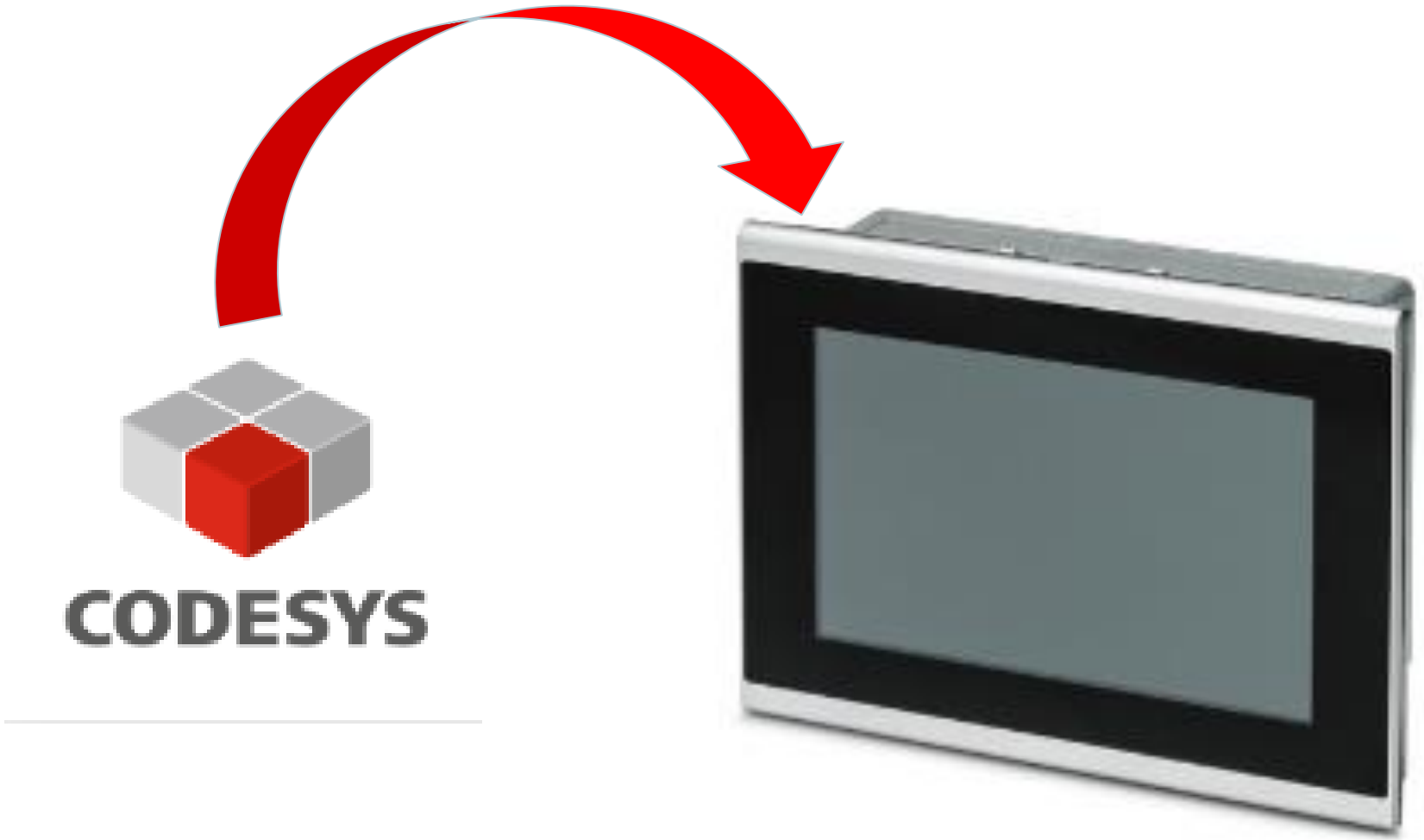
Installing CodeSys onto a Phoenix Contact WP6xxx Panel



Requirements:

- Phoenix Contact WP 6xxx with Firmware Version 3.0.15
- CodeSys Software V3.5 SP19, Patch 1.

NOTE: No other Phoenix Contact Panels or CodeSys Software combinations were tested or are verified to work as this document suggests at this time. Please confirm with your local CSIE member for added support.

