1.0 Connecting OpenGN to an MR-2200/2900

Attention: Before you begin, follow the instructions in LT-1113 "OpenGN Administrator's Guide" (available on http://www.mircom.com) to install OpenGN and configure the computer running OpenGN and the OpenGN Gateway.

Note: These instructions should be completed by someone familiar with configuring an MR-2200/2900. See LT-2010 the MR-2900 Installation Manual, LT-2011 the MR-2900 Programming Manual, LT-2000 the MR-2100/2200 Installation Manual, and LT-2001 the MR-2100/2200 Programming Manual (available on http://www.secutron.com).

You need:

- ARW-VESP211 Advantech Serial to Ethernet Converter
- PARANI-DB9FTB DB9 to Terminal Block Adapter
- Advantech software CD
- Modul-R Human Interface (MHI) application version 22.0f or later
- MR-2200 with firmware 22.11 or MR-2900 with firmware 22.12
- Secutron_ConfigXML application
- OpenGN version 3.1 or later
- OpenGN Gateway version 3.1 or later
- OpenGN license key
- Ethernet cable

1.1 Connect the ARW-VESP211

This section explains how to connect 5 components:

- MR-2200/2900
- ARW-VESP211
- PARANI-DB9FTB
- OpenGN Gateway (which is installed as part of OpenGN)
- OpenGN (this can be on the same computer as the OpenGN Gateway)

The ARW-VESP211 communicates between the MR-2200/2900 and the OpenGN Gateway.

The ARW-VESP211 can be connected directly to the OpenGN Gateway computer with an Ethernet cable, or it can communicate over a local area network.

1. Connect the PARANI-DB9FTB to the COM port on the ARW-VESP211.
2. Connect pins 3 and 4 from the PARANI-DB9FTB to the COMLINK 3 + port and COMLINK 3 − port on the MR-2200/2900 as shown in Figure 1.
3. Connect the ARW-VESP211 to the power.

   If you want to connect the ARW-VESP211 to the OpenGN Gateway computer directly:

   - Use an Ethernet cable to connect the ARW-VESP211 to the computer running the OpenGN Gateway.

   If you have a local area network:

   - Use an Ethernet cable to connect the ARW-VESP211 to the same network that the OpenGN Gateway computer is connected to.

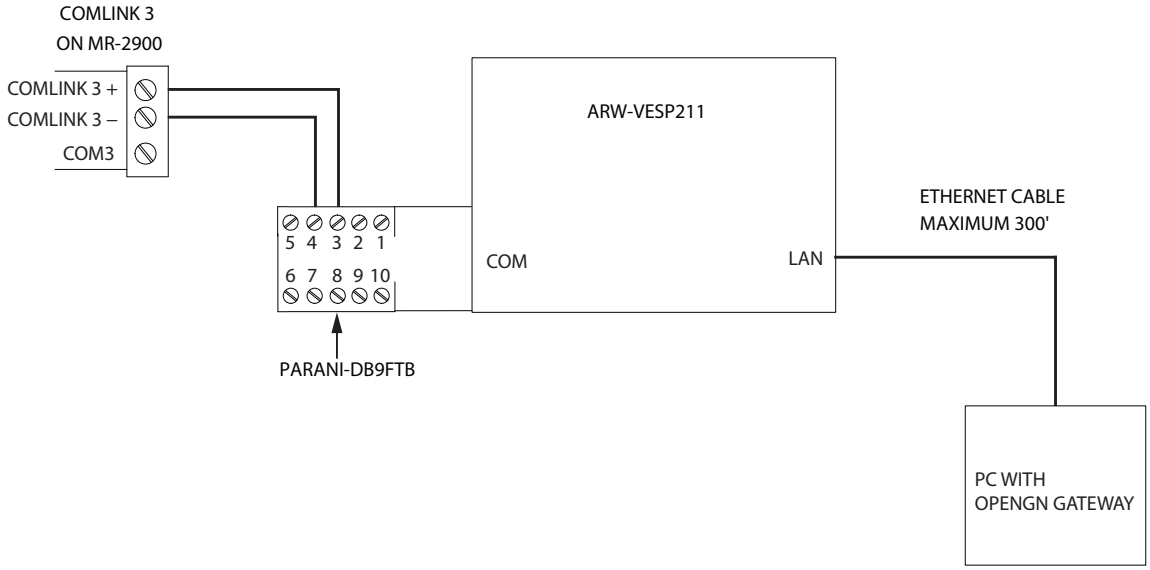

Figure 1 Connect the ARW-VESP211 to the OpenGN Gateway Computer Directly

1.2 Configure the ARW-VESP211

1.2.1 Configure the OpenGN Gateway Computer to Connect to the ARW-VESP211

In order to initially connect to the ARW-VESP211, the OpenGN Gateway computer must have a specific IP address.

1. On the computer that the OpenGN Gateway is on, click **Start**, then click **Settings**.
2. Click **Network and Internet**.
3. Click **Network and Sharing Center**.
4. Click the Ethernet connection.

The **Ethernet Status** window appears.

