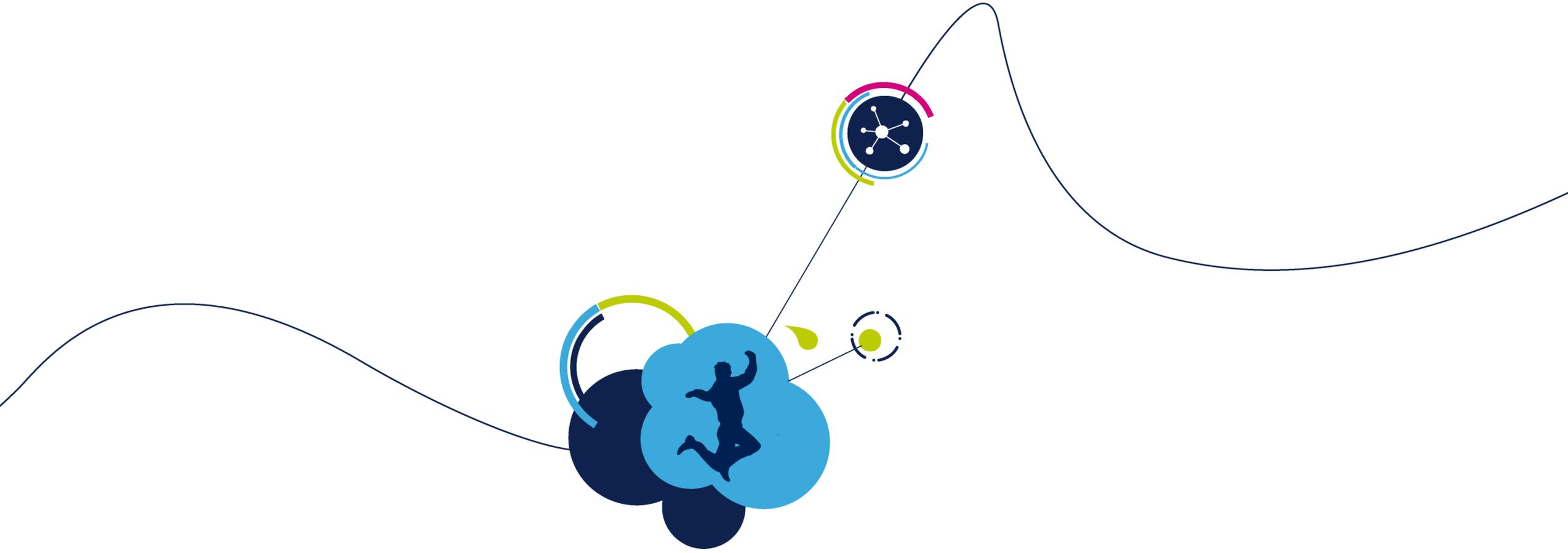




# STM32 Ecosystem workshop

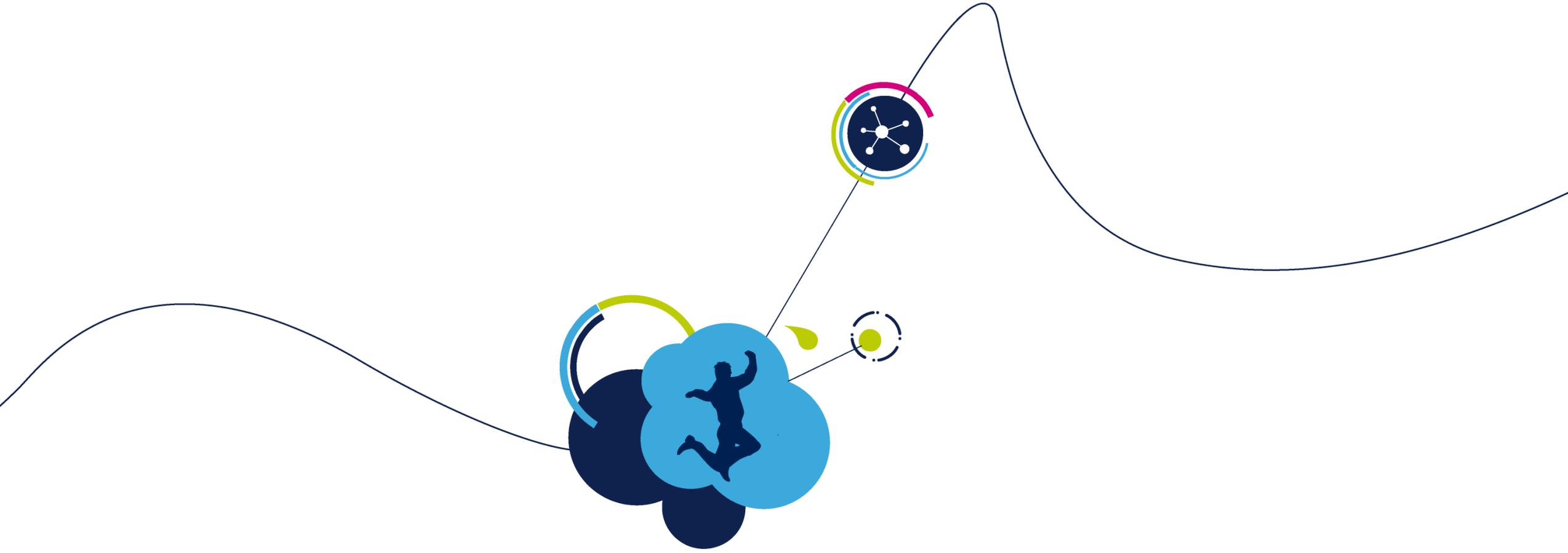
T.O.M.A.S Team





# Installation of the tools and drivers

- Download, install SW4STM32 and upgrade it to the newest version
- Download and install STM32CubeMX
- Download and install STM32L0-Cube and 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)



# Installation of SW4STM32

System Workbench For STM32

# Install SW4STM32 toolchain 1/2

installation from MS Windows

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- In order to download SW4STM32 toolchain you need to register on [www.openstm32.org](http://www.openstm32.org) website
- After registration and logging, please either go to the web itself and:
  - Select „System Workbench for STM32” from left side menu (it is called SW4STM32 as well).
  - Select „Downloading the System Workbench for STM32” link from Table of Contents.
  - Download and run  
[install\\_sw4stm32\\_win\\_64bits-latest.exe](#) for 64-bit or  
[install\\_sw4stm32\\_win\\_32bits-latest.exe](#) for 32-bit MS Windows.

*In our session we will use “installation from MS Windows” option only.*

# Install SW4STM32 toolchain 2/2

installation from MS Windows

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- Launch *System Workbench for STM32* installer.
- You will receive pop-up error message displayed in case proper JavaRE version is not installed on your system. Click "Ok" to get redirected to the Oracle JAVA website.
  - **Warning** : The architecture version for System Workbench for STM32 **MUST** follow your Java architecture version. SW4STM32 64-bits will only work with JavaRE 7 (and newer) 64-bits etc.
- The first page describes the product features. Get familiar, click "Next" to continue.
- Read and accept the license agreement to continue installation. Click "Next" to continue.
- Choose installation path (default: C:\Ac6\SystemWorkbench). Click "Next" to continue.  
**NOTE: Avoid paths with white spaces included like "C:\Program Files\..."**.
- Follow the installation and, after "Finish" message is displayed, click "Quit" to exit installer.

