FAQ C6 EMBEDDED

# P6 Boot Application FAQ No.0002

| Part | Version | Revision | Date | Status |
|---|---|---|---|---|
| en | 3.5.4.10 | 001 | 2019-01-01 | Released |

## Content




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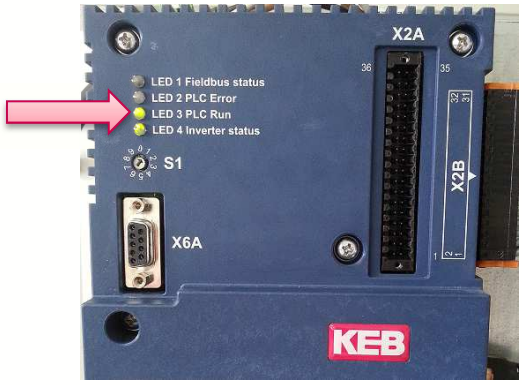
## Introduction

This is a step-by-step description of how to handle an offline created boot application for P6 devices. It uses both KEB FTP application and COMBIVIS studio 6 to download/handle a boot application for P6.

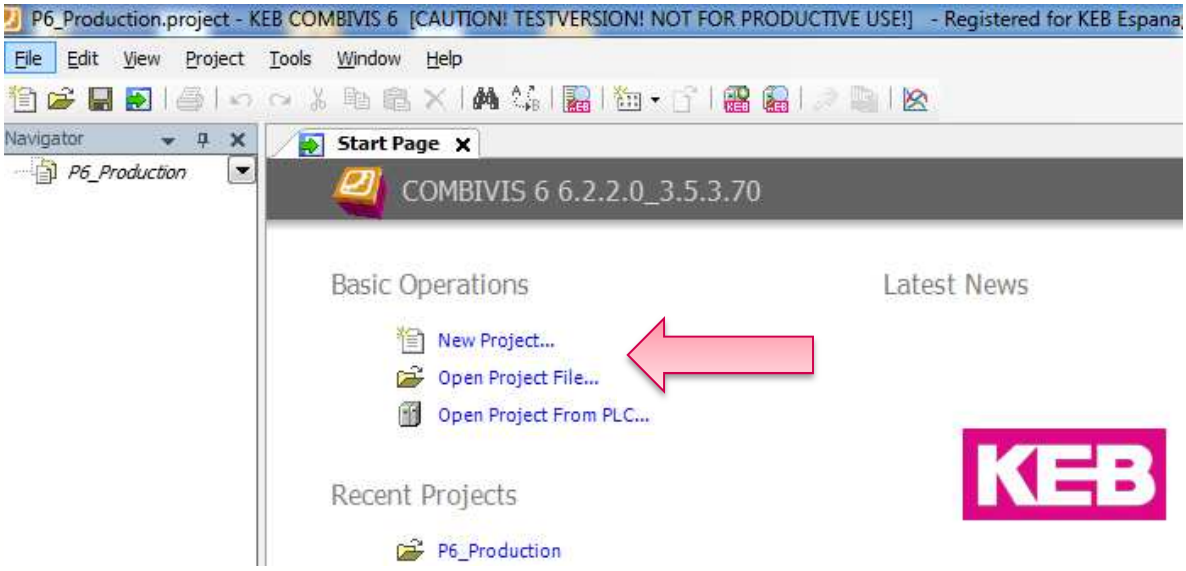
## Step 1: First checking of the unit

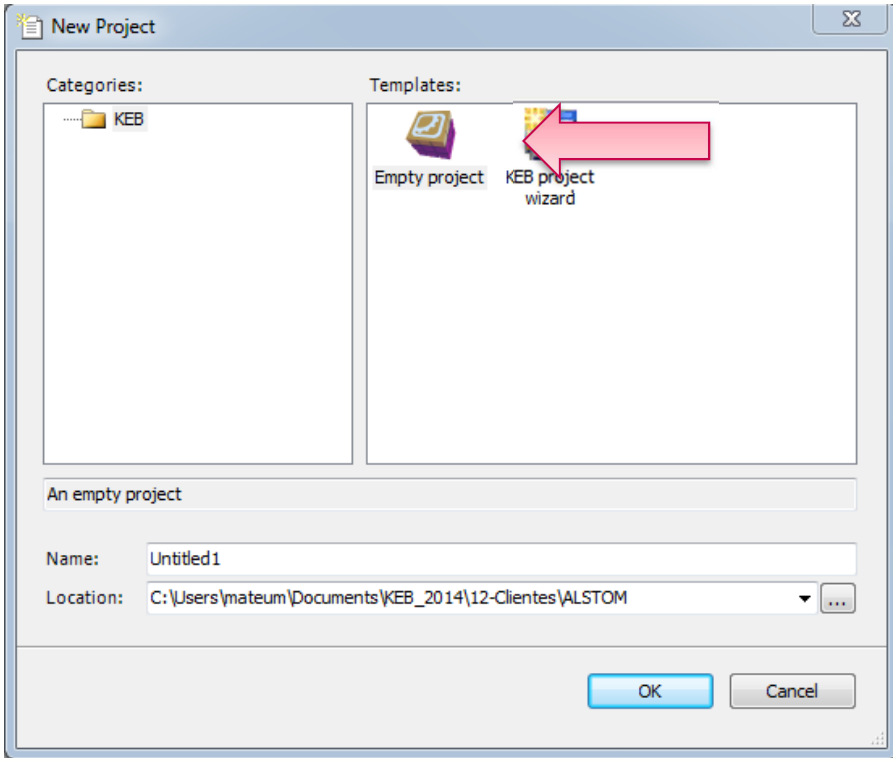
When you receive a P6 unit, normally it has a production test application inside. It is necessary to delete it first, before downloading your boot application. When you power on the device, you can check if **LED 3: PLC Run** is on. If yes, then it is necessary to delete the application first.




## Step 2: Open/Create COMBIVIS 6 project

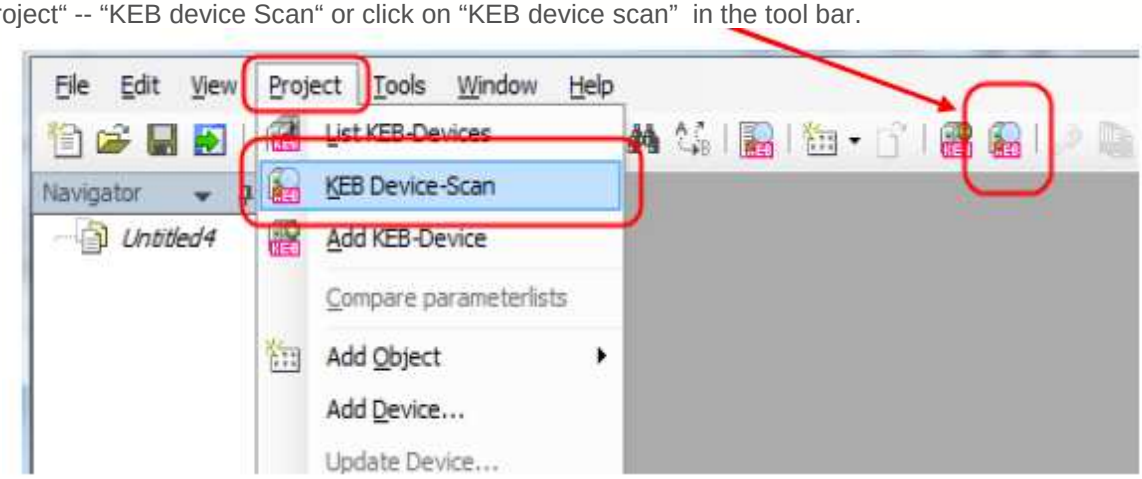

Double click on COMBIVIS 6 Icon and select: Create new project or open project file (depending if you have default production project). Here is an example how to create a new project:


P6_Production.project - KEB COMBIVIS 6 [CAUTION! TESTVERSION! NOT FOR PRODUCTIVE USE!] - Registered for KEB Espana
File Edit View Project Tools Window Help
Navigator
P6_Production
Start Page
COMBIVIS 6 6.2.2.0_3.5.3.70
Basic Operations
Latest News
New Project...
Open Project File...
Open Project From PLC...
Recent Projects
P6_Production

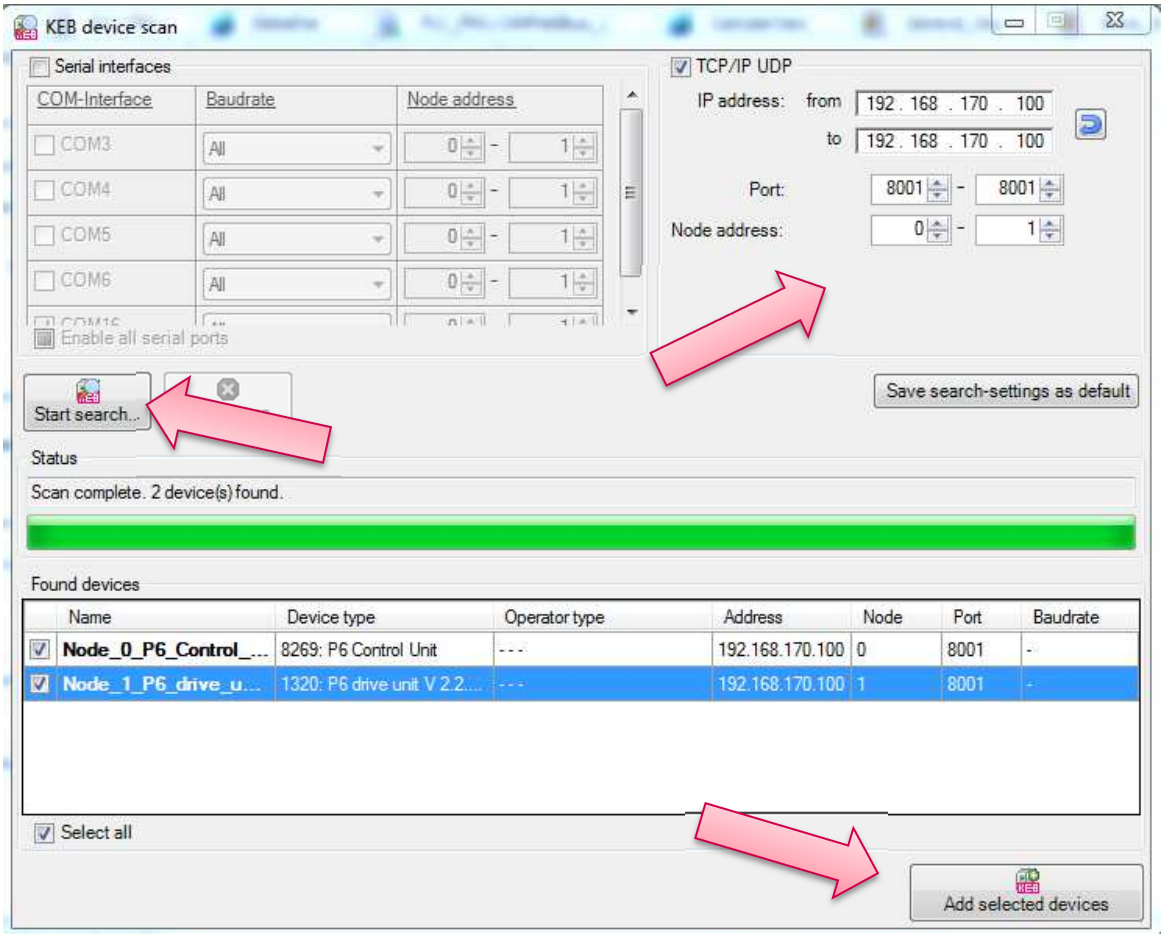

New Project
Categories:
Templates:
KEB
Empty project
KEB project wizard
An empty project
Name:
Untitled1
Location:
C:\Users\mateum\Documents\KEB_2014\12-Clientes\ALSTOM
OK
Cancel

## Step 3: Search for devices

**If you have created a new project**, the first thing to do is searching for devices. Click on: “Project“ -- “KEB device Scan“ or click on “KEB device scan” in the tool bar.



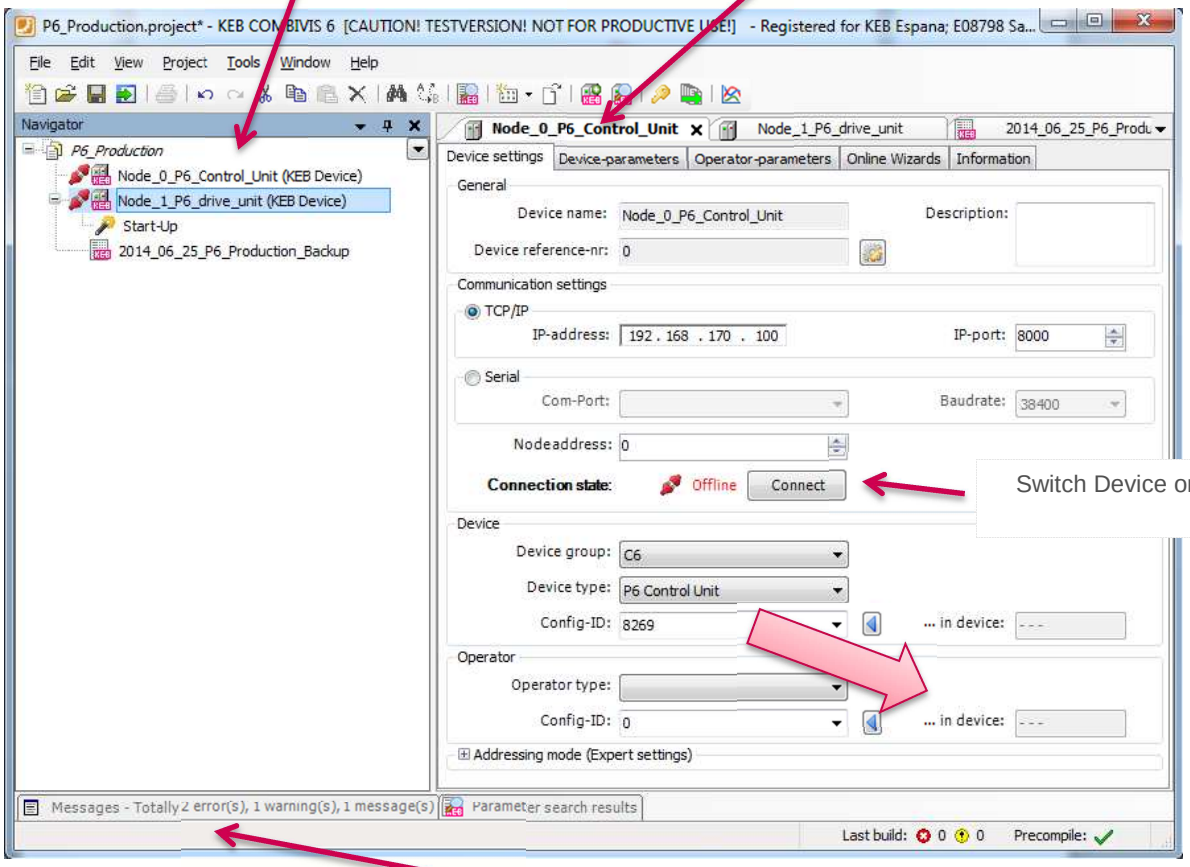

This window will appear, with all scan options. Then enter the P6 IP address (**KEB factory IP address is 192.168.0.100 by default) Port: 8001 and Node address 0 to 1**. Press the “Start Search“ button, and P6 control unit and P6 drive unit will be found. Then click on “Add selected devices“.



