

Product Application Note

MPiec: Configuring DigiOne IAP for Serial – Ethernet MODBUS communication

Applicable Product: MPiec

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Subject: Application Note	Product: MPiec	Doc#: AN.MCD.09.093
Title: MPiec: Configuring DigiOne IAP for Ethernet – Serial MODBUS communication		

Application Overview

This document details the steps to configure a DigiOne IAP serial to Ethernet converter for use in MPiec applications when the MP controller has to interface with a serial device using MODBUS protocol.

Application Highlights:

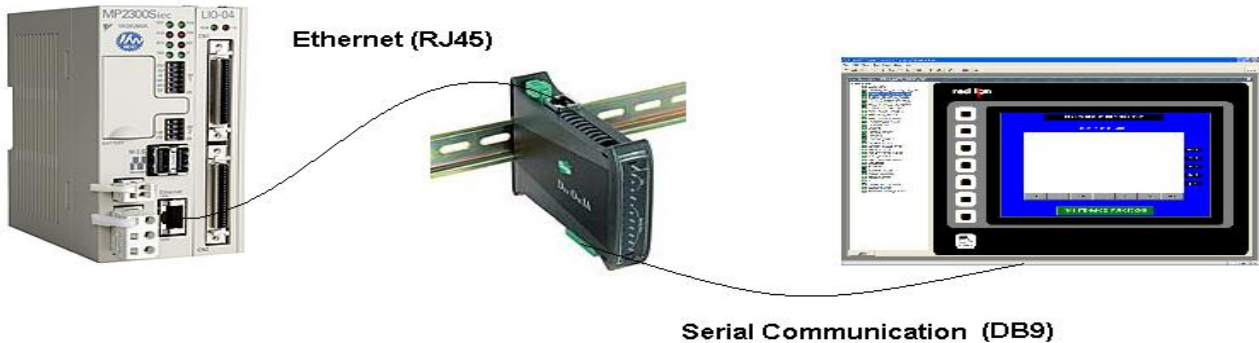
Industry: Automation
 Major Features: MPiec applications with serial devices

Application Challenges:

- The MPiec controller does not have a serial port for communicating with other devices. For applications that require the MPiec controller to communicate with devices that have only a serial port a user will have to use a serial to Ethernet converter. This document describes the configuration for DigiOne IAP to be used as a serial to Ethernet converter.

Products Used:

Component	Product and Model Number
Controller	MPiec
Software	MotionWorks IEC
HMI	RedLion G3-10
Converter	DigiOne IAP serial to Ethernet converter



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Implementation Method of Core Operation

Set the IP address of the device using the MAC address from the DigiOne unit. The ‘arp’ command is made use of as shown below

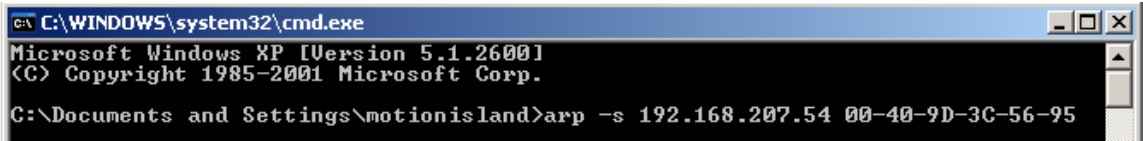


Figure 1: Setting the IP address of the DigiOne device

Log on to the web page of the DigiOne device. Set the network settings under Configuration>Network

