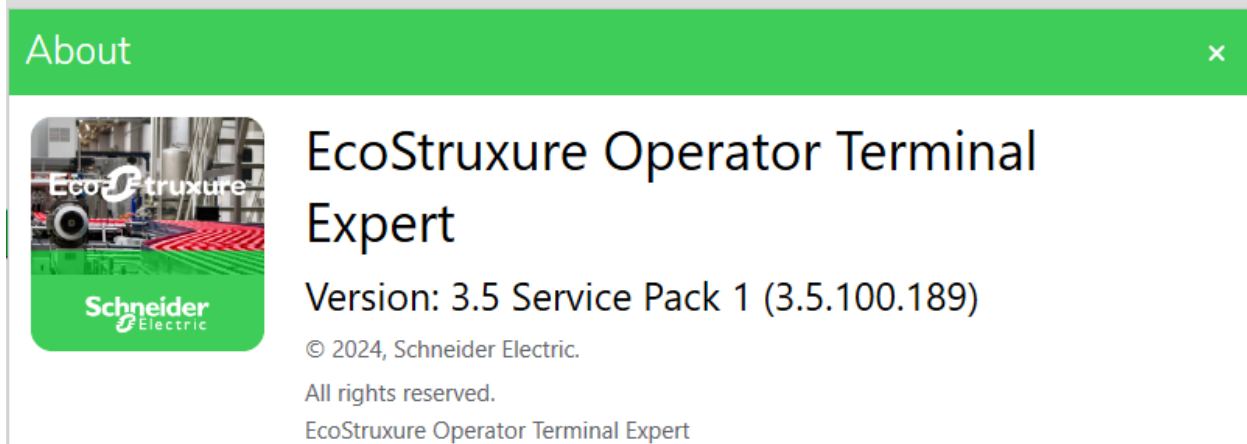


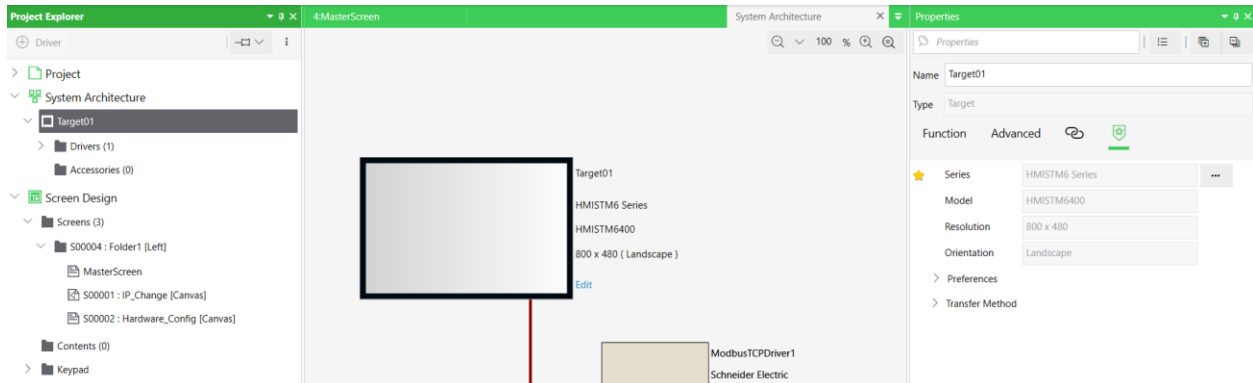
How to change M172P and Equipment (Device Driver) IP Address from EOTE runtime

In this document, I will show you how to change the M172P PLC and Equipment IP address during the runtime of EcoStruxure Operator Terminal Expert.

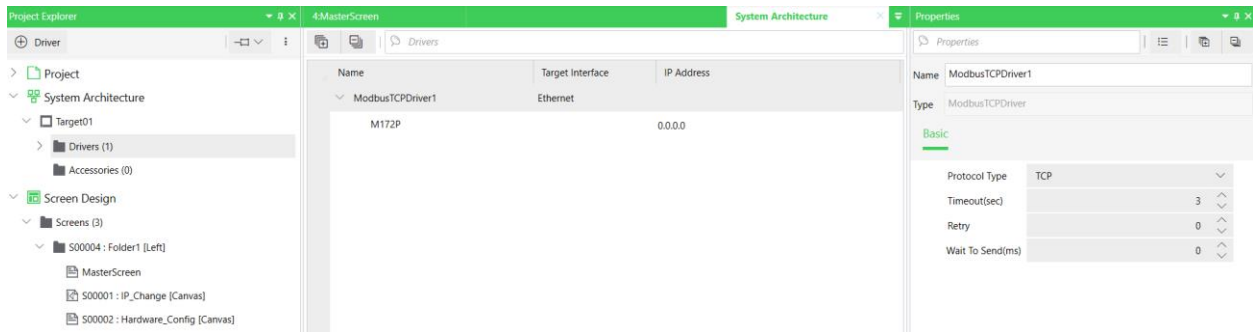
First, I created a project in EcoStruxure Operator Terminal Expert Version 3.5SP1. A latest version is highly recommended.



Then, I set the target configuration by selecting the HMISTM6400 as shown below.



