

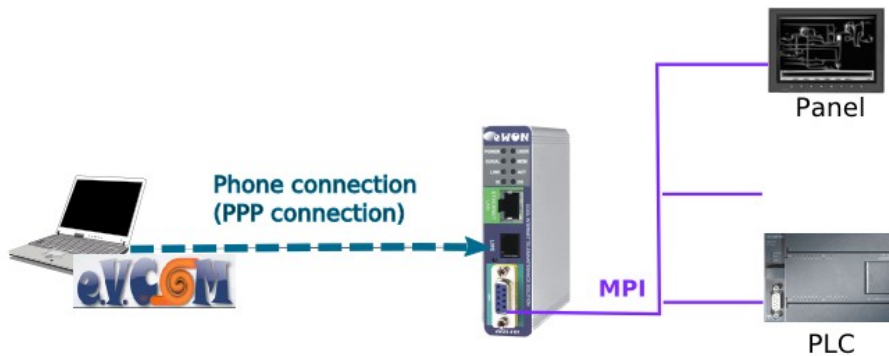
# eWON Application User Guide

AUG 022 / Rev 1.0



You Select, We Connect

## eWON 2001 MPI-Teleservice using eVCOM How To



### Content

This guide is intended to explain in a few steps how to configure your system to establish a remote connection to your MPI PLC and MPI panel through an eWON 2001 using eVCOM.

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# Hardware and software requirements

## Hardware requirements

In order to follow this guide you will need:

- 1 Siemens PLC S7-300 or S7-400 with an MPI interface.
- 1 Siemens MPI Panel
- 1 eWON with MPI port and integrated modem (for example : eWON 2001)
- 2 standard Profibus cables to link the equipments together
- 1 PC with internal or attached modem

## eWON Firmware Version

eWON firmware version 5.6S0 or higher.

A simple way to realize the eWON firmware upgrade is to use eBuddy, the eWON software companion (<http://support.ewon.biz>).

## Software requirements

### eWON configuration software:

The eWON is configured through its embedded web server. So all you need is a standard Web Browser software like Internet Explorer<sup>i</sup> or Firefox<sup>ii</sup>.

Additionally we suggest you to download the eBuddy utility on our website :  
<http://support.ewon.biz>

This utility 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).

### Siemens programming software:

To be able to connect to your S7 PLC and Siemens Panels you need the Step7<sup>®iii</sup> and the WinCC flexible<sup>®iv</sup> software.

### eVCOM software:

To be able to reach the PLC and the Panel from remote through the eWON you need to install on the PC the eVCOM software. You can download it for free under following link : <http://support.ewon.biz/DownloadSoft.html>

This software will create a virtual COM port on your PC which will allow you to make the remote maintenance of your MPI devices, as if you were locally connected to the MPI network using the MPI PC adapter cable.

# eWON IP address configuration

Every eWON™ is shipped with the pre-configured IP address **10.0.0.53** and **adm/adm** as User Name/ Password.

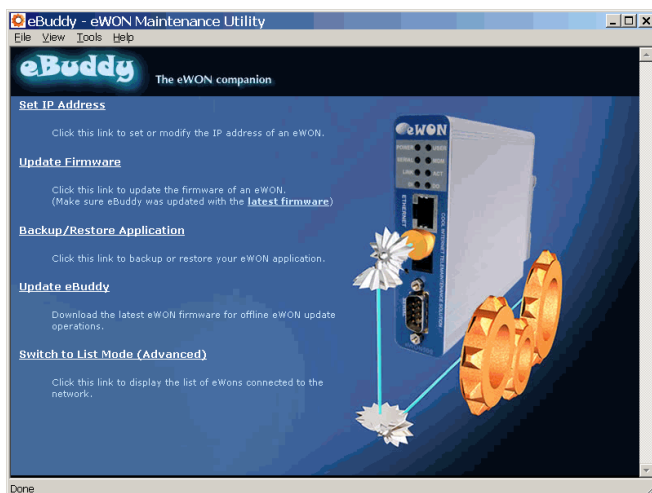
Probably the network settings of your PC does not allow you to connect to the pre-configured IP address.

You can find on our website an utility called «eBuddy» that will allow you to change the IP address of the eWON even if your PC is not on the same IP address range.

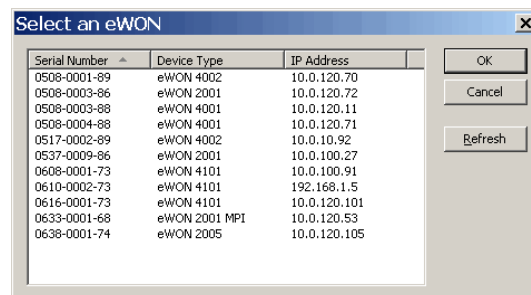
eBuddy : <http://support.ewon.biz>

To change the IP address of your eWON using eBuddy, follow the steps below:

Launch the eBuddy application (eBuddy.exe)



Click on the «Set IP address» link



## 2. eWON IP address configuration

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Enter the eWON serial number in the **Serial Number** field if you know it, or click on the Browse button. In this case, the dialog box «Select an eWON» will appear showing you all the eWON existing on your Network.

The first screenshot shows the 'IP Address Wizard' dialog box with the title 'Welcome to the IP Address Wizard' and the question 'Which eWON would you like to configure?'. The 'Serial Number' field contains '0633-0001-68' and there is a 'Browse...' button. The second screenshot shows the 'IP Address' configuration screen with the title 'IP Address' and the instruction 'Here you can specify the new IP settings'. The 'Serial Number' is '0633-0001-68', the 'IP Address' is '192 . 168 . 0 . 2', and the 'Subnet Mask' is '255 . 255 . 255 . 0'.

Once the Serial Number entered, click **Next**.

Set the new **IP Address** and the **Subnet Mask**.

Click on **Next** to launch the update and wait for the eWON to reboot:

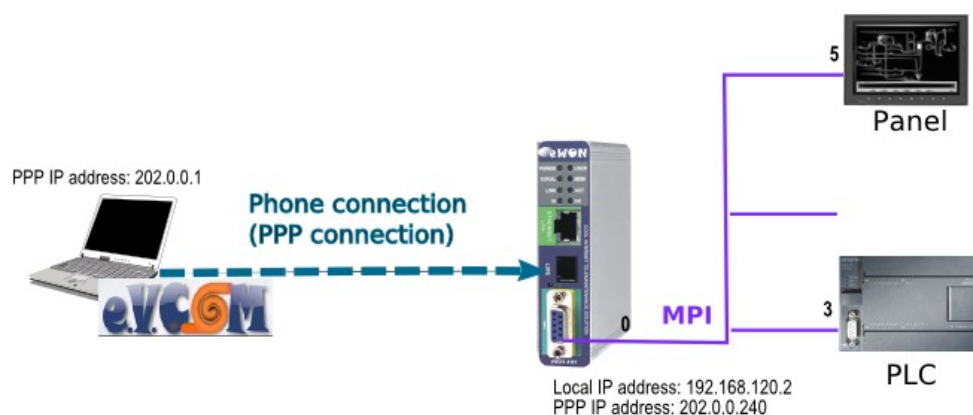
The first screenshot shows the 'Update of remote device' screen with a progress bar and the message 'Please wait while the eWON reboots...'. The second screenshot shows the 'Update of remote device' screen with the message 'eWON updated successfully.'.

When done, click on **Finish** to exit from the IP Address Wizard.

