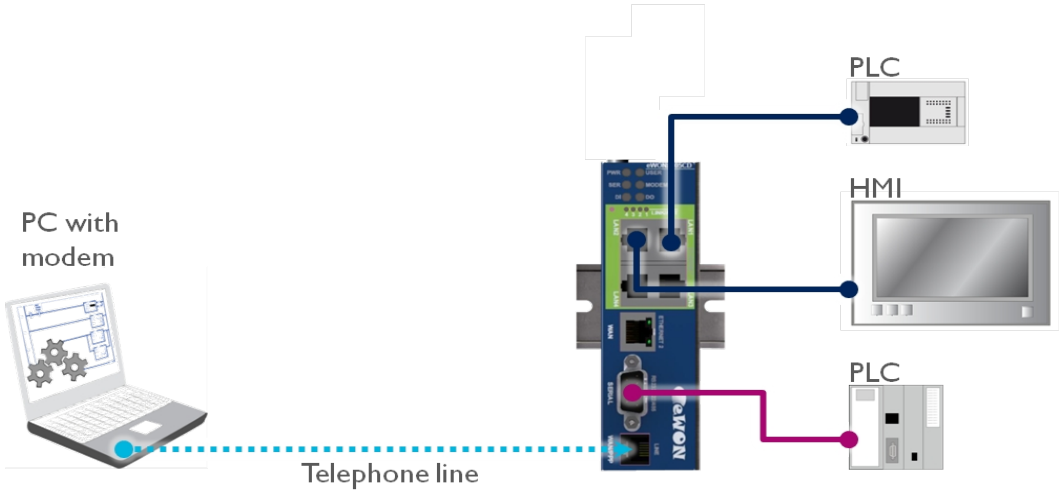
eWON Application User Guide
AUG 013 / Rev 1.1

eWON Direct Phone Connection



Content

This document explains how to reach the eWON through a point-to-point PPP connection (telephone line).

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Hardware and software requirements

Hardware requirements

In order to follow this guide you will need:

- 1 eWON with integrated modem (for example : eWON 2005CD PSTN)

Software requirements

eWON configuration software:

The eWON is configured through its web server. So all you need is a standard Web Browser software like Internet Explorer[i] or Firefox[ii].

Additionally we suggest you to download the eBuddy utility on our website : http://support.ewon.biz.
This software allows to list all the eWONs on your network and to change the default IP address of an eWON to match your LAN IP address range. With eBuddy you can also easily upgrade the firmware of your eWON (if required).

Other programming software:

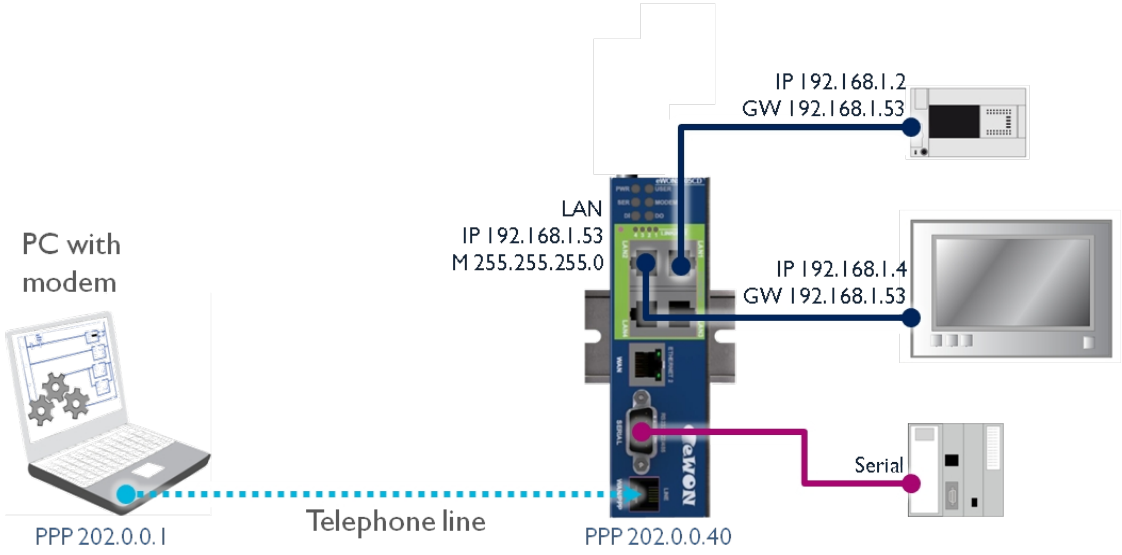
To create the dial-up connection instance on your PC, you have the choice between using the dial-up connection utility included in Windows or, alternatively, you can use ***eGrabit*** that allows to create and manage a dial-up connection on your PC. Both procedures are explained in this manual. If you go for the eGrabit solution, you can download eGrabit free of charge from our website: http://support.ewon.biz.

eWON Firmware Version

To be able to follow this guide your eWON needs a firmware version 5.0 or higher. A simple way to realize the eWON firmware upgrade is to use eBuddy, the eWON software companion.

