# Mikrotik Wireless PTP & PTMP Link Features

By

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# About Me

**Name:**

**Mohammad Irfan**

**Education:**

**BS Telecommunication**

**(In Progress)**

**Position:**

**Technical Sales Engineer**

**Certifications:**

- MTCNA (MikroTik Certified Network Associate)
- UBWS (Ubiquiti Broadband Wireless Specialist)
- UBWA (Ubiquiti Enterprise Wireless Admin)
- CCNA (Cisco Certified Network Associate)

# About Company

- Started in 2003
- Top Wireless/Security & Network Equipment Distributor in Pakistan.
- We are Master Distributor for:
  - MIKROTIK, Yeastar, Fanvil, GrandStream, UBNT.....

- We Deals in:
- IT managed services
- Trainings
- Security Solutions
- Electrical & Instrumentation Solutions with SCADA

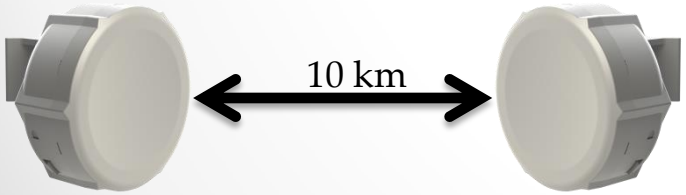
# Presentation Objective

- PTP & PTMP Connections
- Access List and Connect List
- Basic Features
- Q & A

# Types Of Connections

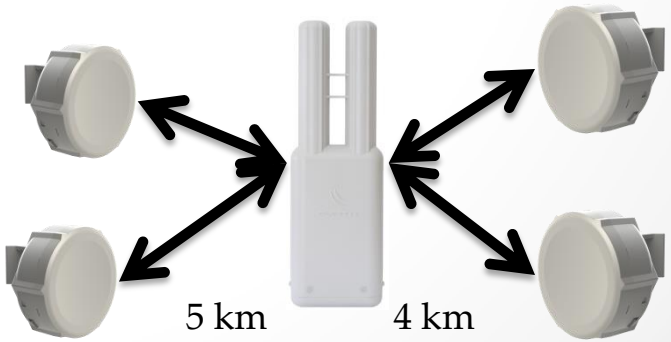
## PTP (Point to Point)

- You can establish long distance link.
- Better throughput.




## PTMP (Point to Multipoint)

- Mostly use in Wireless ISPs
- Cost effective than PTP



# Advantages & Disadvantages Of Wireless Links

## Advantages

- Easy to install
- Cost effective
- No cable to pull

## Disadvantages

- Country limitation
- Bandwidth limit

# Wireless Operation Modes in Mikrotik

- AP-bridge/Bridge <-> Station
- AP-bridge/Bridge <-> Station-wds/Stationbridge
- AP-bridge <-> WDS-slave
- AP-bridge/Bridge <-> Stationpseudobridge

# RouterOS License Requirement

- PTP link requires at least Level 3
  – Example: Bridge <-> Station
- PTMP link requires on AP at least Level 4
  and on clients at least Level 3
  – Example: AP-bridge <-> Station
- For Non RouterOS AP:
  – Example: Non RouterOS AP <-> pseudobridge

# PTP & PTMP link Configuration

- PTP Link Requirements:

  1 x Wireless Equipment For Access Point Minimum RouterOS L3

  1 x Wireless Equipment For Station Minimum RouterOS L3

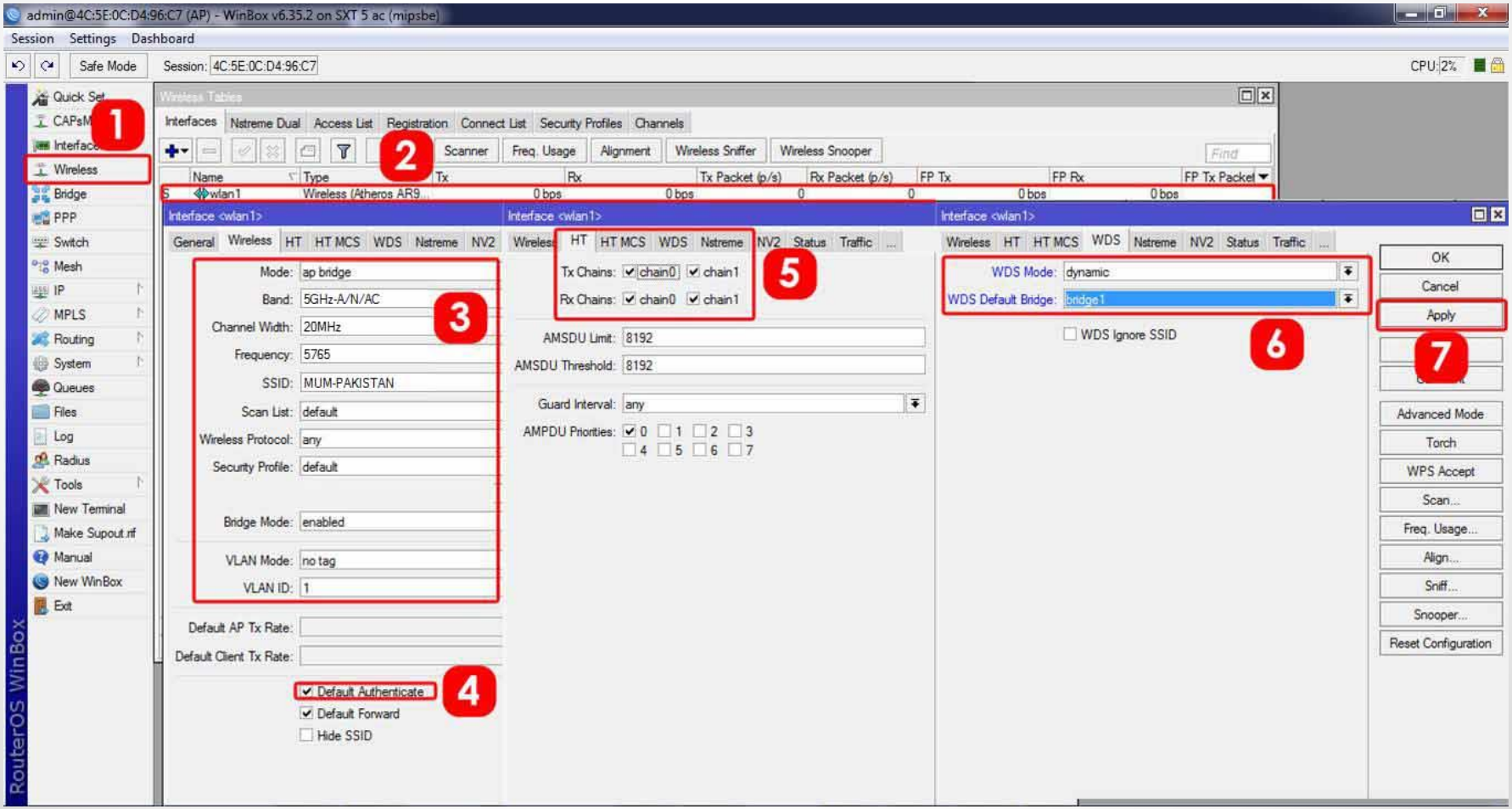
- PTMP Link Requirements:

  1 x Wireless Equipment For Access Point Minimum RouterOS L4

  1 - …. x Wireless Equipment For Station Minimum RouterOS L3

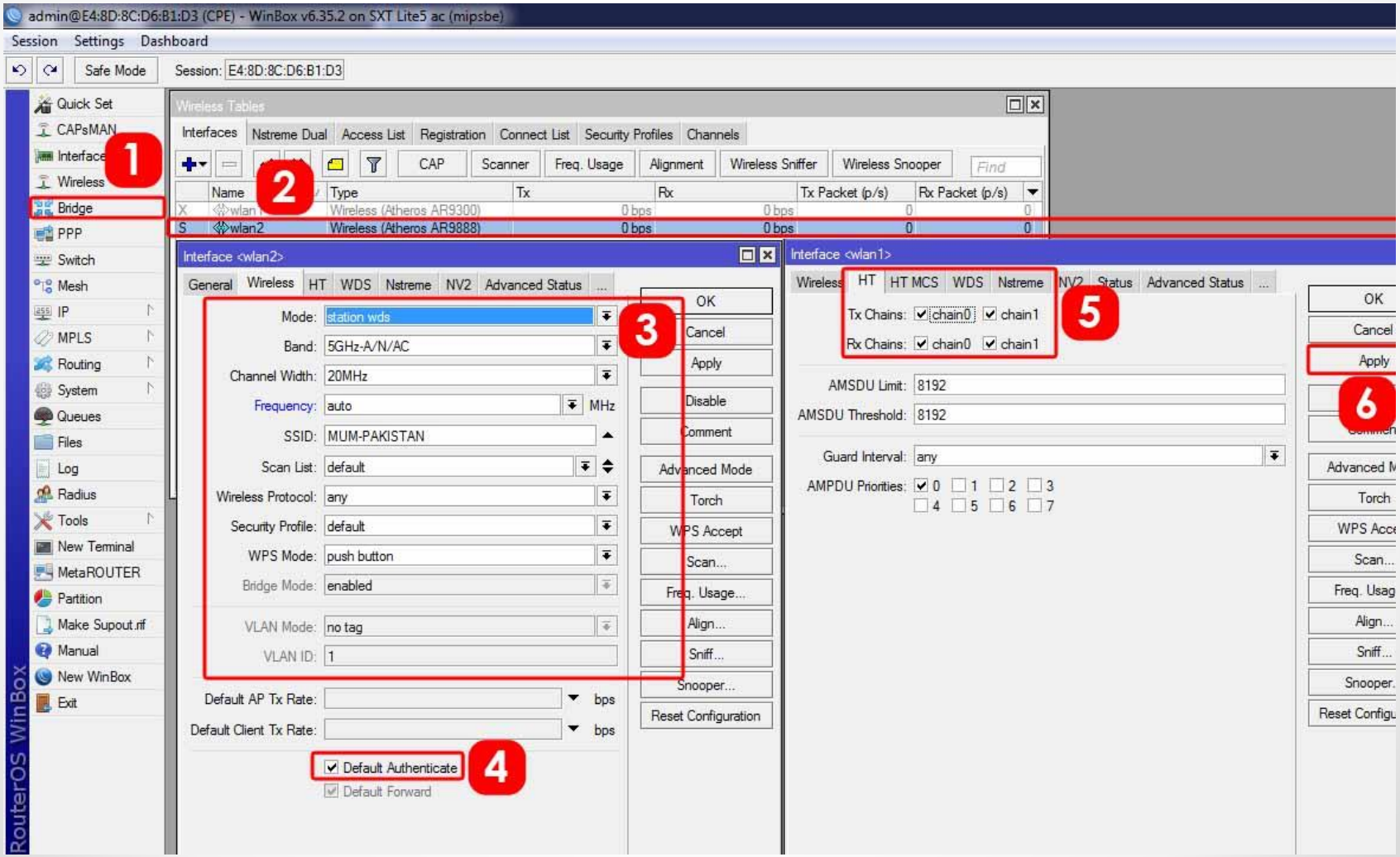
# PTP & PTMP link Configuration

- Access Point WDS Configuration Steps (PTP):



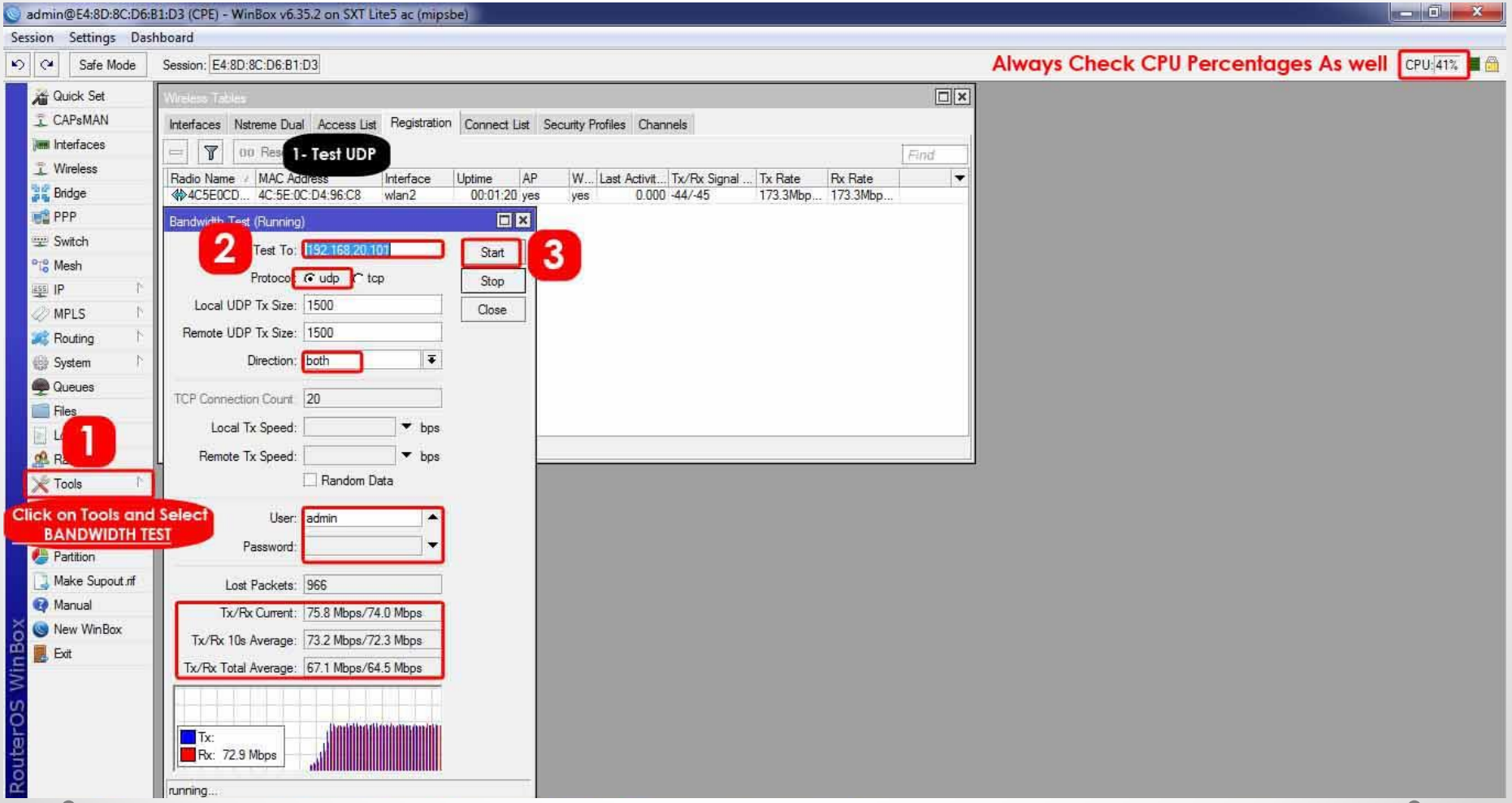
# PTP & PTMP link Configuration

- Station WDS Configuration Steps (PTP) :



