

# APPLICATION NOTE

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**Title : CNI Programming Using Lantronix DeviceInstaller**

**Category : 5500CN**

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**Key Words : C-Bus 5500CN, Lantronix, Device Installer**

Lantronix® DeviceInstaller™ is a utility software application used for scanning, configuring and programming new or existing CNIs (5500CN) on a network.

You need a basic knowledge in IP addressing, in order to successfully and efficiently program a CNI.

IP addresses on a network must belong to the same subnet (have the same subnet mask) in order to talk to each other. Servers allocate IP addresses in a dynamic or static manner. When programming a CNI it is best to use a static IP address, as this ensures that the CNI is always available at the same address. Dynamic IP addresses (allocated by a DHCP Server) can be used in simple projects, where Schedule Plus or HomeGate is not used for MASTER/SLAVE computer configurations.


In a DIRECT connection (using a crossover Cat-5 cable), the connectivity is even simpler and the address method used for allocating IP addresses (dynamic or static) is no longer crucial.

If a CNI is connected to an existing PC network, its IP address and subnet mask is dictated by the existing PC network. If nothing fancy is required (such as a C-Bus remote connection via a local network or the Internet), dynamic IP addressing can be used. Most complex PC networks, are managed by a network administrator. You will need permission to install additional devices on such networks. You also need to know whether dynamic IP addressing can be used. If not, the network administrator will supply a specific static IP address and subnet mask.

Once the above factors are resolved, take the CNI out of the box and connect it. Power up the unit using the supplied or purchased mains adapter. Connect the C-Bus and Ethernet networks. DO NOT connect the pink C-Bus cable into the Ethernet socket, as this will damage the unit.

The two indicators on the front of the CNI indicate the status for the C-Bus and Ethernet connections. They should both be orange.

Next, launch the Lantronix® DeviceInstaller™. You should see a window similar to the one in Figure 1.

 You can download the latest DeviceInstaller™ software here: [Lantronix DeviceInstaller v4.4.0.2](http://www.lantronix.com/products/deviceinstaller/), and also find many notes on the next link about windows 10 and windows 8 mostly firewall policy issues from the Lantronix web site:

<https://www.lantronix.com/products/deviceinstaller/>

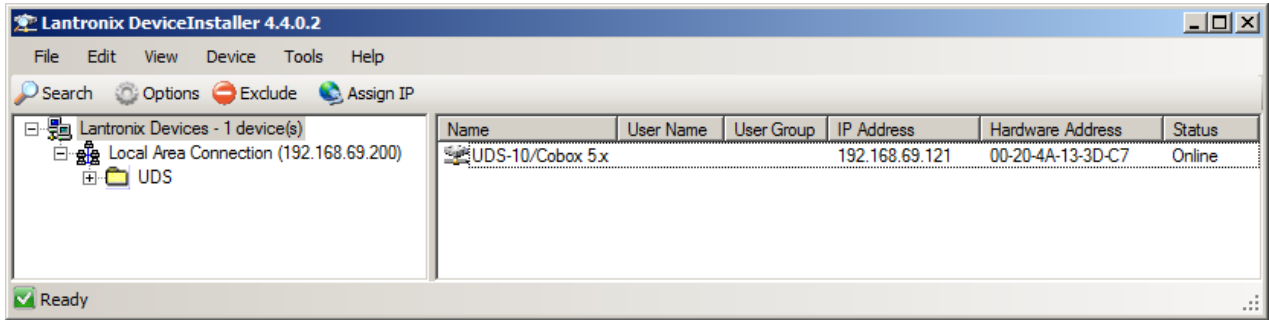


Figure 1 - The initial DeviceInstaller window

If you need to scan or reprogram an existing CNI on the network, click the Search button. In a few seconds you should see one or more CNIs listed, like in Figure 2.

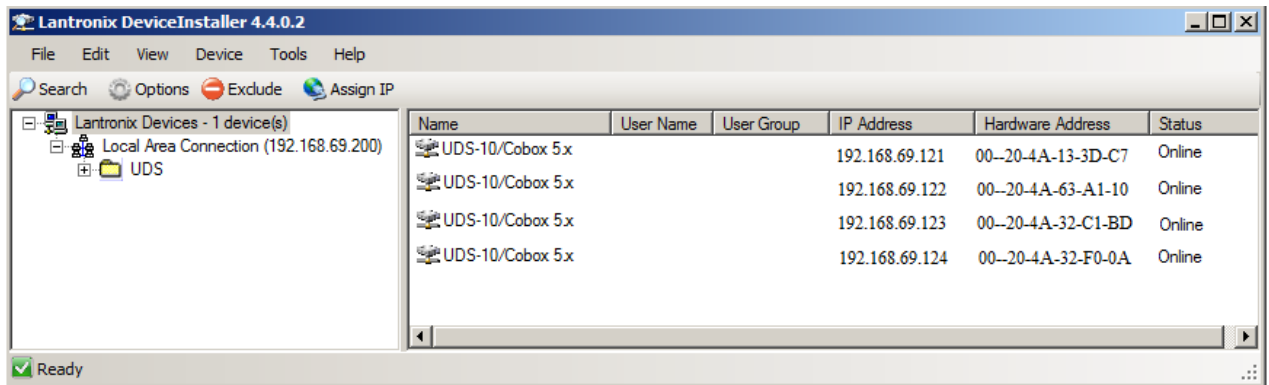


Figure 2 - The Search function lists the CNIs found on the network

Each device found will be a UDS-10/Cobox (either 4.x or 5.x depending on the firmware/hardware version). Information is provided about each CNI, including its allocated **IP Address**, **Hardware Address** (sometimes called the **MAC Address**) and **Status** (Online or Offline). Additionally, a **Name** and **Group** may have been added when a CNI was initially programmed. The Name and Group may reflect the C-Bus network name and location or department.

If you have a new CNI, launch the DeviceInstaller™ and follow the steps below.

- 1) Click the Assign IP button. This reveals the Device Identification panel shown in Figure 3.

