Technical Note

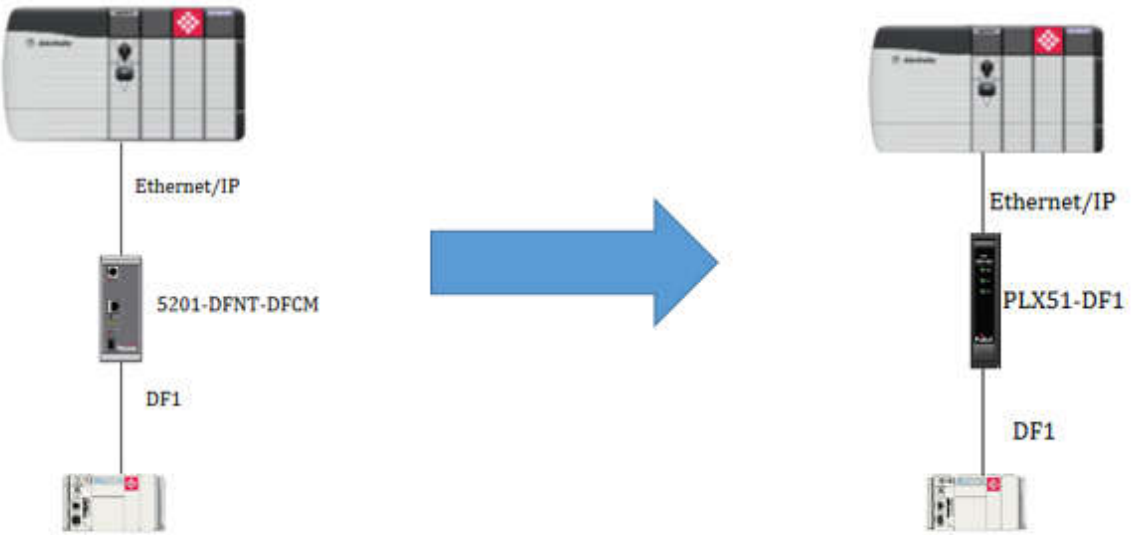
Migrating from 5201-DFNT-DFCM to PLX51-DF1-ENI

Document Code: TN_PLX51DF1ENI_Migration from 5201-DFNT-DFCM

Manual Summary

In the proceeding labs, you will configure all the required software and hardware in order to migrate from 5201-DFNT-DFCM to PLX51-DF1-ENI.

The Lab will cover how to upload the PLC code from CompactLogix and ControlLogix , upload the configuration file from 5201-DFNT-DFCM , figure out the data mapping between CompactLogix and ControlLogix , setup and configure the PLX51-DF1-ENI for complete the migration process .