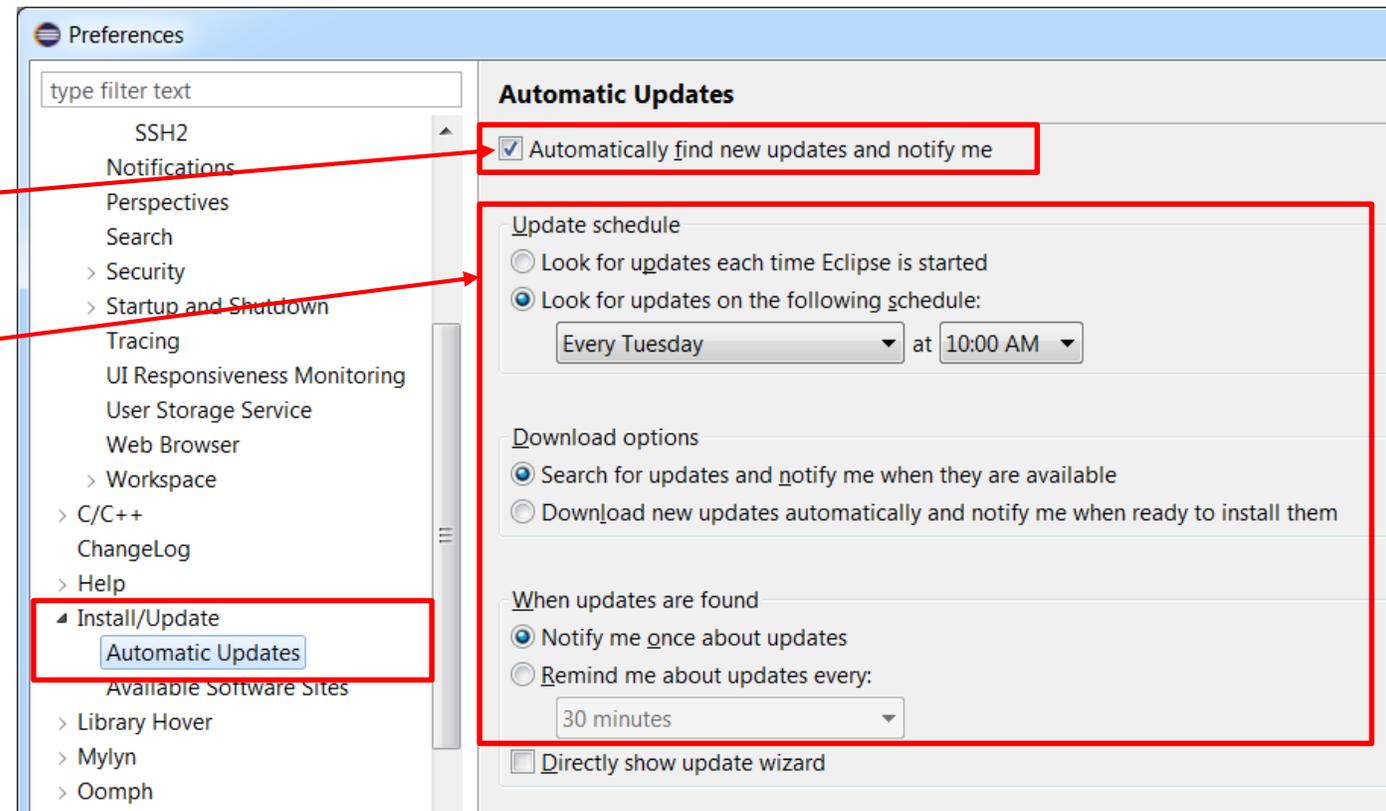
# Update SW4STM32 to current version

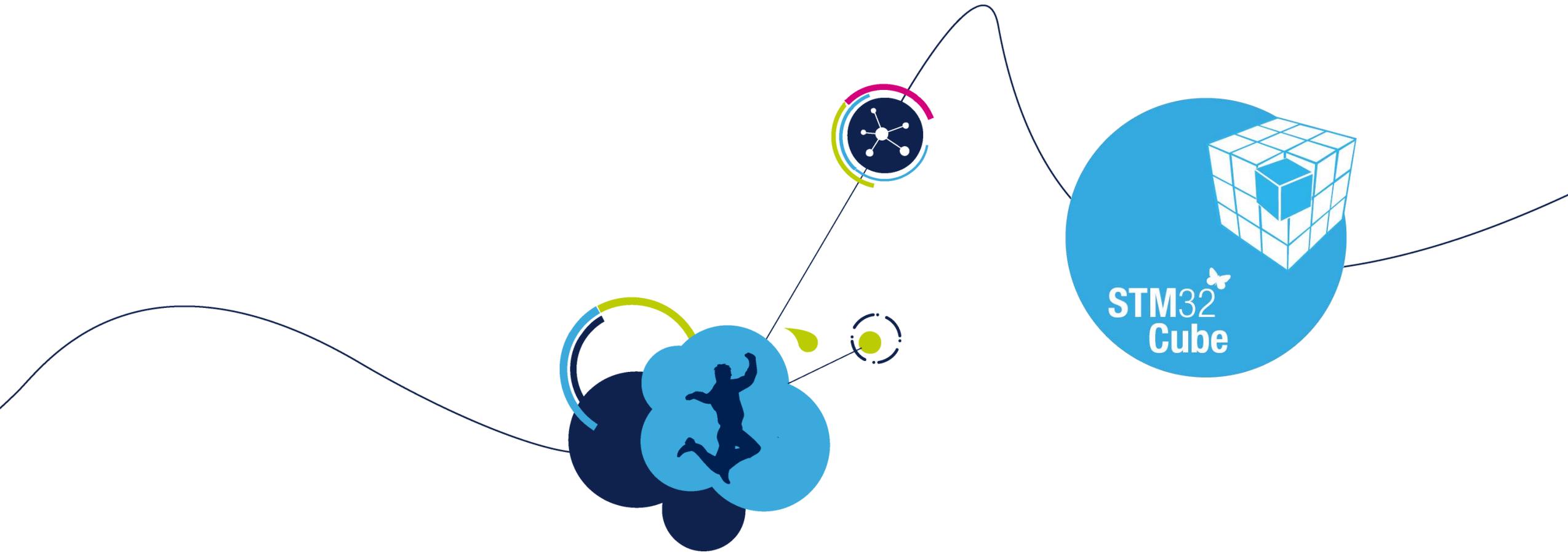
## configuration of automatic updates

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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





# STM32CubeMX installation

Standalone version



# STM32CubeMX install

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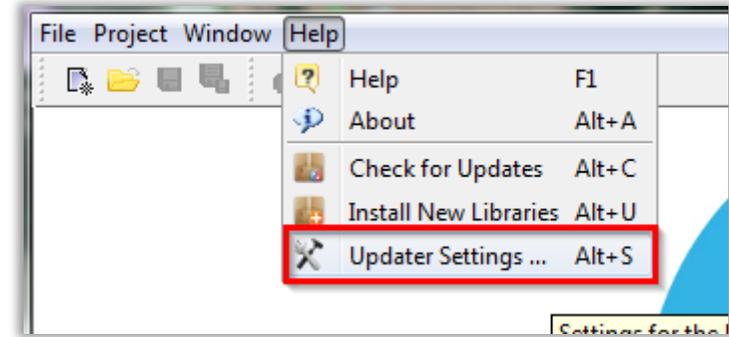
- STM32CubeMX tool
  - <http://www.st.com/stm32cube>
- The STM32CubeMX tool needs Java
  - Please check whether you have latest Java installed on your PC, for sure 32-bit and 64-bit version
- You can either download STM32CubeL0 and STM32CubeL4 packages directly from STM32CubeMX or download them offline using the below links and install as local (“**From loc...**” button)
  - [STM32CubeL0](#)
  - [STM32CubeL4](#)