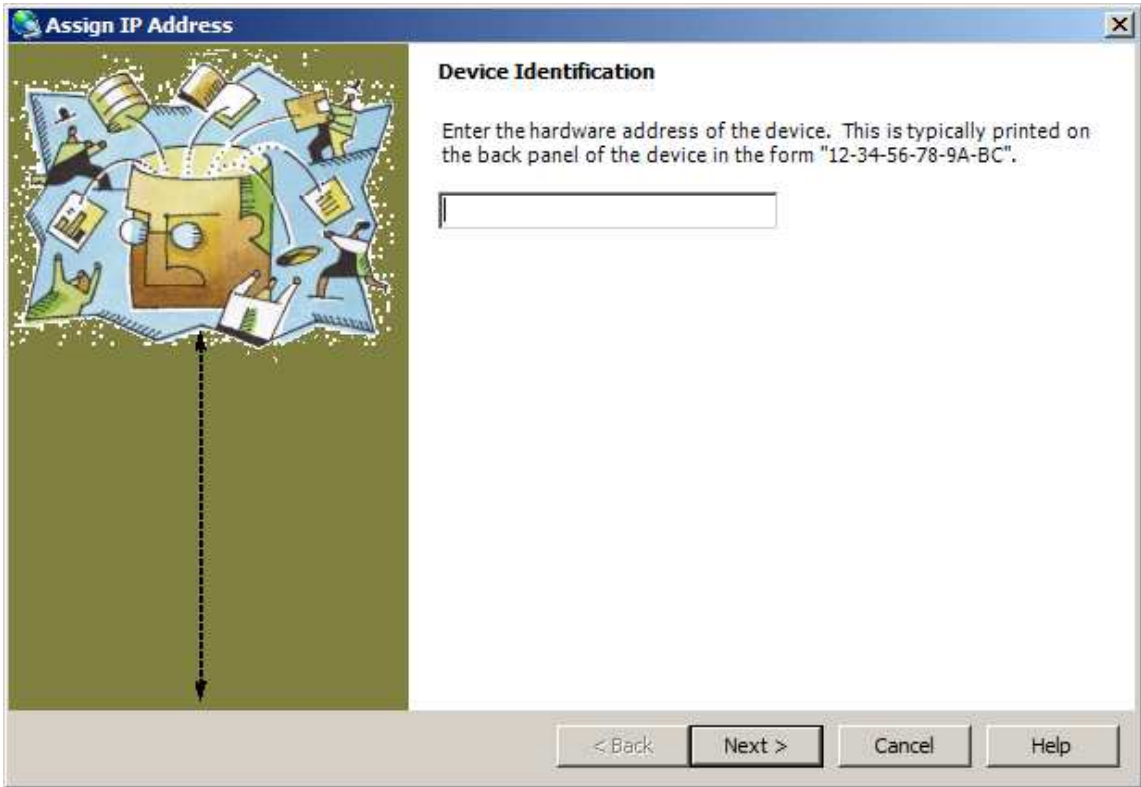


Figure 3 - Entering the MAC Address of your CNI

- 2) Type in the CNI's MAC Address. This is printed on a label on the side of the CNI. An example MAC Address is **00-20-4A-13-3D-C7**.
- 3) Click **Next**. The Assignment Method panel is displayed.

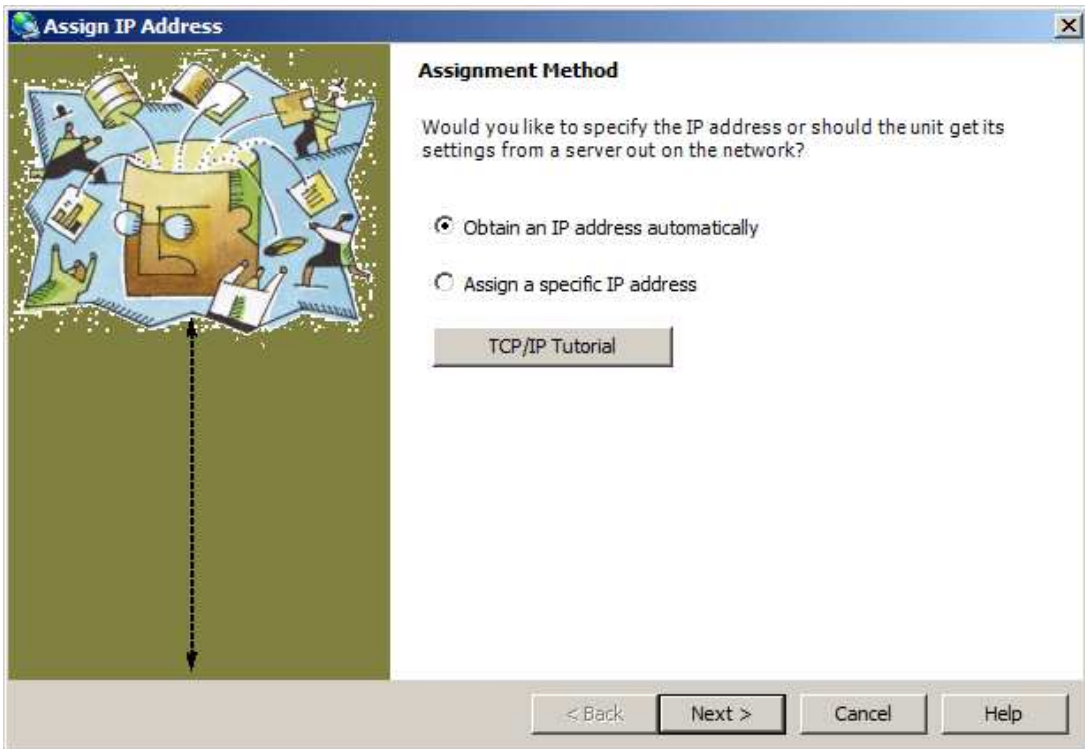


Figure 4 - Selecting the IP address Assignment Method

- 4) Select either the automatic (dynamic IP address) or specific (static IP address) option. Click **Next**. If you chose the specific (static IP address) option, go to **step 10**).

### **Dynamic IP Address Option**

- 5) With the automatic (dynamic IP address) option selected, the IP Discovery Settings panel is displayed (Figure 5).