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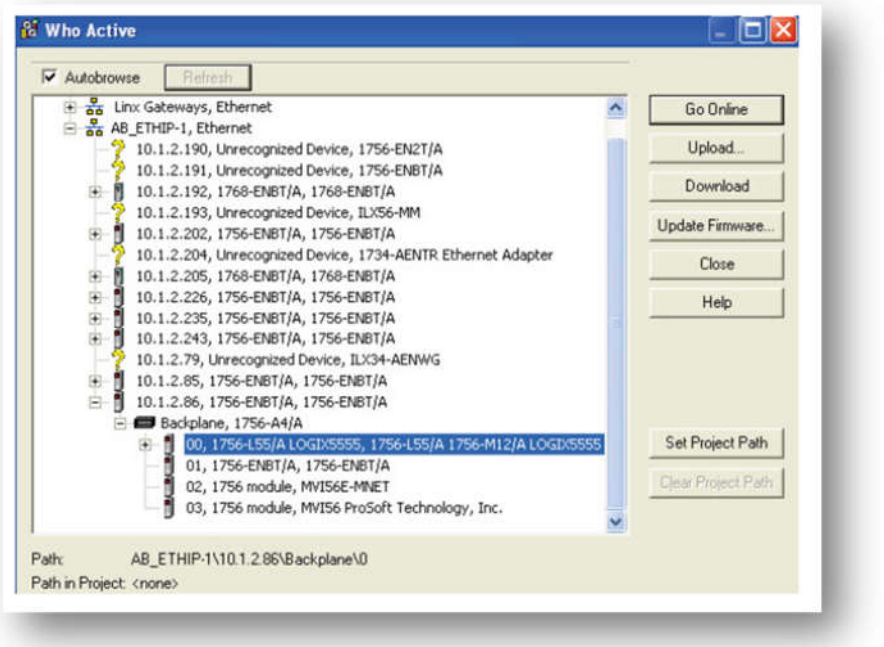
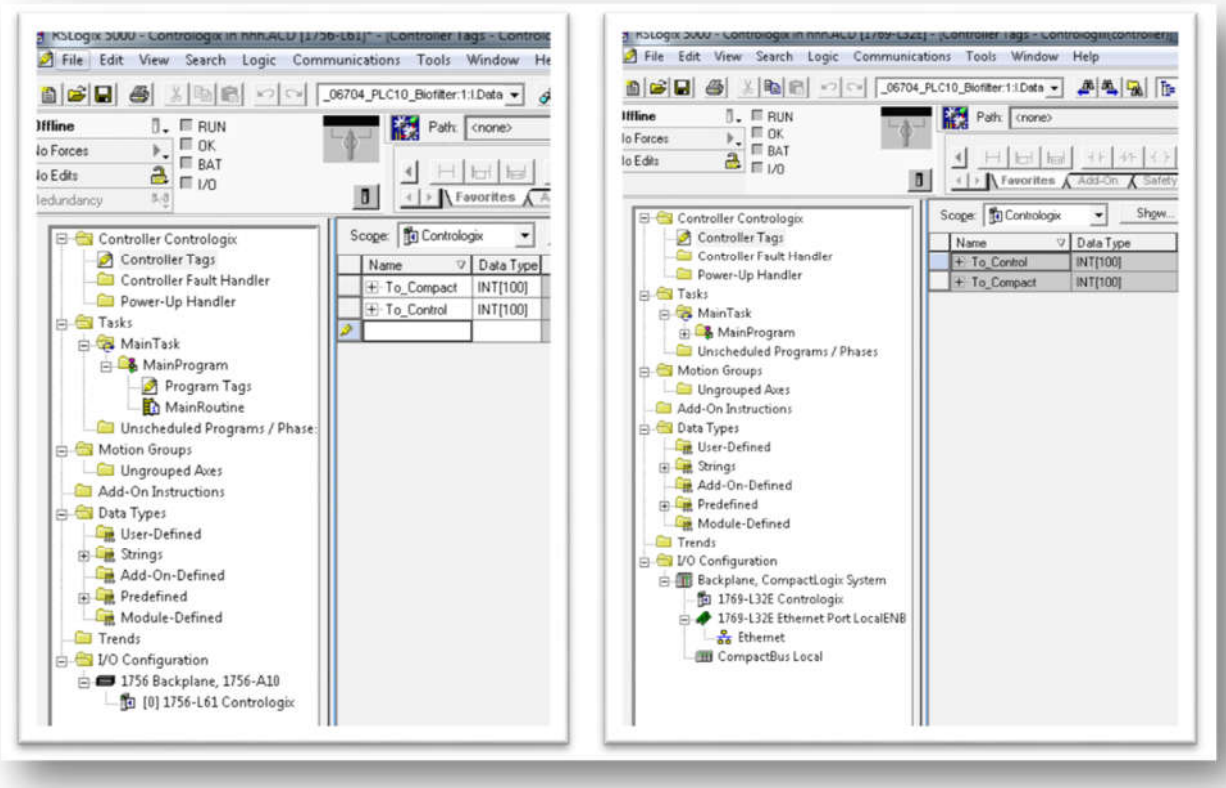
Lab 1 – Upload the PLC code from CompactLogix and ControlLogix and study the data map.

1. Physical connection :
    a. Ensure that the Ethernet/IP module in the ControlLogix rack is connected to the switch
    b. Ensure that the Ethernet port on the CompactLogix processor is connected to the switch.
2. In the menu bar, go up to Communication and select Who Active
3. On the Who Active screen, expand the “AB_ETHIP-1” driver
4. Locate the Ethernet module in the ControlLogix rack (find it’s IP address from the blue information sheet or the scrolling LCD display on the faceplate of the module.
5. Locate the IP address for the Ethernet port in the CompactLogix rack using the IP Address from the *blue information sheet.*
6. Select the processor and click upload.



7. Save CompactLogix and ControlLogix PLC code as different file name.
8. Study the data mapping between ControlLogix processor and CompactLogix processor.

9. For Below example :
    a. To_Compact tag is the data from ControlLogix(EIP) to CompactLogix(DF1).
    b. To_Control tag is the data from CompactLogix(DF1) to ControlLogix(EIP).