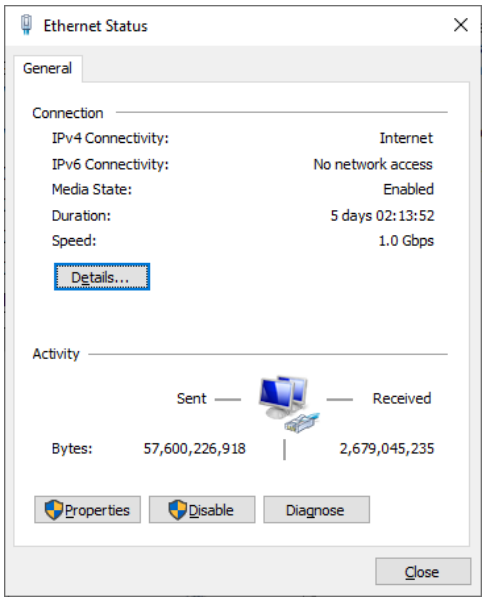

Figure 2 Ethernet Status

5. Click **Properties**.

   The **Ethernet Properties** window appears.

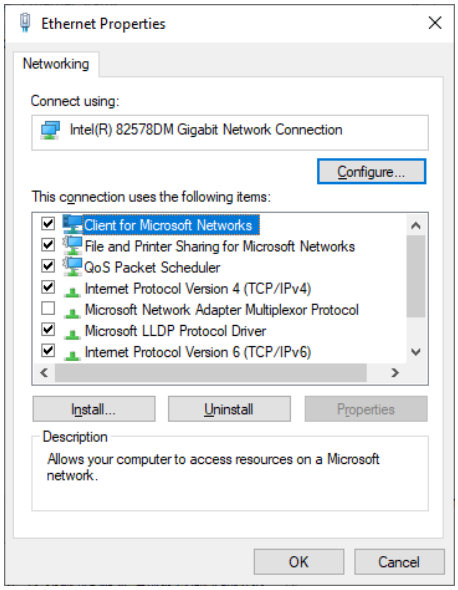

Figure 3 Ethernet Properties

6. Double-click **Internet Protocol Version 4 (TCP/IPv4)**.

The **Internet Protocol Version 4 (TCP/IPv4) Properties** window appears.

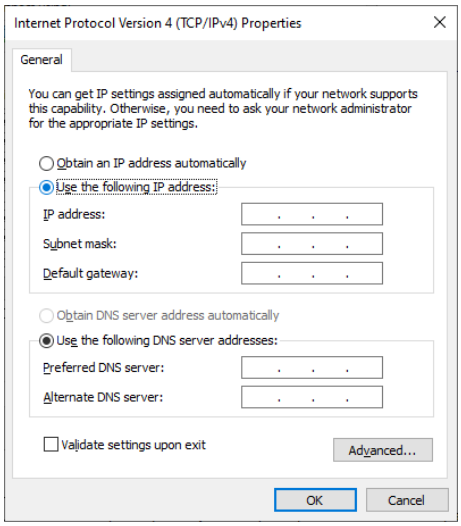

Figure 4 Internet Protocol Version 4 (TCP/IPv4) Properties

7. Click **Use the following IP address**.
8. Type the following addresses:
   - **IP address:** 169.254.102.40
   - **Subnet mask:** 255.255.0.0
4. Click **OK**.

1.2.2 Install the Vlinx Serial Server Manager

1. Insert the Advantech CD into the OpenGN Gateway computer.

   The Vlinx Serial Server Manager Installation Wizard starts automatically.

Figure 5 Welcome to the Vlinx Serial Server Manager Installation Wizard

2. Follow the instructions on the screen to install the Vlinx Serial Server Manager.

1.2.3 Configure the ARW-VESP211

1. On the OpenGN Gateway computer, open the Serial Server Manager: click **Start** > **B&B Electronics** > **Vlinx** > **Vlinx Serial Server Manager**.

   The Vlinx Serial Server Manager appears.

Figure 6 Vlinx Serial Server Manager

2. Click **I don't know the IP address of the device**.
3. Click **Connect**.

   The Vlinx Serial Server Manager looks for devices.

Figure 7 Advantech Device Details

The Login screen for the ARW-VESP211 device appears.

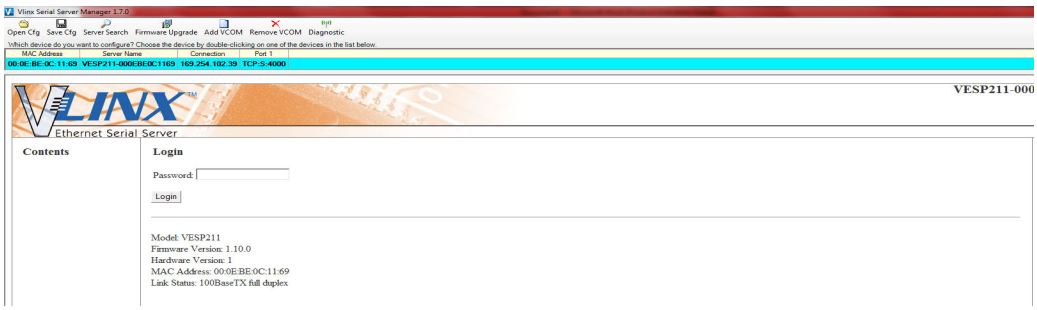

Figure 8 Login screen

4. Enter the Login password, then click **Login**. By default, the password is blank.

   The General screen appears.