Introduction

With its embedded PSTN, ISDN or GSM/GPRS modem, the eWON is your access point to field applications and your service gateway to perform *remote maintenance* on distant equipments.



In this document we will see how to reach your eWON and devices from your PC through a standard telephone line.

Here are the steps to make a remote connection work:

- Configure your eWON for incoming PPP connections
- Configure the dial-up connection on your PC

***If you want to reach a device connected to the Ethernet port of your eWON*:**

- Enable the IP forwarding between IP interfaces on your eWON
- Set the eWON LAN IP address as gateway on the devices connected to the LAN port

Once the phone connection is established, by default, the eWON as PPP Server will receive the IP address 202.0.0.240 (eWON's line port) and the PC as PPP Client the IP address 202.0.0.1 (PC).

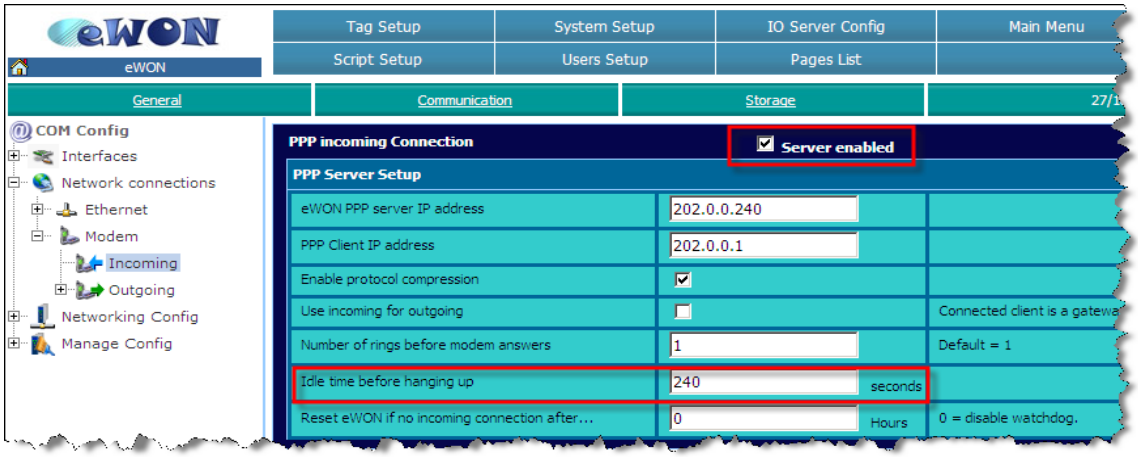
In our example, the LAN IP address of our devices (behind the eWON) are 192.168.1.2 and 192.168.1.4. The eWON LAN IP address is 192.168.1.53.

eWON Configuration

Incoming Connection Configuration

Open the eWON web interface.

Configuration → System Setup → Communication → Network Connections → Modem → Incoming



In ***Modem*** – ***Incoming***, make sure that the ***PPP incoming Connection*** is enabled.

Once you have checked the ***Server enabled*** box, set the ***Idle time before hanging up*** (by default, the line is interrupted after 240 seconds of inactivity). Bear in mind that there is no need to change the ***eWON PPP server IP address*** and the ***PPP Client IP address.***

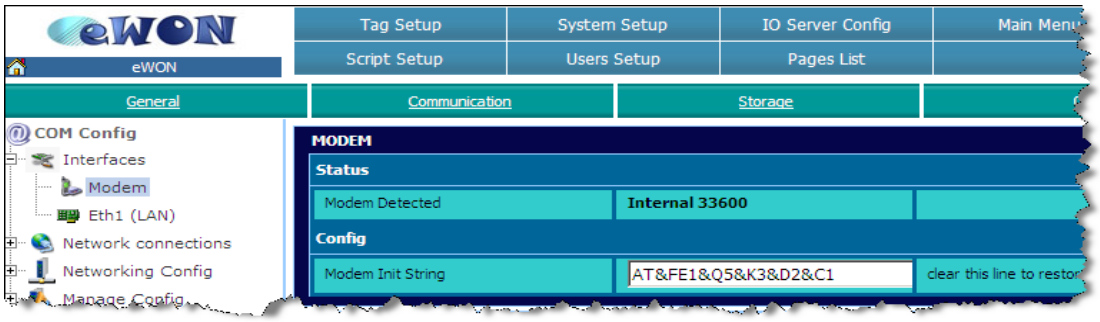
When the PPP connection is established, the eWON receives a PPP IP address and will thus be reachable at address 202.0.0.240 over the PPP connection. Of course, you can still reach it through its local LAN IP address using the same PPP connection.