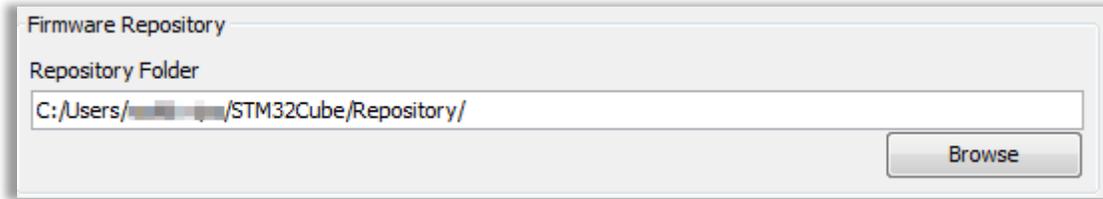
# STM32CubeMX configuration

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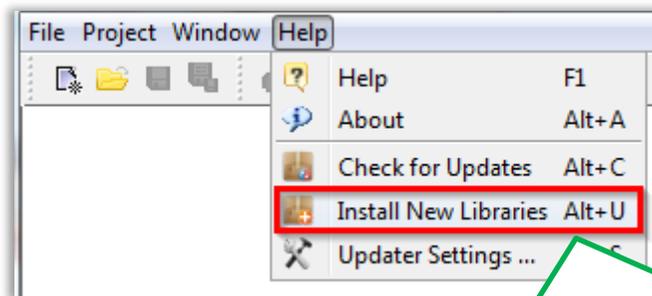
- In case you download packages from web, you need to define place where they will be stored (repository)
- MENU>Help>Updater Settings...
- You will see current repository folder location
  - Default is C:/User/Acc\_name/STM32Cube/Repository/
  - **NOTE: In case your repository path contains diacritics, STM32CubeMX may fail to recognize them correctly. If this happens, change your repository path to contain raw Latin only (ex: C:/Repository)**
- You can either download STM32 packages manually and put them into this folder or STM32CubeMX can do it for you if configured correctly



- The comparison of the STM32CubeMX repository settings and folder structure



- In case you want STM32CubeMX to download these files automatically
  - MENU>Help>Install New Libraries
  - Select required libraries
  - Force download with button “Install Now”

