

CURSO

MikroTik

Certified Network Associate
(MTCNA)



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Senior Network Engineer
de Hotelling

Trainer

Telecommunications Technical Engineer, CCNP (Cisco Certified Network Professional), **UEWA** (Ubiquiti Enterprise Wireless Admin), **UBRSS** (Ubiquiti Broadband Router and Switching Specialist), **MTCWE** (MikroTik Certified Wireless Engineer), **MTCSE** (MikroTik Certified Security Engineer), **MikroTik Trainer....**

Certification

MikroTik MTCNA

Duration

3 days (24 hours)

Dates

September 30, October 1 and 2

Price

€550

Subsidized training for companies is available (more information on request: admin@hotelinking.com)

Course location and schedule

The course will take place at **Parc Bit**, from **9:00 AM** to **6:00 PM**, with a one-hour lunch break.

General information

The course leads to the basic MikroTik certification (MTCNA). At the end of this training, the student will be familiar with RouterOS software and RouterBOARD products. The student will be able to configure, administer and troubleshoot basic problems of a MikroTik router and provide basic services to customers.

Who is it intended for

Network engineers and technicians who wish to implement and provide support in:

- Corporate Networks
- Operators (WISPs and ISPs)

Prerequisites

Have a good understanding of TCP/IP and subnetting.

Suggested reading

Test yourself with '[Example Test](#)'

Title	Objective
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Module 1

Introduction

- About MikroTik
 - What is RouterOS
 - What is RouterBoard
- First time accessing the router
 - WinBox & MAC-WinBox
 - WebFig & Quick Set
 - **Default configuration**
- RouterOS command line interface (CLI)
 - Null Modem cable
 - SSH & Telnet
 - New terminal in WinBox/WebFig
- RouterOS CLI principles
 - <tab>, double <tab>, “?”, navigation
 - Command history and its benefits
- Initial configuration (Internet access)
 - WAN DHCP-client
 - LAN IP address and default gateway
 - Basic Firewall - NAT masquerade
- Upgrading RouterOS
 - Package types
 - Ways of upgrading
 - RouterBOOT firmware upgrade
- Router identity
- Manage RouterOS logins
- Manage RouterOS services
- Managing configuration backups
 - Saving and restoring the backup
 - Difference between a backup and an export (.rsc) file
 - Editing an export file
- **Resetting a RouterOS device**
- Reinstalling a RouterOS device (Netinstall)
- **RouterOS license levels**
- Sources of additional information
 - help.mikrotik.com
 - wiki.mikrotik.com
 - forum.mikrotik.com
 - mum.mikrotik.com
 - Distributor and consultant support
 - support@mikrotik.com
- **Module 1 laboratory**

Title	Objective
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Module 2**DHCP**

- DHCP server and client
 - DHCP client
 - DHCP server setup
 - Leases management
 - DHCP server network configuration
- Address Resolution Protocol (ARP)
 - ARP modes
 - RouterOS ARP table
- **Module 2 laboratory**

Title	Objective
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Module 3**Bridging**

- Bridging overview
 - Bridge concepts and settings
 - Creating bridges
 - Adding ports to bridges
- Bridge wireless networks
 - Station bridge
- **Module 3 laboratory**

Title	Objective
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Module 4**Routing**

- Routing overview
 - Routing concepts
 - Route flags
- Static routing
 - Creating routes
 - Setting default route
 - Managing dynamic routes
 - Implementing static routing in a simple network
- **Module 4 laboratory**

Title	Objective
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Module 5**Wireless**

- 802.11a/b/g/n/ac Concepts
 - Frequencies (bands, channels) data-rates / chains (tx power, rx sensitivity, country regulations)
- Setup a simple wireless link
 - Access Point configuration
 - Station configuration
- Wireless Security and Encryption
 - Access List
 - Connect List
 - Default Authenticate
 - Default Forward
 - WPA-PSK, WPA2-PSK
 - WPS accept, WPS client
- Monitoring Tools
 - Snooper
 - Registration table
- **Module 5 laboratory**

Title	Objective
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Module 6**Firewall**

- Firewall principles
 - Connection tracking and states
 - Structure, chains and actions
- Firewall Filter in action
 - Filter actions
 - Protecting your router (input)
 - Protection your customers (forward)
- Basic Address-List
- Source NAT
 - Masquerade and src-nat action
- Destination NAT
 - dst-nat and redirect action
- FastTrack
- **Module 6 laboratory**

Title	Objective
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Module 7

QoS

- Simple Queue
 - Target
 - Destinations
 - Max-limit and limit-at
 - Bursting
- One Simple queue for the whole network (PCQ)
 - pcq-rate configuration
 - pcq-limit configuration
- **Module 7 laboratory**

Title	Objective
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Module 8

Tunnels

- PPP settings
 - PPP profile
 - PPP secret
 - PPP status
- IP pool
 - Creating pool
 - Managing ranges
 - Assigning to a service
- Secure local network
 - PPPoE service-name
 - PPPoE client
 - PPPoE server
- Point-to-point addresses
- Secure remote networks communication
 - PPTP client and PPTP server (Quick Set)
 - SSTP client
- **Module 8 laboratory**

Title	Objective
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Module 9

Misc

- RouterOS tools
 - E-mail
 - Netwatch
 - Ping
 - Traceroute
 - Profiler (CPU load)
- Monitoring
 - Interface traffic monitor
 - Torch
 - Graphs
 - SNMP
 - The Dude
- Contacting **support@mikrotik.com**
 - supout.rif, autosupout.rif and viewer
 - System logs, enabling debug logs
 - Readable configuration (item comments and names)
 - Network diagrams
- **Module 9 laboratory**

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