

Mikrotik

Day 1: Introduction to MikroTik and RouterOS

1. Introduction to MikroTik and Networking Basics

- Overview of MikroTik as a networking solution
- Understanding fundamental networking concepts

2. RouterOS Installation and Configuration

- Installing RouterOS on MikroTik devices
- Initial configuration and basic settings
- Accessing devices via Winbox and Webfig

3. RouterOS CLI and Configuration

- Navigating the RouterOS Command Line Interface (CLI)
- Configuring interfaces, IP addresses, and DHCP
- Enabling basic routing and static routes

Day 2: Advanced Routing and Network Services

4. Dynamic Routing Protocols

- Implementing dynamic routing with OSPF and BGP
- Configuring route redistribution and filtering

5. Firewall and Security Configuration

- Setting up firewall rules for packet filtering
- Configuring NAT and port forwarding
- Implementing security policies and access control

6. Quality of Service (QoS)

- Managing network traffic using QoS techniques
- Prioritizing traffic and ensuring optimal performance

Day 3: Wireless Networking and Hotspots

7. Wireless Network Configuration

- Setting up wireless interfaces and access points
- Securing wireless networks with encryption and authentication

8. Wireless Bridging and Mesh Networks

- Implementing point-to-point and point-to-multipoint bridging
- Configuring wireless mesh networks for extended coverage

9. Hotspot Configuration and User Management

- Setting up hotspot services for guest access

- Managing user authentication and authorization
- Customizing hotspot login pages and settings

Day 4: Network Monitoring and Management

10. Network Monitoring and Tools

- Using tools like Ping, Traceroute, and Torch
- Monitoring network traffic and bandwidth usage
- Diagnosing network issues with Packet Sniffer

11. Network Management with Dude

- Introduction to The Dude network monitoring tool
- Configuring devices for monitoring and alerts
- Generating reports and visualizing network data

Day 5: VPNs and Advanced Topics

12. Virtual Private Networks (VPNs)

- Configuring site-to-site and remote access VPNs
- Implementing secure communication using IPsec and L2TP

13. Load Balancing and Failover

- Distributing traffic across multiple links with load balancing
- Setting up failover for high availability

14. Advanced Configuration and Troubleshooting

- Exploring advanced RouterOS features and settings
- Troubleshooting common network issues and challenges

15. Final Project and Certification

- Applying MikroTik concepts to a practical project
- Presenting the network design and configuration approach
- Evaluation and assessment for the MikroTik Certification