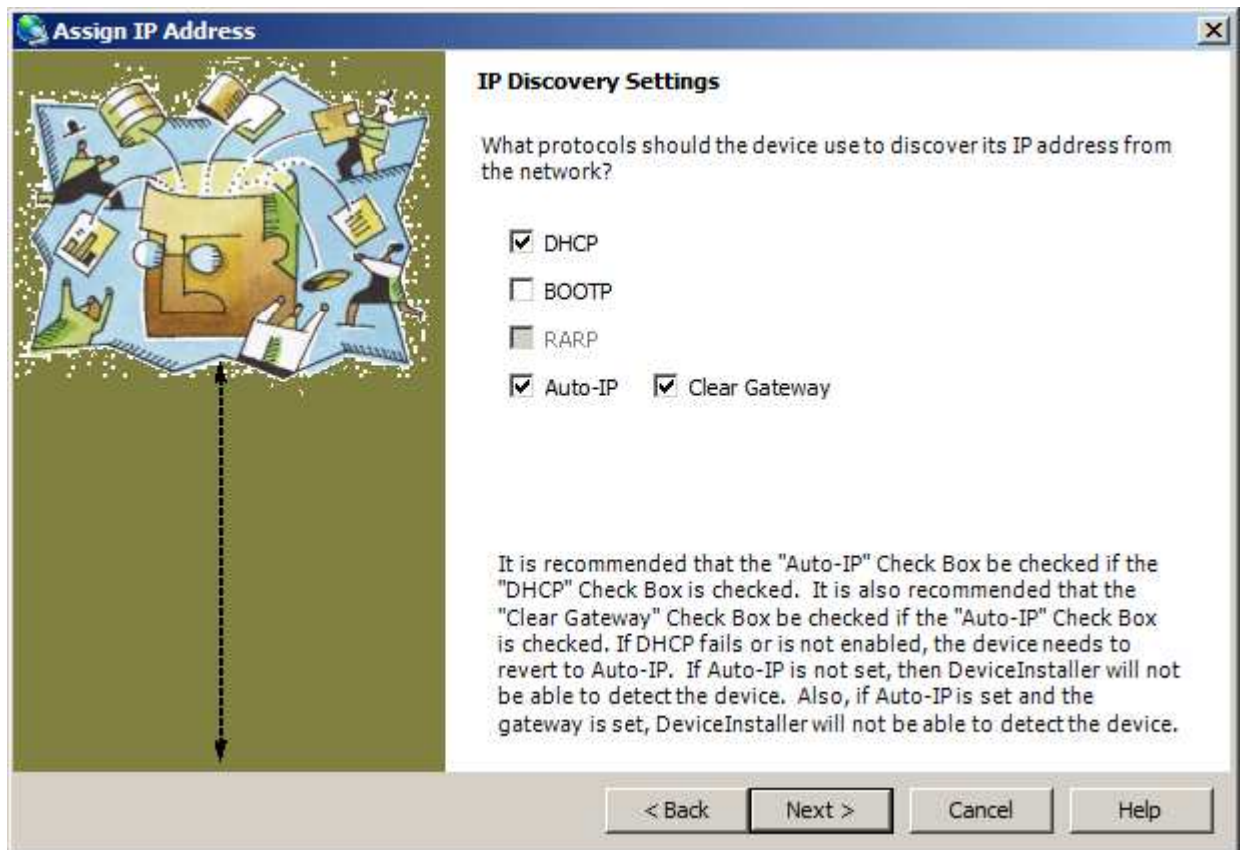


Figure 5 - Selecting the IP discovery settings

- 6) Click **Next** again. The Assignment panel is displayed (Figure 6).

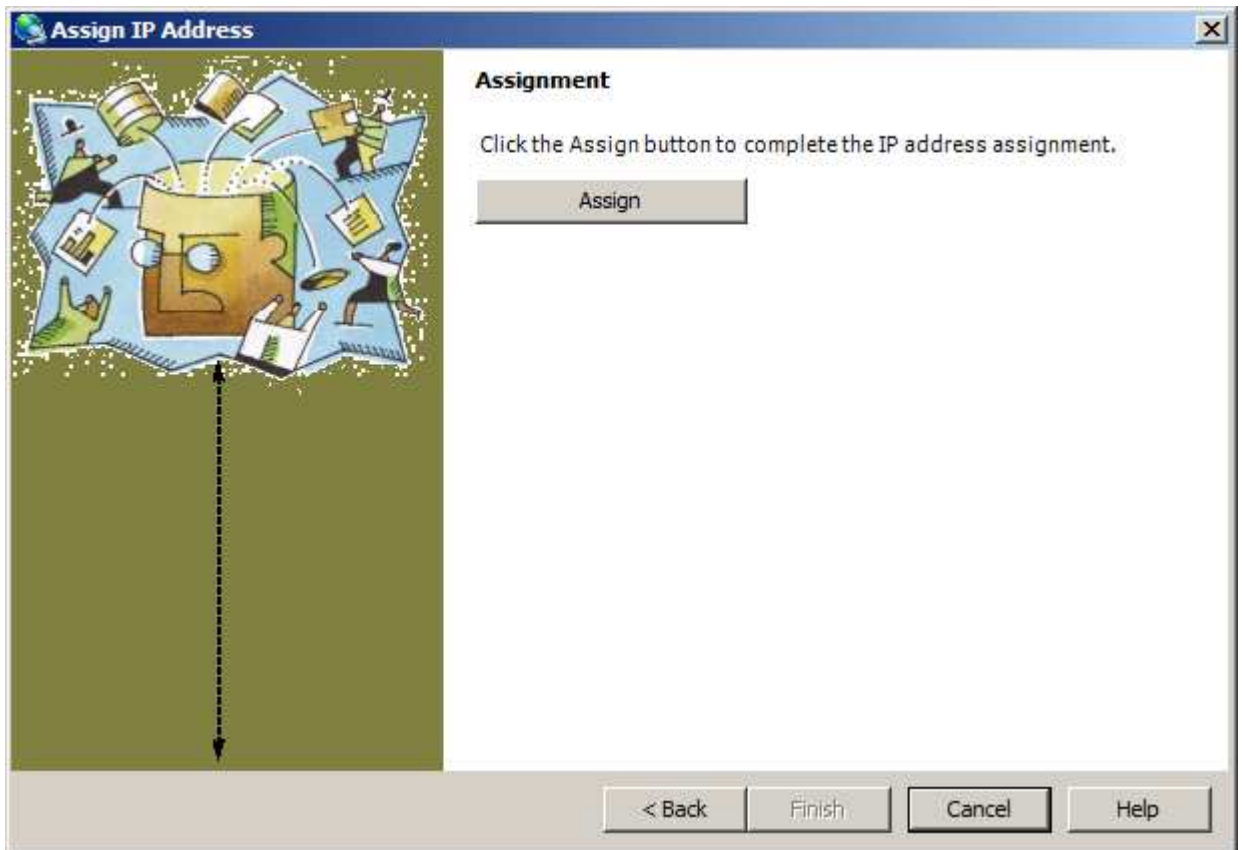


Figure 6 - The Assignment panel

- 7) Click the **Assign** button. You should see a progress bar as the configuration is applied.

