For automatic scanning of devices

For automatic scanning of devices, this is not an issue. The unique serial string is already known by each device and therefore also if it contains unauthorized digits. The device itself works out a correct Modbus address, during boot-up, and will reply using the correct address.

5. Channel Monitor

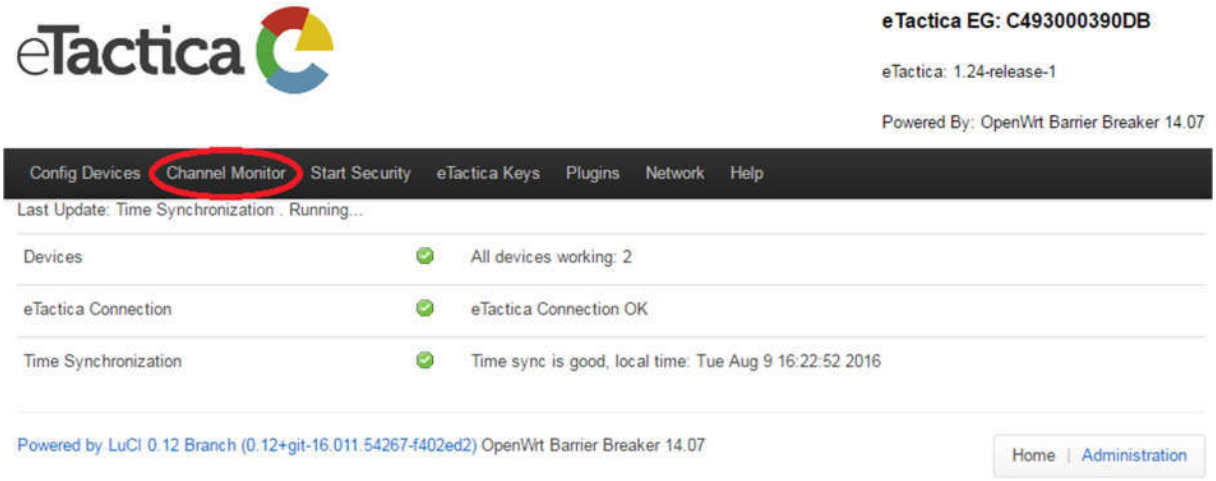
The Channel Monitor lists all connected devices and displays all measurements.

Step 1 - Connect to your Gateway

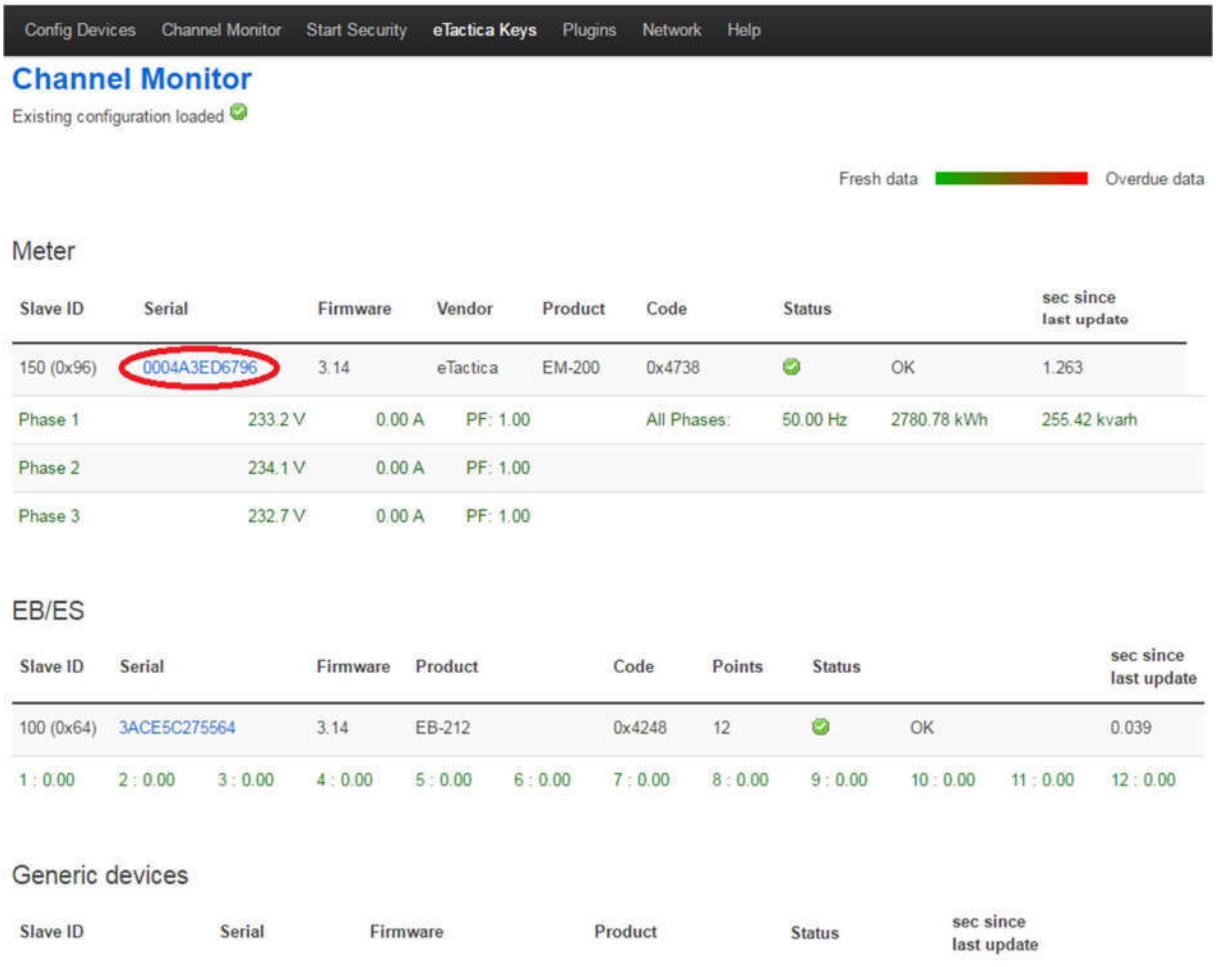
If you are not connected to your gateway device, please see chapter 2, *Connecting to Gateway*.