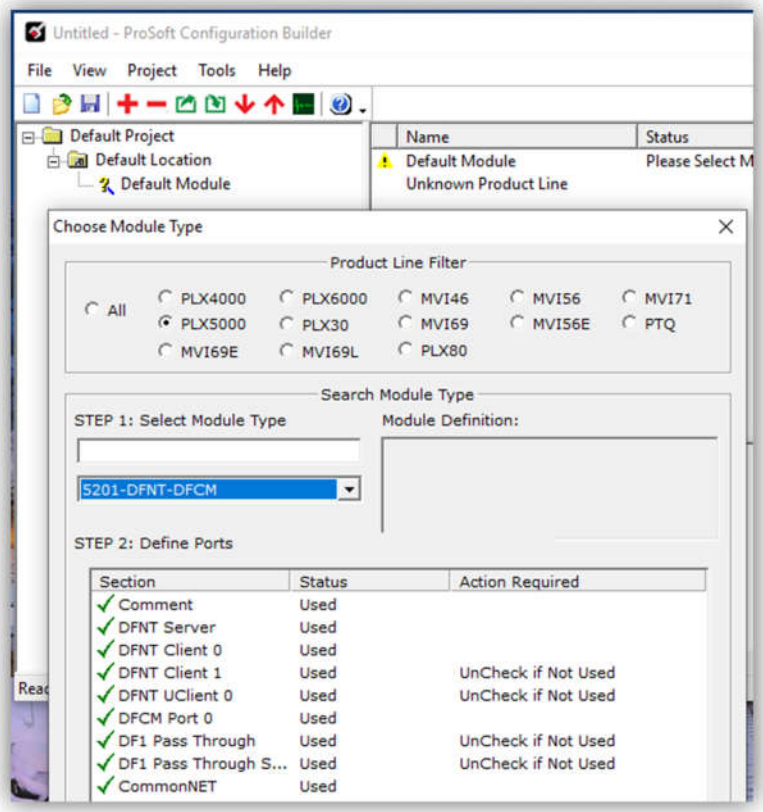


Lab 2 –The Next task is to upload the configuration file from 5201-DFNT-DFCM. So, to do this, open up a new project in ProSoft Configuration Builder and add the 5201-DFNT-DFCM module to the project

1. From the Start button, locate and launch **ProSoft Configuration Builder** under the

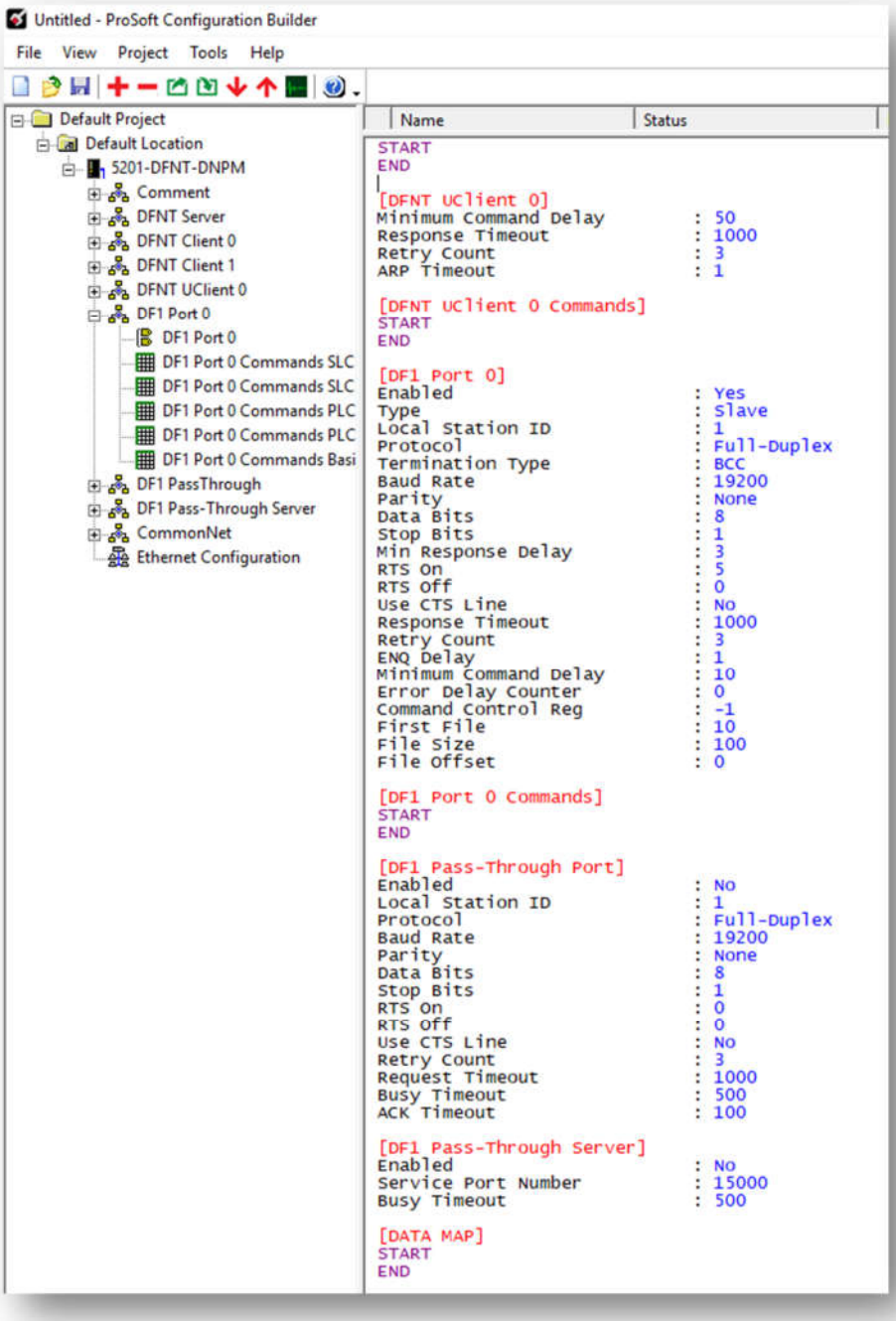
ProSoft Technology folder.