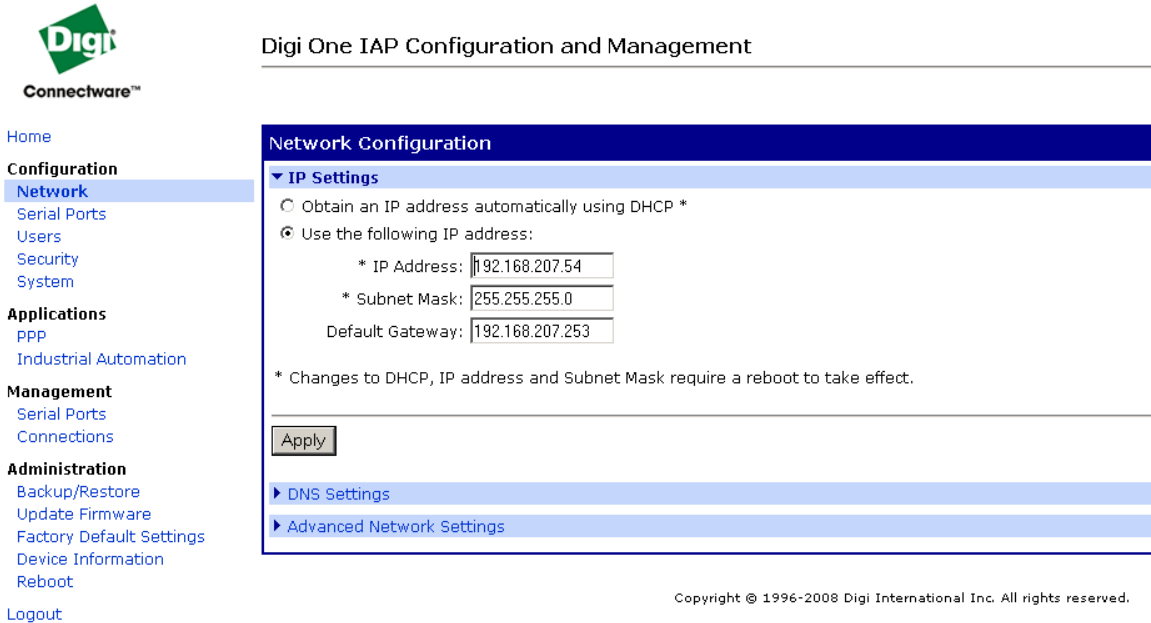


Figure 2: Configuring network settings

Make sure that the unit is clear of any previous configurations. To make sure of it click on ‘factory default settings’ under administration. Reboot.

Click Industrial automation under Applications as shown in Figure 3. Start the industrial automation wizard. If prompted for a user name and password, use: root and dbps.

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Applications

- PPP
- Industrial Automation**

Management

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Administration

- Backup/Restore

Digi One IAP Configuration and Management

Industrial Automation

The Industrial Automation application is used to control and monitor any number of following links will help to configure this application.

For more information, see [How to Configure Industrial Automation](#)

For a guided installation, launch the **Industrial Automation Wizard**

Display [Industrial Automation Configuration Summary](#)

- ▶ Serial Slaves
- ▶ Serial Masters
- ▶ Network Masters
- ▶ Destination Tables (Packet Routing)

Figure 3: Industrial automation wizard

Create a new table for the configuration

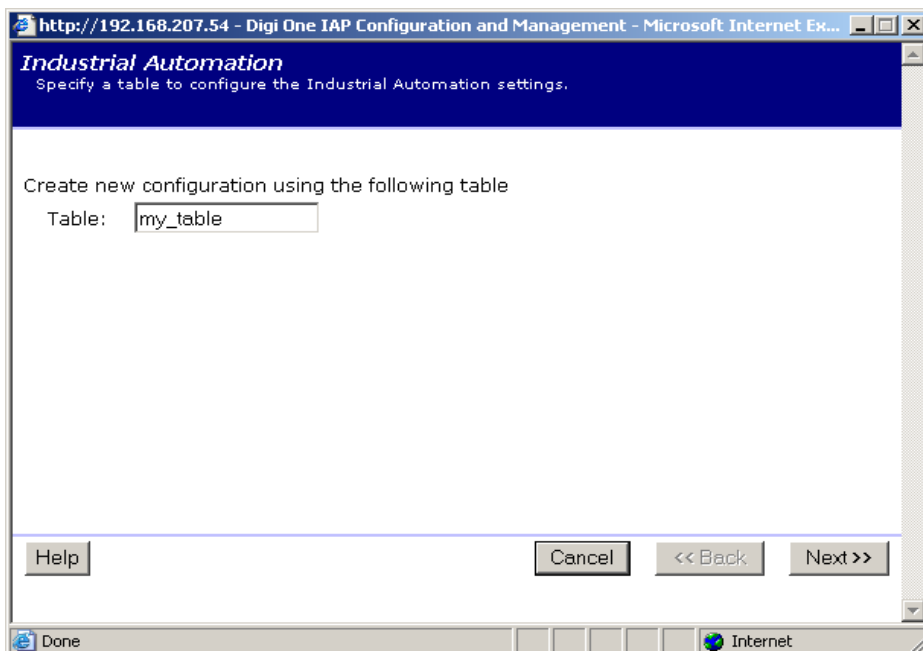


Figure 4: New table creation

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Select MODBUS family as shown in Figure 5