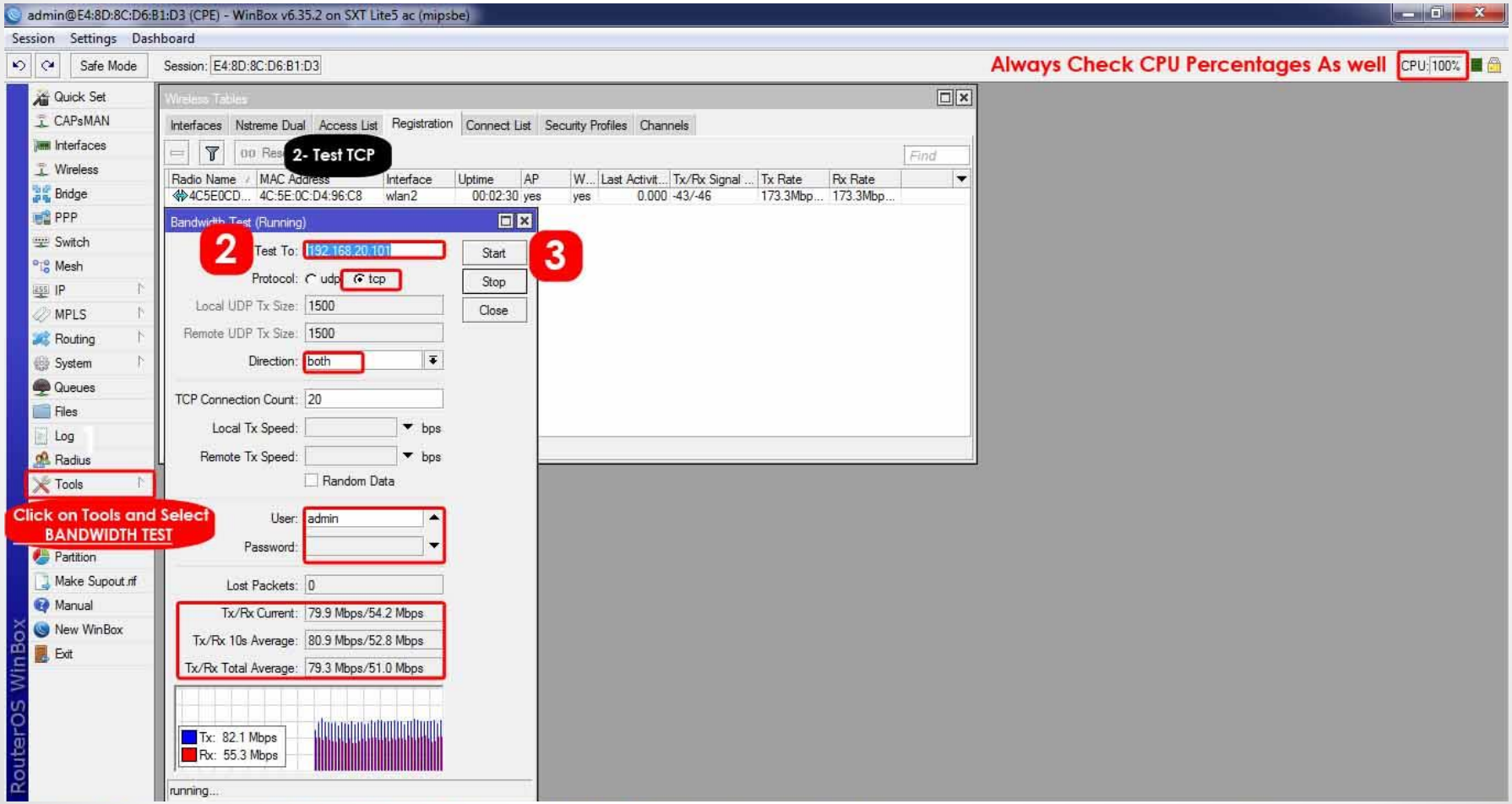
# PTP & PTMP link Configuration

- Result UDP (PTP) :



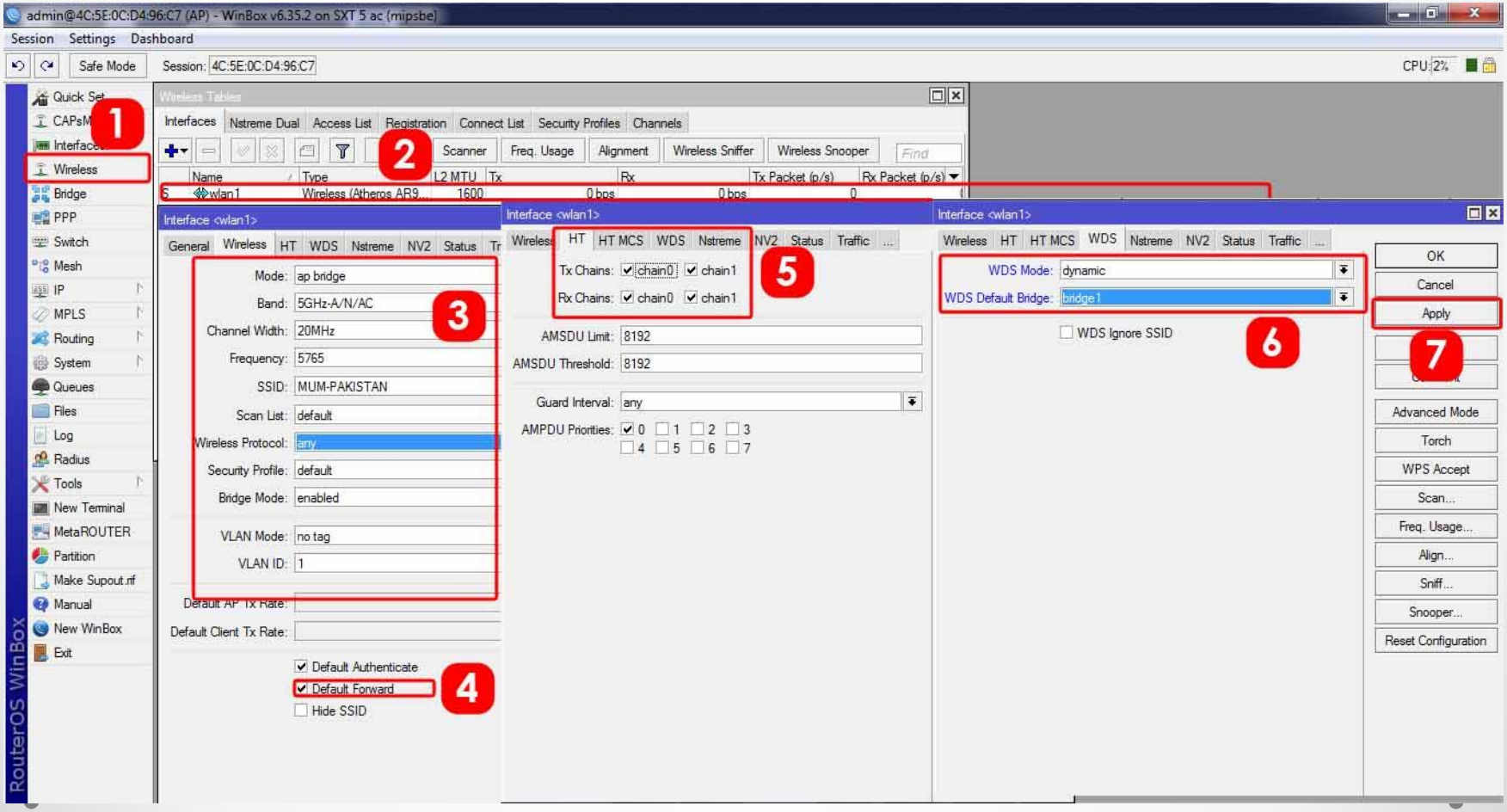
# PTP & PTMP link Configuration

- Result TCP (PTP) :