Step 2 - Enter Channel Monitor page

On the home page of your administration web console, select *Channel Monitor* from the top menu.

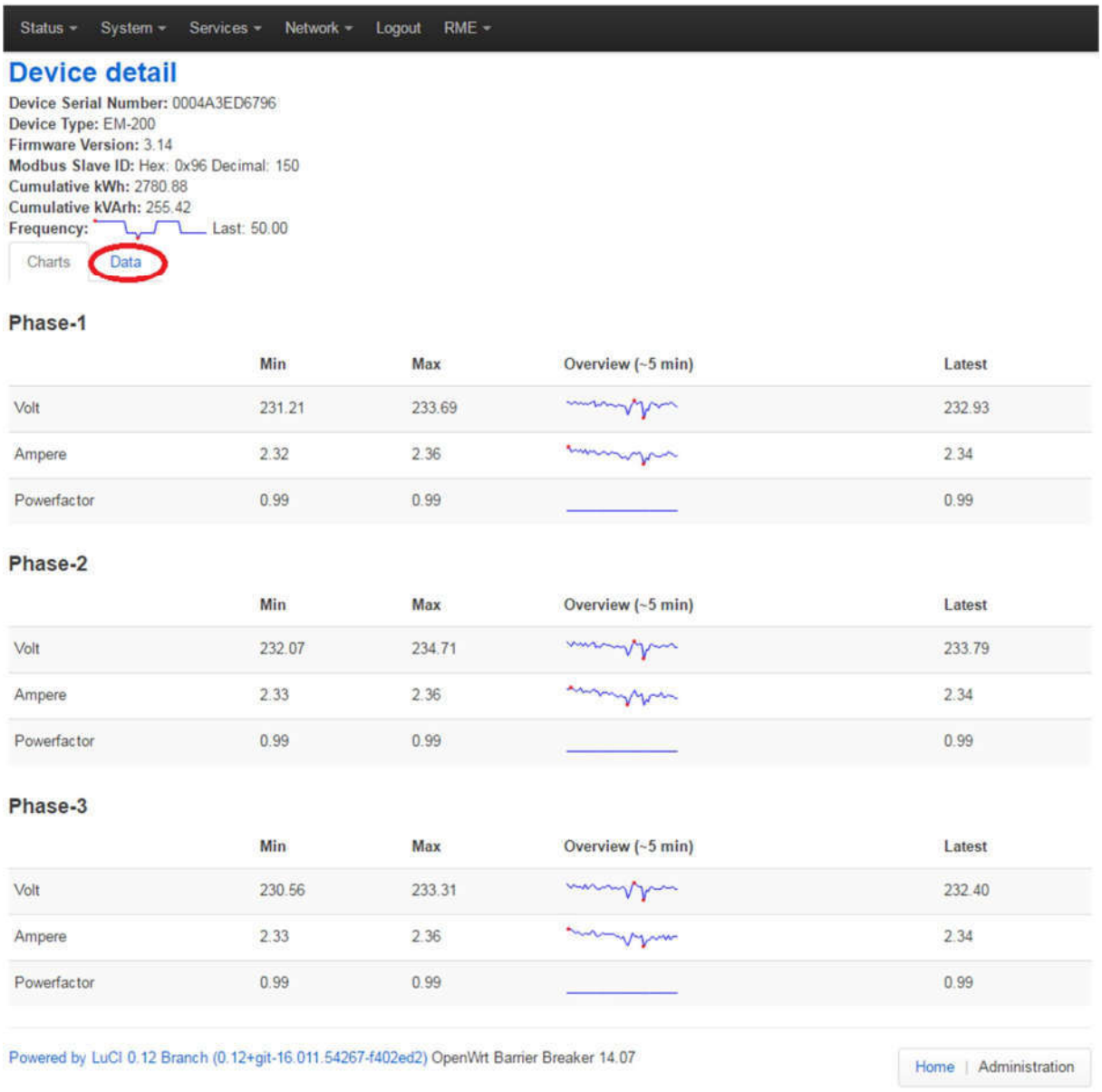


Here you can see a list of all connected devices, information about the type, serial number and firmware version. You can also see the latest readings.