2. Go to File and select New.
3. Select the DEFAULT MODULE in the tree view, and right-click to open a shortcut menu.
4. Select CHOOSE MODULE TYPE, which opens the Choose Module Type dialog box.



5. In the tree view of PCB, click on the 5201-DFNT-DFCM module to select it.
6. On the menu bar, select PROJECT, and then choose Module > Upload from Device to PC.

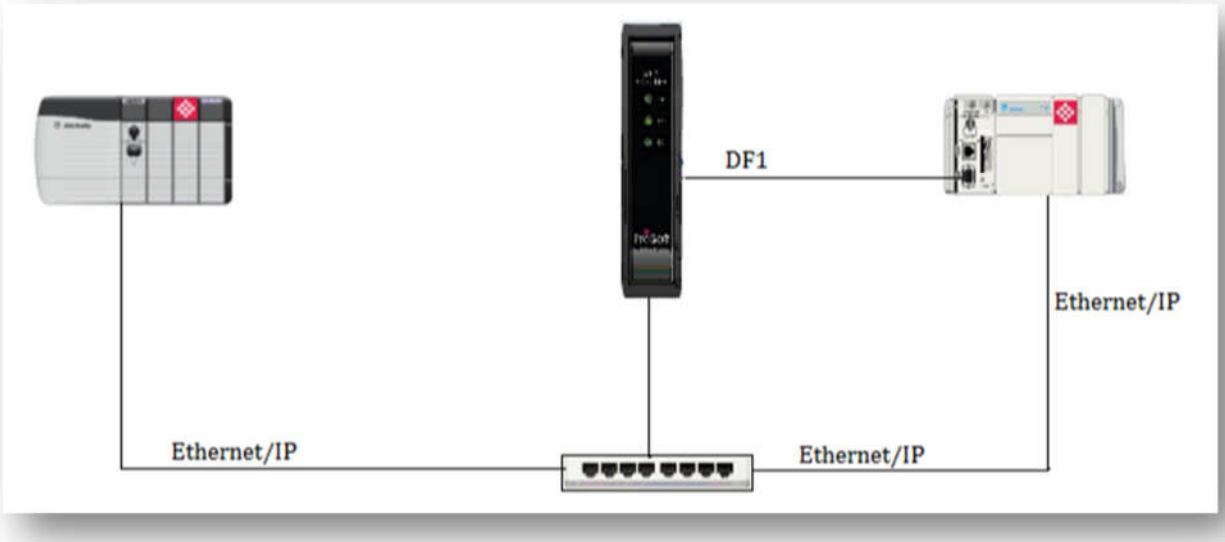
7. Below is the sample configuration file of 5201-DFNT-DFCM.



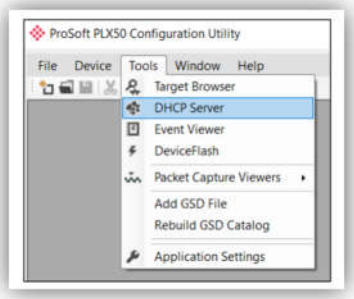
Lab 3 –Configure the PLX51-DF1-ENI .