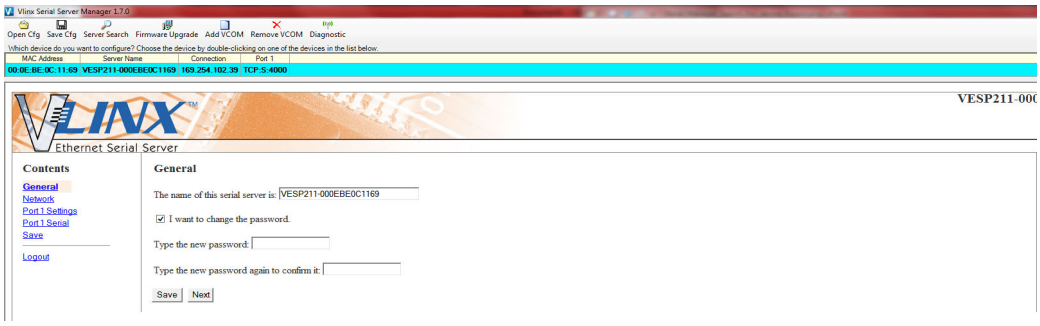

Figure 9 General screen

5. Enter a name that describes the panel that the device is connecting to, for instance **MR-2900**.
6. Select **I want to change the password**, then enter the new password.
7. Click **Save**.

Note: Keep a record of the password. You will need it in a later step.

8. Click **Network** on the left sidebar.

   The Network screen appears.

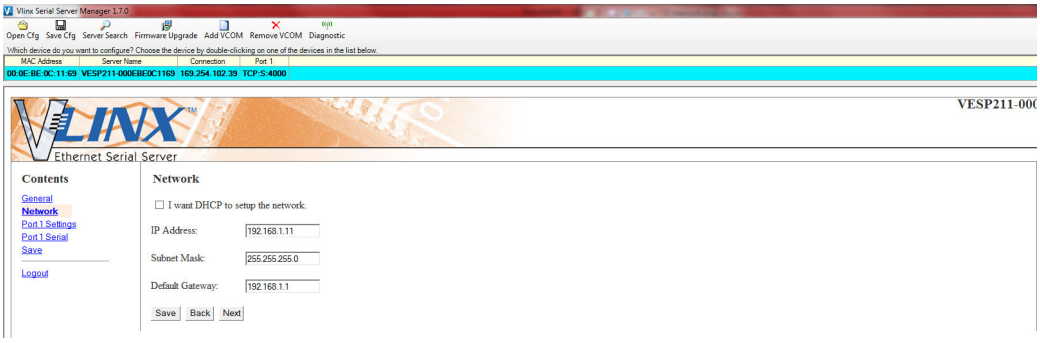

Figure 10 Network screen

9. Enter the following information:

IP address **Subnet Mask** **Default Gateway**	Consult your network administrator for assistance. The IP address must be in the same range as the IP address of the computer running the OpenGN Gateway. The gateway and subnet mask must be the same as they are on the OpenGN Gateway computer. For example, if the OpenGN Gateway computer's IP address and subnet mask are 192.168.1.10 and 255.255.255.0, then you can enter **192.168.1.11** and **255.255.255.0** as the ARW-VESP211's IP address and subnet mask.

Note: Keep a record of the IP address. You will need it in a later step.

To ensure a constant connection to OpenGN, you must assign a static IP address to the ARW-VESP211.

10. Click **Next**.

    The **Port 1 Settings** screen appears.

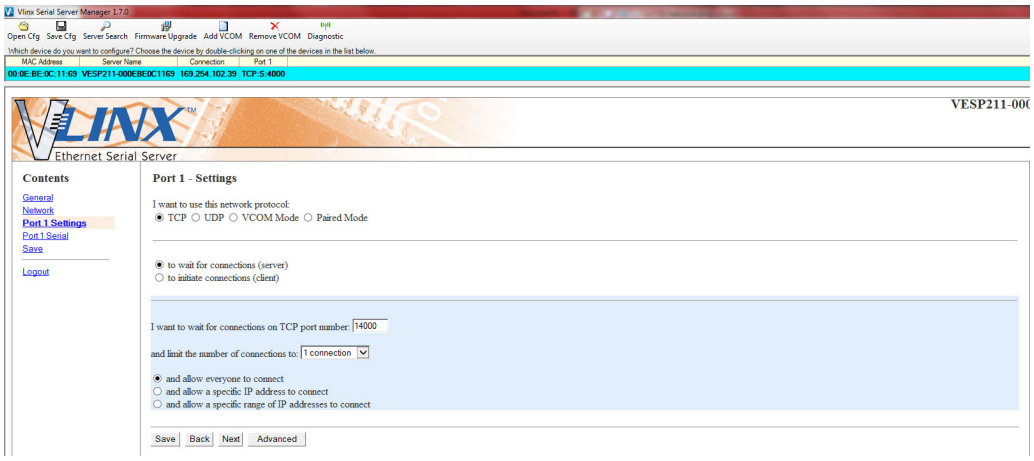

Figure 11 Port 1 Settings

11. Enter the following information:

I want to use this network protocol	TCP
to wait for connections (server)	Select this option
I want to wait for connections on TCP port number	14000
and limit the number of connections to	1 connection
and allow everyone to connect	Select this option

12. Click **Next**.

The **Port 1 - Advanced** window appears.