## eWON configuration for Remote Connection

The remote connection that we will use in this example is a “Direct Phone Connection”. This connection consists in calling the eWON using a standard modem to set up a PPP (point to point) connection. For this, we need to configure the eWON as PPP server. The eWON will then pick up the phone, authenticate the caller and assign an PPP IP address to the eWON and to the PC for the remote connection.

For our example, we will assume to have a layout and address settings as described in the following picture:



**NOTE** In this manual we explain the Remote Maintenance using a direct phone connection.



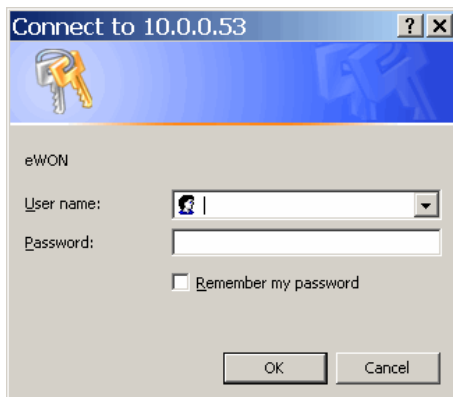
Just keep in mind that with the eWON you can also make Remote Maintenance using other connection types like Internet connection, GPRS connection, VPN connection or using Callback features.

### Accessing your eWON

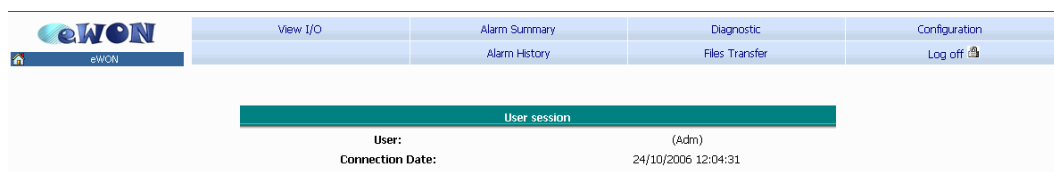
Accessing your eWON is very simple:

Enter the IP address of your eWON in the address bar of your Web Browser (Internet Explorer, ...): <http://10.0.0.53> or <http://192.168.0.2> in our example.

### 3. eWON configuration for Remote Connection



On the **Connect to** pop-up page enter adm (User Name) /adm (Password) then **OK**. You are now navigating on your eWON2001.

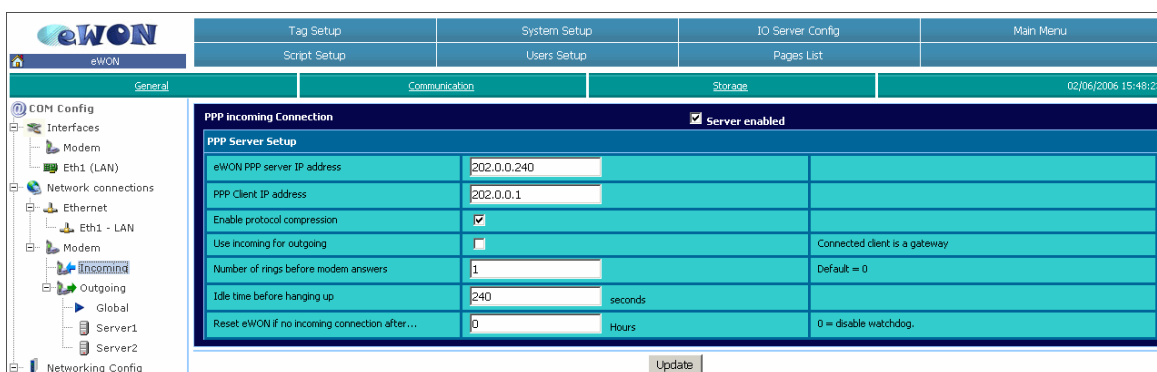


The menu bar on the top of the main page allows you to navigate through the different display and configuration pages of your eWON.

## eWON PPP connection configuration

The eWON PPP configuration page can be reached on the web page (starting from the main page, see above) following this path:

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



Check the **Server enabled** box for the PPP Incoming Connection.

### 3. eWON configuration for Remote Connection

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Let the **eWON PPP server IP address** and the **PPP client IP address** unchanged.  
By default the PPP Server address is set to 202.0.0.240.

Enable the protocol compression.

Let the other items unchanged.

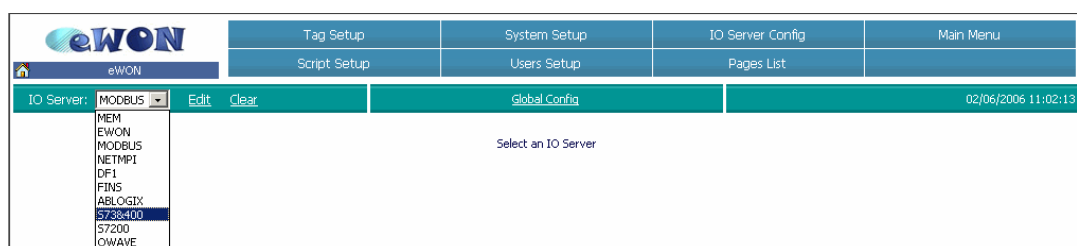
Click **Update**.

## eWON MPI Interface configuration

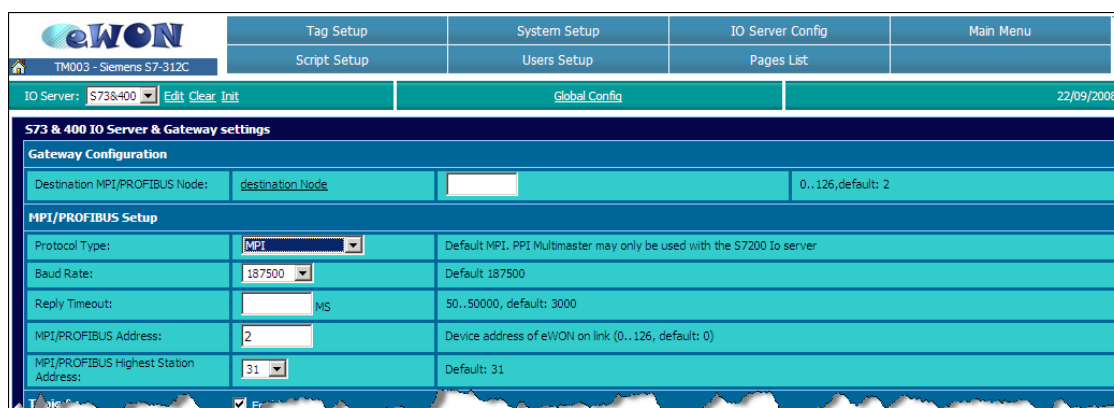
### eWON IO Server configuration

To configure the eWON MPI Interface, open the **S73&400 IO Server settings** page by following the path:

**Configuration → IO Server Config**



Select the **S73&400** in the IO Server list. The following page appears:



In the **Protocol Type** field, choose MPI or Profibus

Set the **Baud Rate** to the transmission rate of your MPI/Profibus Network (187500)

Set the **MPI/Profibus address** to the address of your eWON on the MPI/Profibus Network (0)

Set the **MPI Highest Station Address** in accordance with your MPI/Profibus Network layout (31)

Click the **Update Config** button at the bottom of the page

Your eWON MPI/Profibus interface is now configured.

### eWON connection on the MPI Network

The MPI port of the eWON is easily identifiable by its blue square surrounding the gender-changer.

## 4. eWON MPI Interface configuration



Specification	Value
Physical mode	MPI
Speed	<ul style="list-style-type: none"> <li>• 19.2 kBauds</li> <li>• 187.5 kBauds</li> <li>• 1.5 MBauds</li> </ul>
Polarisation	680 Ohms (selectable)
Termination	120 Ohms (selectable)



Depending on the layout of your MPI/Profibus network, you will have to activate or inactivate the polarization and termination of your eWON on the MPI/Profibus network.