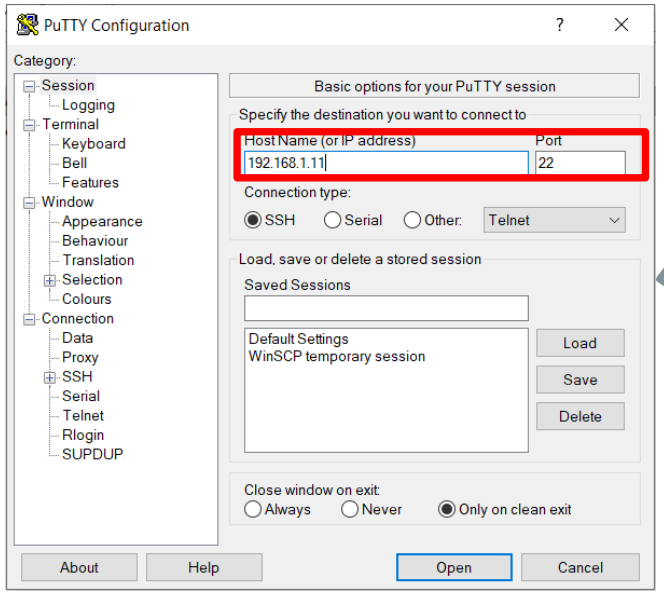
Valid Part Numbers	Description	Type Code
1290800	7" Touch Screen - 800 x 480 Resolution	WP6070-WVPS
1290801	10" Touch Screen - 1280 x 800 Resolution	WP6101-WXPS
1290802	12" Touch Screen - 1280 x 800 Resolution	WP6121-WXPS
1290803	15.6" Touch Screen - 1920 x 1080 Resolution	WP6156-WHPS
1290807	18.5 "Touch Screen - 1920 x 1080 Resolution	WP6185-WHPS
1290809	21.5 "Touch Screen - 1920 x 1080 Resolution	WP6215-WHPS

This document assumes that the user has some basic Linux command Line or other experience, as not all specific details are given in this manual.

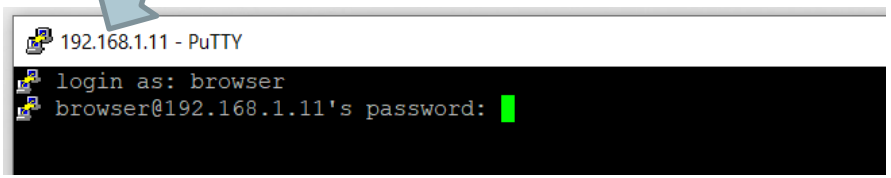
Also, Make sure that your Web Panel has an IP Address assigned to it and that it is on the same Ethernet Subnet as your PC.

You will need to install Putty and CodeSys PC Software before beginning this Tutorial.

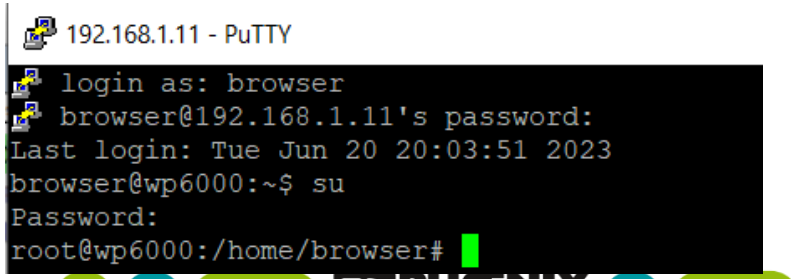
Using Putty (or Similar Terminal editor), we need to access the Web Panels Linux Command Line.



Enter the IP address of the Connected Web Panel



At the command Linux Line, Log in as ‘browser’ (pw: browser),
Once Logged in, Enter the command ‘su’ <ENTER>
(this requests Linux to let you login in as a ‘Super User’).
Type in ‘foo’ as the Password.
The prompt will now show logged in a root… (e.g *root@wp6000:....*)