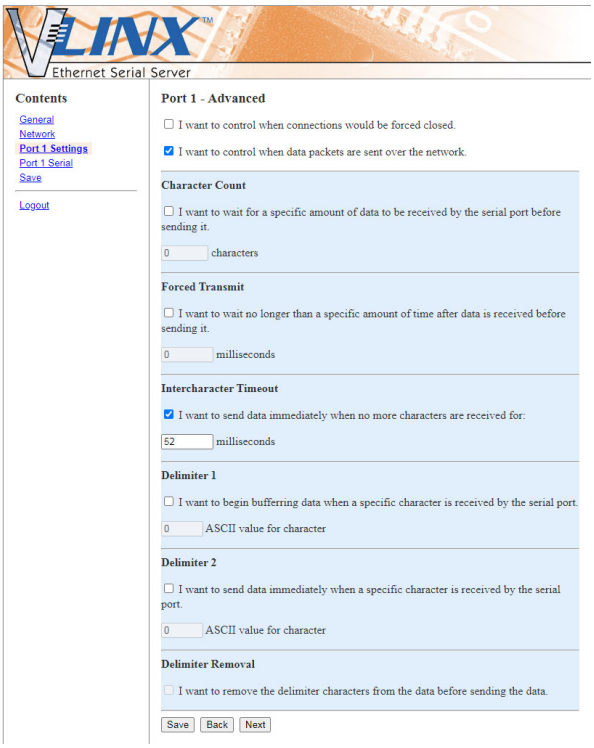

Figure 12 Port 1 - Advanced

13. Enter the following information:

I want to control when data packets are sent over the network	Select this option
Under Intercharacter Timeout: "I want to send data immediately when no more characters are received for"	52 milliseconds

14. Click **Next**.

The **Port 1 - Serial** window appears.

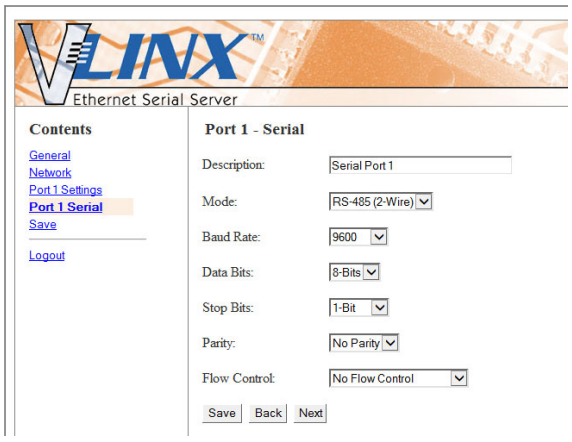

Figure 13 Port 1 - Serial

15. Enter the following information:

Mode	**RS-485 (2-Wire)**
Baud	9600
Data bits	8-Bits
Stop bits	1-Bit
Parity	No Parity
Flow Control	No Flow Control

16. Click **Next**.
17. Under **Save**, click the **Save** button and wait for the Login screen to appear.

1.2.4 Configure the OpenGN Gateway Computer

- Change the IP settings for the OpenGN Gateway computer to their previous values. See section 1.2.1 on page 2 for instructions on how to change the IP settings.

  If you need assistance, contact your network administrator.

  If you are connecting the OpenGN Gateway computer to an MR-2200/2900 panel directly over Ethernet, enter an IP address that is different than the IP address of the MR-2200/2900 panel. Enter the same subnet mask as the subnet mask on the panel.

1.3 Configure the Job for the MR-2200/2900

You need:

- The Modul-R Human Interface (MHI) application, version 22.0f or later

1. Connect the MR-2200/2900 to the computer that has the MHI configurator application installed on it.
2. In the MHI application, open the job for the MR-2200/2900 panel.
3. Click **System** -> **Edit**.

   The Editing window appears.

