Application Note
Schneider PLC and Unity Pro XL

This document guides you through the setup of proprietary vendor specific software installed on your PC. Your supervisor may provide you with additional or alternative instructions.

The document consists of standard instructions that may not fit your particular solution. Please visit our support website for latest revisions of documentation and firmware:

http://www.secomea.com

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Prerequisites for This Guide

The following guide will assist you to setup a remote and online connection to the Schneider equipment placed on the customer site using the Unity Pro XL software.

This guide concentrates on the Schneider Electric Modicon M340, but may also work with other Ethernet and/or USB enabled Schneider PLCs and software packages.

Prerequisites for this guide are:

- You have an operational LinkManager installed on your PC with a LinkManager certificate that allows you to connect to the SiteManager agents.

- You have the Schneider PLC and the Unity Pro XL software installed.

- You have the Schneider device agent installed and configured on the SiteManager at the remote site, and there is access between the SiteManager and the PLC by one of the following methods:

  - A network attached PLC must be configured with agent device type **Schneider Electric / Ethernet PLC** on the SiteManager.

  - A USB attached PLC must be configured with agent device type **Schneider Electric / USB PLC** on the SiteManager. Note that this connection type requires a SiteManager model with USB support and minimum SiteManager and LinkManager version 12155.

If this is not the case, we kindly ask you to contact the person / department responsible within your own company or at the company responsible hereof.

System Overview

The communication path is as follows:

Unity Pro XL → **LinkManager** → GateManager → SiteManager → PLC.

This guide will elaborate on the components marked with **bold.**

The following system overview depicts a SiteManager 3229 at the customer location:
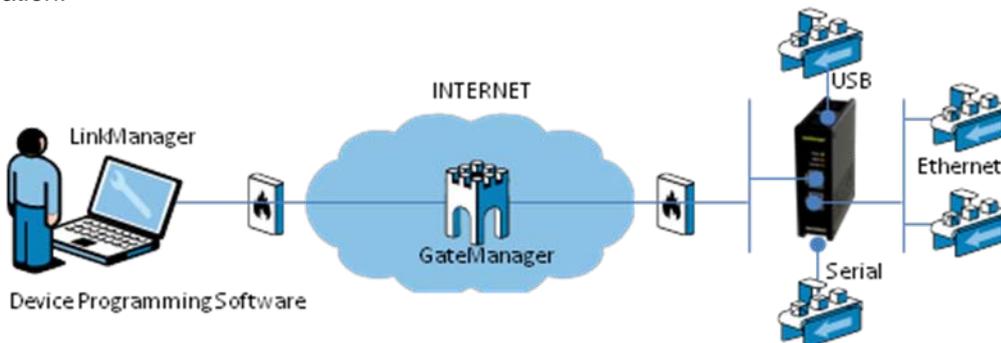
USB supported Schneider devices

At the time of writing this guide, the agent **Schneider electric / USB Adapter** covers the following configurations:

- Telemecanique Modicon M340

- TSX C USB 485 (USB-RS485 Adapter for Inverter, Brushless)

- Telemecanique XBT ZG935 (Adapter/Cable for XBTGT HMIs)

- Telemecanique Modicon TM238/258. Since these models require the SoMachine software for programming, they are in principle out of scope for this document although the connection method is the same. (refer to the separate guide "**Schneider PLC and SoMachine**" for these PLCs)

This guide concentrates on the Schneider Electric Modicon M340.

1. Ethernet Connection

The following describes how to connect the Unity Pro XL to a Modicon M340 PLC that is attached to a SiteManager via Ethernet.

Note: A network attached PLC must be configured with agent device type **Schneider electric / Ethernet PLC** on the SiteManager.

1. Login with your LinkManager and locate the agent that represents your TCPI/IP attached PLC. Click the text (that turns orange at mouse over) to connect to the PLC.

2. You will not see any activity on it yet. This only starts when you connect to the PLC via your project (Make a note of the IP address of the PLC):
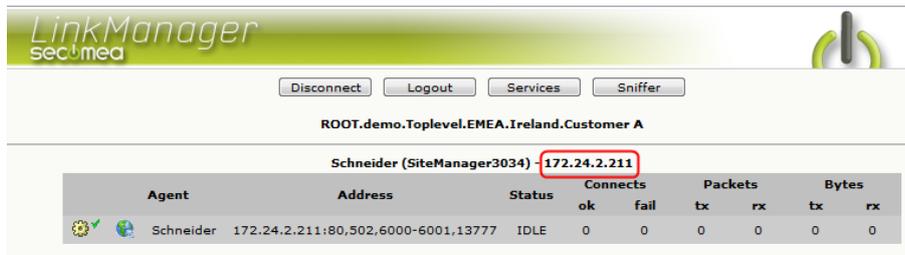
Hint: You are in princple now connected to the PLC, and you could make a ping to the PLC IP address.