The configuration of the termination and polarization is done by a set of 4 dip switches located on the left side of the eWON housing.

Available dip switch positions:

Positions	Mode	
4 3 2 1  OFF ON	MPI WITH polarisation and termination resistors	all dip switches ON
4 3 2 1  OFF ON	MPI WITHOUT polarisation and termination resistors	dip switch 1 & 2: ON dip switch 3 & 4: OFF

**NOTE** Bear in mind that on the eWON 2005CD/4005CD series, you do not have to configure dip switches as those models do not have this kind of switches.



## eWON MPI connection verification

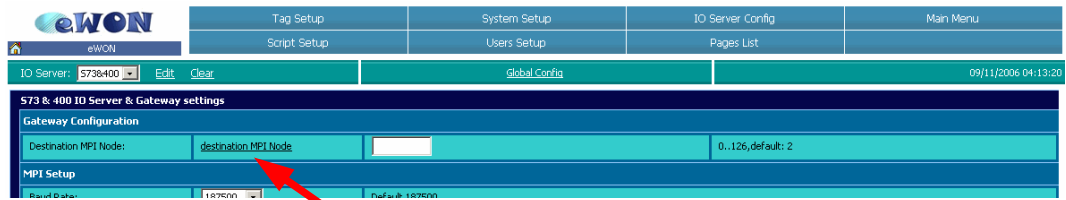
To check if the eWON MPI/Profibus interface is correctly configured and connected to your MPI/Profibus network you can reopen the **S73&400 IO Server settings** page by following the path:

**Configuration → IO Server Config**

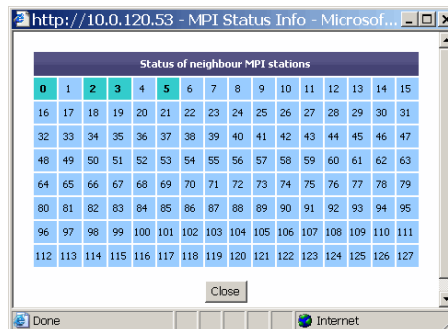
## 4. eWON MPI Interface configuration



Select the **S73&400** in the IO Server drop down list. The following page appears:



Click on the **«destination MPI/Profibus Node»** link to open the «MPI/Profibus Status Info» pop-up window:



This table will show you the different MPI/Profibus Master devices detected by the MPI chip of the eWON. The detected MPI/Profibus devices are represented with a green square.

If the status table displays only the MPI/Profibus address of your eWON, then the eWON is probably not connected to the network.

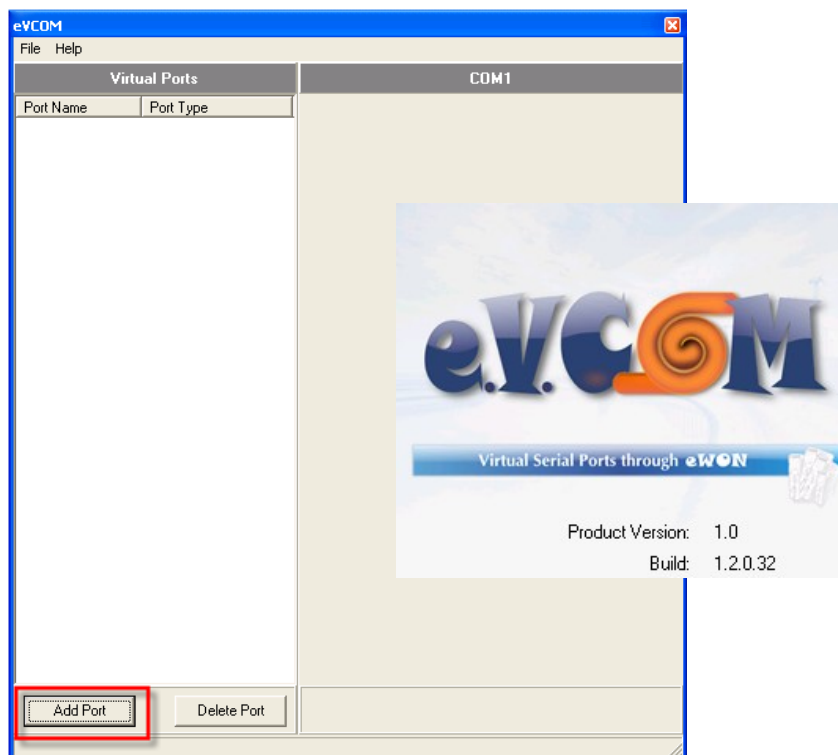
If the table doesn't display any MPI/Profibus addresses, then the setup parameters for your eWON are probably not correct. Please check the baud rate settings and verify if the eWON is not using an already occupied MPI/Profibus address.

## Configure eVCOM

To be able to reach the PLC and the Panel from remote through the eWON you need to launch the eVCOM software on your PC. This software will create a virtual COM port on your PC which will allow you to make the remote maintenance of your MPI devices, as if you were locally connected to the MPI network using the standard MPI PC adapter cable.

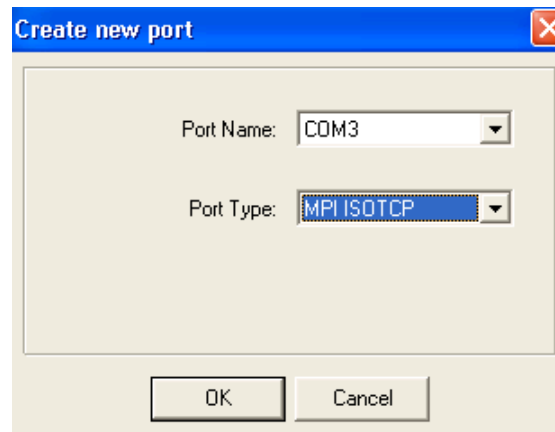
The eVCOM software can be downloaded under following link  
<http://support.ewon.biz/DownloadSoft.html>

After installation of the eVCOM software, launch the software.



Click on the **Add Port** button to create a virtual port. The following pop-up window opens:

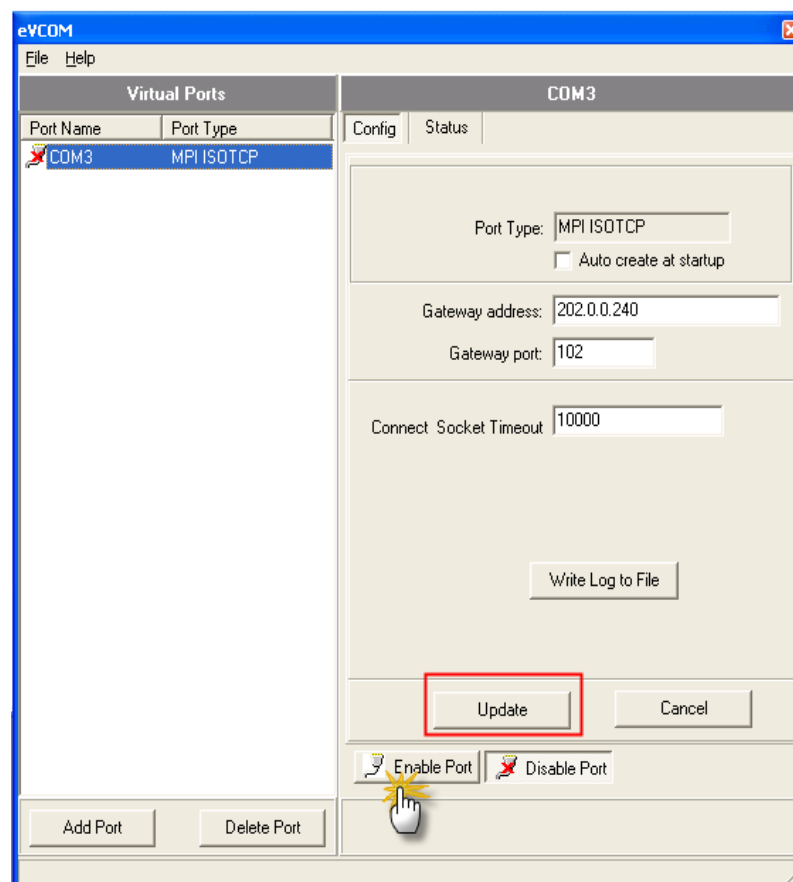
## 5. Configure eVCOM



Select a port and **MPI ISOTCP** as Port Type, and click on the **OK** button.