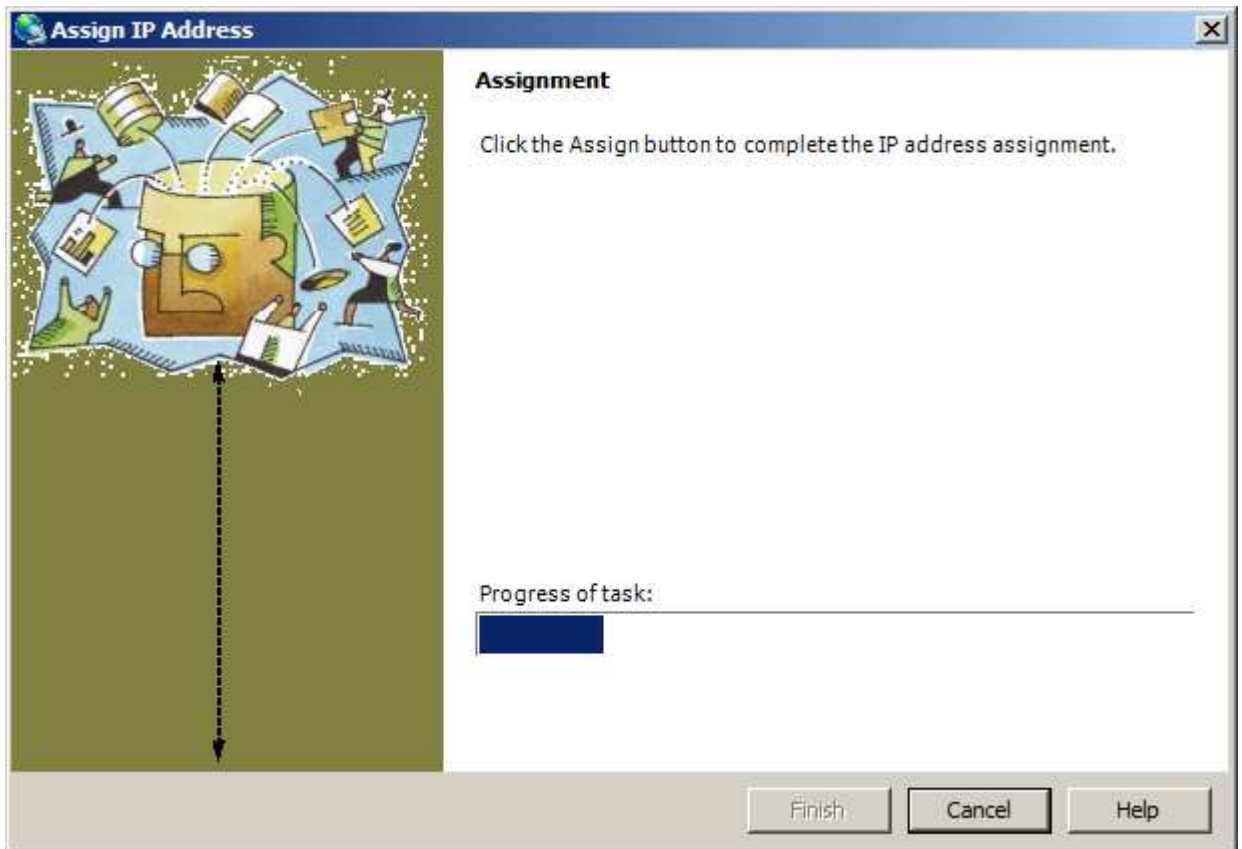


Figure 7 - IP address assignment Progressing

- 8) When the progress completed successfully, click **Finish**



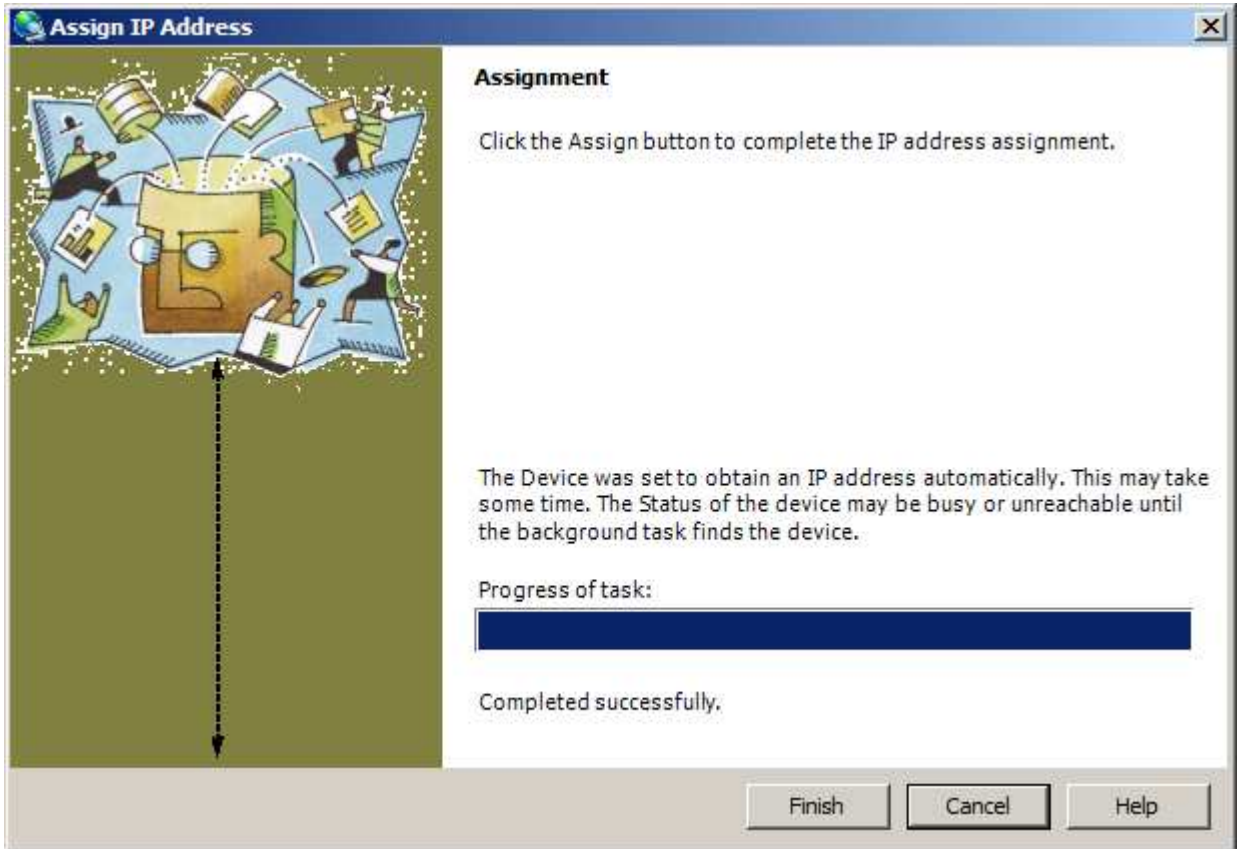


Figure 8 - A successful IP address assignment

9) In a few seconds the CNI should appear in the list with an IP address allocated by the DHCP server. Its status should be Online. If the CNI does not appear, click the Search button again.

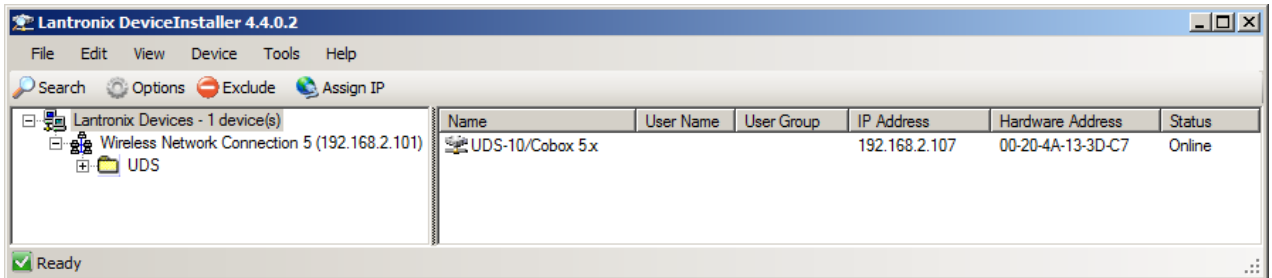


Figure 9 - A new IP address assigned to the CNI