3. Start the Unity Pro XL and communicate on the IP address as you would normally have done if you were sitting in the local network with the PLC. The following illustrates some basic screenshots:

4. Open your project in the Unity Pro XL, and select **PLC → Select Address**

5. Ensure that your project is configured with the IP address that the LinkManager is connected to, by selecting the PLC
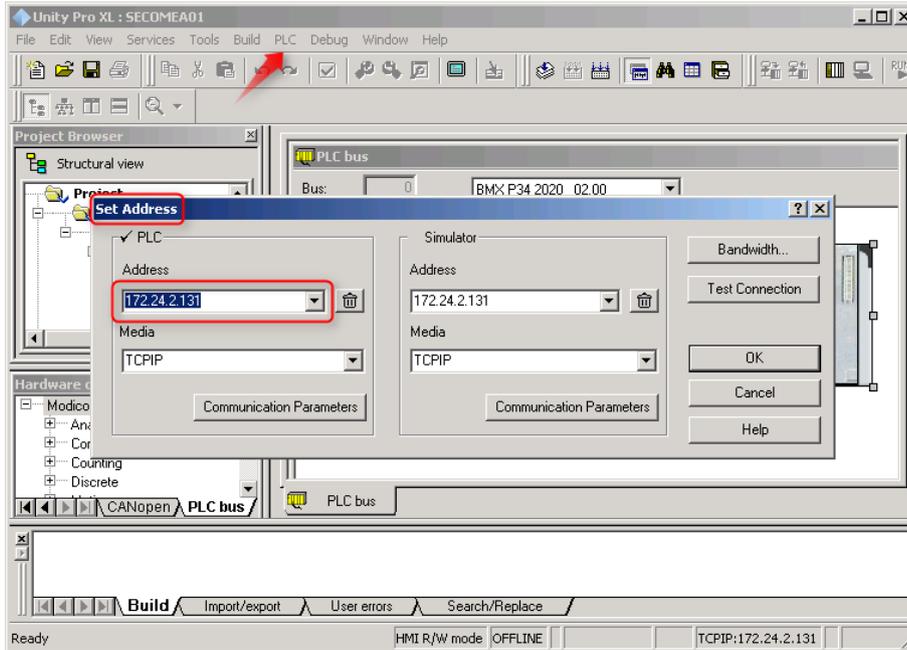
6. At this point you can select **Test Connection**.
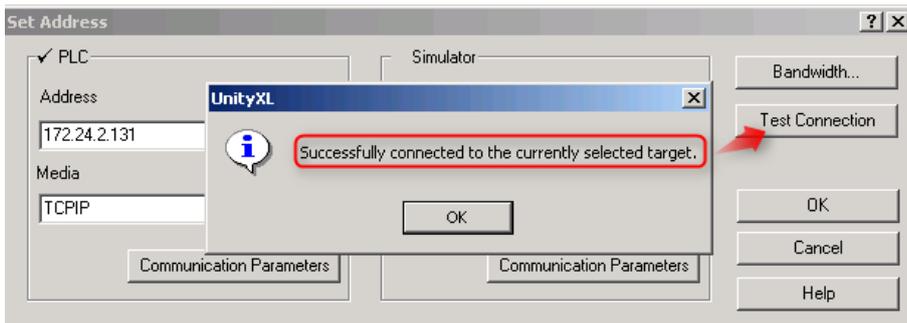
7. Or simply go online, by selecting **PLC → Connect**
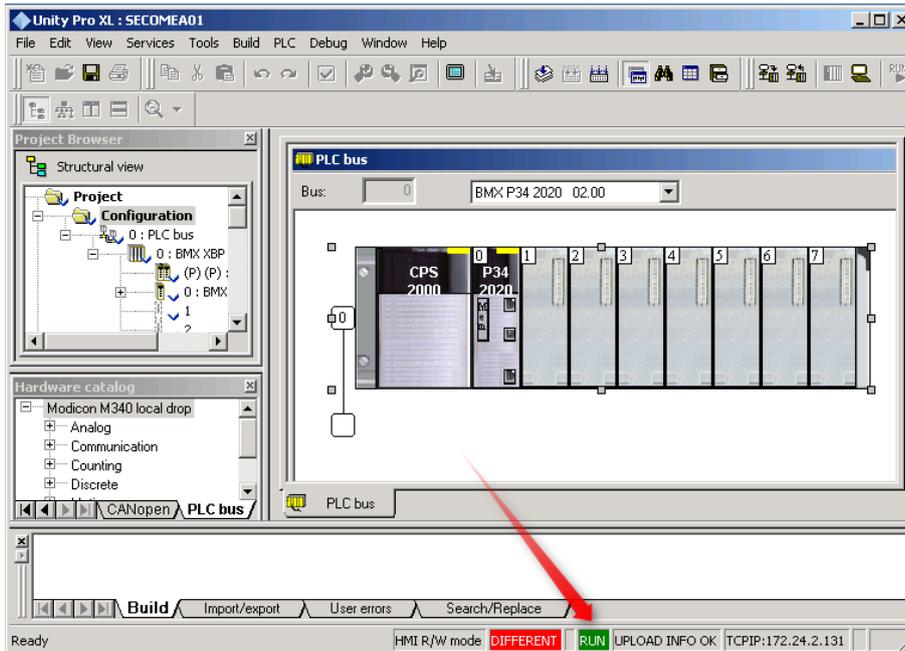
8. You can now also observe data traffic in the LinkManager:
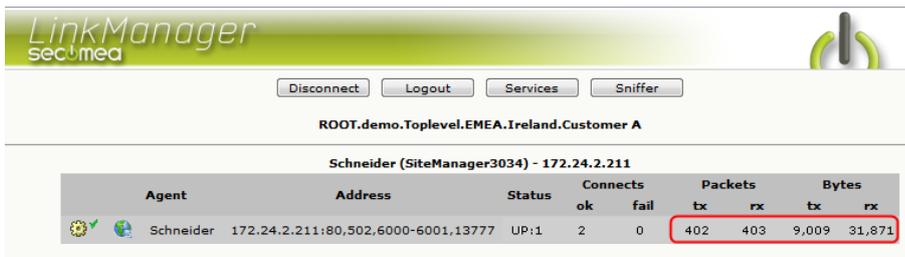
9. You can also try to click the globe Icon.