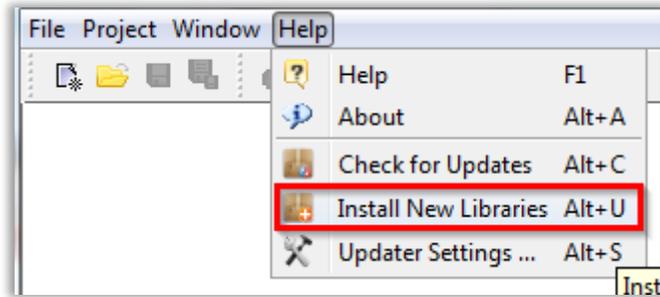


STM32CubeMX can download for  
you repository packages  
automatically



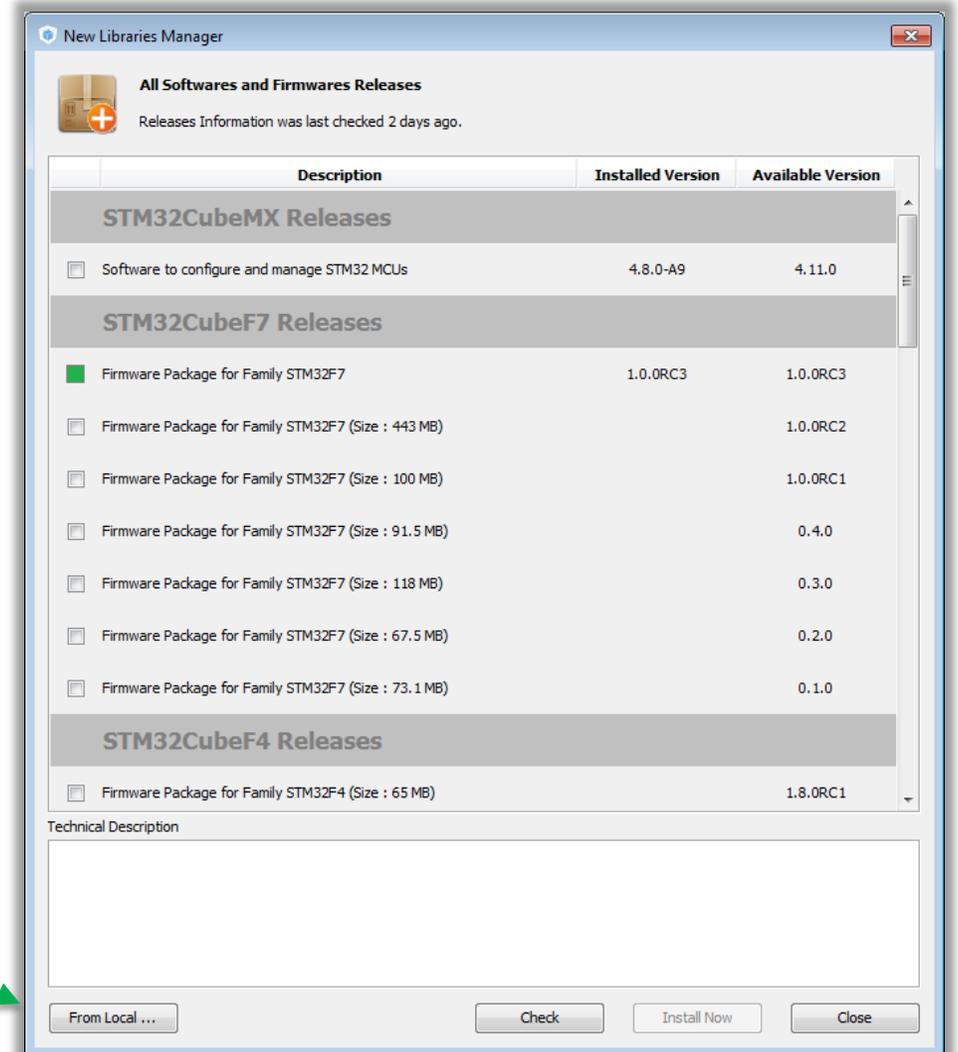
# STM32CubeMX configuration

- The comparison of the STM32CubeMX repository settings and folder structure
- In case you want to install files manually
  - MENU>Help>Install New Libraries



- Click “From Local...” button
- Browse to select file to be installed  
i.e. from provided USB stick package:

\\HAL\STM32Cube\_FW\_L4\_V1.5.0.zip

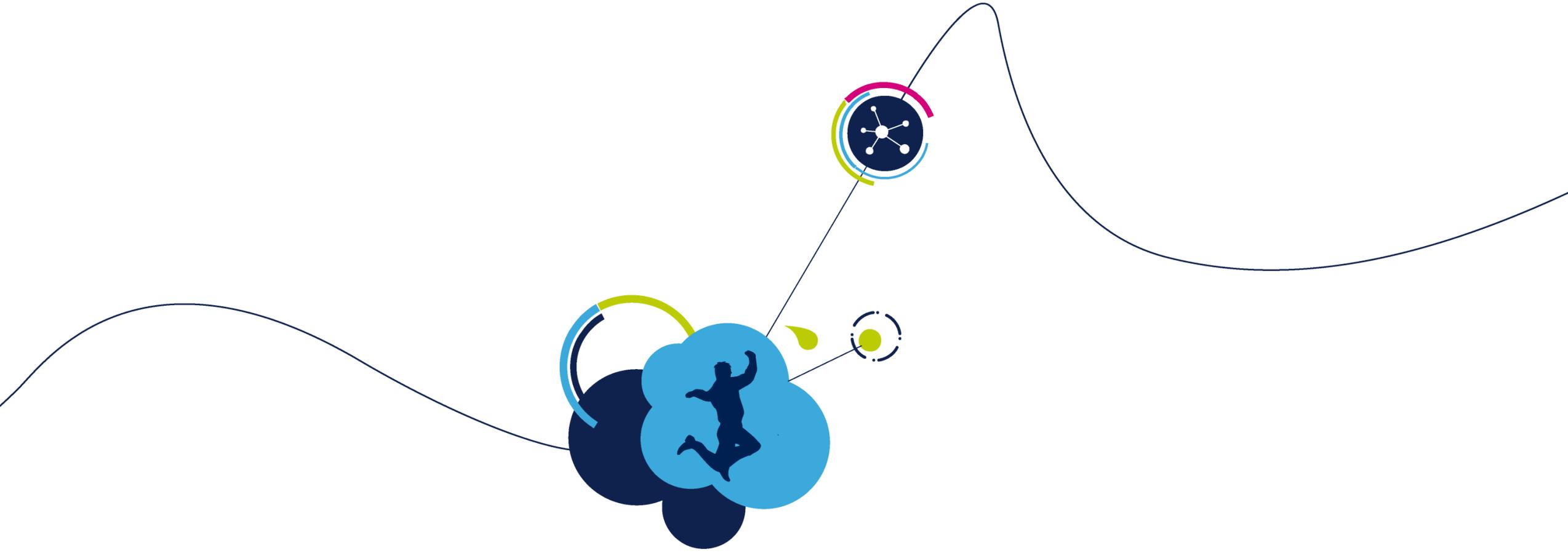




# STM32CubeMX install

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- For code generation STM32CubeMX uses package from the Repository folder
- Currently, STM32CubeMX can generate code for the following toolchains
  - Keil (free for F0/L0 families)
  - IAR
  - Atollic (free Lite version available)
  - System Workbench (SW4STM32 by AC6, free)
- For debugging purposes, it is necessary to have ST-Link drivers installed. Drivers are a part of ST-Link Utility package that can be found here
  - [STSW-LINK004](#) ST-link Utility
- To install drivers you will need **Admin rights** on your PC