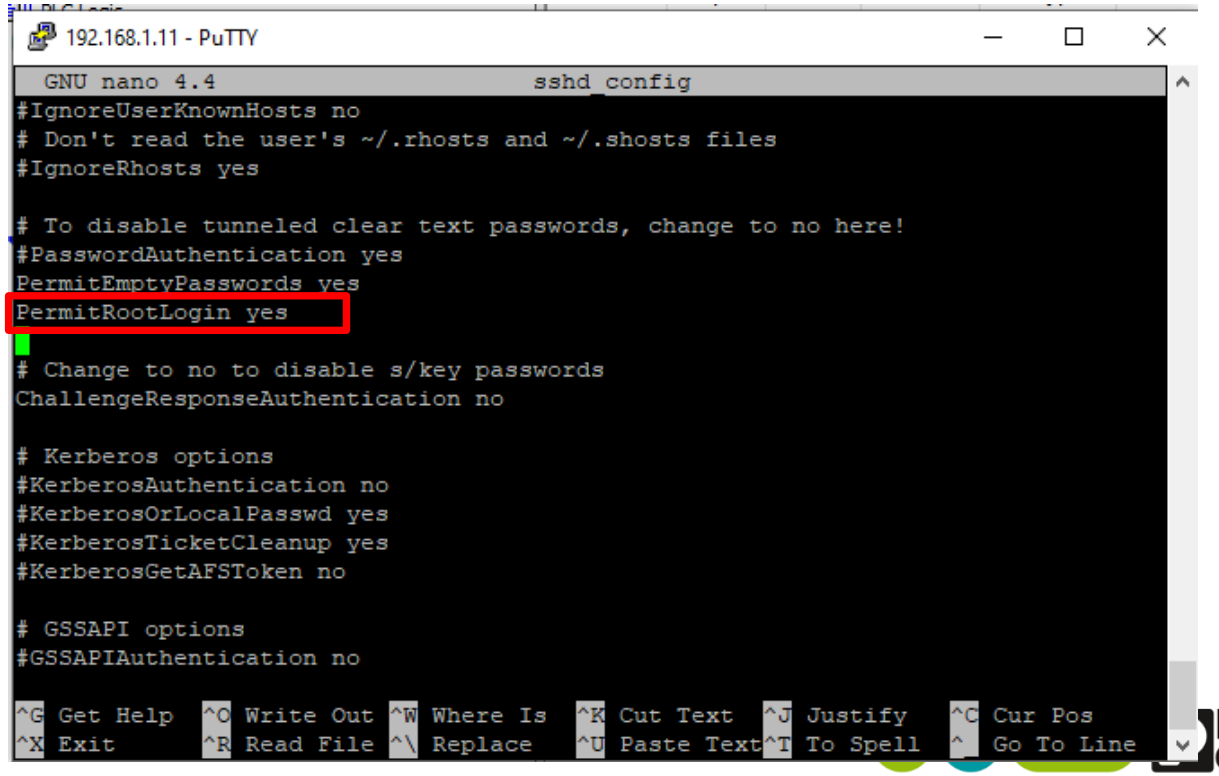
From here, we will be adding a single command to the config file of the WP.

NOTE: only arrow keys will work (mouse is deactivated)… also, be very careful to type in the exact phrase as described. Incorrect typing may cause undesired effects.

Type the following ‘nano /etc/ssh/sshd_config’ <ENTER> (this opens the file in a text editor).

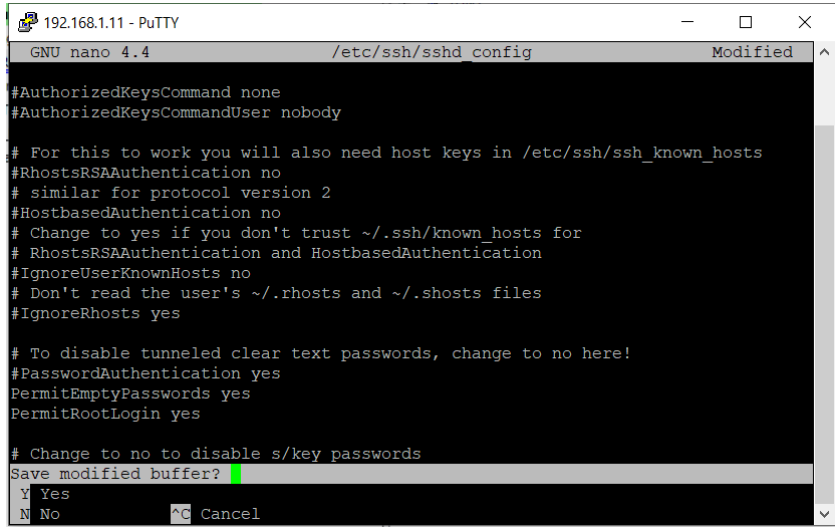
We need to add the following command to the file. ‘PermitRootLogin yes’ (as shown in the screen capture Below – with a single space after the command / before ‘yes’).