In the **Config** section of the created port, enter the eWON's IP address as **Gateway address** and the ISOTCP port configured in the eWON (by default:102) as **Gateway Port**.

Click on the **Update** button to validate the configuration



### IMPORTANT



As you will connect to the eWON using a dial-up connection you must enter for the **Gateway address** the PPP IP address of your eWON: **202.0.0.240** (as defined in chapter 3).

You can also use the eWON local IP address if the local PC IP address and the eWON local IP address are not on the same subnet.

When this has been done, click on the **Enable Port** button to activate the port that you have just created.

The **Status** area can be used to monitor the status of the eVCOM connection:

Info	Value
Frame sent	36
Frame received	0
TCP sent	0
TCP received	0

Reset statistics

Last Error:  
TCP connection failed

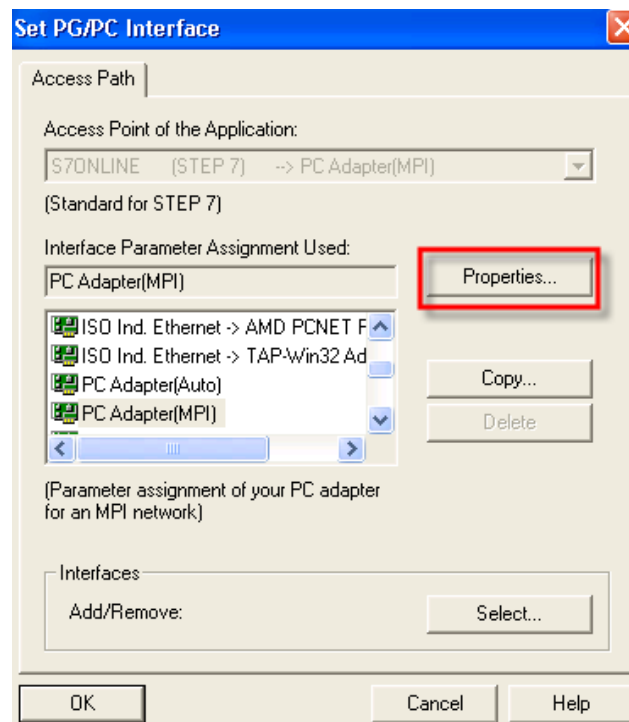
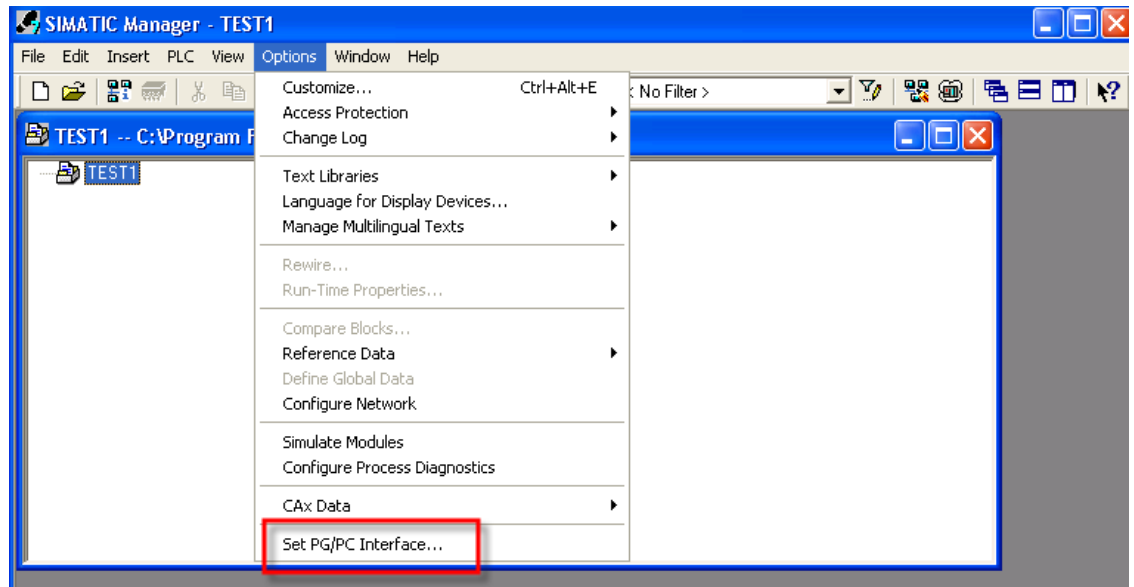
Clear error

- **Frame sent** and **Frame received** monitor the exchange between eVCOM and the PG/PC interface.
- **TCP sent** and **TCP received** monitor the exchange between eVCOM and the eWON. The **Reset statistics** button resets the 4 values.

The **Last Error** field (at the bottom) displays the last error that occurred. The **Clear error** button can be used to clear the error description, but does not solve the problem!

## PG/PC Interface configuration for the Teleservice

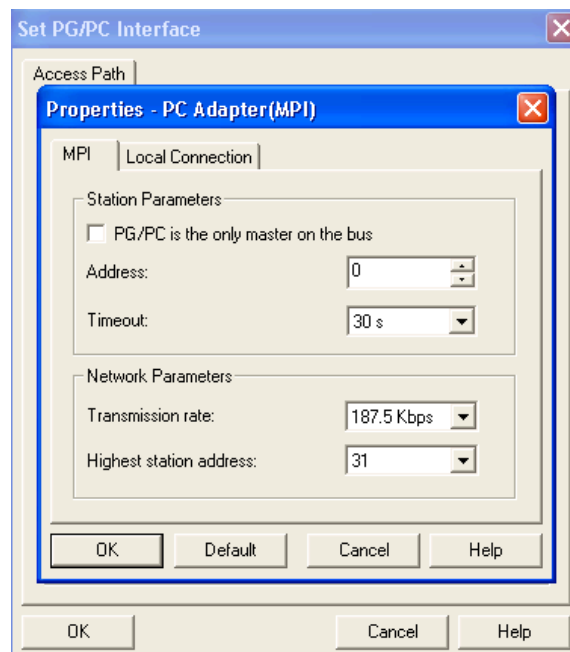
Launch the Siemens **Set PG/PC Interface** (Simatic Manager/Options) tool in order to configure the way the Siemens has to access the MPI/Profibus equipments.



In the **Access Path** section, select the **PC Adapter (MPI)** and click on the **Properties** button.