# Installation of STM32 ST-Link Utility

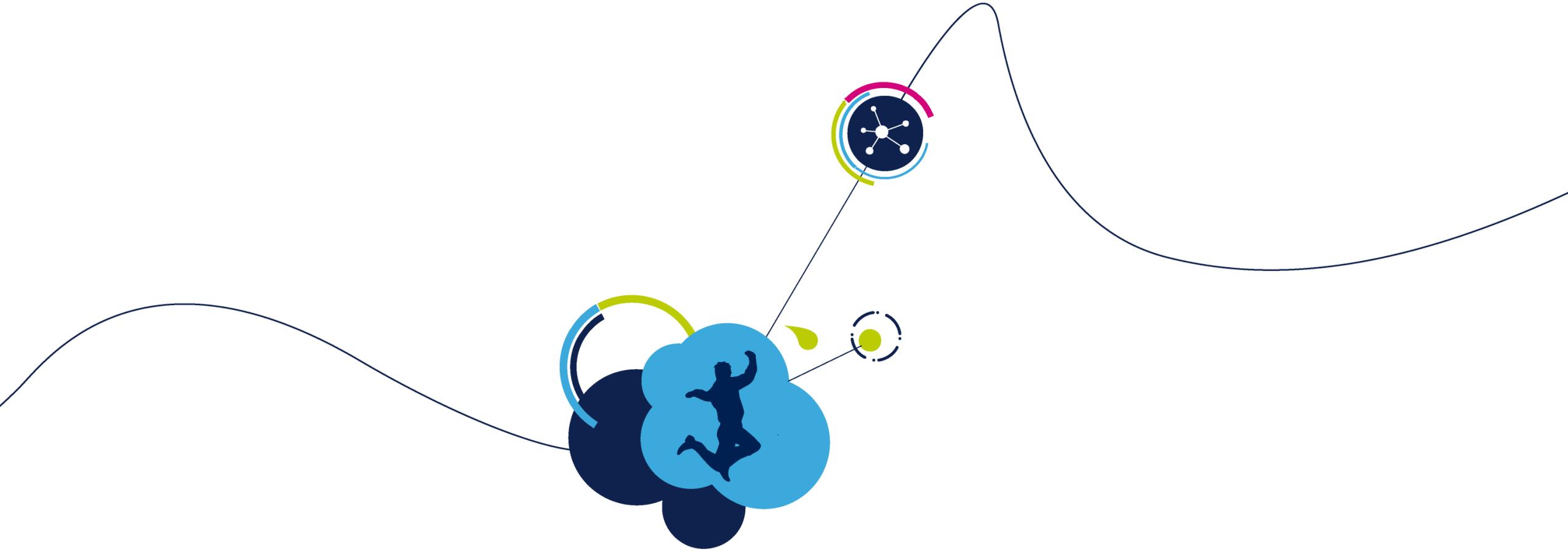
# Download & Install STM32 ST-Link Utility

- Drivers are available for Windows XP, Vista, 7, 8 & 10.

- To download them use direct link:

[http://www.st.com/content/st\\_com/en/products/embedded-software/development-tool-software/stsw-link004.html](http://www.st.com/content/st_com/en/products/embedded-software/development-tool-software/stsw-link004.html)

