ABC IT
FOR AUTOMATION

User manual

ABC-Industrial Panel

HMI Setup in TIA

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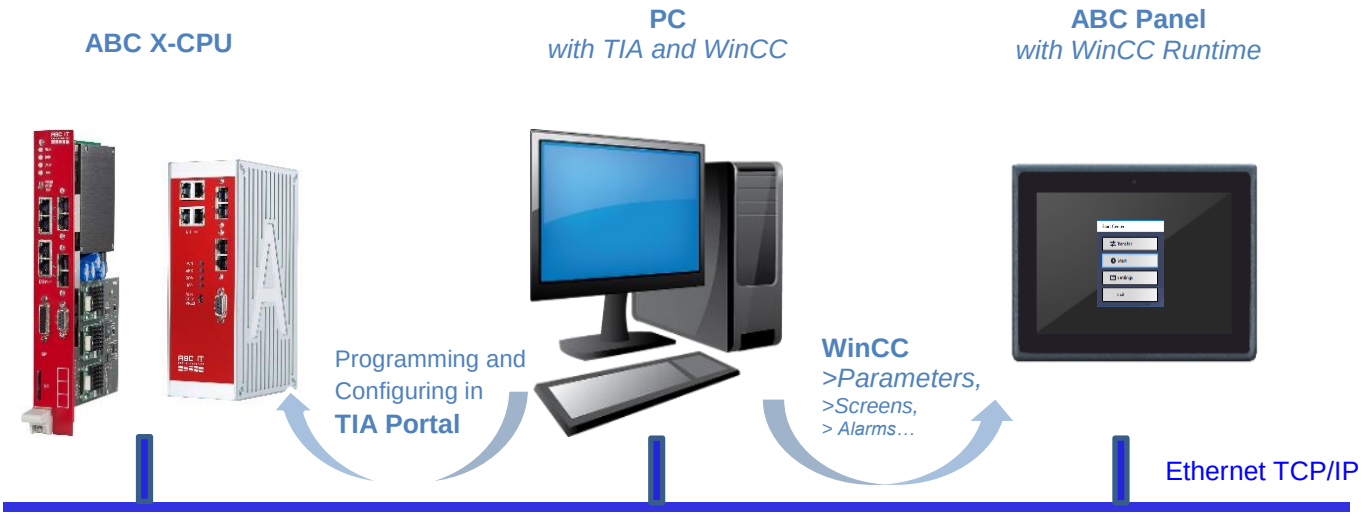
1. Introduction

1.1 General

The ABC industrial panel can also serve as a Simatic HMI panel for the system controlling and monitoring. By means of the integrated LAN port, it is possible to establish the communication with the TIA PC and the PLC. The configuration will take place in TIA PC, and then transferred into the panel through the Ethernet.

This document will show you, how to setup an ABC panel as an HMI panel.



1.2 Software

In order to show the compatibility, we choose software TIA V15 in this example.

PC: installed with TIA V15 and WinnCC Advanced V15
ABC panel: installed with WinCC Runtime Advanced V15

Please connect them via a network cable.

