ISP Setup and Administration using MikroTik

Course Duration

30 Hours, 10 Classes, 3 Hours per class

Course Content

Lesson 01: Basic Networking Concept.

- Detailed Networking Concept discussion
- Networking Device Working Method (Hub, Switch, Router)
- IP Address discussion (Private and Public Concept)
- IP Address Study. (Class of IP Address, Subnetting, Subnetting and VLSM)

Lesson 02: Introduction of MikroTik Router.

- Hardware and Software Introduction.
- First Login and Navigation (Winbox, CLI, webfig)
- OS version Upgrade and Downgrade auto and Manual Method.
- License level Study and activation method.
- PC MikroTik build

Lesson 03: Basic Configuration and Network Layout.

- Physical layer Study and Connectivity.
- Optional Router Fine tuning.
- Basic Setup steps with CLI and GUI (Lan, WAN, Gateway and NAT)
- NTP and DNS Configuration

Lesson 04: MikroTik Bandwidth Management.

- Static Bandwidth Allocation.
- Priority and Parent Concept.
- Dynamic (PCQ) Bandwidth Allocation.
- Different Bandwidth for YouTube, Facebook, BDIX and FTP.
- Time Based Queues and Burst Concept.

Lesson 05: IP Allocation Methods.

- Static IP Allocation and MAC Binding.
- DHCP IP Allocation and MAC Binding.
- PPPoE IP Allocation (ISP Setup).
- Hotspot IP Allocation with Radius (Pre-Paid Packages)

Lesson 06: MikroTik Other Features.

- Bridge, VLAN, Bonding.
- User administration.
- Log Server.
- Backup Management (E-Mail Backup)
- Script and Scheduler.
- MikroTik Tools.

Lesson 07: Firewall and Web-Proxy Access List.

- Firewall Filter Concept.
- Firewall ScrNat and DstNAT (Port Forwarding) Concept.
- Firewall Mangle Introduction.
- MikroTik Web Proxy Access Control. (URL Block, Extension Block)
- Web Proxy Setup. (Norman and Transparent Mode)

Lesson 08: Routing With MikroTik.

- Routing Concept.
- Static Routing.
- Dynamic Routing with OSPF.
- Dynamic Routing with BGP.

Lesson 09: VPN Technologies.

- VPN Concept.
- IPsec VPN Configuration.
- GRE, IPIP and EoIP Configuration.
- PPTP Configuration.

Lesson 10: Wireless Configuration.

- Introduction Wireless Technology.
- Wireless access Configuration.
- WLAN Network Design.
- Wireless Security Protocol.