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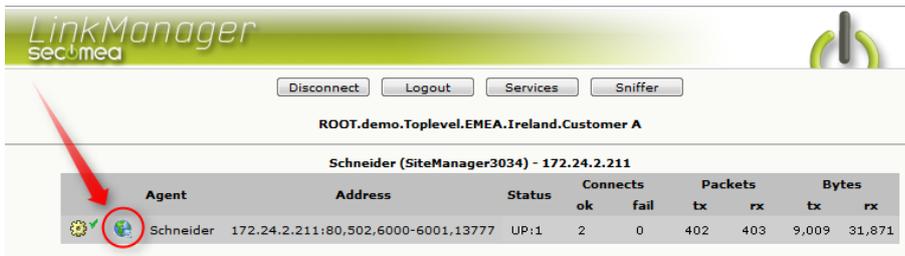
10. This will start your web browser for the PLC:

2. USB Connection

In SiteManager firmware version 12035 in combination with LinkManager 12081, true USB support is introduced. The new LinkManager version will, when connecting to the agent, create a USB controller on the PC that will perform redirection to the USB port on the SiteManager.

This means that Schneider Unity Pro XL should be configured to use a USB connected device.

The following steps have been performed with Unity Pro XL V4.0 and USB drivers already installed on the PC.

1. Locate the Schneider USB agent and click on it to establish a connection to it:

2. First time the connection is opened, the "Found New Hardware" Wizard will pop up. Select to not search for drivers on Windows Update site.

3. Select "Install the software automatically".
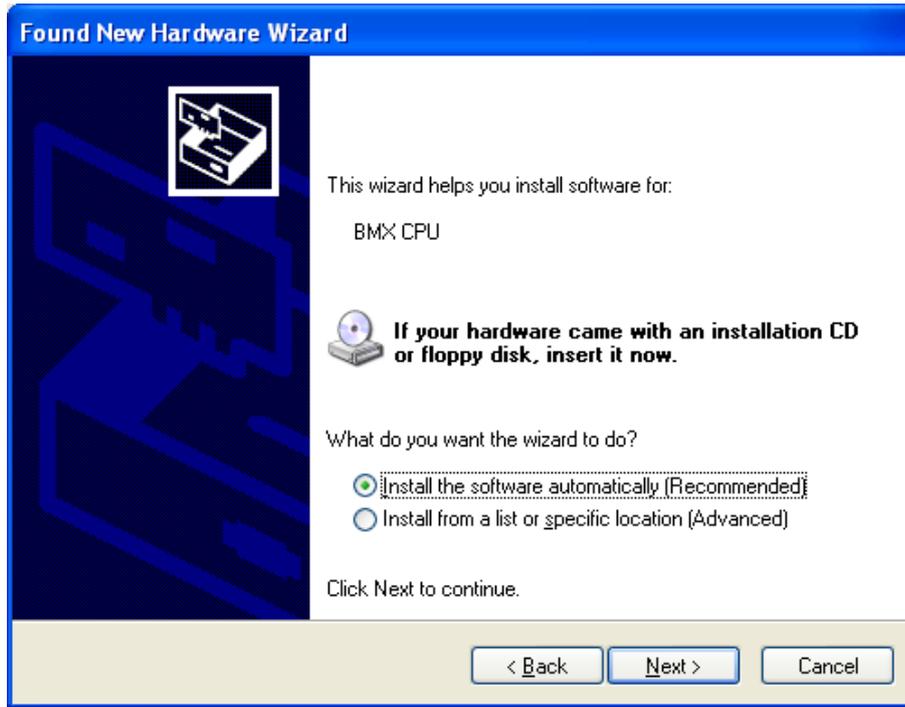
4. Windows recognizes the device, so you can let it install the driver automatically. The driver is not WHQL signed, but you can safely select Continue Anyway:

5. It should then complete the wizard:
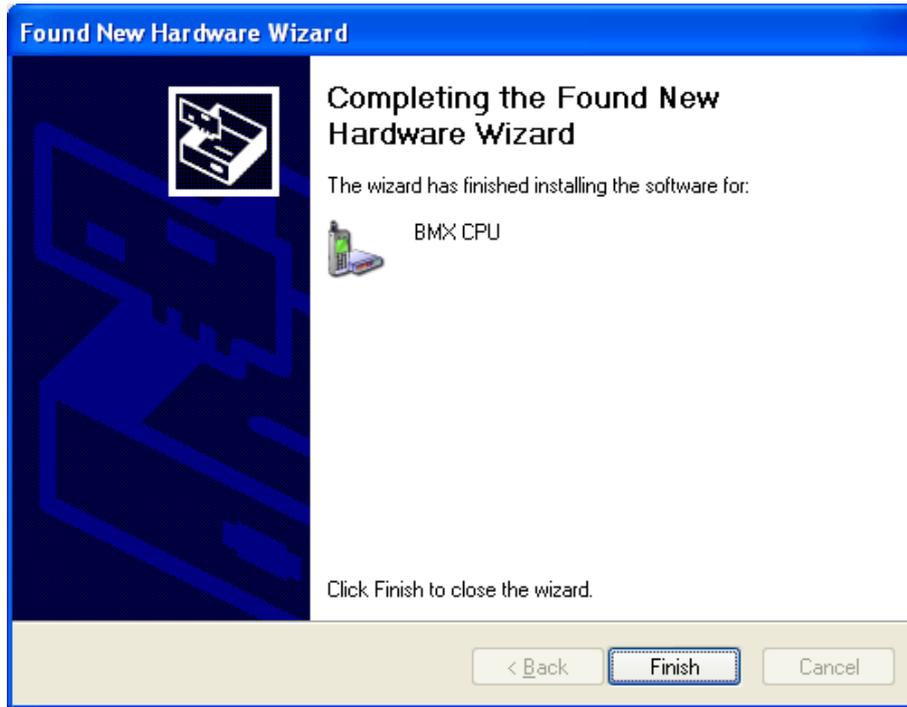
6. And you will observe the USB icon in the taskbar