2. Configuration

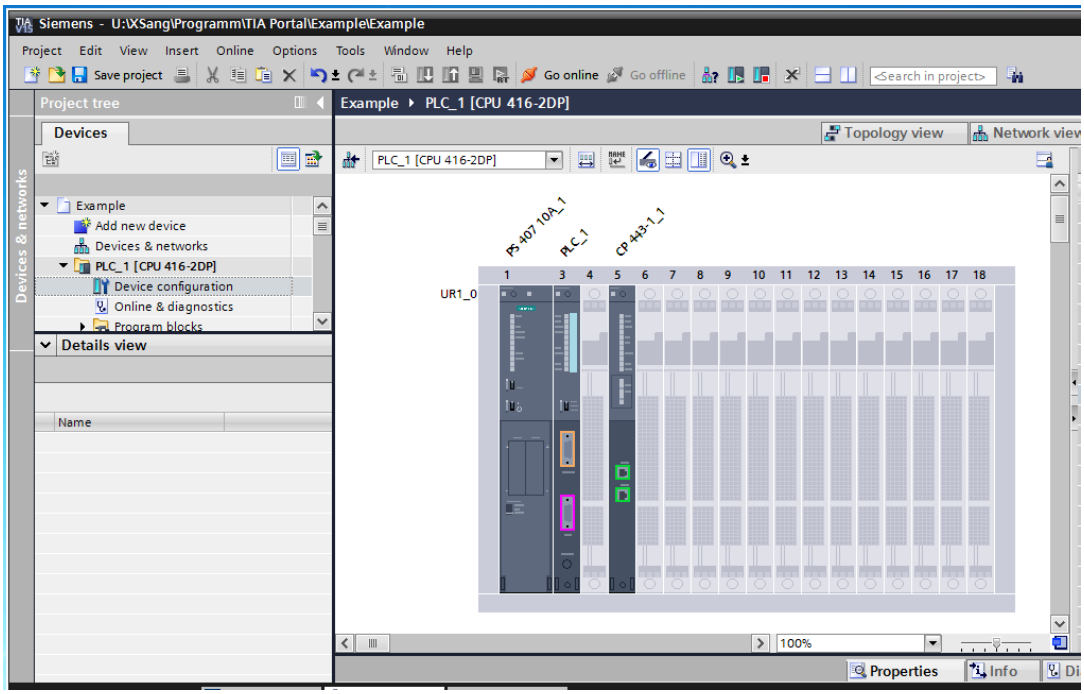
2.1 Configuration with TIA PC

2.1.1 Project in TIA

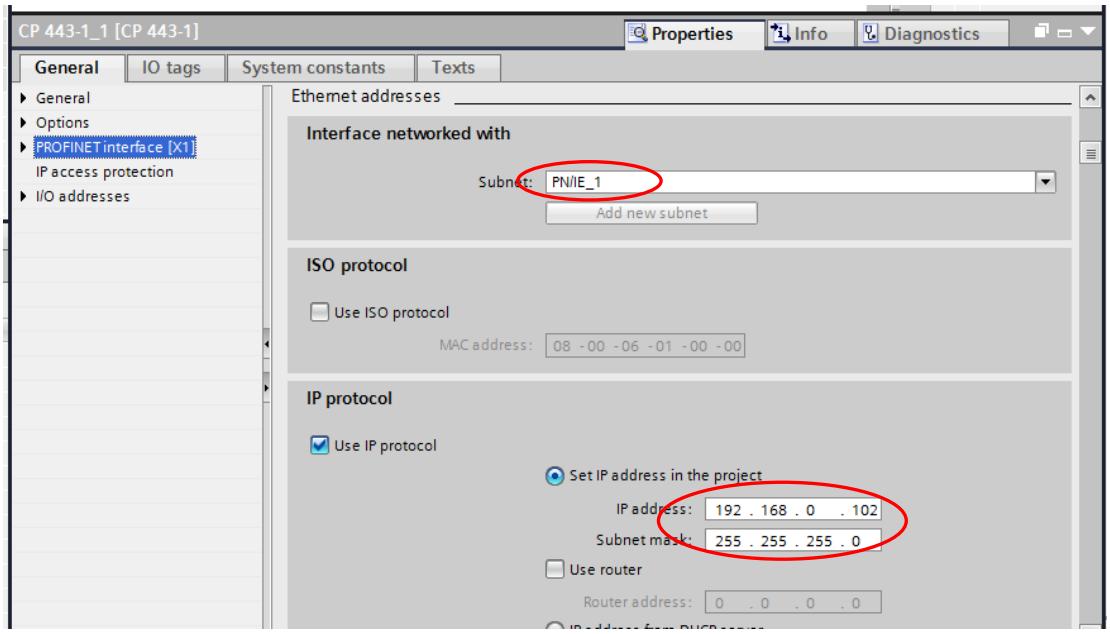
In TIA, firstly create a new project, “Example.ap15”. Of course you can open an existing project as well.

2.1.2 PLC configuration

Configure a PLC station as usual. In this case, we choose a CPU 416 and a CP 443-1.