NOTE The PPP IP address range MUST differ from the eWON local IP address range. Otherwise, the routing is impossible. That is the reason why there is no need to change the default settings.

Modem Configuration

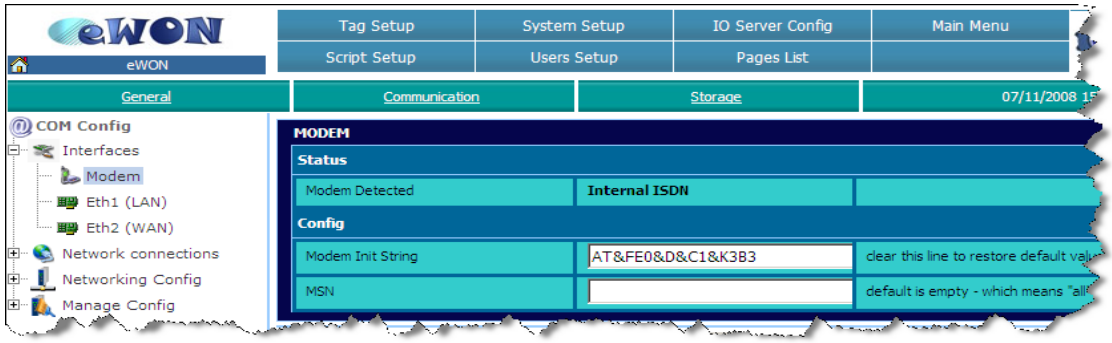
PSTN Modem Configuration

Let the ***Modem Init String*** unchanged. You might need to adapt it only to fit your local telephone requirements on some special situations.ISDN Modem Configuration

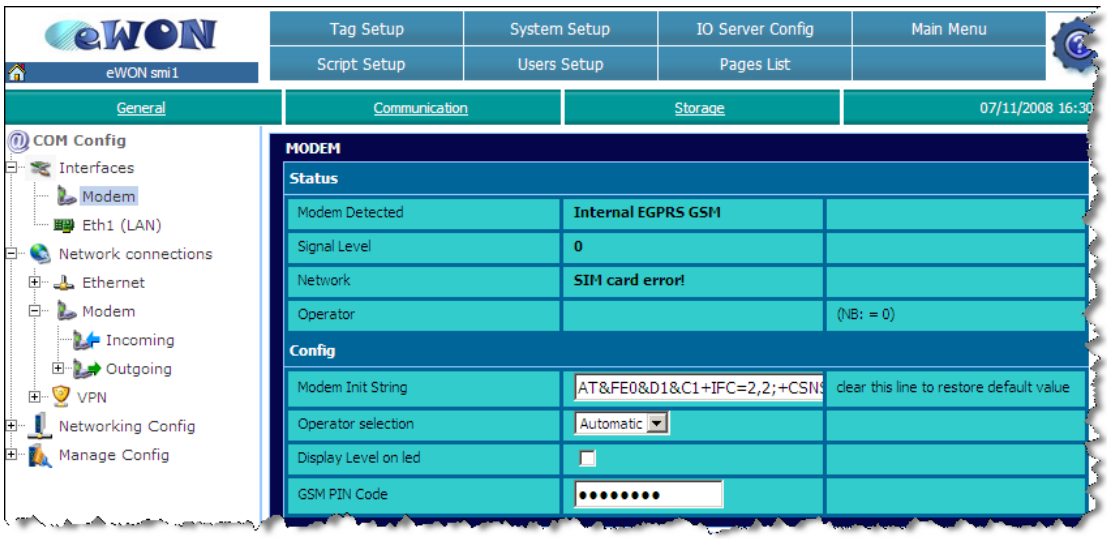


ISDN Modem Configuration

Let the ***Modem Init String*** unchanged. If needed, you may insert the identification number of your line in the ***MSN*** field.



GSM Modem Configuration



Let the ***Modem Init String*** to its default value. Insert the ***PIN Code*** of your SIM card.

NOTE

Reboot your eWON for your PIN code to be applied.

