MIKROTIK CONFIGURATION

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Contents

Chapter 1

Introduction

This file documents how I want my MikroTik devices to be configured. It doesn't necessarily have to be written in LaTeX, but I want to practice it.

My wishlist for WiFi APs, that MikroTik doesn't fully comform either, is at: https://gitea.blesmrt.net/mikaela/gist/src/branch/master/wifi/README.md

My configuration is mostly based on https://support.apple.com/HT202068 although I disable legacy protocols which it advices keeping enabled for maximum compatibility.

As this document is primarily for my personal use, some sections won't go to further detail.

Chapter 2

winbox

WinBox is the MikroTik configuration tool. It works directly with WINE and can be dropped to `$PATH` with `chmod +rx WinBox64.exe`

Chapter 3

Quíck set

- Network name: same for both, for me ends with _nomap
- Frequency: auto
- Band: 2GHz-only-N, 5GHz-only-AC
- Guest network: openwireless.org_nomap
- Guest WiFi password: empty
- Limit Download Speed: 8M

Limit Download Speed appears to use bits per second or something similar as an unit.

An expert has this to say on WiFi bands:

> The problem with enabling the lower spec networks are the broadcasts. Those you shout out with the lowerst spec you have available for the clients. Those beacons are reserved airtime not only for you, but everyone who hears them too.

This is where Apple disagrees, but they most likely want the most compatibility for end users regardless of their devices, while I don't have active devices that don't support n.

Chapter 4

IPv6

To enable IPv6, simply Select LTE APNs.

1. navigate to Interfaces → LTE (it's a tab) → LTE APNs (a button below the tab bar).
2. Doubleclick or add a new APN from the plus symbol.
3. Set `IPv6 Interface: bridge`

DNS could be canged here too, but "Use Peer DNS" is probably fine when using DoH anyway. Referr to a later section.

For reference the full configuration here is:

```
Name: Moi
APN: data.moimobile.fi
IP Type: Auto
[x] Use Peer DNS
[ ] Use Network APN
[x] Add Default Route
Default route distance: 2
IPv6 Interface: bridge
Authentication: none
Passthrough Interface: none
```

Chapter 5

DNS over HTTPS

IP → DNS → Use DoH server.

WinBox has a Files button where .pem can be uploaded (previously downloaded with Firefox security details, CA tab), that can then be imported from System → Certificates.

In Firefox it's best to load the chain and then check that the 90 days certificate doesn't get included.

Chapter 6

2.4 GHz band

Doubleclick Interface WLAN1 (and WLAN2) and select the appropiate box (20 MHz).

Chapter 7

DHCP Lease time

IP → DHCP Server → doubleclick defconf (short for default configuration).

- Default: 00:10:00. I hope this means 10 hours, but I fear it's HH:MM:SS...
- New value for SOHO: 08:00:00
- New value for open: 01:00:00

Chapter 8

5G

In iOS MikroTik app settings I have navigated to 5G, pressed the cog symbol and set NR bands to 78. This closes out 28 which is present, I am under impression that it's similar in experience to 4G.

Chapter 9

DFS

I have detected that most of my clients refuse to use DFS channels for 5 GHz. The solution is to disable them.

On MikroTik iOS app:

1. Select WLAN2 on the main menu.
2. Press the three dots on top.
3. Select advanced mode.
4. Wireless
5. Skip DFS channels
6. All

Note: Skip DFS channels is set to ”disabled”, my clients avoid 5 GHz. If it’s ”10 min CAC”, my clients still avoid it. So it must be disabled, even if those three non-DFS channels are going to be the most busy.