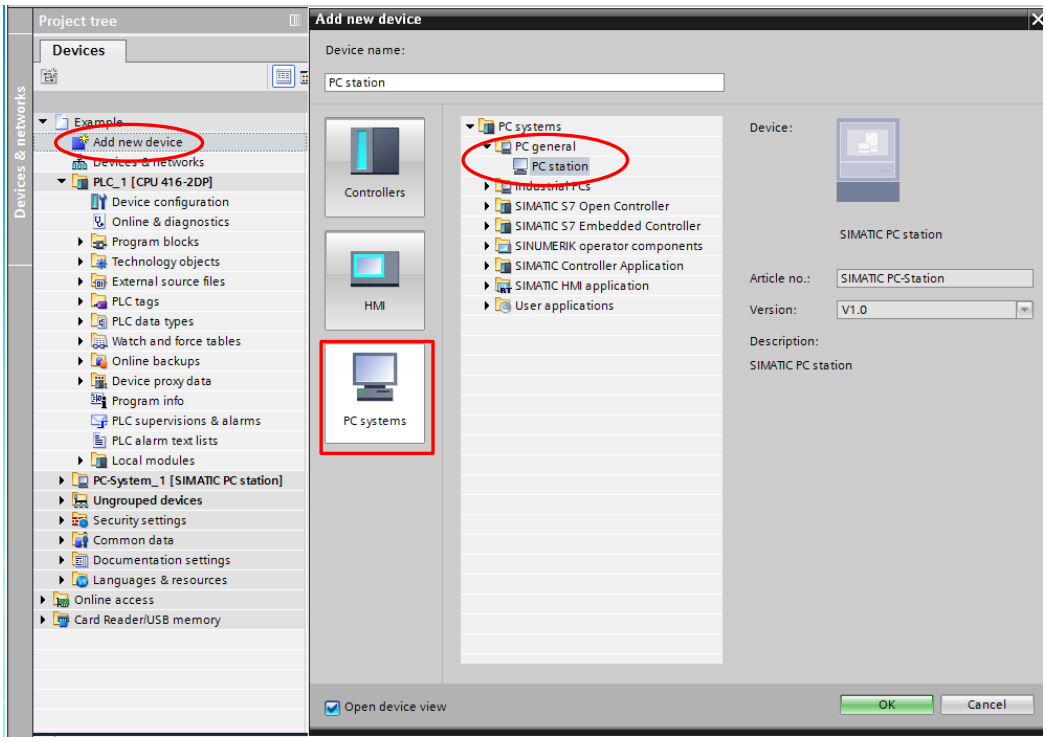


In “Properties ” of CP, connect it in the subnet “PN/IE_1”and set the IP-address. Here the IP- address is 192.168.0.102. Because the IP-address of the PC is in the same subnet, 192.168.0.xxx.

