ANC-100e and ANC-120e Ethernet and USB to DH+ Converter

Automation Networks

Citect 2015 with ANC-100e or ANC-120e using HMI feature and the ABTCP/TCPIP driver on a Data Highway Plus network

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This document provides information to set up Citect 2015 running in a computer connected via Ethernet Network with an ANC-100e or ANC-120e to communicate with a SLC5/04 processor on a Data Highway Plus Network using the HMI feature.

Note: Before proceeding, make sure

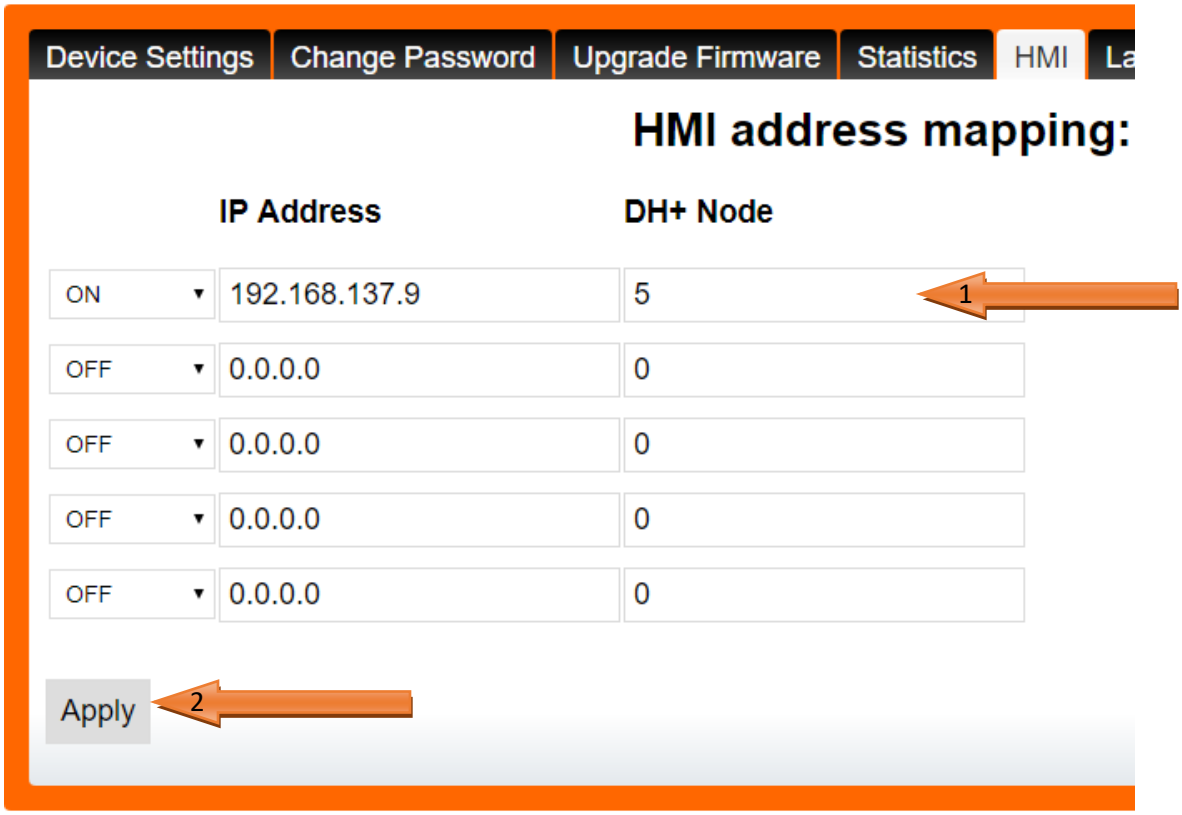
- ✓ ANC-120e Driver is installed *(Only if using ANC-120e)*
- ✓ Network Adapter is correctly configured to access ANC-120e or ANC-100e
- ✓ ANC-120e is connected to the computer and DH+ network or ANC-100e is connected to the same Ethernet network or directly to your computer, and to the DH+ network.

For this example:

ANC-120e IP address = **192.168.137.2**
SLC5/04 DH+ node = **05**
SLC5/04 IP address = **192.168.137.9**

1. Turn ON the first row in the ANC-100e's "*HMI*" tab in the web interface
2. Enter an IP address that is not being used (keep in mind that it has to be in the same network the ANC-100e is) and enter the DH+ node of the device that you are connecting to
3. You can repeat steps 1 and 2 for each row to communicate with up to 5 DH+ devices if necessary, using a different IP address in each row

   Click "*Apply"* and wait for the unit to reboot (5 seconds)



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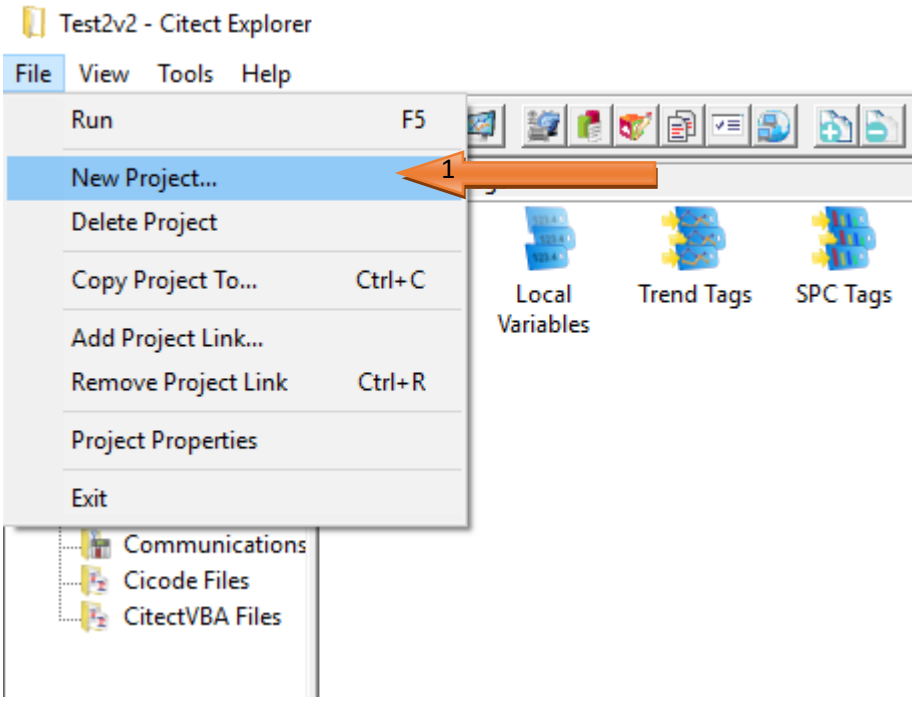
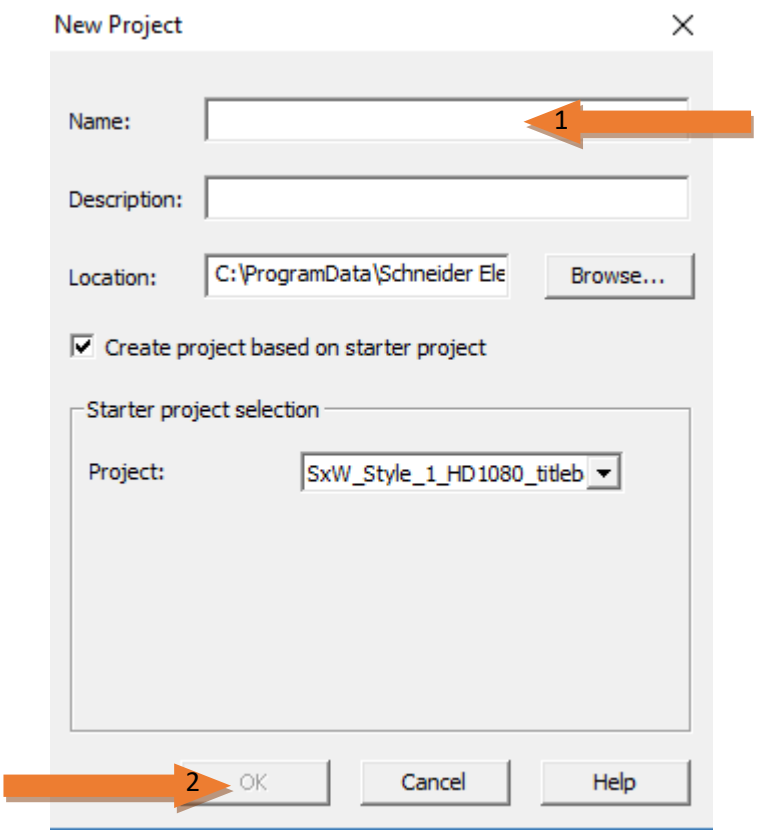
4. Open "*Citect Explorer*" application.

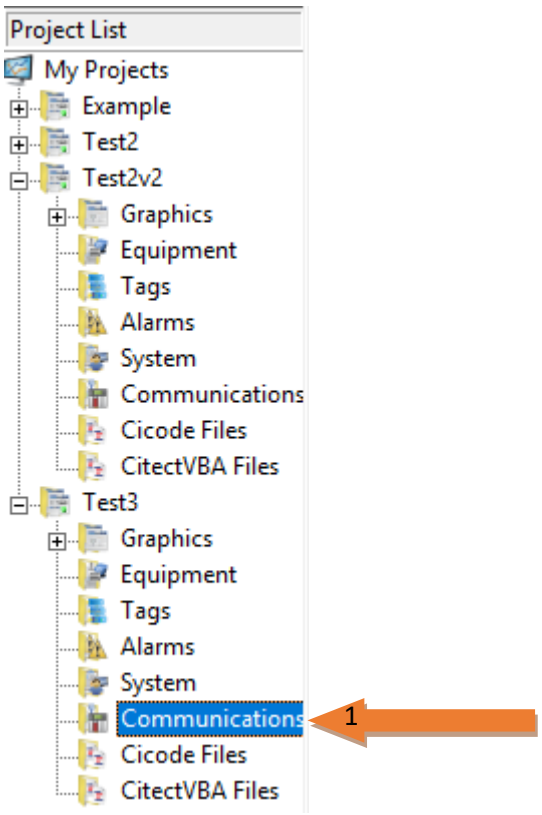
5. Left click *in "File..."* menu and select "*New Project…"*



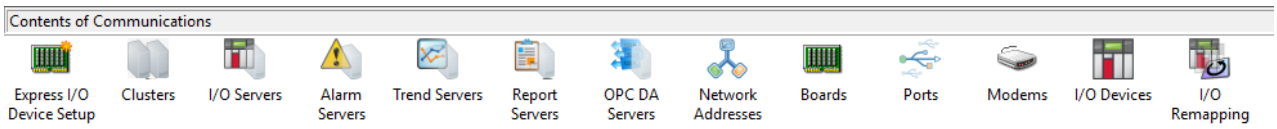
6. Enter a name for the project (*"Test3"* for our example) and click *"OK"*



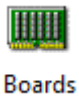
7. Select from the "*Project list*" tree project *Test3*, and then select "*Communications".*



8. You will see in the right side window the "*Contents of Communications*" with several items, we will need to modify: Boards, I/O Devices, Ports and Variable Tags.

