

# MikroTik, A Router for Today & Tomorrow

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# Routing The World

- Millions of RouterOS powered devices currently routing the world
- MikroTik provides routing equipment - from the customers home to high end data centers across the world .
- MikroTik mission is to make existing Internet technologies faster, more powerful, and affordable to wider range of users with affordable cost.



# Routing The World

- Over 50'000 RouterOS trained and certified network engineers
- More than 4000 training classes in the last year
- World wide network of certified consultants
- Offering products that support simple Network to complex enterprise networks Globally



# MikroTik Availability

Reseller, trainer and consultant map



# The Magic Box !!



# Affordable Price



About \$ 3K



About \$ 50K



# Bandwidth Management

- Bandwidth Management is the most popular features in MikroTik Router
- Limit data rate for certain IP addresses, subnets, protocols, ports, and other parameters
- Limit peer-to-peer traffic
- Prioritize packet flows
- Apply queues on fixed time intervals
- Share available traffic among users equally, or depending on the load of the channel



# Static & Dynamic Routing

- RouterOS supports static routing and dynamic routing protocols.
- RouterOS also supports Virtual Routing and Forwarding (VRF), Policy based routing, Interface based routing and Equal-cost multi-path routing
- For IPv4 it supports RIP v1 and v2, OSPF v2, BGP v4.
- For IPv6, it supports RIPng, OSPFv3 and BGP.





# MPLS

- Smallest Router With MPLS Support
- Static Label bindings for IPv4
- Label Distribution protocol for IPv4
- RSVP Traffic Engineering tunnels
- MP-BGP based MPLS IP VPN



# Firewall

- MikroTik performs stateful packet inspection
- It also supports Source and Destination NAT
- The Firewall provides features to make packet marks
- It can filter by IP address, address range, port, port range, IP protocol, also supports Static and Dynamic Address Lists
- It can match packets by pattern in their content, specified in Regular Expressions, called Layer7 matching.
- The RouterOS Firewall facility also supports IPv6.



# VPN

- MikroTik proprietary functions EoIP
- Simple tunnels Like IPIP
- IPSec - tunnel and transport mode
- Point to point tunneling (OpenVPN, PPTP, PPPoE, L2TP)
- 6 to 4 tunnel support (IPv6 over IPv4 network)
- VLAN - IEEE802.1q and Q-in-Q support
- MPLS based VPNs



# Hotspot

- Plug-n-Play access to the Network
- Authentication of local Network Clients
- User Accounting
- RADIUS support for Authentication and Accounting
- Configurable bypass for non-interactive devices
- Walled garden for browsing exceptions



# Tools

- Ping, traceroute
- Bandwidth test
- Packet Sniffer, torch
- Telnet, SSH
- E-mail and SMS send tools
- Active connection table
- NTP Client and Server
- TFTP server
- Dynamic DNS updater
- SNMP for providing graphs and stats
- RADIUS client and server (User Manager)



# Monitoring

- Logging
- SNMP
- Graphing
- Packet Flow



# WinBox

- WinBox is a small program that allows users to control and monitor Mikrotik using a fast and simple graphical user interface
- Discover MikroTik Routers /Switches /Appliances in your computers subnet
- Connect to the MikroTik appliance using IP /layer 3 connection
- Connect to the MikroTik appliance using Ethernet /Mac /layer 2 connection