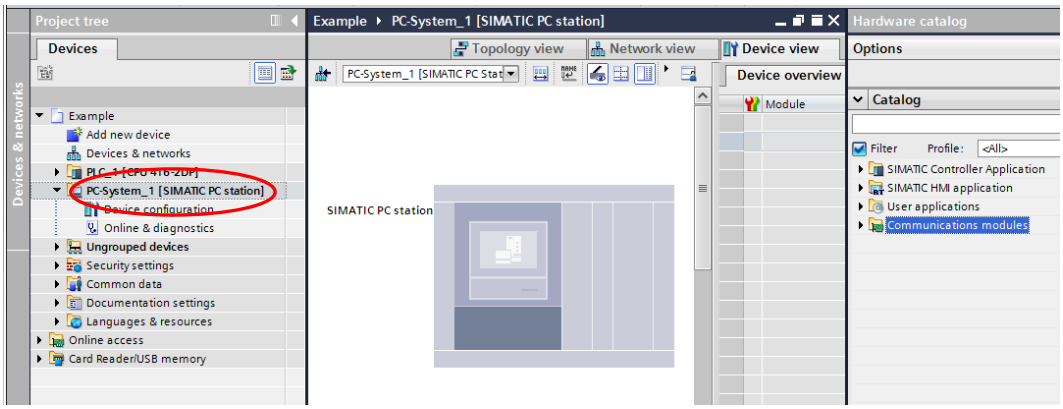


2.1.3 Panel configuration

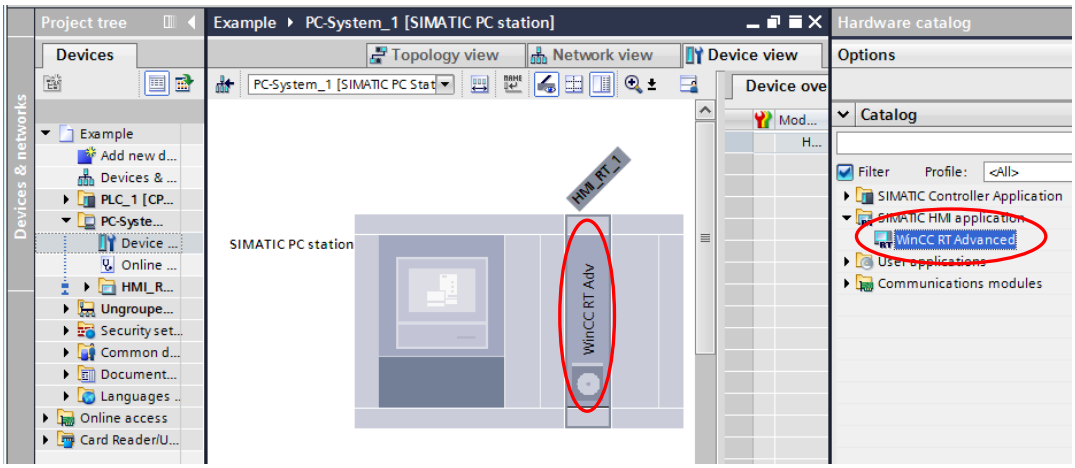
Double klick on “Add new device”. In the opened Dialog, select “PC systems > PC general > PC station”. Then a PC-System will be listed under “Devices” (left). This PC station is just the ABC panel, which will soonly work as an HMI panel.



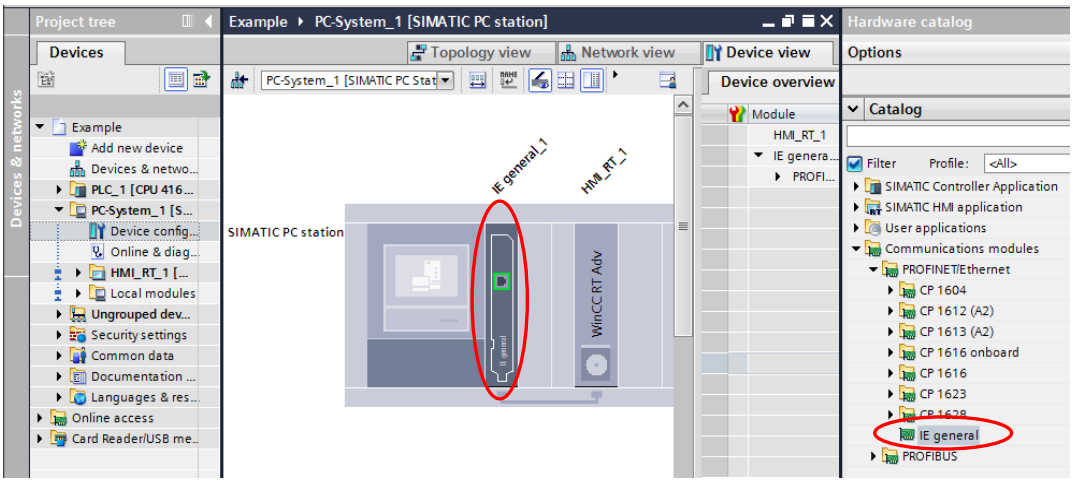
Open “Device configuration” of PC-System_1[SIMATIC PC station].



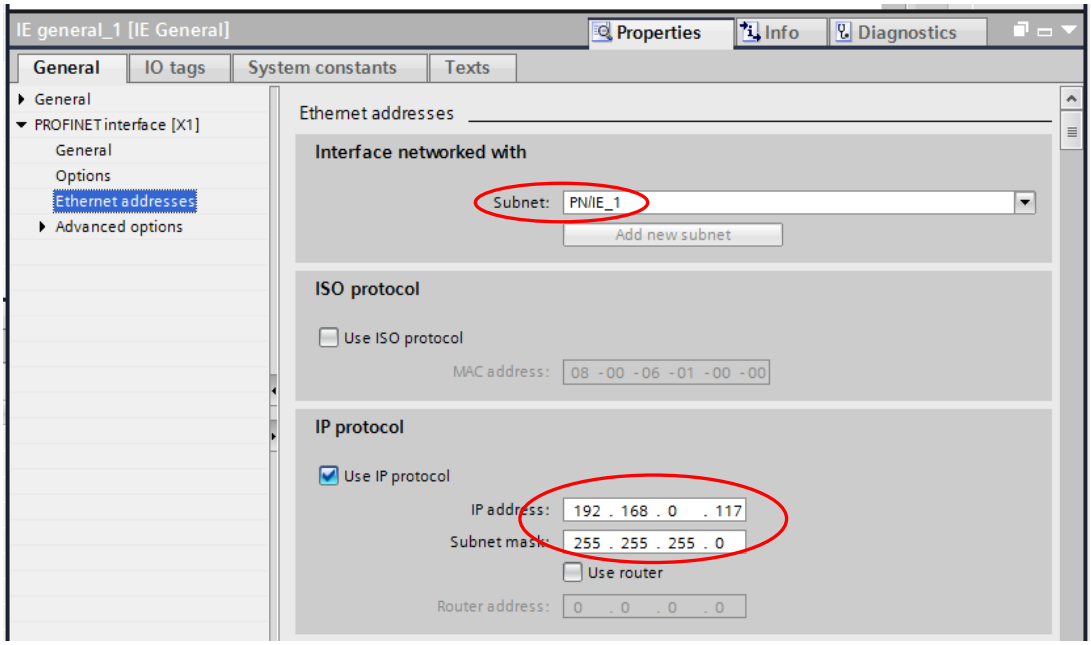
In “Hardware catalog” (right) select “SIMATIC HMI application > WinCC RT Advanced”, and double click on it. It will appear in the corresponding slot of the PC station. Or drag it in the slot.