7. Clicking the icon will bring up a status bar:

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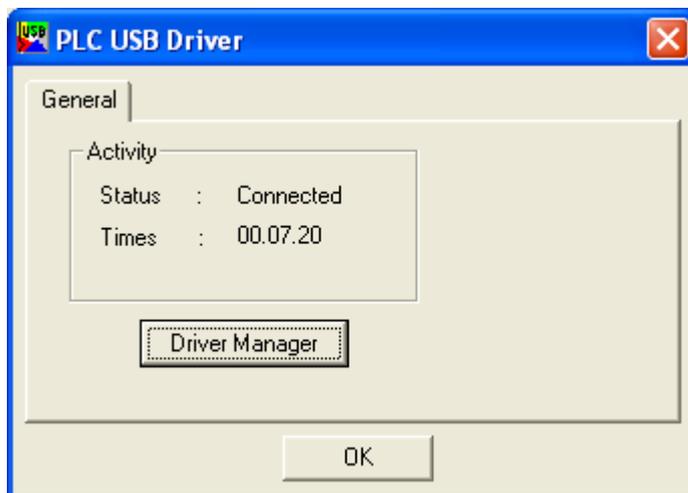
8. Selecting Driver Manager will bring up the Windows Device Manager, and you will find the device as BMX CPU under the Modems class.
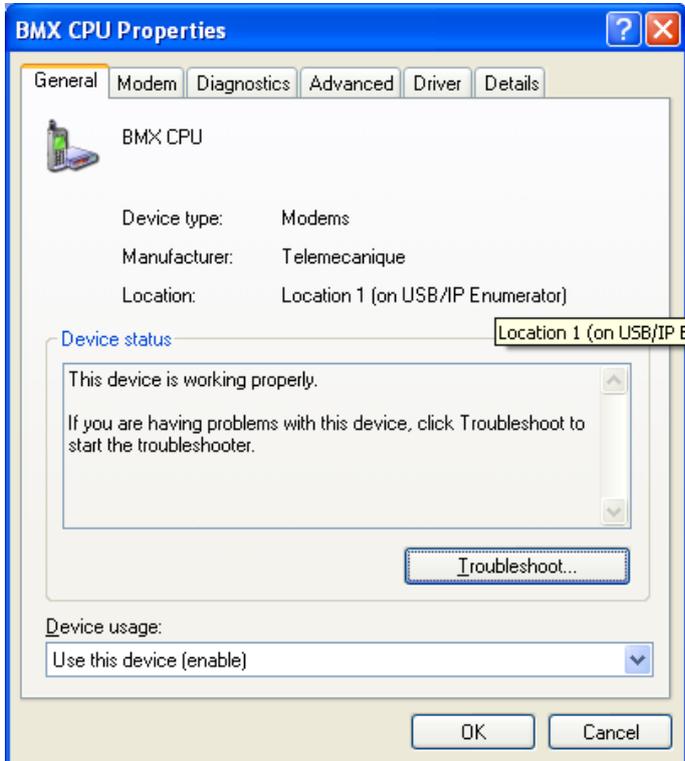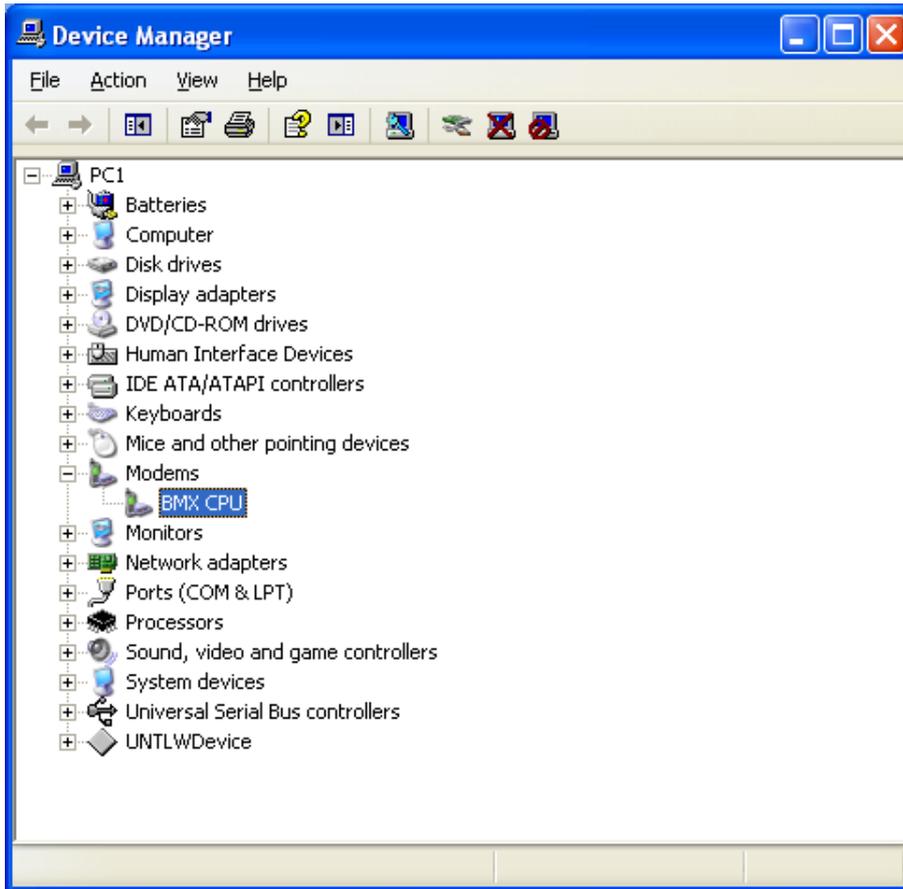
9. In Unity Pro XL, select **Standard Mode** in the PLC menu:
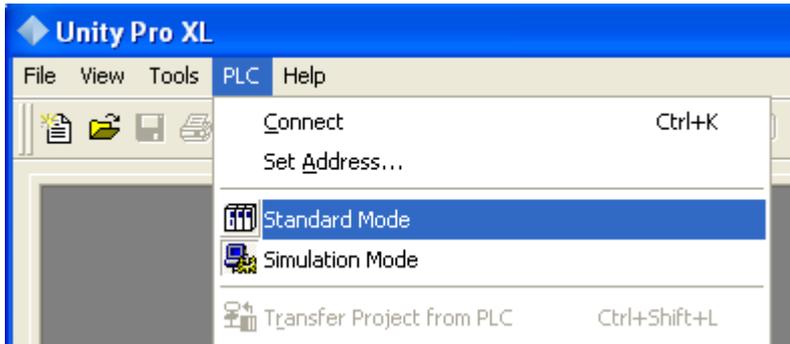
10. Select **Set Address** in the PLC menu, and set **Media** to "USB".
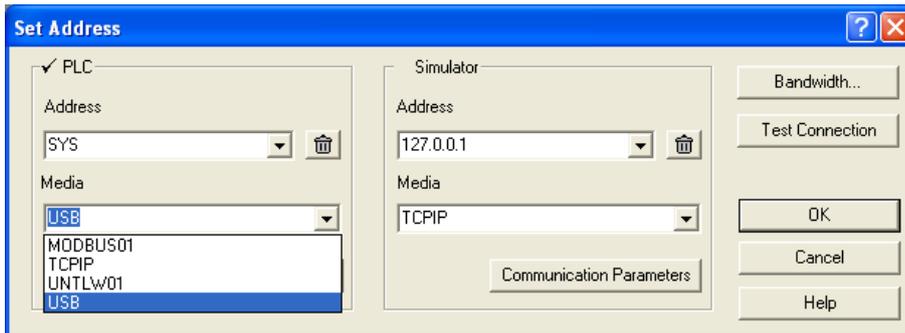
11. Select **Connect** in the PLC menu:
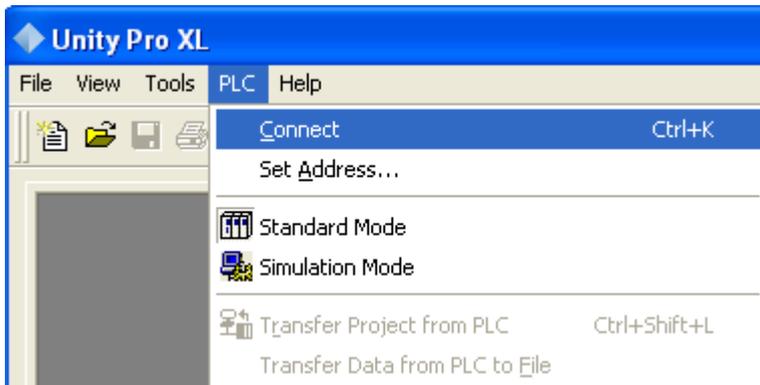
12. The status line will show that the connection is active (but project is different).:

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13. Select **Transfer Project from PLC** in the PLC menu:
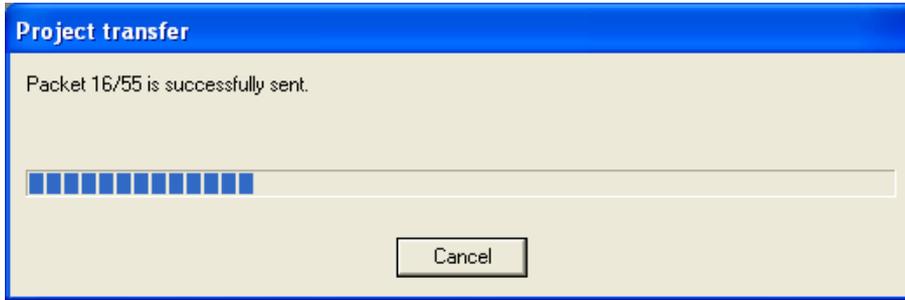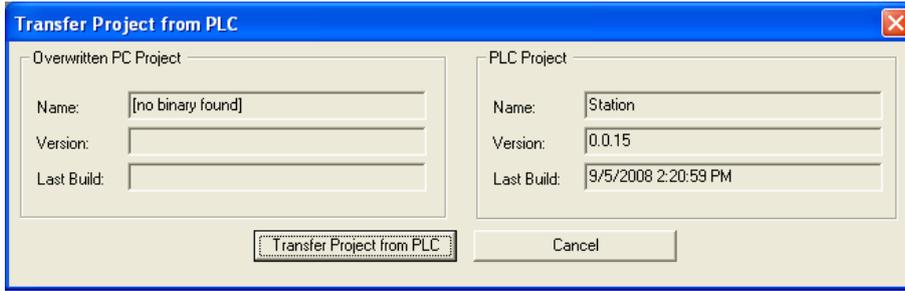
14. If successful:

IMPORTANT: If LinkManager status is DOWN:
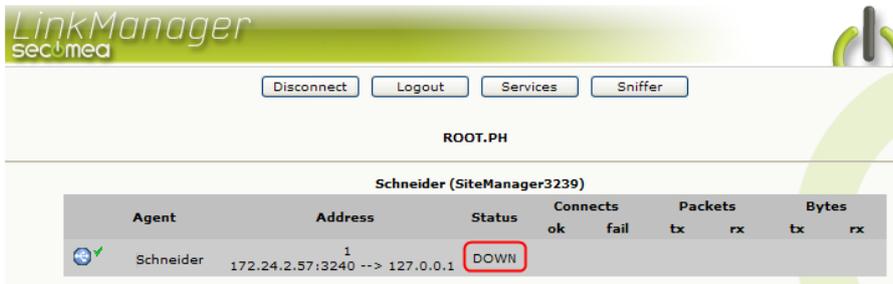
In the current LinkManager version, the connection is not automatically re-stored in case the PLC restarts, or if the cable is un-plugged/re-plugged.

It is necessary to Disconnect and re-establish the connection (first step of this section).

3. Ethernet connection via Windows XP under VMWare

You can run the Unity Pro XL software inside a VMWare engine, to a PLC that is Ethernet attached to a SiteManager.

From LinkManager version 12155 you can choose to run the LinkManager inside or outside the virtual machine. Note that LinkManager can only run inside VMWare if the host OS is Windows 7 and the PC's CPU has support for virtualization.