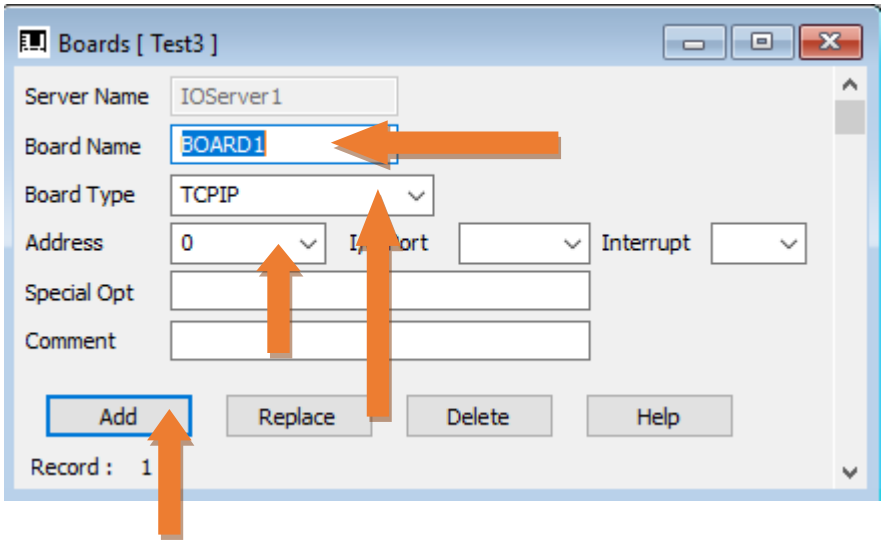


9. Select "Boards" and double click that item (left mouse button). This will open "*Citect Project Editor*" window, if it doesn´t open please look for it in the Windows Task Bar of the Windows OS (Operating System).



10. You will see two little windows inside "*Citect Project Editor*". One is "*I/O Server*" and the other is "*Boards*". You don´t need to change any value in the "*I/O Server*" window, leave that information like it is. In the "*Boards*" window you will have to change the next values and at the end selecting "*Add…"*:

- Board Name: BOARD1
- Board Type: TCPIP
- Address: 0



11. In the "*Citect Project Editor*" window you can change the other items you need to (I/O Devices, Ports and Variable Tags) using the "*Communications…*" menu for I/O Devices and Ports, and the "*Tags…"* menu for the Variable Tags.

12. We will now proceed with "*Ports*". For that we will click in the "*Communications…*" menu and select "*Ports…*"

13. In the "*Ports*" window you will have to change the next values: Port Name, Board Name, Port Number and Special Opts.

    Port Name: Port1_Board1

    Board Name: Board1

    Port Number: 1

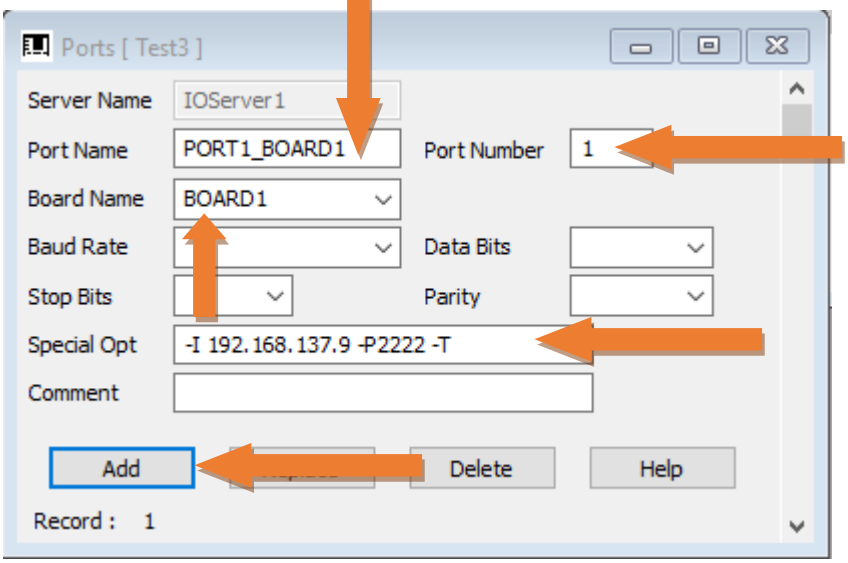
    Special Opt: -I 192.168.137.9 -P2222 -T

    Special Options (in the Ports form) are space separated and start with the dash character (-) immediately followed by the option characters. Use the following special options for TCP/IP:

    - **Ia.b.c.d**: defines remote IP address to connect to.

-Pn: defines remote PORT to connect to.

-T: sets this port for TCP (stream) operation.



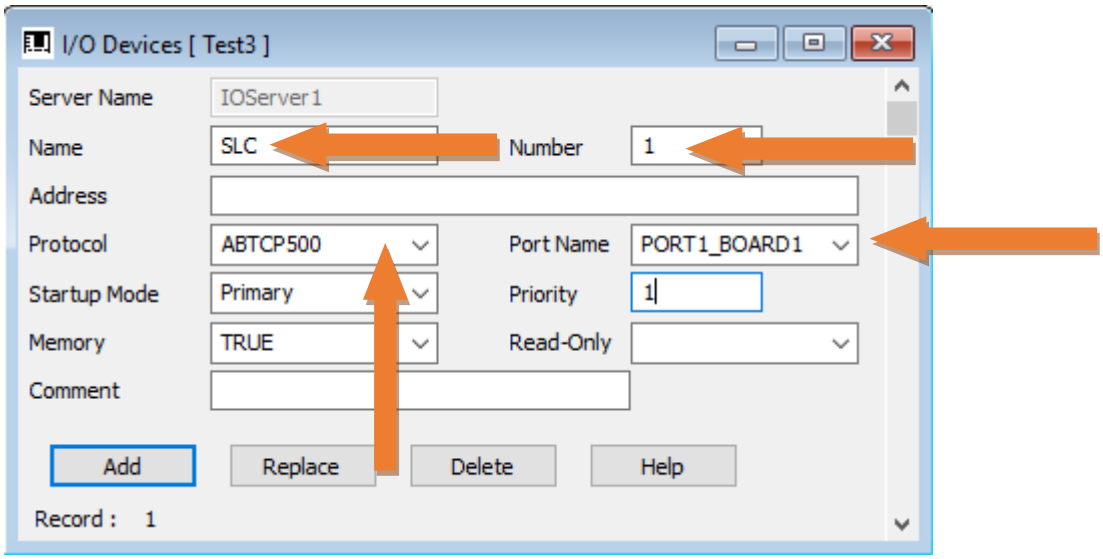
14. We will now proceed with "*I/O Devices*". For that we will click in the "*Communications…*" menu and select "*I/O Devices*"

15. In the "*I/O Devices*" window you will have to change the next values:
    Name: SLC
    Protocol: ABTCP500
    Port Name: Port1_Board1
    Number: 1

    For the Name, choose something that makes reference to the device to which you are going to connect to, our case SLC.

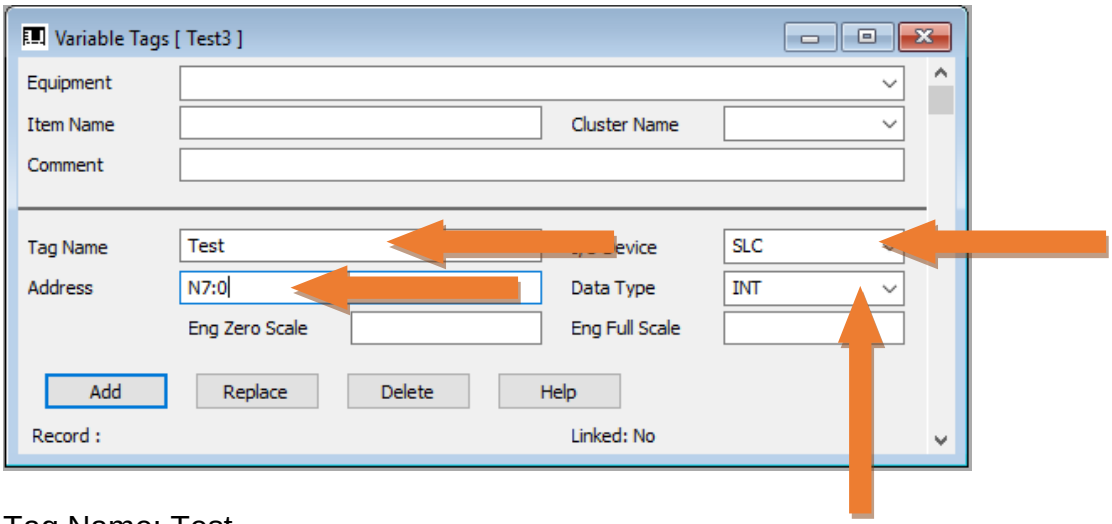
    For the Protocol you will have to select the one that works with the SLC in this case ABTCP500.
    For the Port Name, choose the one which make reference to the protocol and board.

    For the Number, select the corresponding number of the I/O device



16. We will now proceed with "*Variable Tags*". For that we will click in the "*Tags…*" menu and select "*Variable Tags*"

17. In the "Variable Tags" window you will have to change the next values: Tag Name, I/O Device, Address and Data Type.



Tag Name: Test
I/O Device: SLC
Address: N7:0
Data Type: Int

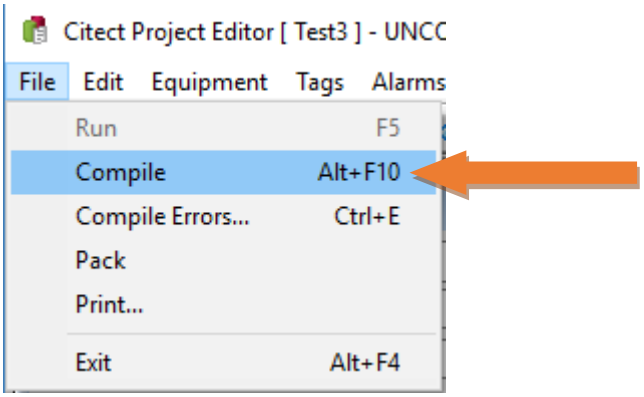
Tag Name: You will write here a name that makes reference and help you remind the TAG you are going to work with.

I/O Device: Select the device you are working with.

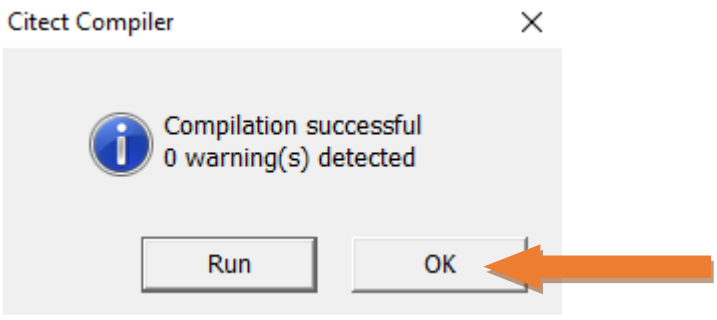
Address: The address of the SLC or PLC you are going to work with.

Data Type: Type of Data the TAG is working with.

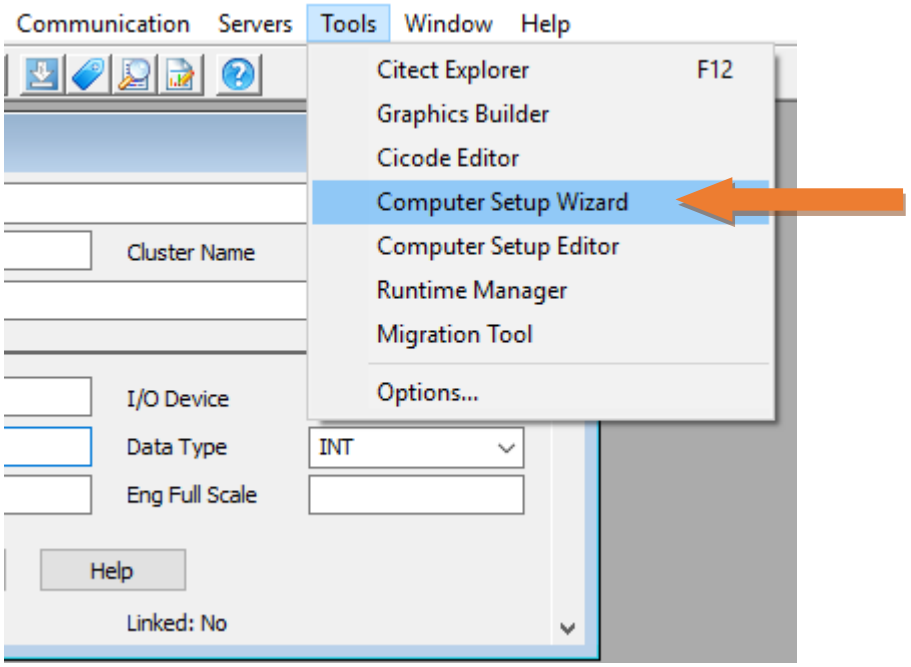
18. Now you will have to compile the project. Left click the "*File…"* menu and select "*Compile"*.



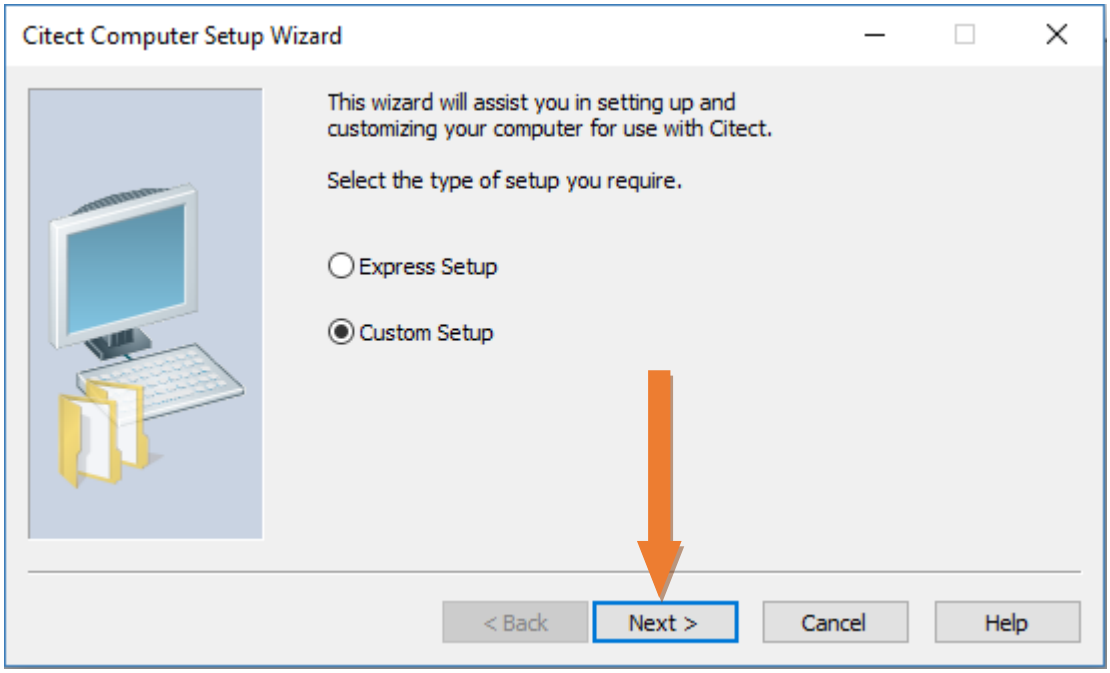
19. If everything is ok you will see the next screen dialog. Select "*OK*".



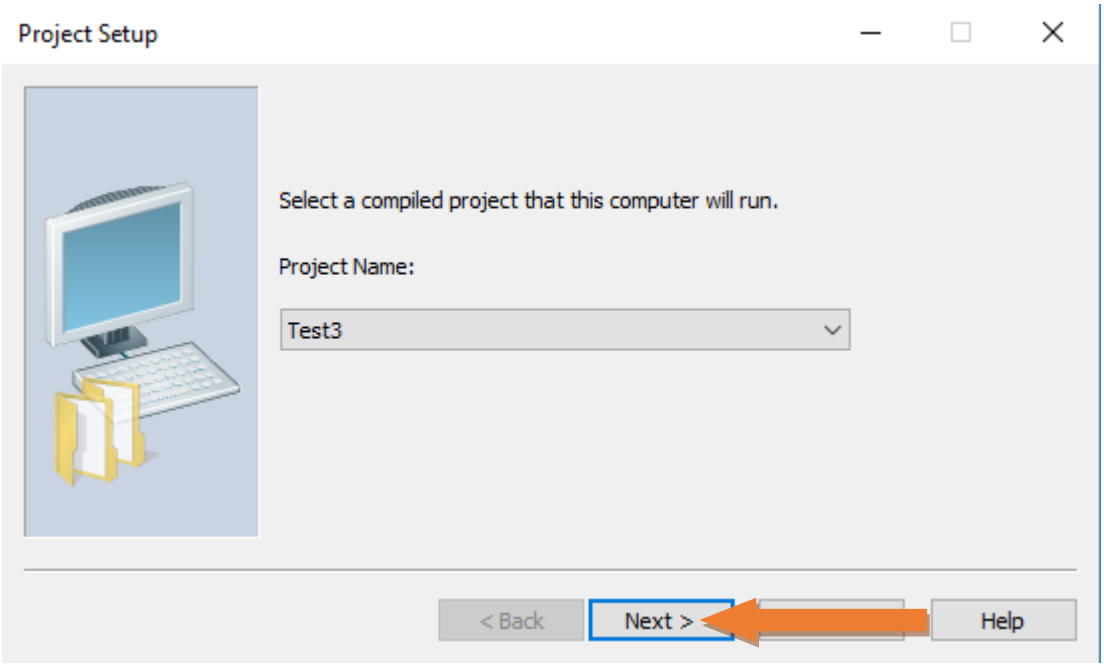
20. Now you will have to run the Citect Computer Stup Wizard so you don't have any issue about finding the server. In the same Citect Project Editor window go to "*Tools…*" menu and select "*Computer Setup Wizard*".



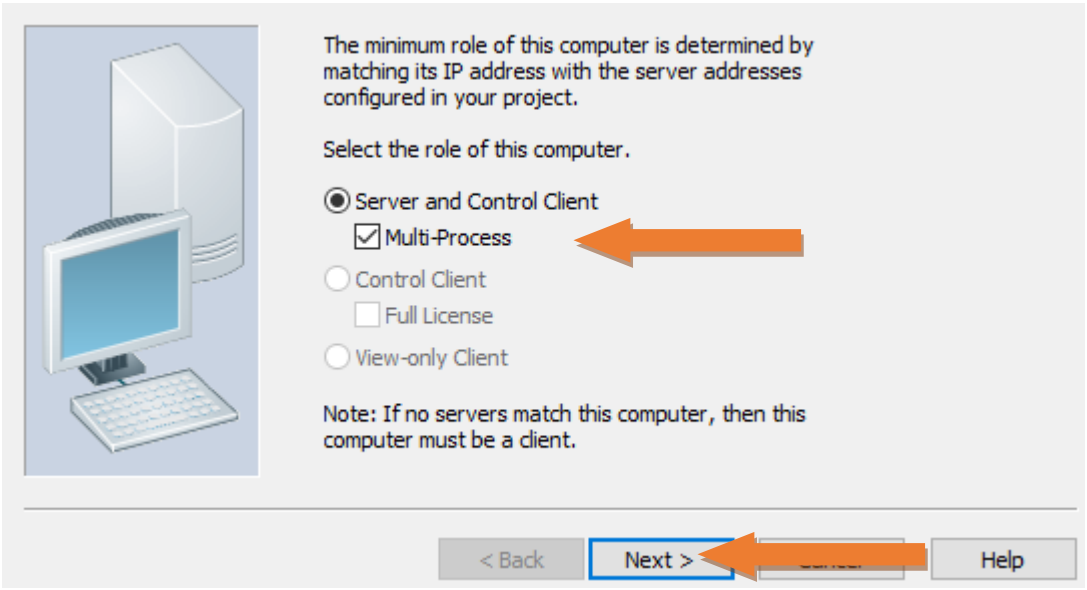
21. Select "*Custom Setup*".



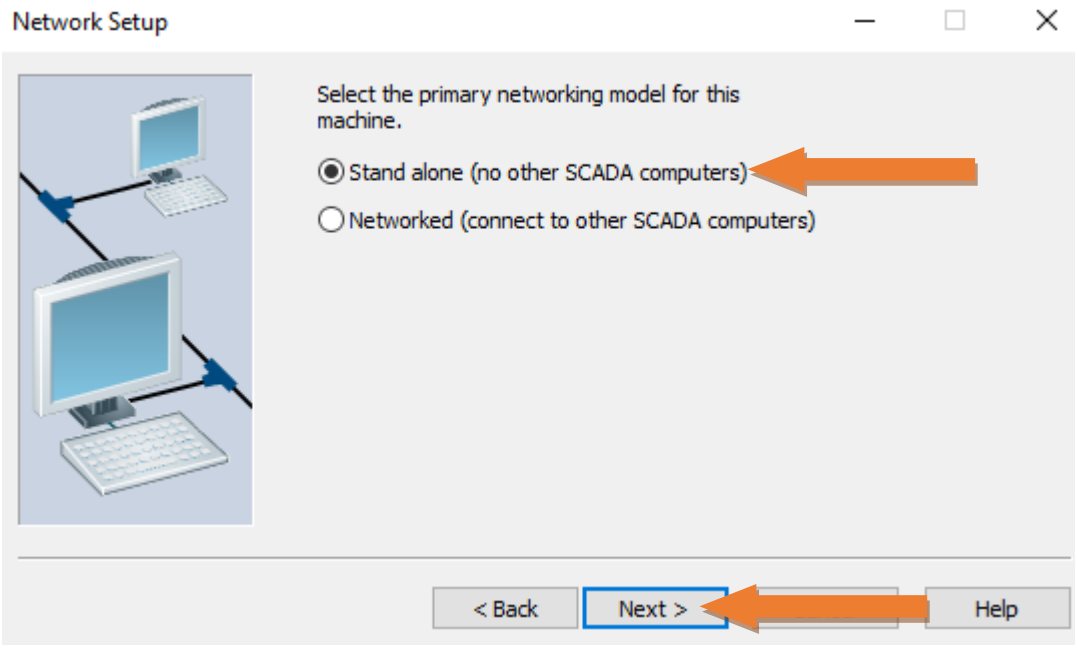
22. This screen will ask you for the project name. In our case: Test3



