

Technical Note

Title: How to Enable Transparent Forwarding

Date: 6/2/08

Product(s): WebPort (2001, 2005, 2101, 4001, 4005, 4101)

Product Revision: NA

Information:

Document # TN060208-01

Section 1 Introduction

This technical note will explain how to enable transparent forwarding. When initiated, the transparent connection will forward all traffic from the WAN to the specified LAN IP address via Ethernet IP port 80. Once the connection is made to the device on the LAN the user can program or access the device using software provided by the device manufacturer. For example, RSLogix could be used to program a PLC located on the LAN of the WebPort over the internet.

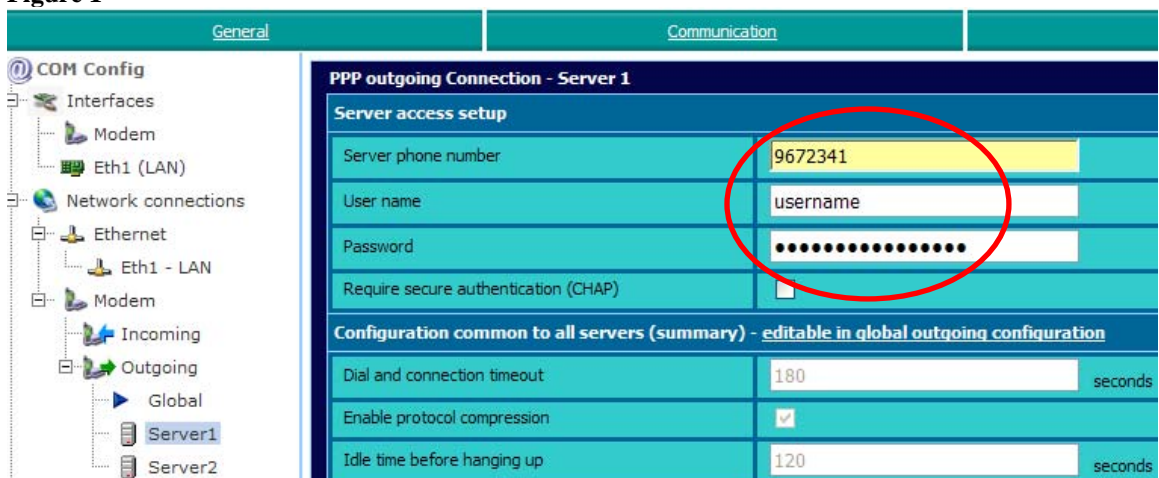
Note: Transparent Forwarding, when used over the internet, is not secure. A VPN connection should be used if security is a requirement.

Section 2 Using a dialup ISP

2.1 Configuration Settings:

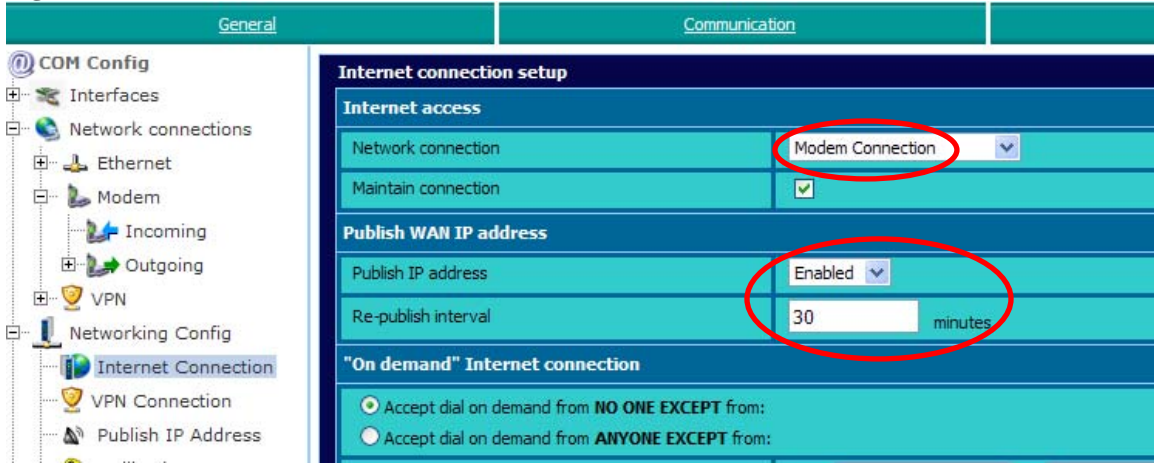
- 1.) Setup an account with a local ISP provider.
- 2.) Connect phone line to WebPort RJ11 connector. Refer to install guide for more information.
- 3.) Configure PPP outgoing connection in WebPort

