Geneva Planning

Enhancements for Device Services

- Implement dynamic discovery using Provision Watchers
- REST request/response types to be refined as necessary in line with the v2 rework in the core
- Provide clean API for query parameters
  - Currently passing entire query string as an extra Attribute
- Make more configuration dynamic (ideally, all of it)
  - Including the driver-specific configuration
- Implement command chaining (deviceCommand contains other deviceCommands)
- Allow driver to manage device operational state
- Allow driver to feed back meaningful error information (not just ok/fail) from get/set handlers
- Implement minimum/maximum restrictions on actuation parameters

Testing

- Build-out of blackbox test suite
- Define process for self-certification of device services
  - Currently estimated (For Fuji version) N.E.T. January 2020, but any Fuji slippage will push this back

Enhancements for Core EdgeX

- Remove legacy fields in metadata
  - ProvisionWatcher: OperatingState
  - PropertyValue: Precision, Size
  - ResourceOperation: Resource, Object
  - ProfileProperty: Units becomes String
- Reduce boilerplate in coreCommands
  - All it really needs for each command is the name and whether it's get, set, or both?
- Readings will need to contain type information (ValueDescriptors are going away)
- ~~Add field in Event to store query parameters that were used when it was generated~~
  - No, we don't support use of QPs to hold extra addressing information

Other discussion topics (for Phoenix F2F)

Load Management in Device Services

Sources of demand

1. Device producing data autonomously
2. REST 'device' endpoint
3. AutoEvents

Shedding demand

For autonomous and REST-driven data, we can feed back errors to the caller, eg 503 unavailable.

For AutoEvents we could apply a scaling factor to the intervals?

Load monitoring

Monitor the number of simultaneous calls to get/put handlers?

Serialize Event submission and monitor the queue length?

Compare time taken to process an AutoEvent with its specified interval?

Harmonized developer experience Application SDK / Device SDK