Using the Dynamic IP Address Option, the CNI must connect to a Router, not connect to a PC directly using a crossover cable, otherwise it will have an error message of Unable to find device.

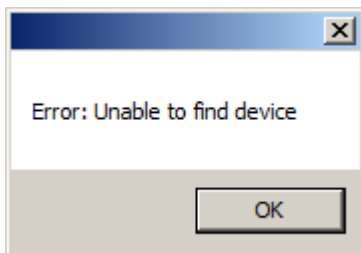


Figure 10 - Unable to find CNI

**Static IP Address Option**

- 10) With the specific (static IP address) option selected, the IP Settings panel is displayed (Figure 11).

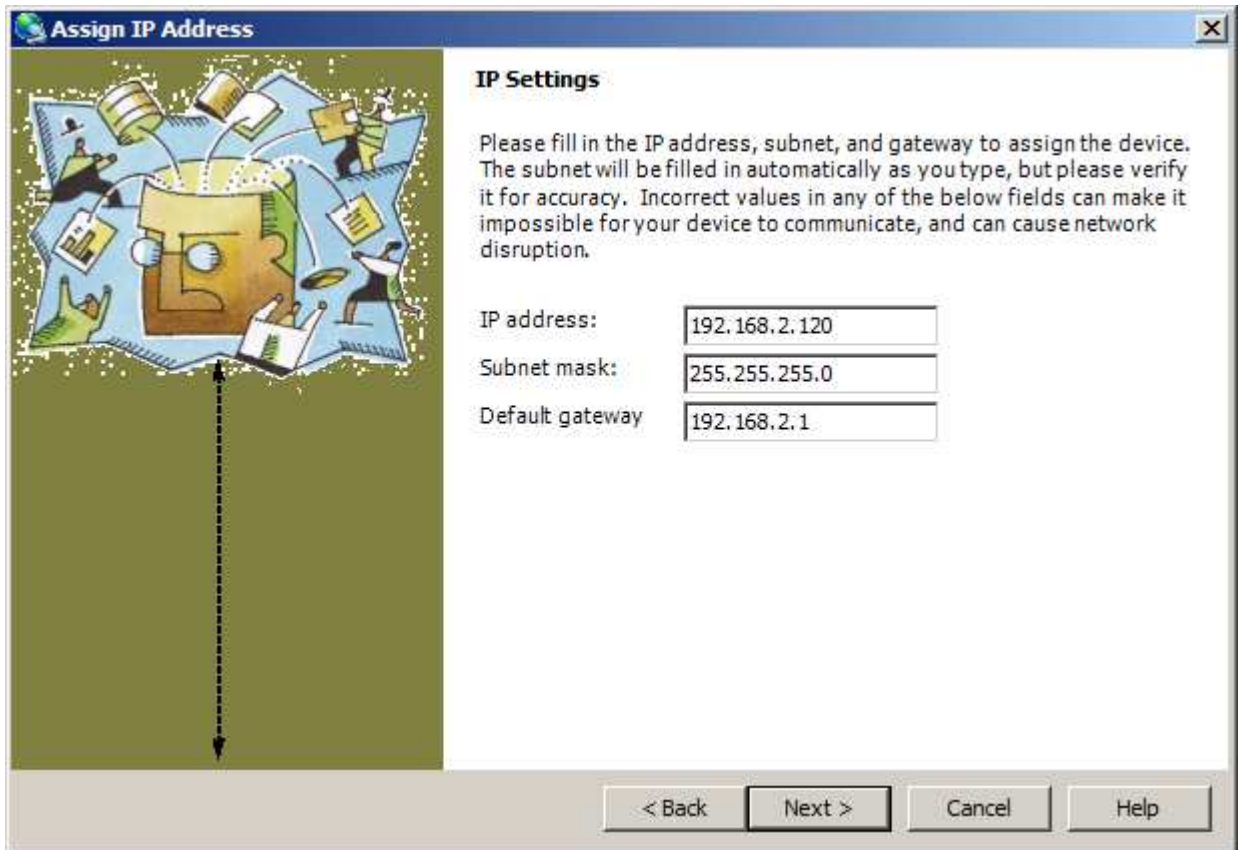


Figure 11 - Entering the IP settings

- 11) You must enter the subnet mask and a unique IP address which is compatible with the Ethernet network. This information may be obtained from the Network Administrator (in larger or complex networking environments).