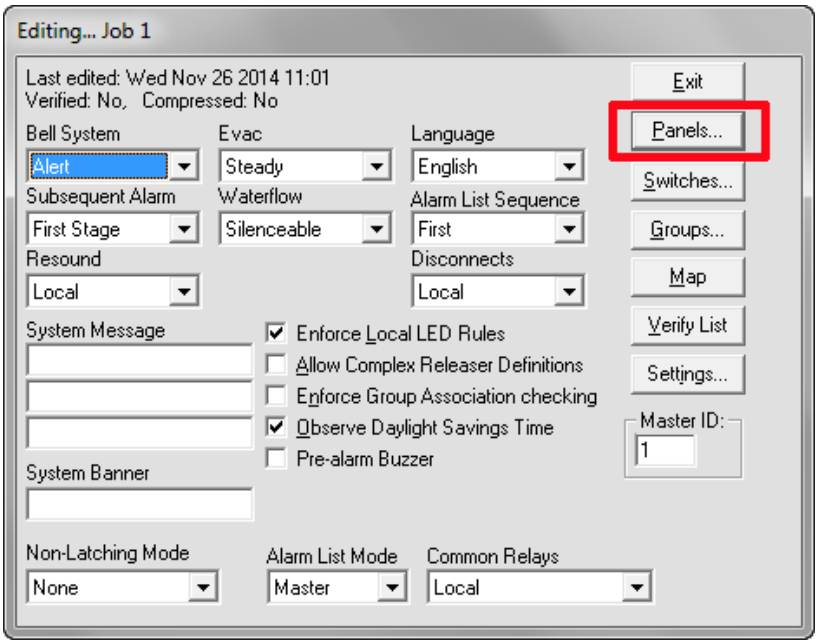

Figure 14 The Editing Window

4. Click the **Panels** button.

   The Panels window appears.

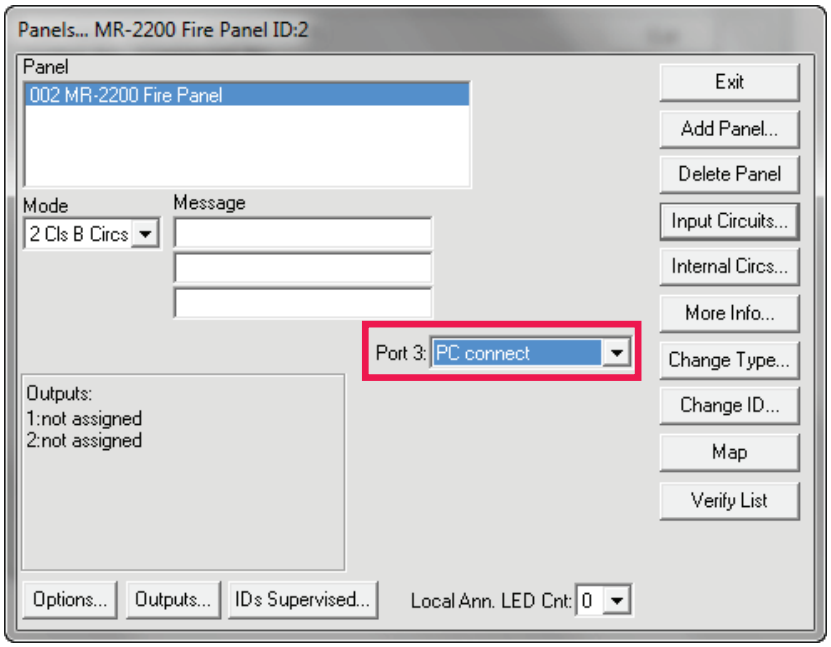

Figure 15 The Panels Window

5. In the **Port 3** menu, select **PC connect**.
6. Click **Exit** and send the job to the panel.

1.4 Export the Configuration File

1. In the MHI application, click **System** -> **Export**.

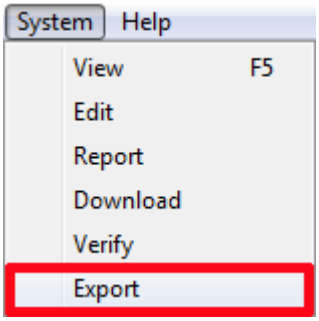

Figure 16 Export

The Export System window appears.

2. Select **OpenGN**, and then click **Export**.

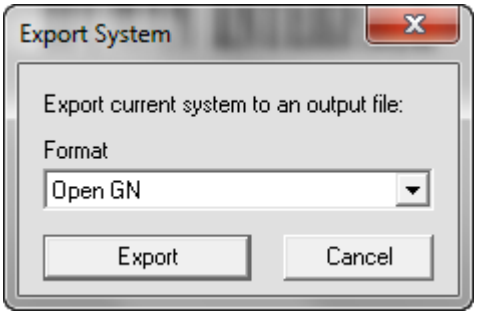

Figure 17 OpenGN File Type

3. Click **Yes**.

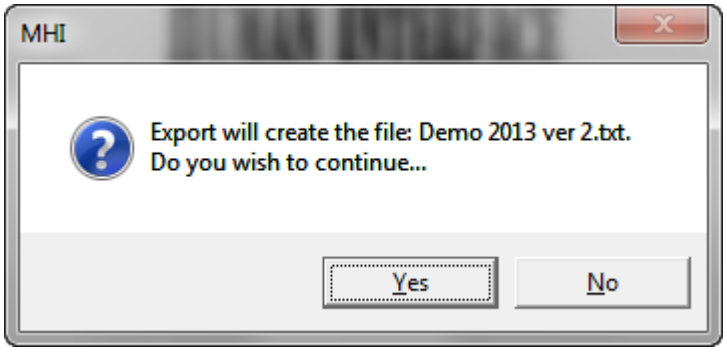

Figure 18 Export File Confirmation

1.5 Convert the Configuration File to XML Format

You need:

- The Secutron_ConfigXML application

1. Open the Secutron_ConfigXML application.

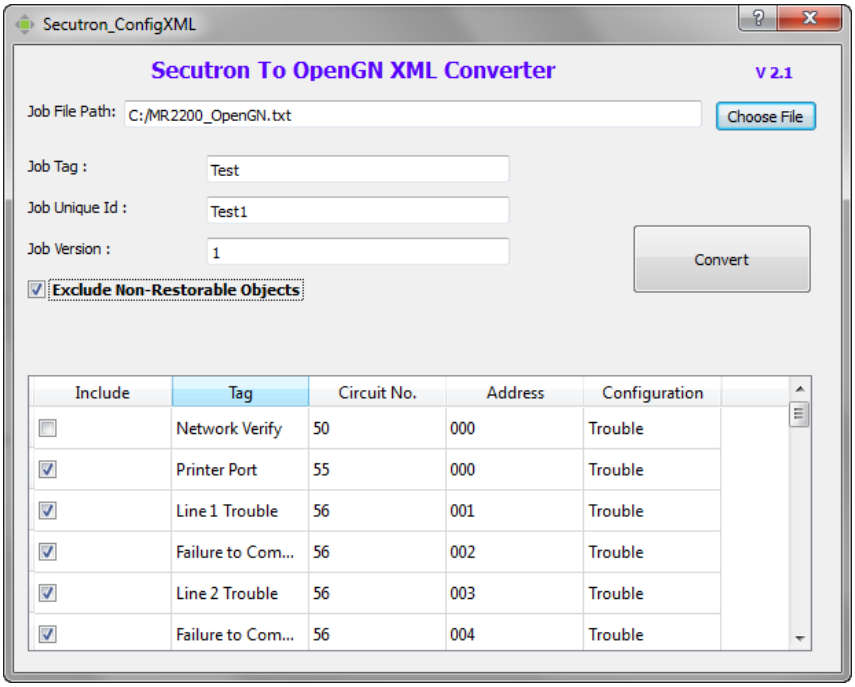

Figure 19 The Secutron to OpenGN XML Converter

2. Enter the following information.

Job File Path	Select the text file you created in section 1.4.
Job Tag	A description of the job.
Job Unique Id	A name to identify the job. You can define this yourself. Make a note of this; you will need it later.
Job version	The version of the job. You can define this yourself. Make a note of this; you will need it later.
Exclude Non-Restorable Objects	Select this checkbox in order to ignore events from system status devices that are non-restorable, for example low battery troubles. Restorable system status devices can also be excluded or included individually by selecting the checkboxes in the **Include** column.

Note: Make a note of the **Job Unique Id** and **Job version**. You will need them later.

3. Click the **Convert** button. Save the XML file by providing a name and location.

1.6 Import the XML Configuration File into OpenGN

1. Transfer the XML job file you just saved to the computer that OpenGN is running on.
2. Insert the OpenGN CodeMeter license key in the computer.
3. Start OpenGN.

   The Login window appears.

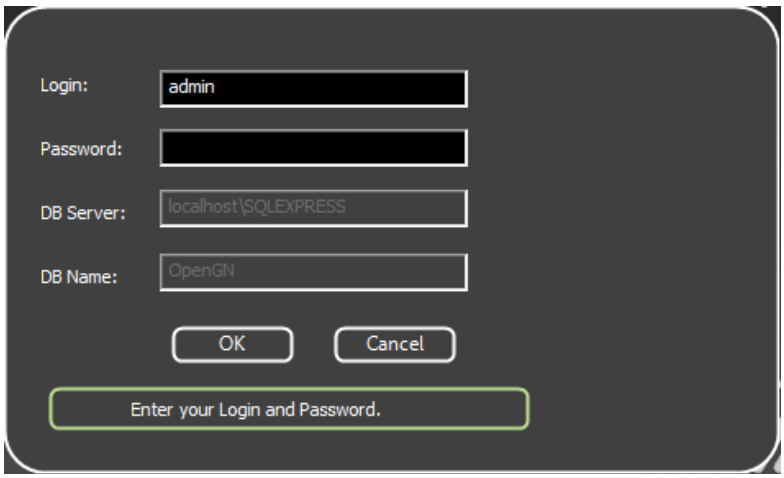

Figure 20 Login Window

4. Select the user from the **Login** menu.
5. Type the password.
6. Click **OK**.

   The OpenGN Main Display window appears.

