2017 STM32Cube with System Workbench for STM32 workshop

Pre-workshop Installations

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System Requirement

- Laptop
  - Administrative privileges needed for driver/software install and later during the workshop for compiling codes.

- Windows Operating System
  - XP/Vista/Win7/Win8

- **Please bring your own USB A to mini-B cable**

Step 1: Download the following files

Register & download the following softwares from the links provided. Refer to the installation procedures in the following pages.

- Software Development Environment:
  - Workbench for STM32 installer:

    www.openstm32.org/Downloading+the+System+Workbench+for+STM32+installer

    *Important: Select the right version for your operating system (**32bit or 64bit**), also required Java installed*

- STLink USB driver (STSW-LINK009) : www.st.com/stlinkv2

- STM32 STLink Utility (STSW-LINK004) : www.st.com/stlinkv2

- STM32 Virtual COM Port Driver : www.st.com/web/en/catalog/tools/PF257938

- STM32 STM-Studio: www.st.com/content/st_com/en/products/development-tools/software-development-tools/stm32-software-development-tools/stm32-performance-and-debuggers/stm-studio-stm32.html

Step 1a: Download the following files

- STM32CubeMX: www.st.com/stm32cube

  Important: *The STM32CubeMX requires Java Run Time Environment 1.8 (JRE version 1.8.0_45 or newer)* ***https://java.com/download***

- STM32CubeL4 firmware package: www.st.com/content/st_com/en/products/embedded-software/mcus-embedded-software/stm32-embedded-software/stm32cube-embedded-software/stm32cubel4.html

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Step 2: AC6 STM32 Installation

- We will be using AC6 System Workbench (SW4STM32) for in this session.

- **SW4STM32 for STMicroelectronics STM32L4 mcu**
  - Verify that your PC has installed Java

- AC6- Tools offers a complete approach, ready to work and expandable for future needs
  - A complete graphical, user friendly environment based on Eclipse
  - GCC-based full fledged toolchain, no size limitation

- The STM32 peripherals can be configured using STM32CubeMX and the resulting project then exported to AC6 SW4STM32

Step 2a: AC6 STM32 Download

- Download AC6 STM32:
  www.openstm32.org

- Click on **download area** as shown in the diagram

- Select
  install_sw4stm32_win64bits-v1.14.0.exe

- If you download earlier on just update with newest version

Step 1: Explore

- Search for Content
- Visit Wiki Pages
    - You can start from **Wiki Home**
- Read Blogs and Forums
- Look at the FAQs
- Install System Workbench for STM32 - Bare Metal Edition
    - Instructions are provided **here**
    - You can download the System Workbench for STM32 installer from the **download area**
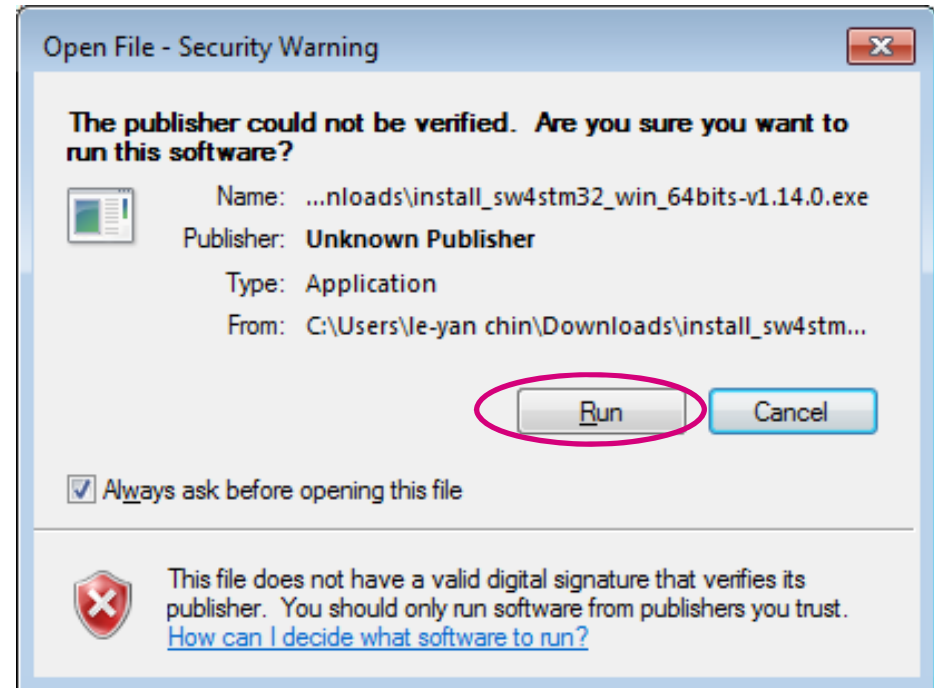
Windows 7

The Windows version is available for 32 and 64 bit systems. Note that we will need to install a device driver to communicate with the ST-Link debug probe, so you **must** select the installer that fits your system. Installing the 32 bit version on a 64 bit Windows system will **not** work. If you have problems downloading an executable file (.exe), try downloading and extracting the ZIP file.

- Latest Windows 7 64 bit installer (Version v1.14.0, updated on Friday, March 10, 2017 at 09:17:19 CET): install_sw4stm32_win_64bits-v1.14.0.exe or install_sw4stm32_win_64bits-v1.14.0.zip
    - The latest installer can always be retrieved from install_sw4stm32_win_64bits-latest.exe or install_sw4stm32_win_64bits-latest.zip
- Latest Windows 7 32 bit installer (Version v1.14.0, updated on Friday, March 10, 2017 at 09:17:21 CET): install_sw4stm32_win_32bits-v1.14.0.exe or install_sw4stm32_win_32bits-v1.14.0.zip
    - The latest installer can always be retrieved from install_sw4stm32_win_32bits-latest.exe or install_sw4stm32_win_32bits-latest.zip

Step 2b: AC6 STM32 Installation

- Click Run to install *System Workbench for STM32* installer.
    - install_sw4stm32_win_64bits-v1.14.exe

- You may refer to the installation instructions from the AC6 website. Click here.
    - www.openstm32.org/Installing+System+Workbench+for+STM32+with+installer
    - Choose installation path (default: C:\Ac6\SystemWorkbench). **NOTE: Avoid paths with white spaces included like "C:\Program Files\...".**

Open File - Security Warning

The publisher could not be verified. Are you sure you want to run this software?

Name: ...nloads\install_sw4stm32_win_64bits-v1.14.0.exe

Publisher: **Unknown Publisher**

Type: Application

From: C:\Users\le-yan chin\Downloads\install_sw4stm...

Run   Cancel

☑ Always ask before opening this file

This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust. How can I decide what software to run?