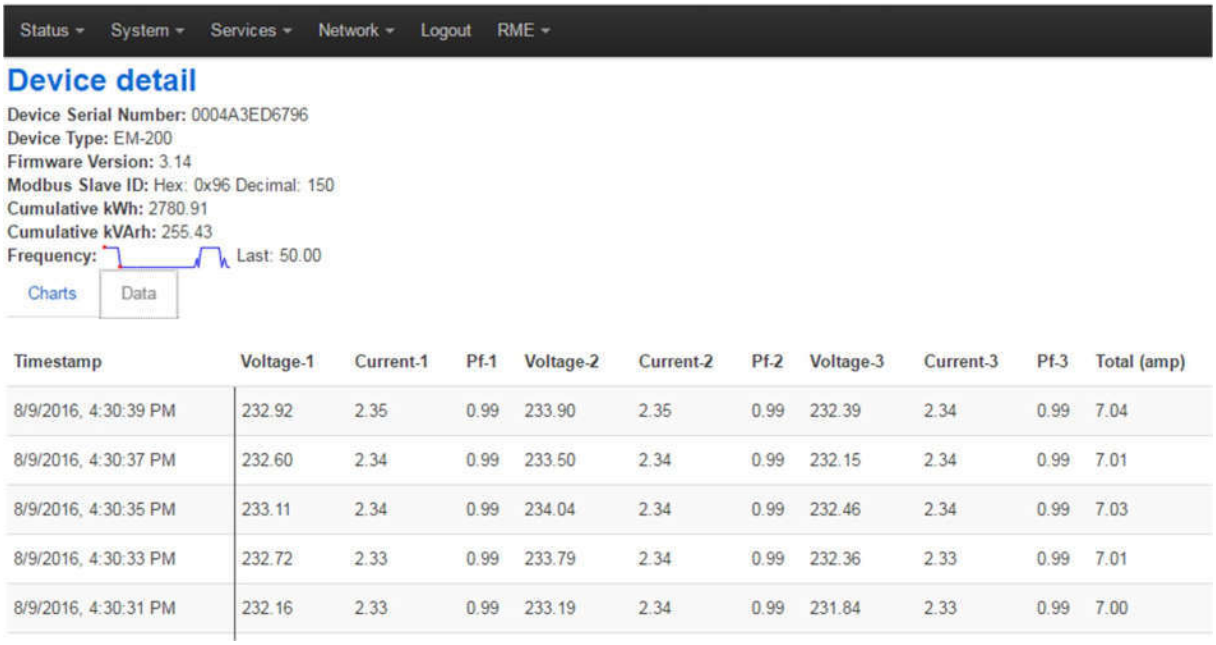
Step 2 - Go to the Device detail page

Click on the serial number of device of interest. Here you can see various information about that device, all measurements, both in numbers and also in small graph with up to 5 minutes of data (starting when the page is opened).



Step 3 Go To the tabulated data page

Click on the *[Data]* button to see all measurements in tabulated form.



Timestamp	Voltage-1	Current-1	Pf-1	Voltage-2	Current-2	Pf-2	Voltage-3	Current-3	Pf-3	Total (amp)
8/9/2016, 4:30:39 PM	232.92	2.35	0.99	233.90	2.35	0.99	232.39	2.34	0.99	7.04
8/9/2016, 4:30:37 PM	232.60	2.34	0.99	233.50	2.34	0.99	232.15	2.34	0.99	7.01
8/9/2016, 4:30:35 PM	233.11	2.34	0.99	234.04	2.34	0.99	232.46	2.34	0.99	7.03
8/9/2016, 4:30:33 PM	232.72	2.33	0.99	233.79	2.34	0.99	232.36	2.33	0.99	7.01
8/9/2016, 4:30:31 PM	232.16	2.33	0.99	233.19	2.34	0.99	231.84	2.33	0.99	7.00

The newest measurements are added to the top of the list.

6. Device Plugins

Add/Remove Device Plugins

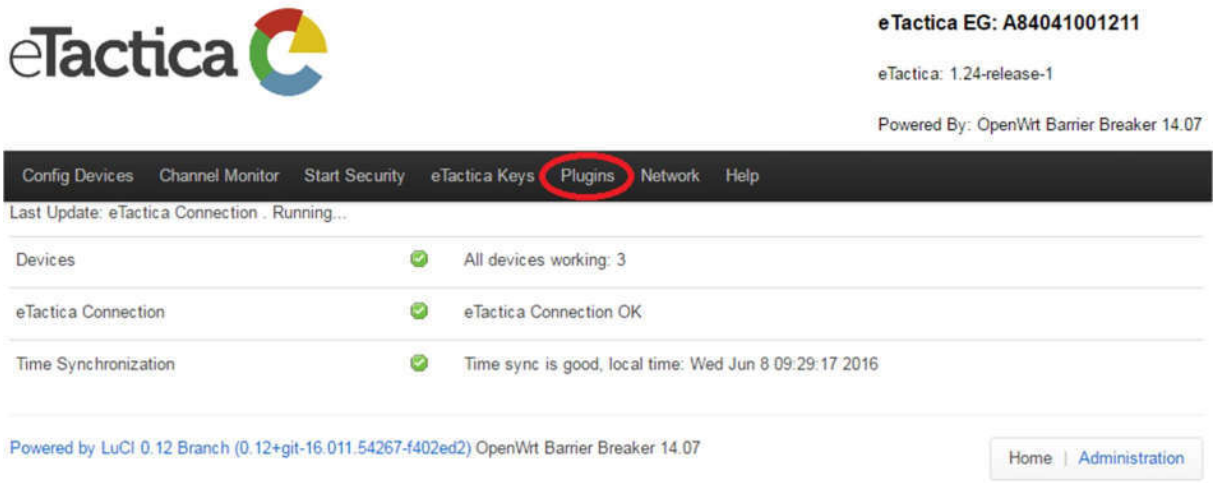
The eTactica gateway uses plugins to support all data collection devices, both 3rd party and our own eTactica devices. These plugin scripts tell the gateway how to access a particular device, and what values to read from that device. The administration console lists all the plugins, allows you to add new plugins to support new devices, create new plugins, edit plugins that are installed and delete plugins that might conflict.

Step 1 - Connect to your Gateway

You need to be successfully connected to your gateway device. If not, see chapter 2, *Connecting to Gateway*.

Step 2 - Go to the plugins page

From the home page of the administration web console of your device, select *Plugins*.