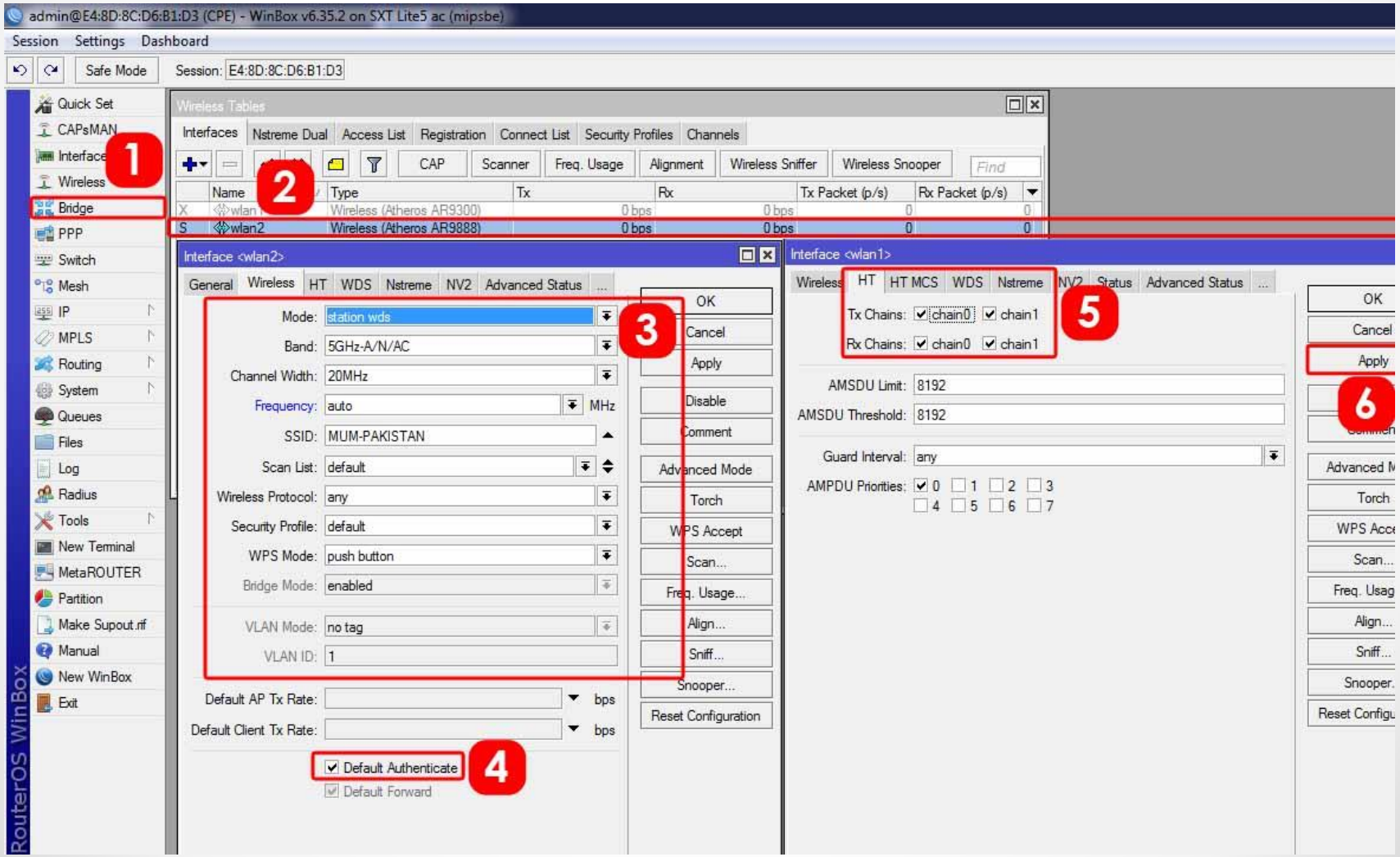
# PTP & PTMP link Configuration

- Access Point WDS Configuration Steps (PTMP):



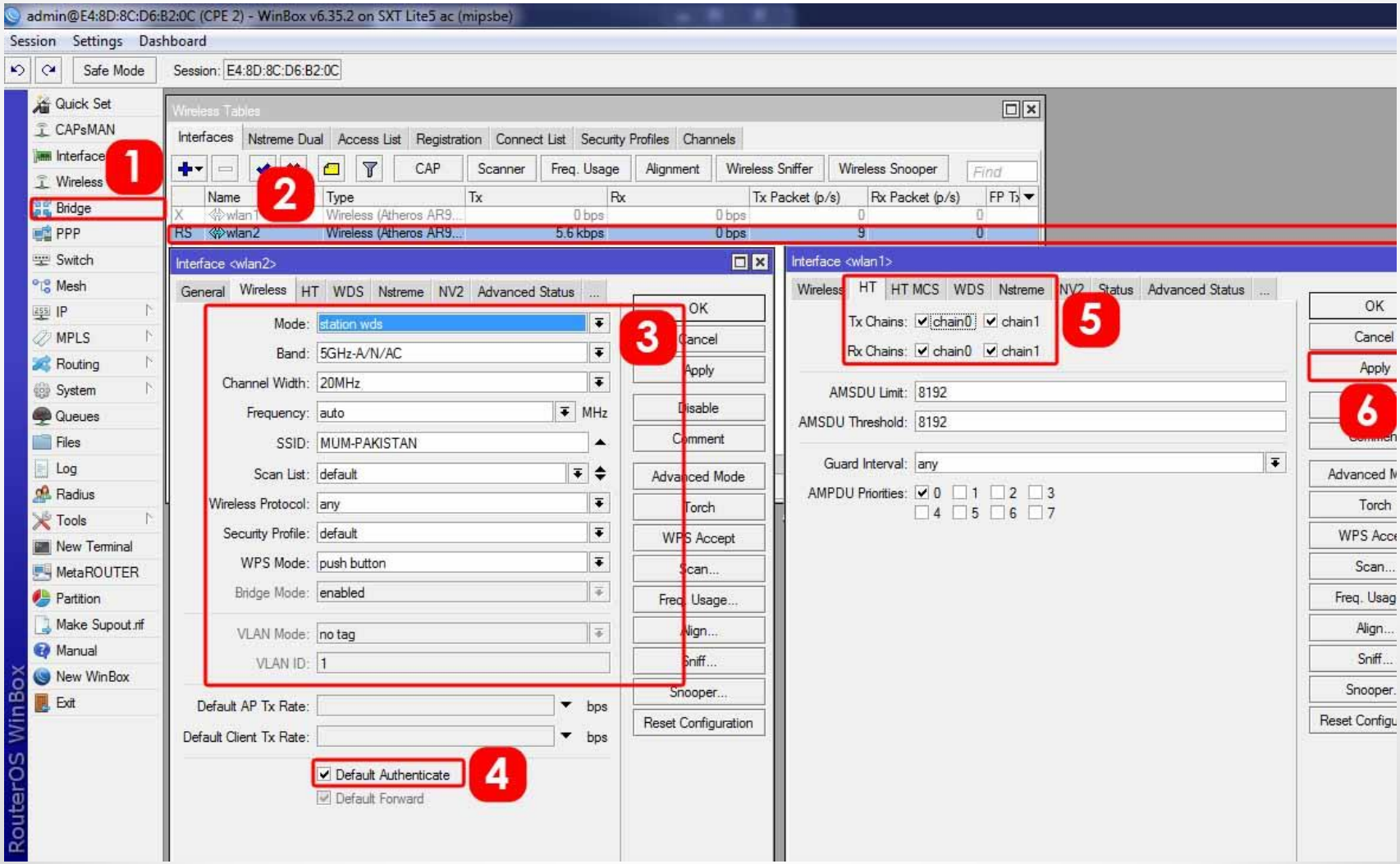
# PTP & PTMP link Configuration

- StationWDS - 1 Configuration Steps (PTMP):