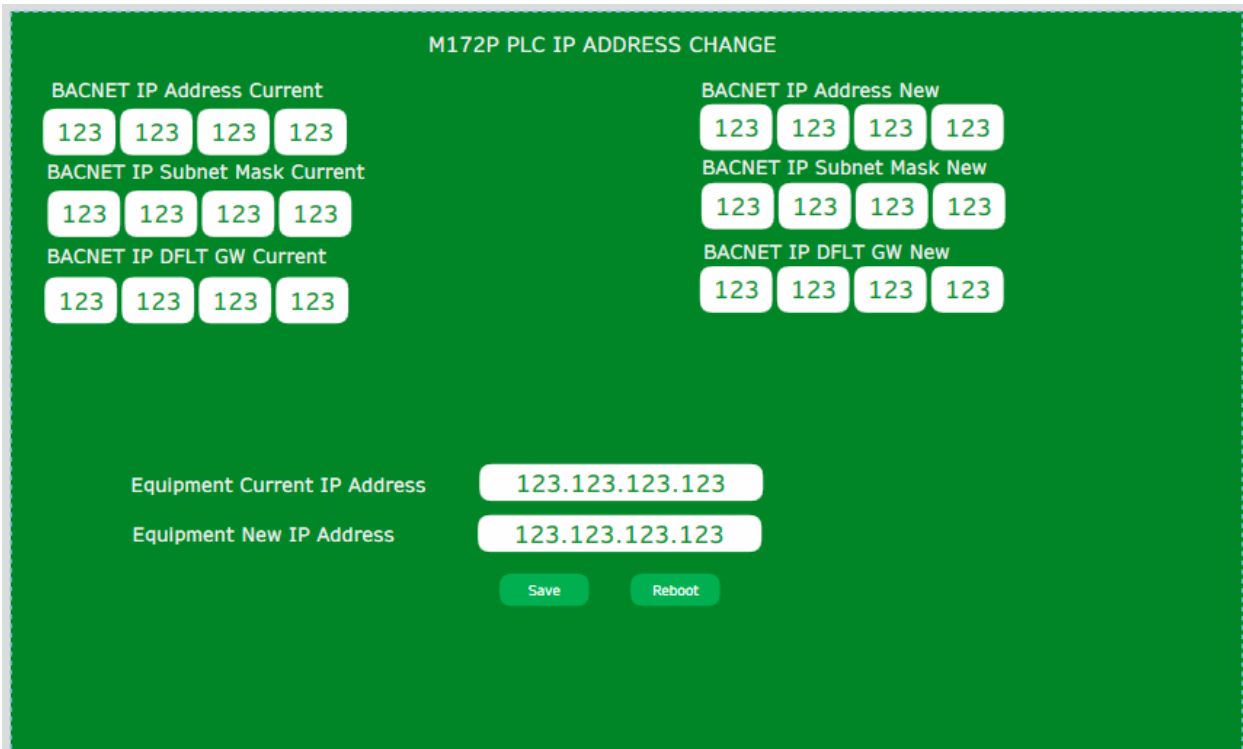
I added the Modbus TCP Driver in the driver sub-menu. Driver can be accessed from the Project Explorer as shown.



I left the IP Address field blank since our intention is to update the IP Address of Equipment from runtime.