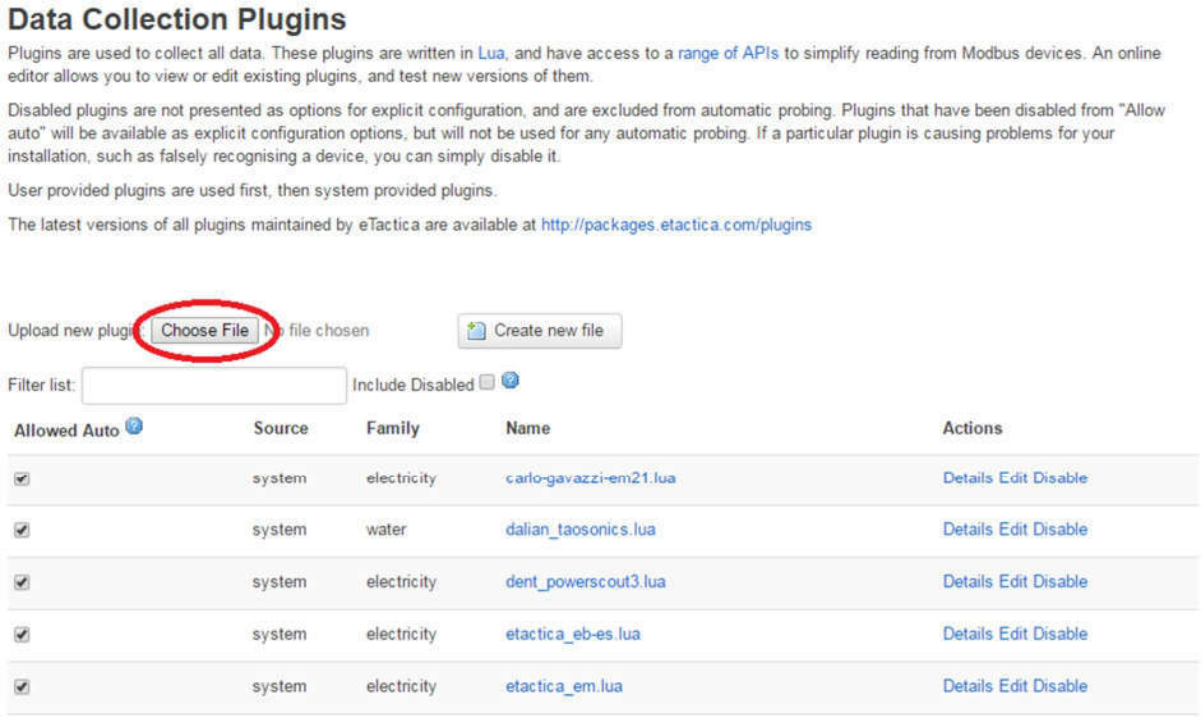


This will require you to login, using the root password you have configured earlier. If not, please see chapter 9, *Password Settings*.

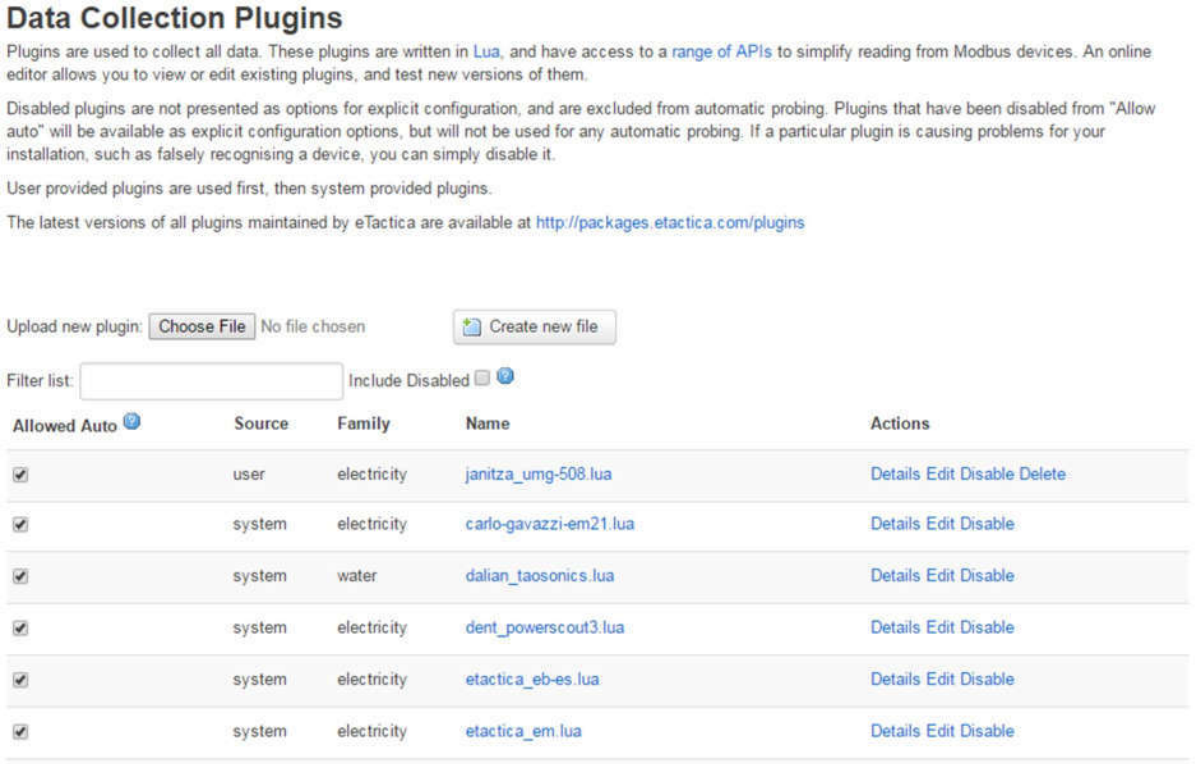
Step 3 - Add new plug-ins

On the Plugins configuration page, you can see the list of already installed plugins that the gateway is now able to use for a data collection device access.

To add more plugins to that list, press the *[Choose File]* button and select the script file from your computer to upload to your gateway.



