



# Secure Firmware Upgrade

## Minimal Solution Requirements



# Device Considerations

## Bootloader only firmware upgrade

Enable devices that delete the old firmware before installing the new firmware.

## Firmware as single image

Allow firmware as single image download. Dependency management is complicated and manufacturer specific



# Firmware Server

## Local Server

Enable devices with constrained networks to locate firmware via well-known location

## Manufacturer Server

Allow supporting firmware download from the OEM server over Internet



# Manifest Discovery

## Well Known Location

Standardized well-known location to download the manifest relative to the Firmware Server

## IP Transport Protocol support

COAP, HTTP



# Manifest content and Security

## Single Manufacturer/Provider and Single Firmware Scope

Initial scope to limit to single manufacturer based verification.

## Integrity Protection & Optional Encryption

Simplified key management.

## Multi generational Signature Verification

Enable signatures across multiple generations to be verified by the device.



# Manifest Encoding

Flexible Encoding Support

Let the device decide what format it can support