The following illustrates VMWare Player, which can be downloaded from http://www.vmware.com/support/product-support/player/, and for LinkManager running outside the virtual machine (i.e. on the host system)

1. Locate your WindowsXP that has Unity Pro installed, and enter **Edit virtual machine settings.**

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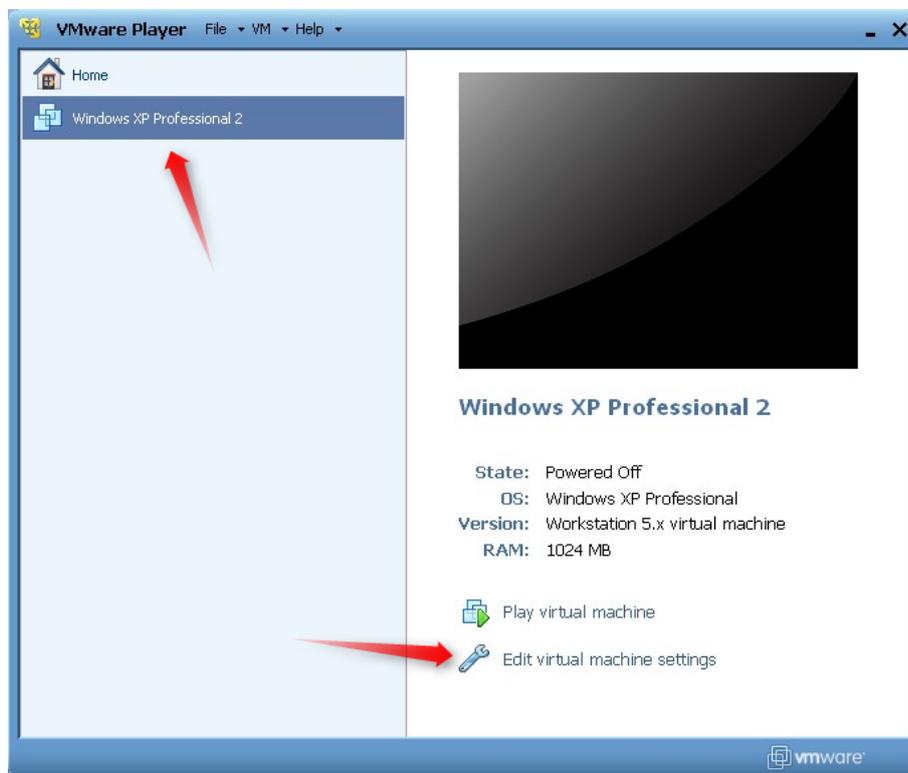
2. Make sure the Network Adapter settings is set to **NAT:**
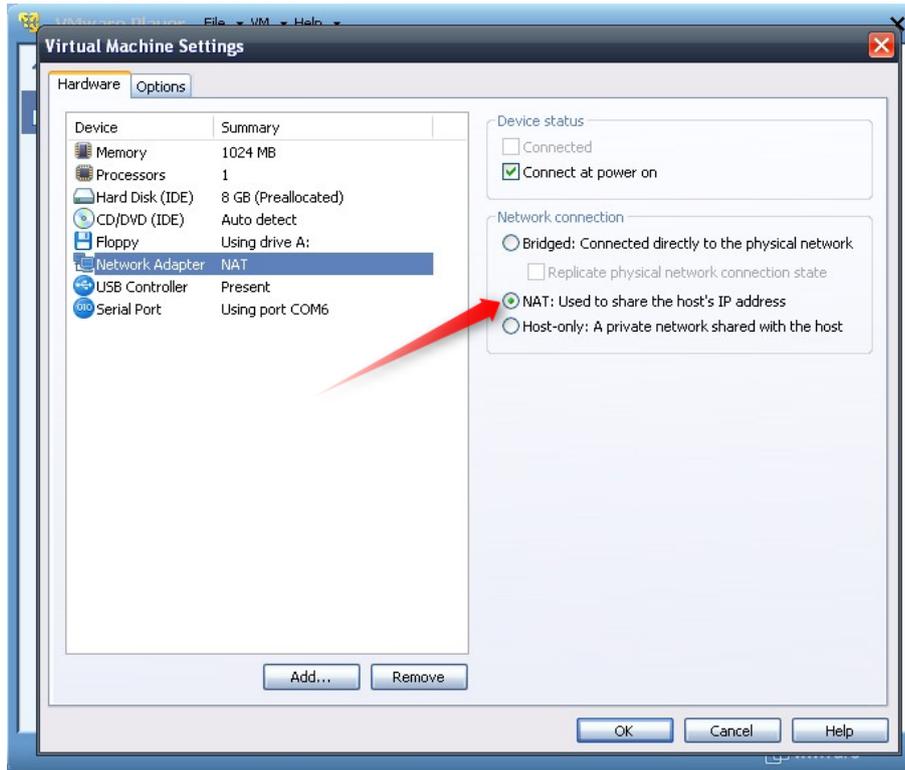
3. Start the VMWare engine and on the host PC start LinkManager.

4. Follow the procedure of section **1. Ethernet Connection** to get access to the PLC via LinkManager.

4. USB connection via Windows XP under VMWare

You can run the Unity Pro XL software inside a VMWare engine, to a Schneider PLC that is USB attached to a SiteManager.

Important: LinkManager must run inside the virtual machine also and must be version 12155 or later. Note that LinkManager can only run inside VMWare if the host OS is Windows 7 and the PC's CPU has support for virtualization.