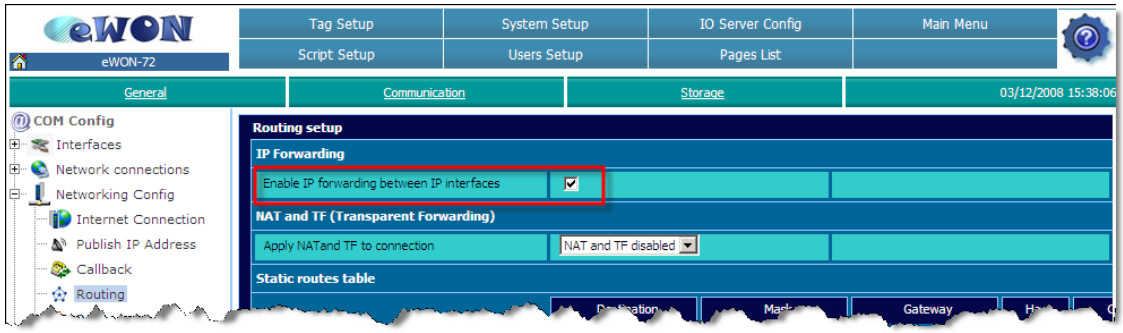
In the ***Operator selection*** field, you can choose if your mobile phone operator should be allocated automatically or forced.

The other fields (upper part) cannot be modified, they only give you status information:

- The ***Modem Detected*** field displays the textual description of the eWON internal modem detected.
- The ***Signal Level*** field shows the current signal level for your GSM/GPRS communication. The signal level must be between 20 and 31 (signal levels lower than 18 could work, but the communication could be slower or even interrupted). If you get 0 or 99, check your local environment and your antenna isolation/power.
- The ***Network*** field indicates if you are able to connect to the GSM/GPRS network. You should read «**Home network»** (when you are in your country) and «**Roaming**» (when you are abroad) to communicate safely.
- The ***Operator*** field displays the current GSM provider that you are using.

Routing Configuration

Configuration → System Setup → Communication → Network Config → Routing



If you want to reach the devices connected to the eWON LAN port, enable the ***IP forwarding between IP interfaces*** box. Do not enable the ***NAT and TF***.

If you want to reach the eWON only, do not enable this box so that you avoid to connect to the device(s) on the LAN side.

NOTE

In eWONs with VPN capabilities (e.g.: eWON 2005 CD, eWON 4101,...) the *IP forwarding* option is activated by default and does not appear on the ***Routing*** setup page.

PC Configuration

On your PC you will need to create a dial-up connection.

You can create a standard dial-up connection in Windows using the *«New Connection Wizard»* or you can use ***eGrabit***, a utility program you can download for free from our Website. With eGrabit you can create and manage easily your different remote connections.

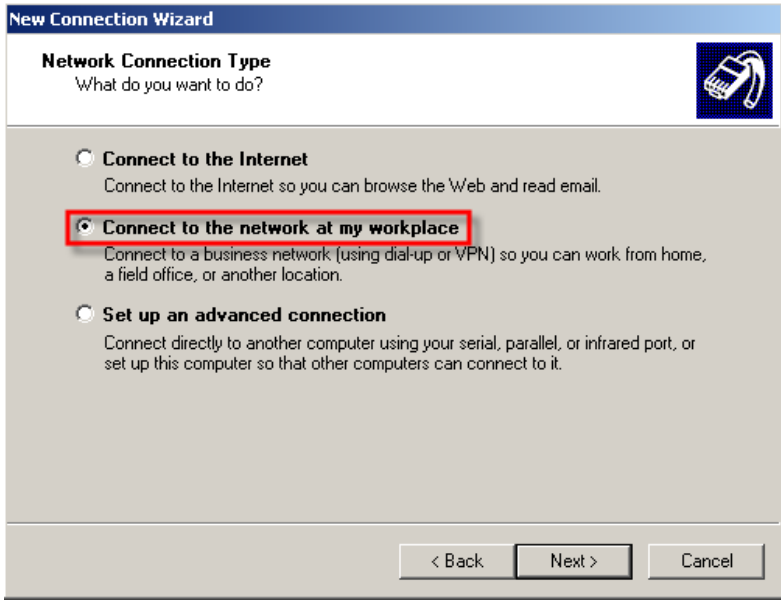
Download eGrabit from: http://support.ewon.biz. and follow the path eWON Support > Download > eWON Software.

