Command Line Interfaces RutOS

The information on this page is updated in accordance with the **00.07.4** firmware version .

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Introduction

A **command line interface** (**CLI**) is a means of interacting with a computer program or system where the user (or client) issues commands to the program in the form of successive lines of text (command lines). A program that handles the interface is called a **command language interpreter,** or **shell**.

Teltonika-Networks devices support a variety of different command line interfaces, all of which will be described in this article. Only the methods of reaching and logging in via a specified CLI will be described here, not any specific command usage.

In all cases, the CLI login information for Teltonika-Networks devices is:

- User name: **root**
- Password: **router's admin password**

CLI (WebUI)

Teltonika Networks routers and gateways have a command-line interface built-in to their **Web User Interfaces** (**WebUI**). This is the most accessible method because all you need is a web browser.

To access the WebUI CLI, **log in to the WebUI**, and navigate to **System → CLI**. Type in the login name "**root**" and the **router's admin password**. You should be greeted with a message such as this:

SSH

Secure Shell (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network. The best-known example application is for remote login to computer systems by users. The login process is different for different operating systems. Therefore, this section is split into two parts: **Linux** and **Windows**.

Linux

Linux operating systems support many applications that can be used to log in to a router or a gateway via SSH, but the most common is **Terminal**, which we'll be using for this example.

Open a new Terminal window, type **ssh root@192.168.1.1.** If this is your first time logging in, you might be asked to clarify whether you really want to log in. In that case, just type **yes**. Then type in the **router's admin password** to finish the login process.

RSA key

There is a possibility to use an RSA key instead of a password when logging in via SSH. This process is described **here** in detail.

Windows

To access SSH on the Windows OS, you will need an SSH client application. The most common is **PuTTY** - free, open source SSH and Telnet client, which we'll be using for this example. You can download PuTTY from **here**.

Launch PuTTY and select the **SSH** option. Type in the **router's LAN IP address** into the **"Host Name (or IP address)"** field, specify the SSH port into the **"Port"** field (**22** by default), and **click "Open"**:

In the next window, type in the login name **root** and the **router's admin password**. You should be greeted with a message such as this:

Note: Newer Windows 10 editions already have a built-in SSH client. see https://docs.microsoft.com/en-us/windows/terminal/tutorials/ssh

RSA key

There is a possibility to use an RSA key instead of a password when logging in via SSH. This process is described **here** in detail.

RS232/RS485 console (only with RUT955)

It is also possible to control routers or gateways via RS232 or RS485 consoles if they have those serial ports. For this, you will need the adequate cables:

Straight-through Female/Male RS232 cable

Null-modem (crossed) Male/Male RS232 cable

USB to RS232 (Male) cable

You can log in to the RS485 console with a 2-wire cable or you can use the RS485 jack that comes with the router for one end; the other end of the cable basically depends on your end device's capabilities (it can be USB, RS232, etc.)

Router configuration

The configuration on the device side is fairly simple. Just **log in to the device WebUI**, go to **Services → Serial Utilities → Console,** enable the instance, and configure the rest according to your serial device settings. In the example below, default values were used.

Linux

To login from a Linux PC, you'll need an application for serial communication like **minicom** or **gtkterm**. For this example, we'll be using minicom. You can download it by typing these lines into the Terminal:

`sudo apt-get update` - downloads a list of newest software packages.

`sudo apt-get install minicom` - downloads and installs minicom.

Once you have installed minicom, you can run it with the command **`sudo minicom`** from the Linux Terminal. This will open a new console window where you will need to set some things up. Press **Ctrl + A** at once on your keyboard, then press **"Z"** which will direct you to the settings menu:

Then press **"O"** on your keyboard. This will direct you to the main settings menu. From there you should specify the name of the serial device and the same parameters that you entered in the router's configuration. A picture with corresponding parameters is presented below:

Once done, press **"Enter"**. In the next menu, you can save these settings as defaults by selecting

Save setup as dfl so that you would not need to set everything up the next time you use the console.

To access the console, press **"Esc"** on your keyboard. It will take you to a login window - there enter the login name **root** and the **router's admin password**.

Windows

To log in from a Windows PC, you'll need an application for serial communication. The most common is **PuTTY** - a free, open source SSH and Telnet client, which we'll be using for this example. You can download PuTTY from **here**.

First you must find out which **Serial line** (or **COM port**) your cable uses. To do so, go to Windows **Device Manager** (you can find it easily via the search field or in the Control Panel). Find **Ports (COM & LPT)** in the device list and expand that section. Locate your serial device (depends on the type of cable) and take note of its **COM port number** (**COM3** in our example):

Launch PuTTY and select the **Serial** option under the "Connection type" field. Specify the COM port (**COM3** from our example) in the "Serial line" field and the Baud rate from your router's configuration in the "Speed" field (**9600** from our example) and click "Open":

In the next window type in the login name *root* and the **router's admin password**. You should be greeted with a message such as this:

See also

- SSH RSA key authentication (Linux)
- SSH RSA key authentication (Windows)

External links

- https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html - PuTTY downloads page