The following illustrates VMWare Player, which can be downloaded from http://www.vmware.com/support/product-support/player/, and for LinkManager running outside the virtual machine (i.e. on the host system)

5. Locate your Windows XP that has Unity Pro XL installed, and enter **Edit virtual machine settings.**

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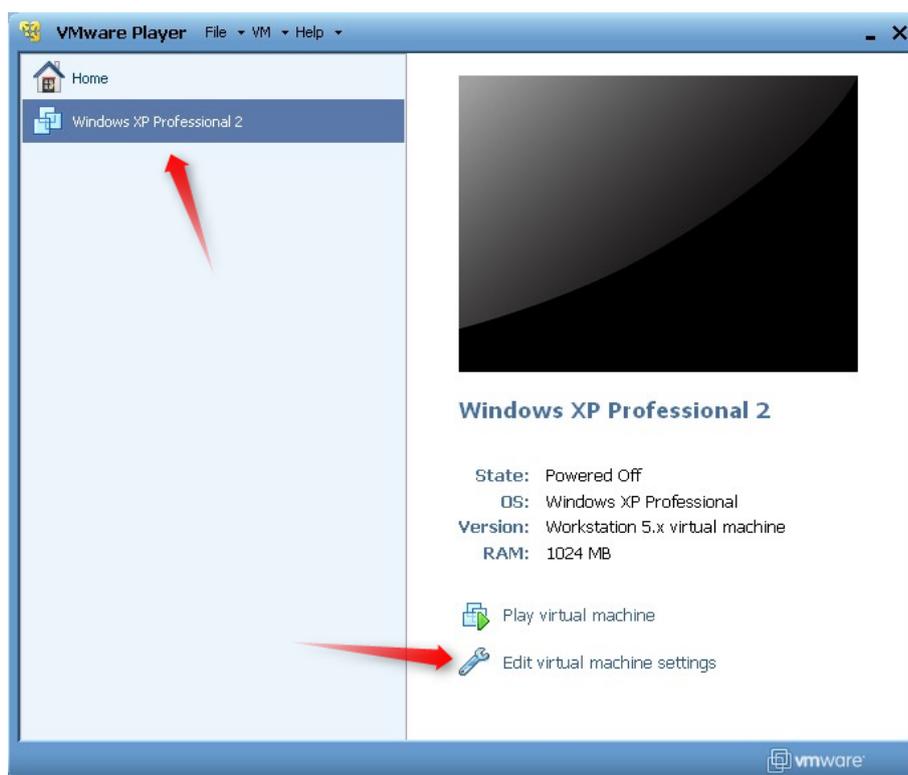
6. Make sure that **USB Controller** has been added as Hardware component**:**
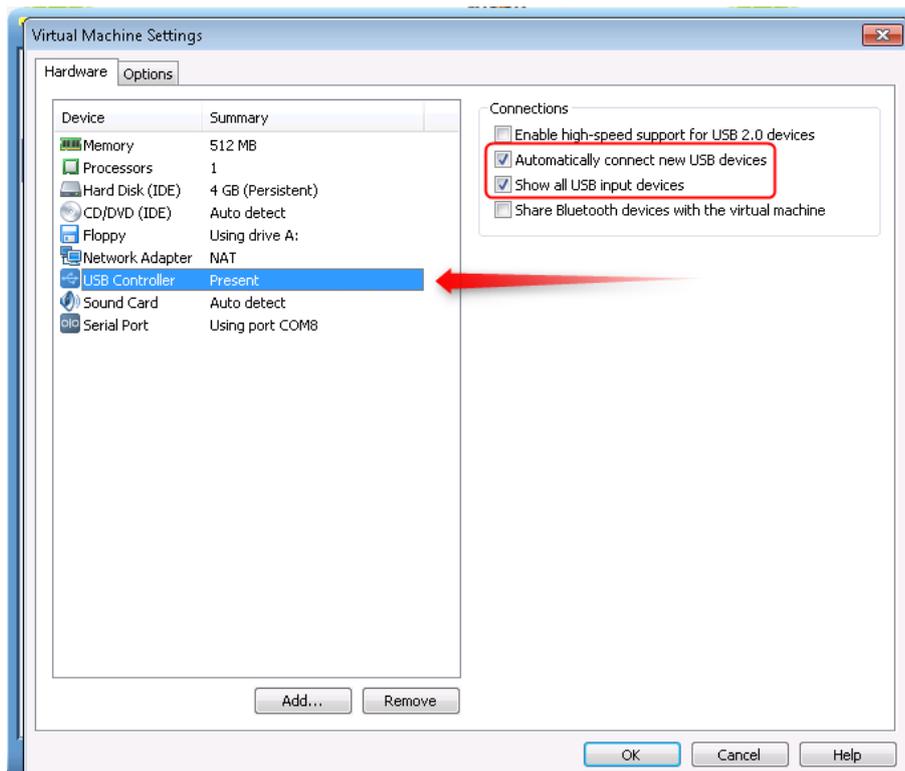
7. Start the VMWare engine and the LinkManager inside the VMWare engine.

8. Follow the procedure of section **2 USB Connection** on page **8** to get access to the PLC via LinkManager

Notices

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