Figure 1



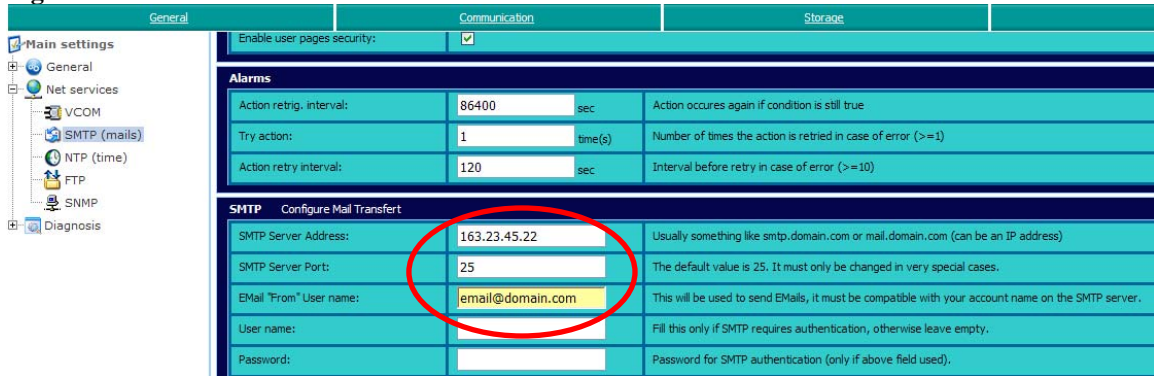
- 4.) Enter local phone number for ISP in “server phone number” field. See figure 1.
- 5.) Enter user name and password for ISP access.
- 6.) Configure internet connection

Figure 2



- 7.) Set “network connection” to “modem connection” and check the “maintain connection” checkbox.
- 8.) Enable publish WAN IP address. Set “re-publish” interval to 30 min.
- 9.) Use “publish by email” option.
- 10.) Configure SMTP for outgoing email transfer. See figure 3.

Figure 3

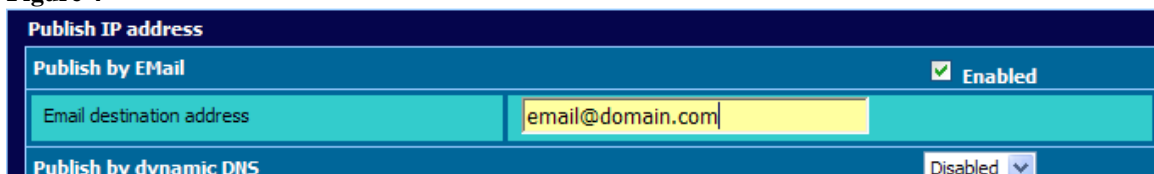


- 11.) Set SMTP server address. The address can either be the public IP or the URL.

Note: If you enter a URL instead of the IP, a DNS IP address must be defined. See the WebPort user manual for more information.