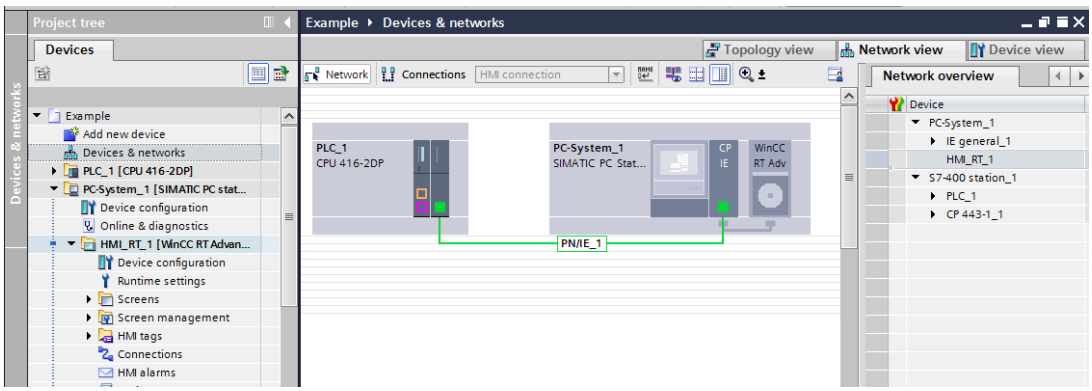
In “Hardware catalog” select “Communications modules > IE general”, and double click on it. It will also appear in the corresponding slot of the PC station. Or drag it in the slot.



In “Properties” of IE general_1, connect it into the subnet “PN/IE_1” and set the IP address: 192.168.0.117. This should be the IP-address of the ABC panel.

