Ireland Pre-Wire

Oct 13-14 (virtual event)

7am-10am (PDT) – Day 1

10am – 1pm (PDT) – Day 2

Agenda

- Introductions – If needed
- Logistics, Ground rules and expectations of our pre-wire meeting
- Address any Hanoi high priority release items in advance of the freeze
- Ireland Focus
- Review of proposed architectural issues
- Review of Adopter series requirements
  - Any that impact Ireland?
- Review of proposed Scope
  - Tech debt
  - New features/enhancements

Day 1 attendance

Some people may have joined the meeting after attendance was first captured.

Logistics, Ground Rules and Expectations

- Attempt to break every hour for 5 minutes (please keep me aware of the time)
- Don't be shy about interjecting your opinion/thought (we may not always call it out explicitly)

- Purpose of this 2-day meeting:
  - Not to scope (done during our planning meeting), but outline all the possible scope for this release. What's being considered vs. what is planned, tasked and coordinated
    - This is where big ideas start – but in order for them to actually take root, they must be accepted as "possible" here and coordinated/tasked as part of the planning meeting in November.
    - Allow open debate on the future of the project, key features, technical/architectural direction
    - Identify high priority work and eliminate potential work that is beyond this scope
    - Identify areas where research or design/architectural ideas are necessary in advance of the Ireland scoping. Owners will be assigned to present more details in Nov.
    - Highlight pain points/issues identified by this (Hanoi) release and attempt to offer potential solution options (for determination in the Nov meeting)
  - Outline critical topics/themes/drivers for the next release
    - Example: Hanoi release was about starting V2 API, stability, few features. What will Ireland be about?
    - Collect and share lessons learned

- Expectations
  - Pave the way for a smooth Ireland planning meeting
    - Ireland planning becomes a refinement of the overall potential scope to the determined scope
    - Focus technical debate around the scope of the single release
    - Focus architectural/design questions to the immediate scope
  - At the conclusion of this meeting we have
    - Identified the larger "potential" release scope (if we haven't talked about it here, there would have to be a very big change to consider it for Ireland)
    - Identified technical issues we must solve (or start to solve) with this release and arranged presentation from opposing options to present at the Nov meeting.
    - Set the tone for the major theme(s) of the Ireland release

Hanoi Items

Are there any open / pressing Hanoi release items that need to be addressed in advance of freeze date of Oct 28?

Taking Stock and Ireland Focus

We have much to be proud of as this is the 4th year of development; 6 releases; 7.1 million container downloads; publicly announced adopters

Reality check

- Is the platform strong or does it have lots of technical deficiencies?
  - Would you use it to build a solution with a customer yet?
  - What is our real competition (Fledge? PTC? Greengrass?)
  - How well do we size up to the competition?
- If we could change tomorrow with no effort, what 2-3 things are our biggest issues that you would address?
  - Usability / ease of use (documentation, simple to understand, etc.)
  - Architecture (more messaging, security, etc.)
  - Stability (LTS, testing, etc.)
  - Other?
- What's prohibiting getting more people to join the project as contributors?
  - Complexity
  - Personnel/personalities/culture
  - Product direction
- What can the leadership of this project do to improve the product and health of the ecosystem/community
  - Get more involved
  - Stay out of the way (be less involved in day-to-day)
  - Show more leadership, direction setting, goal setting
  - Find more help

What should the focus(es) of Ireland be?

- EdgeX 2.0?

- Stability?
- Some new feature set?

Architectural Topics (for consideration)

What rises to the level of Ireland consideration?

We don't need to solve the issue here – only consider its conclusion to Ireland

What factors / inputs do we need to answer these questions for the planning meeting?

- V2 API, EdgeX 2.0, and LTS, and certification. How much of this is accomplished with Ireland?
- Upgrade path from v1 to v2 (especially around databases)
    - We said that is upon users/providers for dot releases
    - If we are at V2, must we provide upgrade tools/documentation, etc?
    - What would those look like?
- Kubernetes direction/project
    - Outline the use case/requirements for high availability better
    - What services should be replicated to address scale?
    - What other K8s services would EdgeX look to leverage in a full K8s/HA
    - environment?
    - What services or infrastructure need to be researched as to HA concerns?
- Metrics / control plane data collection
    - We have a list of potential metrics to be collected / made available by each service
    - Per Hanoi planning:
        - All services will use/integrate go-mod-messaging to facilitate sending metrics object messages to a configurable topic
        - A message structure will have to be created for this metric data (different from event/reading)
        - All services will have configuration (which goes in Consul) to say which metrics they provide and the option to turn those metric collections on/off as well as define how often they get collected
        - Application services will be constructed to optionally receive these messages and act on them (the reference implementation receiver in EdgeX) but users can attach their own receiver to the topic
        - Control plane event handling
            - All services will use/integrate go-mod-messaging to facilitate sending control plane events to a configurable topic
            - A structure will have to be created for this control data event (different from event/reading)
            - All services will have configuration (which goes in Consul) to say which metrics they provide and the option to turn those metric collections on/off as well as define how often they get collected
            - Application services will be constructed to optionally receive these messages and act on them (the reference implementation receiver in EdgeX) but users can attach their own receiver to the topic

- Do we offer timeseries database integration
    - In place of Reds?
    - In addition to Redis?
    - Which one? Why?
- Remove value descriptor
    - This was decided with the last release
    - Where do other elements go?
    - Need conveniences/syntax sugar around value descriptor "stuff"
    - Don't want to get device provide and week through it for VD stuff
- Message bus between DS and core
    - Other point to point message bus implementations
- Collapse of services
    - Example: single core
    - Why
- Core data vs support data
    - Device service to appl service via message bus 1st
    - Device service to core data via message bus 2nd
    - Core data changed to support data 3rd
- What do we do with command service? Will it ever be more than a proxy?
    - Combine with Metadata?
    - Should we separate it with its own DB (separate concerns)?
    - How to provide commands North?
- Distributed services
    - Beyond DS distribution
- Should we be archiving artifacts (Docker images)?
    - Other organizations do not
    - New Docker rules will likely not help here
- Message order in and out of EdgeX services is non-deterministic
    - Is this ok?
    - Would users need messages to stay in order through all the services?
- Alternate language support (Chinese)
    - Made a request of LF for documentation translation
    - Chinese teams ready to help
    - CLI? UI?

Adopter Series Requirements (for consideration)

Review
https://wiki.edgexfoundry.org/display/FA/Monthly+Architects%27+Meeting?preview=/37912817/52330565/Adopter%20Series%20Requirements.pdf for potential topics.

Scope Consideration

Review scoping deck:
https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=52330532&preview=/52330532/54263812/Ireland%20Planning%20Conference%20-%20Detailed%20Agenda-v6.pdf