NOTE: Command Entry (Caps, No Caps) critical, so it must be entered exactly as stated. It is, however, not critical that the command be inserted exactly where described, but this is the suggested location.

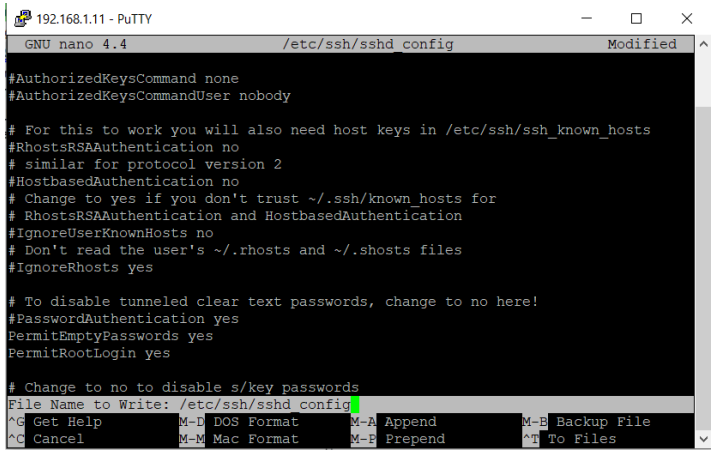


Once the Command is entered, saving the file and rebooting are the next required steps.

Press the keys <CNTRL> + X to Exit.
You will be asked to ‘Save modified buffer? …
press ‘Y’ (for Yes).



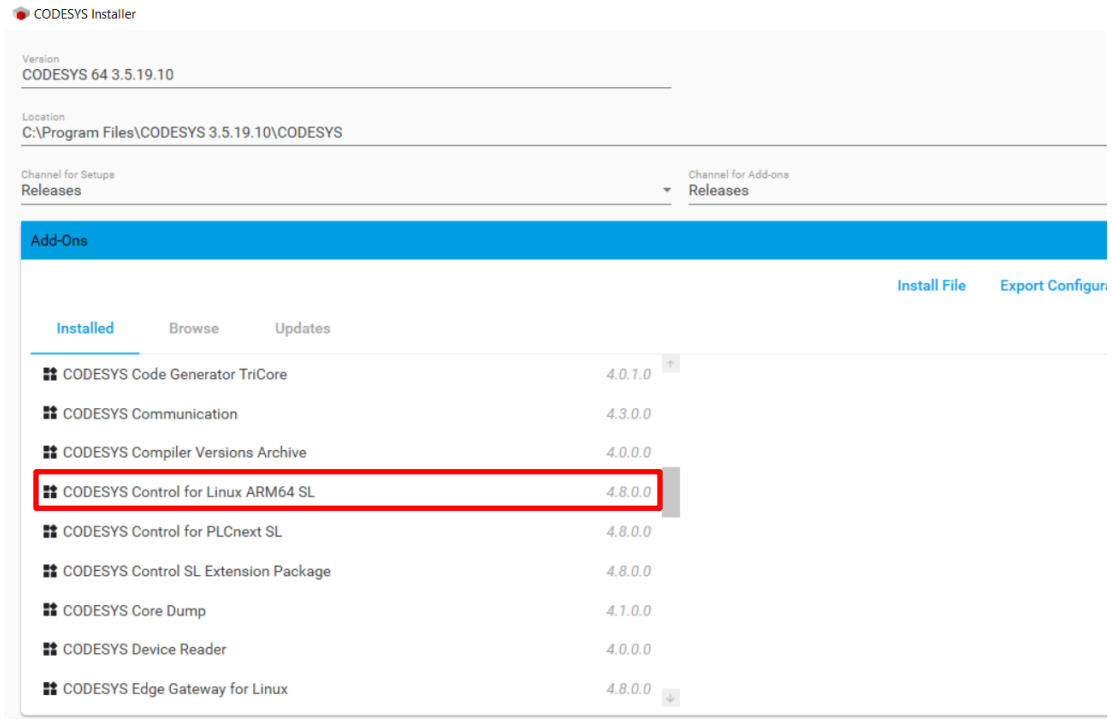
Then, you will asked to verify the Filename.. press <ENTER>



After exiting the editor, you will be back at the prompt…
Type ‘reboot’ + <ENTER>
at this time, the panel will reboot and then the CodeSys Software will now able to access and Install the appropriate Run Time version.