**If you have opened a project**, the P6 drive unit and P6 control unit will appear in the project navigator, normally in offline mode (red symbol at left side of the device):

Navigator: Presentation and activation of the project's particular objects and devices

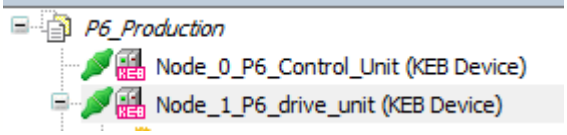
Editor: Editing objects and devices, communication setup and online wizards




Switch Device online/offline

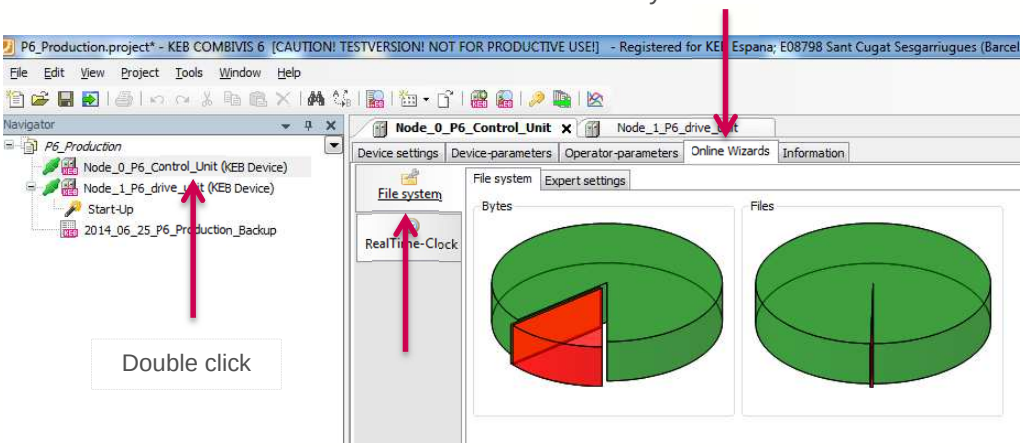
Messages: Status, alarms and error information will be indicated and journalized

In the device editor (double click on device), select the right IP address and right port, then click „Connect". If it is not possible to modify the IP address, this is because the device must be in **offline** mode. Click on "Disconnect" button and try again.
When communication is working, a green symbol will appear at the left side of the devices:



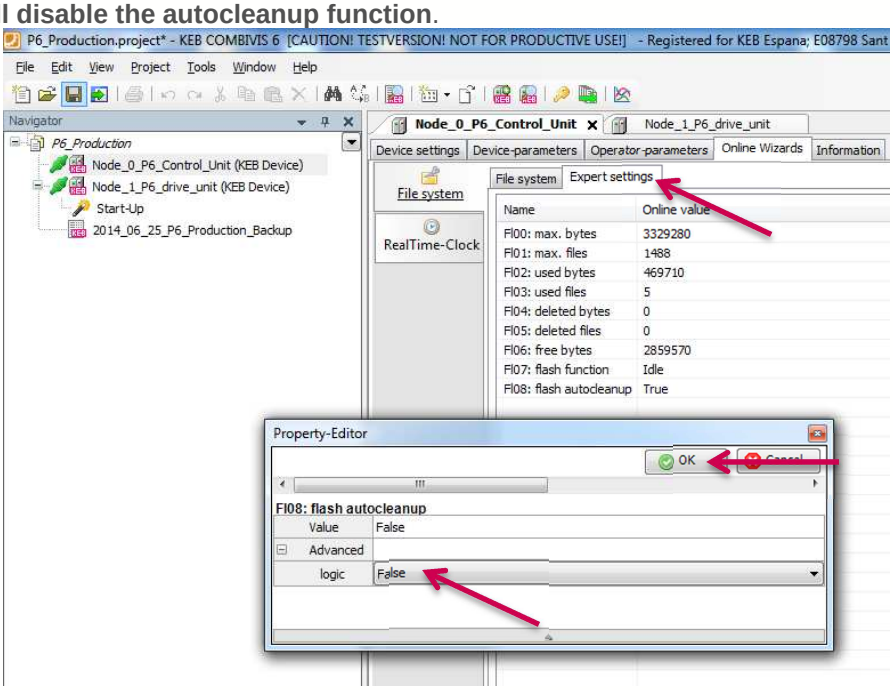
## Step 4: Check file system of P6 control unit

Double click on P6 control unit device -- Online wizards -- File System




Here it's possible to check the actual P6 application size (in bytes).

Select „Expert settings" – double click on parameter *FI08: flash autocleanup* – select *false* and click on „OK". **This will disable the autocleanup function**.



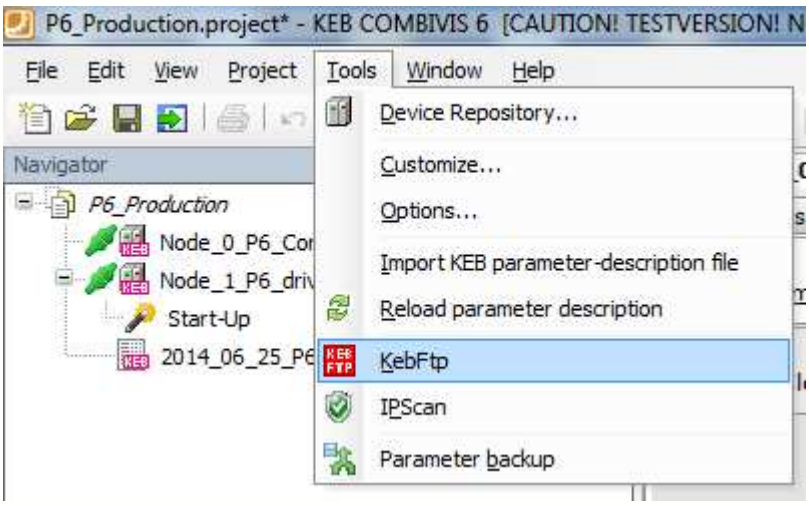

The file system consists of an internal built-in flash memory (drive C:) and an internal RAM memory (drive B:). Data in drive C: are not physically deleted. First they are only marked as deleted. Thus the available memory capacity decreases. If the autocleanup function is enabled, the PLC itself deletes these files at a certain time. But there is the risk that if the device is switched off during autocleanup operation, the data in the flash memory could be damaged, and it's possible to lose some files. **So it is strongly recommended to switch off this function**!

**ATTENTION: DO NOT SWITCH OFF THE P6 DURING AUTOCLEANUP OPERATION!!!**

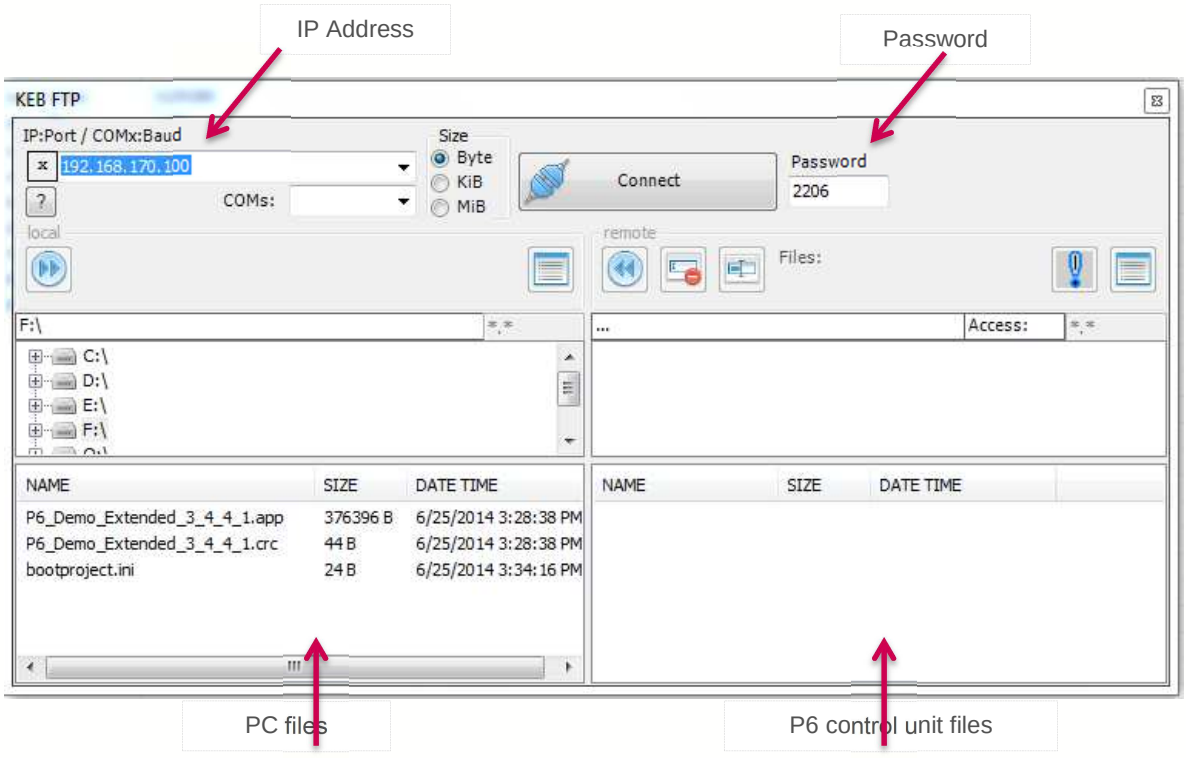
## Step 5: Open Ftp application and handling of P6 project files

KEB-FTP is a separate program running in parallel to COMBIVIS studio 6. Nevertheless, this application is integrated into the COMBIVIS environment to help transfer files to KEB PLCs.

To run the application, click on „Tools“ – „KEB FTP“:

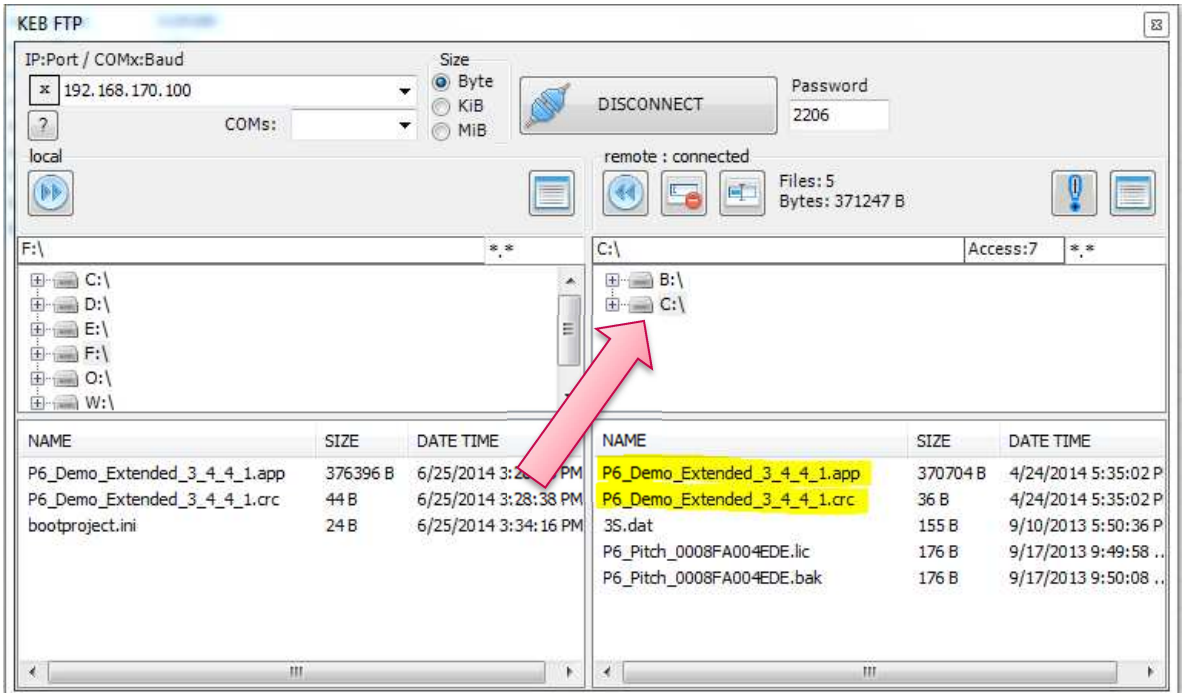



KebFtp application will start. On the left side of the application, the windows-style explorer shows the PC hard disk files. On the right side, the windows-style explorer shows the P6 control unit files. The P6 IP-address and password are needed and have to be adjusted before clicking on the button „Connect“:

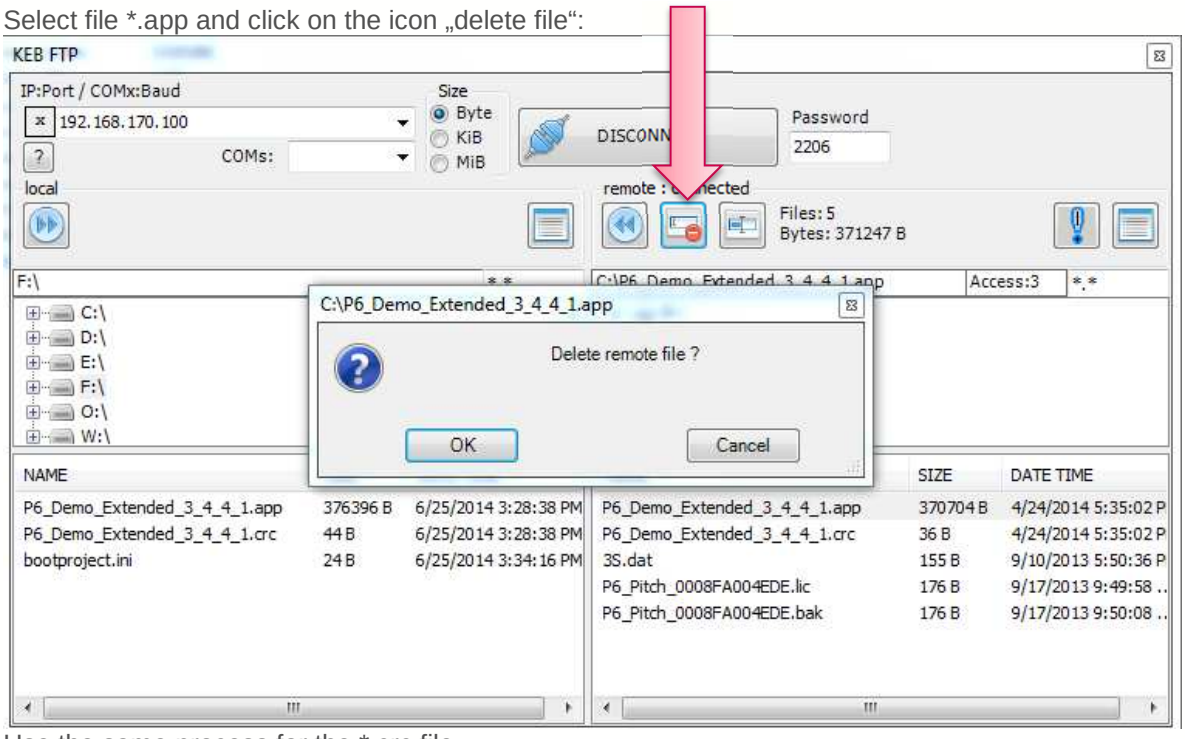



After pressing “connect“, the P6 directories appear. Then click on “C:“, and delete ***.app** file and ***.crc**

file. ATTENTION: You cannot delete both files at the same time; you have to delete first one, then the other:




Select file *.app and click on the icon „delete file“:



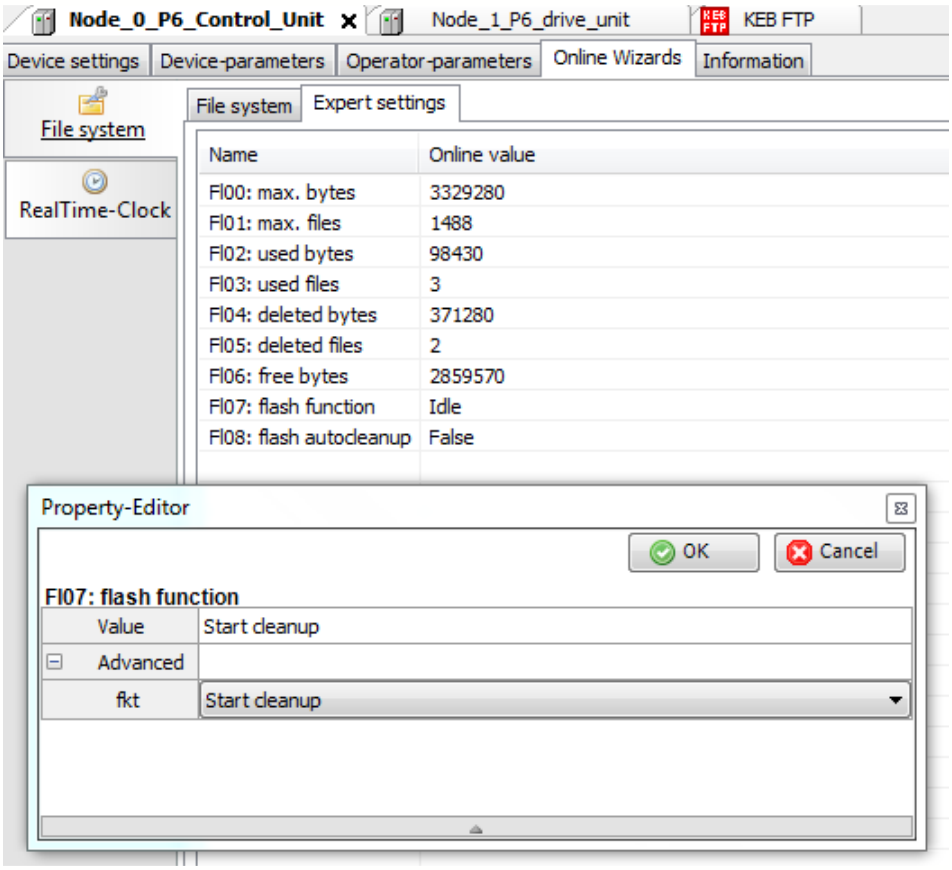

Use the same process for the *.crc file.

**ATTENTION! Don’t delete the *.lic file which is needed to run the P6 extended library!**

After this operation, the online wizard of the P6 control unit has changed, showing that some files were

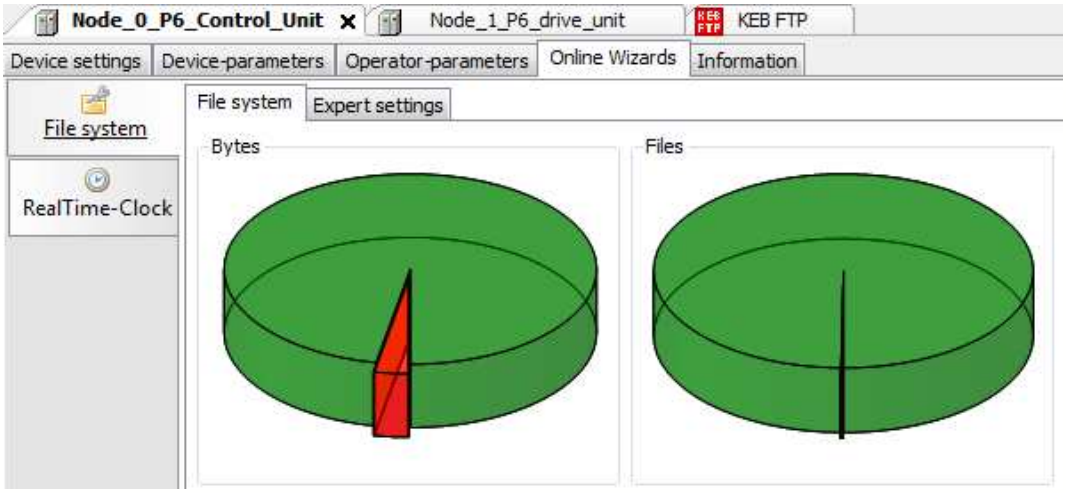
deleted:


The yellow colour indicates that some files were deleted, but memory is not cleaned up (explained in step 4). To do it, click on “expert settings“-- double click on parameter *Fl07: flash function* – select *start cleanup* and click on „OK“.




The cleanup process will start and take some seconds. Please check the online wizard until the whole

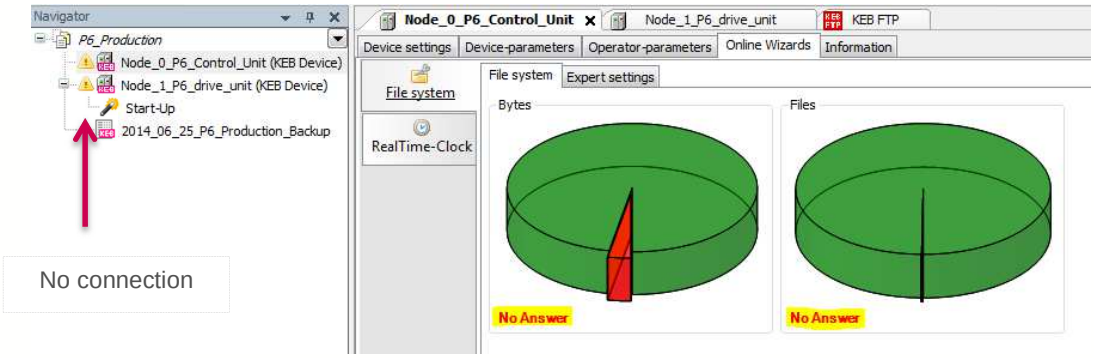
directory is cleaned up, obtaining the following picture, where the yellow colour has disappeared.



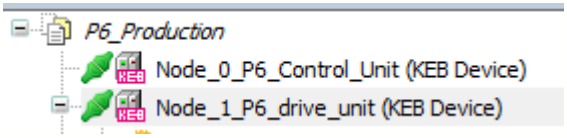

**ATTENTION: DO NOT SWITCH OFF THE P6 DURING AUTOCLEANUP OPERATION!!!**

## Step 6: Switch off – switch on P6

Switch off P6, wait until all status LEDs turn off, and COMBIVIS 6 has lost communication to the devices:




Then turn P6 on again. Communication to Combivis 6 will restart automatically, and the status will change to green colour:



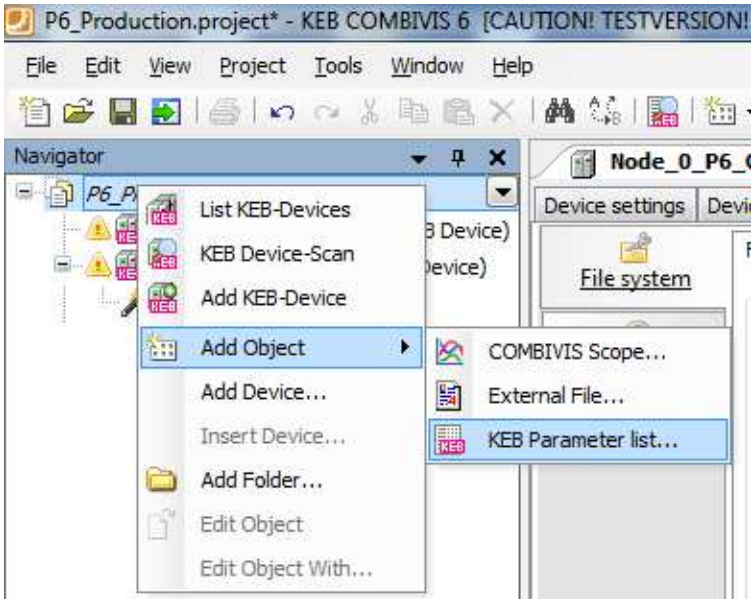

**Now the P6 control unit is ready to accept new boot project files!**

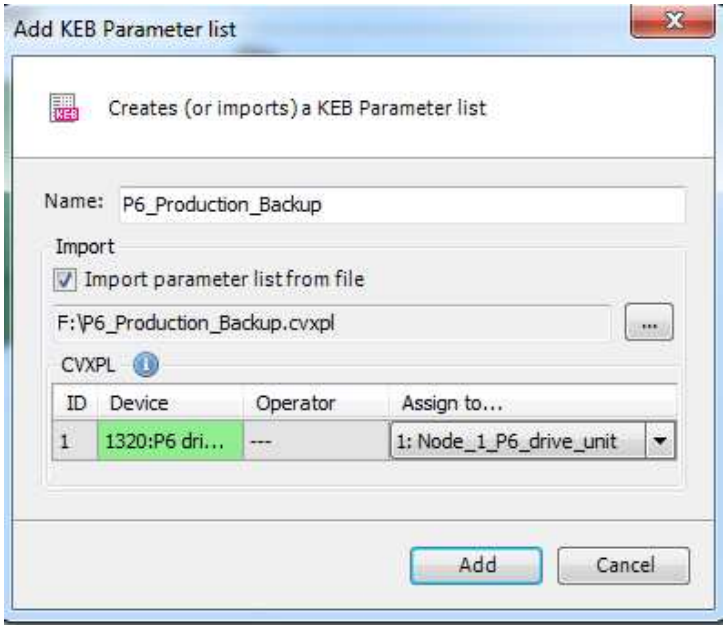
## Step 7: Download parameter list to P6 drive unit

This step will parameterize the **P6 drive unit** for:

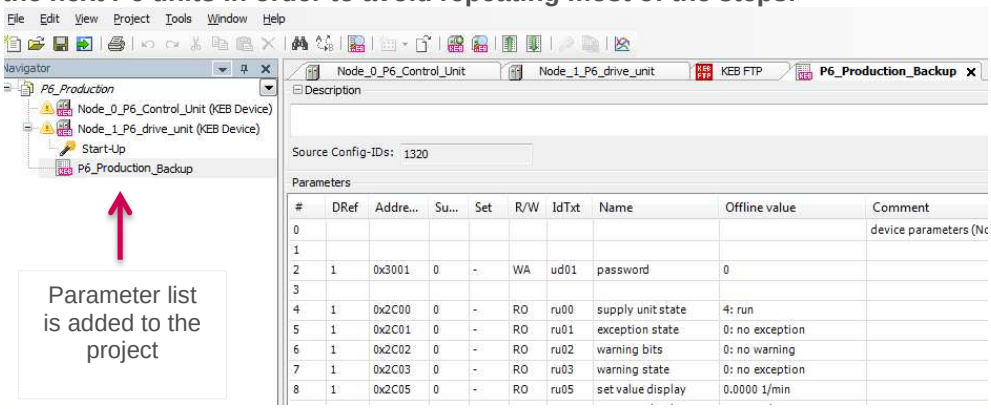
- Motor data adjustment.
- Acceleration/deceleration ramps.
- Emergency run configuration.
- ...

To attach a parameter list to a project, **select the project name in the navigator**, right click on it – „Add object“ – „KEB parameter list“ – „Import from“ and select your *.cvxpl file:

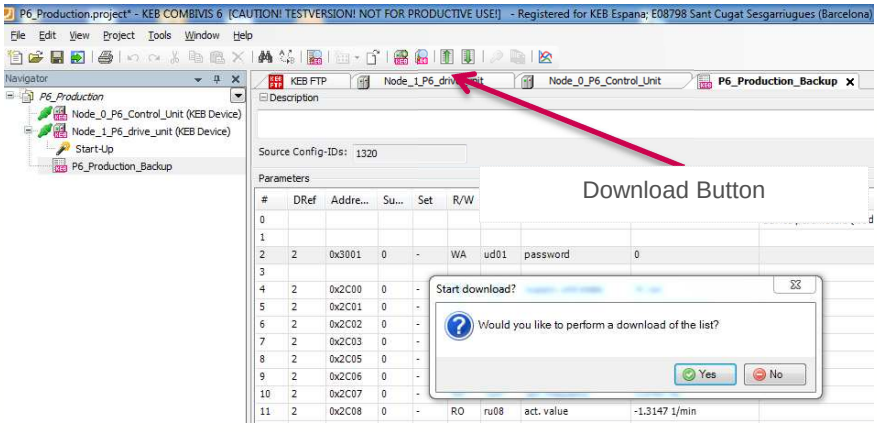




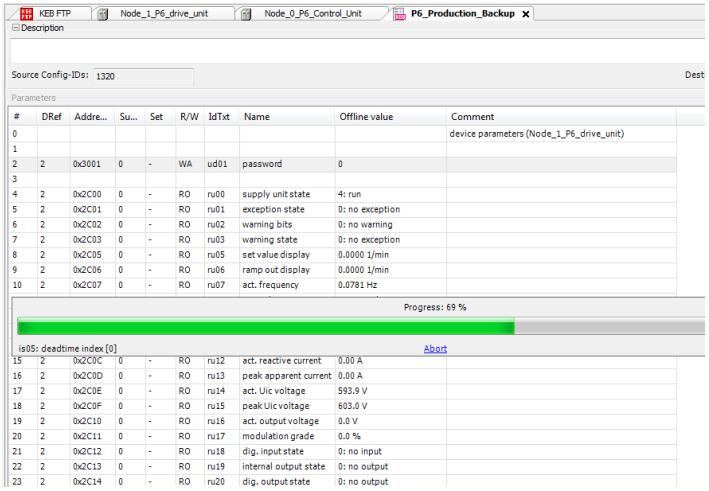

The parameter list will be added to the project. **At this moment, we can save the complete project to use it for the next P6 units in order to avoid repeating most of the steps:**




To download the parameter list to the P6 drive unit, click on download button:



Wait until process bar has finished:

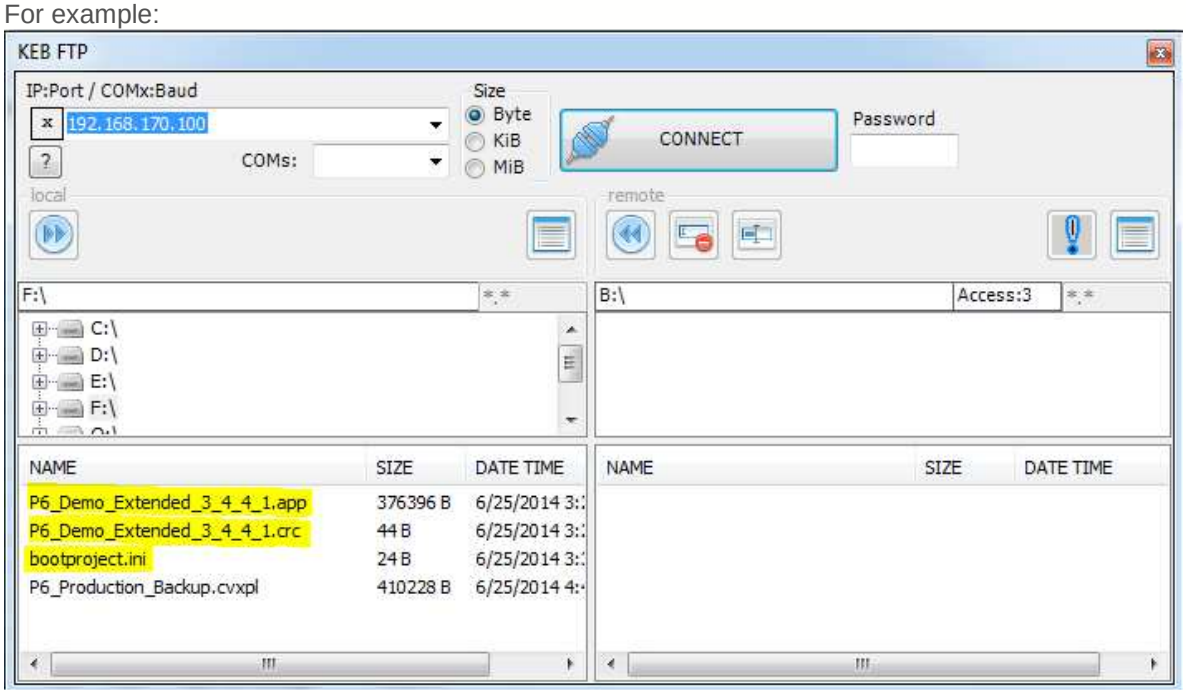



## Step 8: Load P6 boot project files by using KEB FTP

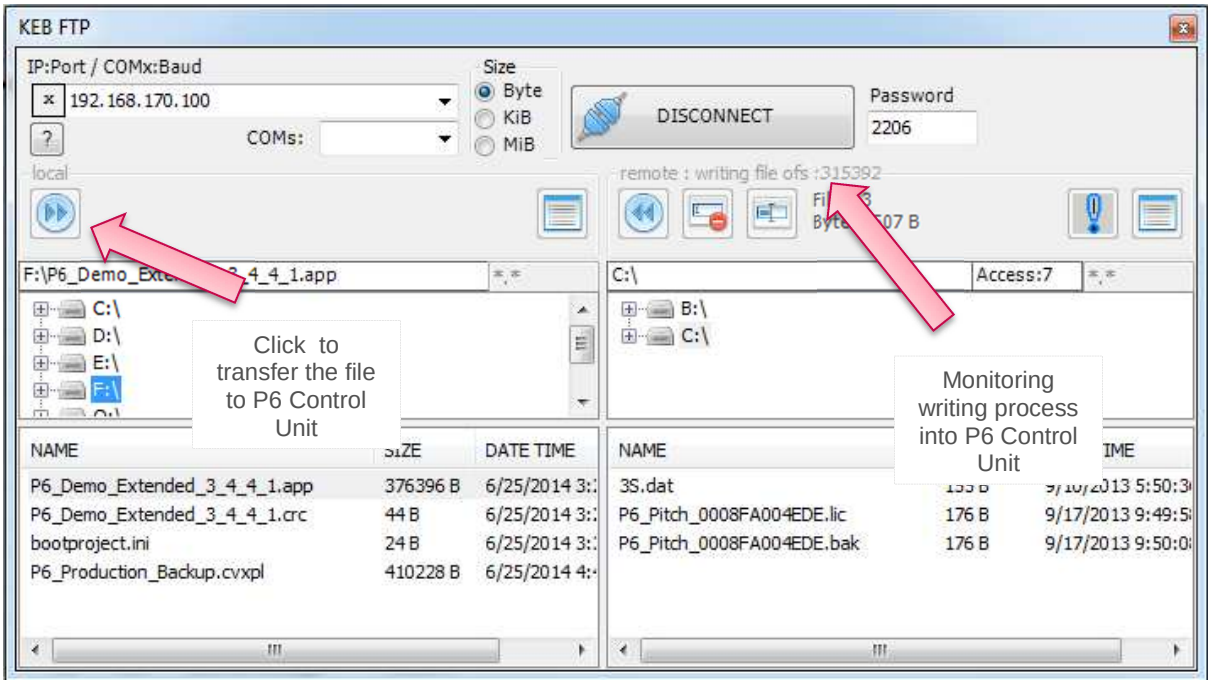
Select KEB FTP application again, and search in your PC for the following files:

-*.app
-*.crc
-*.ini

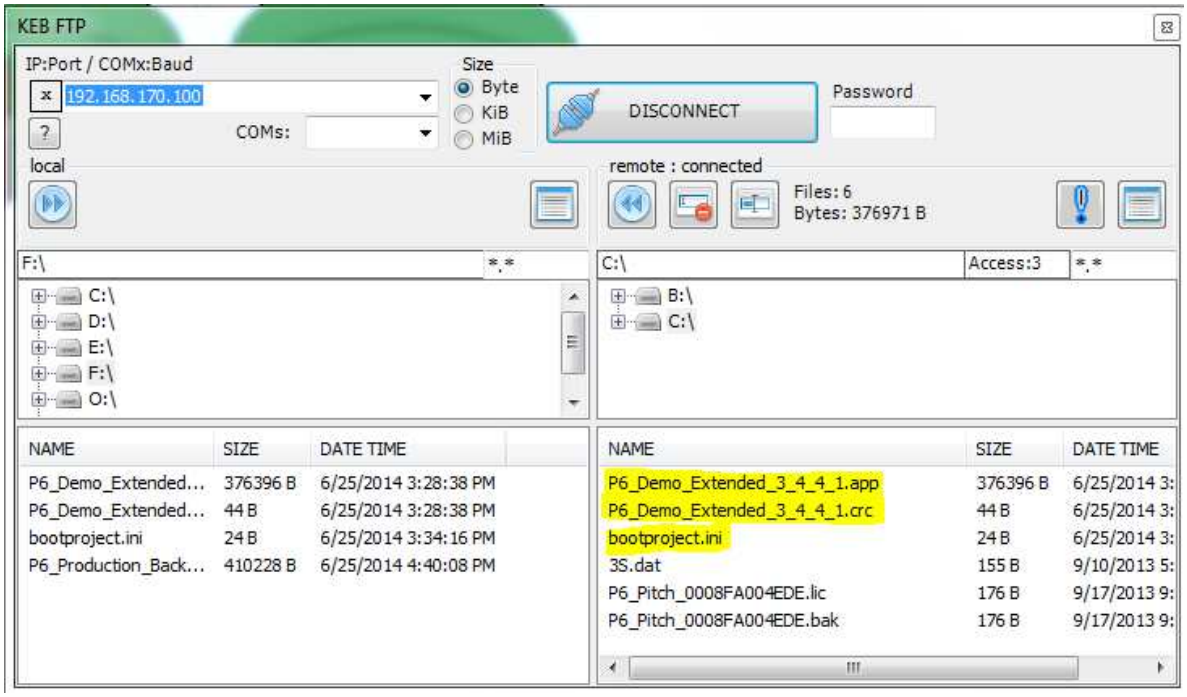
For example:



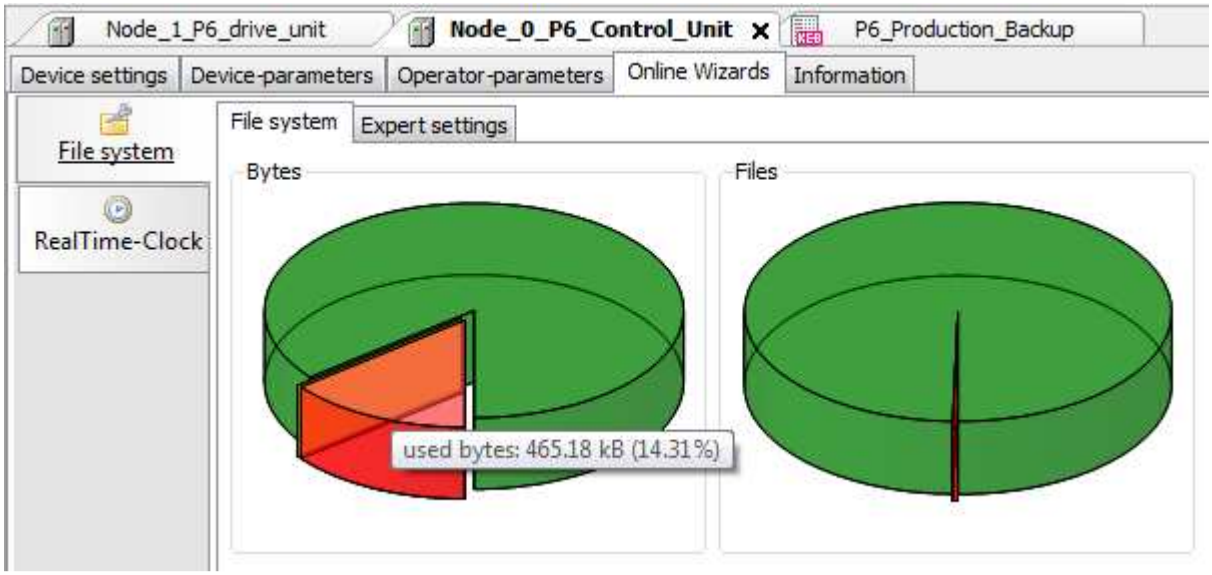

Enter P6 IP address and password. Then press „Connect“, select drive „C“ of the P6 control unit and transfer these 3 files to the P6 control unit, **one by one** (same behaviour as before with deleting files: it’s not possible to send more than one file at the same time).




When three files are saved, KEB FTP will look like:



Optional: Check online wizard to see used bytes:



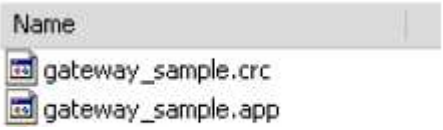

## Step 9: Switch off – switch on P6

Switch off P6, wait until all status LEDs turn off, and COMBIVIS 6 has lost communication to the devices (like step 7). Then turn on again, and check if PLC RUN Led is on. If yes: the boot project is running -> **PROCESS FINISHED!**

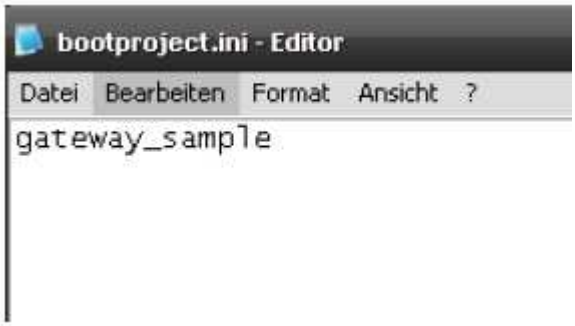
## Annex: Create a boot application for P6 in offline mode

A boot application can be created offline in **COMBIVIS studio 6** by clicking on the menu –Online – Create boot application:


Save the files somewhere at your hard disk:




Create an additional file, called bootproject.ini: This file has to contain exactly the name of the application. The name must not be longer than 80 characters:




Transfer all 3 files to the flash memory (directory “c“) of the control unit, using for example KEB FTP application.

The “Bootproject.ini” file will be deleted automatically when the boot application is loaded for the first time.

## Disclaimer

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The information contained in the technical documentation, as well as any user-specific advice in verbal or in written form are made to the best of our knowledge and information about the application. However, they are considered for information only without responsibility. This also applies to any violation of industrial property rights of a third-party.

Inspection of our units in view of their suitability for the intended use must be done generally by the user. Inspections are particular necessary, if changes are executed, which serve for the further development or adaption of our products to the applications (hardware, software or download lists). Inspections must be repeated completely, even if only parts of hardware, software or download lists are modified.

**Application and use of our units in the target products is outside of our control and therefore lies exclusively in the area of responsibility of the user.**

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