You may leave the default gateway blank.

In a smaller network environment which uses static IP addresses, you can determine a suitable address by taking the IP address of your PC and using one similar. To reduce the likelihood of using a duplicate IP address, it is best that all network equipment is switched on and connected to the network when you do this. That way, the DeviceInstaller™ software can ensure the address you specify is not used by another network device.

To determine a suitable subnet mask and IP address, using Windows 7:

- i) Type "cmd" On the Start search bar, to search the Command Prompt.

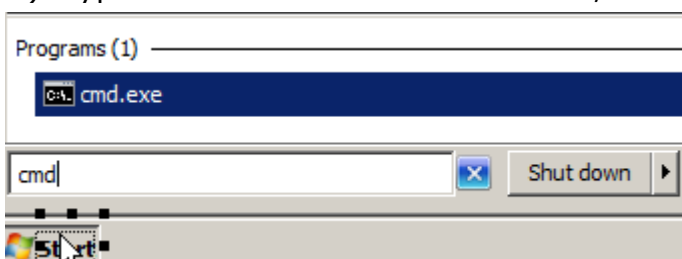


Figure 12 - Search Command Prompt program

- ii) Click the "cmd.exe" to open the Command Prompt window.

- iii) Type "**ipconfig**" and press **Enter**. This displays the PC's network settings (3). Use the subnet mask displayed here, for the IP Settings panel of the DeviceInstaller.

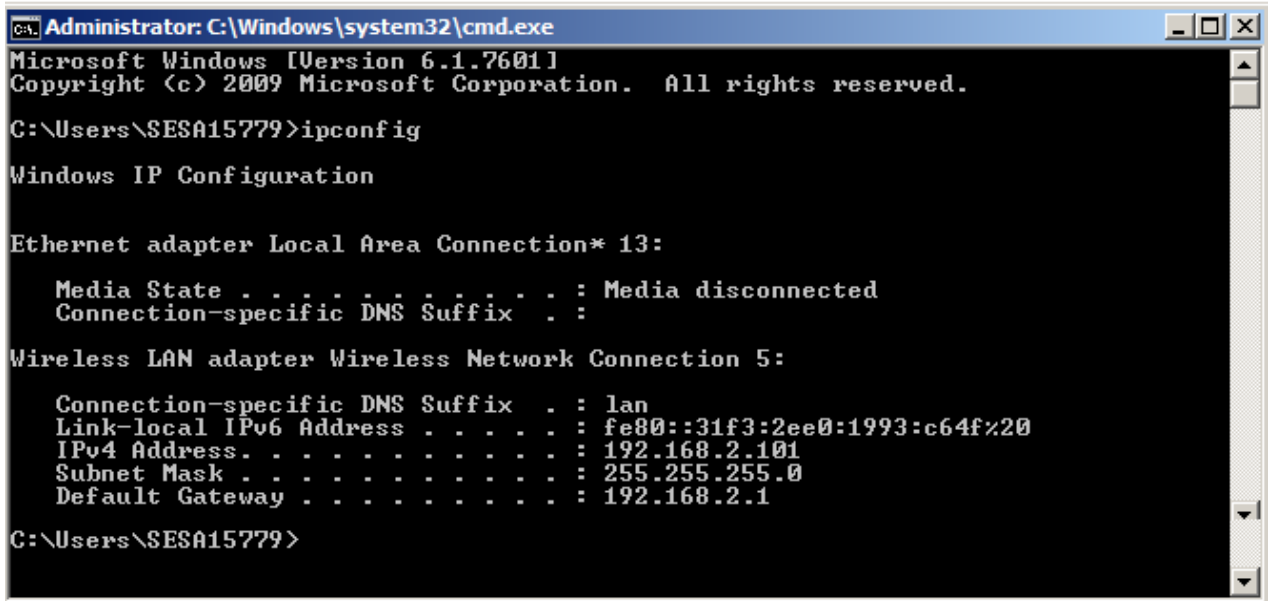


Figure 13 - Type "ipconfig" in a command prompt window to display the PC's network settings

- iv) Use the IP address displayed in the command prompt as a guide. Add (or subtract, if the number is near 254) one or more to the fourth number in the IP address and enter this in the IP Settings panel. For example, if your PC's IP address is 192.168.2.101, type in something like 192.168.2.120.
- v) Click **Next**. The DeviceInstaller will verify the validity of the IP address. If the address is used by another device on the network, increment the fourth number and try again. Repeat this until the DeviceInstaller™ accepts the IP address.



