




LAB MULTI-HMI

In this extension of the HMI lab, we add multiple sources from different IPs. It is important to note that the IPs must be on the same network as ScadaBR. After collecting the IPs I will use, I created several data sources of Modbus IP. This section of the lab is nearly identical to the process shown in Lab 5-HMI, exception being the HOST address in the properties. Select the add point button and add the two inputs and the coil along with the inputs appropriate offset. Along with activating monitoring on each point and the set.

Nick's 192.168.0.139

 14:00:02: 'NickPi': No response from slave 1

 13:55:41: 'NickPi': No response from slave 1

 **Modbus IP properties**

Name

NickPi

Export ID (XID)

DS_583593

Update period

200

millisecond(ms)

Quantize

☐

Timeout (ms)

500

Retries

2

Contiguous batches only

☐

Create slave monitor points

☐

Max read bit count

2000

Max read register count


125


Max write register count

120

Transport type

TCP


 14:08:19: 'Pi3': No response from slave 1

 **Modbus node scan**

Scan for nodes

Cancel

Nodes found

 **Modbus read data**

Slave id

1

Register range

Coil status


Offset (0-based)

0

Number of registers

100

Read data

 **Point locator test**

Slave id

1

Register range

Coil status

Modbus data type


Binary

Offset (0-based)

0

Bit

0

 **Modbus IP properties**

Name

Pi3

Export ID (XID)

DS_828625

Update period

200

millisecond(ms)

Quantize

☐

Timeout (ms)

500

Retries

2

Contiguous batches only

☐

Create slave monitor points

☐

Max read bit count

2000

Max read register count

125

Max write register count

120

Transport type

TCP

Host


192.168.0.108

Port

502

Encapsulated


☐

 **Modbus node scan**

Scan for nodes

Cancel

Nodes found

 **Modbus read data**

Slave id

1

Register range

Coil status


Offset (0-based)

0

Number of registers

100

Read data

 **Point locator test**

Slave id

1

Register range

Coil status

Modbus data type

Binary

Offset (0-based)

0

Bit

0

Number of registers


0

Character encoding

ASCII

Read

Add point

 **Event alarm levels**

Data source exception


Urgent




Point read exception

Urgent

Point write exception

Urgent

 **Points**

Name	Data type	Status	Slave	Range	Offset (0-based)
Button1	Binary		1	Input status	2
Button2	Binary		1	Input status	3
LED1	Binary		1	Coil status	0

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Hayden 192.168.0.108

Robert's 192.168.0.125

Modbus IP properties

Name: Robert's Pi 1

Export ID (XID): DS_793269

Update period: 200 milliseconds(ms)

Quantize: ☐

Timeout (ms): 500

Retries: 2

Contiguous batches only: ☐

Create slave monitor points: ☐

Max read bit count: 2000

Max read register count: 125

Max write register count: 120

Transport type: TCP

Host: 192.168.0.125

Port: 502

Encapsulated: ☐

Event alarm levels

Data source exception: Urgent

Point read exception: Urgent

Point write exception: Urgent

Name	Data type	Status	Slave	Range	Offset (0-based)
Button1	Binary		1	Input status	2
Button2	Binary		1	Input status	3
LED1	Binary		1	Coil status	0

Modbus node scan

Scan for nodes Cancel

Nodes found:

Modbus read data

Slave id: 1

Register range: Coil status

Offset (0-based): 0

Number of registers: 100

Read data

Point locator test

Slave id: 1

Register range: Coil status

Modbus data type: Binary

Offset (0-based): 0

Bit: 0

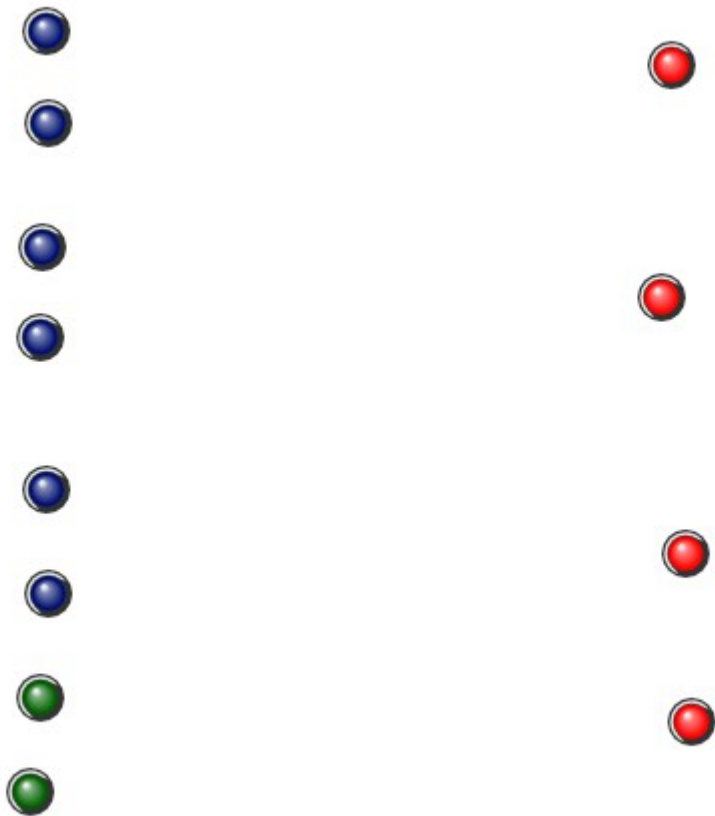
Number of registers: 0

Character encoding: ASCII

Read Add point

Mine 192.168.0.100

Now we will create the graphic view for all 4 data sets together. This is done through repeating steps in LAB 5 just 4 times over, new view, add binary graphic for each point and placing the points from the data sources together. Then selecting an image to represent it.



Here are 4 different circuits from 4 different PLCs all corresponding on the same centralized HMI.