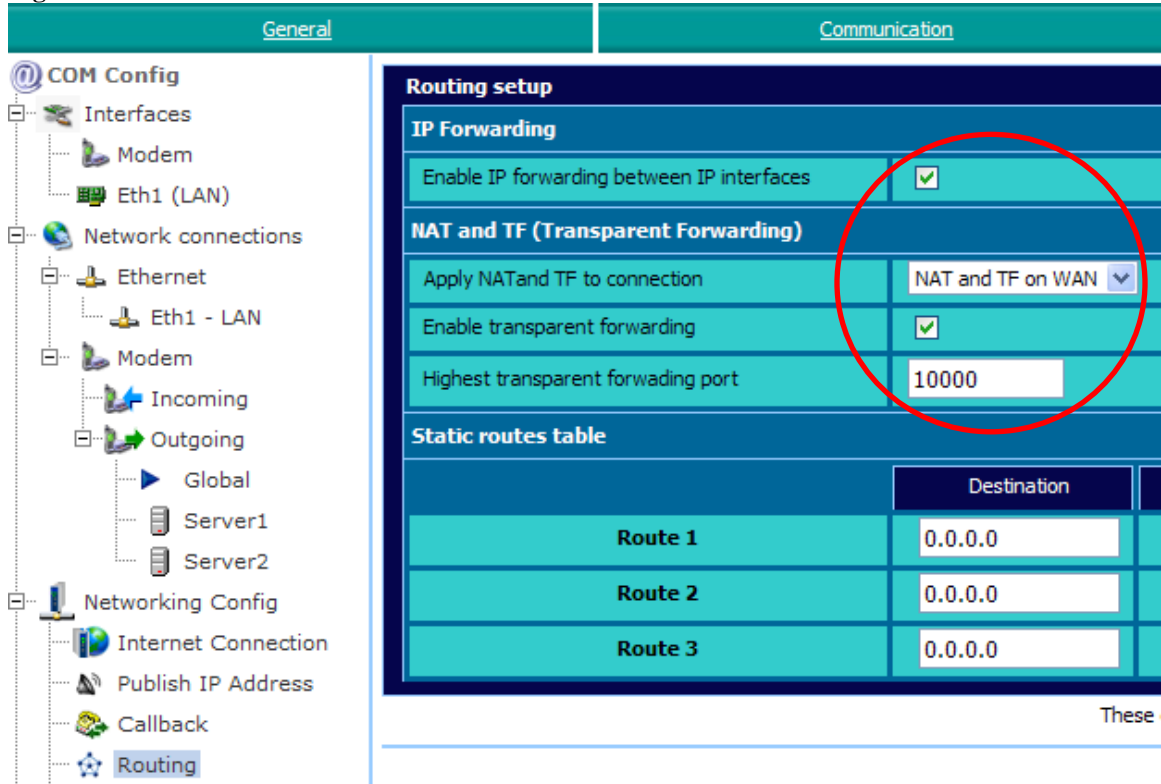
- 12.) Enter the destination email address. The public IP address of the WebPort will be sent to the destination email address.

Figure 4



13.) Configure WebPort routing options as shown in figure 5 below.

Figure 5



14.) Cycle the power on the WebPort so that the changes will take effect.

2.2 Testing Transparent Forwarding:

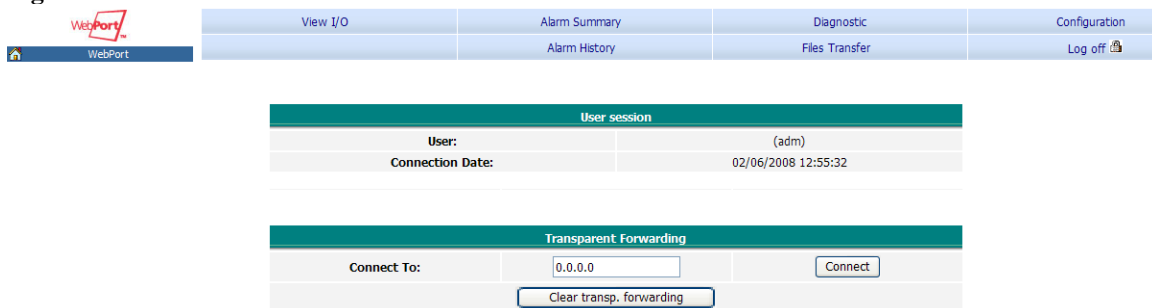
- 1.) The WebPort will automatically connect to the ISP account since the “maintain connection” checkbox was selected in step 7 of section 2.1. The public IP will be sent via email to the email address specified in the procedure above.
- 2.) Select the hyperlink of the public IP from the email body. Your default web browser should be spawned automatically.
- 3.) Logon to the WebPort as shown in figure 6 using “adm” for the username and password.

Figure 6



4.) After logging in, you should see a screen like the one shown in figure 7.

Figure 7



- 5.) Enter the LAN IP address of the device you're trying to reach in the "Connect to:" field and press the "connect" button. You should receive a "router updated" message after pressing the connect button.
- 6.) Close all open browsers.
- 7.) Use the public IP address of the WebPort to access the LAN device directly. For example, if the device is an Allen-Bradley PLC and the public IP of the WebPort is 63.231.29.14, you would enter this IP address when configuring the "Ethernet Devices" driver within RSLinx.

Note: Steps 8 through 11 describe how to clear the current transparent forwarding connection.

- 8.) The user needs to specify the secondary HTTP port in the URL to access the WebPort after setting the transparent forwarding address. For example, if the public IP address is 63.231.29.14, the URL will be (<http://63.231.29.14:81/index.htm>).
- 9.) After entering the URL, you will again be presented with the image shown in figure 7. Press the "clear transp. forwarding" button. Again the "router updated" message will appear.