## 6. PG/PC Interface configuration for the Teleservice

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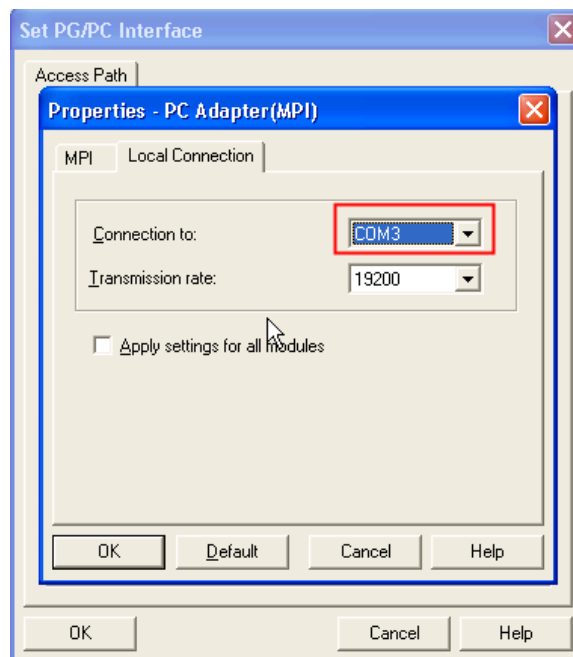


In the **MPI** section, set the **Transmission rate** to 187.5 Kbps and click on the **OK** button.

**NOTE** Set the **Transmission rate** to **187.5** Kbps even if your MPI/Profibus Network uses an other transmission rate.




In the **Local Connection** section, use the **Connection to** drop-box to select the COM port created with eVCOM and click on **OK**.



Now the Siemens softwares (Simatic Step7<sup>®</sup>, WinCC flexible<sup>®</sup>) will be able to access the MPI network.

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**NOTE** **PROFIBUS Network:** if you want to connect to a Profibus network, the S73&400 IO Server of the eWON must be configured in PROFIBUS but all the above steps are exactly the same as for MPI.  
 So even if eWON is connected to a Profibus network you must still choose the *PC Adapter (MPI)* for the PG/PC Interface.

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## Establish the remote connection

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

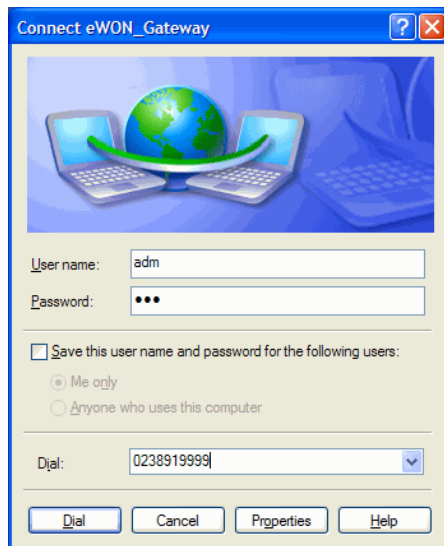
You can create a standard dial-up connection in Windows using the «New Connection Wizard» or you can use eCatcher, a free downloadable program on our Website.

With eCatcher you can create and manage easily your different remote connections. Among other things, with eCatcher you can configure your dial-up connection to launch automatically the corresponding Step7® project once the dial-up connection established.

eCatcher : <http://support.ewon.biz/DownloadSoft.html>

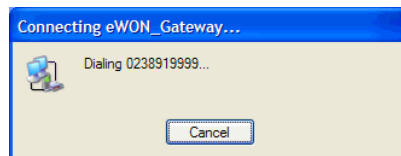
## Using the Windows Dial-up connection

Click on your dial-up connection to open the «Connect» window:



In the **User name** and **Password** fields enter a valid eWON user name and password (adm/adm for example)

Enter the phone number of the eWON to call and click on the **Dial** button.

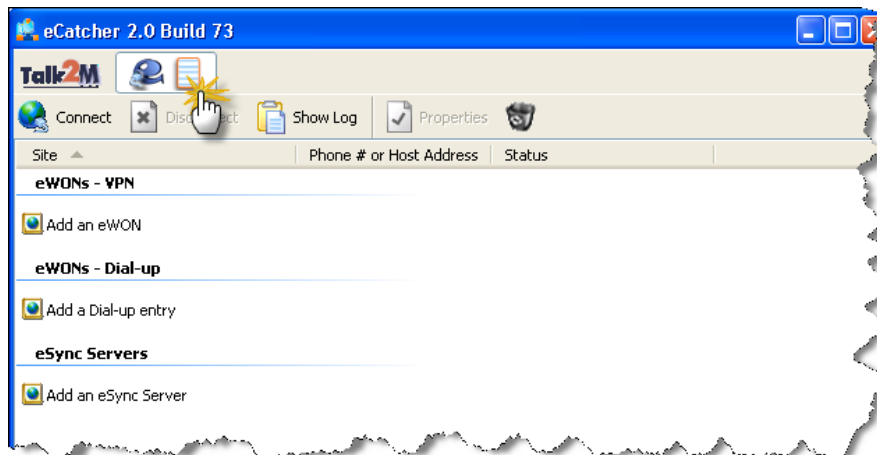


Once the connection is established, the status of your Dial-up connection becomes «connected».

## Using eCatcher

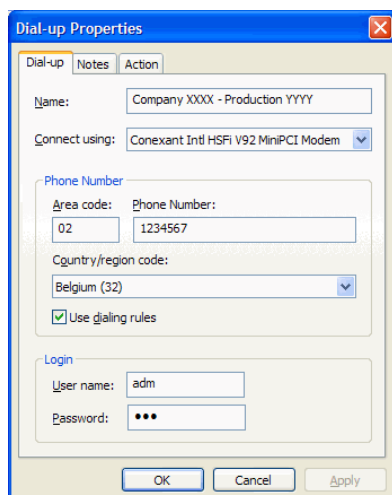
**To create a new Dial-up connection** in eCatcher follow these next steps:

Launch the eCatcher application (eCatcher.exe)



Select the «My connection» tab (not the Talk2M tab).

Click on «**Add a Dial-up entry**»



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

**Name:** a name to identify the Dial-up connection

**Connect using:** choose the Modem that 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.

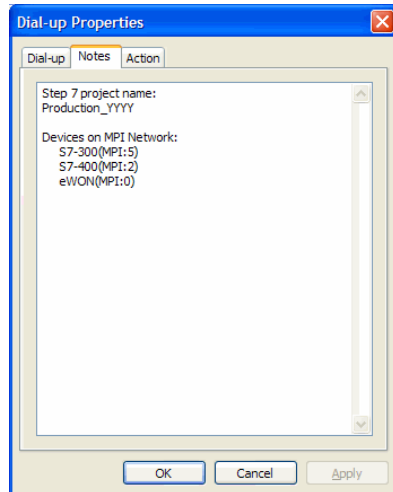
**Login:** enter a valid eWON user and password (adm/adm for example)

Go to the **Notes** tab:

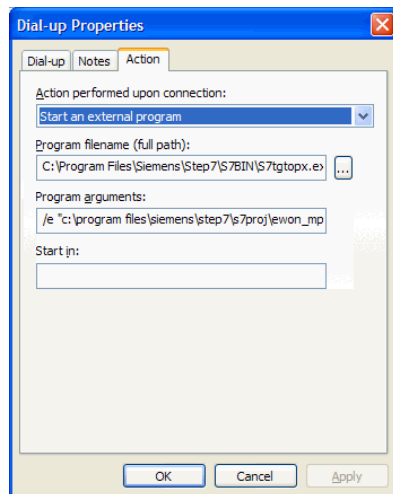
This window will allow you to encode some information that will be useful for the remote connection. For example, the name of the involved Step7® project or the addresses of the PLC which can be reached through the remote connection, ...