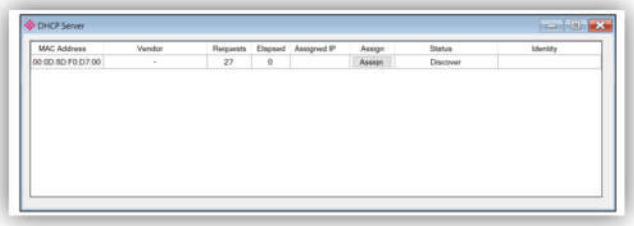
This task is to configure how the PLX51-DF1-ENI will act as gateway between DF1 and Ethernet/IP. So, to do this, initiate ProSoft PLX50 Configuration Utility.

1. Setup the network parameter.



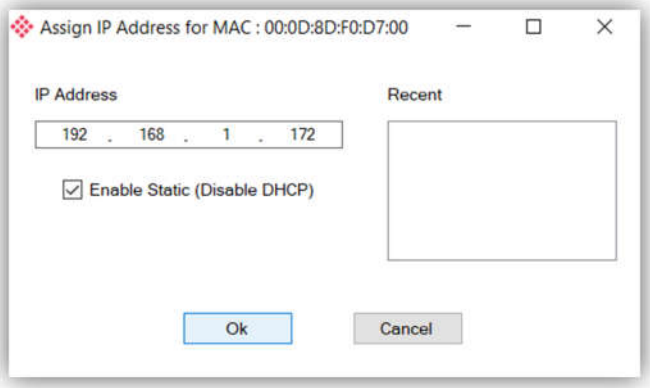
2. Use the DHCP server in the PLX50 Configuration Utility to assign the IP address to PLX51. Once opened, the DHCP server will listen on PLX51 for DHCP requests and display their corresponding MAC addresses



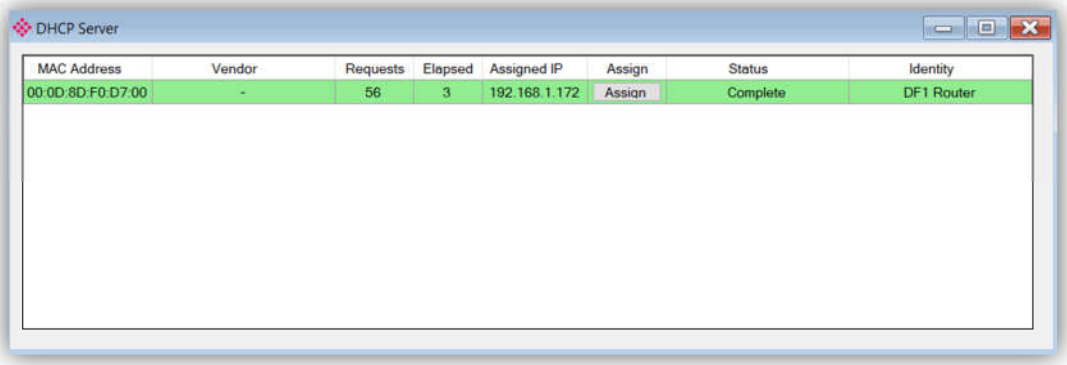


NOTE: If the DHCP requests are not displayed in the DHCP Server, it may be due to the local PC's firewall. During installation, the necessary firewall rules are automatically created for the Windows firewall.

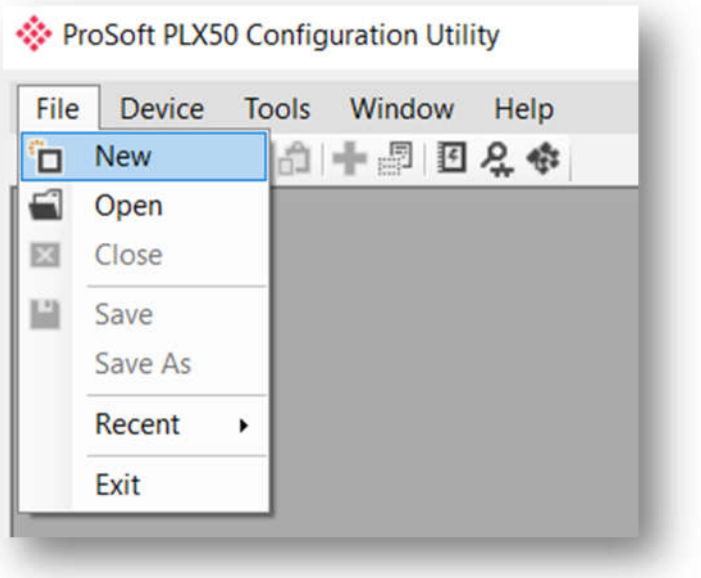
3. To assign an IP address, click on the corresponding “Assign” button. The IP Address Assignment window opens. Below example is set the IP address = 192.168.1.172 with Enable static.