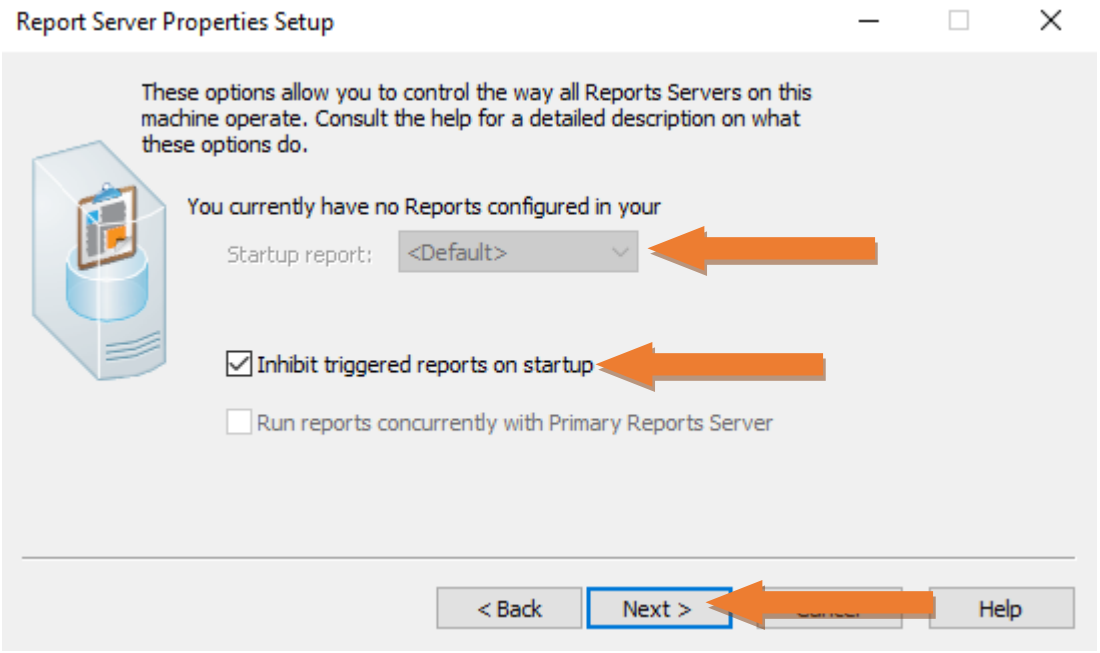
23. Select "*Server and Control Client*"



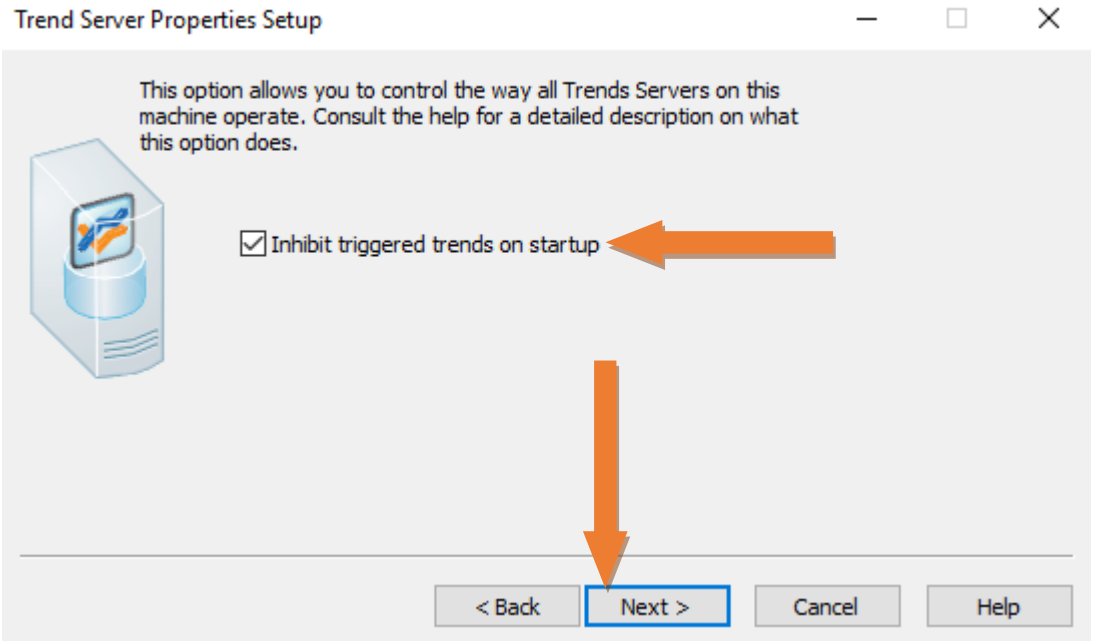
24. Select the next option according to: having or not other SCADA computers.



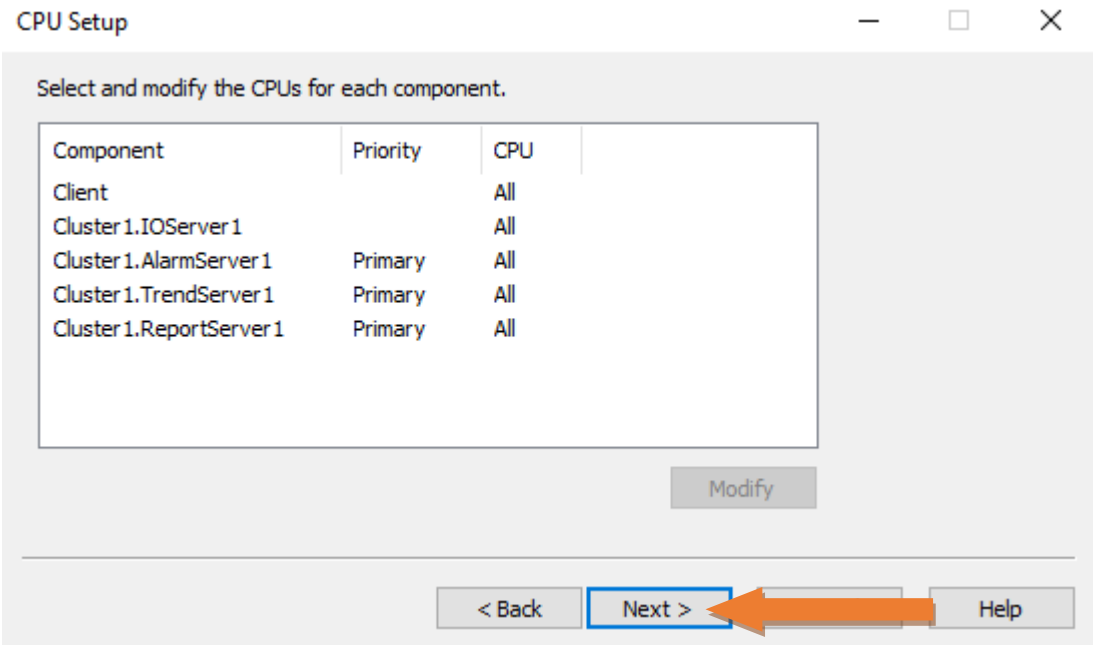
25. Here you can select the way Reports Servers on this machine operate. We selected:



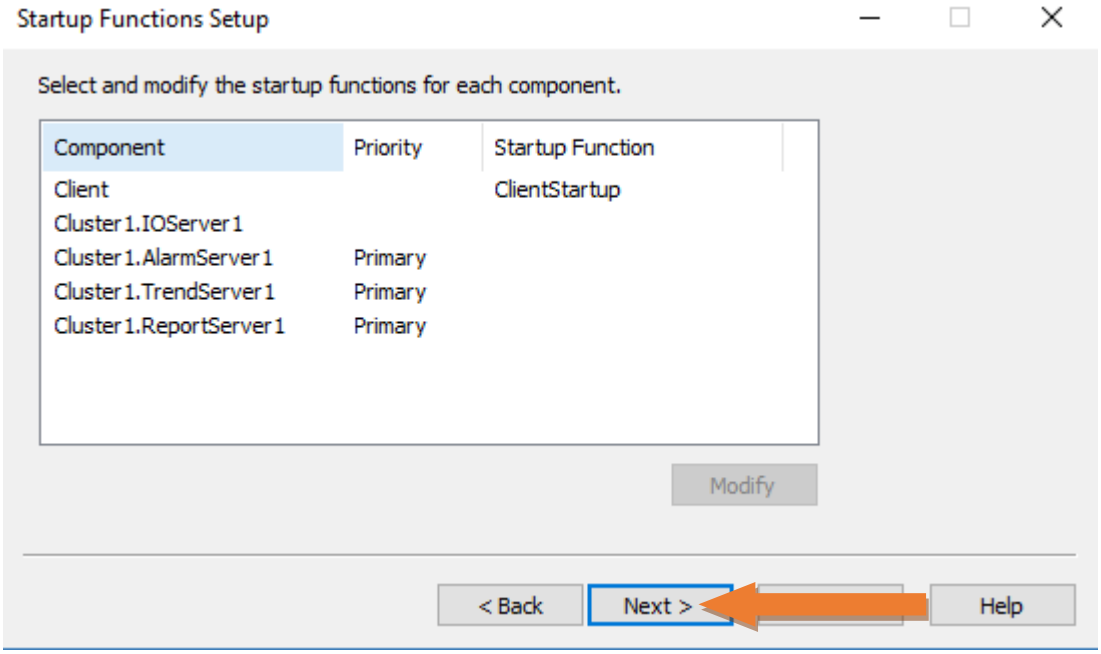
26. In this next screen you control the way all Trends Server in this machine operate. We selected:



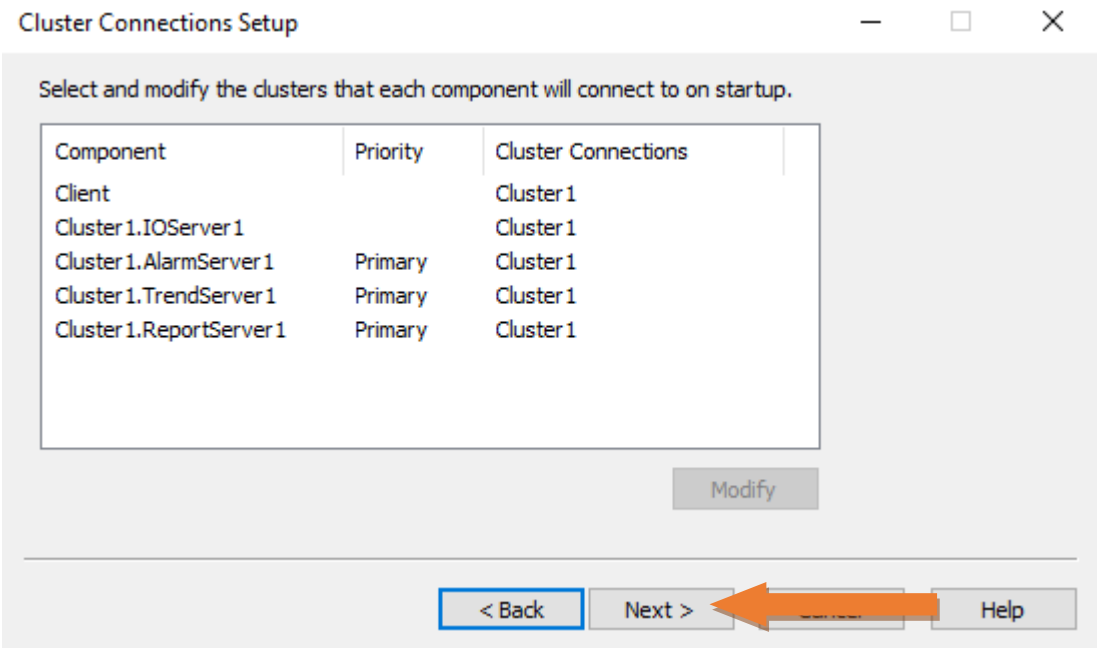
27. In this screen we didn't change any value. Click only in Next:



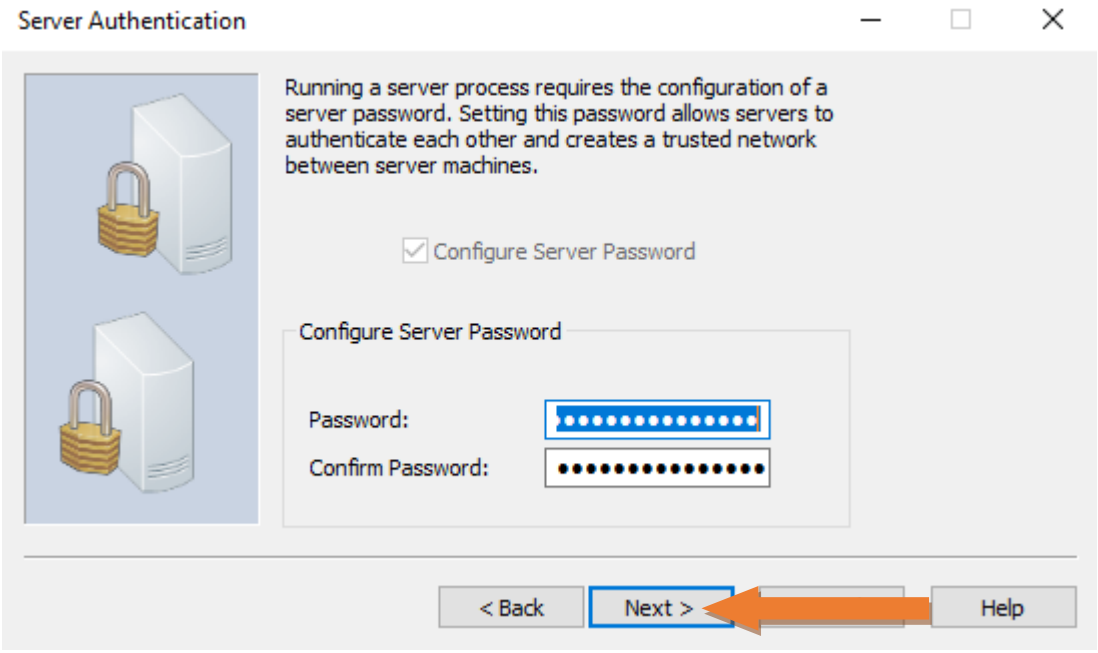
28. In this screen you select and modify the startup functions for each component:



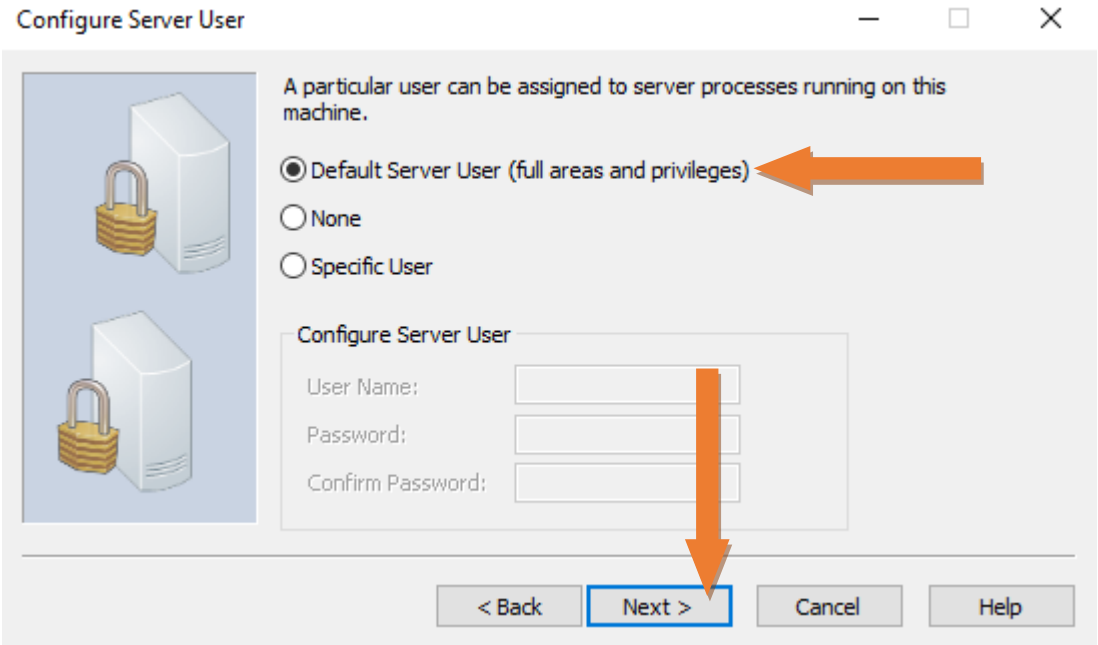
29. In this screen you select and modify the clusters that each component will connect to on start up. We didn't change anything.



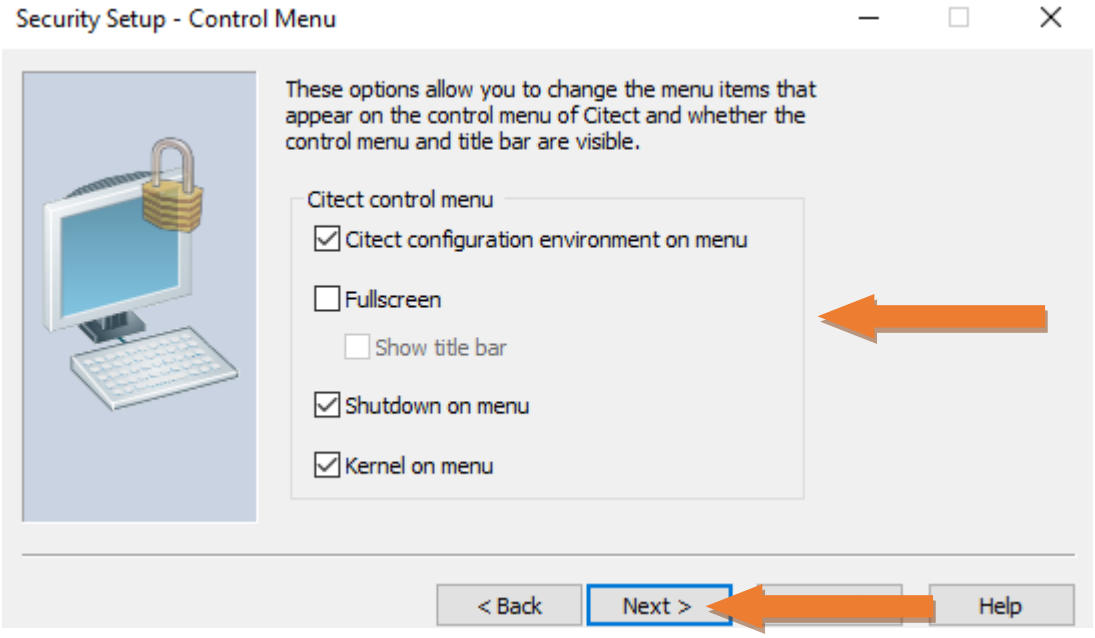
30. In this screen you configure the server password.



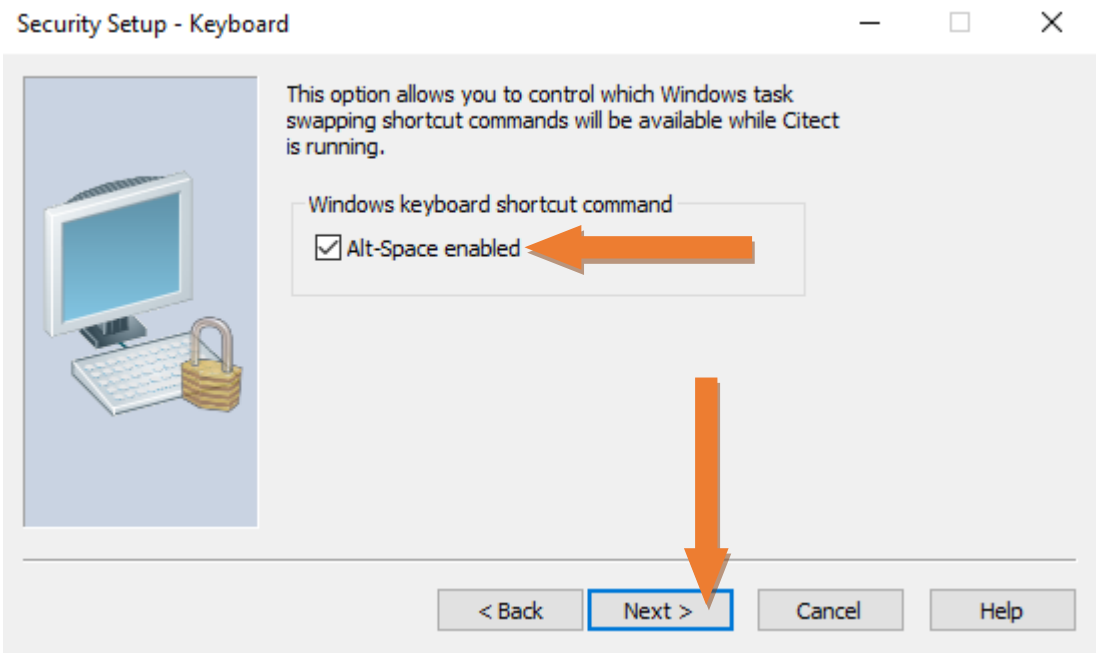
31. Here you configure a Server User. We use a Default Server User.



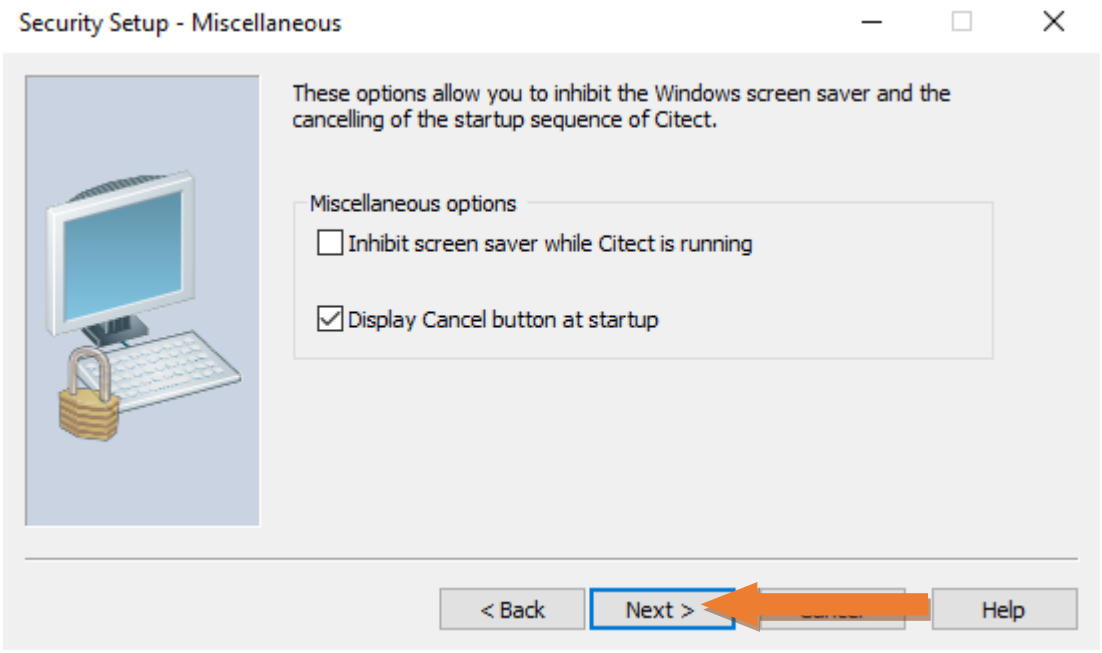
32. Here you select the Citect control menu. We left the default options selected.



