STM32WL workshop prerequisites

Prerequisites

1. Please, be familiar with STM32WL workshop theory part as online courses (subfolder MOOCs):
- LoRaWAN theory: https://www.youtube.com/playlist?list=PLnMKNibPkDnFyehmihirJ1fLeXpvNkdoY
- STM32WL security: https://youtube.com/playlist?list=PLnMKNibPkDnGg0wpC1_s4ACq5PuELBds5

2. Install STM32CubeIDE v1.5.1, see "STM32CubeIDE – configuration"slides
https://www.st.com/content/st_com/en/products/development-tools/software-development-tools/stm32-software-development-tools/stm32-ides/stm32cubeide.html

3. Install STM32CubeWL v1.0.0 software package, see "STM32CubeIDE – configuration"slides
https://www.st.com/content/st_com/en/products/embedded-software/mcu-mpu-embedded-software/stm32-embedded-software/stm32cube-mcu-mpu-packages/stm32cubewl.html

4. Install STM32CubeProgrammer v2.5.0
https://www.st.com/content/st_com/en/products/development-tools/software-development-tools/stm32-software-development-tools/stm32-programmers/stm32cubeprog.html

5. Install terminal sw (i.e. TeraTerm) in order to see Virtual Com Port application debug trace

6. NUCLEO-STM32WL55JC board and microUSB cable

7. P-NUCLEO-LRWAN2, microUSB cable and 5V/2A power supply including micoUSB cable (supply of RF part of gateway), Ethernet cable, see also UM2587
https://www.st.com/resource/en/user_manual/dm00620948-getting-started-with-the-pnucleolrwan2-and-pnucleolrwan3-starter-packs-stmicroelectronics.pdf

Prerequisites

8. LoRaWAN infrastructure, gateway / network server / application server:

- **Recommended:** P-NUCLEO-LRWAN2 gateway + external service provider, configuration procedure in ...Tutorials/**Loriot_server_setup...**
- Option 1: P-NUCLEO-LRWAN2 gateway + local NS/AS, configuration procedure in ...Tutorials/LoRaWAN_Server_tutorial... , related Node-RED flow file: *flows_nodered.json*
- Option 2: Multitech Conduit LoRaWAN gateway/NS/AS, configuration procedure in .../Tutorials/STM-WL Instruction for Trainers… , related Node-RED flow file: *Flow_Multitech.txt*

Node-RED flows and related test binary files can be found in ...Hands-on/Attendee_resources

9. **Check your setup** implementing the first STM32WL project described in **1_STM32WL_WS_Led_Blinking.pdf** .
   Please, **do not skip this point** and save both your and other participant time during workshop facilitation.

10. It would be practical to use 2 screens in order to follow the slides presented by trainer and modify the hands-on source code accordingly.

11. Options or trainer only

11.1. X-NUCLEO-LPM01A in order to monitor current consumption profile,
https://www.st.com/content/st_com/en/products/evaluation-tools/product-evaluation-tools/stm32-nucleo-expansion-boards/x-nucleo-lpm01a.html
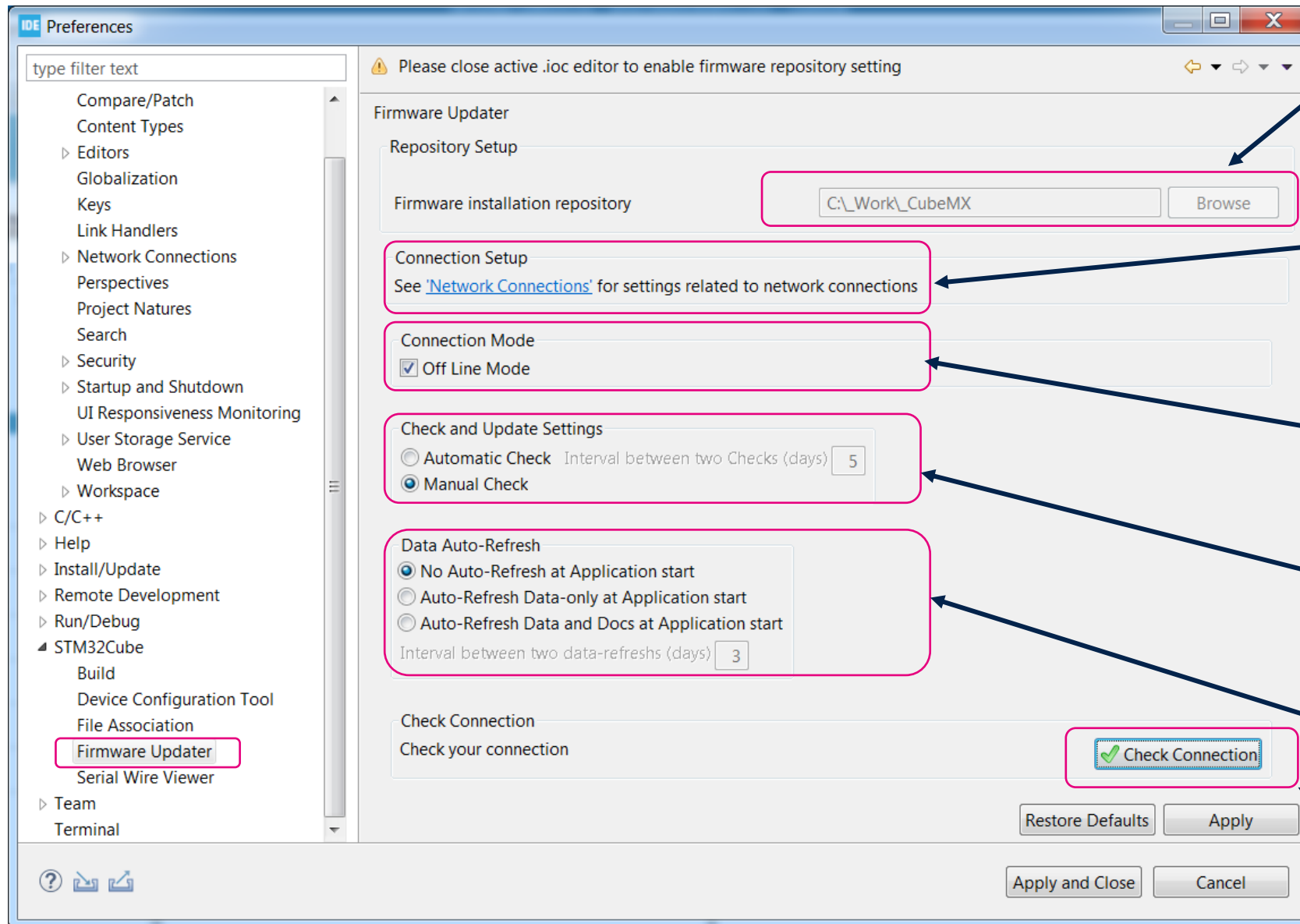
11.2. STM32CubeMonPwr
https://www.st.com/content/st_com/en/products/development-tools/software-development-tools/stm32-software-development-tools/stm32-performance-and-debuggers/stm32cubemonpwr.html

STM32CubeIDE - configuration

Firmware updater configuration
Window->Preferences

Libraries installation location (active only if **there is no open project** in current workspace)

Connection setup (redirection to General->Network Connection preferences)
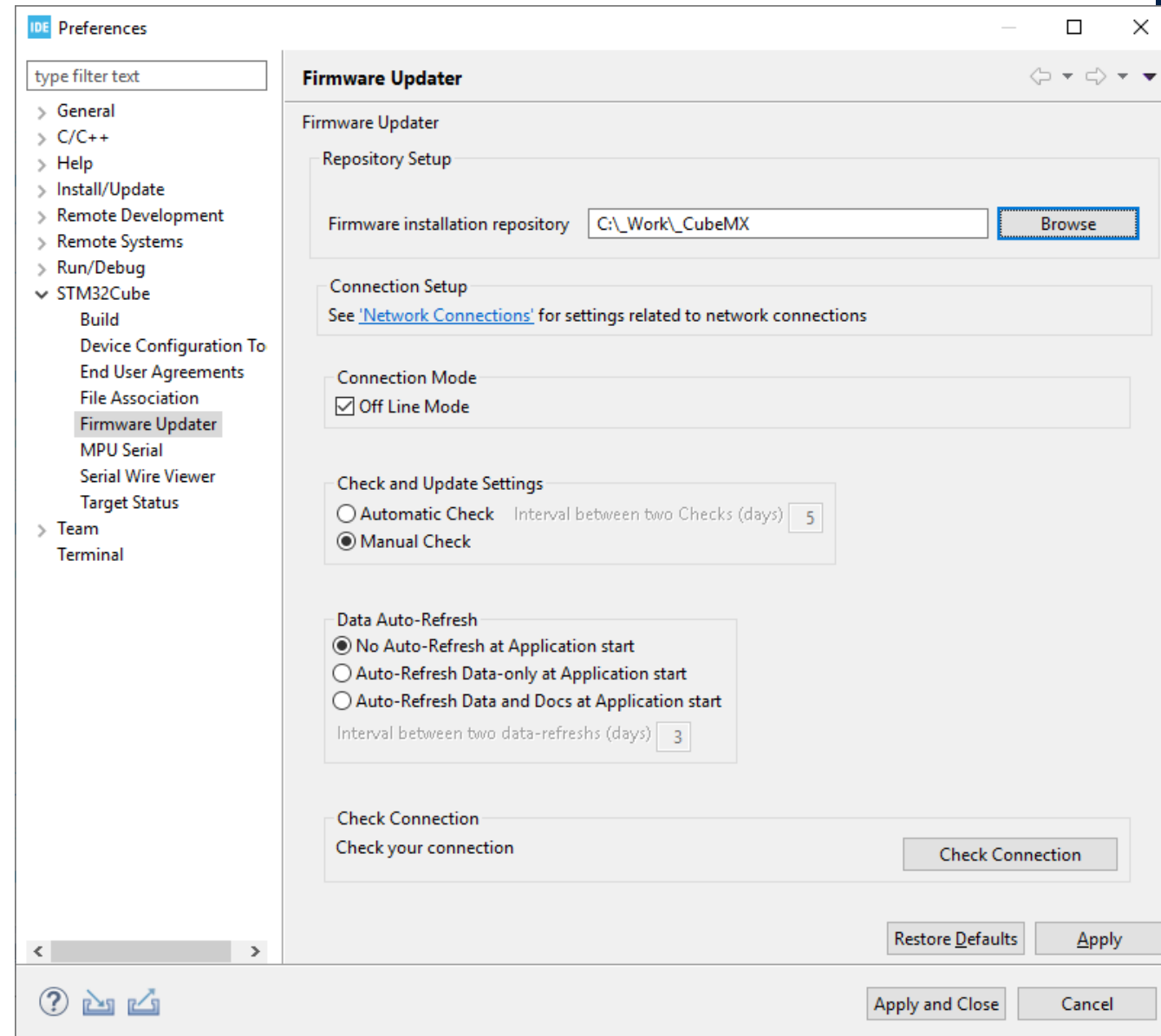
Connection mode (on or off-line)

Check for updates settings (automatic or manual)
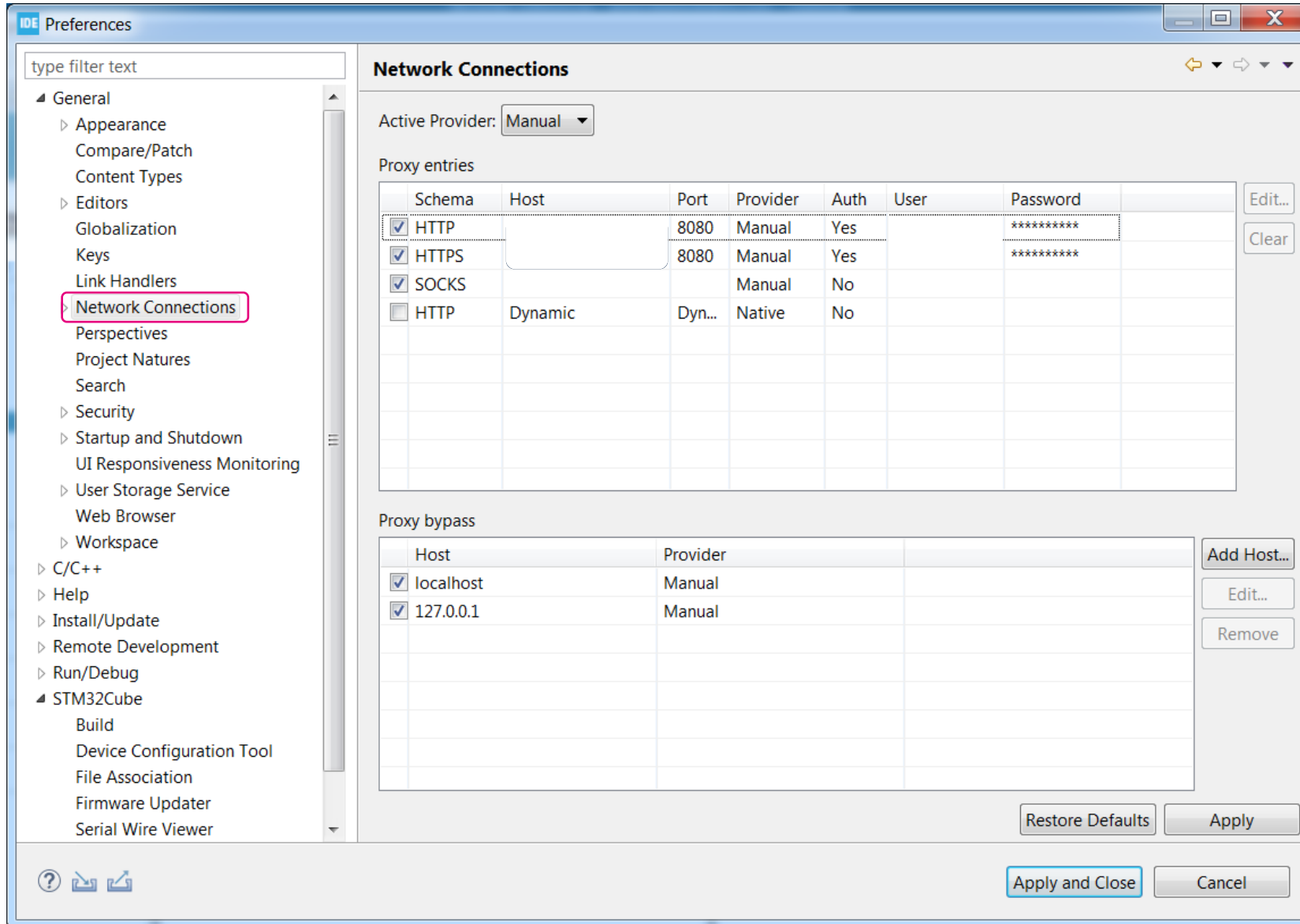
Data auto-refresh settings

Checking the connection

Updater configuration – fastest startup

- Those settings will allow you fastest start of new project within current workspace

- Unfortunately, those settings will be set to default values on new workspace creation

Network connections configuration
Window->Preferences

a. Proxy entries for HTTP, HTTPS, SOCKS

b. Proxy bypass settings

Manage installed libraries

- To run configuration:

    Help-> Manage embedded software packages
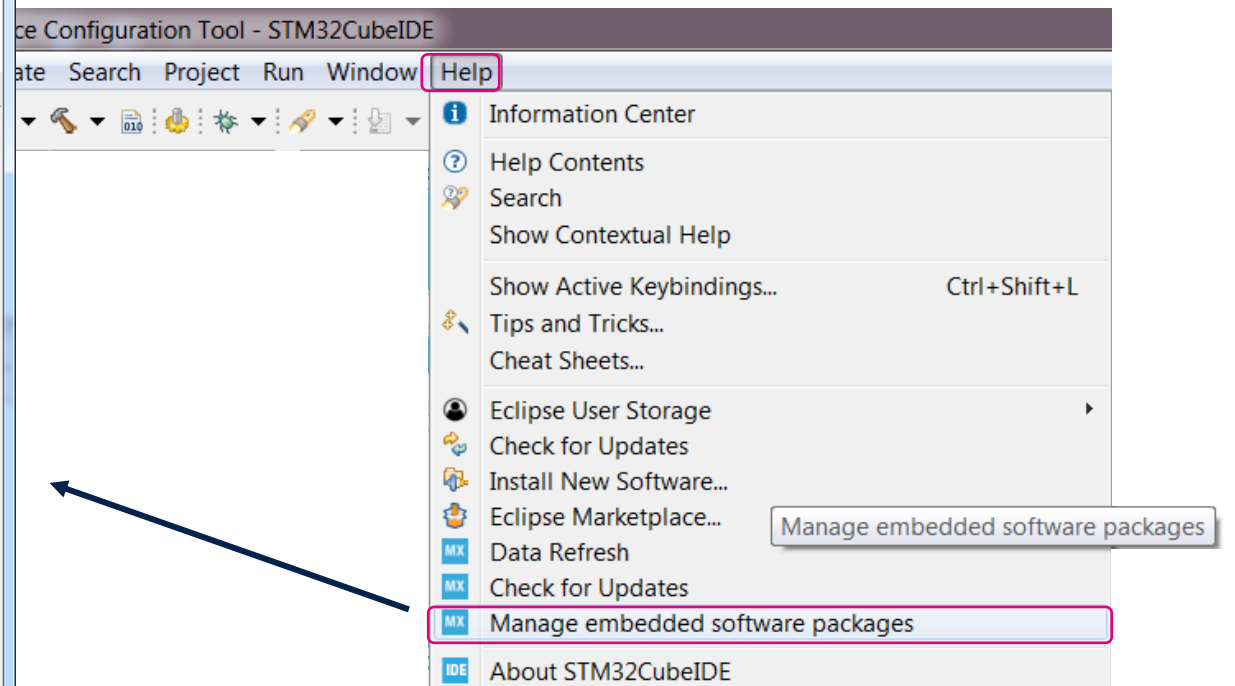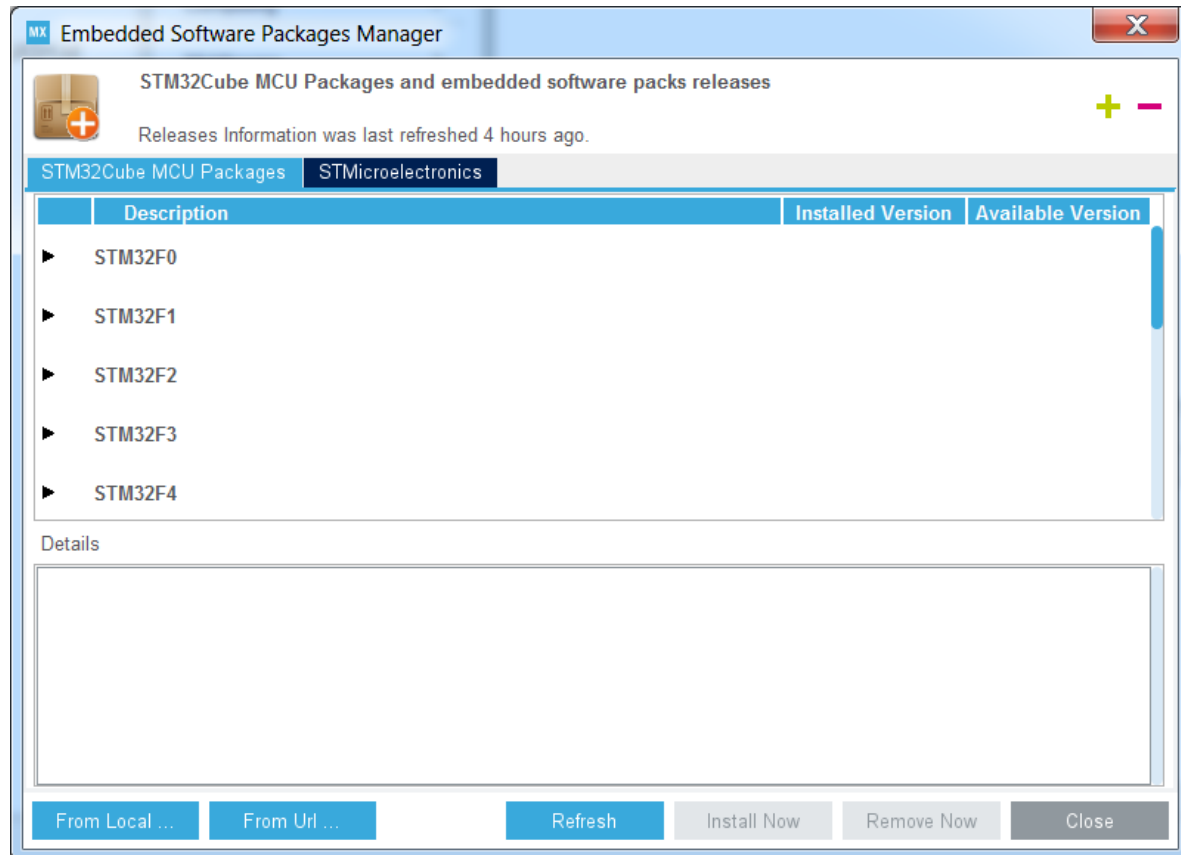
Manage installed libraries

Installed library

Install library from local file (already downloaded library pack)

Install marked new libraries

Remove marked libraries

Thank you

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