Using docker to build TFM
Summary

• Goal of the tool
• Tool presentation
• Demo
Goals of the docker tool

- Currently, many issues can occur when someone discovers TF-M and builds the project or the documentation.

- Example: [https://developer.trustedfirmware.org/T922](https://developer.trustedfirmware.org/T922)
  - Here someone is trying to build the documentation and getting the following error:
    - `make: *** No rule to make target 'tfm_docs_userguide_html'`
  - This message might look like an issue coming from TF-M itself, but it is caused by a tool version error.

- Docker allows us to have a base image which will be usable with no modification.
Goals of the docker tool

• Main goal: reduce the barrier to entry for contributing to TFM
  • Simplify the set up of the environment
  • Allow the user to easily create different environments
• Give a common standard environment for replicating bugs
• Facilitate dependencies versions update
Tool presentation: docker images

Core TFM image (GNUARM)

- Dependencies
  - Python packages
  - TFM requirements (cmake, gcc, gnuarm)

TFM CLANG

- Dependencies
  - armclang

TFM Documentation

- Dependencies
  - Python packages
Tool presentation: launch scripts

- Docker image
- Config file
- Shell script (ex: launch_clang.sh)
- Docker container building TFM

- LOCAL_TFM_REPO
- PLATFORM (default: mps2/an521)
- ADDITIONNAL_PARAMETERS
Demo

- Works on Linux or Windows (Some extra steps are required to let Windows docker use a Linux container)
- Tool will be in the tf-m-tools repository
Docker setup on Windows

1. Install the Docker desktop app and run it
2. Set the “experimental” field to true
Docker setup on Windows

3. Enable the file sharing