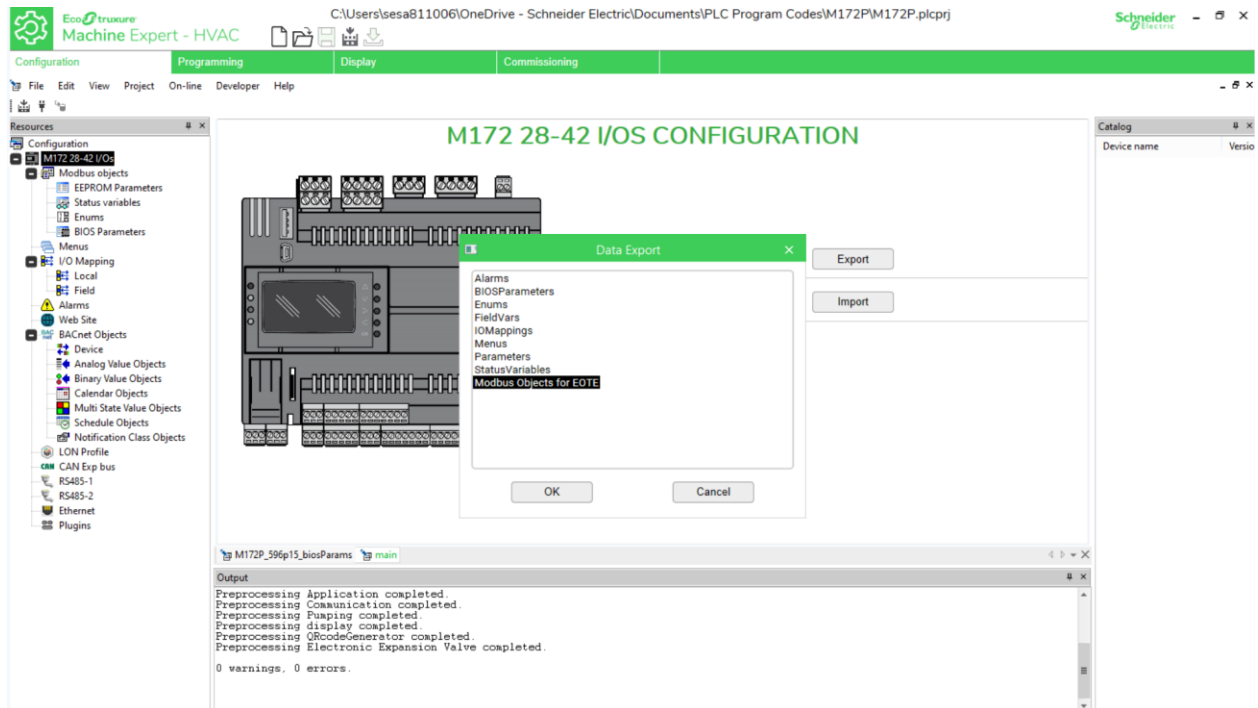
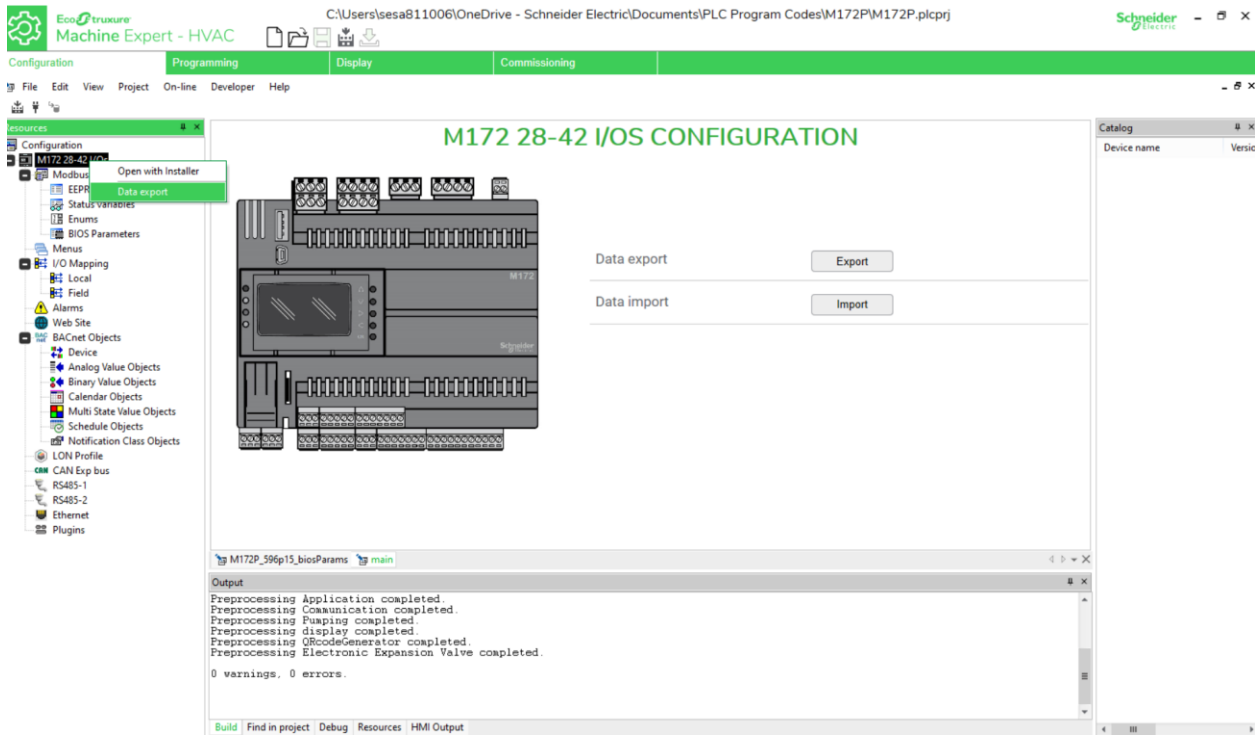
Step-2

This step highlights the example screen design. I will not be adding too much emphasis on screen design. This article assumes some basic familiarity with EcoStruxure Operator Terminal Expert.

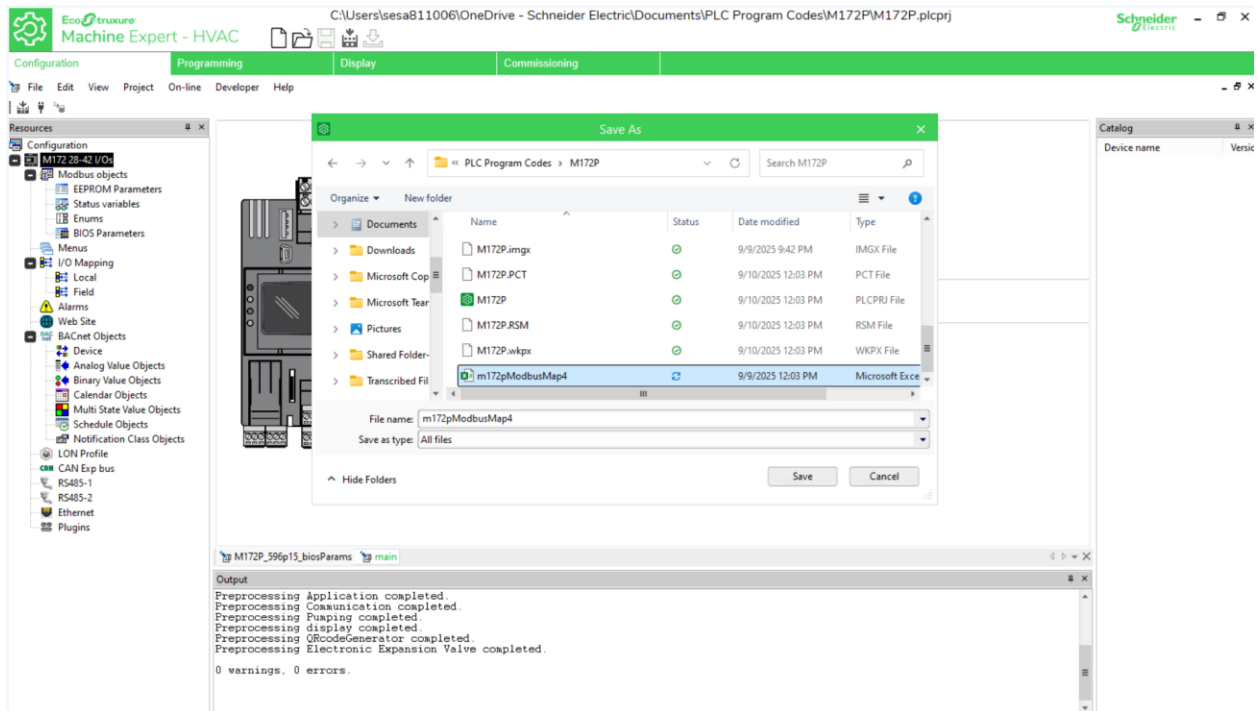


The above screen shows fields for current and new BACNET IP network settings for M172P PLC.

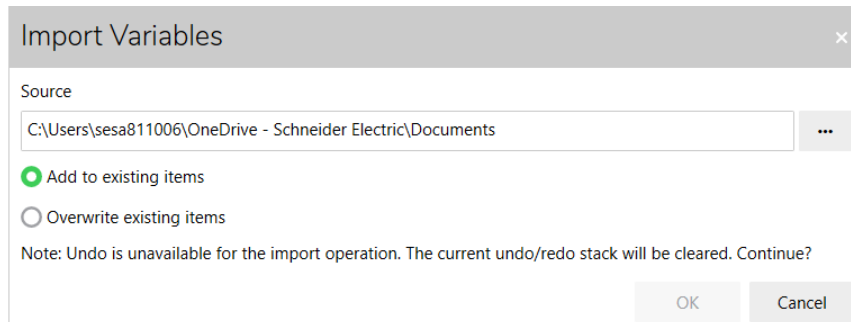
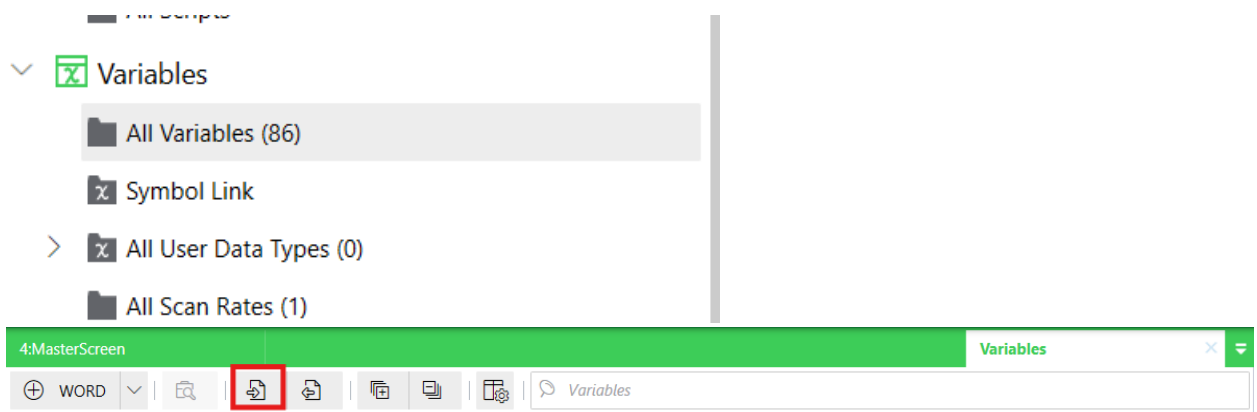
Both Current and New BACNET IP Address were composed of 4 numeric display objects bound to each Octet of the IP Address. I have exported the Modbus Objects data from EcoStruxure Machine Expert HVAC to expose the Modbus registers required to change the ip address of M172P.



Select OK to save the csv file for the modbus objects.



After you choose save, a csv file will be generated and saved at your chosen location. In Project Explorer, under Variables section, choose “All Variables” and select Import icon on the top ribbon menu.



You will see imported variables added as shown below.