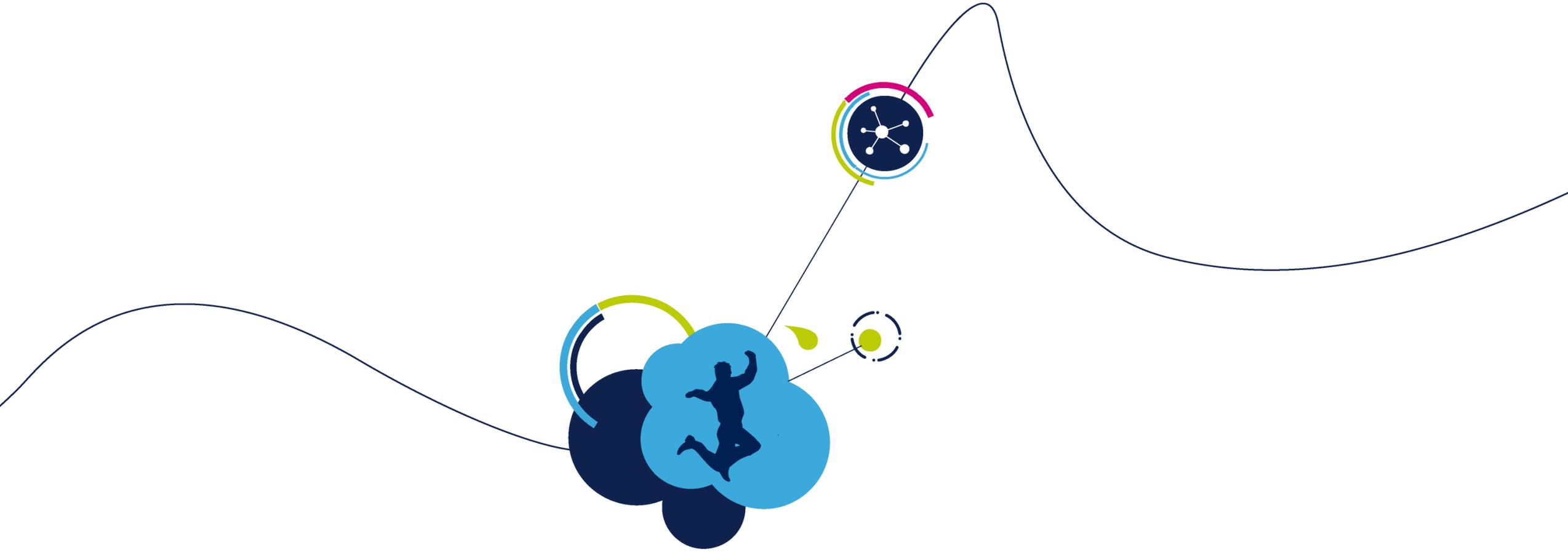
- Unzip the package and run executable (setup.exe)
- Follow all default installation settings



# Installation of ST-Link v2.1 drivers

# Download & Install ST-Link/V2-1 drivers

- Drivers are available for Windows XP, Vista, 7, 8 & 10.
- To download them use direct link:
  - [http://www.st.com/content/st\\_com/en/products/embedded-software/development-tool-software/stsw-link009.html](http://www.st.com/content/st_com/en/products/embedded-software/development-tool-software/stsw-link009.html)
- Unzip the package and run executable for x86 or AMD micro, depending on the platform you use
- Follow all default installation settings



# Installation of STMStudio application

# Installing STMStudio

- Ensure that the Java Run Time Environment (JRE) is installed and running on your machine. JRE version 1.7 or more recent is required (JRE 7).
- If installed JRE version is older than 1.7 or you miss it, please download the latest one from:  
<http://www.oracle.com/technetwork/java/javase/downloads/index.html>.
- Note that STM-STUDIO requires 32-bit JRE installed (even on 64-bit versions of Windows).
- STMStudio can be found on [www.st.com](http://www.st.com) by putting **stmstudio** keyword into the search field
- Once the JRE is installed or updated, run **STMStudio\_setup.exe**.

- ✓ Download, install SW4STM32 and upgrade it to the newest version
- ✓ Download and install STM32CubeMX
- ✓ Download and install STM32L0-Cube and STM32L4-Cube libraries
- ✓ Download and install STM32 STLink Utility
- ✓ Download and install ST-Link V2.1 drivers
- ✓ Download and install STMStudio application
- ✓ Download and install any terminal application (i.e. Termit or Hterm)

# Now we are ready for the session!

 /STM32

 @ST\_World

 [st.com/e2e](http://st.com/e2e)

[www.st.com/mcu](http://www.st.com/mcu)