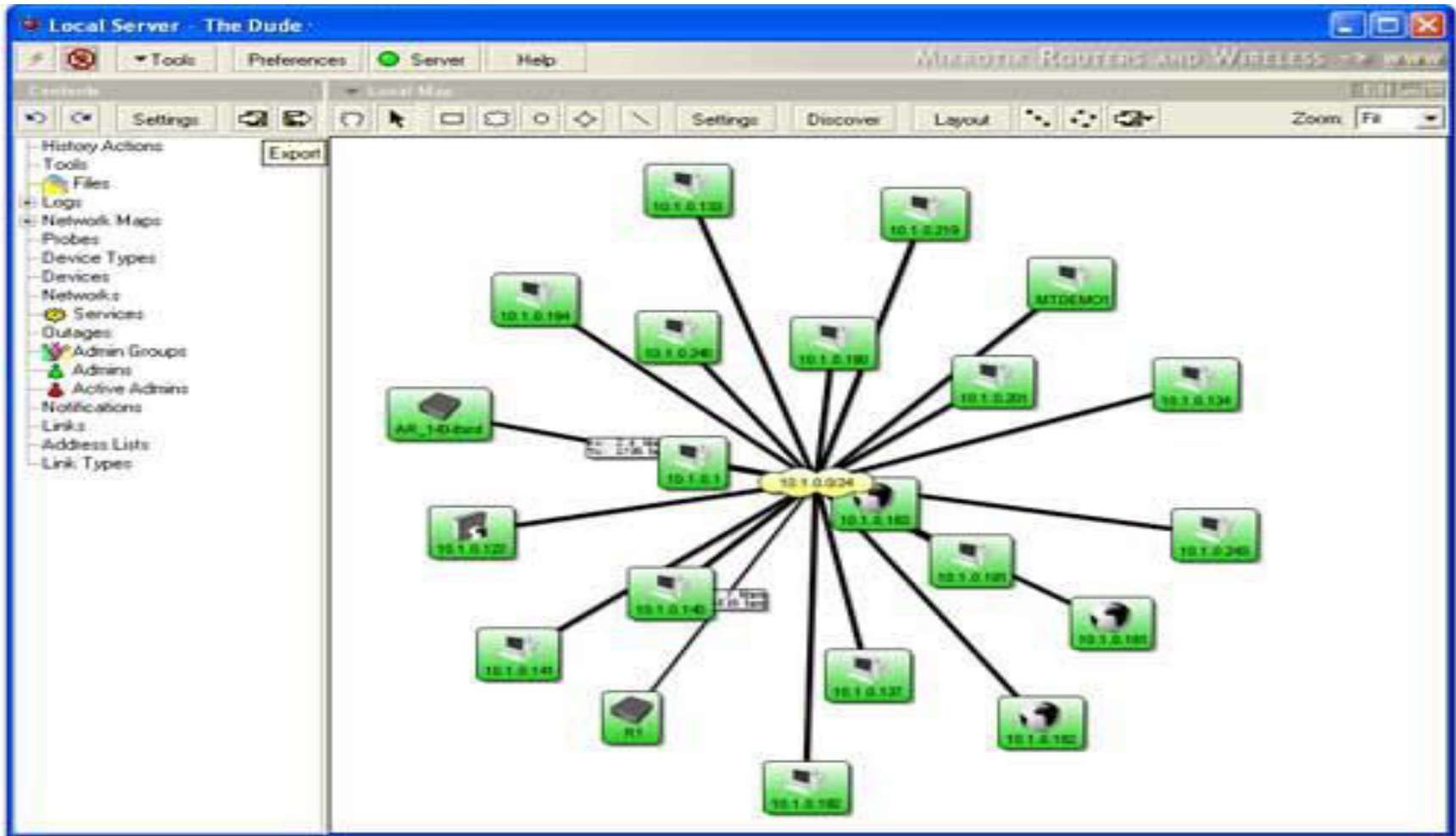
# The DUDE

- The Dude network monitor is an application by MikroTik
- The Dude is free of charge!
- Auto network discovery and layout
- Device, Link monitoring, and notifications
- Supports custom icons and backgrounds
- Allows you to draw your own maps and add custom devices
- Individual Link usage monitoring and graphs
- Direct access to remote control tools for device management





# The Dude



# Low Power Consumption

- Mikrotik has an excellent performance with very low power consumptions
- 72 core of CPU Running with only 100W Power Consumptions..



# User Expectation



# Unified threat management (UTM)

- Virus, Worm, Trojan Detection & Removal
- Spy ware, Malware, Phishing protection
- Real-time Blacklist (RBL)
- Filter based on message header, size, sender, recipient
- Redirect spam mails to dedicated email address
- Virus Outbreak Protection
- Spam Notification
- IP Reputation-based Spam filtering
- User-based policy creation
- Protocol Anomaly Detection



# Modular Device

- Interface Module for Router
- Interface Module for Switch
- Carrier level interface like OC-3 and STM-16 etc.



# Routing Engine

- Interface is connected with routing processor
- Need different interface Controller
- Different Data plane and control plane



# Technical Assistance Center

- No Technical Assistance Center
- Need support service around-the-clock
- Online Support
- Over the Phone



# Complete User Guide

- No Complete User Guide
- No GUI Based Guide





# User Are Happy !!!