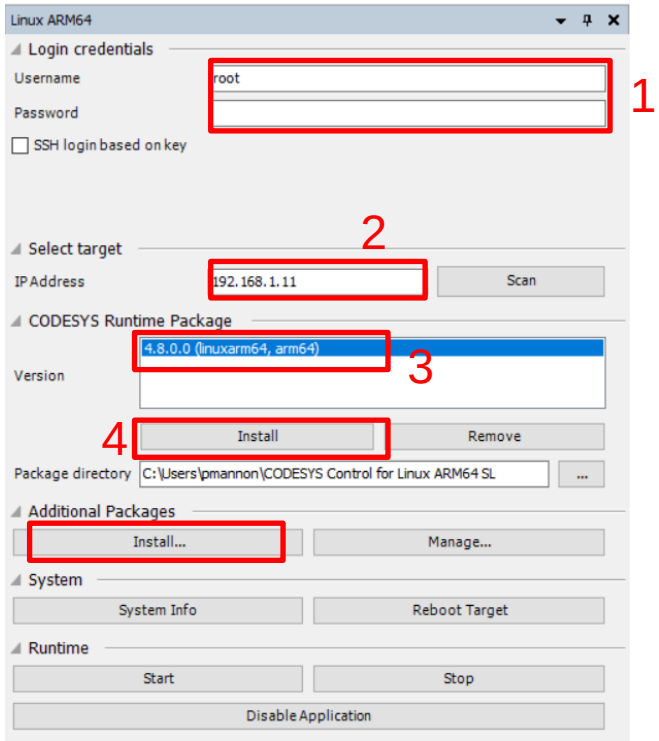
Open CodeSys Software.
From Tools -> CodeSys Installer, The following shows the installed ‘Add-ons’.
From the CodeSys Store, get and install the Linux ARM64 SL Package (as below):

*Note: If you do need to install, make sure that you ‘**Restart as Administrator**’*



Once the installation is verified, Close this Window and Choose ‘Tools -> Update Linux ARM64’ from the Menu

Using the Installer, Install the Linux ARM64 SL
User: root, password: foo
Install ‘Linux ARM64 SL’



1. User: ‘root’ password: ‘foo’

2. Enter the IP Address of the WP6 Panel.

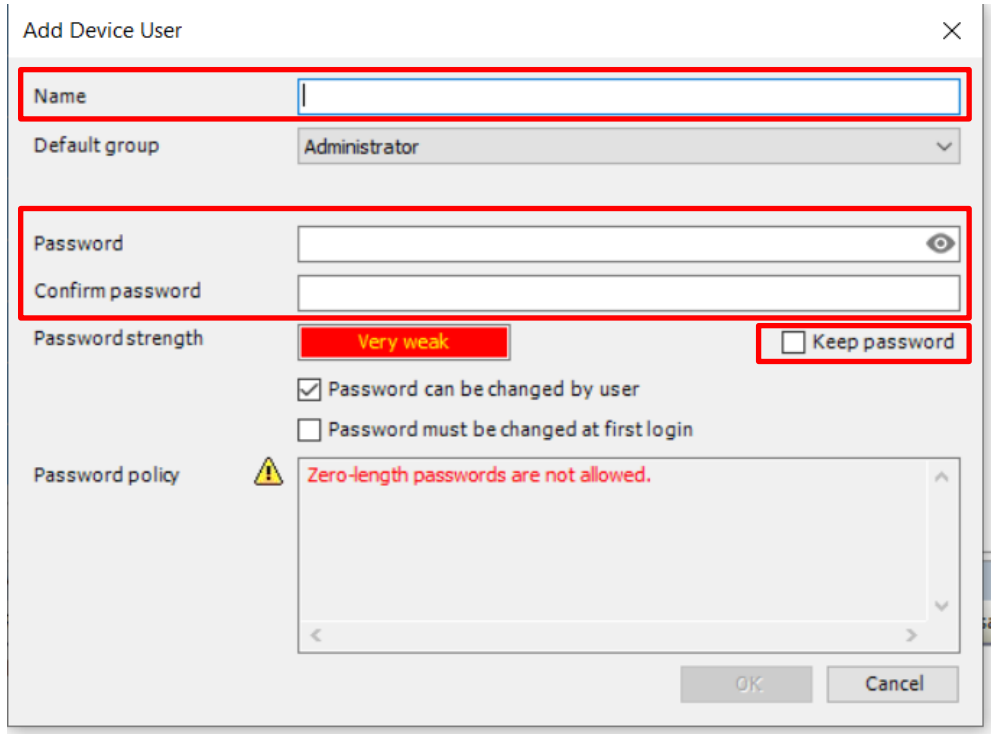
3. Verify that the Runtime Package is 4.8.0.0 (linuxarm64, arm64).

