Core Working Group Agenda 05/03/2018 meeting

Attended by: Trevor Conn, Brett Preston, Rodney Hess, Janko Isidorovic, Steve Osselton, Jim White, Andy Foster, Jeremy Phelps, dhantula, Svet, OnePlus 5T

Discussion and action items as a result of meeting in RED.

Trevor Conn will be sitting in as interim-chairman for the following two weeks (May 3rd & 10th) as Jim White will be unavailable.

Old Business

DevOps issues/updates

- Jim working on a 0.5.2 compose file
    - Do we want to hand this off in Jim's absence?
    - Jim working on this today, will send out an announcement

Documentation

- Now available in Github. Feedback welcome and encouraged.
- "Pretty" version available on IoTech Web site
    - http://www.iotechsys.com/community/
    - This is just a placeholder, not a permanent home. Would like for content to be updated dynamically as part of build pipeline.
- Still need to resolve where to host output.
    - Did Jim and Jeremy have a chance to discuss?
    - Still TBD
    - Two options
        - Host on ReadTheDocs
        - Or use Github Pages

DS Requirements Discussion

- Open issues in DS requirements
    - Query All command results
    - actuation commands RAML accuracy
    - metadata updates (/callback) RAML incomplete – may be open for now (??)
    - Endpoint is present but no additional information. Have to look at the code. Consumer should understand intent without doing that.
    - Create an issue in GitHub, post SDK work/requirements (Jim W.)

License file issue

- Jeremy to implement for Docker files
    - **Next week** – License files in Docker Images, how are they applied?
    - License files copied into a directory and packaged with the binary
    - Jeremy referred to example from Tony in his snap generation
- Issue submitted against export services for attribution file need (#120)
    - No progress on this yet
- Can we close this discussion?
    - Tony recently suggested SPDX license statements as an alternative
    - Export services (distro/client) using this already (??)

- o https://spdx.org/licenses/
- o **Trevor** review the examples above, create an issue for core services.
- o If we adopt this, wiki needs to be updated
- o We can close current topic and open items as work progresses

Service Naming, Availability and Configuration Bootstrapping
- Requesting approval to implement per https://wiki.edgexfoundry.org/download/attachments/7602423/ServiceNameDesign-v6.pdf?version=1&modificationDate=1523468903687&api=v2
  - o I don't recall a vote on this, but is anyone not OK with this content?
  - o Trevor contributed a couple PRs last week based on this document (171, 176)
- Tony – Need POSIX signal handling
  - o Native deployed services on Linux, lifetime controlled by systemd
  - o Start/stop/restart
  - o Jim to put an issue in GitHub, cover as part of system mgmt. work.

Release Number for California – 1.0?
- Version 0.6.0 is the consensus.
  - o Depends on whether versioning by marketing or technical basis.
- Andy: Might want to take this up with TSC. It infers lack of maturity. We don't want to say you can't use it in real systems.
- Making recommendation to TSC to use version 0.6.0. Allow TSC to decide if it should be 1.0 based on marketing/optics.
- Jim to do final advocacy for 0.6.0 for TSC
- Release date for California work is June 29th
  - o Target June 15th for dev complete followed by a testing cycle (Andy)
  - o California release branch will be created at this point (Jeremy)

New Business

Other Opens??
- Jim talking with NodeRed (IOT platform Javascript/Node)
  - o Would like to run a small Node agent, possible replacement for rules engine on small devices.
  - o Those with interest, contact Jim White

DevOps issues/updates
- Question from Jeremy – Should we adopt the latest tag on Docker images?
- By default, a new build gets the latest tag in Docker. However this can be manually assigned.
- "Latest" does not imply stable.
- We'll adopt the default behavior

Core-config-seed-go was pulled in.

Technical Debt and other issues we want to address at June F2F

- Additional south-side tech debt from Rodney
    - Device onboarding. The device microservices need to support device onboarding to the cloud. Currently, this happens out of band.
        - Automate the onboarding of devices, including upstream in the cloud
        - Review onboarding by IOTivity / OCF
    - Gateway support with the cloud. With MQTT as the dominant protocol when communicating with the cloud, EdgeX theoretically functions as a gateway, but the current implement only supports acting as a multifaceted device with the cloud. E.g., a gateway is responsible for registering its devices with the cloud; currently, this happens out of band.
        - Needs follow-up architectural/design discussion RE: interaction of metadata with export services to cloud/on-prem.
    - What impact for system management?

Possible Work Items for California

- Filename/package audit
    - https://stackoverflow.com/questions/25161774/what-are-conventions-for-filenames-in-go
    - Trevor to review core/support
    - Janko to review in export
- Steve and Tony have both suggested we remove the attribution lines from the file headers since they aren't maintained and clutter things up.
    - All in agreement
    - I would suggest dropping the following lines:

      * @microservice: core-clients-go library
      * @original author: Ryan Comer, Dell
      * @version: 0.5.0
      * updated for Kei Ohmura. Kei made the original contribution in the core-clients-go repo
      * fix - moves `decodeValueDescriptorSlice()` method to the ValueDescriptorClient.
      * added - methods to the ValueDescriptorClient

Approval of Trevor's core service refactoring approach?

- Presentation provided two weeks ago
- Tony provided some good comments along with a hand grenade related to interfaces
    - https://github.com/golang/go/wiki/CodeReviewComments#interfaces
    - "Go interfaces generally belong in the package that uses values of the interface type, not the package that implements those values."
    - By the time this meeting occurs, I should have two check-ins showing this approach in the refactoring repo and we can compare.

- Sounds like the feedback is positive on the approach, question is whether its timing is good for California or not.
    - Positive feedback from Tony, Drasko and Jim
    - Only core-data has been refactored. Need to also do metadata and command.
- Core service refactoring for all three services will be targeted for early in Delhi development cycle. Will not be included for California.

New Hire
- We're bringing on Eric Cotter as a new full time EdgeXFoundry developer at Dell.
- Start date May 7th
- Trevor will handle onboarding

From last week's meeting – Is there a process for how these get officially evaluated and prioritized on the roadmap?
See Roadmap on the Wiki, Jim collates in a repo.

Additionally proposed topics for technical debt and future releases

- Errors and warnings expressed in Mongo startup
- Next security features
- Drasko/Rodney issue from security WG on how we deal with device security (paragraph needed)
- First steps to distributed-EdgeX (services running on different host machines and impact to security reverse proxy, command calling, etc.)
    - Subsequent to Delhi
- Load balancing – multiple instances of services
    - Subsequent to Delhi
- Upgrade consul (0.7.3 is old, and warning generated on startup)
    - Review usage of consul in standalone mode with Hashicorp. Jim to try to get discussion going with Hashicorp.
- Registry - service outage notifications
    - Need to think about now (for Delhi)
- Device discovery onboarding/removal issues
- Use of db IDs in objects
- How to support multiple Message bus implementations
- Replace RAML with SWAGGER (RAML is being abandoned??)
- Introduce new category for microservices: "Sharing Services" for East/West data exchange with non-edgex entities
- Lighter alternative to Mongo for metadata (or in general: how to enable multiple metadata backends)
    - See above
- Marketplace for value-add microservices and its implications (will we need a new EdgeX microservice acting as license server?)
- Security Certification for EdgeX by a specialized Cybersecurity third party
- Make Export Services to have the same architecture as Device Services (independent microservices using the same SDK) or at least make new export services to be as "plugins". In the long run the number of export services will explode (same as DS).

- See above