Demo Hardware Setup Instructions

1. Setup Demo, Monitor(if applicable) and PG on table. Each station should seat max. 2 people.
2. Plug ethernet cable between the CSM 1277 to PG ethernet port 1

PG Setup Instructions

1. If UA Expert is already installed on the PG, skip this step - From the "distributor setup files" folder downloaded from the SIPEC website, run the installation application for "UA Expert" and create a shortcut on the desktop (this will be required to demonstrate the OPC UA Server of the S7-1200).
2. From the "distributor setup files" folder downloaded from the SIPEC website, run the "S7-1200 SIPEC extraction tool.exe" application
3. Extract the contents directly onto the Desktop of the PG
4. This should automatically create a folder on the desktop called "S7-1200 Event". This folder contains all the necessary PDF files, project files and supplementary files that the student will use in the workshop.
5. **[optional]** No further setup of the PG is necessary, however as an *optional* step, you can clear the desktop of other shortcuts, folders and applications to simplify the experience for the user. The Desktop should only have 3 shortcuts:
    a. **TIA Portal V16**
    b. **UA Expert**
    c. **"S7-1200 Event" Folder**
    d.

Prepare Demo

1. Open the project "S7-1200 Tabletop Demo V16 KTP700 V3.zap16" from the "S7-1200 Event" folder on the desktop.
2. Compile and download the project to the S7-1200 CPU and KTP700 HMI

> **NOTE:**
> This workshop finishes with downloading a secured/locked project to the CPU. It is possible that whoever had the demo equipment prior may not have removed the secured project from the CPU and you will be unable to overwrite the CPU unless you use either of the following options to overwrite the CPU:
> - Option 1 (fastest): Load project to CPU from SIMATIC Memory Card formatted as a 'Transfer Card'
> - Option 2: Login with 'Read/Write' Access level, then download project using TIA Portal

Option 1 – Load project to CPU from SIMATIC Memory Card formatted as a 'Transfer Card'

Note: a SIMATIC Memory Card is NOT provided as part of the scope of delivery for this event. Therefore, for this option you will need to furnish the card on your own to perform the following steps.

1. If your SIMATIC MC memory card is not empty, delete the "SIMATIC.S7S" folder and the "S7_JOB.S7S" file on the memory card, using Windows Explorer, for example.
2. In the project view of STEP7 Basic software, click "Project View"→"Card Reader/USB memory"→<*Your card reader model*>" at the left side, as shown in the Fig. below:
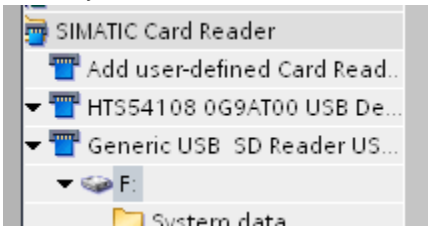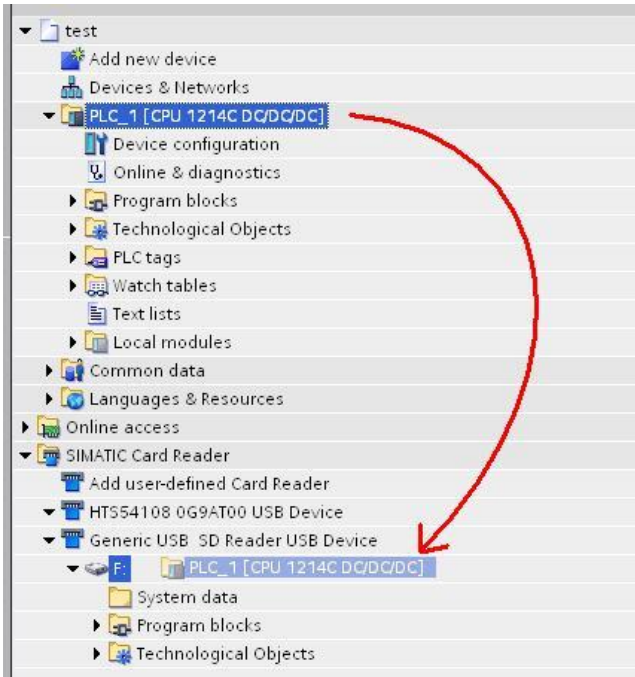