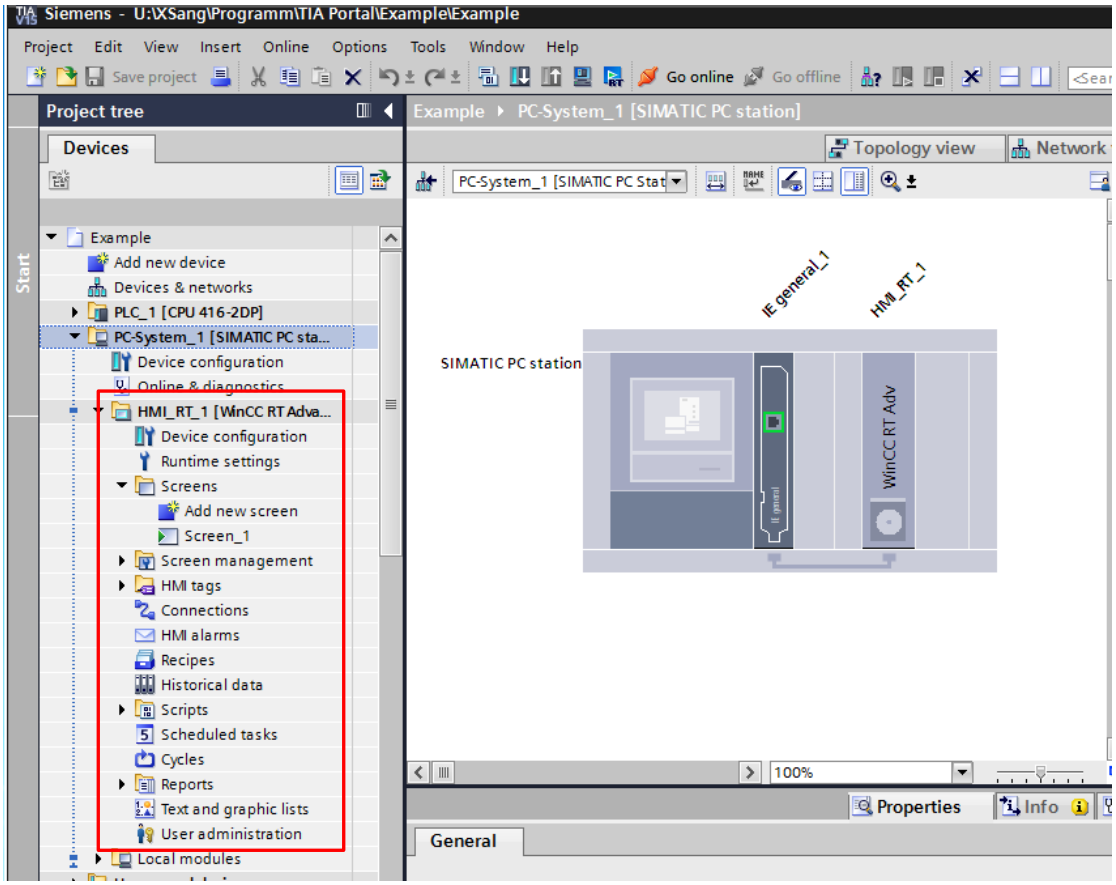


Open the diagram of “Devices & networks”. The connection between the CPU and the PC station will be displayed (as below). That means, that the network connection is ready for the data exchange.



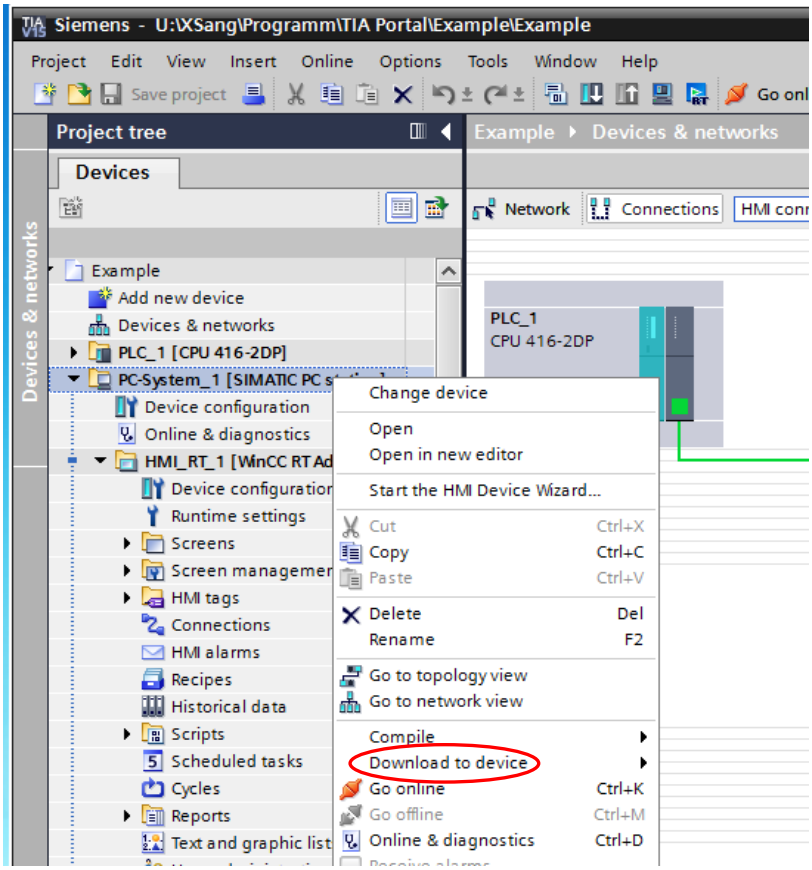
2.1.4 WinCC configuration

Now you can edit the settings of WinCC, and design the screens as you like.

