Quick Start

Use the ELA products with Linux

The ELA softwares only run on Windows. To communicate to our reader from a Linux system, you need to use a terminal in a serial mode or IP mode, depending on the reader.

In the rest of this tutorial, we will use Putty under Ubuntu.

1 Install Putty

- **Open a console** (under Ubuntu, press `Alt` and `F2`, then type `xterm` and confirm with `Enter` key).
- **Type `sudo apt-get install putty`**.
  Enter the password: `root`. Under Ubuntu, the characters do not appear on the screen.
  - The console will ask you to confirm with `y` ou `n` key. Tap `y` to accept.
  - Once installation is completed, move on to the next step.

2 Launch and Putty settings

- In the console previously opened, enter `sudo putty` & to open Putty in a new window.
- In the Putty window, **go to the Session section** (which should be already selected when the program starts.)
- **Enter the connection information:**
  - For a reader with IP communication (Ethernet or Wifi), **check the box Raw** then enter its IP address in the **Host name (or IP address)** field, and its communication port: **10001**. The latter value is the default port for ELA’s products.
  - For a reader with a serial communication, **check the box Serial** then enter the **port name** in the **Serial Line** field. To get the port name, please refer to paragraph 3 Get the port name. In the **Speed** field, enter the reader speed. It is set to **9600 bauds** by default.
- **Click on the Terminal section** in Putty, and select **Force on** for the **Local echo** and **Local line editing** fields. Those options allow to see what is written in the serial terminal.
- **Click on Open** to establish the communication with the reader; then send commands via the terminal which just opened.
3 Get the serial port’s name

- **Open a console** (press `Alt` and `F2`, then type `xterm` and confirm with `Enter` key).
- **Type** `sudo ll /dev/serial/by-id` to display the COM ports available on the computer.
  Find the line containing **Silicon Labs CP210x**.
- At the end of this line, the reader COM port name appears. For instance:
  `[...]Silicon Labs CP210x[...]` → `/..../ttyUSB0`. The port name is: **ttyUSB0**
- In the **Serial Line** field of Putty, enter `/dev/port_name` (here, the COM port is `ttyUSB0` : you have to enter `/dev/ttyUSB0`).

4 Reminders on ELA’s structure and use of commands

For a complete list of the ELA’s commands, refer to our Software Datasheet MCHD:
Reader Communication & setup protocol, available on our website
http://www.rfid-ela.eu/download.html

All commands have the same syntax:

```
[AABBCC]
```

- A command starts by `[` and finishes by `]``
- “AA”: Command number
- “BB”: Command parameter
  - 6 hex characters for commands A1 and A3
  - 2 hex characters for all other commands
- “CC”: Reader ID
  - Broadcast to all readers: 00

If the reader understands the command, it will answer `[OKAABBCC]`.

If you want to get some help about a command, replace the closing bracket `]` by `?`.

The more important command is: `[990101]`.
It shows the list of all the commands available for the reader, and the actual value for the corresponding parameters.
You can see below a sample line from the `[990101]` command:
For example, if you want some help about the speed command, send [130000?], you will get the answer alongside. To get the actual speed of the SCIEL CARD, you must send [120001]. It will answer [120001] because we are at 9600 bauds.

To set the SCIEL CARD’s speed to 115200 bauds, you must send [130401]. The reader will answer [OK130401], but you won’t see it because the Lantronix module is still at 9600 bauds, so it won’t understand the SCIEL CARD’s message (this is a particular case; usually you will get the answer message because the speed stays the same).

------RS232 Serial Speed------
Serial port Communication Speed.

get: [12xx01]
set: [13xx01]
-00h 9600 Bauds
-01h 19200 Bauds
-02h 38400 Bauds
-03h 57600 Bauds
-04h 115200 Bauds

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