4. Press the ‘Install’ Button. The Panel will be connected and the proper Runtime will be installed on the Panel. If there are errors, verify that the IP Address is correct and all of the previous steps have been completed correctly.

5. You can verify that the install is correct, by pressing and viewing the ‘System Info’ information on the panel.

When Connecting to the Web Panel for the First Time, pay very close attention and Document the User Name and Password entered. THIS CANNOT BE RECOVERED !!!

NOTE: If you do forget or something happens, the ‘recovery’ of the WP6xxx is to reinstall the WP6xxx Firmware, which wipes out and resets the panel.



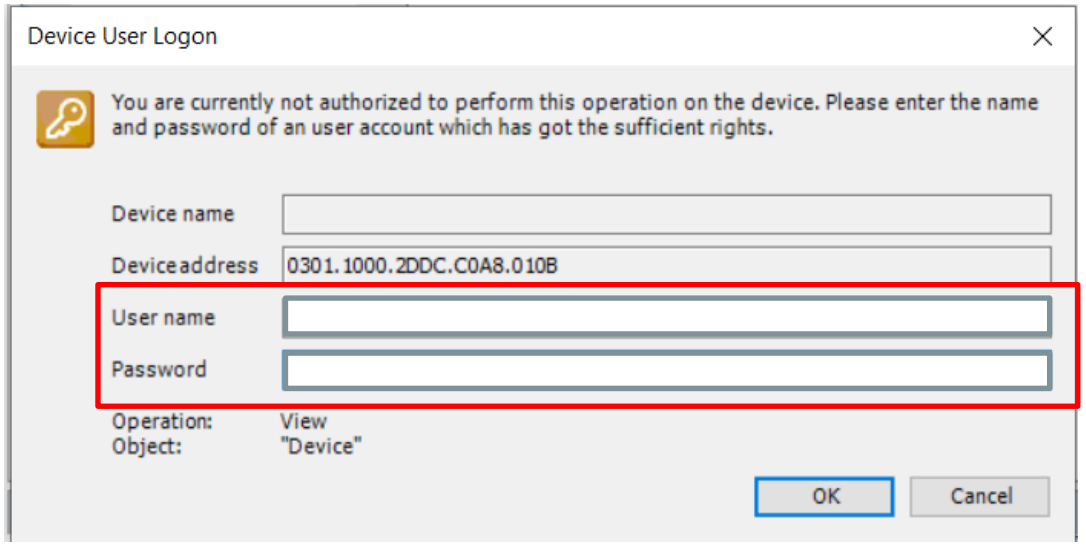
All Characters (CAPS, etc.. Must be noted !)