Using the Windows Dial-Up Connection

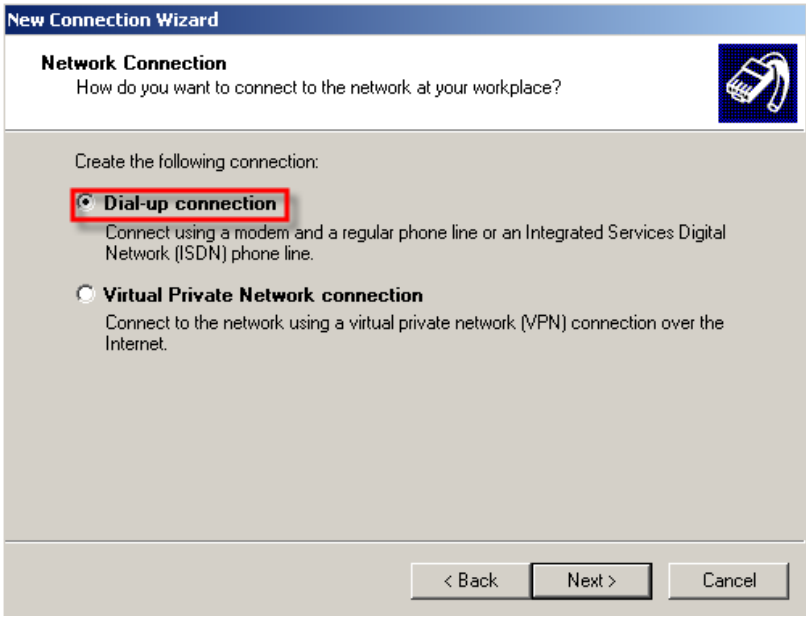
On your PC, follow this path: ***Start*** / ***Settings***/ ***Network Connections***/ ***New Connection Wizard*** (or open your PC's ***Control Panel*** and click on ***Network Connections***)

The following window will open:

Click on *Next* and check *Connect to the network at my workplace*.



Click again on *Next* and check *Dial-up connection*.

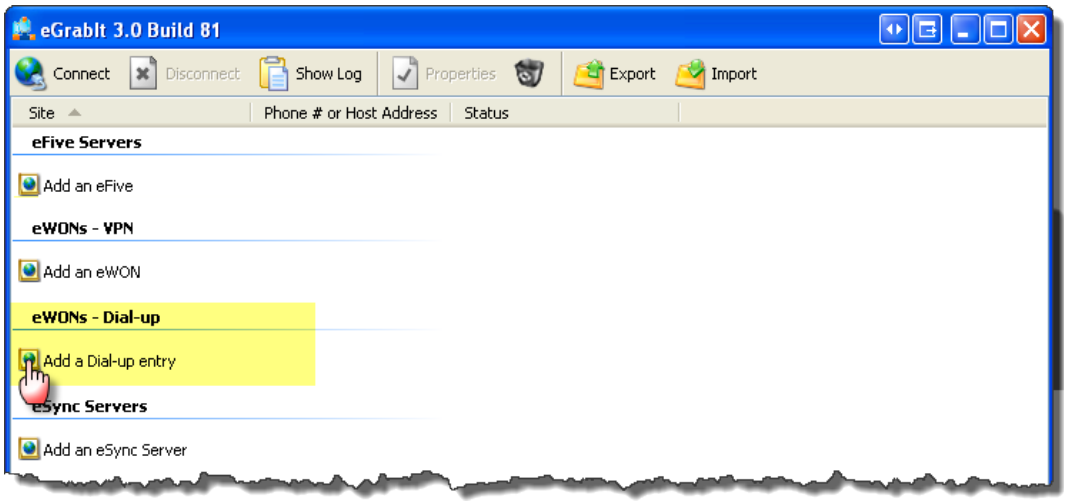


Click on ***Next***, you will have the possibility to insert your Company name and phone number (your PC will use this number to call your eWON). When done, click finally on ***Finish***.

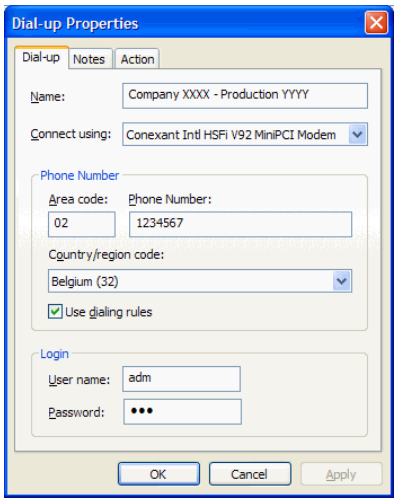
Using eGrabit

To create a new dial-up connection in eGrabit ,follow the steps below:

- Launch the eGrabit application (eGrabit.exe)



- Click on ***Add a Dial-up entry***



- On the ***Dial-up*** tab, enter following information:

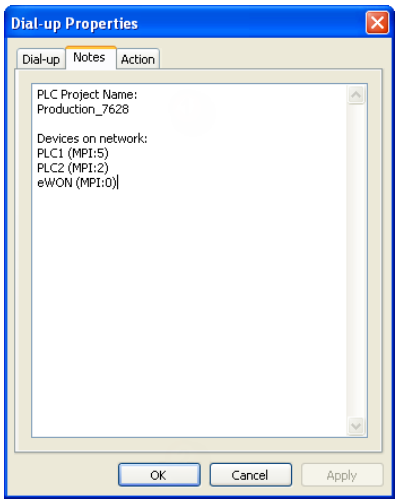
  Name: a name to identify the Dial-up connection

  Connect using: choose the Modem you will use on your PC

  Phone Number: enter the phone number of your eWON. You can use or not the dialing rules defined on your PC.

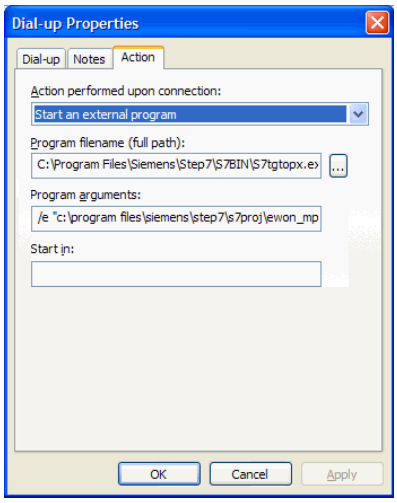
  Login: enter a valid eWON user and password (adm/adm for example)

- Go to the ***Notes*** tab:



This window will allow you to encode some information that will be useful for the remote connection.

- Go to the ***Action*** tab:



This window will allow you to configure the action that will be performed once the remote connection established.

This can be either starting your Internet browser OR launch an external application like, for example, a PLC console. By default the eWON internal Web page will be displayed.

For example to start automatically Step7® with the relevant project:

- Action performed upon connection: Start an external program

- Program filename: Use the «...» button to chose the Step7® program (S7tgtopx.exe)

- Program arguments: /e & full path of your Step7® project

- Click ***OK*** to close the Properties window

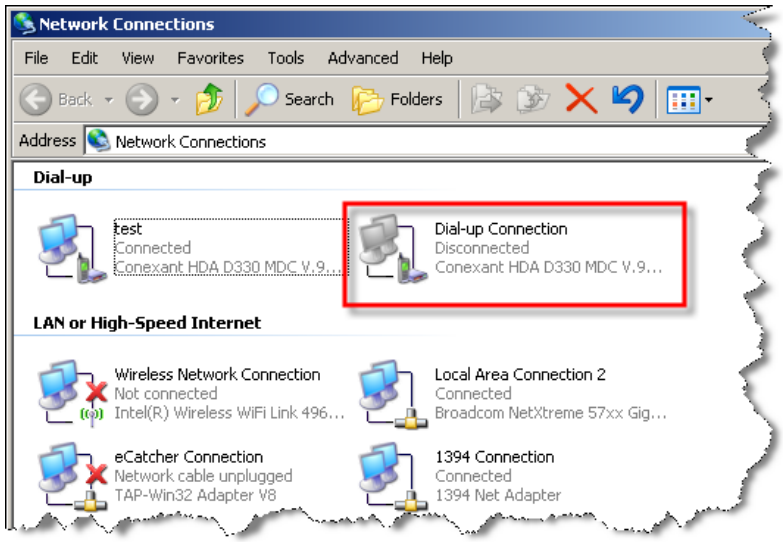
The dial-up connection you created will now appear in the list of «eWONs -Dial-up».

Connection Establishment

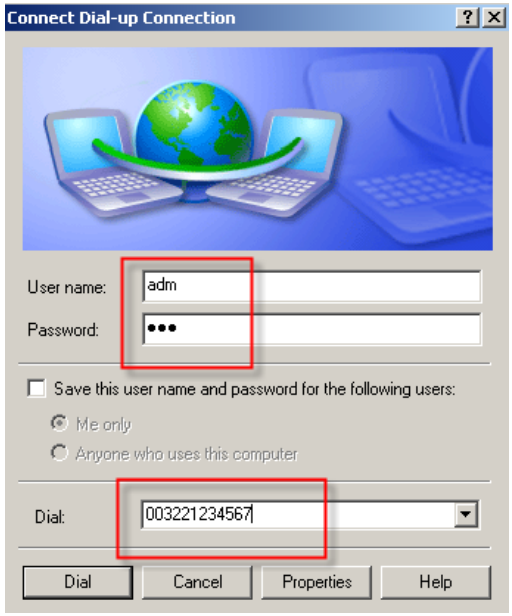
With the Windows Dial-Up Connection

Let's test your remote connection.

In the *Network Connections* window (***Start***/ ***Settings***/ ***Control Panel***), double-click on the *Dial-up connection*:

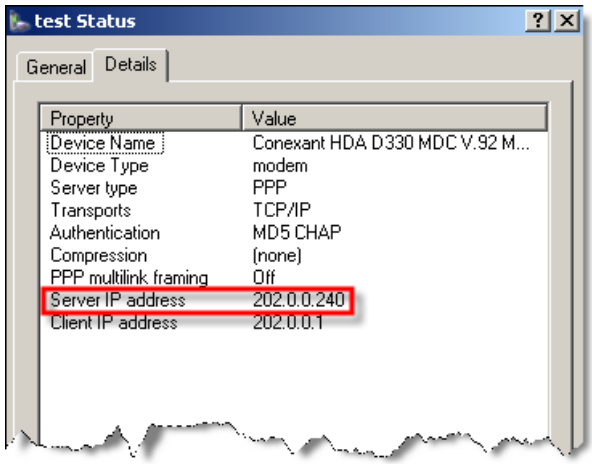


The following window opens:



Type a valid eWON *user name* and *password,* verify the phone number and click on *Dial*.

Once the connection is established, go to the *Network Connections* window and double-click on the dial-up connection to see its properties.



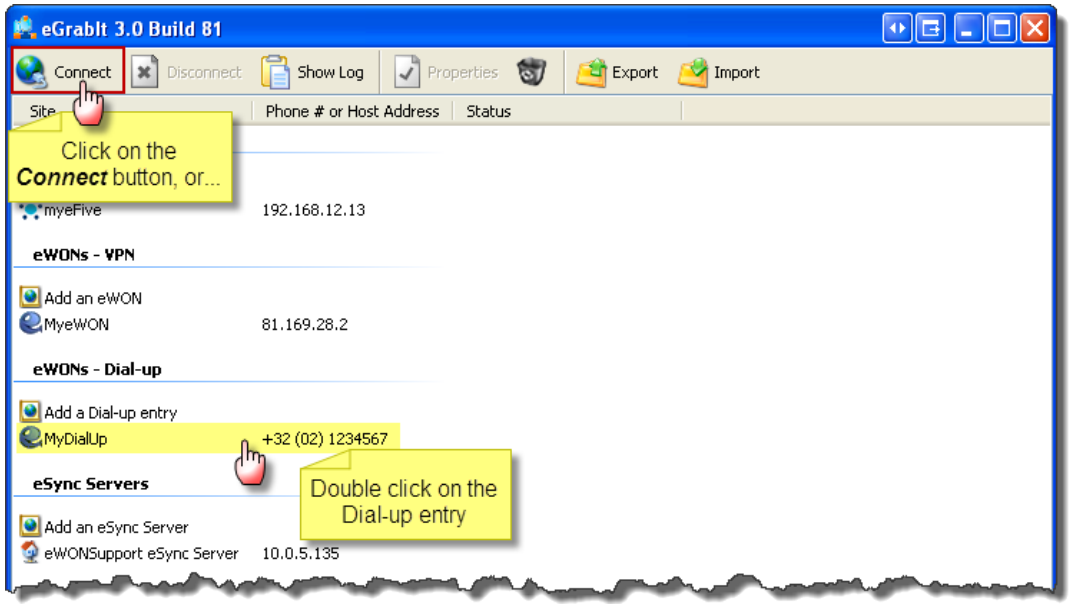
NOTE To open the *Network Connections* properties window, you can also click on the small icon in the task bar of your PC once your have called your eWON.

In this window you can see the settings of the PPP Connection, the *IP address* used for the remote connection on the eWON (Server IP address) and on the PC (Client IP address).

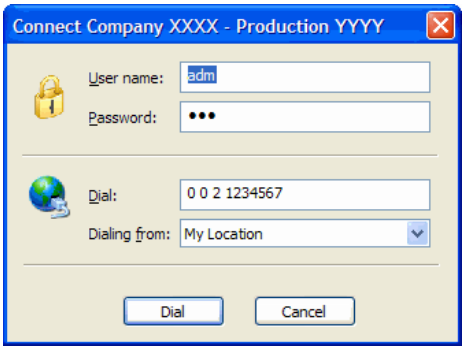
With eGrabit

To start the remote connection follow the steps below:

- Double-click on the eWON Dial-up you want to open or click ***Connect***



- Click the button ***Dial*** to start dialing.

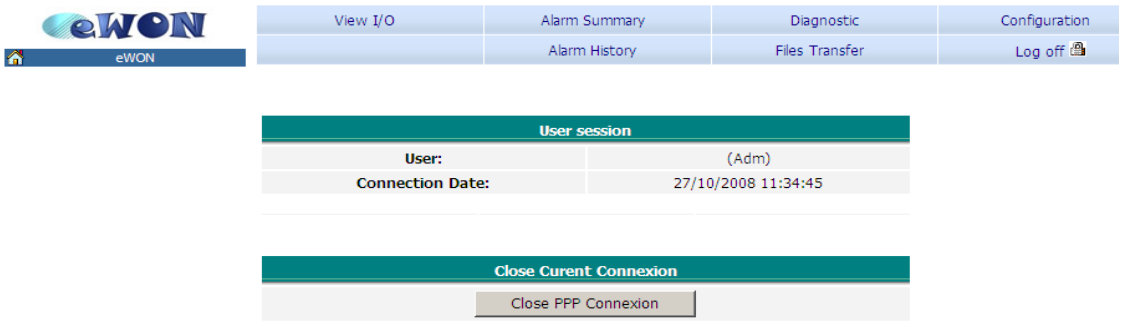


Once the PPP connection established, eGrabit will perform the action configured.

In eGrabit, the active Dial-up connection will be checked in green color and the Status column will indicate the PPP server address (Connected: 202.0.0.240).

Access to the eWON web pages

To see your eWON web interface, type the Server IP address 202.0.0.240 (default settings) or its local IP address in your web browser. Once you have introduced your user name and password, the following window will open:



You can use the ***Close PPP Connection*** button to close the remote connection. Bear in mind that the connection will be interrupted after the ***Idle time before hanging up***, will be elapsed (in case of inactivity).

Connection between your PC and the devices

Devices linked to the serial port are accessible at the eWON PPP address (202.0.0.240) or on the eWON's local IP address.

For your eWON to communicate with devices on the Ethernet network, the IP addresses must be compatible and your eWON ***must*** be the default gateway of your devices.

There is no need to set a default gateway on the PC's side, as this is automatically done once you call your eWON using the telephone line.

Troubleshooting

PC cannot connect to the eWON:

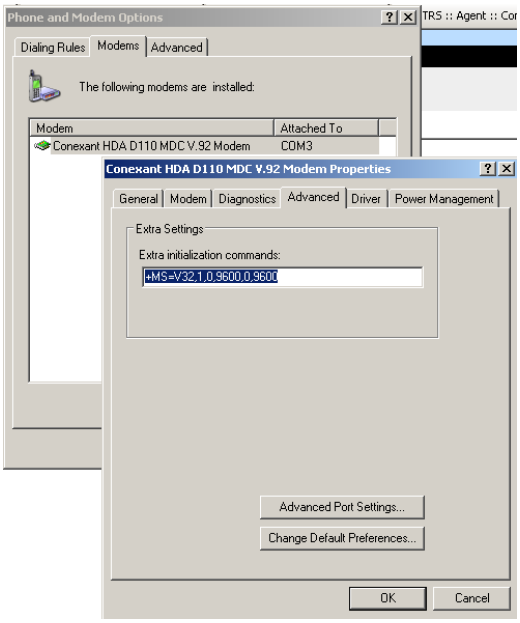
- Check the phone number, user name and password used for the PPP connection.
- Maybe you need to add an access code before your phone number (e.g. 0, 0032212345678)

PC connects to the eWON, but not to the devices connected to the LAN port

- Check if the eWON IP address is indeed the gateway of your devices.
- To avoid routing problems, disconnect the local network cable of your PC before dialing up to force it to route through the phone line only. Do not forget that the PC and devices must be on a different network range, otherwise the routing is not possible. So, in our introduction example, if the PC is connected on its local network using the address 192.168.1.# (i.e the same range address as the eWON LAN side), then you will need to deactivate first the network connection before calling the eWON.

The connection does not work with a GSM modem at the eWON side:

- You can have several services on a SIM card (voice, data, fax, GPRS, etc.) To allow a PPP connection, the Data Protocol *must* be activated. Besides, you have sometimes to force the baud rate of your PSTN modem to 9600 bauds for it to allow synchronization with the eWON wireless modem. To do so, you will need to use the advanced properties of your PSTN modem. The AT command that you will have to use depends on the PSTN modem. But most of the time the AT commands used are: **+MS=32,0,9600** or **+MS=V32,1,0,9600,0,9600**
- **Note:** The same working principle applies to certain GPRS/EDGE wireless modems.



Revisions

Revision Level	Date	Description
1.0	2008-12-16	First release.
1.1	2013-13-07	eGrabit

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ii Firefox is a trademark of the Mozilla Foundation

Document build number: *129*

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