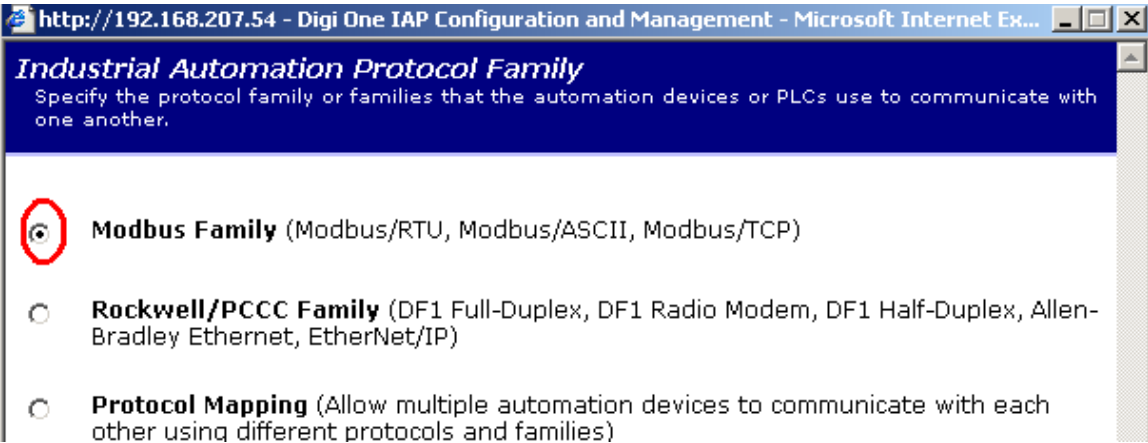


Figure 5: Modbus family

Click next

Select the message source and the port. In this example, the source is the RedLion HMI. It was connected to serial post 2 on the DigiOne device