In the following example, we have selected a Janitza UMG-508 meter plugin and it will be added to the list of plugins.



The latest versions of all plugins maintained by eTactica are available at http://packages.etactica.com/plugins

You can create your own plugin, either from scratch by pressing the *[Create new file]* button or by modifying an existing plugin by clicking *[Edit]* for the plugin you want to modify. Then you do the modifications you want and save the plugin under a new name. There is a link to further documentations on the plugin API on the plugin

Clicking the name of a plugin or will show you more information for that plugin. Disabled plugins are not presented as options for explicit configuration, and are excluded from automatic probing. Disabled plugins will disappear from the list unless the tick box is checked. Plugins that have been disabled from "Allowed auto" will be available as explicit configuration options, but will not be used for any automatic probing. If a particular plugin is causing problems for your installation, such as falsely recognizing a device, you can simply disable it.

7. Modbus Settings

The eTactica gateway, as a data collecting device, uses the Modbus/RTU protocol over an RS485 serial line to communicate with one or many connected measurement devices. Up to 32 devices can be connected at once.

Default configuration

By default, the eTactica gateway is configured to maintain a connection to eTactica servers, posting real time measurements from configured devices. All connected devices are listed up, using the administration web console on the gateway, where the user types in the Modbus address required to identify each connected device (For device configuration, see chapter 4, *Device Configuration*).

The gateway continuously makes Modbus/RTU requests to each device and forwards these readings to the eTactica server database.

The RS485 interface is by default configured with the following protocol settings, according to Modbus/RTU:

- 19200, baudrate
- 8, data bits
- Even, parity
- 1, stop bit

Furthermore, the eTactica gateway can also be used as a simple Modbus/TCP to Modbus/RTU bridge that is connected to a 3rd party management or data collecting software. All Modbus queries are then handled by the 3rd party software.

In the following, a step by step guide is provided for:

- Edit the serial protocol settings
- Configure the Modbus/TCP access

Edit RS485 serial settings

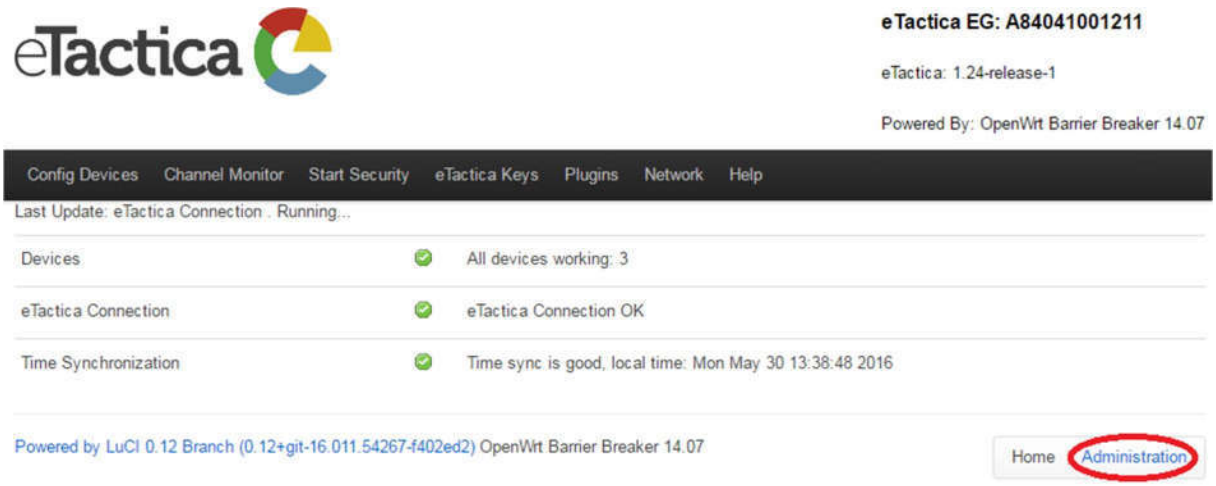
The user is able to change the default serial settings for the RS485 interface.

Step 1 - Connect to the Gateway

If you are not connected to your gateway device, please see chapter 2, *Connecting to Gateway*.

Step 2 - Go to Administration page

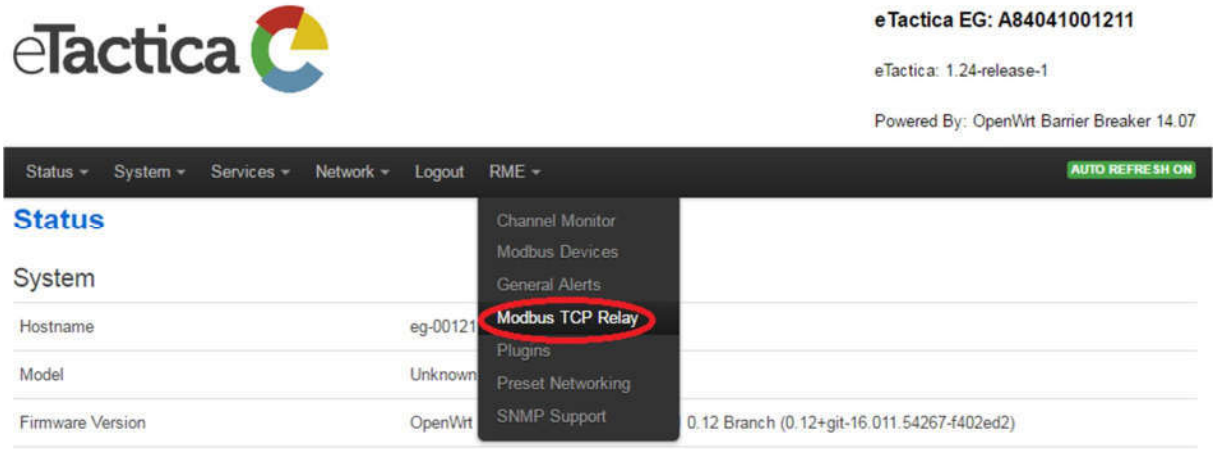
From the home page of the administration web console of your device, click the *[Administration]* link.