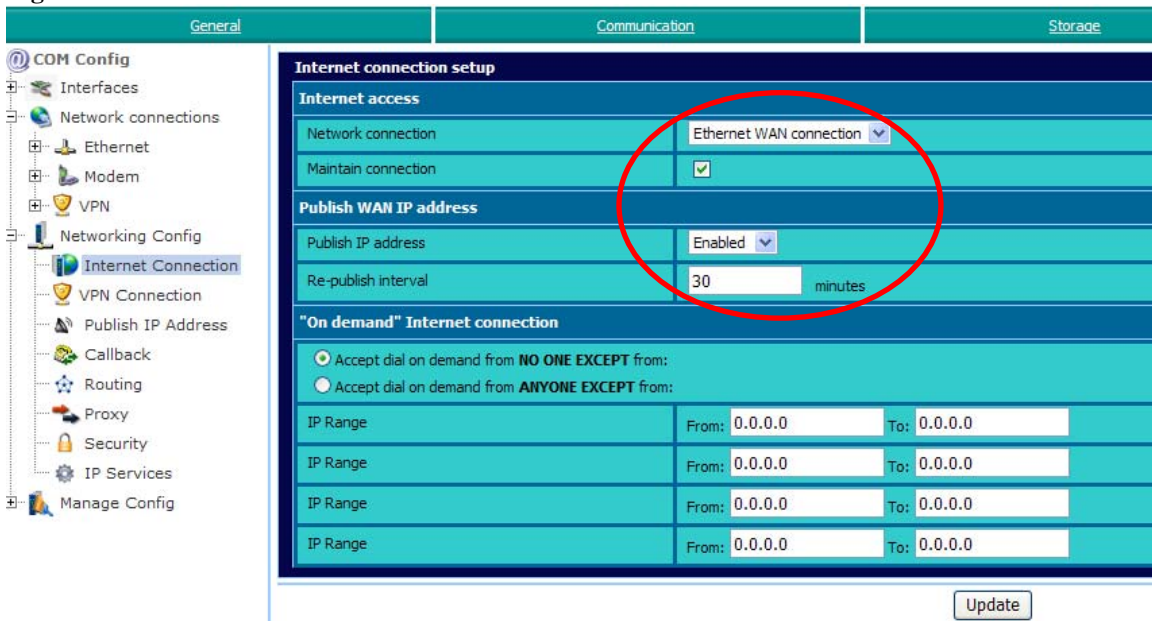
- 10.) Close all open browsers.
- 11.) Enter the public IP in the browser address field. For example, if the public IP is 63.231.29.14, the URL should be (<http://63.231.29.14/index.htm>).
- 12.) Repeat steps 1 through 11 to access other devices on the LAN of the WebPort.

Section 3 Using a DSL ISP

3.1 Configuration Settings:

- 1.) Setup an account with a local DSL ISP provider or connect the WAN port of the WebPort to your company LAN.
- 2.) Configure internet connection

Figure 8



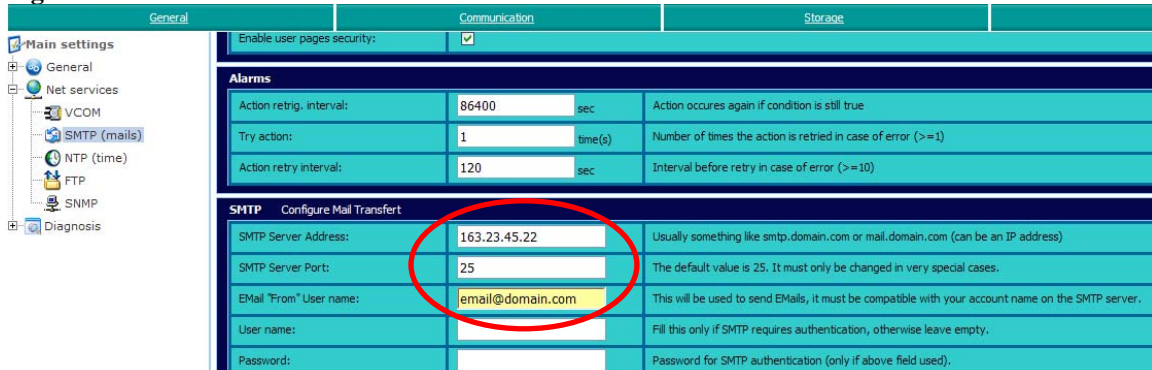
The screenshot shows the 'Internet connection setup' page in the Spectrum Controls web interface. The page is divided into three tabs: General, Communication, and Storage. The 'Communication' tab is active. On the left, there is a navigation tree with 'Internet Connection' selected. The main content area is titled 'Internet connection setup' and contains several sections:

- Internet access:** 'Network connection' is set to 'Ethernet WAN connection' (highlighted with a red circle). 'Maintain connection' is checked.
- Publish WAN IP address:** 'Publish IP address' is set to 'Enabled' (highlighted with a red circle). 'Re-publish interval' is set to 30 minutes.
- "On demand" Internet connection:** There are two radio button options: 'Accept dial on demand from NO ONE EXCEPT from:' (selected) and 'Accept dial on demand from ANYONE EXCEPT from:'. Below these are four rows for 'IP Range' with 'From' and 'To' fields, all set to 0.0.0.0.

An 'Update' button is located at the bottom right of the configuration area.

- 3.) Set “network connection” to “Ethernet WAN connection” and check the “maintain connection” checkbox. Set “re-publish” interval to 30 min.
- 4.) Configure SMTP for outgoing email transfer

Figure 9



The screenshot shows the 'SMTP (mails)' configuration page in the Spectrum Controls web interface. The page is divided into three tabs: General, Communication, and Storage. The 'Communication' tab is active. On the left, there is a navigation tree with 'SMTP (mails)' selected. The main content area is titled 'SMTP Configure Mail Transfert' and contains several fields:

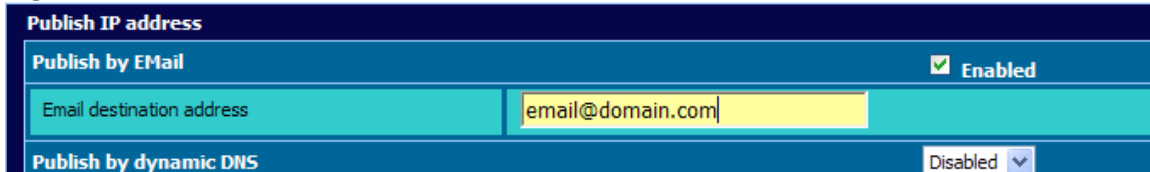
- Enable user pages security:** Checked.
- Alarms:** A table with columns for 'Action retrig. interval', 'Try action', and 'Action retry interval'. Values are 86400 sec, 1 time(s), and 120 sec respectively.
- SMTP Server Address:** 163.23.45.22 (highlighted with a red circle).
- SMTP Server Port:** 25.
- E-Mail From User name:** email@domain.com.
- User name:** (empty).
- Password:** (empty).

5.) Set SMTP server address. The address can either be the public IP or the URL.

Note: If you enter a URL instead of the IP, a DNS IP address must be defined. See the WebPort user manual for more information.

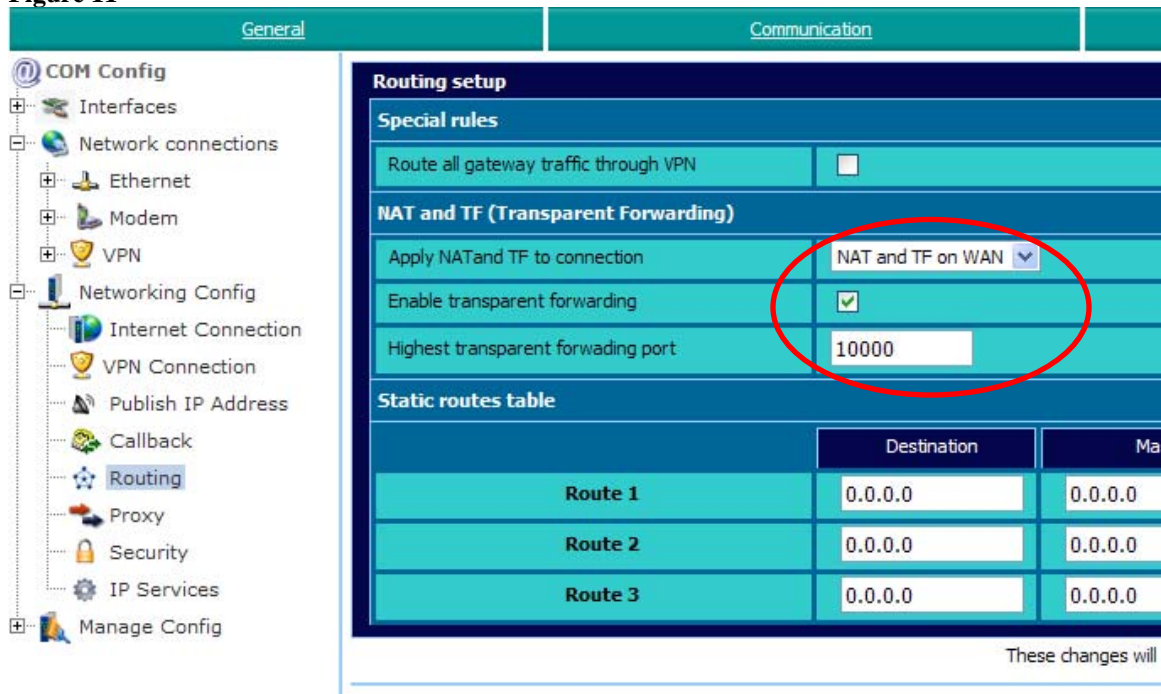
- 6.) Enable publish WAN IP address. Set “re-publish” interval to 30 min.
- 7.) Use “publish by email” option.