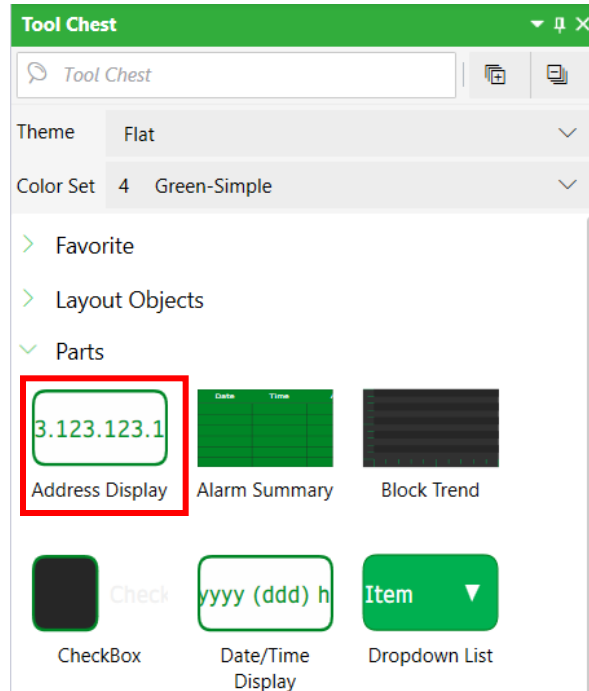
Folder	Name	Data Type	Source	Scan Rate	Device Address	Number of B
	Save	BOOL	Internal			0
	M172P_Port_FTP_PI	UINT	M172P	DefaultScanRate (10...	415772	0
	M172P_Port_HTTP_PI	UINT	M172P	DefaultScanRate (10...	415796	0
	M172P_Port_ETH_PI	UINT	M172P	DefaultScanRate (10...	415797	0
	M172P_Ip_1_ETH_PI	UINT	M172P	DefaultScanRate (10...	415798	0
	M172P_Ip_2_ETH_PI	UINT	M172P	DefaultScanRate (10...	415799	0
	M172P_Ip_3_ETH_PI	UINT	M172P	DefaultScanRate (10...	415800	0
	M172P_Ip_4_ETH_PI	UINT	M172P	DefaultScanRate (10...	415801	0
	M172P_DefGtwy_1_ETH_PI	UINT	M172P	DefaultScanRate (10...	415802	0
	M172P_DefGtwy_2_ETH_PI	UINT	M172P	DefaultScanRate (10...	415803	0
	M172P_DefGtwy_3_ETH_PI	UINT	M172P	DefaultScanRate (10...	415804	0
	M172P_DefGtwy_4_ETH_PI	UINT	M172P	DefaultScanRate (10...	415805	0
	M172P_NetMsk_1_ETH_PI	UINT	M172P	DefaultScanRate (10...	415806	0
	M172P_NetMsk_2_ETH_PI	UINT	M172P	DefaultScanRate (10...	415807	0
	M172P_NetMsk_3_ETH_PI	UINT	M172P	DefaultScanRa	415808	0
	M172P_NetMsk_4_ETH_PI	UINT	M172P	DefaultScanRate (10...	415809	0

We will now bind these Modbus variables behind the numeric display objects on the screen.

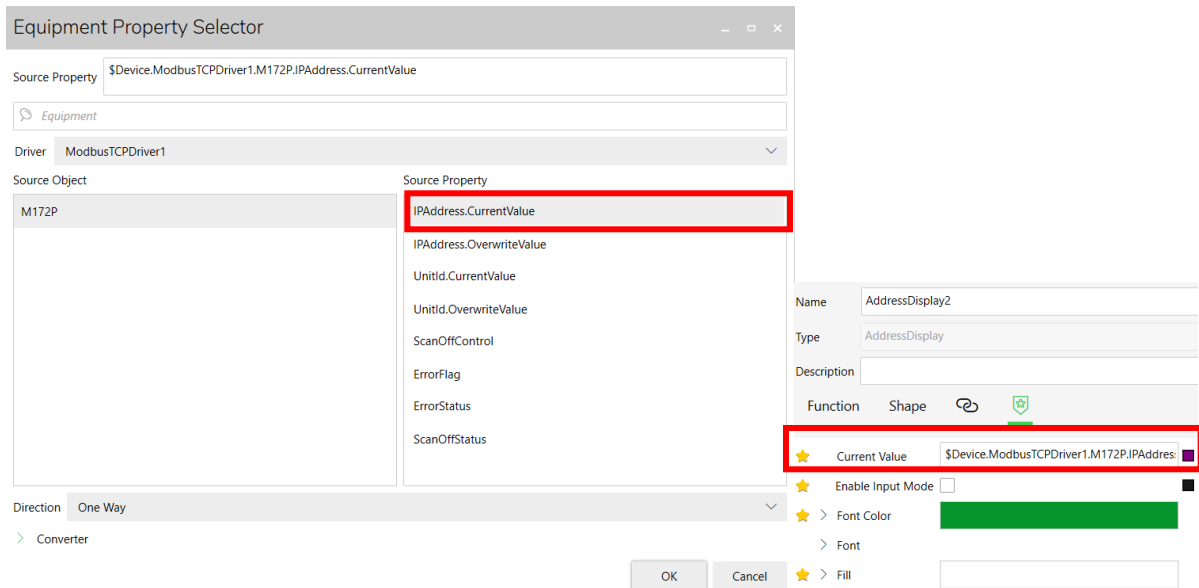
The image shows a software configuration interface. On the left, a green screen displays three sections: 'BACNET IP Address New', 'BACNET IP Subnet Mask New', and 'BACNET IP DFLT GW New'. Each section contains four numeric displays, all showing the value '123'. On the right, a configuration panel for 'NumericDisplay13' is visible. The 'Current Value' is set to 'M172P_Ip_1_ETH_PI.Value'. Other settings include 'Enable Input Mode' (checked), 'Font Color' (green), and 'Fill' (white).

Repeat the steps above to bind all the Modbus objects necessary to change IP, Subnet Mask and Default Gateway.