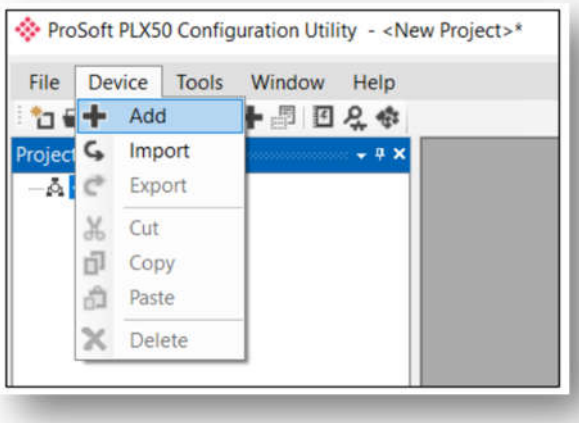
4. The successful assignment of the IP address by the device is indicated by the green background of the associated row.



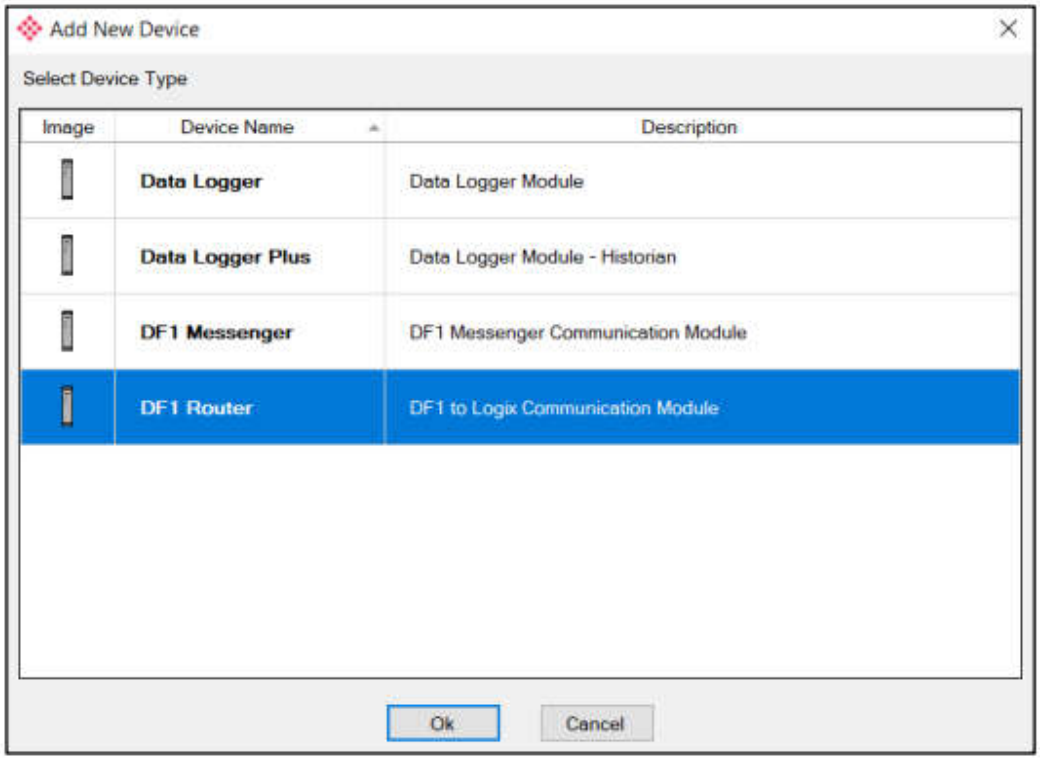
5. Before you configure the module, a new PLX50 Configuration Utility project must be created. Under the File menu, select New.



