

Setting up a PPPoE between RUTX and Mikrotik device

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Introduction

PPPoE (Point-to-Point Protocol over Ethernet) is a specification for connecting multiple computer users on an Ethernet local area network to a remote site through common customer premises equipment, which is the telephone company's term for a modem and similar devices. PPPoE can be used to have an office or building-full of users share a common Digital Subscriber Line (DSL), cable modem, or wireless connection to the Internet. PPPoE combines the Point-to-Point Protocol (PPP), commonly used in dialup connections, with the Ethernet protocol, which supports multiple users in a local area network. The PPP protocol information is encapsulated within an Ethernet frame.

This article provides a guide on how to configure **PPPoE** server on Mikrotik and how to connect RUTX router, Windows computer to it.

Prerequisites

- Any RUTXxx device.
- One MikroTik router (this guide was created by using MikroTik RB750Gr3).
- Windows 10 computer. (Mikrotik and RUTXxx configuration will also work with other OS platforms)
- WinBox application (it is used to access the MikroTik router).

Topology

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Mikrotik (server) configuration

Connect to MikroTik by using **WinBox** application and follow all the further steps to create PPPoE server on LAN port 5.



1. Open **Bridge** settings.
2. Navigate to **Ports** section.
3. Select **ether5**.
4. Press **Delete**.



1. Open **IP** settings.
2. Select **Pool** settings.
3. Press **Add** button.
4. Create a **Name** (anything you want).
5. Write **Addresses**, it is an address range which will be used for PPPoE clients (in this tutorial I used 192.168.5.10-192.168.5.20).
6. Press **Apply**.
7. Press **Ok**.



1. Open **PPP** settings.
2. Select **PPPoE Servers**.
3. Press **Add** button.
4. Write **Service Name** (anything you want).
5. Select **Interface** (ether5).
6. Press **Apply** button.
7. Press **Ok** button.



1. If you have closed the window, open **PPP** settings again.
2. Select **Secrets**.
3. Press **Add** button.
4. Create a **Name** (it will be later used to connect PPPoE server).
5. Create a **Password** (it will be later used to connect PPPoE server).
6. Press **Apply**.
7. Press **Ok**.



1. If you have closed the window, open **PPP** settings again.
2. Select **Profiles**.
3. Press **Add**.
4. Create a **Name**.
5. Set **Local Address** (select your LAN IP-Pool).
6. Set **Remote Address** (select PPPoE IP-Pool which you recently created).
7. Press **Apply**.
8. Press **Ok**.



1. If you have closed the window, open **PPP** settings again.
2. Select **PPPoE Servers**.

3. Double click the **PPPoE server**, which you created before.
4. Change **Default Profile** to PPPoE.
5. Press **Apply**.
6. Press **Ok**.



1. Open **IP** settings.
2. Select **Firewall**.
3. Select **NAT**.
4. Press **Add**.
5. Write **Src. Address** (PPPoE server address).
6. Select **Action** (masquerade).
7. Press **Apply**.
8. Press **Ok**.

RUTXxx client configuration

Access RUTXxx WebUI, go to **Network > LAN** and then press **Edit LAN** button.



Change **Protocol** to **PPPoE**.



Then it will ask you “**Really switch protocol?**” press **SWITCH PROTOCOL**.



Write **Username** and **Password** which you recently created in MikroTik **Secrets** settings. And then press **SAVE & APPLY**. You will lose connection to your router as soon as you save the settings.



Now plug MikroTik router's port 5 to any of the RUTXxx LAN ports.

Windows 10 client configuration

Connect your PC to any of the remaining RUTXxx LAN ports. Go to **Control Panel > Network and Internet > Network and Sharing Center**. Then press **Set up a new connection or network**.



Select **Connect to the Internet** and then press **Next**.



If you already have internet, select **Set up a new connection anyway**, if you don't, skip this step.



Select **Broadband (PPPoE)**.



Write **User name** and **Password** (use the same ones, you used to connect the router) and press **Connect**.



When it is done connecting it will show this message:



Check whether you have internet connection (try to access any website).