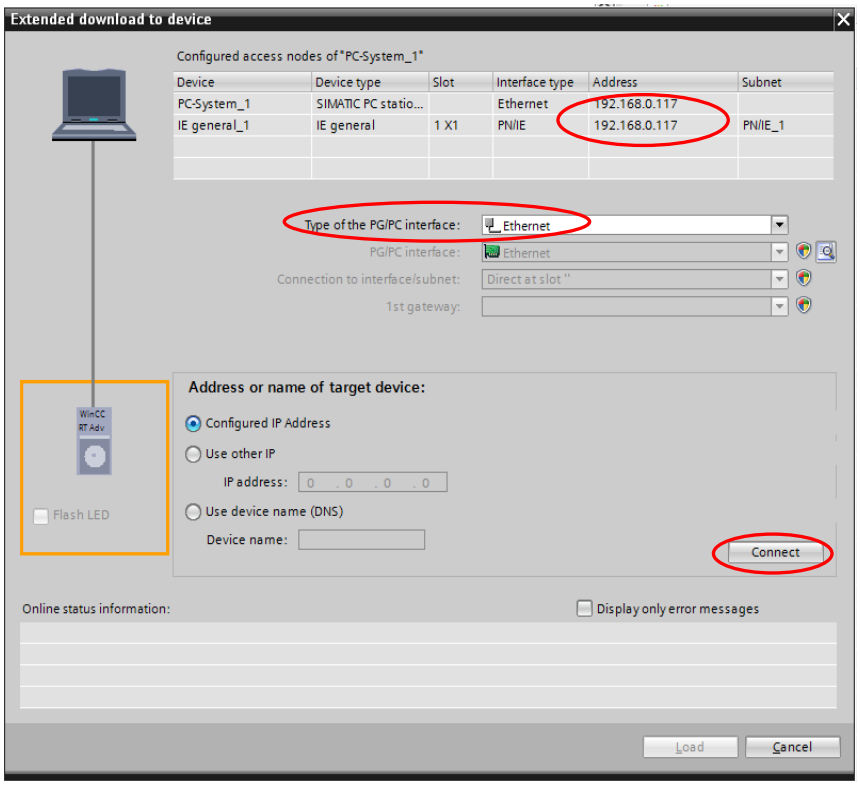


2.1.5 Configuration download

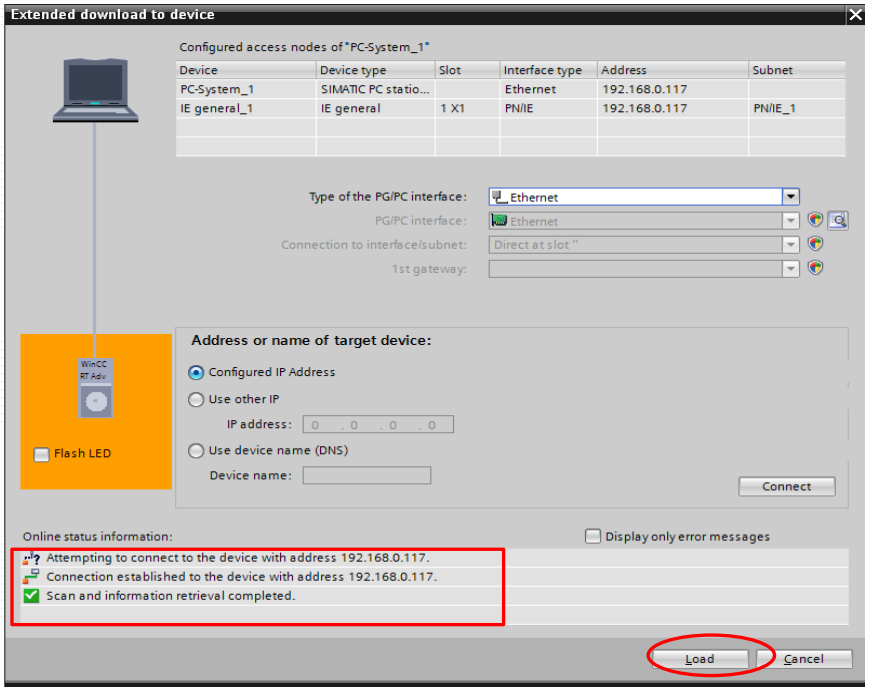
When the edition in WinCC is finish, you can transfer it to the panel. Please first of all make sure that panel is physically in the network connected. Mark “PC-System_1[SIMATIC PC station]” under “Project tree” and mouse right click on it. Select “Download to device”.