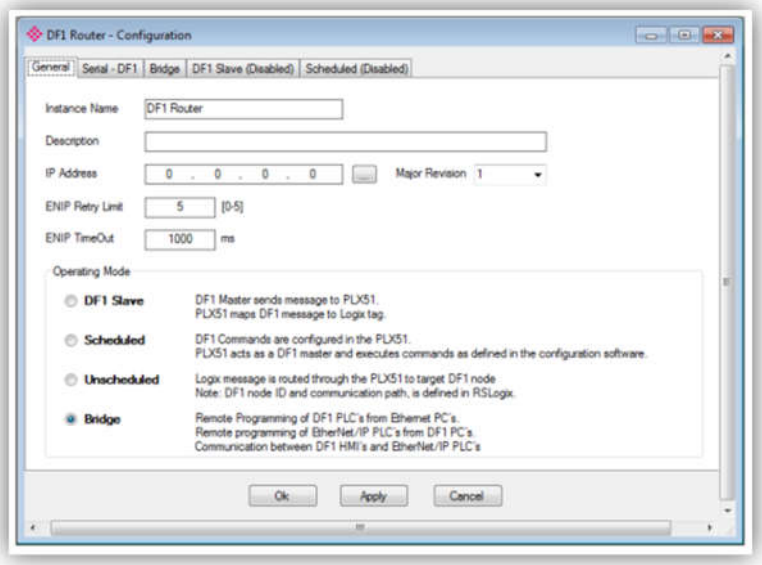
6. A PLX50 Configuration Utility project will be created, showing the Project Explorer tree view. Selecting Add under the Device menu.



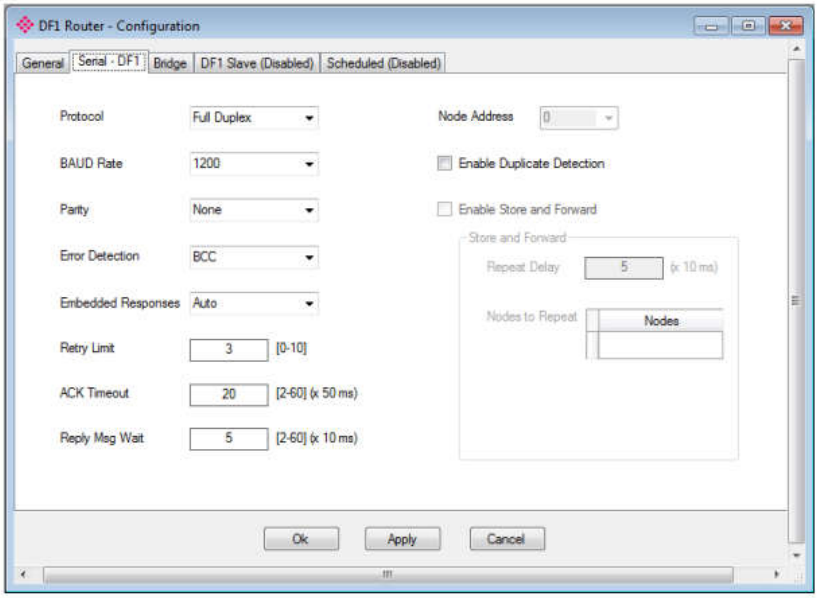
7. In the Add New Device window, select the DF1 Router, and click the Ok button.



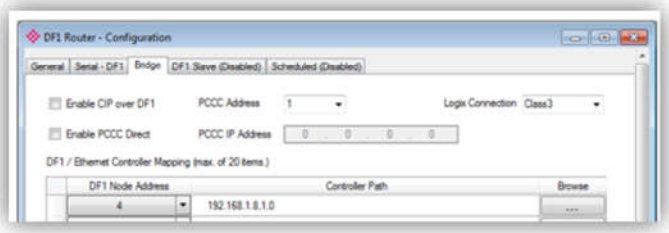
8. The device appears in the Project Explorer tree as shown below, and its configuration window opened.