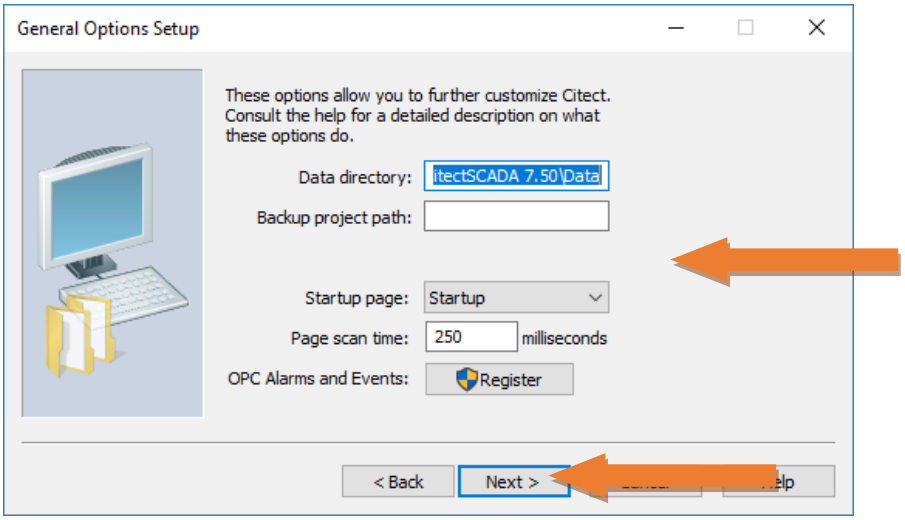
33. Here you select the Windows Keyboard shortcut command.



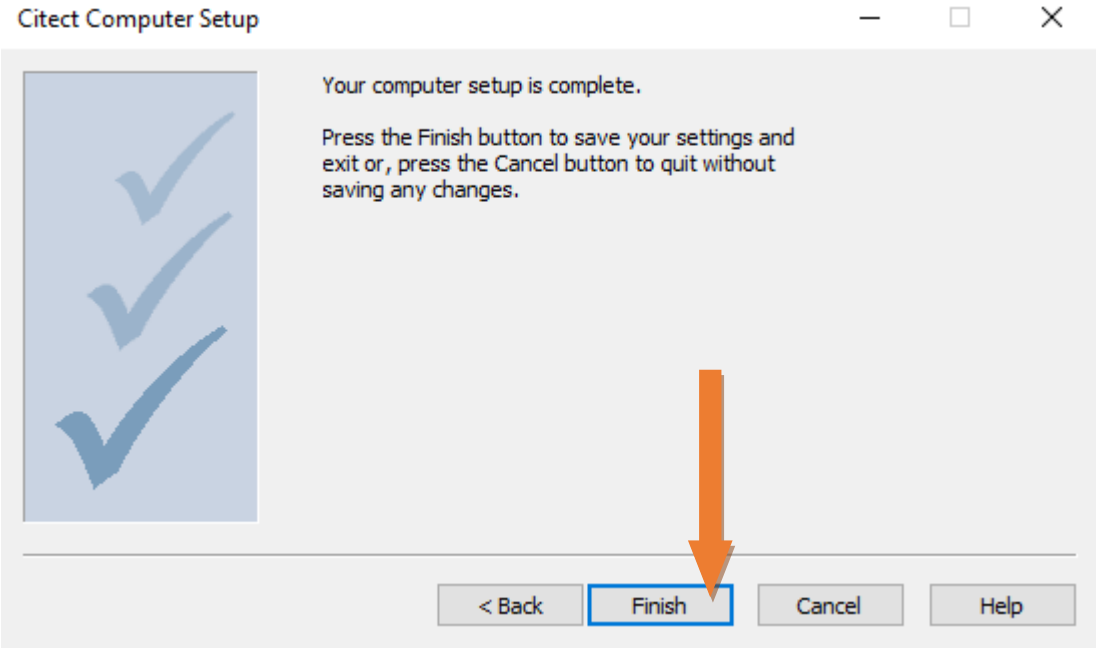
34. Here you can select if you don't want the screensaver to be launch and the cancelling of the startup sequence of Citect.



35. Here we will configure the Data directory, the Backup project path, the Startup page and OPC Alarms and Events:

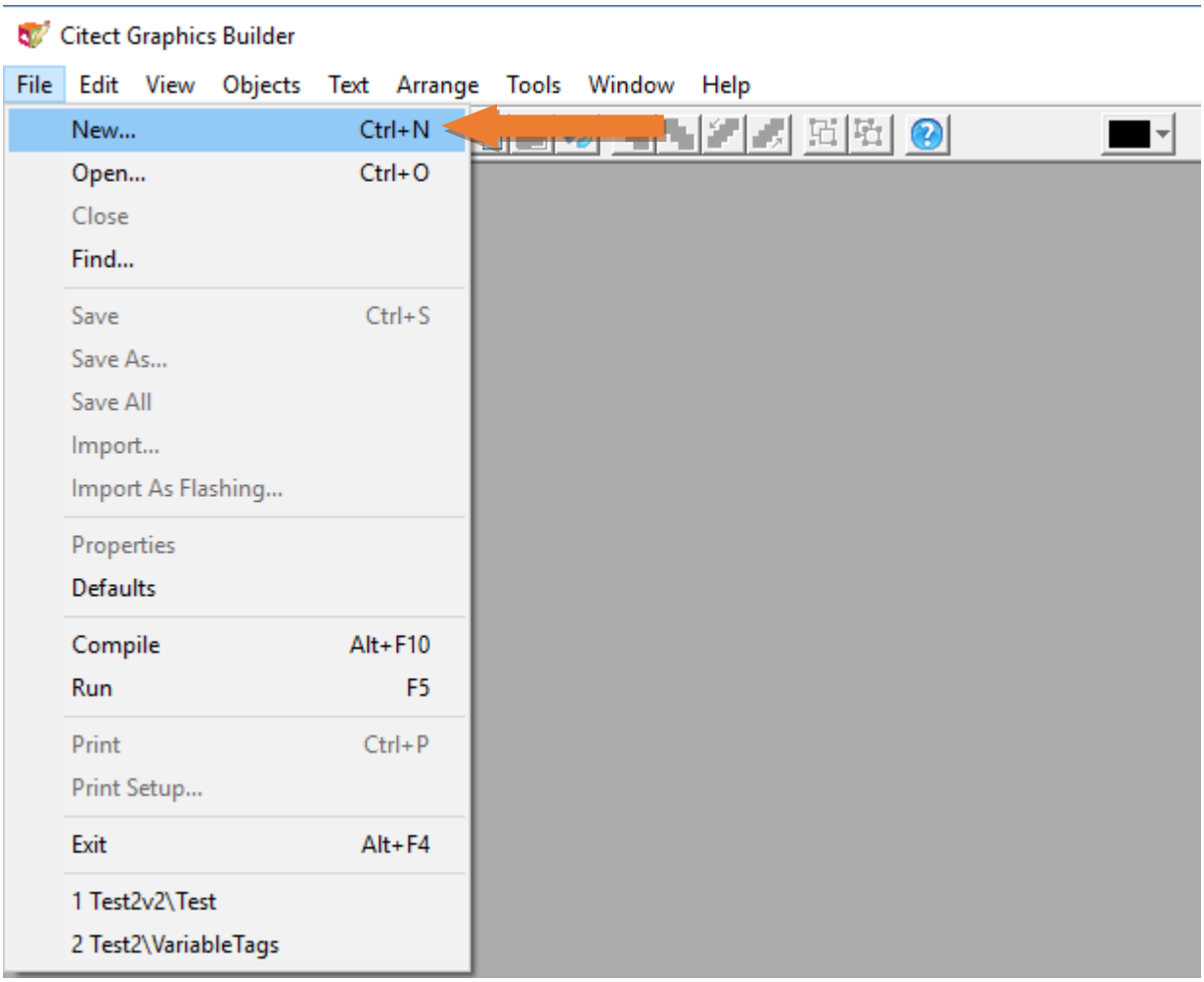


36. Finally you will have reached the last window

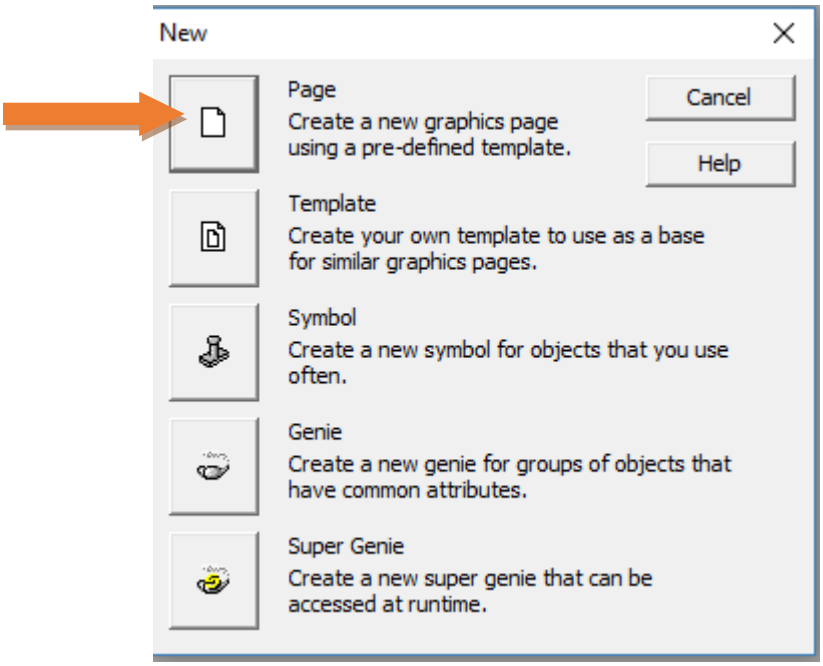


37. Now for testing the communications, Tag and their quality. We will have to create a normal Page in Citect Graphics Builder.

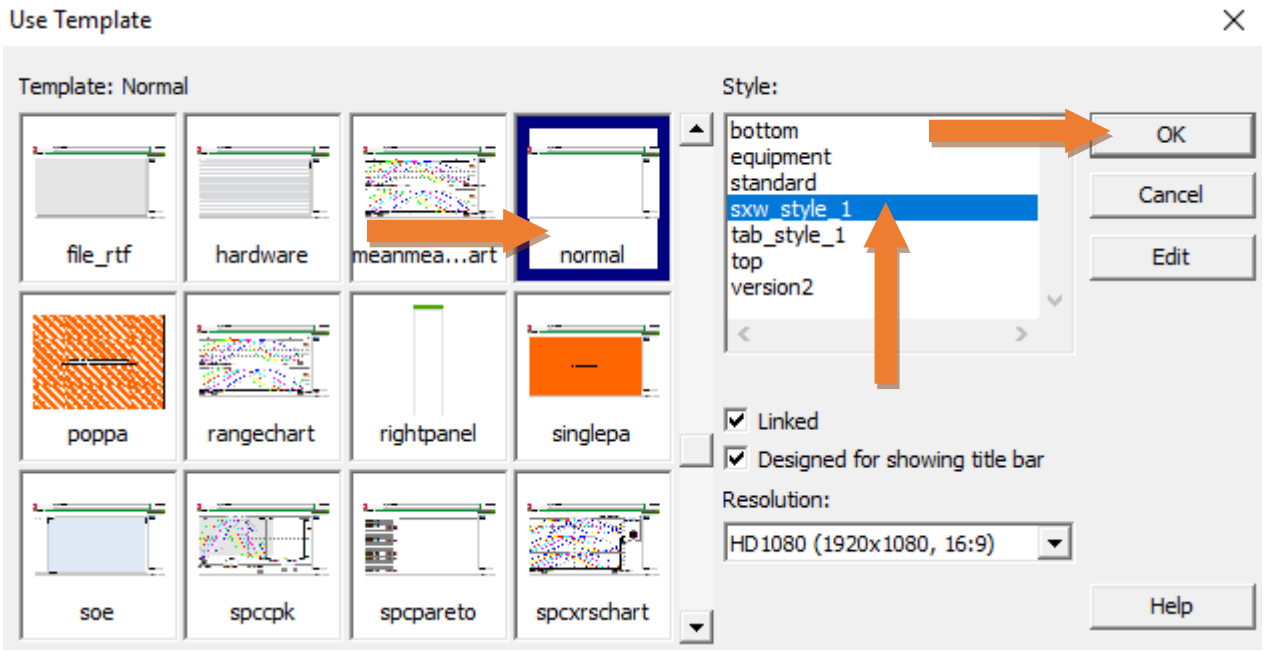
38. Select the "*File…"* menu in Citect Graphics Builder and click on "*New"*.