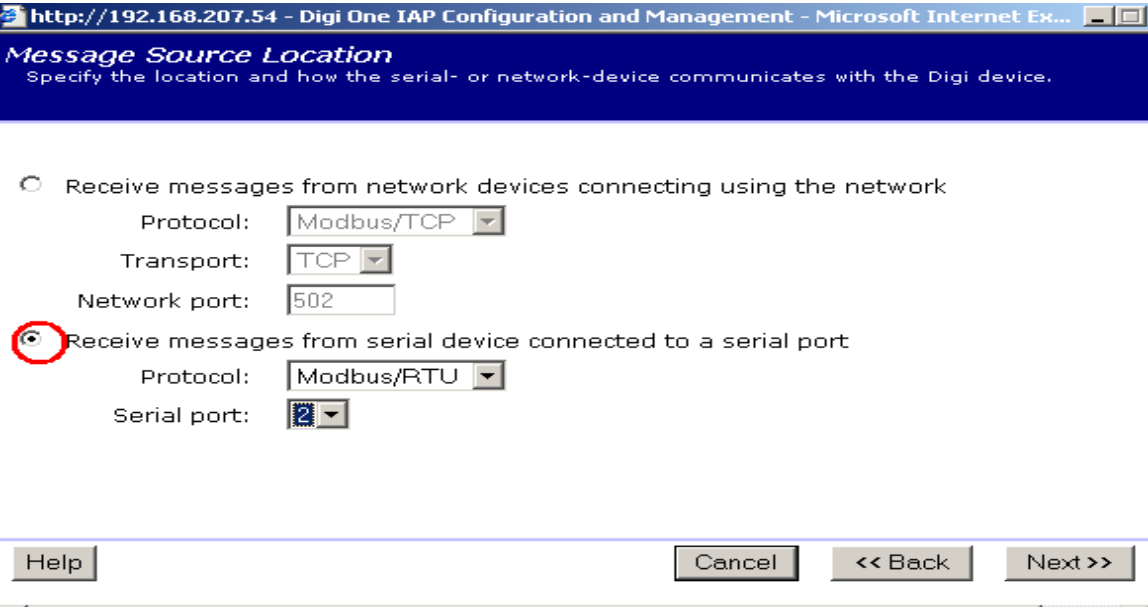


Figure 6: Selecting source port

Enter the settings on the serial source device

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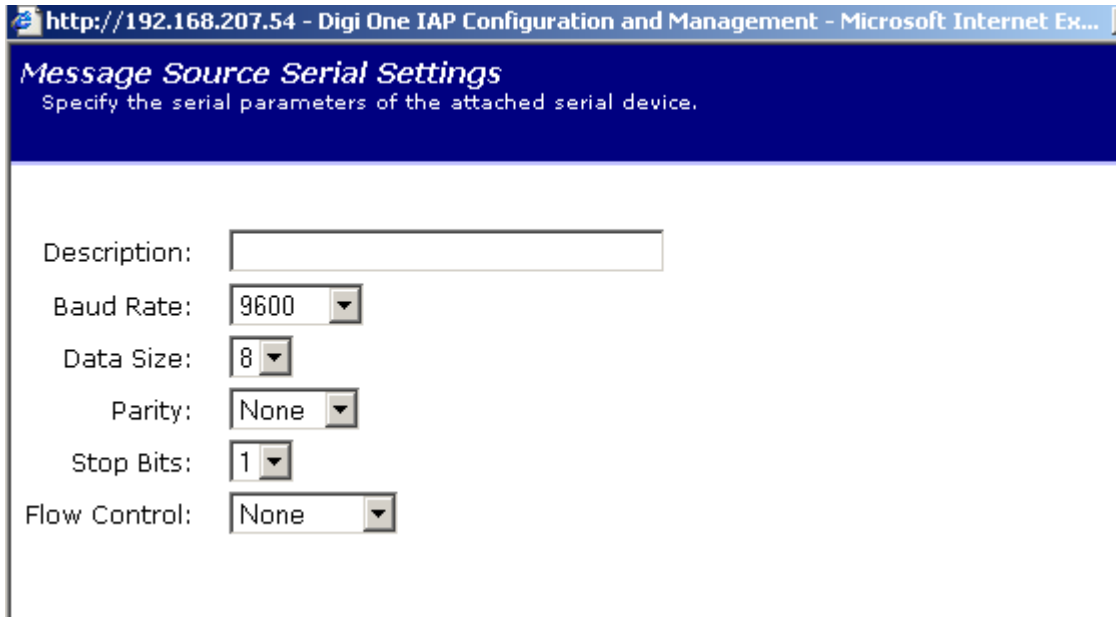


Figure 7: Serial settings

Click 'Next' twice

Figure 8 illustrates the window that displays the sources that have been configured. If the user needs more sources they can be added.

