Architecture

draft-moran-suit-architecture-03

Terminology

- **Manifest**:
  - The manifest contains meta-data about the firmware image.
  - The manifest is protected against modification and provides information about the author.
- **Firmware Image (or firmware)**:
  - The firmware image is a binary that may contain the complete software of a device or a subset of it.
  - … may consist of multiple images.
  - … may consist of a differential update

Terminology

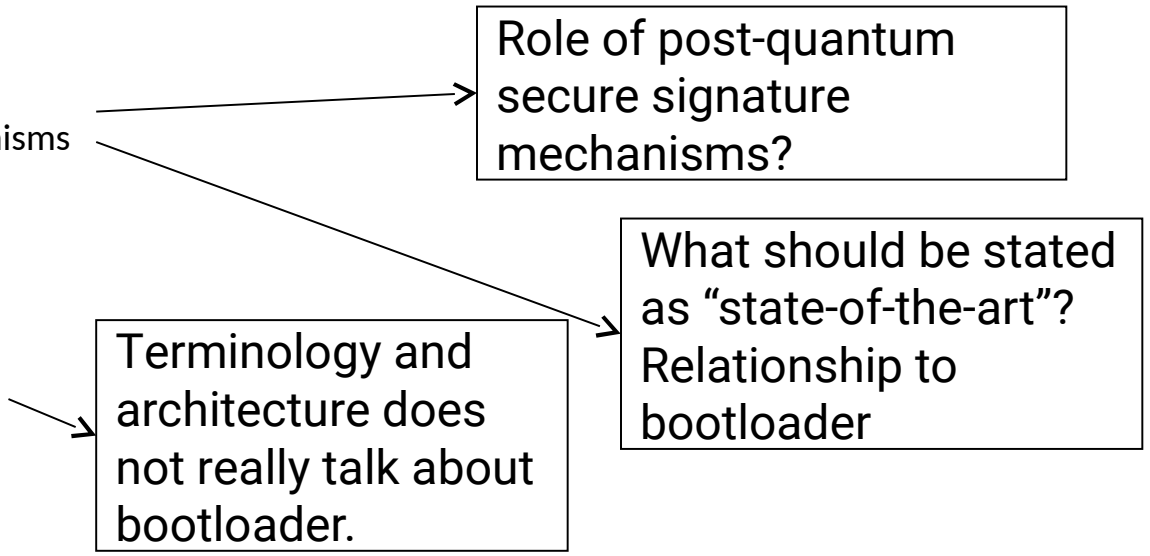
- **Author**:
  - The author is the entity that creates the firmware image, signs and/or encrypts it and attaches a manifest to it.
- **Device**:
  - The device is the recipient of the firmware image and the manifest.
  - The goal is to update the firmware of the device.
- **Untrusted Storage**:
  - Firmware images and manifests are stored on untrusted fileservers or cloud storage infrastructure.

Terminology

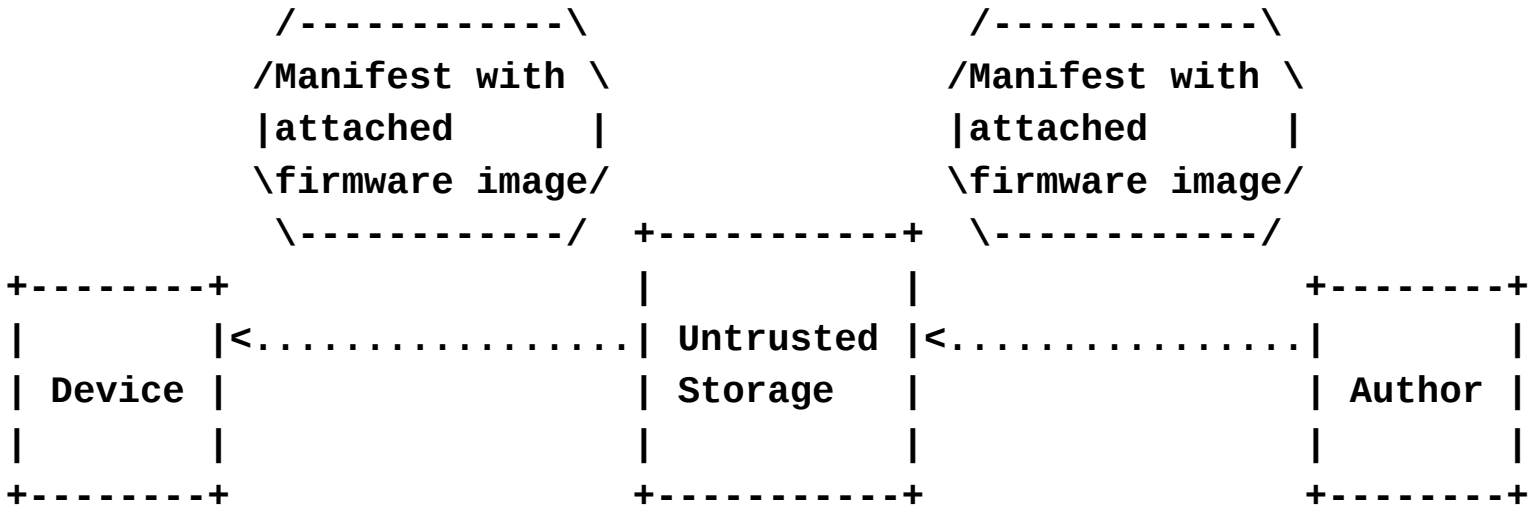
- We had a discussion about the ITU-T terminology. Some terms can be mapped but for others there is no related concept since the ITU-T architecture is broader (e.g., tracker concept).

