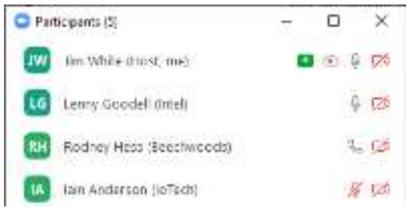
# Architect’s meeting, January 26, 2021, 10am MST

Attendance:


Participants (5)

JW Jim White (Host, me)

LG Lenny Goodell (Intel)

RH Rodney Hess (Beechwoods)

IA Iain Anderson (IoTech)

Some attendees may have joined after the call started when this record was captured.

## Topics

Completed business

- Holding repository clean up
- Semantic versioning with modules – (decision was to tag ‘em with the release number that they go with.) ADR updated and Lenny/Ernesto worked to complete this
- Docker naming changes – being worked by DevOps

In Work Group for review right now

- Core/High - Ensure that service location data is pulled from trusted source (i.e. not Consul) (Tony's ADR)
    - Covered in Security WG

High priority (priorities per previous meetings)

- We need to revisit CBOR binary support vs simple JSON / binary encoding (per Core WG meeting of 1/7/21). How to handle binary data in V2
    - Is CBOR still the right way?
    - Simplicity versus performance
    - We should have new requirements/use cases to change this
    - Jim to find the objectors to CBOR before we cover and get any suggestions/requirements for non-CBOR (there are none)
    - Lenny – votes for leaving as is for V2 (use of CBOR as done for V1)
        - App services will unmarshal the CBOR and deal with the event (and does not re-encode in CBOR)
    - Message bus vs REST – not germane to the discussion of CBOR v JSON bin encoding
    - Heart of the discussion simplicity of JSON bin encoding vs complicity of CBOR but less efficient than CBOR
        - JSON encoders take care of all the back and forth marshalling/unmarshalling

    - Iain did some performance testing (in C device services)
        - CBOR v Json encoding
        - On 1MB binary data
        - 33% add to size of the payload (JSON) v. 1 for 1 size on CBOR (1MB)
        - CBOR - .5 millisecond per event; JSON 20 milliseconds
            - Could maybe do some optimization to improve this
            - Base 64 encode step is already a millisecond
    - **Decision: for Ireland – no change**
        - **For Jakarta (or stretch for Ireland) – allow DS to have switch to use CBOR for everything or JSON sent through the bus (or REST channel)**
        - **Perhaps we need some testing in Go SDK and DS; even full workflow test to see if there are significant gains across**
        - **Could we run this through Modbus scalability tests to see results**
- Client keys in configuration; use the service keys as the constants for the map keys (per Core WG meeting of 1/21/21)
    - https://github.com/edgexfoundry/go-mod-core-contracts/issues/449
    - https://github.com/edgexfoundry/edgex-go/issues/2424
    - Decision:
        - Use service keys in configuration.toml files
        - Service keys in core-contracts/clients/constants.go
        - Both issues above – should be addressed by this decision
        - Add to agenda in Core WG to make sure everyone is aware/ add to cross cutting concerns because this hits everyone.
- V2 API - should we add security foundation added to that (per some of earlier V2 API designs via Dell and Bryon N)?
    - Adding token to authenticate a micro service call (is this in scope for Ireland)
    - May not be needed unless all services are distributed
    - We need to explore alternatives to provide secure / locked out service to service communications
    - Not a core competency of EdgeX?
    - Need more input from Bryon and Security
- Use of CLI to generate new application or device service
    - Per Core WG and TSC meetings (1/20/21), there is a big desire to add a feature to EdgeX tooling to more easily generate a new device or application service (using a command line tool and some template found in the SDK)
    - Question is whether this should live in edgex-cli or is this a separate tool?
    - CLI for replacing curl scripts; this doesn't see to fall in line with objectives of the current CLI.
    - Should be "templates" in examples for DS and AS
        - The copy for the starter of a new service
    - Tool would then pull down the template, rename things, adjust the mod file, on a copy
    - But where does this tool belong? In an SDK, CLI or separate tool.
    - **Decision: work template first; with some documentation and possible script second – then look at tool automation after that.**

Medium Priority

- Address how to get device resource info (for app services and Kuiper)
    - Probably not ADR worthy
    - Either provide Lenny's convenience APIs or tool to dig out the device resource information in the (cached) profiles
    - How/when to invalidate the cache if we use the profile-digging approach
- Keep commit history from beginning to end (don't squash them until PR approved)
- Standardizing units of measure
- Declarative Kong applicability
    - Allowing us to drop Progress DB
    - But can you configure groups/users ACL
    - Only supports JWT users

Low Priority

- Is the Wiki the best place to document project decisions (those outside of or smaller than ADRs). This was our initial take. Should we revisit?
- (must be done before V2 is done) - Naming scheme changes for config.Clients (key name change)
    - Use consistent name that all other services use for core data
    - Consistency in the naming vs changing all the names to use service name as part of key
    - Related to system management hard coded list of services.
    - Separate issue in arch meeting – high once report back
    - Other naming issues (secret store vs secret service)
    - Opportunity to make all config/naming consistent
    - Jim take resp – get WG leads – try to prioritize this survey
- Revisit combine core services at least at all executables in one image
    - Release would be easier but image would be bigger with more complex compose files
- Digital twin (and LWM2M) applicability
- Time series database support and applicability
    - Ian Johnson has an example of app service to InfuxDB export (snap in the store)