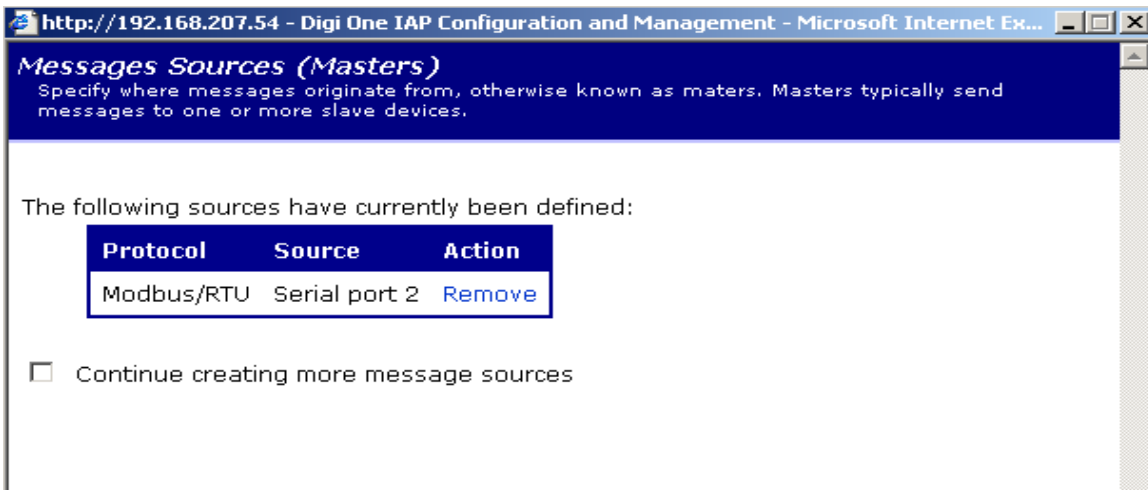


Figure 8: Source summary

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Configure the slave/message destination as shown in Figure9

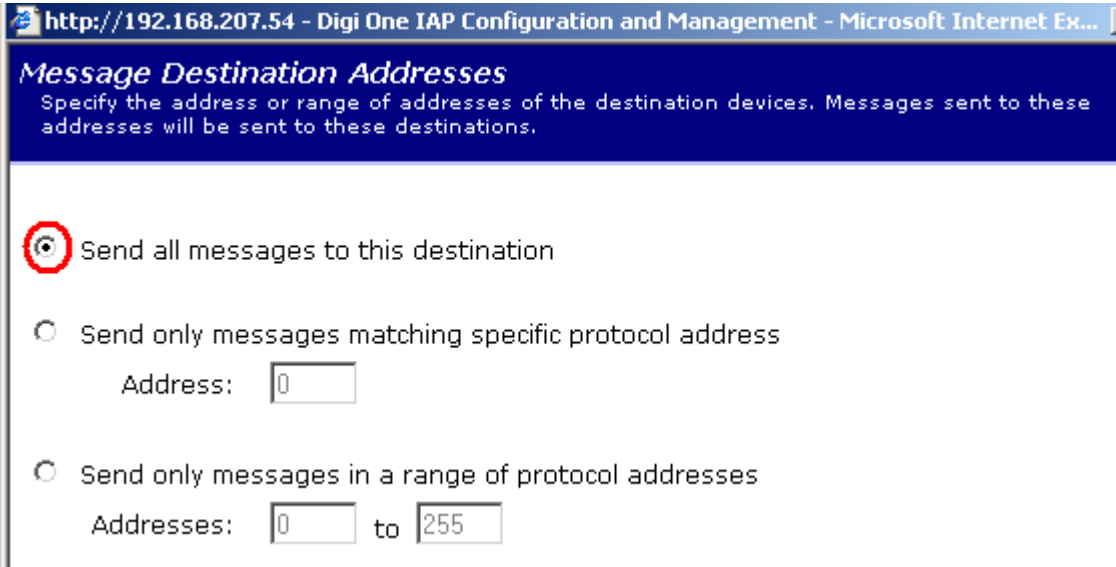


Figure 9: Destination specification

Enter details of the network device (IEC controller)



Figure 10: Network configuration of receiving device (MPiec)

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The unit ID of the IEC controller is 1

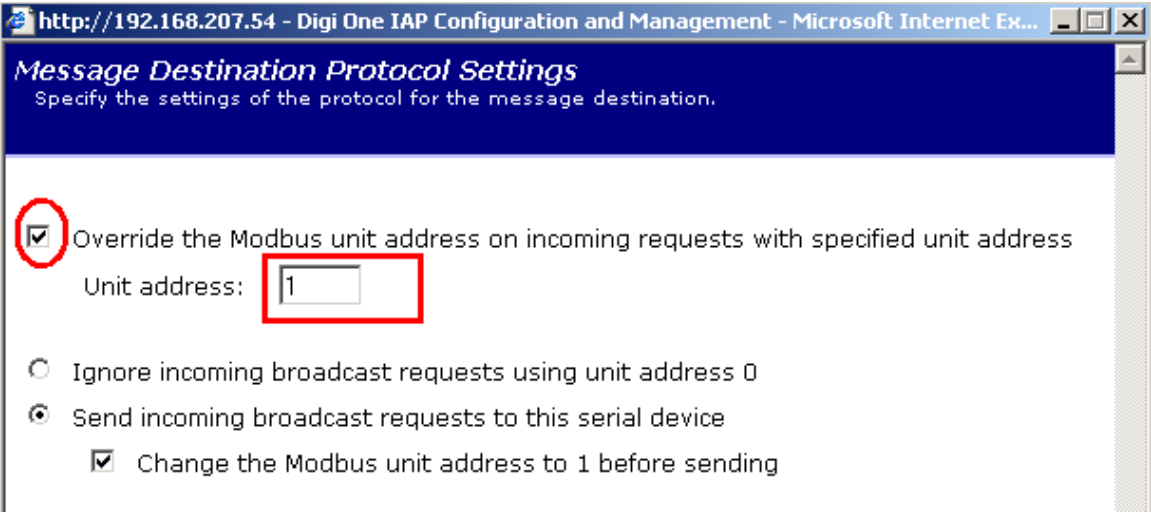


Figure 11: Unit ID of the MPiec

Specify timeouts

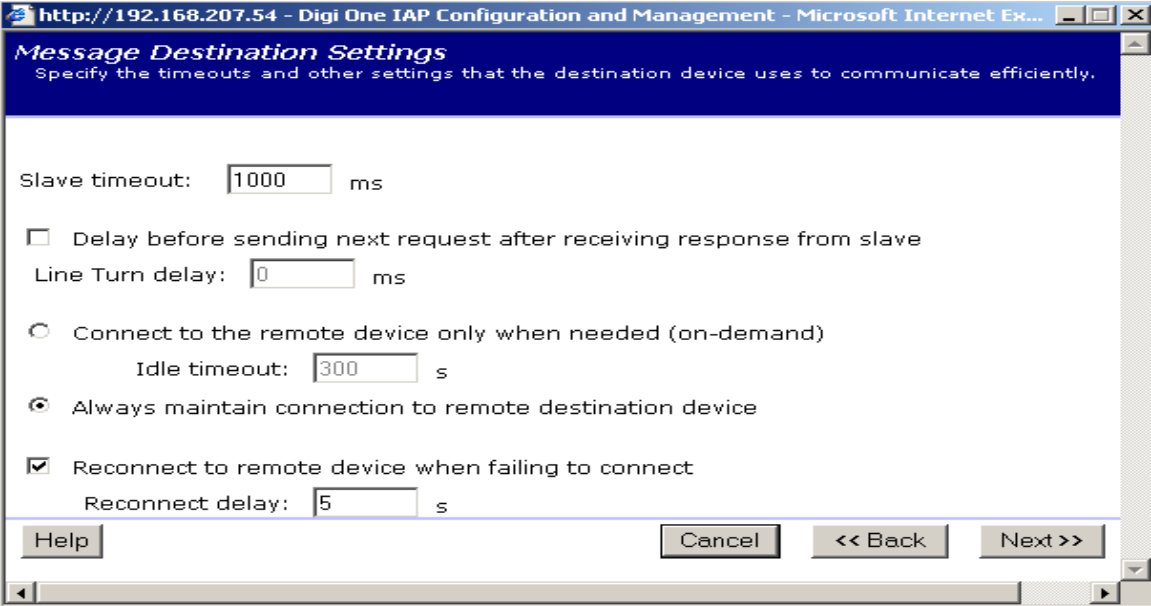


Figure 12: Communication parameters

Figure 13 is a screen shot of the window that lists all the destination /slave devices that have been configured