This will require you to login, using the root password you have configured earlier. If not, please see chapter 9, *Password Settings*.

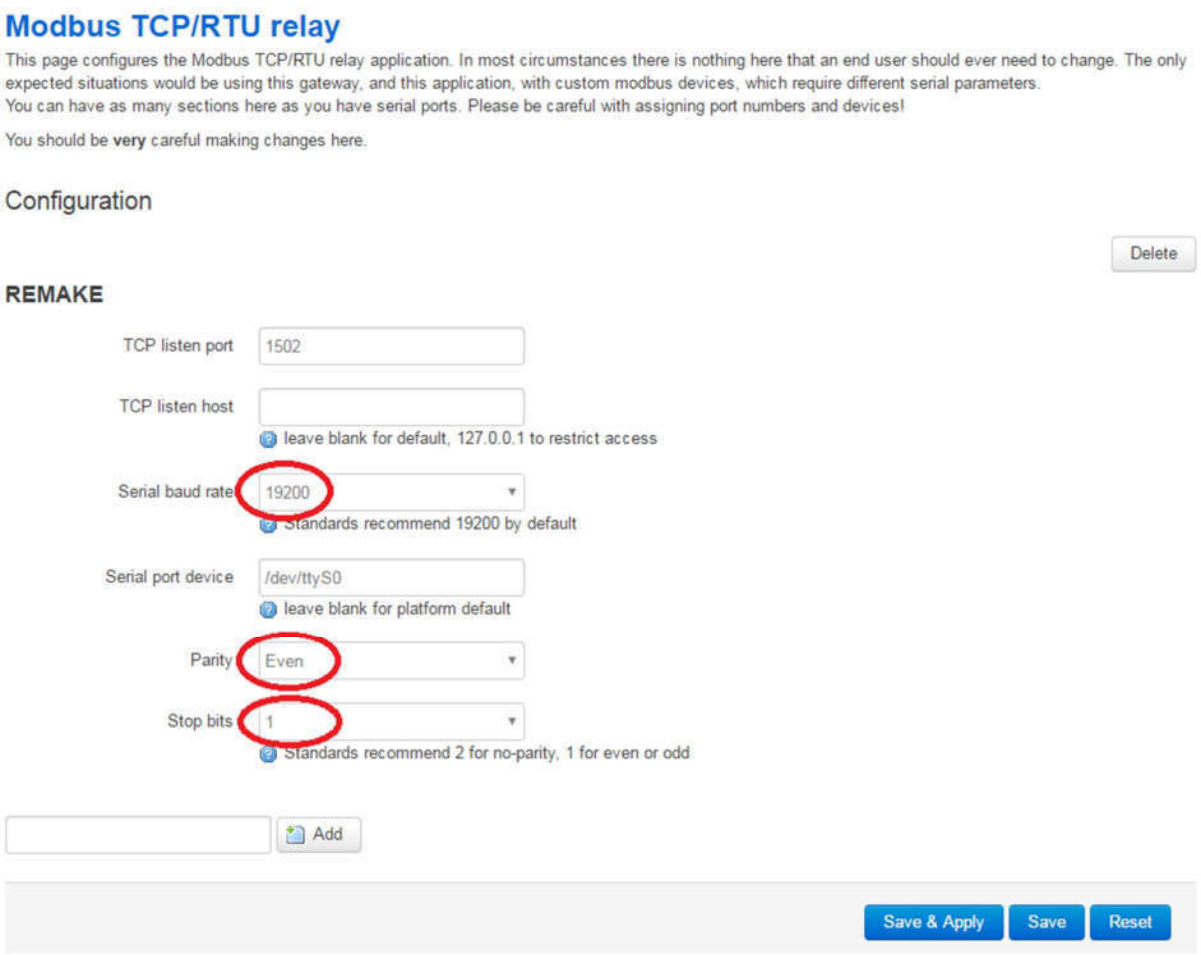
Step 3 - Go to the Modbus TCP/RTU relay page

From the top menu, choose *RME->Modbus TCP Relay*.



Step 4 - Change settings

You can now change the serial settings; baud rate, parity and stop bits.



Step 5 - Save settings

When done, press the *[Save & Apply]* button to keep and apply the new settings.

Modbus/TCP

By default, the eTactica gateway is pre-configured to communicate with eTactica servers. However, the gateway also provides a Modbus/TCP to Modbus/RTU bridge interface on TCP port 1502. This allows the use of any third party Modbus software to query devices connected to the Modbus/RTU port of the gateway from a remote network.

Note

Using this Modbus/TCP relay at the same time as the default eTactica service, requires some caution. The serial network has only a limited bandwidth and each Modbus request must be handled in sequence. Trying to operate the relay of requests at a high rate, when you also have multiple devices configured for eTactica, may result in intermittent timeouts and communication failures.

- The minimum polling interval of the Modbus/TCP Master must be set to 500 msec or longer.
  This is the timeout used on the serial side and if your TCP master waits for less than this time, you may timeout when the device is still sending a valid reply.