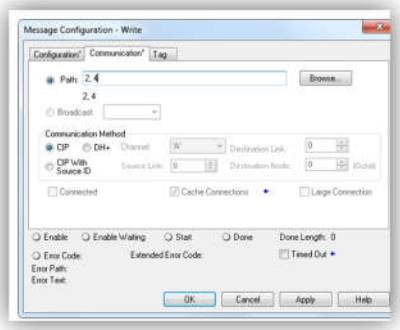


9. Select the second tab at the top Serial-DF1. Copy the serial port setting in 5201-DFNT-DFCM then set to Serial-DF1.

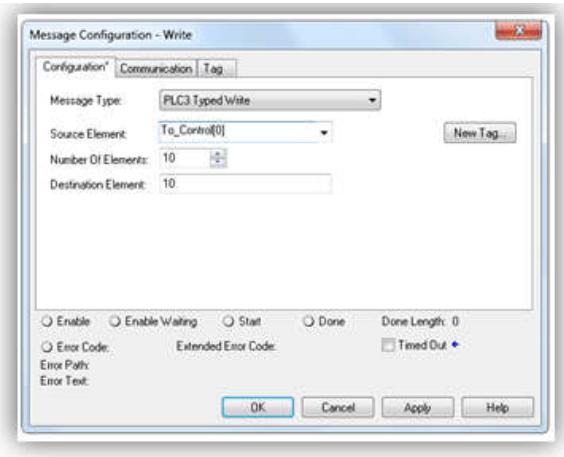


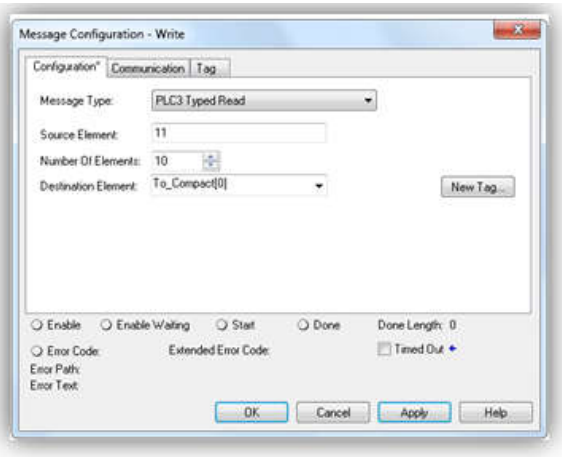
10. Configure the bridge mode for redirecting the message between DF1 and Ethernet port. For below example: MSG from CompactLogix PLC serial port that point to node 4 will be reroute by PLX51 to the device IP 192.168.1 over EIP. The module can emulate more than one destination DF1 Node Address, and thus route multiple messages to different Ethernet devices. For this reason it is important to enter the correct associate DF1 Node address in each mapping record. Please Identify the DF1 target node on CompactLogux MSG path and target IP .



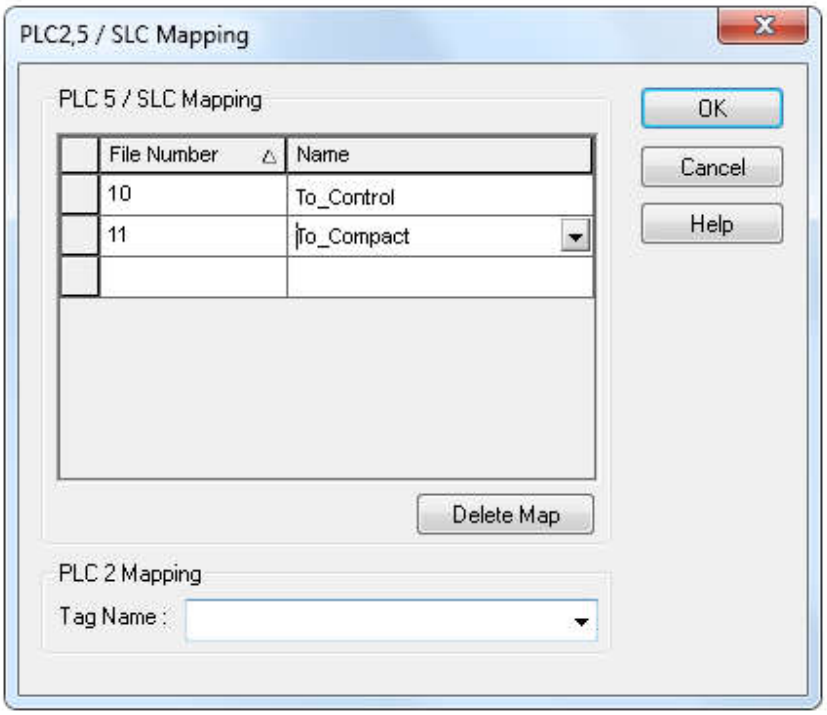


11. The last part of the Bridge routing map setup is to map the DF1 request received by the Logix controller to a Logix tag. This must be done in Rockwell Automation's RSLogix5000. Check the DF1 MSG in the CompactLogix PLC. Then do the same mapping to ControLogix.





12. Ensure the ControlLogix also have the same data mapping.



13. When confirm the mapping of EIP IP address Vs DF1 node address and DF1 data address Vs EIP data address then download the configuration file into the PLX51-DF1-ENI .