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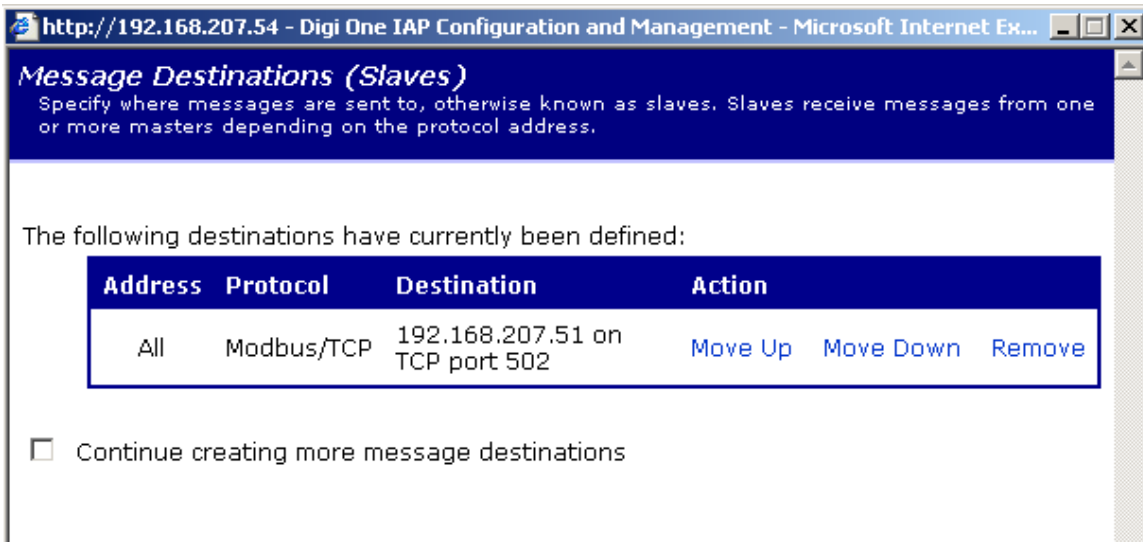


Figure 13: Destinations

Review the final configuration and press Finish

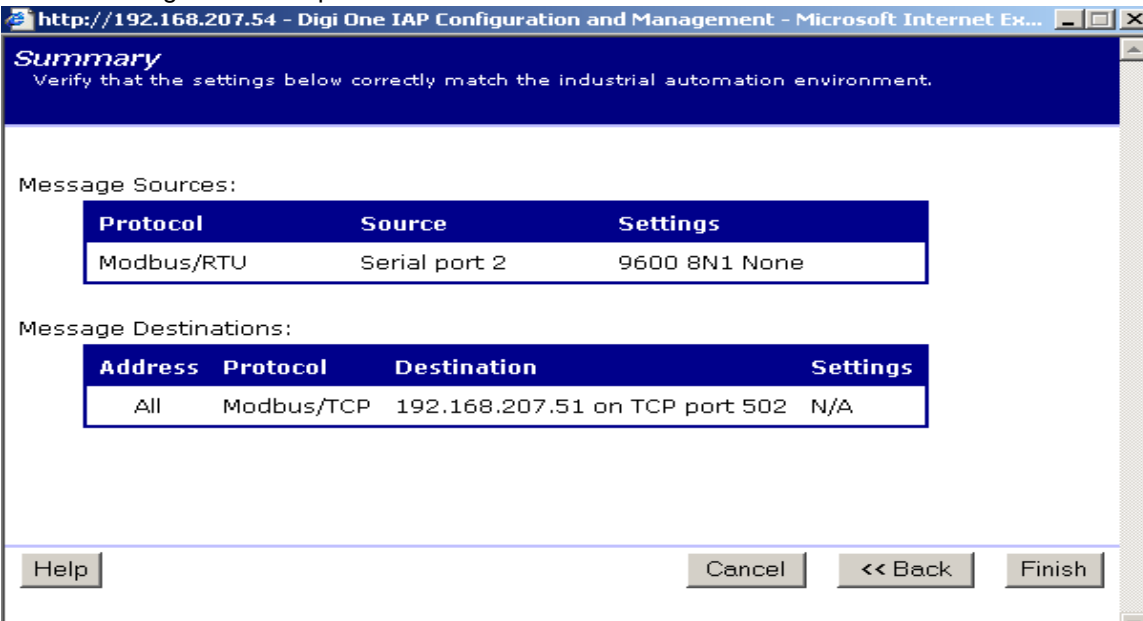


Figure 14: Final configuration

Reboot the DigiOne. User is ready to use the serial HMI and the MPiec.