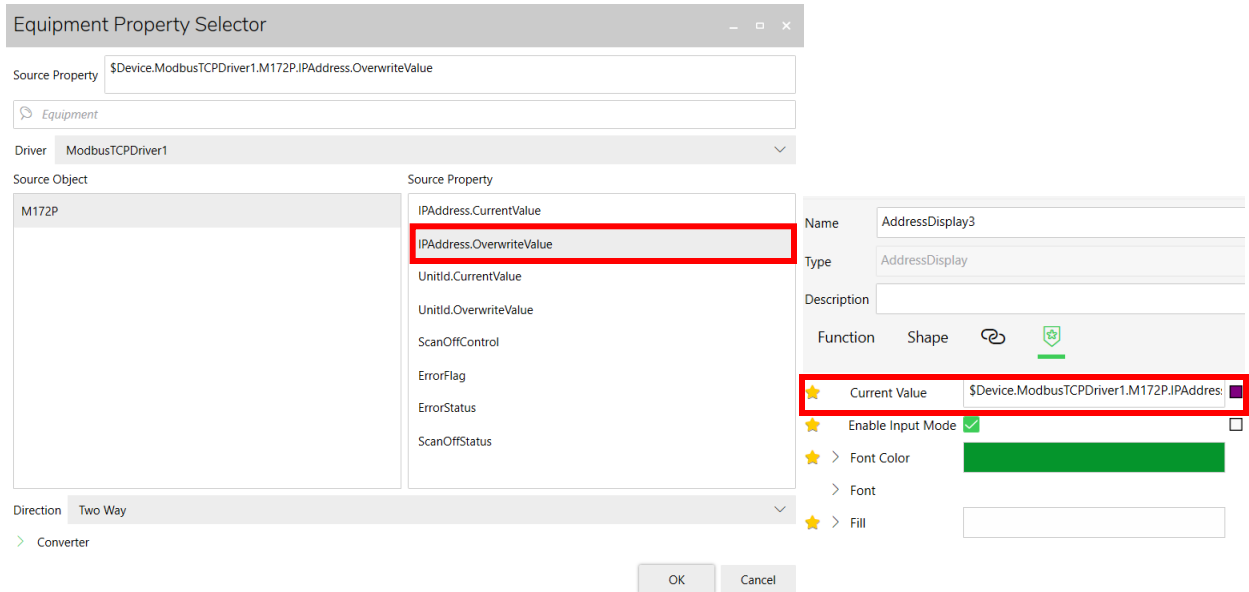
In the lower part of the screen, I added two fields for current and new Equipment IP Address. I used the Address Display object from the tool chest under Parts section.



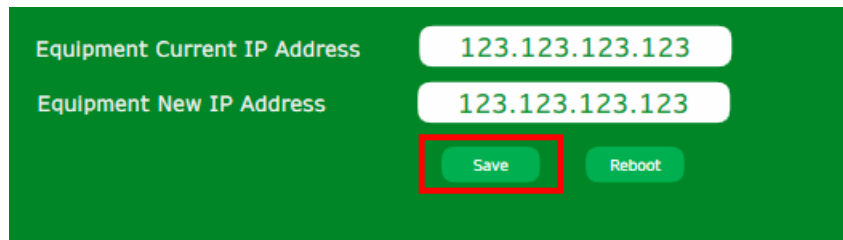
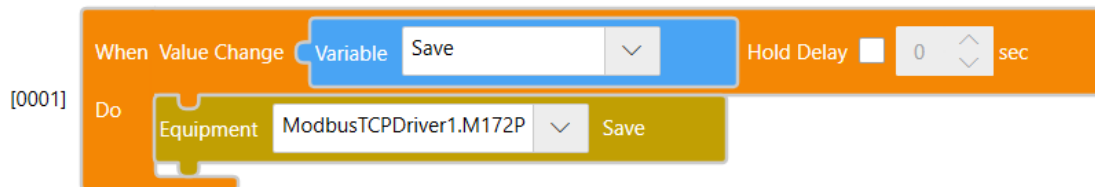
Equipment current IP Address field is bound to source property of equipment “IPAddress.CurrentValue” as shown below. This is a read only property and direction is selected “One Way”.