39. Select “Page…”



40. Select NORMAL template and SXW_STYLE_1 Style. Click OK



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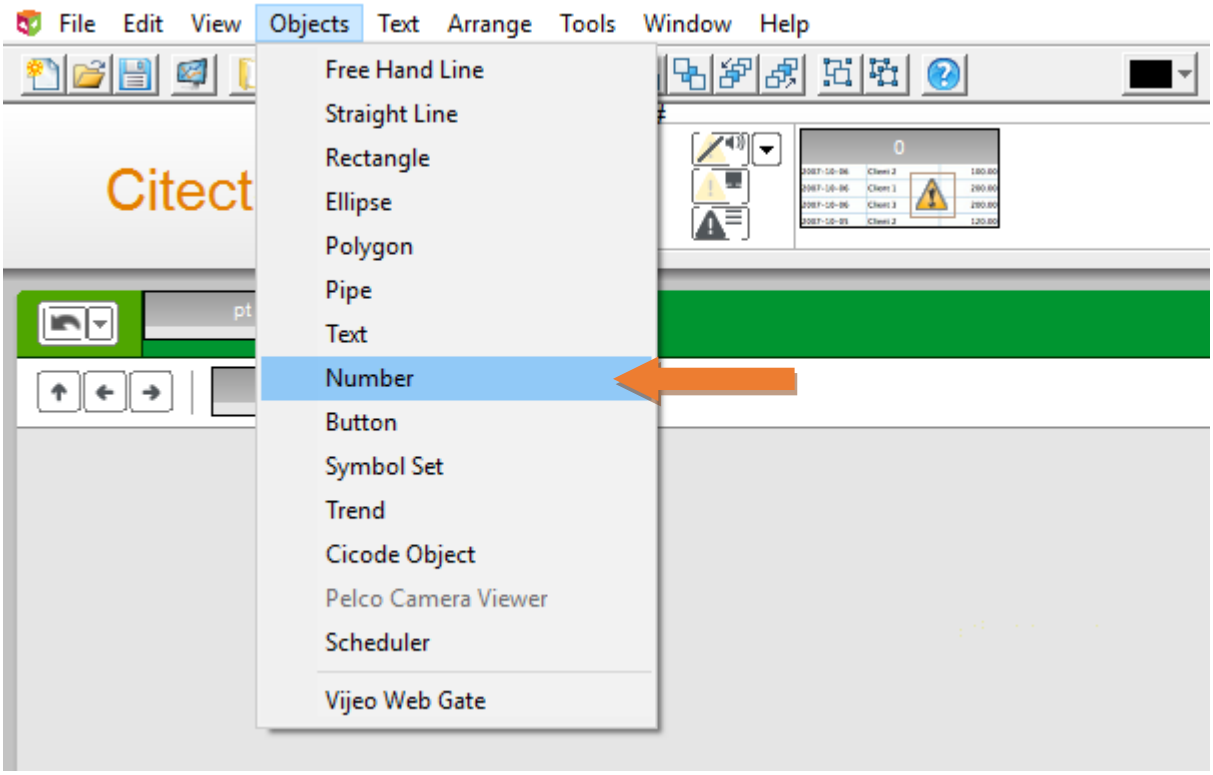
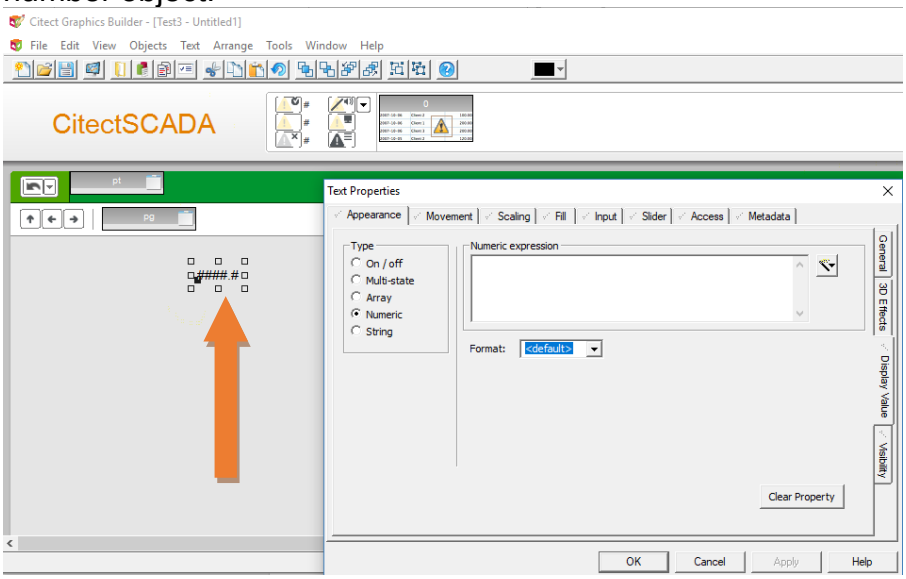
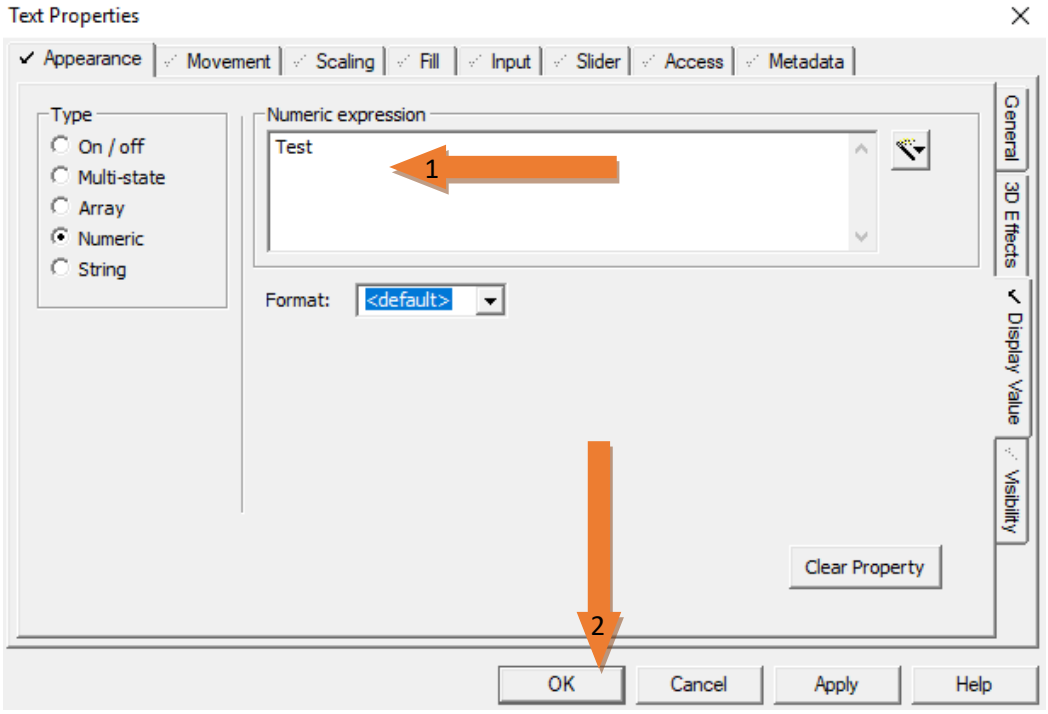
41. Left click in the "*Objects…"* menu and right click the "*Number*" option.



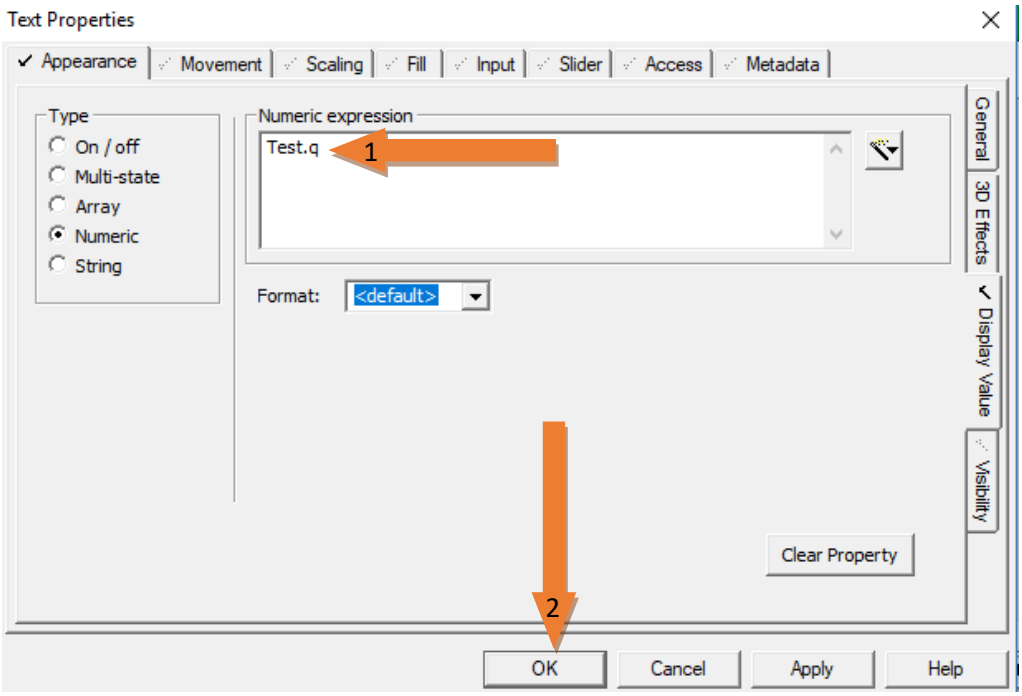
42. You will have to select in the gray area the position where you are going to put the number object.