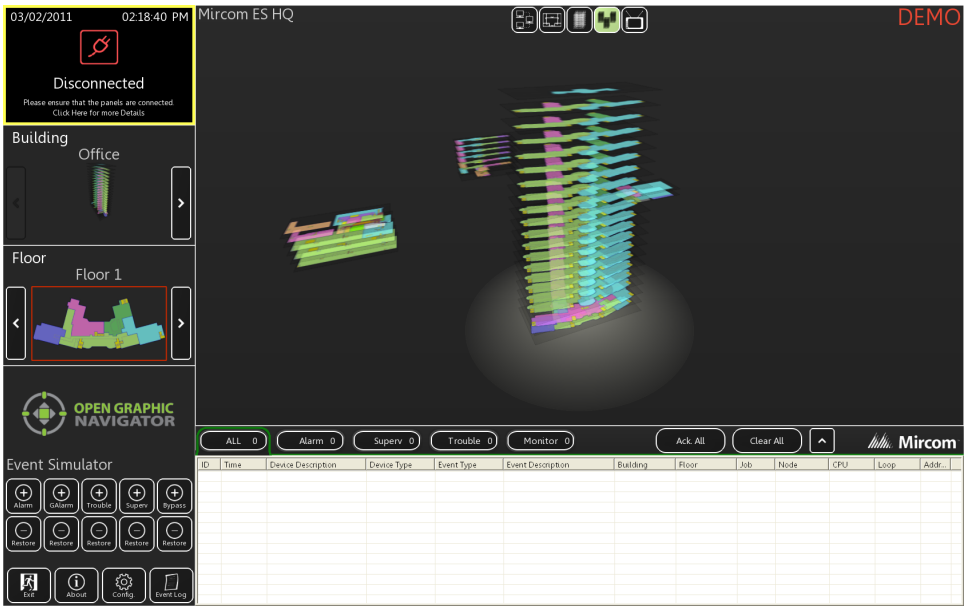

Figure 21 OpenGN Main Display Window

7. Click the **Config** button from the Main Display window. Click **Yes** to confirm that you want to enter the configuration section.

   The Configuration window appears.

8. Click the **Settings** button in the lower right-hand corner of the Configuration window.

   The Panel Settings window appears.

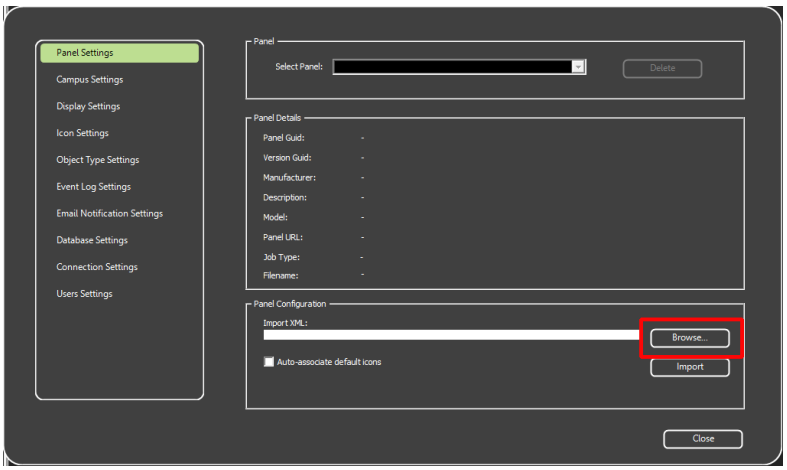

Figure 22 Panel Settings

9. Click **Browse** in the Panel Configuration section, and then navigate to the job file.
10. Select **Auto-associate default icons** if you want to associate the object icons with the existing system icon images.

> **Note:** If you are importing a new version of a previously imported job file, uncheck **Auto-associate default icons**. Otherwise, any custom icon settings you have made will be erased.

11. Click **Import XML**.
12. If the job already exists, a window appears asking you if you want to update the stored version of the job with the one you are importing. Click **Yes**.

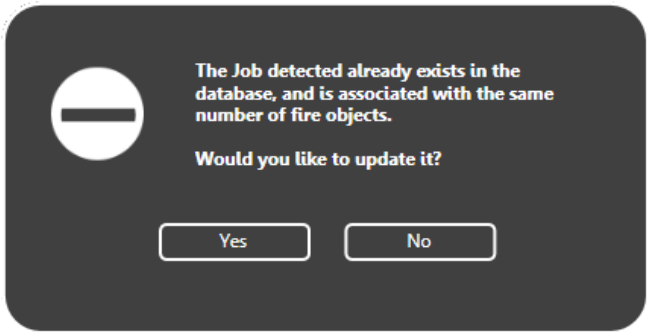

Figure 23 Update Job Confirmation

13. Restart OpenGN.

1.7 Configure the OpenGN Gateway

The OpenGN Gateway communicates between the MR-2200/2900 and OpenGN.

1. Double-click the **Open Graphic Navigator Gateway** icon.

Figure 24 OpenGN Gateway

2. Click the **+** button.

   The Adapter Configuration window appears.

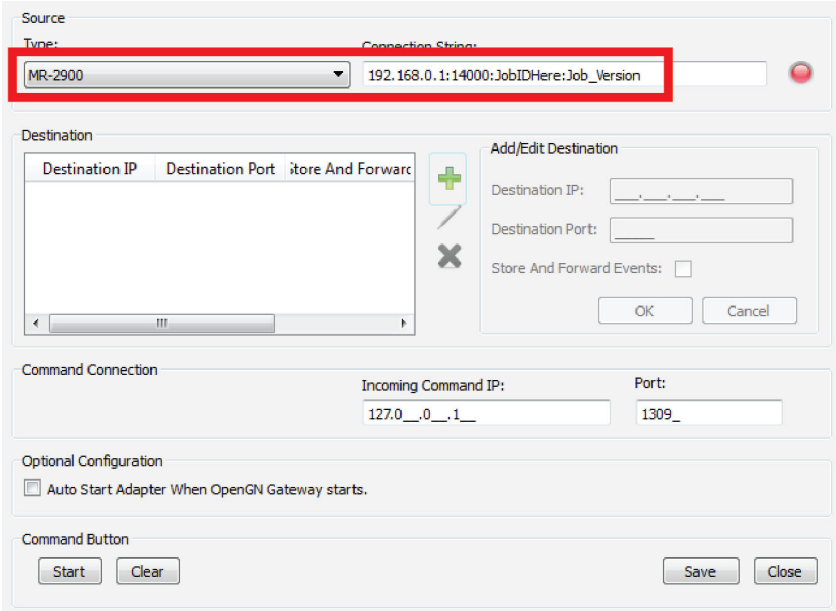

Figure 25 Adapter Configuration Window

3. Enter the following information.

Type	**MR-2900**
Connection String	The connection string consists of 4 pieces of information separated by colons: • The IP address of the ARW-VESP211: you assigned this in section 1.2 on page 2. • The port: **14000** • **Job Unique Id**: the **Job Unique Id** that you created in section 1.5 on page 13. • **Job Version**: the **Job Version** that you created in section 1.5 on page 13. For example, if the IP address is **10.10.8.37**, the Job Unique Id is **Job1**, and the Job Version is **1**, then type 10.10.8.37:14000:Job1:1

4. Click the green button beside Destination, and then provide the following information:

Destination IP	The IP address of the OpenGN computer. If the OpenGN Gateway and OpenGN are on the same computer, use 127.0.0.1.
Destination Port	1209
Store and Forward Events	Reserved for future use.

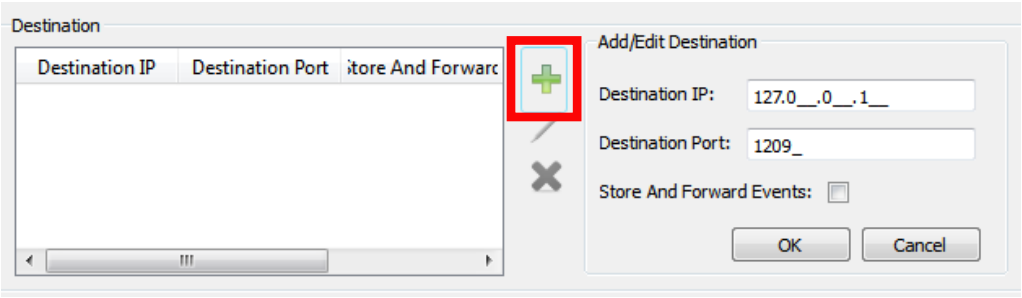

Figure 26 Destination

5. Under **Command Connection**, provide the following information:

Incoming Command IP	The IP address of the computer that the OpenGN Gateway is on. If the OpenGN Gateway and OpenGN are on the same computer, use 127.0.0.1.
Port	**1309**. This must be a different port than the port listed above.

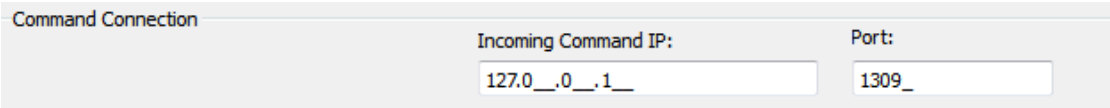

Figure 27 Command Connection

6. Click **Auto Start Adapter When OpenGN Gateway Starts** if you want the OpenGN Gateway to connect automatically with these settings when it starts.
7. Click **Save**.
8. Select the adapter you created, and then click the green arrow icon:

   When OpenGN is connected, the adapter in the Adapter List is green.

Figure 28 OpenGN Gateway with One Connection

9. Double-click the adapter to view its details.

   When OpenGN is connected, the icon beside **Connection String** turns from red to green, and the Destination turns green.

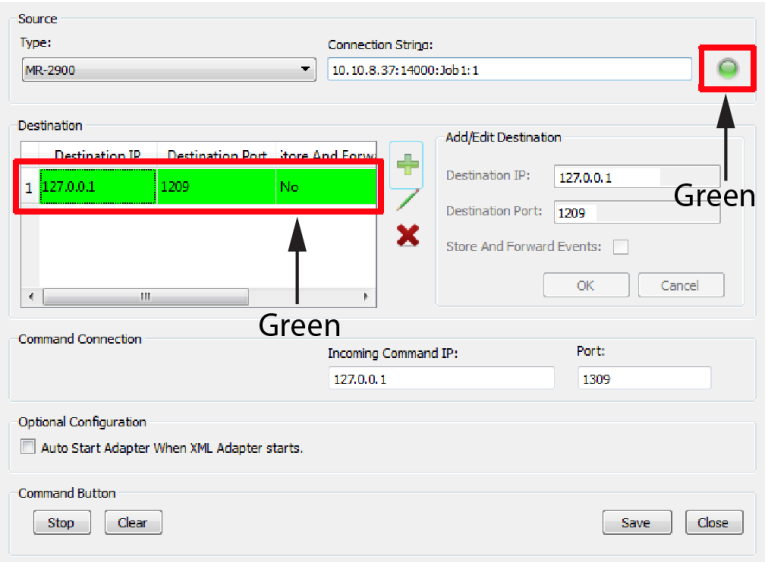

Figure 29 The OpenGN Gateway Showing a Connection

10. Start OpenGN.

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