I normally use..
Name: admin
Password: phoenix1234

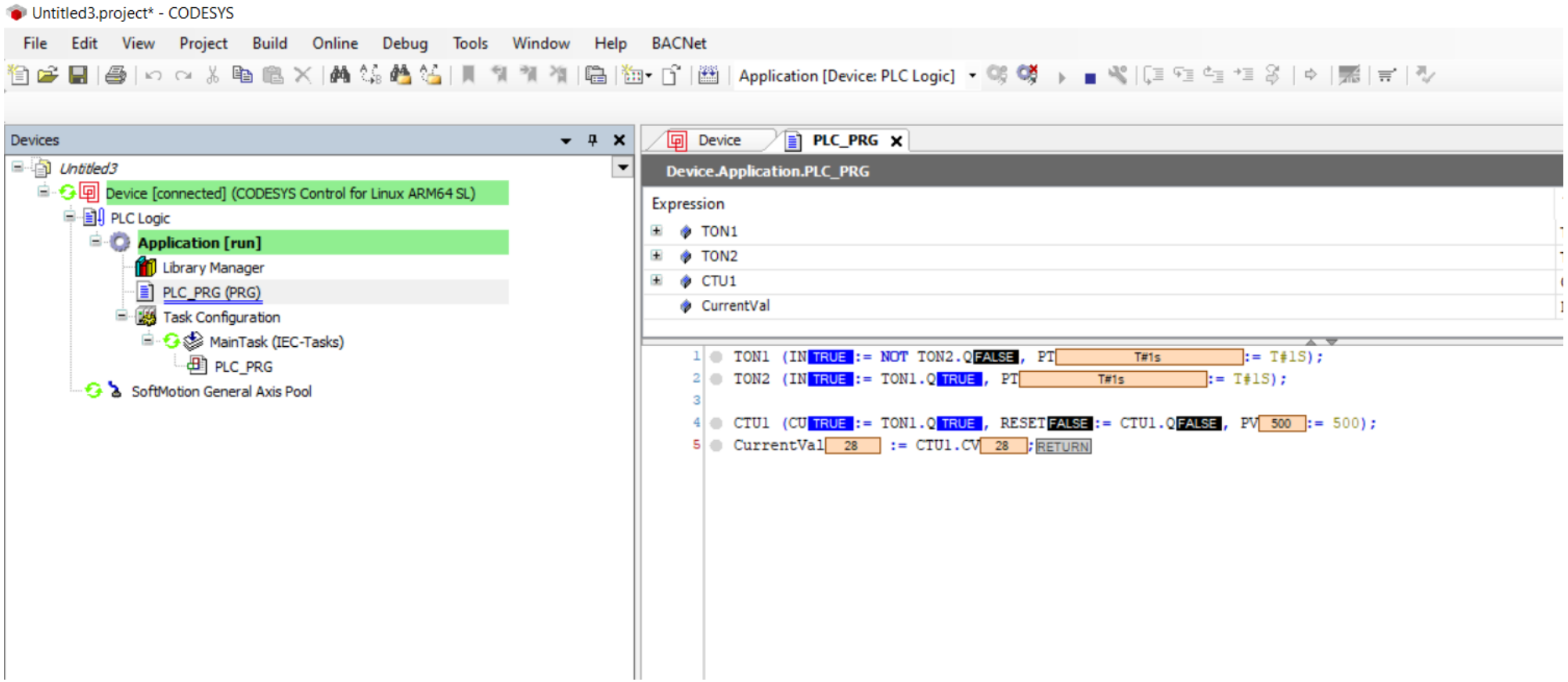
Be sure to check the ‘Keep Password’ checkbox.

When Going ‘Online’ with CodeSys, the Device User Logon Screen (as below will appear).

The user name and Password Created on the Previous Page will allow successful Login.



This Tutorial is complete… Simply program, download and execute CodeSys as normal. The following page shows a very basic program running on the controller.


Untitled3.project* - CODESYS
File Edit View Project Build Online Debug Tools Window Help BACNet
Application [Device: PLC Logic]
Devices
Untitled3
Device [connected] (CODESYS Control for Linux ARM64 SL)
PLC Logic
Application [run]
Library Manager
PLC_PRG (PRG)
Task Configuration
MainTask (IEC-Tasks)
PLC_PRG
SoftMotion General Axis Pool
Device
PLC_PRG
Device.Application.PLC_PRG
Expression
TON1
TON2
CTU1
CurrentVal
1 TON1 (IN TRUE := NOT TON2.Q FALSE, PT T#1s := T#1S);
2 TON2 (IN TRUE := TON1.Q TRUE, PT T#1s := T#1S);
3
4 CTU1 (CU TRUE := TON1.Q TRUE, RESET FALSE := CTU1.Q FALSE, PV 500 := 500);
5 CurrentVal 28 := CTU1.CV 28 ; RETURN