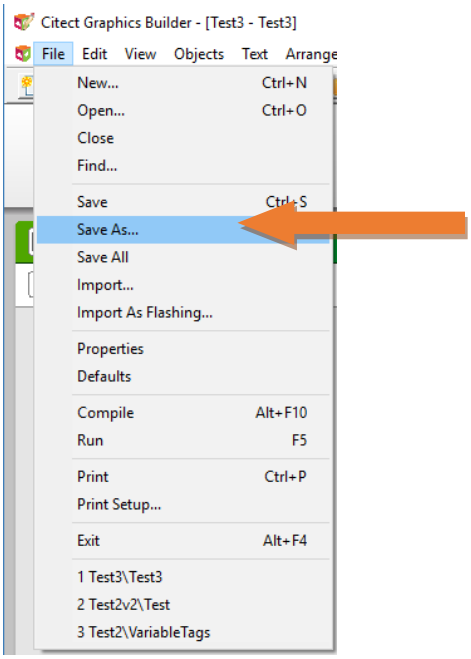
43. You will now see the Number Text Properties. Inside the white box where it says "*Numeric Expression"* you are going to write the name of the tag, in our case: "*Test*".



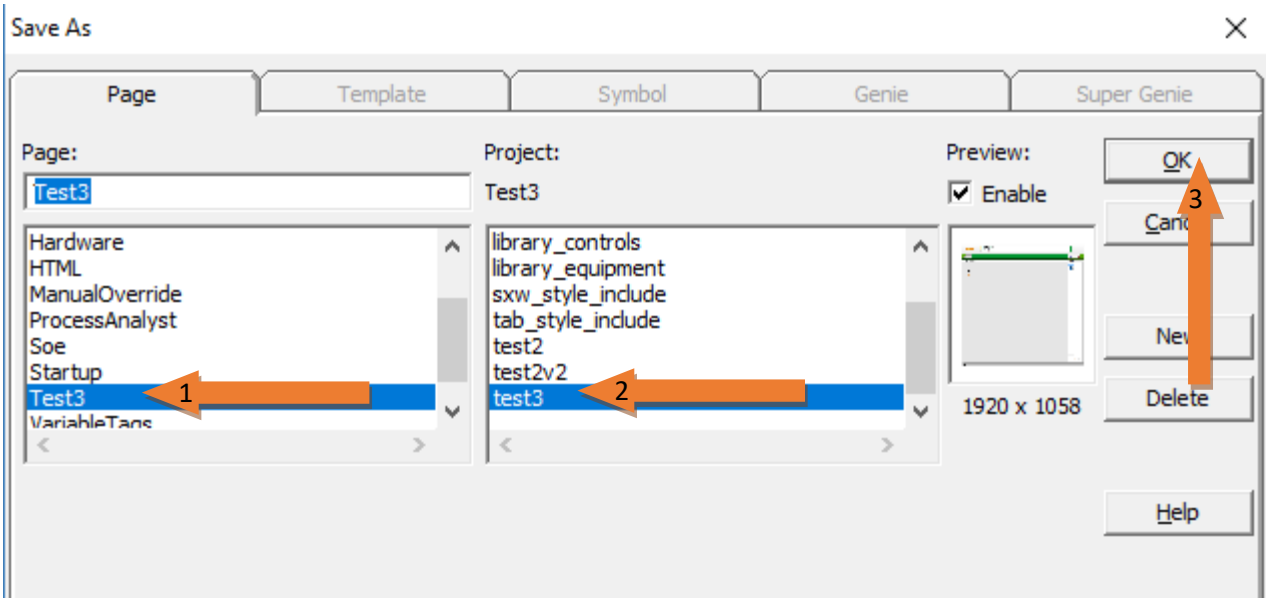
44. You will repeat the steps 41, 42, 43 above, but in the 43 step, inside the white box of "Numeric Expresion" you will write "*Test.q*" this will show the quality connection of the driver. Giving you information if the quality is bad.



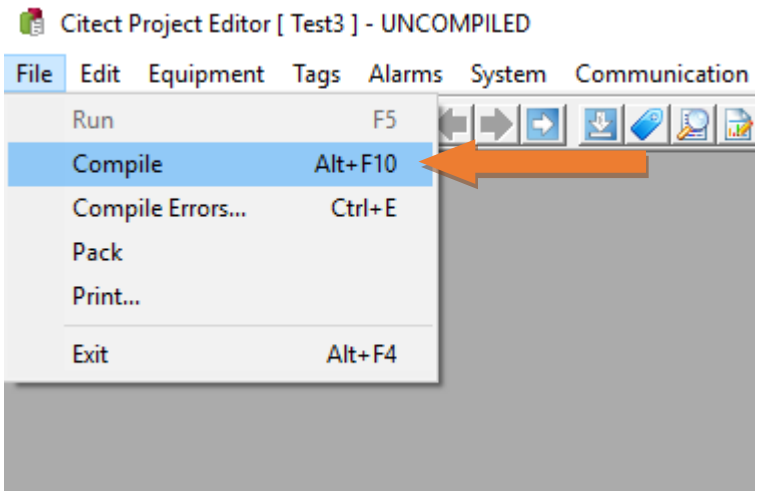
45. Now you will proceed with the saving of the "*Page*".



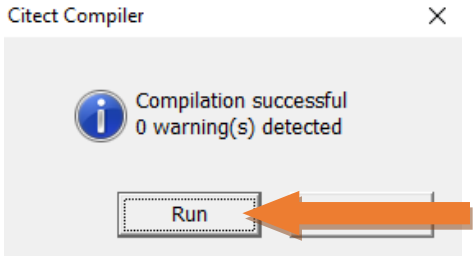
46. Save the "*Page*" with a name that makes reference to the page you are going to work when you are running your project. In our case: Test3, and select the Project where it belongs.



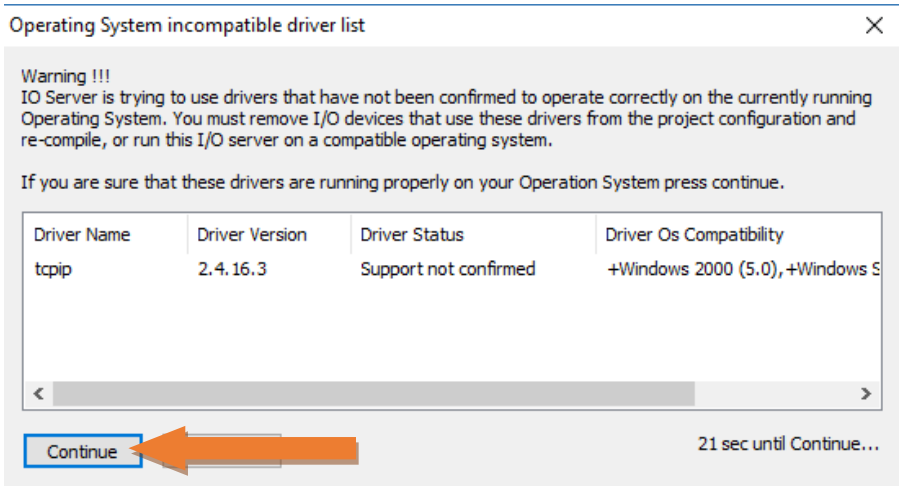
47. Now you will proceed with the compilation of the project. In the Citect Project Editor window select the "*File…"* menu and left click on "*Compile"*



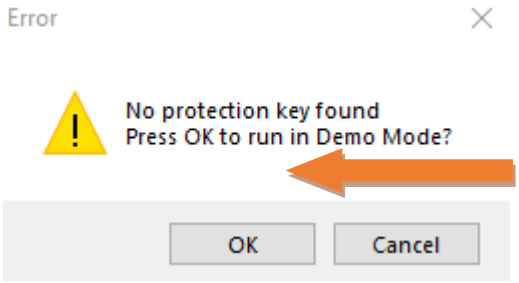
48. If there are no errors a dialog box will appear. Select "*Run*".



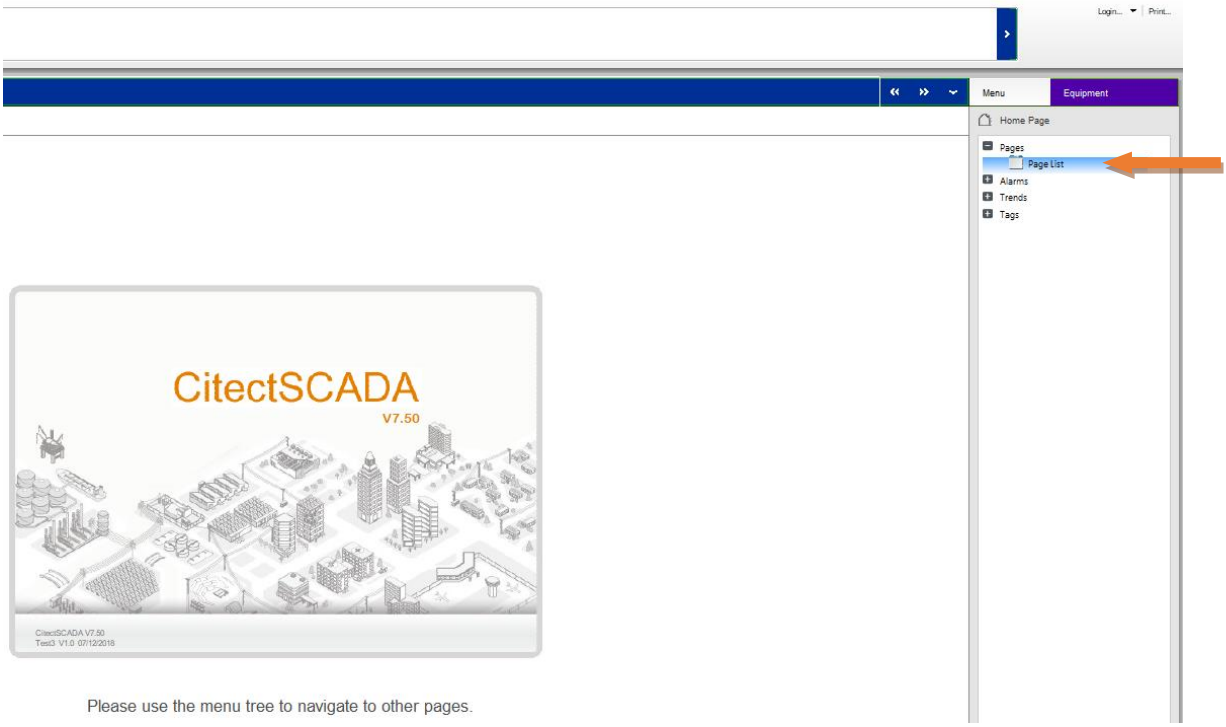
49. If the driver is out of date a warning box could appear. If you are sure your operating system will be able to run the driver select "*Continue"*



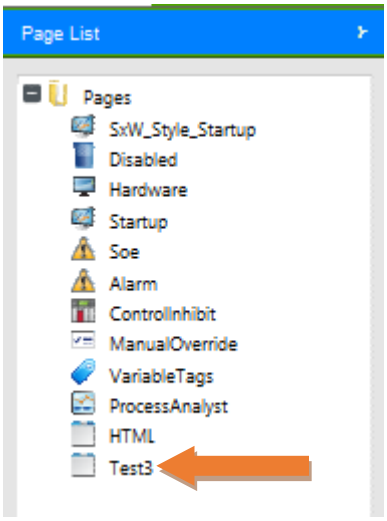
50. If you haven't bought the license of CItect, there could be an error sign after the driver warning telling you there is no protection key found and to press "*OK*" to run DEMO Mode. Press "*OK*".



51. In the Demo window you will go to the right part of the screen and select in the Home Page menu: "*Pages"* and below the Pages item select "*Page List*" and double left click it.



52. This will show a new list. Select the one that says "*Test3*"



53. The page “*Test3*” will show up. The value that we see here is the value of the tag N7:0, and below that the word Good, meaning the quality of the connection for that driver is good, also it can show additional information. For bad quality you normally won't see any tag value by default.