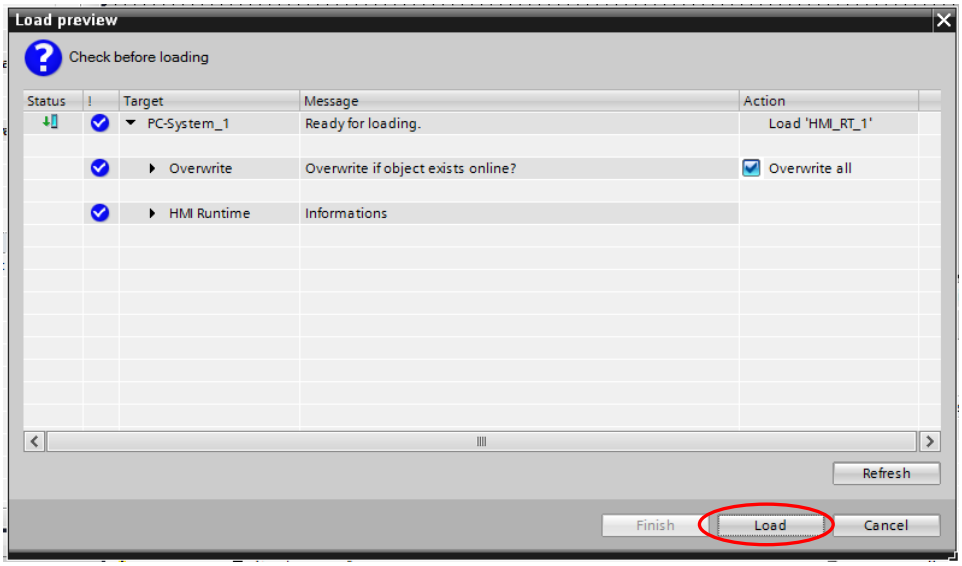
Now a diagram of “Extended download to device” is displayed. Please check the IP address and select “Ethernet” as the “Type of the PG/PC interface”. Then press the button “Connect”.



If every parameter is set correctly, the connection will be as below established. Now press the button “Load”.

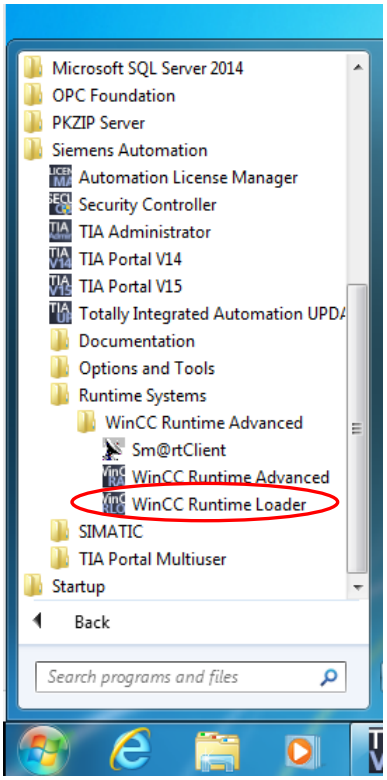
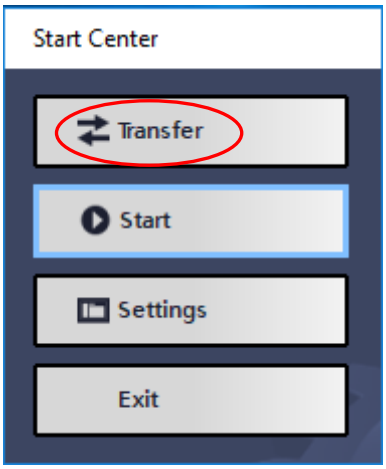


Press “Load”


Load preview
Check before loading
Status
!
Target
Message
Action
PC-System_1
Ready for loading.
Load 'HMI_RT_1'
Overwrite
Overwrite if object exists online?
Overwrite all
HMI Runtime
Informations
Refresh
Finish
Load
Cancel

2.2 Transferring into ABC panel

At the panel, please meanwhile start the application “WinCC Runtime Loader”.



“Start Center ” will be opened. For data receiving, select “Transfer”. Quickly all the configuration of WinCC will be transferred into the panel. Afterwards the edited screens will be automatically executed as configurated.