Requirements

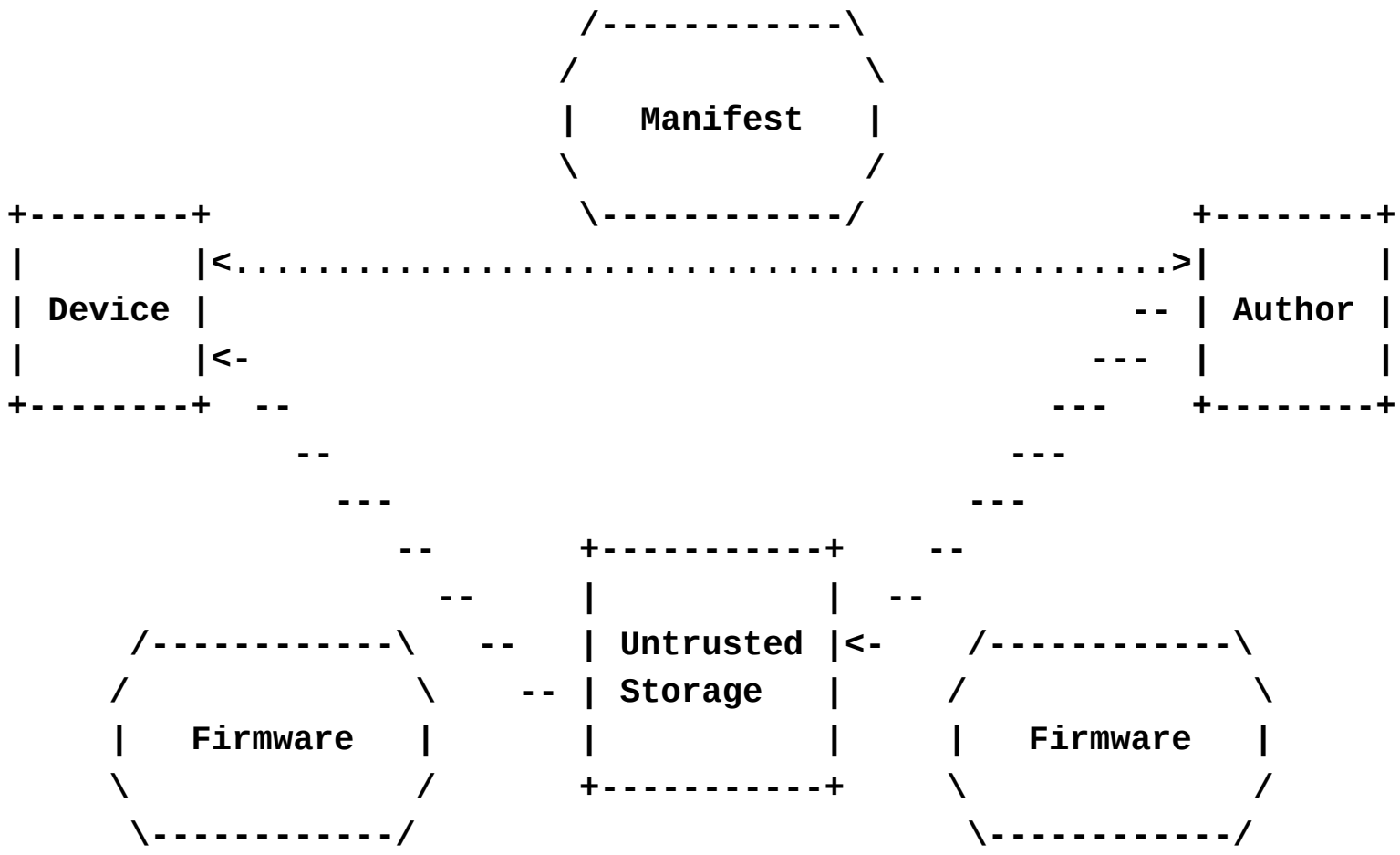
- Agnostic to how firmware images are distributed
- Friendly to broadcast delivery
- Uses state-of-the-art security mechanisms
- Rollback attacks must be prevented.
- High reliability
- Operates with a small bootloader
- Small Parsers
- Minimal impact on existing firmware formats
- Robust permissions



Manifest with attached firmware



Independent retrieval of the firmware image



Appendix

- Contains:
  - Threat Model
  - User Stories
  - Security Requirements
  - and Usability Requirements
- Made appendix easier to read with forward references.