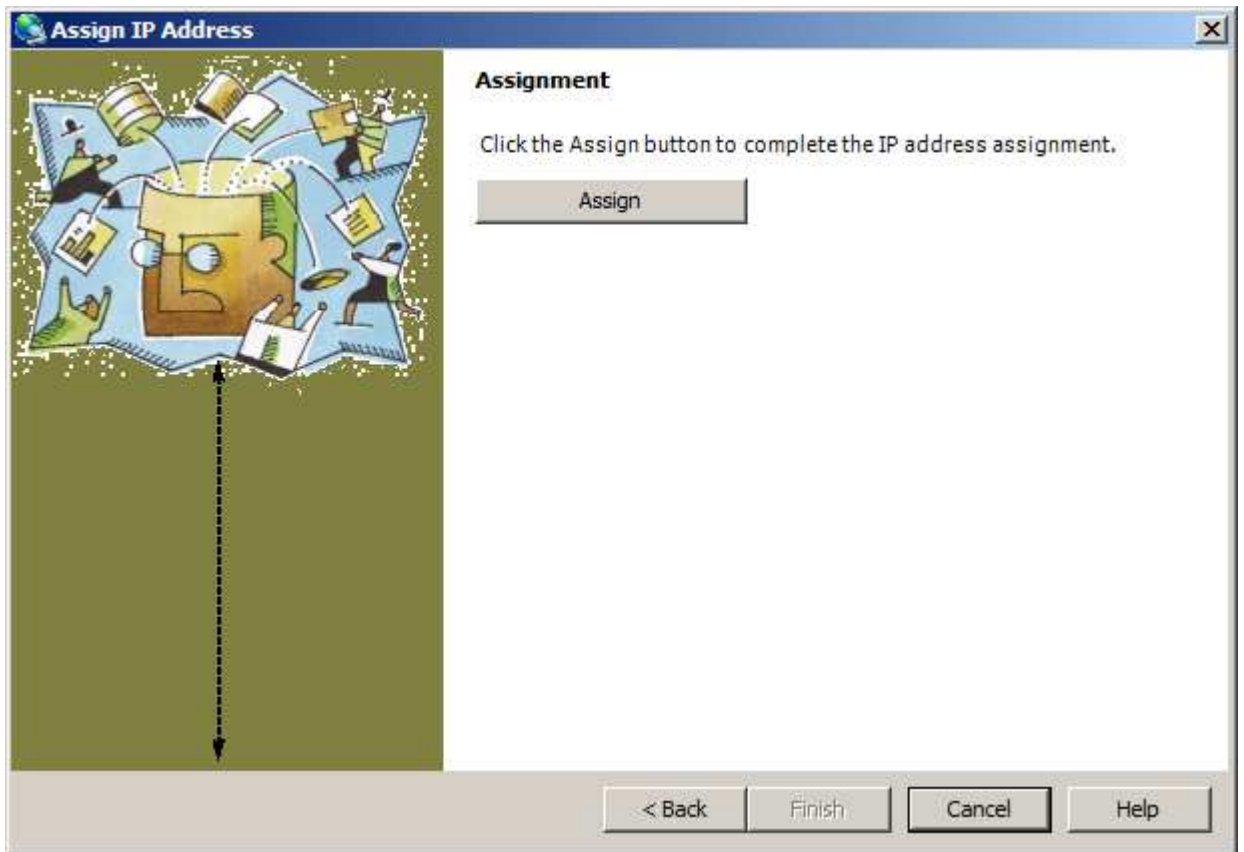


Figure 14 - The final Assignment panel

- 12) Click the **Assign** button.
- 13) Return to the initial launch window (Figure 1) and click Search. The DeviceInstaller™ should find your newly configured CNI, and display it along with any previously existing CNIs (**Error! Reference source not found.5**).



Figure 15 - The newly configured CNI is displayed along with the others

- 14) Finally, click the **Telnet Configuration** tab and ensure that the Change 1 Port No is set to 10001.  
Click the **Connect** button



Figure 16 – Telnet Configuration

Press **Enter** within 5s going to the Setup mode.

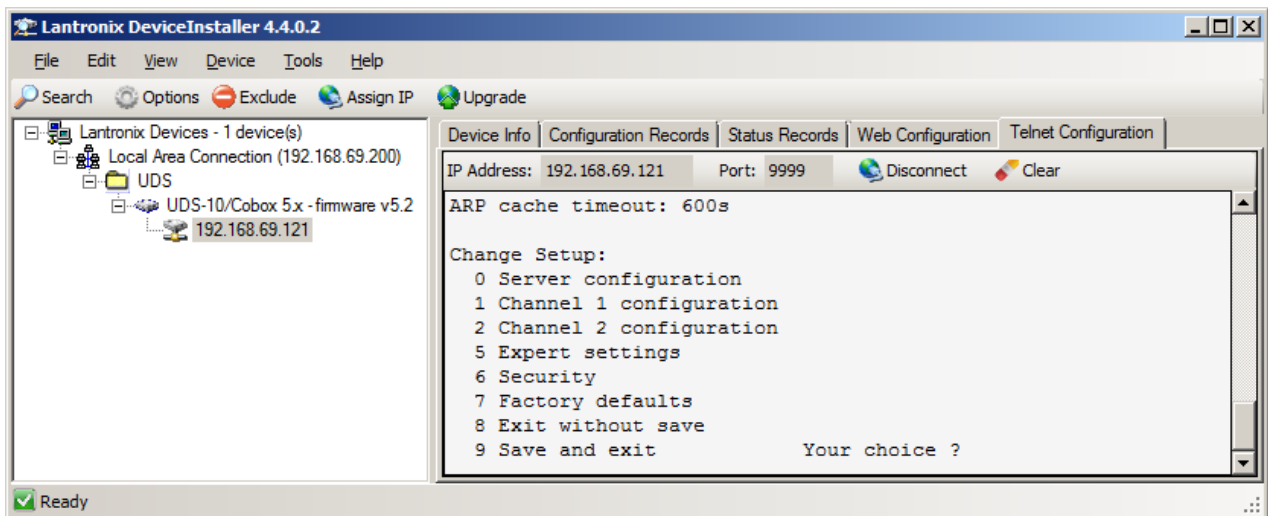


Figure 17 – Telnet Setup Mode

Type **1** and press **Enter** accessing to Channel 1 configuration

Ensure that the Port No is set to **10001**. If necessary, enter the port number.

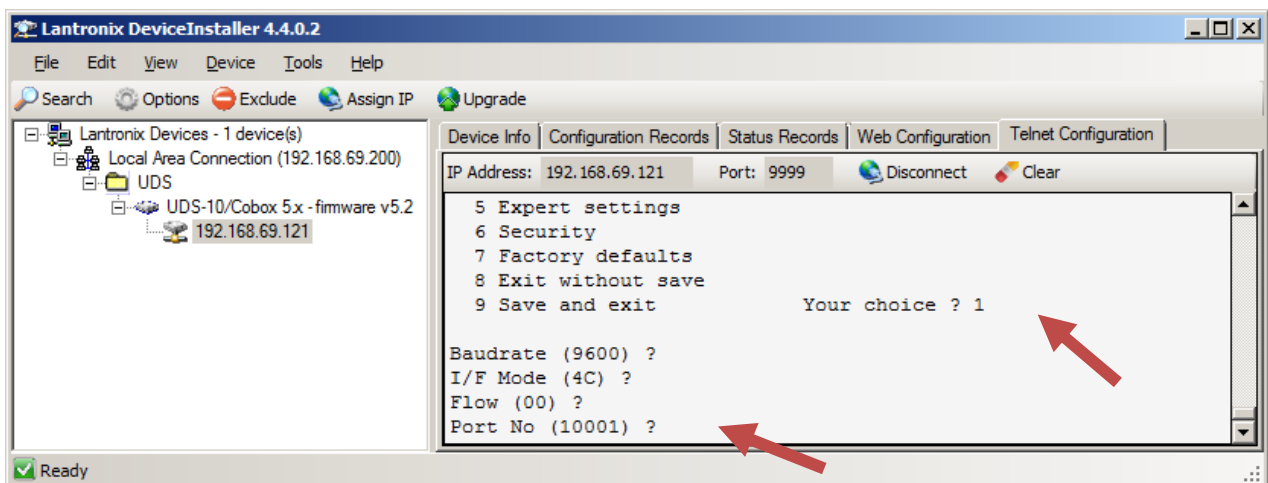


Figure 18 – Channel 1 Configuration

Type "9" and press **Enter** to save and exit.