## 7. Establish the remote connection

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Go to the **Action** tab:



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

You can choose **No Action** or for example define to start automatically Step7® with the concerned project. To realize this, configure the Action settings like following:

Action performed upon connection: Start an external program

Program filename: Use the «...» button to chose the Step7® program (S7tgotpx.exe)

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

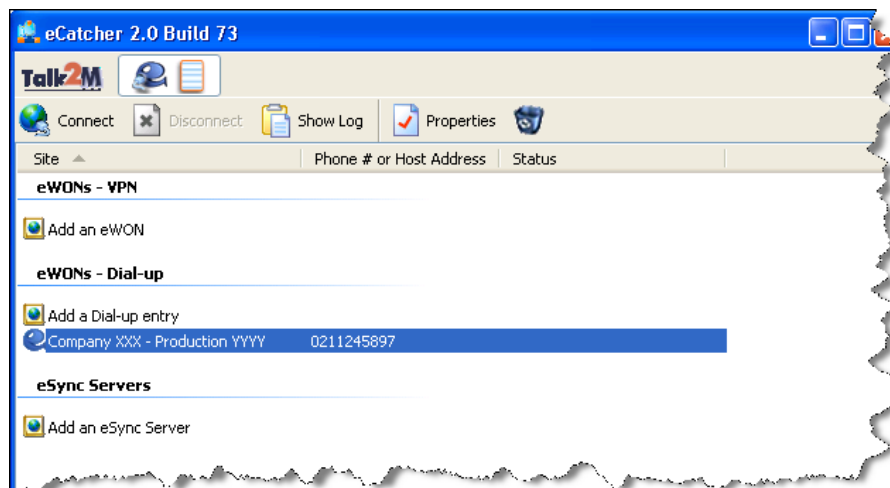
( for our example: /e "c:\program files\siemens\step7\s7proj\ewon\_mpi\ewon\_mpi.s7p"

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

The Dial-up connection that you have created will now appear in the list of «eWONS -Dial-up».

**To start the remote connection** follow the steps below:

## 7. Establish the remote connection

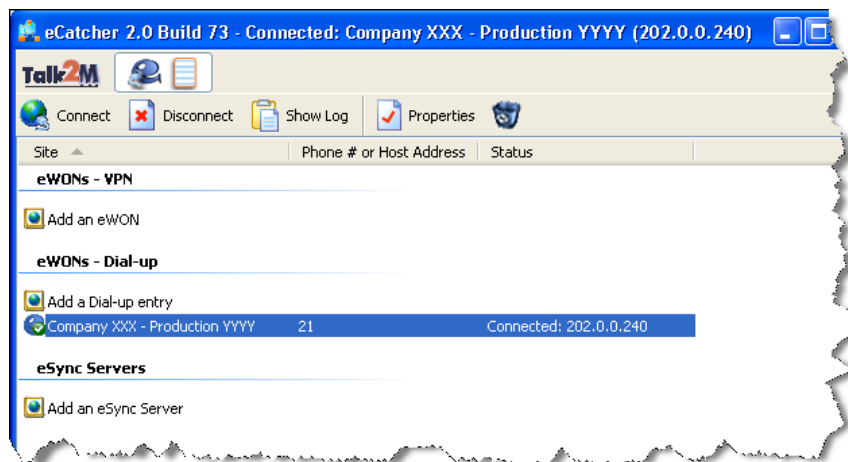


Double-click on the eWON – Dial-up you want to open (Company XXXX – Production YYYY)

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

Once the PPP connection is established, the Step7<sup>®</sup> project will start automatically.

In eCatcher, 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).



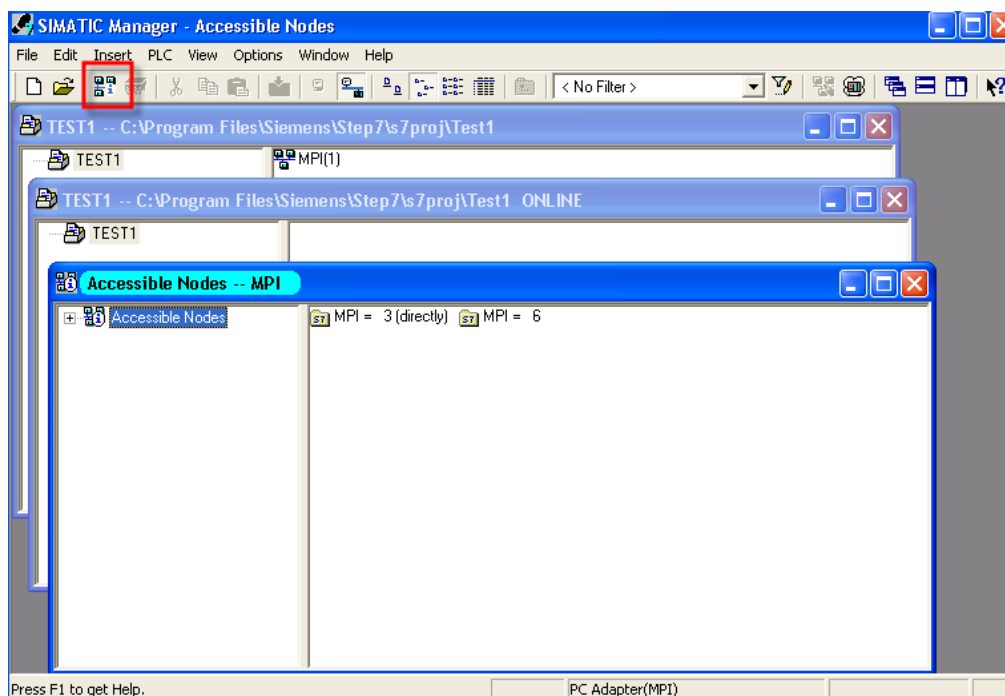
# Remote Maintenance

## PLC Connection

Open the Simatic Step7<sup>®</sup> software to perform maintenance of your PLC's. Once the telephone connection established, you can connect to your PLC as if you were connected directly to the PLC using the PC adapter cable.

### *View the available nodes*

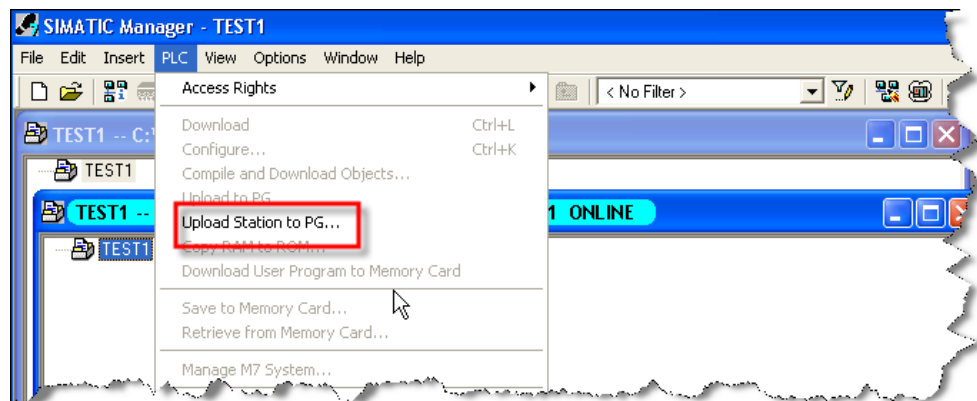
To view the available nodes, click on the **Accessible Nodes** icon.