Step 2c: AC6 STM32 updates

- Open *System Workbench for STM32*

- Configure your own workspace as shown at right
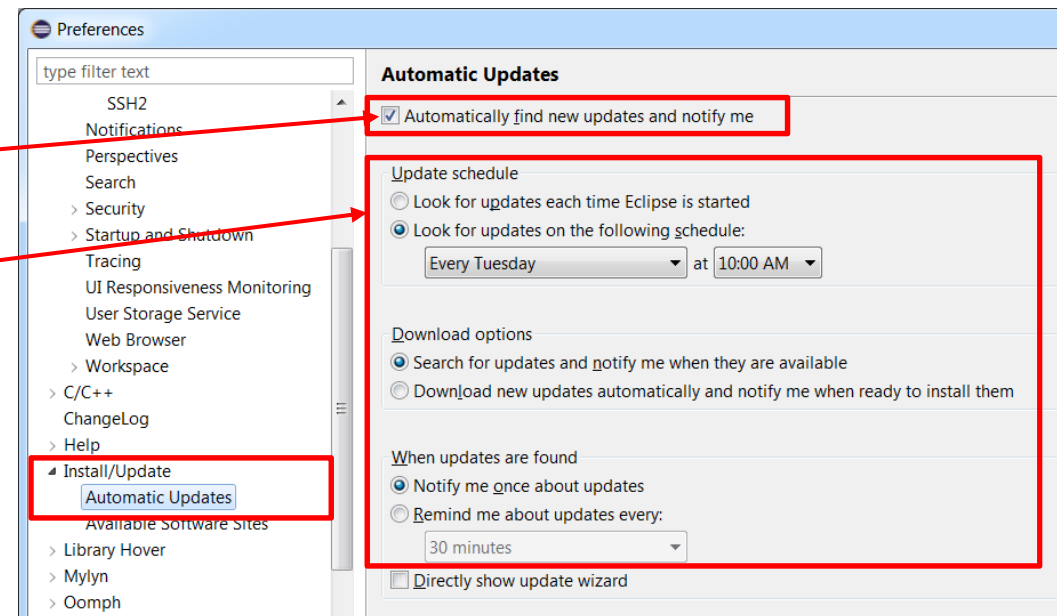
- Check for any updates as shown at below diagram
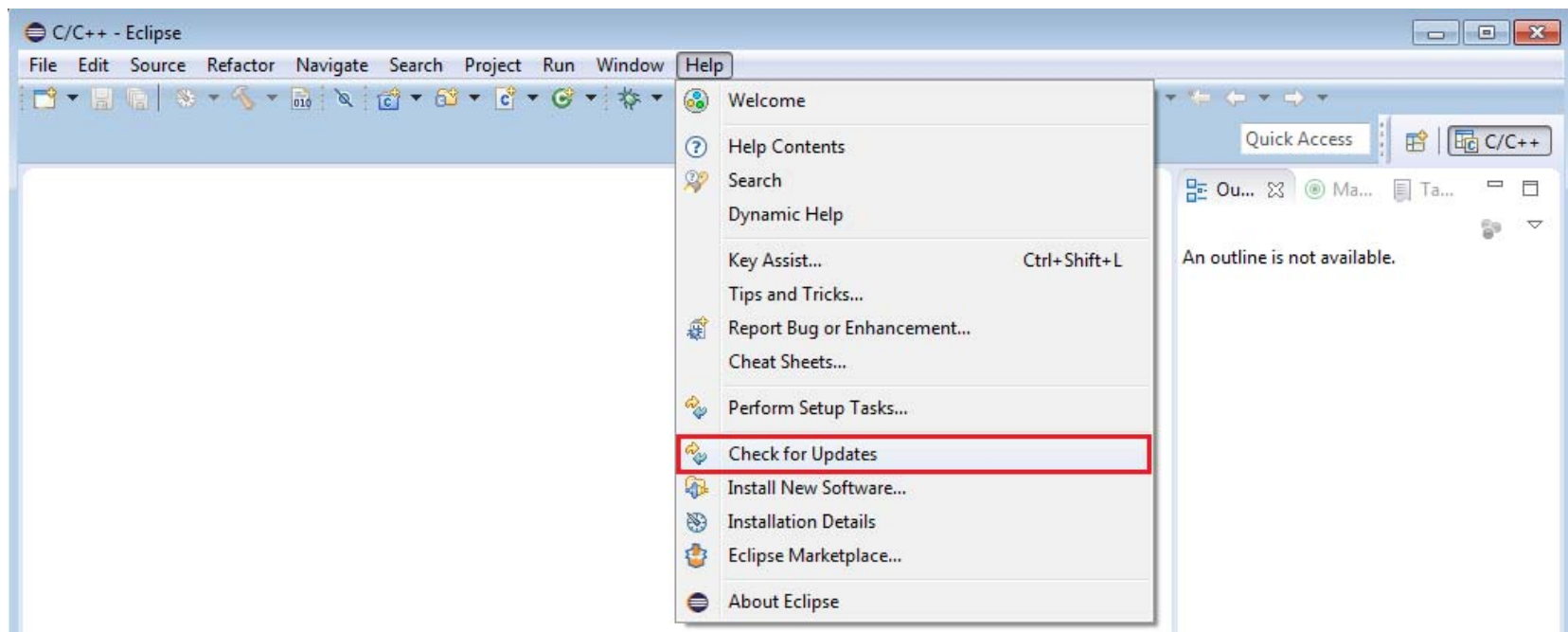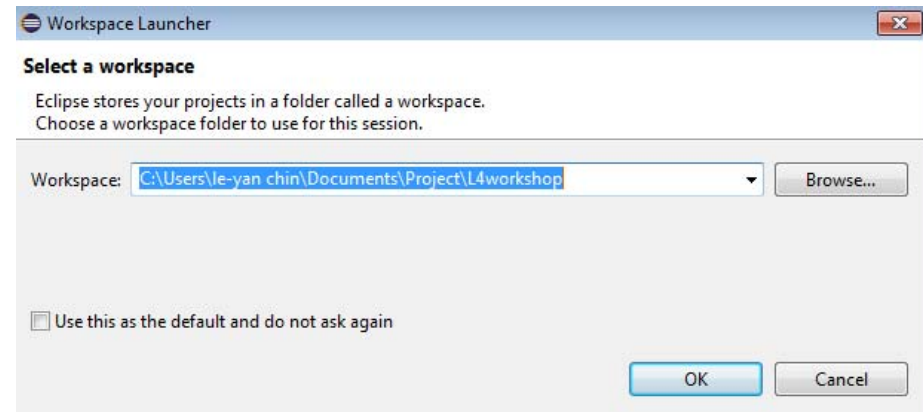
Step 2d: Update SW4STM32 to current version