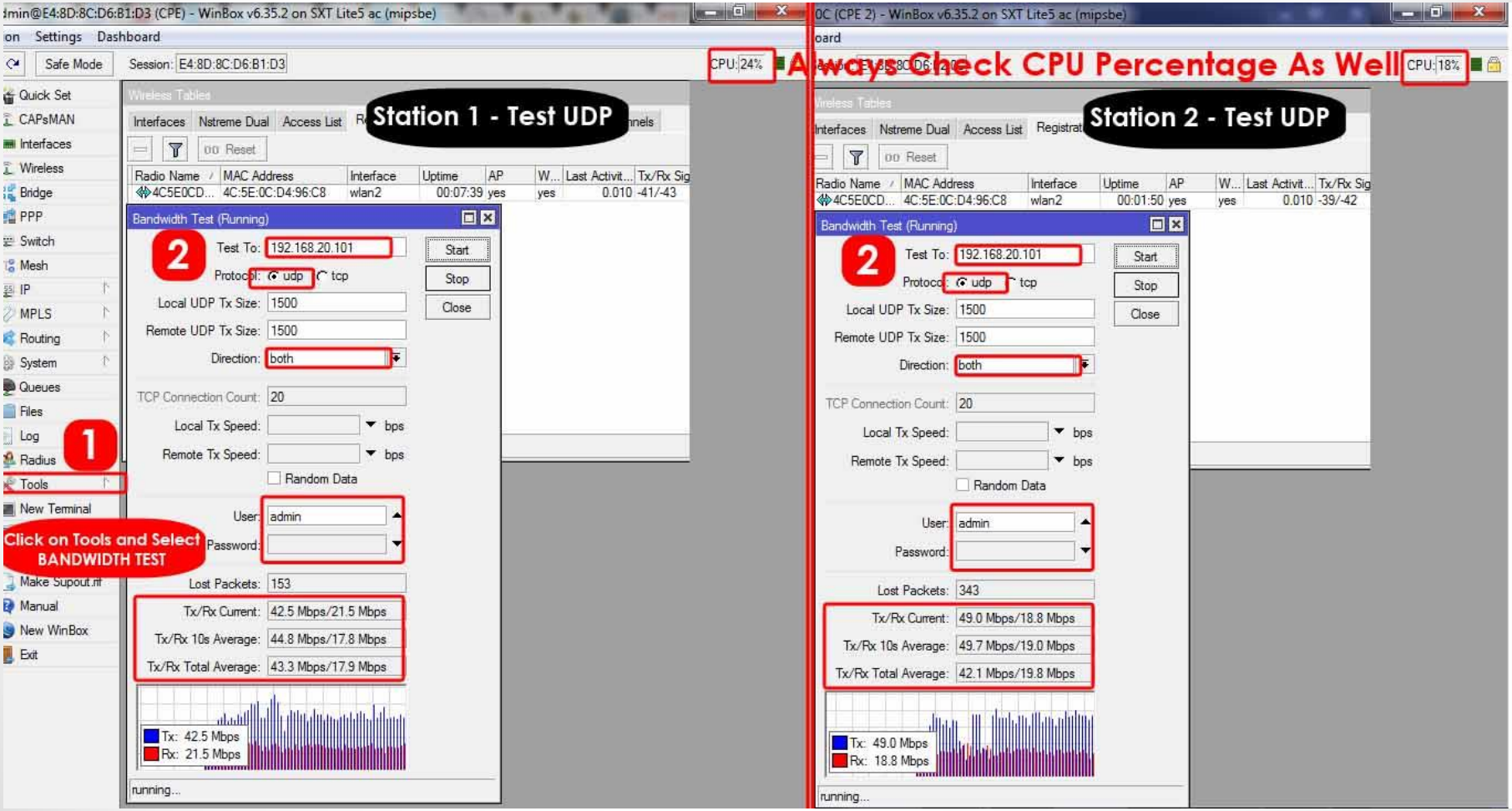
# PTP & PTMP link Configuration

- Station WDS - 2 Configuration Steps (PTMP):



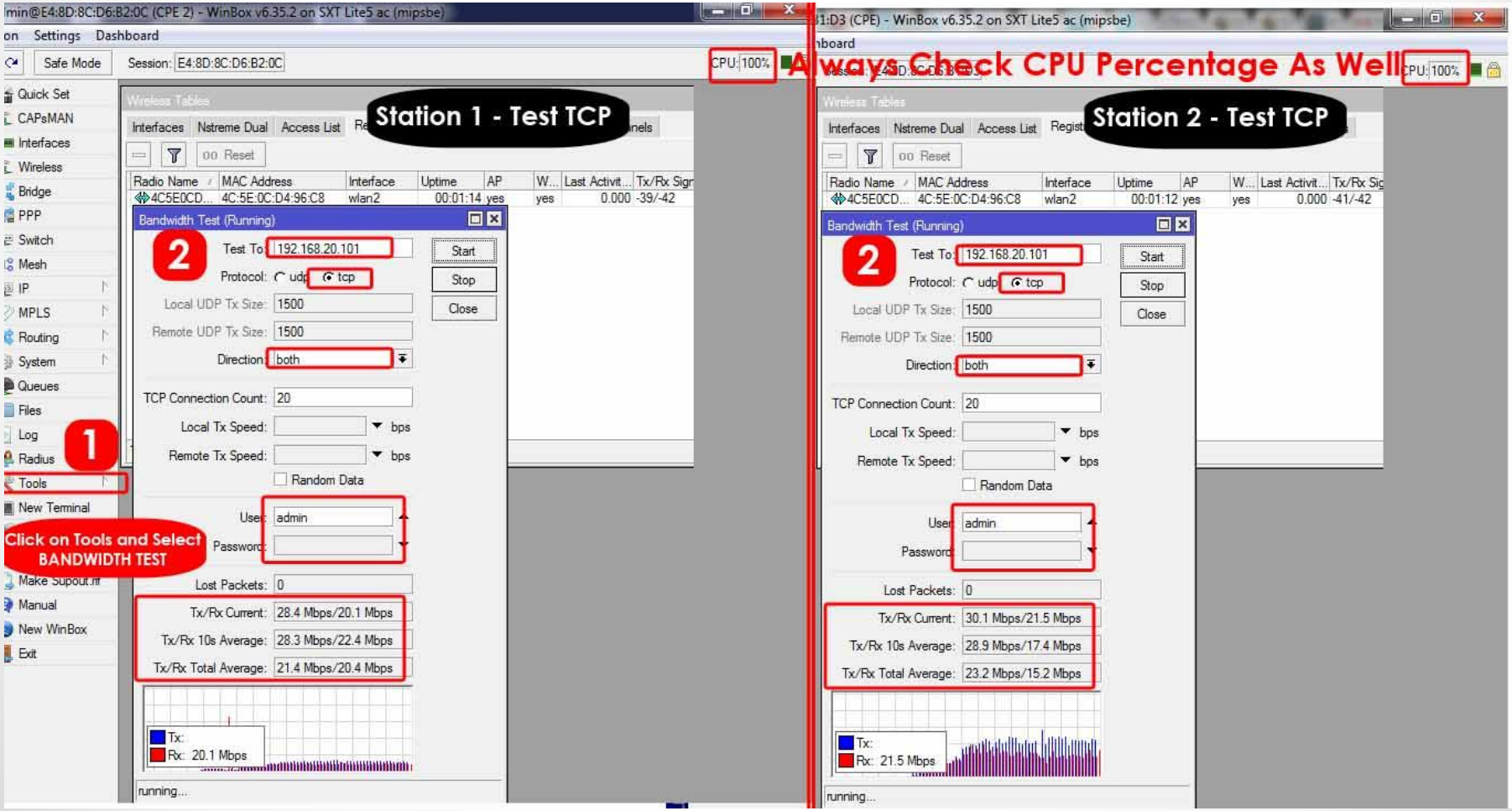
# PTP & PTMP link Configuration

- Result UDP (PTMP) Both Stations:



# PTP & PTMP link Configuration

- Result TCP (PTMP) Both Stations:



# Access List & Connect List

## Access List

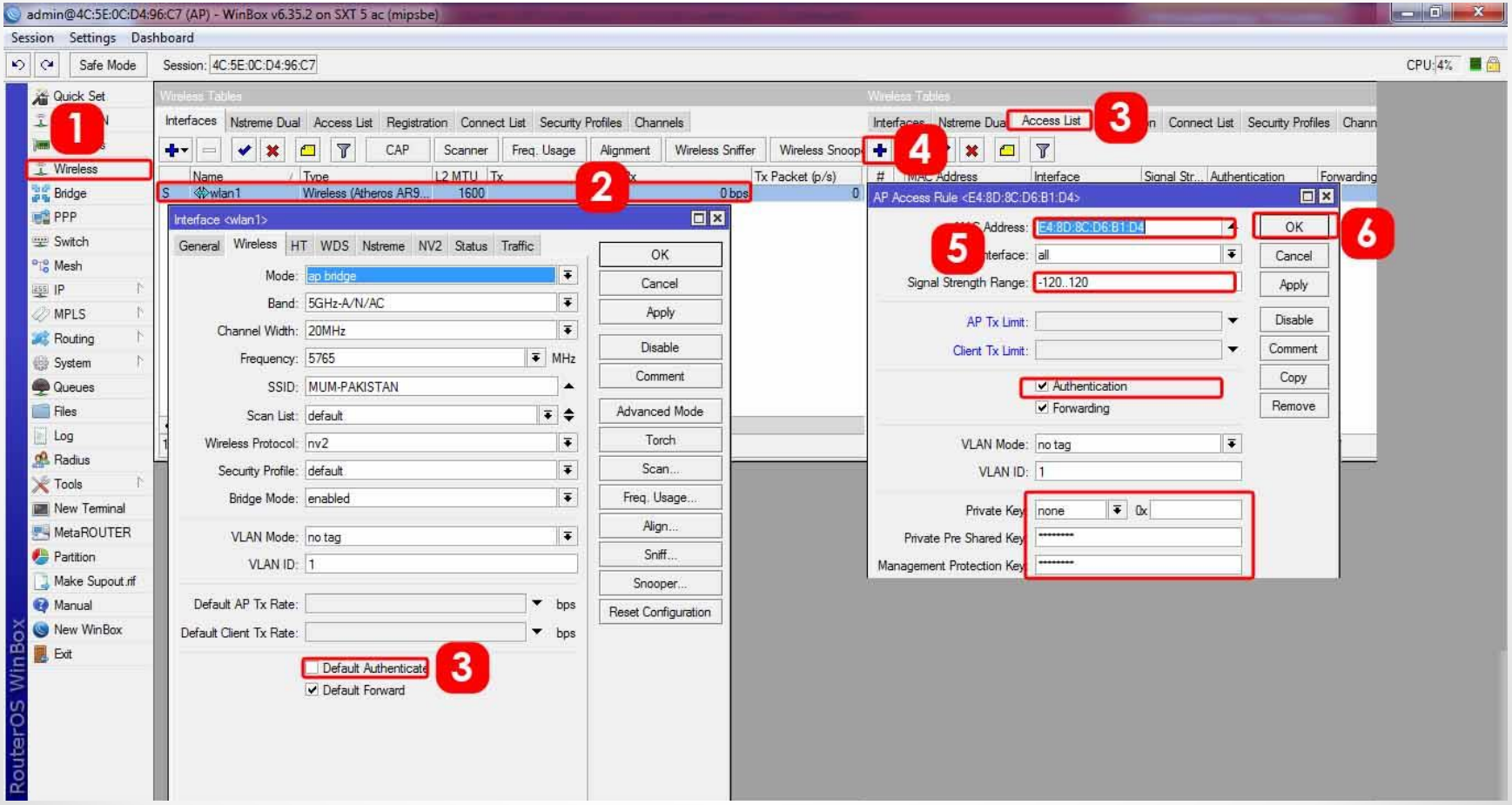
- Access list is used by access point to restrict allowed connections from other devices, and to control connection parameters.
- Access List is use in Access Point

## Connect List

- Connect List is used to assign priority and security settings to connections with remote access points and to restrict allowed connections.
- Connect List is use in Station

# Access List

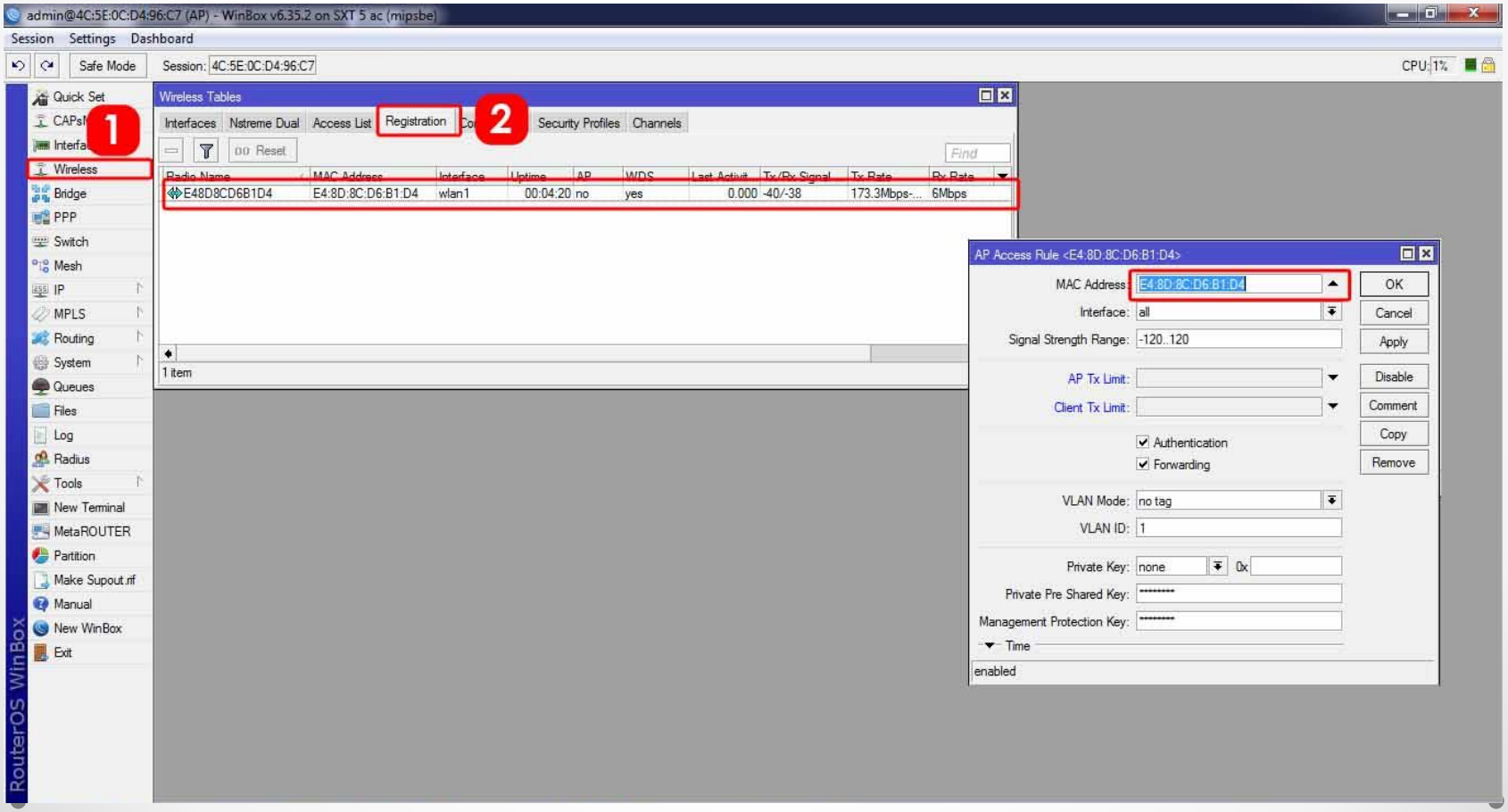
- How to Enable Access List on Mikrotik Wireless Access Point



# Access List

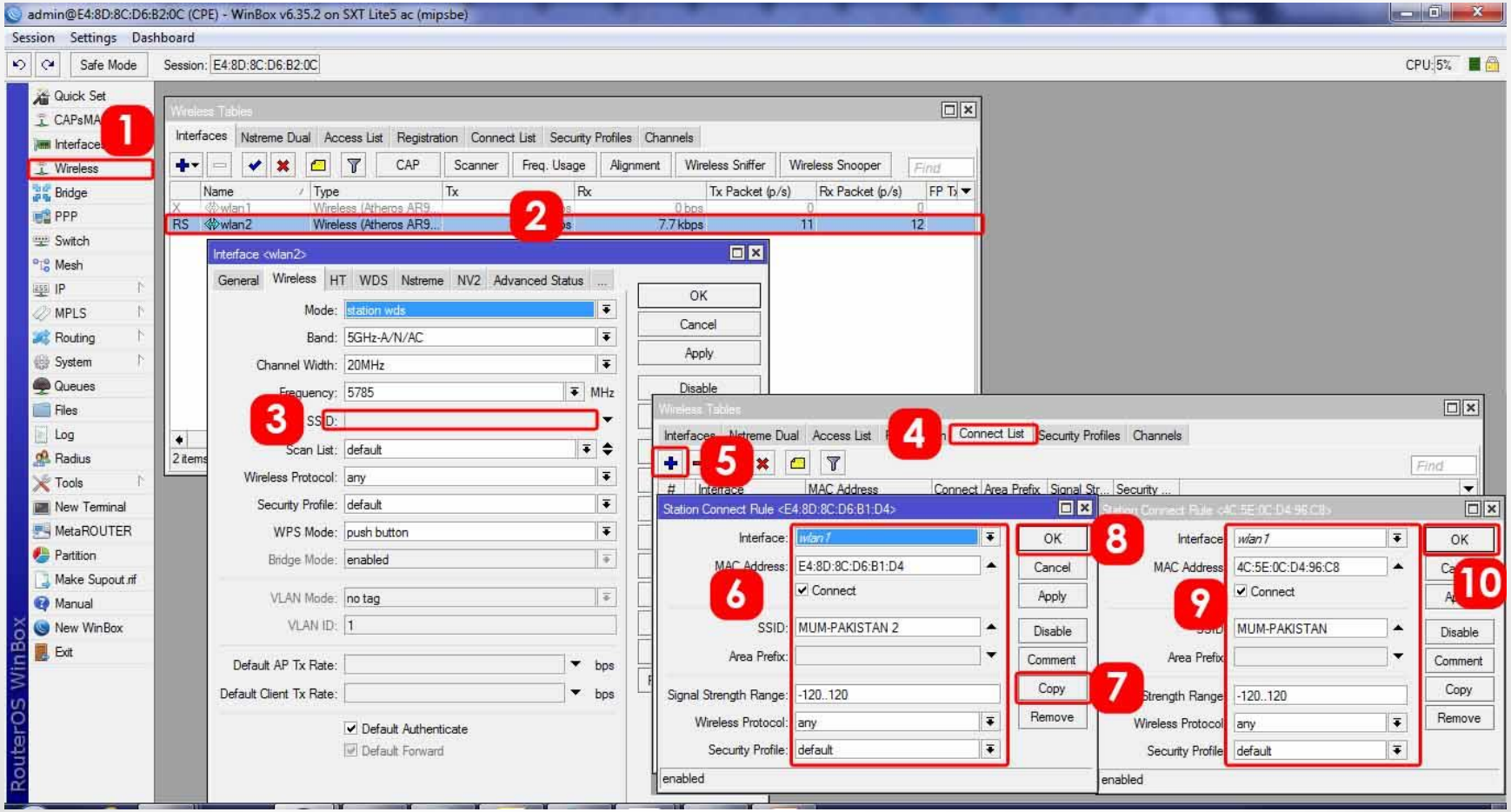
- Result:

- Now Check on Wireless Registration Table, Youwill Find your Station Device



# Connect List

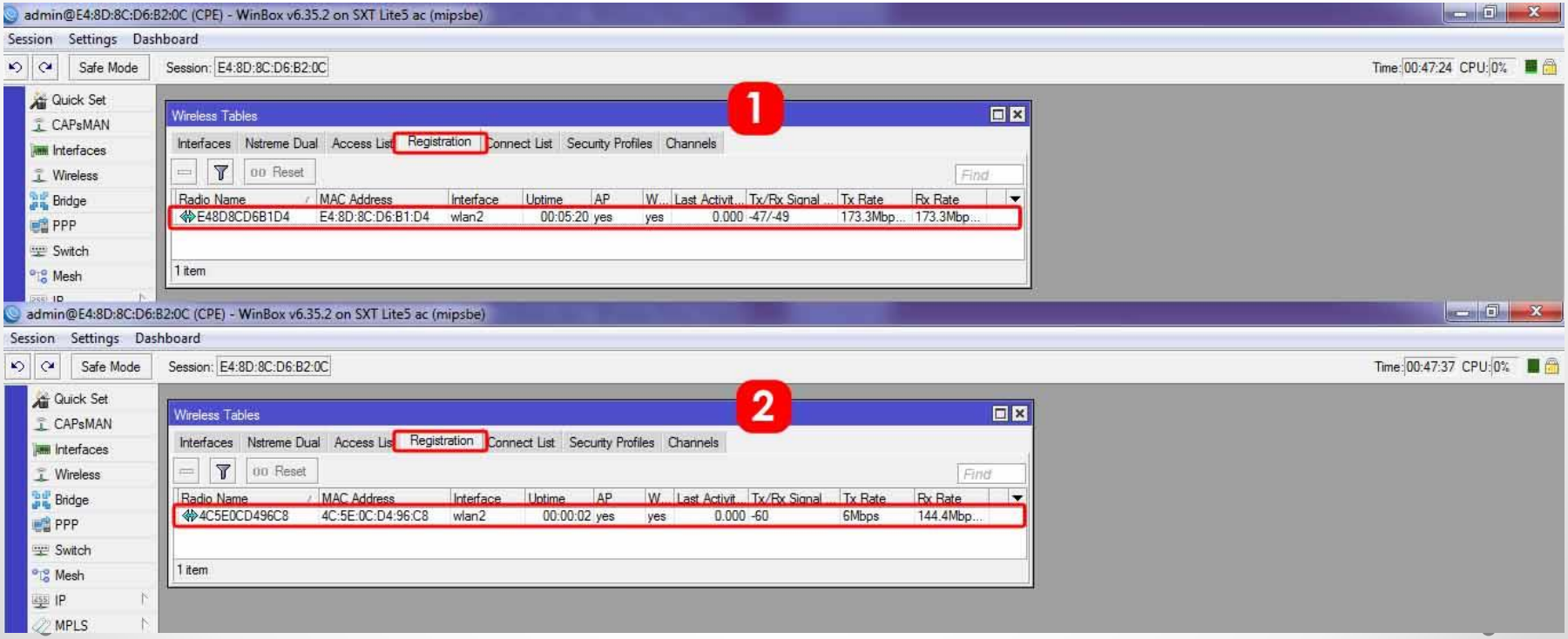
- How to Enable Connect List on MikroTik Wireless Station



# Connect List

- Result:

- Now Check on Wireless Registration Table, You will Find your Access Point Device. So which Access Point is Showing there switch off that one. Your Station Will Connect from Other AP.

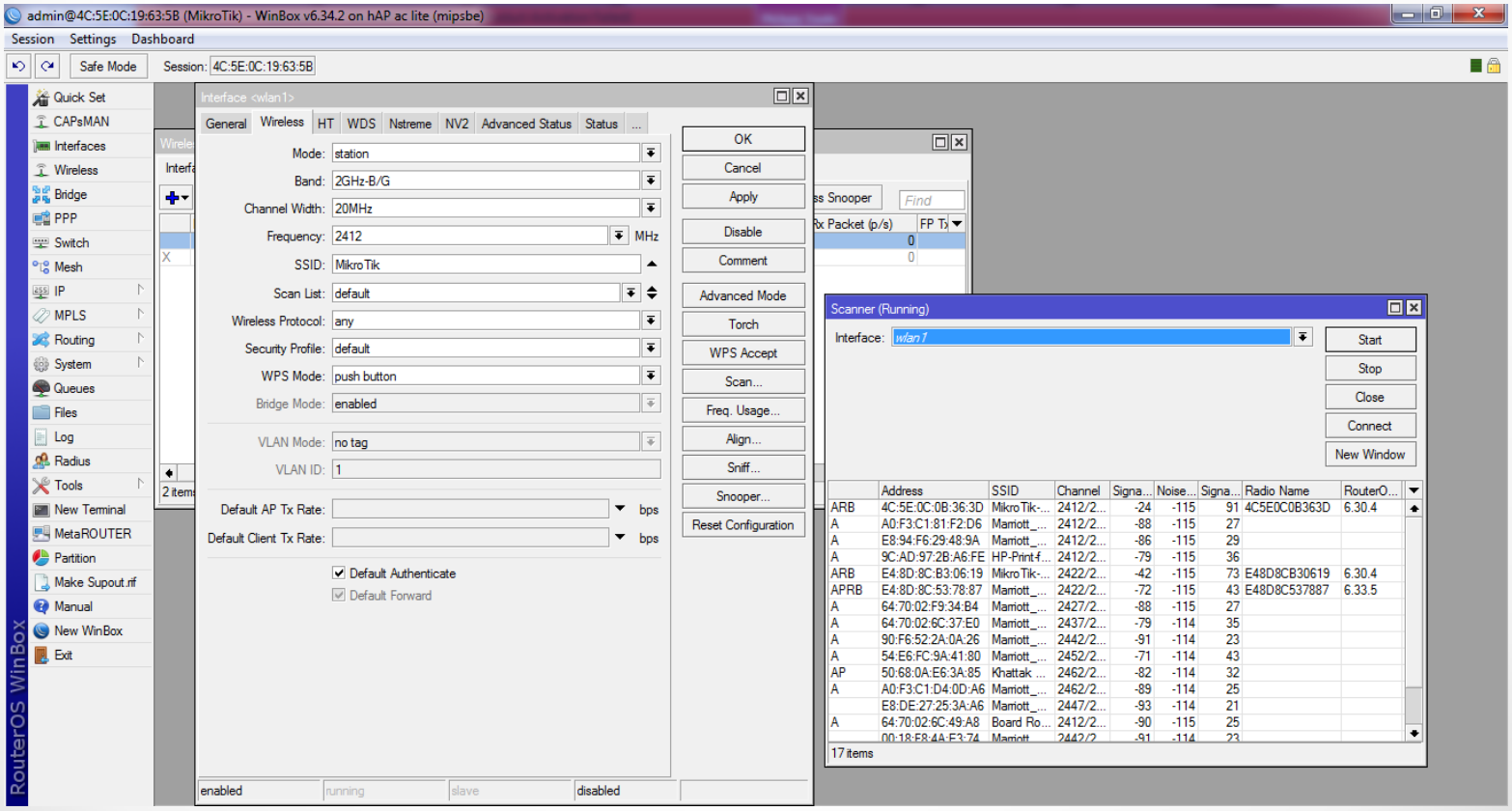


# Basic Features

- Scan
- Frequency Usage
- Snooper

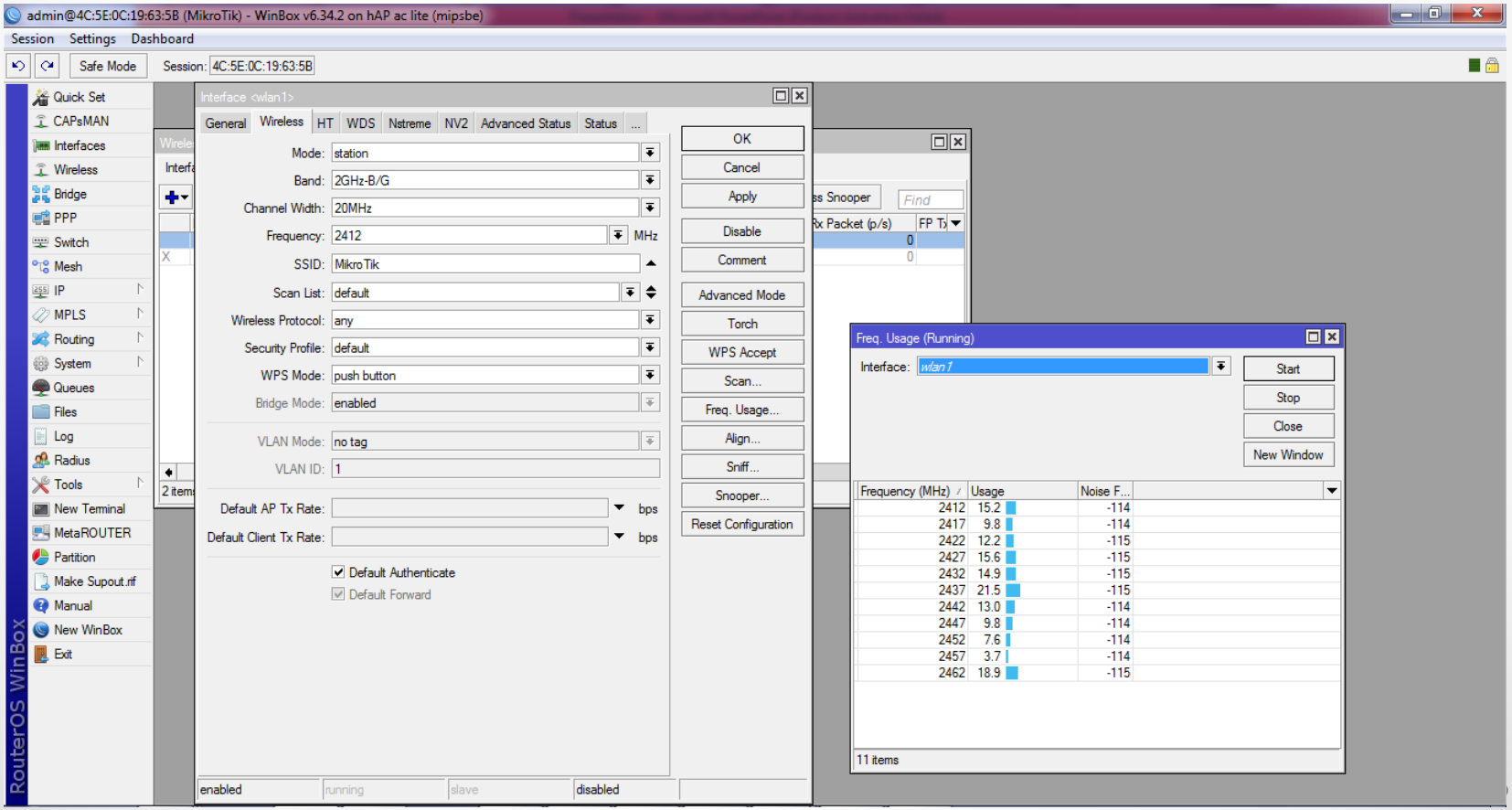
# Basic Feature

- Scan
  - Scan command allows to see available AP in the frequency range defined in the scan-list.



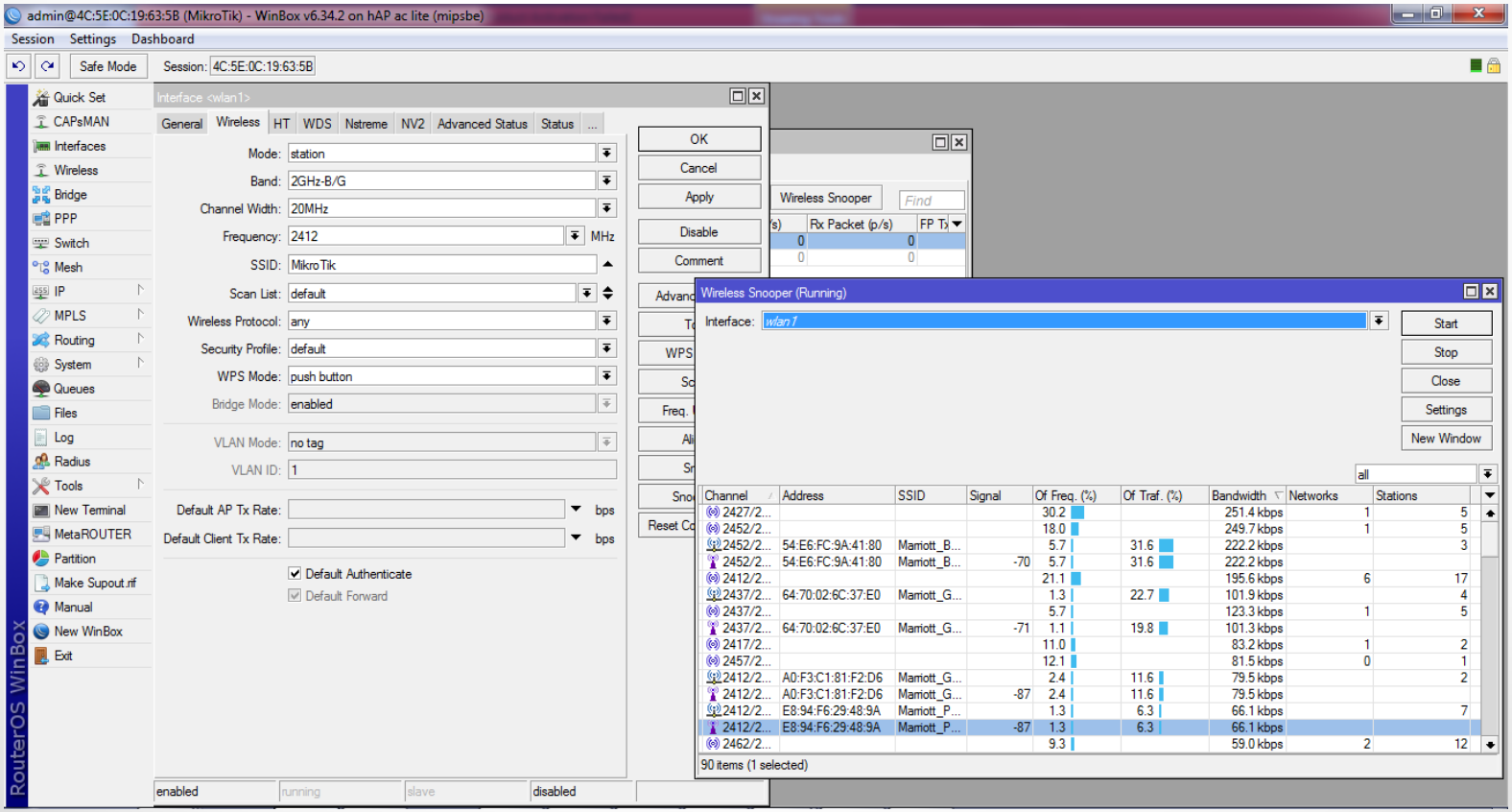
# Basic Feature

- Frequency Usage
  - This tool shows you that usage of frequency.



# Basic Feature

- Snooper
  - This tool monitors surrounding frequency usage, and displays which devices occupy each frequency. It's available both in console, and also in Winbox.



Q&A