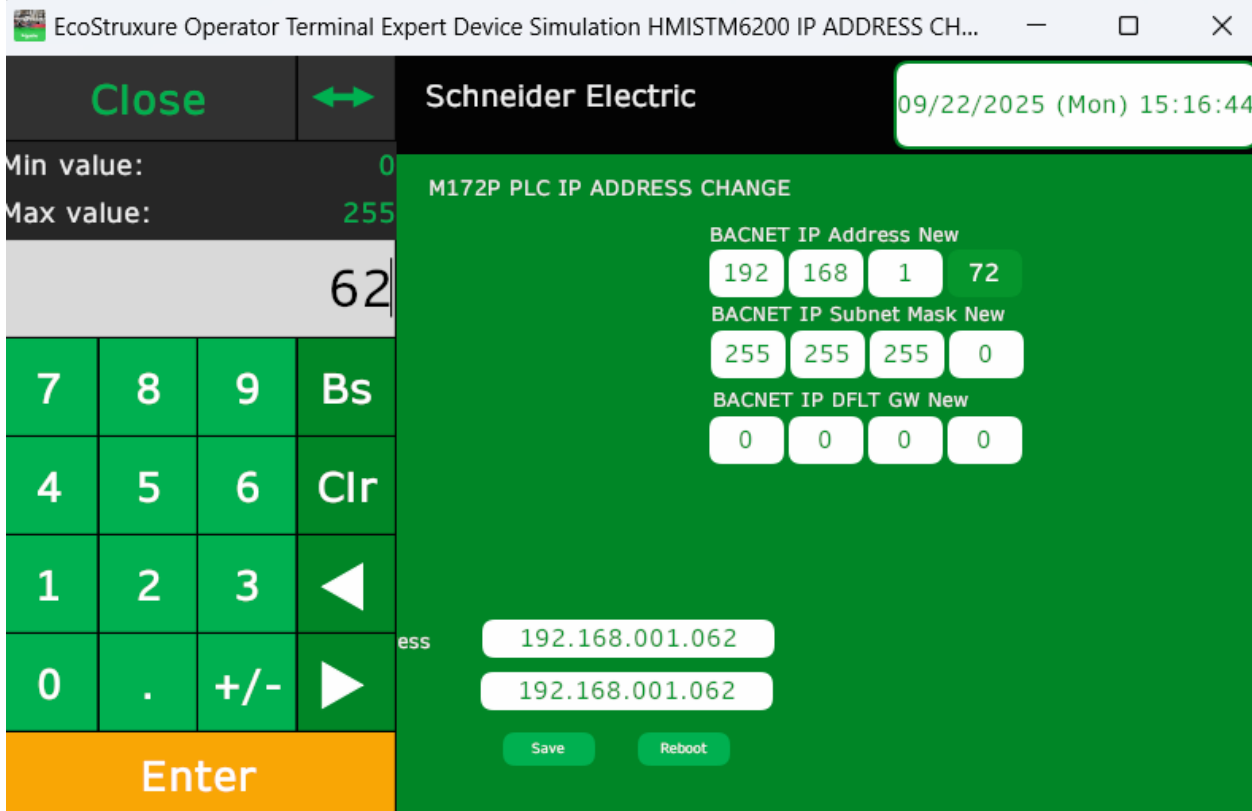
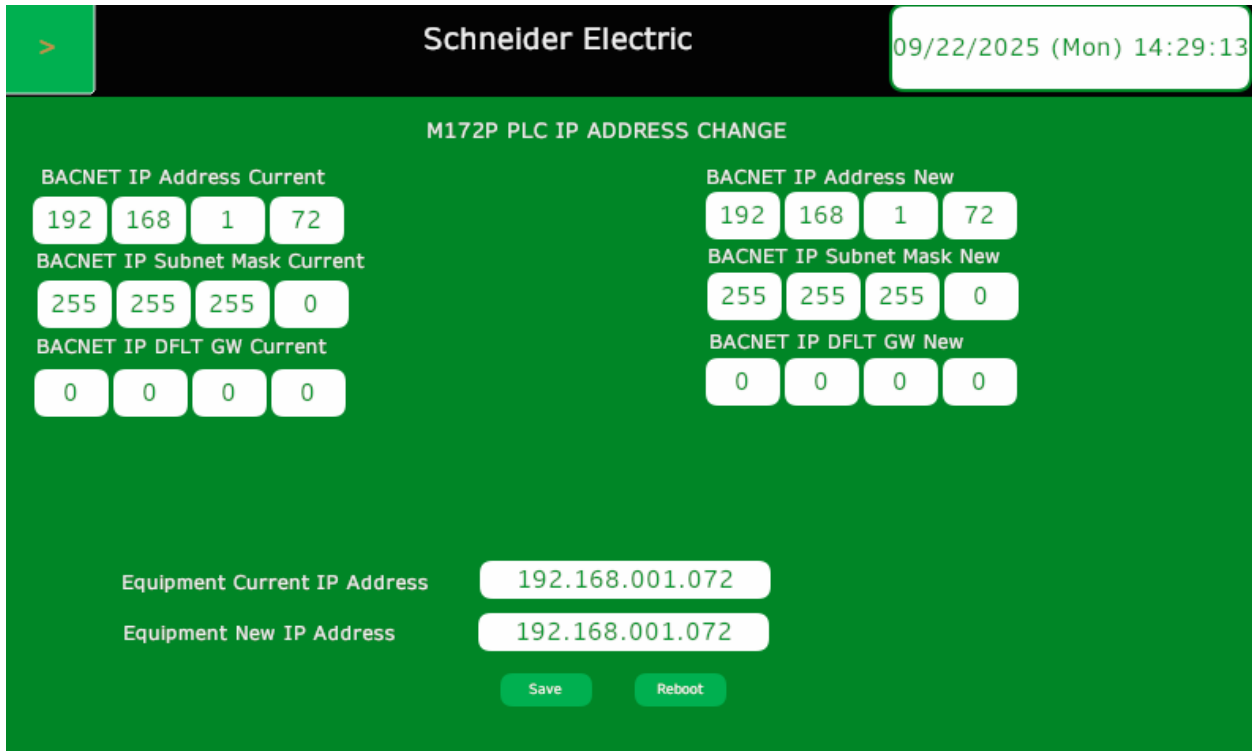
Equipment New IP Address field is bound to the source property of equipment “IPAddress.OverwriteValue”.

