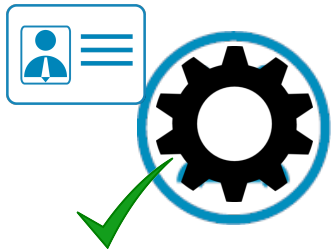
# Authn and Authz for IoT

- Reuse existing IAM technologies
  - OAuth2
  - Introspection
  - JWT
  - SCIM

# Used hardware

- Freescale K64F
  - http://developer.mbed.org/platforms/FRDM-K64F/
  - ARM Cortex-M4 core running at 120MHz.
  - 1MB FLASH, 256KB RAM


- Nordic Semiconductor nRF51822
  - http://developer.mbed.org/platforms/Nordic-nRF51822/
  - Nordic nRF51822 System-on-Chip combining Bluetooth v4.1-compliant 2.4GHz multiprotocol radio and ARM Cortex-M0 core running at 16 MHz on a single chip optimized for ultra-low power operation
  - 128 kB FLASH, 16 kB

- Android smart phone

# Accomplishments

- Authenticate, authorize and get JWT from authorization server
  - Used authorization servers from two IAM vendors
- Developed BLE smartphone app
- Created custom BLE profile and service
- Experimented with different BLE debugging programs

# Challenges

- Different developments environments on server-side, IoT device side, and on the smart phone / tablet.
- Left BLE USB stick at home
  - More complex debugging →BLE development took longer than expected
- Ordered Nordic nRF51-DK with Bluetooth v4.1, Cortex-M0, 32MHz, 256KB Flash, 32KB RAM did not arrive in time for the event.

# Next Steps

- We plan to continue our development during the week to feed the results back into the IETF ACE working group.