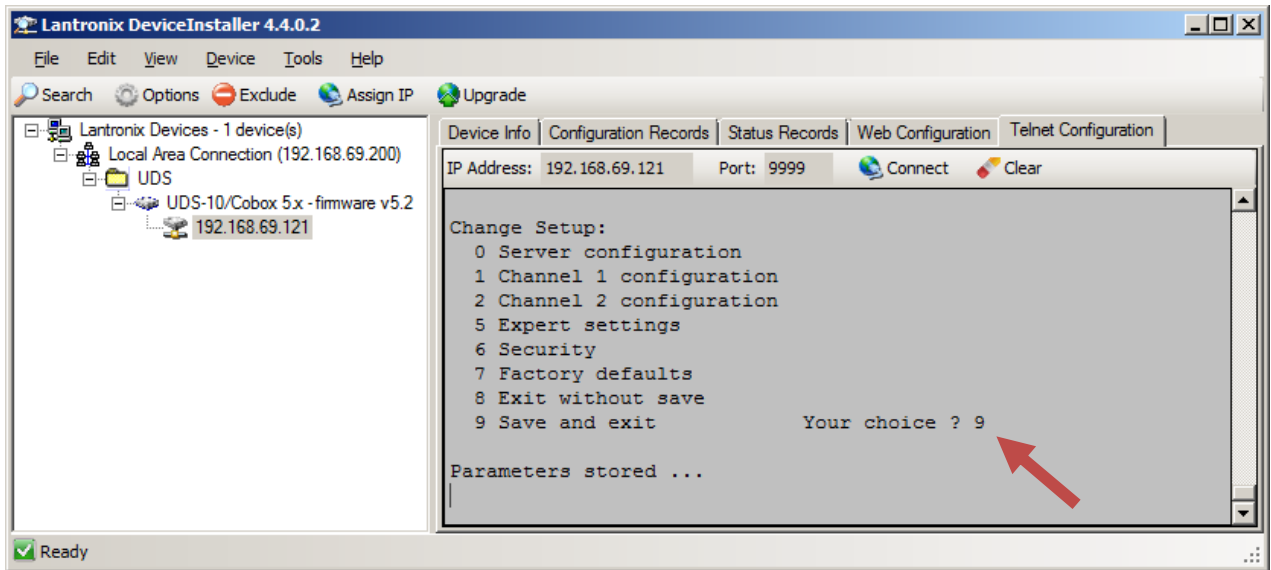



Figure 19 – Save and Exit Telnet configuration

### System Control IP Utility v1.5.0.3

The Control Systems IP Utility is used for commissioning the networking features of IP-based Schneider Electric control systems products such as C-Bus CNIs. It provides the ability to scan a LAN for compatible IP devices, and to set settings of a device such as the IP address and TCP port number.

The new Toolkit 1.14.7 ( released on 22/09/2016) includes Control Systems IP Utility version 1.5.0.3.

 As of version 1.5.0 of this utility the CNI (**5500CN**) units are no longer supported. They will not be detected when performing a scan and can no longer be configured using this utility. It only supports CN2 (**5500CN2**).

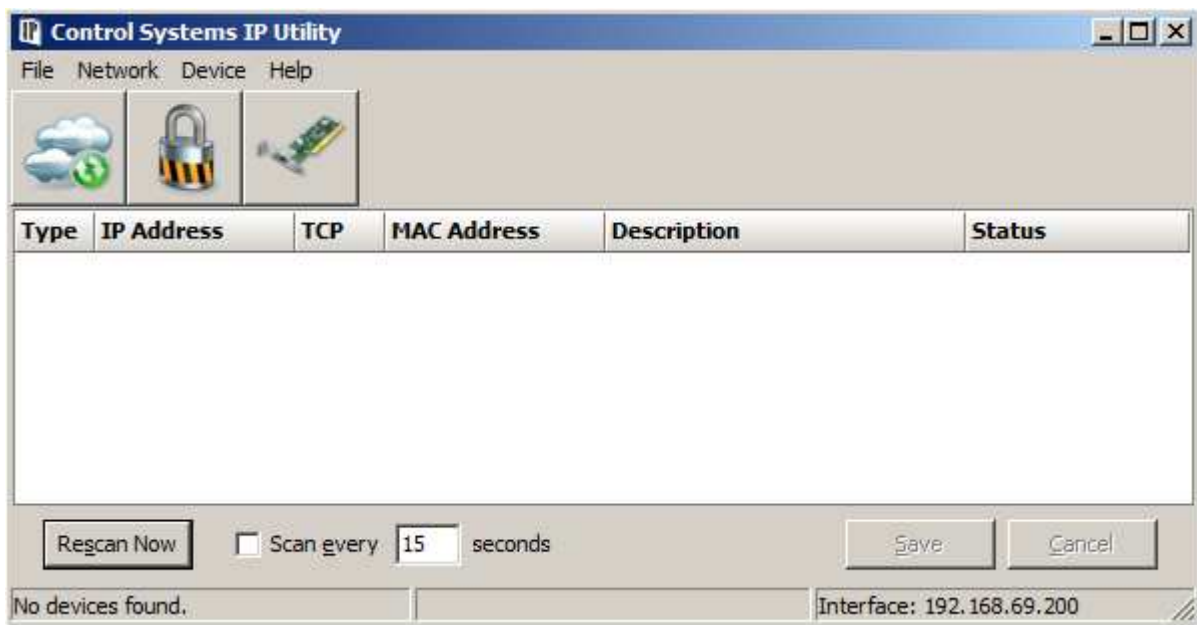


Figure 20 – Control System IP Utility

### Technical Support and Troubleshooting

For technical assistance call: 1300 722 247 (Australia)

CIS technical support email: [partner.supportau@schneider-electric.com](mailto:partner.supportau@schneider-electric.com)

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