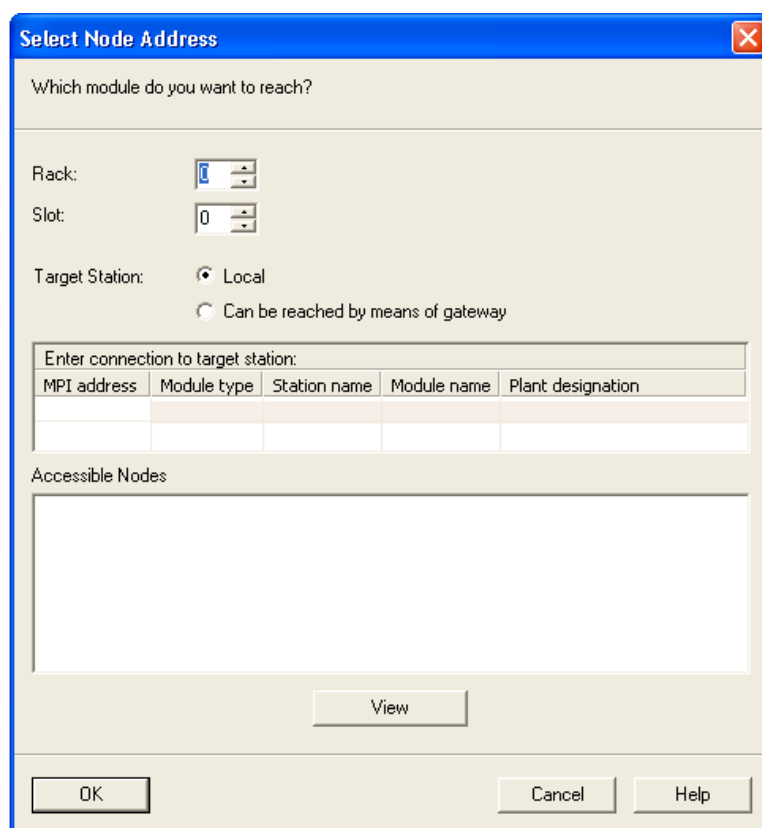
### *Upload a Project*

In Simatic Step7<sup>®</sup> select the **PLC/ Upload Station to PG...** feature.

## 8. Remote Maintenance



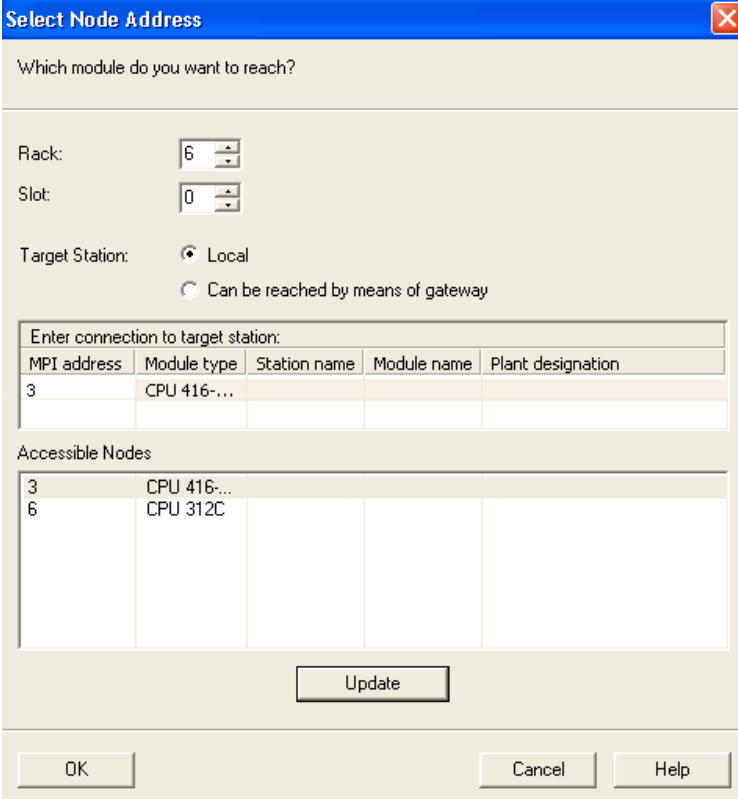
The following page opens:



Click on the **View** button to display the MPI master nodes of the network.

## 8. Remote Maintenance

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Which module do you want to reach?

Rack: 6  
Slot: 0

Target Station:  Local  
 Can be reached by means of gateway

Enter connection to target station:				
MPI address	Module type	Station name	Module name	Plant designation
3	CPU 416-...			

Accessible Nodes

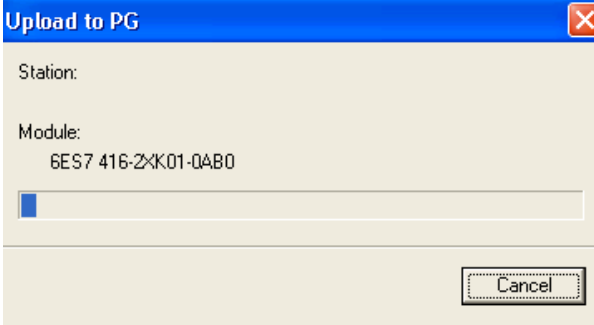
3	CPU 416-...			
6	CPU 312C			

Update

OK Cancel Help

Select an MPI address and click on **OK** button.

The project is being uploaded:



Upload to PG

Station:

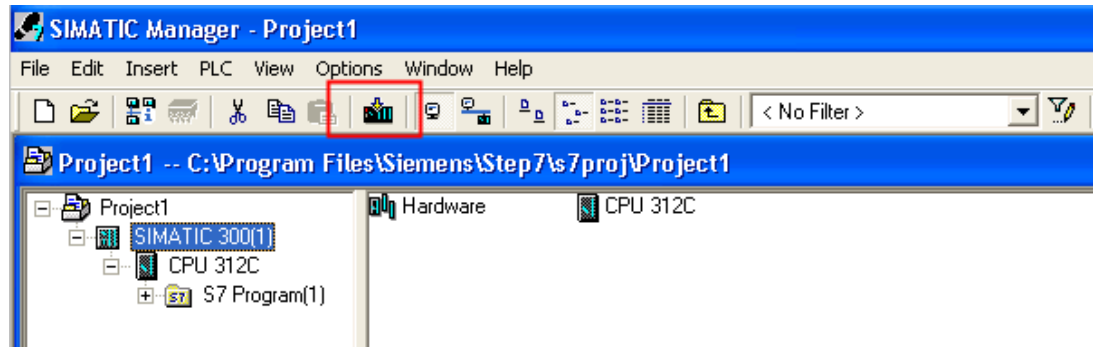
Module:  
6ES7 416-2XK01-0AB0

Cancel

### Download a Project

Open your project:

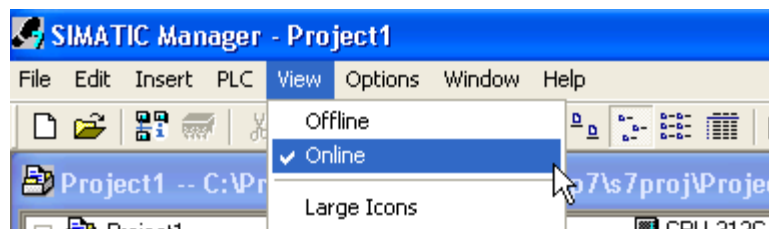
The following window will be displayed:



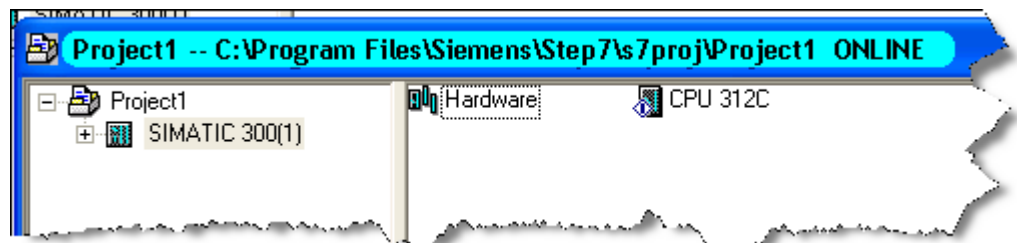
To download your project, select the PLC device and click on the **Download** button.

### Online Viewing

Open your project and under the View menu select the **Online** option.



You can now work online on your project.

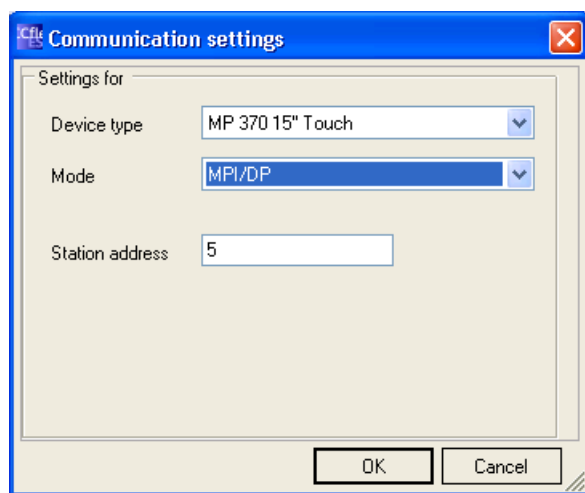
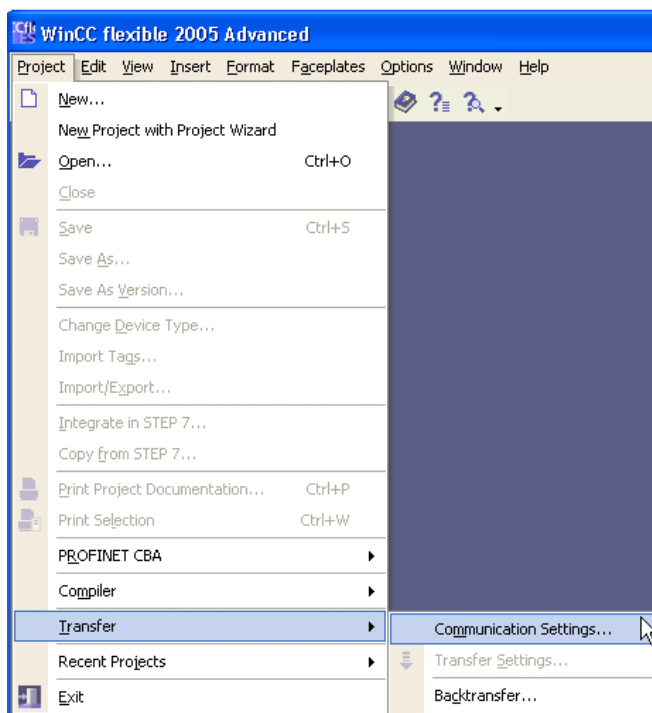


## MPI Panel

Open the WinCC flexible® software to perform the maintenance of your MPI Panels. Once the telephone connection established, you can connect to your Panels as if you were connected directly to them using the PC adapter cable.

### *Backup a project*

Open the communication settings window.

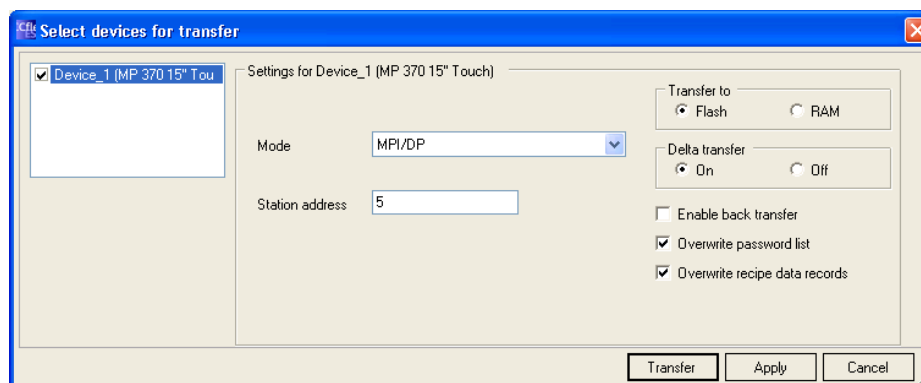
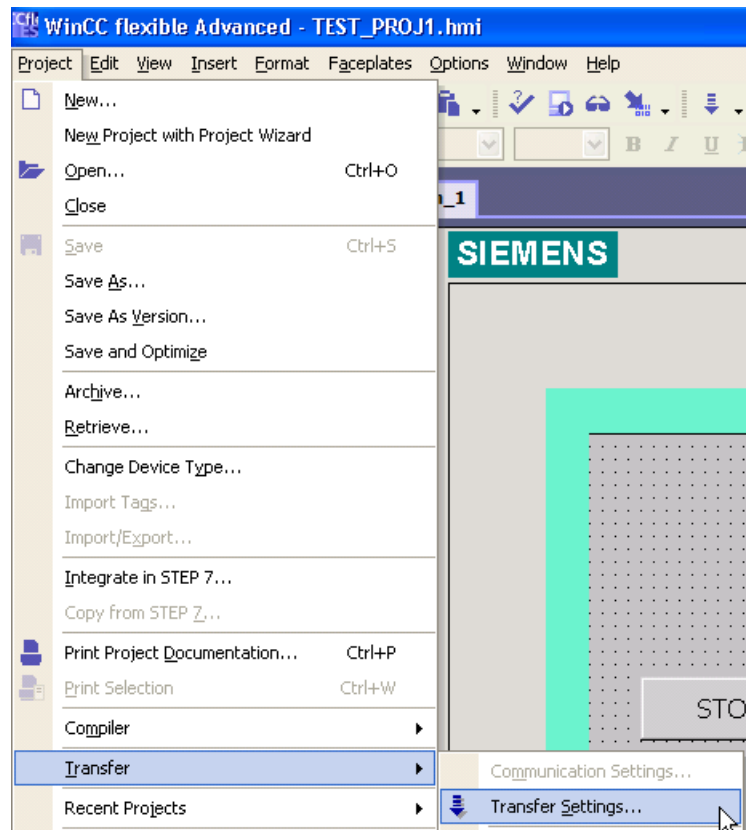


For the communication **Mode** select MPI/DP, and enter the Station address of your Siemens Panel (5, in our example). Click on **OK**.

You should now be able to Backup you project from remote.

### Transfer a Project

Open your project and select the Transfer settings window



In the Transfer window set the **Mode** to MPI/DP, and enter the **Station address** of your device (5, in our example).

Click on the **Transfer** button to start the transfer.

## eVCOM Limitations

eVCOM only allows to access to 1 MPI device on the same time.

So you cannot for example monitor real time data simultaneously on 2 PLCs.

On the same way, you cannot monitor real time data on 1 PLC using Step7<sup>®</sup> and download a project to an MPI Panel at the same time. You will first need to close the online connection in Step7<sup>®</sup> to be able to download the project into the MPI panel using WinCC flexible<sup>®</sup>.

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Revisions

<b>Revision Level</b>	<b>Date</b>	<b>Description</b>
1.0	2009-02-12	First release.

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