**Overview**

Having a long-term supported kernel and middleware layer makes little sense unless you have a software update mechanism in place. The CIP Software Updates workgroup was been born to fill that gap. The main goals of the workgroup are:

- To integrate existing open-source software update tools into CIP Core.
- To implement board-dependent settings for CIP reference hardware.
- To contribute bug reports and patches to the used open-source tools.
- To provide software update instructions and deploy scripts.

**Roadmap**

The first iteration of the workgroup’s roadmap is about to finish:

1. Architecture milestone (finished date: 31\(^{\text{st}}\) Jan 2019)
2. Comparison milestone (finished date: 28\(^{\text{th}}\) Feb 2019)
3. Prototype milestone (finish date: 15\(^{\text{th}}\) Jul 2019, OSSJ)
4. Contributions milestone (finish date: 30\(^{\text{th}}\) Jul 2019)

During OSSJ 2019, the workgroup will decide what to do on the second iteration. There are several possibilities:

- Polish up the current integration
- Integrate other tools (e.g.: casync, rauc, meta-updater, mender..)
- Use a different architecture (e.g.: single partition with Ostree)
- Explore UEFI capsule updates

**References**

- [https://wiki.linuxfoundation.org/civilinfrastructureplatform/cip-sw-updates](https://wiki.linuxfoundation.org/civilinfrastructureplatform/cip-sw-updates)
- [https://wiki.linuxfoundation.org/civilinfrastructureplatform/cip_software_updates_architecture](https://wiki.linuxfoundation.org/civilinfrastructureplatform/cip_software_updates_architecture)
- [https://wiki.linuxfoundation.org/civilinfrastructureplatform/cip_comparison_report](https://wiki.linuxfoundation.org/civilinfrastructureplatform/cip_comparison_report)
**Demo**

Software Updates Workgroup


**Architecture**

- **Internet**
  - REST API
  - Update 2
    - A/B partitions
  - Update 1
    - Rootfs
    - Rootfs'
    - Kernel
    - Kernel'
  - Bootloader

**Software stack**

- **ISAR**
- **HAWKBIT**
- **Ubuntu/Docker**
- **x86_64 laptop**

**Demo Server**

- **SWUpdate**
  - CIP Core
  - U-Boot
  - Beaglebone Black

**Demo board**

**Functionality**

- **Binary deltas**
- **Signatures**
- **Encryption**
- **Version control**
- **A/B partitions**
- **Watchdog rollback**
- **Secure boot**
- **Factory reset**
- **GUI (hawkbit)**
- **Update status**
- **Kernel update**
- **U-boot update**