configuration of automatic updates

In order to configure automatic finding new updates, please follow the procedure within SW4STM32:

1. Window -> Preferences

2. Install/Update –> Automatic Updates

3. Check "Automatically find new updates and notify me"

4. Configure Update schedule, download options and action to be done once updates are found accordingly

Checkpoint #1
verification of SW4STM32 installation

Help->About Eclipse

Step 3: ST-Link USB driver And ST-Link Utility

- Download the ST-Link USB drivers from www.st.com/stlinkv2 (STSW-LINK009) and install the drivers.

- Also download the STM32 ST-Link Utility from www.st.com/stlinkv2 (STSW-LINK004) and install the utility.
  - The STM32 ST-Link Utility is an STM32 programming software using the ST-Link programmer/debugger tool.
  - Besides programming capability, the tool can also be used to verify the ST-Link driver installation and connection to the target MCU.
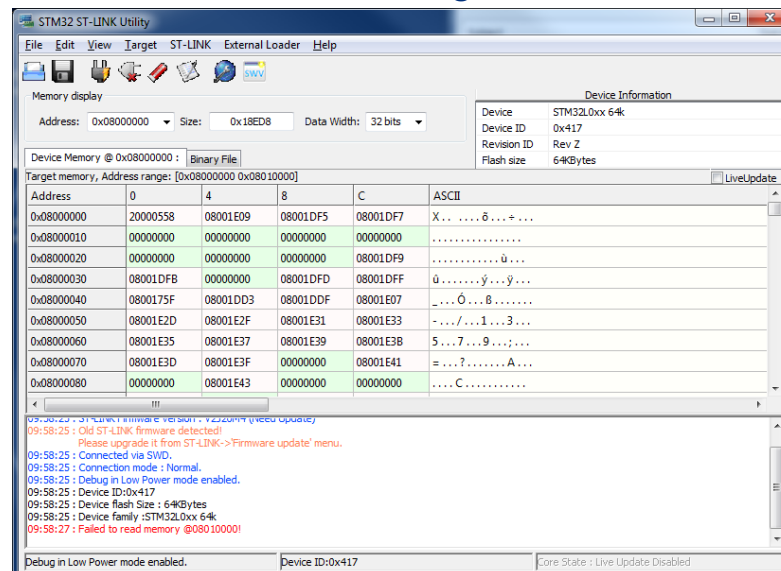
Step 4: STM32 Virtual COM Port Driver

- Download the STM32 Virtual COM Port Driver from: http://www.st.com/web/en/catalog/tools/PF257938

- Open the readme.txt file and follow the instructions to install the driver.

Checklist

❑Download, install SW4STM32 and upgrade it to the newest version

❑Download and install STM32CubeMX

❑Download and install STM32L4-Cube Libraries

❑Download and install STM32 STLink Utility

❑Download and install ST-Link V2.1 drivers

❑Download and install STMStudio

❑Download and install terminal application (i.e. Termite or HTerm)

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End