Figure 10



- 8.) Enter the destination email address. The public IP address of the WebPort will be sent to the destination email address.
- 9.) Configure WebPort routing options as shown in figure 11 below.

Figure 11



| Static routes table | | |
|---------------------|-------------|---------|
| | Destination | Ma |
| Route 1 | 0.0.0.0 | 0.0.0.0 |
| Route 2 | 0.0.0.0 | 0.0.0.0 |
| Route 3 | 0.0.0.0 | 0.0.0.0 |

3.2 Testing Transparent Forwarding:

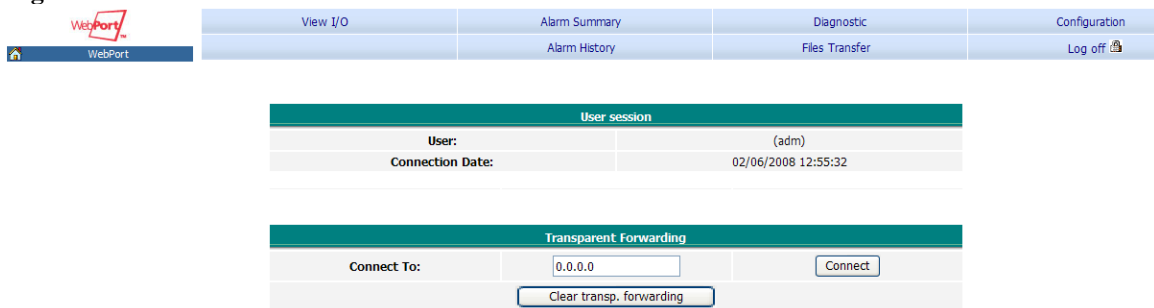
- 1.) The WebPort will automatically connect to the ISP account since the “maintain connection” checkbox was selected in step 7 of section 3.1. The public IP will be sent via email to the email address specified in the procedure above.
- 2.) Select the hyperlink of the public IP from the email body. Your default web browser should be spawned automatically.
- 3.) Logon to the WebPort as shown in figure 12.

Figure 12



4.) After logging in, you should see a screen like the one shown in figure 13.

Figure 13



- 5.) Enter the LAN IP address of the device you're trying to reach in the "Connect to:" field and press the "connect" button. You should receive a "router updated" message after pressing the connect button.
- 6.) Close all open browsers.
- 7.) Use the public IP address of the WebPort to access the LAN device directly. For example, if the device is an Allen-Bradley PLC and the public IP of the WebPort is 63.231.29.14, you would enter this IP address when configuring the "Ethernet Devices" driver within RSLinx. See image below.

Figure 14



Note: Steps 8 through 11 describe how to clear the current transparent forwarding connection.

- 8.) The user needs to specify the secondary HTTP port in the URL to access the WebPort after setting the transparent forwarding address. For example, if the public IP address is 63.231.29.14, the URL will be (<http://63.231.29.14:81/index.htm>).
- 9.) After entering the URL, you will again be presented with the image shown in figure 13. Press the "clear transp. forwarding" button. Again the "router updated" message will appear.
- 10.) Close all open browsers.
- 11.) Enter the public IP in the browser address field. For example, if the public IP is 63.231.29.14, the URL should be (<http://63.231.29.14/index.htm>).
- 12.) Repeat steps 1 through 11 to access other devices on the LAN of the WebPort.