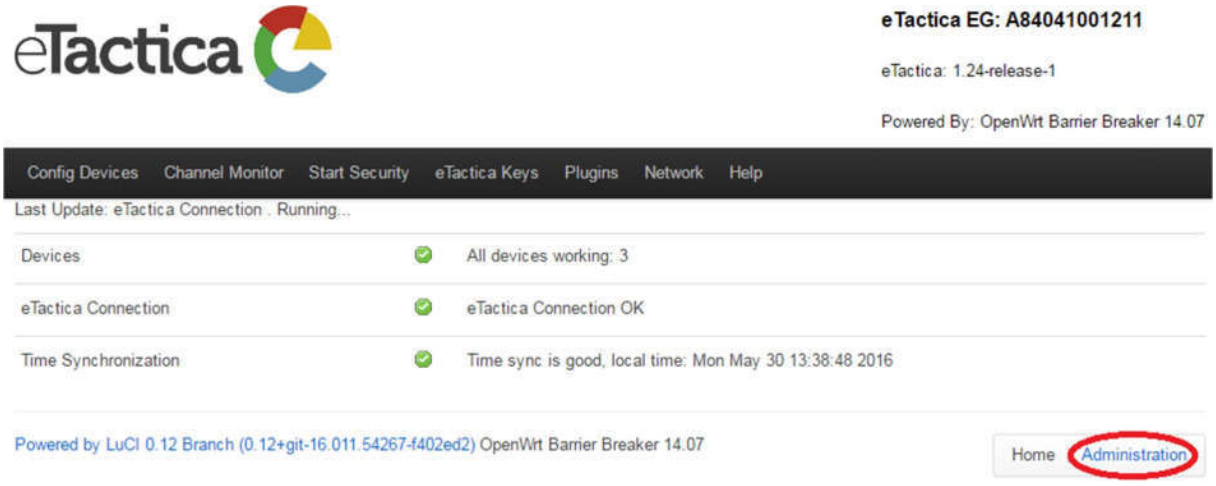
By default, this bridge/relay port listens on all interfaces. If you would like to disable remote access to this service, please change only the *listen_host* property in the configuration page, see below. Note that this bridge service is used internally, so it should not be completely disabled.

Step 1 - Connect to the Gateway

If you are not connected to your gateway device, please see chapter 2, *Connecting to Gateway*.

Step 2 - Go to Administration page

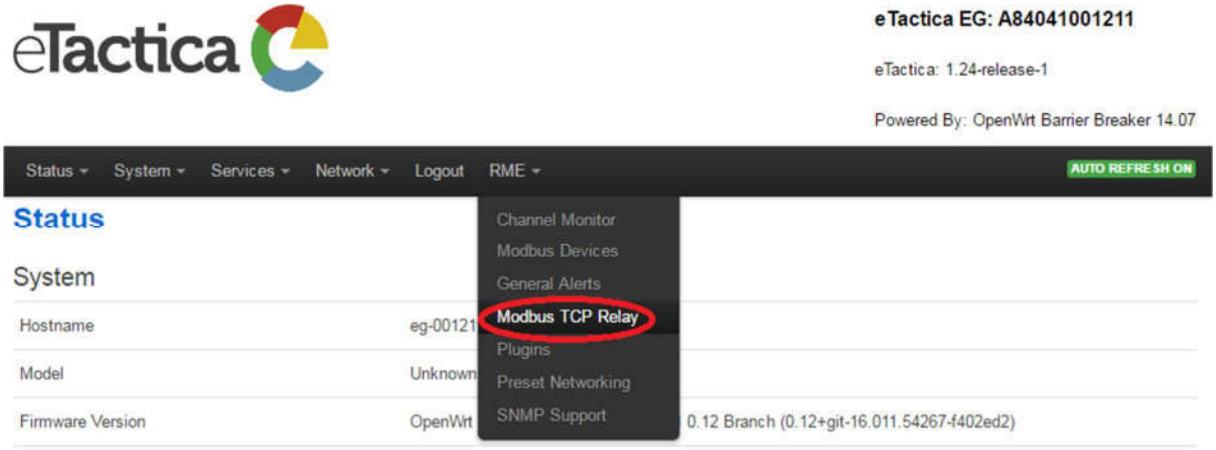
From the home page of the administration web console of your device, click the *[Administration]* link.



This will require you to login, using the root password you have configured earlier. If not, please see chapter 9, *Password Settings*.

Step 3 - Go to the Modbus TCP/RTU relay page

From the top menu, choose *Network->Modbus TCP Relay*.

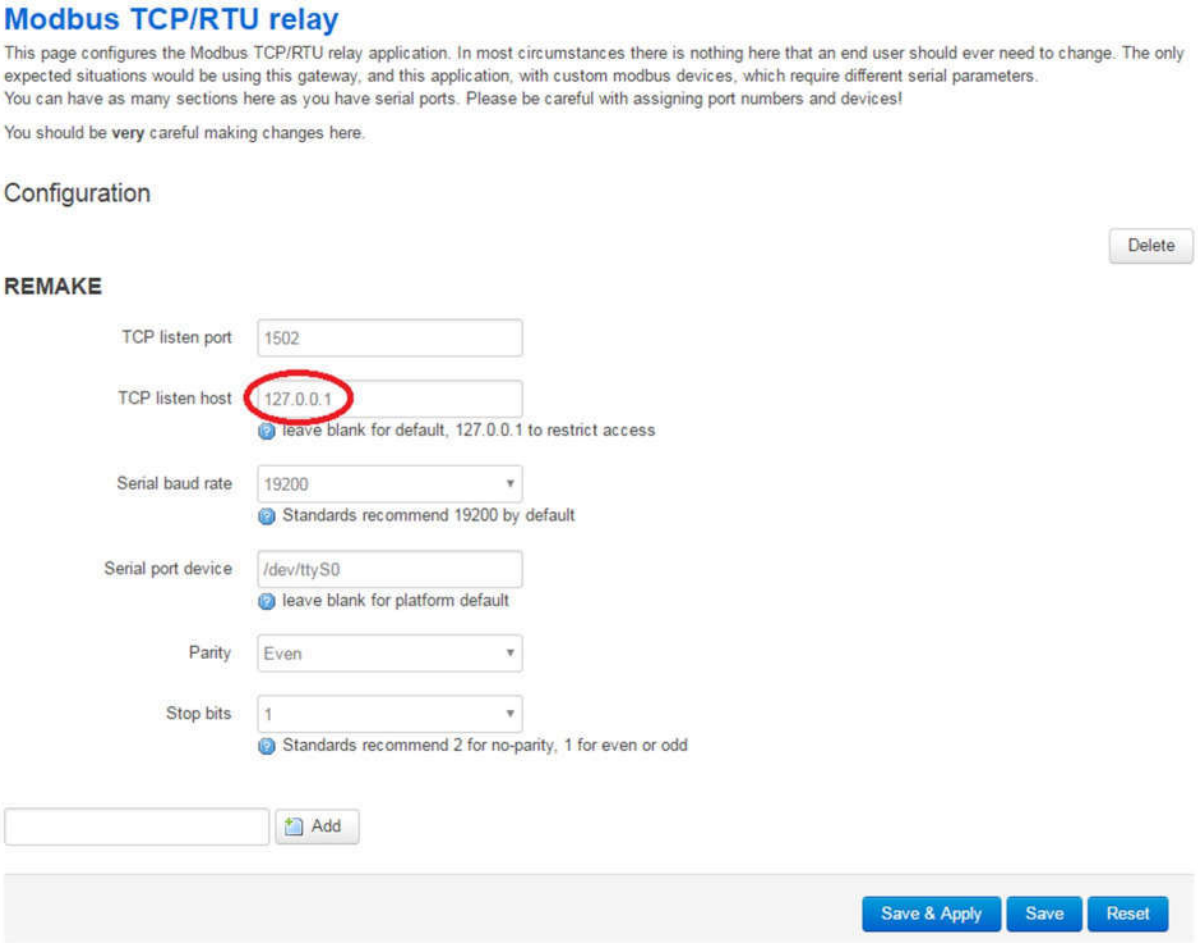


Step 4 - Restrict access

By default, the *TCP listen host* field is blank. This means that the TCP access is open for everyone, via port 1502.

To restrict any access or disable Modbus/TCP for 3rd party devices, insert 127.0.0.1 to the *CP listen host* field. This will only allow the localhost or the gateway itself, to use the internal TCP relay service.

Note
It is important to note that you can t restrict access to a single or several IP addresses on your network. Either Modbus/TCP is open to all devices on your network, or it is completely blocked. The only allowed IP address for this field is 127.0.0.1.



Step 5 - Save settings

When done, press the *[Save & Apply]* button to keep and apply your settings.

8. Network Settings

In this chapter, you will find information related to the following network settings:

- Change to static IP address
- Enable/Disable WiFi interface
- Internet connection via WiFi (No Ethernet connection)
- Advanced WiFi parameters

Static IP address

In some installations, the network facilities require the use of statically configured networking. The eTactica gateway supports this, but it requires manual configuration.

Required Information

The following details are *required* from the network manager:

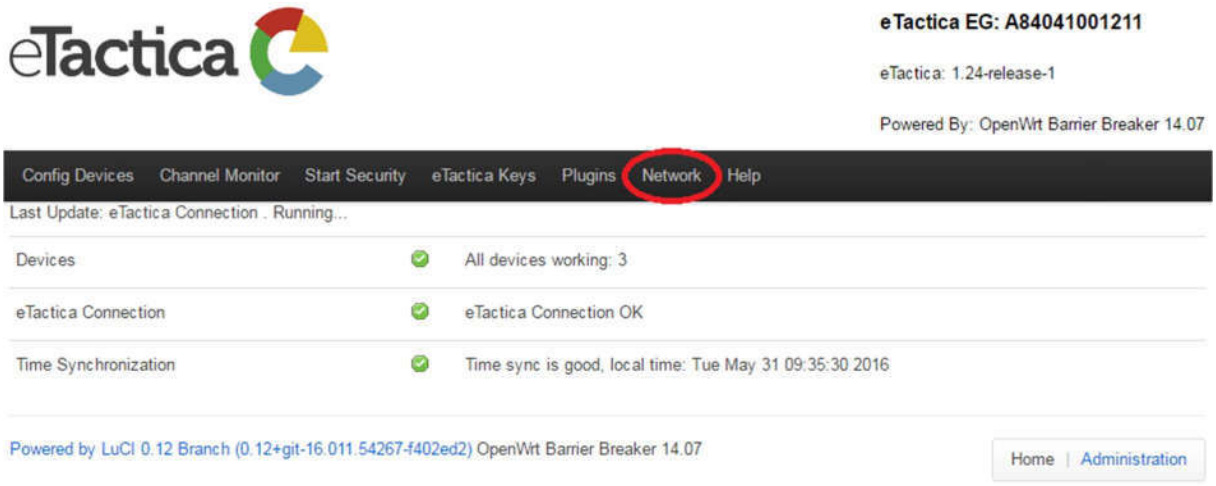
Required Information	Example Value
IP Address	10.0.42.141
Subnet Mask	255.255.255.0
Gateway	10.0.42.254
DNS Server	10.0.1.1

Step 1 - Connect to your Gateway

If you are not connected to your gateway device, please see chapter 2, *Connecting to Gateway*.

Step 2 - Enter Networking configuration page

On the home page of your administration web console, select *Network* from the top menu.
Alternatively, to access network settings, you can use the *[Administration]* link and from there you select *Network->Interface* from the top menu.



This will require you to login, using the root password you have configured earlier. If not, please see chapter 9, *Password Settings*.

Step 3 - Edit the network interface you wish to configure statically

Press the *[Edit]* button, for your interface. This could be either the WiFi or the Ethernet interface, but will generally be the Ethernet interface (LAN).