3. Right-click the drive letter (which is F: here) of the memory card, and select "Properties" to open the following window:
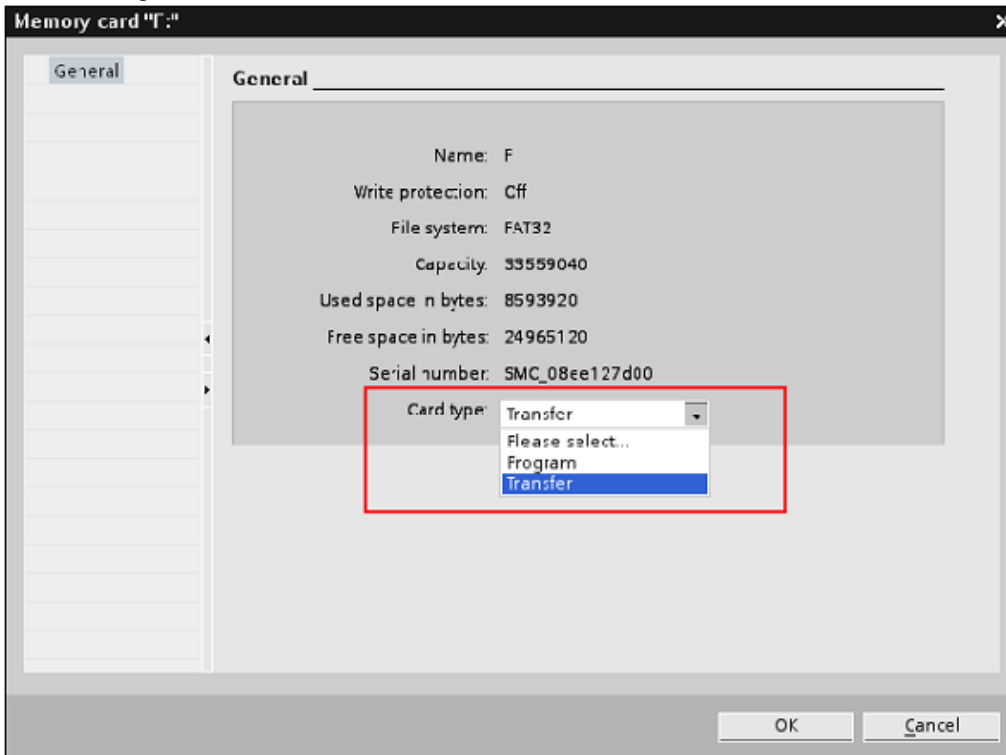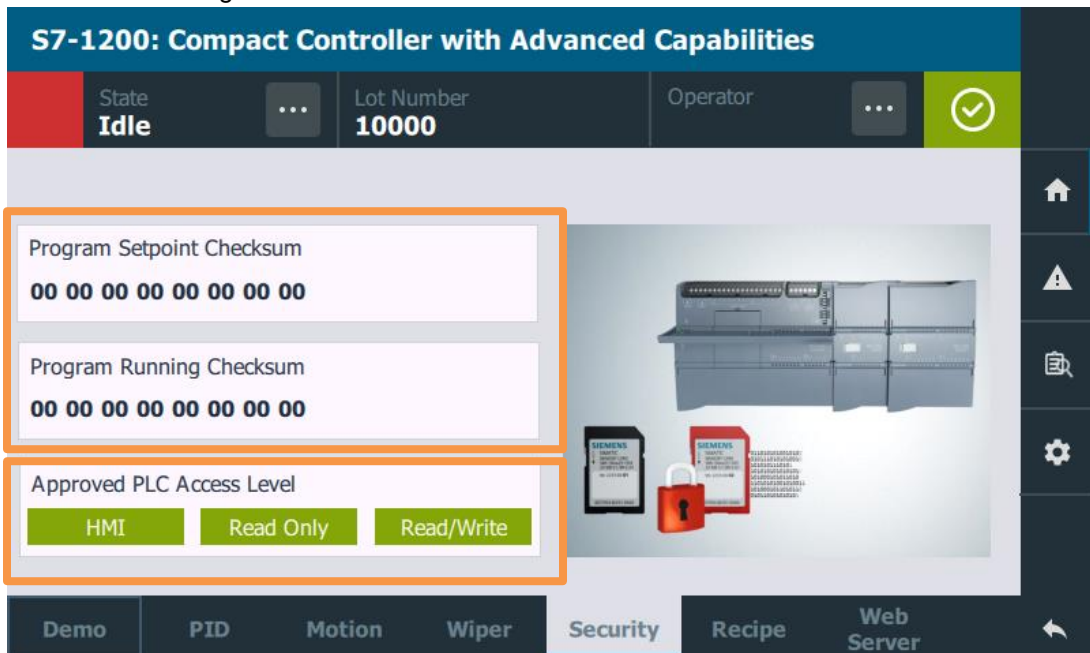