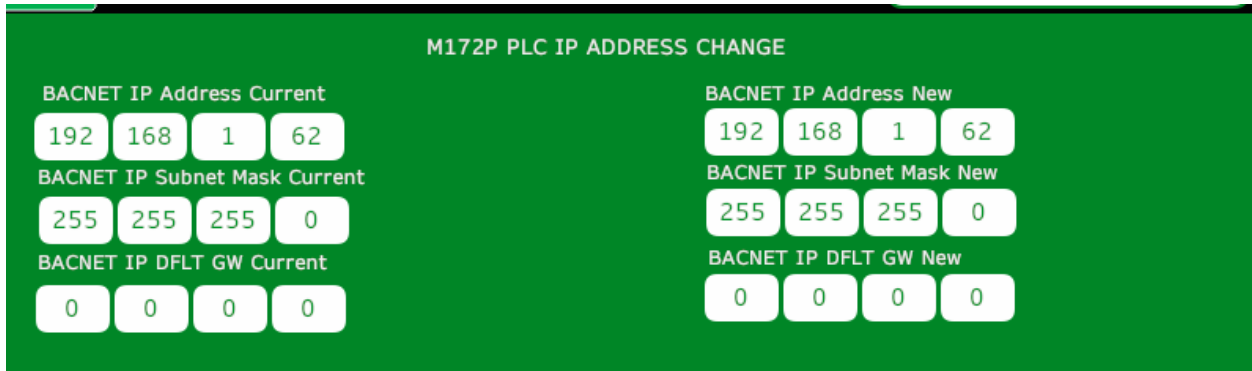


In order to save the new IP Address for the equipment and update the driver during runtime, we have to run an Equipment Save function in the script. I have placed a Switch object from Tool Chest and bound it to an internal variable called Save. The script should look like below:

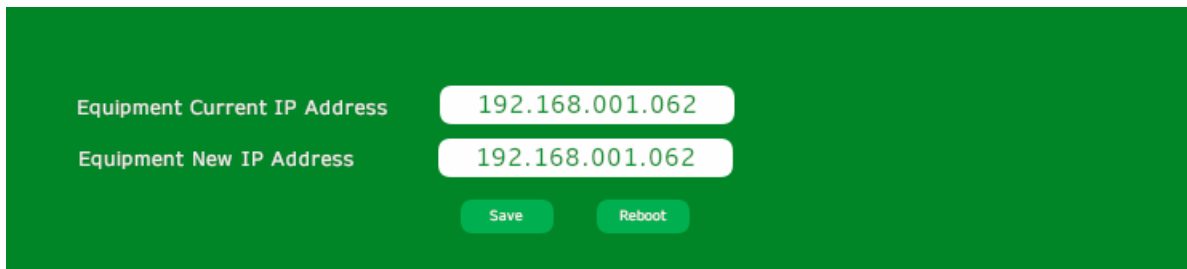
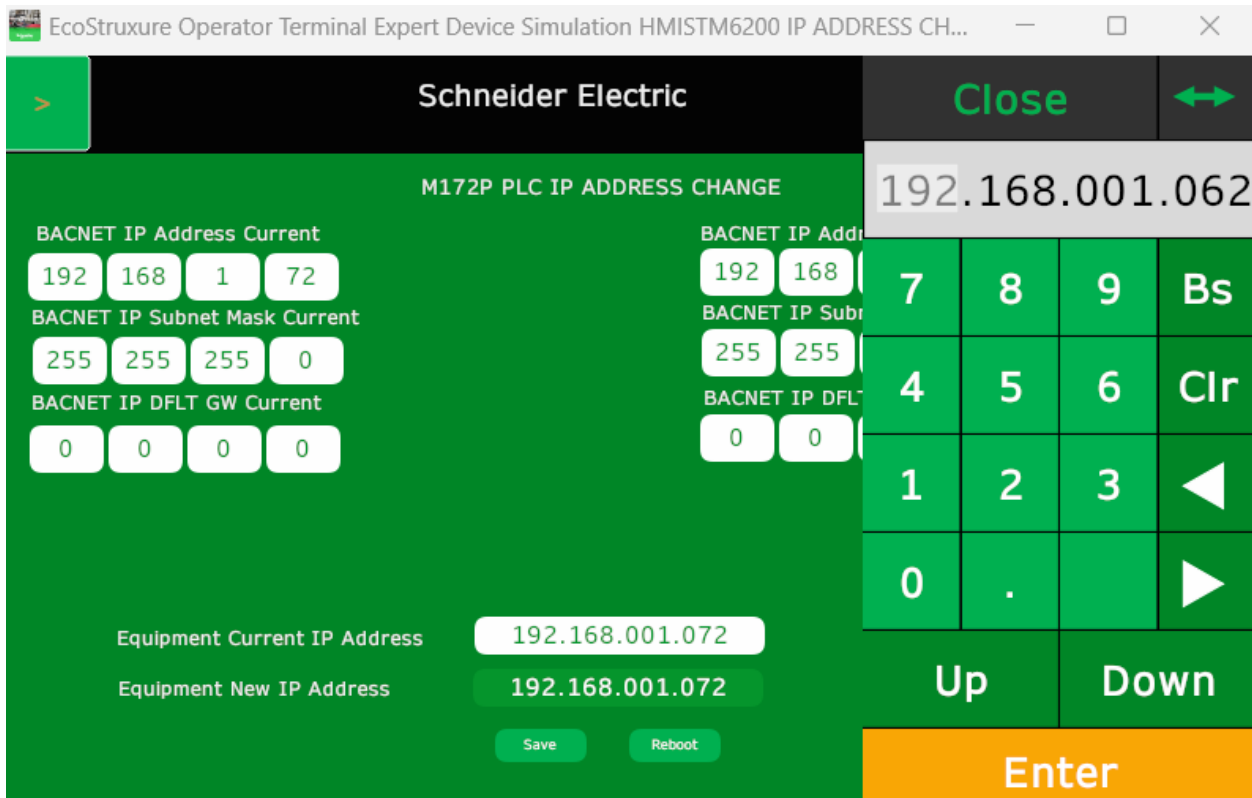


At runtime, screen will look like below:





To change the device driver IP Address, first enter the new IP Address in the Equipment New IP Address field and then press Save to execute the script to save the new address.



Pro Tip:

Include the Hardware Configuration as one of the screens for accessing the target related configurations during runtime!