4. Select the "Transfer" operating mode in "Card type", and click "OK" to complete setting.

5. Drag & drop the PLC from your project tree to the memory card slot from step 2 above:

6. The project will compile and the "Load Preview" dialog will appear. Click "Load" and continue.
7. Power off the Demo
8. Insert the SIMATIC Memory Card into the memory card slot of the S7-1200 CPU
9. Power on the Demo – When the copying procedure has been completed, the "MAINT" LED of the S7-1200 flashes to indicate that the transfer is complete.
10. Power off Demo, then remove SIMATIC Memory Card from the CPU
11. Power on Demo, the PLC should be running with the correct program. You can verify this by going to the "Security" screen on the HMI and verifying that the checksums are all Zeros and all access levels are granted:

Option 2 – Login with full access right on HMI, then TIA Portal and download project

Note: 2-factor access level authentication is activated in the secured/locked project as part of the features demonstrated during the workshop. You will need to login to the HMI as a user with "Full" access rights before logging in via TIA Portal with the "Full" access level password. This is shown in the following steps.

1. On the HMI, Go to the "Security" screen, then click the ellipses in the "Operator" area to login with a user who has read/write access
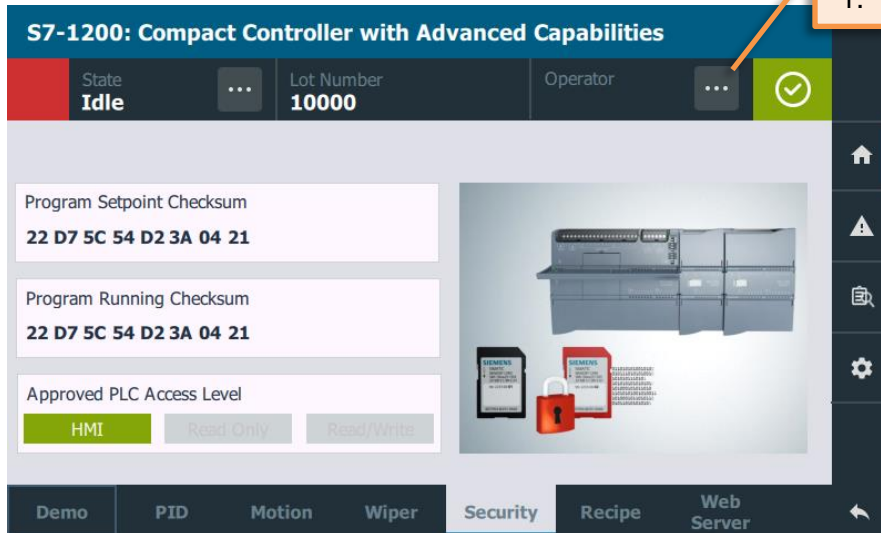
2. Login and then close the screen:
   User: OEM
   Password: OEM (Case-sensitive!)

3. You should have all access level approval. Go to TIA Portal and download to CPU as you normally would. When prompted with the access level password, type the following:
   Password: Siemens1!
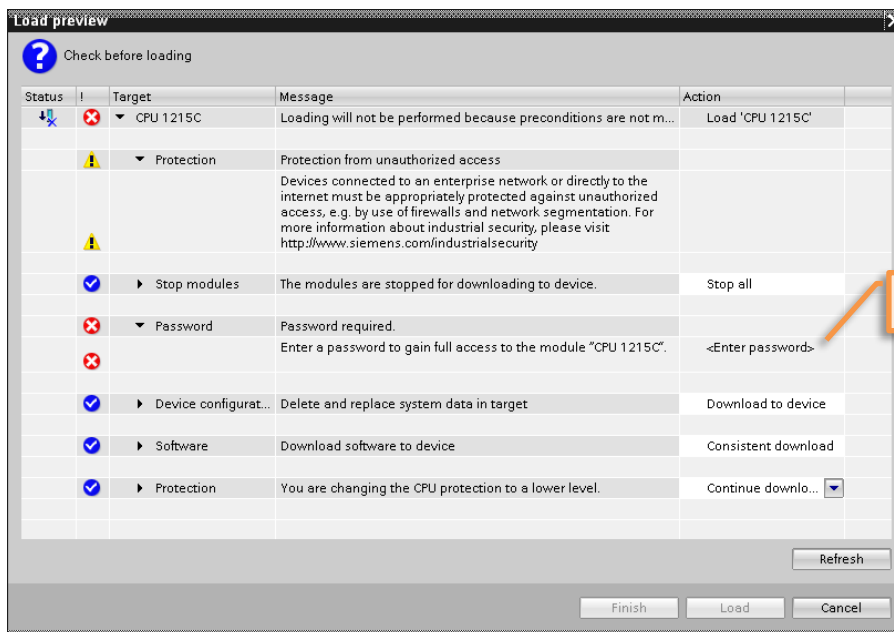
4. Click 'Load' and continue downloading to CPU. Your 'Security' HMI screen should now have all zeros for the Checksums and full access level rights: