EDGE X FOUNDRY™

TSC Meeting

Oct 25th, 2023

Code Freeze Day

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Meeting Logistics

Time: Wednesdays 8am PDT – 9am PDT (Alternate Weeks)

Join from PC, Mac, Linux, iOS or Android: https://zoom.us/j/983155298

Or iPhone one-tap (US Toll): +14086380968,983155298# or +16465588656,983155298#

Or Telephone:

Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+1 855 880 1246 (US Toll Free)

+1 877 369 0926 (US Toll Free)

Meeting ID: 983 155 298

International numbers available: https://zoom.us/zoomconference?m=mkFexUxEcqHlvXHw53PqScTDRvS48PiQ

** TSC calls are recorded and added to Wiki post-call

EdgeX TSC Members

Working Group Chairs:

- Cloud Tsai (IOTech)   cloud@iotechsys.com   Core & Test/QA WG Chair
- Lenny Goodell (Intel)   leonard.goodell@intel.com Applications & Analytics WG Chair
- Lindsey Cheng (IOTech)   lindsey@iotechsys.com   Device Services WG Chair
- Ernesto Ojeda (Intel)   ernesto.ojeda@intel.com   Dev Ops WG Chair

At Large Members:

- Farshid Tavakolizadeh (Canonical)
- Tom Brennan (Eaton)
- Elizabeth Lee (Intel)
- Melvin Sun (Intel)
- James Butcher (IOTech)
- Darryl Mocek (Oracle)

Current quorum = 6 members

Note: Quorum for TSC meetings requires at least fifty percent of all voting members of the TSC to be present. The TSC may continue to meet if quorum is not met, but will be prevented from making any decisions at the meeting. Except as provided in Section 7.c. and 8.a, decisions by vote at a meeting require a majority vote of those in attendance, provided quorum is met. Decisions made by electronic vote without a meeting require a majority vote of all voting members of the TSC.

Today's Agenda

- Working Group Updates
- UCR & ADR Updates
- Doc Updates

Work Group Updates

Chairs

Reminder: Napa Dates

- Freeze date: Wed Oct 25th

- Release date: Wed Nov 15th

- Odessa 3.2 Prewire: Thurs Nov 9th   → note issue with this date
  - Proposing instead Mon Nov 6th, Wed Nov 15th or Thur Nov 16th
  - 8am-11am PDT?

- Odessa 3.2 Planning: Mon Dec 4th - Wed Dec 7th
  - Mon 4 Dec: 7am-10am PDT?   Kickoff and Main Architecture Discussions
  - Tues 5 Dec: 9am-12pm PDT?   Architecture Discussions and Odessa Scoping
  - Wed 6 Dec: 7am-10am PDT?   Complete Odessa Scoping, Business and Marketing Topics, Lessons Learnt

EdgeX Wiki pages:
- Odessa Prewire
- Odessa Planning

Working Group Chair Updates

- Around the working groups:
  - **Product Manager** - Lenny Goodell
  - **Applications** - Lenny Goodell (or co-chair Elizabeth Lee)
  - **Core** - Cloud Tsai (or co-chair Melody Liu)
  - **Device Services** - Lindsey Cheng (or co-chair Felix Ting)
  - **DevOps** - Ernesto Ojeda
  - **Release Czar** - Bill Mahoney
  - **Outreach** and Marketing
    - **Certification** - Rodney Hess
    - **China Updates** - Melvin Sun
    - **LF Edge TAC** - Jim White

Product Manager (10/25/23) - Napa

Icebox (3)
- Lite Builds (no security features) via Build Tags
- Docs Refactoring of individual Device Services and App LLRP
- URIs For Files - C services - Odessa

Backlog (0)
-

In Progress (1)
- **Docs Refactoring - Napa**
  - Main layout - **DONE**
  - Core Data - **DONE**
  - Core Metadata - **WIP**
  - Core Command - TBD
  - Support Notifications - TBD
  - Support Scheduler - TBD
  - App Services general & SDK - **DONE**
  - App Service Configurable **- DONE**
  - App Record & Replay **- DONE**
  - Device Services general & SDK - **WIP**

Done (8)
- Better error handling when Common Config missing
- Move all the common API into go-mod-bootstrap
- Move common Middleware into go-mod-bootstrap
- pkg/errors replacement
- Go 1.21
- Gorilla/MUX replacement
- URIs For Files - Go services
- Common Config - C SDK

Applications WG Update (10/25/23) - Napa

Newly Completed (6)

- refactor: Rework App SDK docs layout/structure - Phase 1 #1248
- refactor: Rework App SDK docs layout/structure - Phase 2 #1260
- Add ability to set MQTT Will options for external MQTT server connections #1117
- feat: Add MQTT Will options documentation #1252
- Err occurs when using nats : already connected to NATS #1497
- feat: Add defaults for new Last Will options [asc] #610

Newly added (0)

-

WIP (0)

-

Done for Napa (45)

Backlog (0) https://github.com/orgs/edgexfoundry/projects/50/views/2

ICE BOX (6)

- Remove creation of snap for record and replay

Next

- Continue to enhance/refactor documentation
  - Add how to guides - identify what's needed/implement

eKuiper

-

Project Board: https://github.com/orgs/edgexfoundry/projects/50/views/2

Next meeting **Oct 31th, 2023 @ 3:30pm AZ**

Application Services - Minnesota

Functions (built into SDK)

- Add Tags
- Batch
- Compression (GZIP & ZLIB)
- Conversion (XML & JSON)
- **EventWrapper** - **NEW**
- Encryption (AES256)
- Export
  - MQTT
  - HTTP POST & PUT
- Filtering
  - By Profile Name
  - By Device Name
  - By Source Name
  - By Resource Name
- JSONLogic
- Set Response Data
- **ToLineProtocol (transforms Metric DTO)** - **NEW**

Features

- Store and Forward
- Batch and Send
- Web Server
- Configurable App Service
- Vault Integration for Secrets
- MQTT Event triggers
- Filter by Topics
- Custom Triggers
- Publish Topics and URL Placeholders
- Structure Custom Configuration
- Background Publishing

- Received Topic
- Context Storage
- Service Metrics - **NEW**
- Clients
  - Logging, Event
  - Command
  - Device, DeviceService
  - DeviceProfile
  - Notification
  - Subscription
  - Registry

Reference/Example App Services
(built on top of SDK)

Released Services
- App Service Configurable
- App RFID LLRP Inventory

Examples
- Simple Filter
- Simple Filter and MQTT Export
- Simple Filter and HTTP Export
- Simple CBOR
- Cloud Export

- Cloud Event Transformation
- Secret Retrieval
- JsonLogic
- Send Command
- Convert & Publish
- Custom Target Type
- IBM Watson IoT (ASC Profile)
- Custom Trigger
- Influx DB & Flege Exports
- Camera Management - **NEW**

Core WG Update (Oct 25 2023)

- TAF
  - Functional tests:
    - Non-Security **612** tests - All pass / Security **612** tests - All pass
  - Integration tests
    - Non-Security **132** tests - All pass / Security **135** tests - All pass
  - Performance tests:
    - Non-Security **10** tests - All pass / Security **10** tests - All pass
- QA Progress
  - Done: Replace DISCRETES_INPUT with DISCRETE_INPUTS on device-modbus sample profile #879
- Core Progress
  - focus on docs refactor in the following week
  - About UI progress, now we're seeking support from other teams.
  - 🔔**Today is the start of Code Freeze Day**🔔

Next meeting: Tuesday Oct 31 2023 @ 5 PM Pacific Time

Device Services WG Update (25 Oct 2023)

- **C Device Service update**
  - [Device COAP] Attribution.txt is incomplete [#55](#) - PR review in progress
    - See PR [discussion](#) about the LGPL v2.1 license usage
  - [Device BacNet] Attribution.txt is incomplete [#85](#) - PR review in progress

- **New CAN device service**
  - Initial [PR](#) merged in holding area - Acceptance TSC vote in progress (currently got 6 votes)

- **New S7 device service**
  - [Repo](#) in the holding area - Review in progress

Device Services - current/coming (as of v3.0)

Open Source connectors (Current):

- Modbus (TCP/RTU) in Go
- Virtual Device in Go
- SNMP in Go
- MQTT in Go
- BACnet (IP & MSTP) in C
- ONVIF and USB Cameras in Go
- REST in Go
- CoAP in C
- LLRP / RFID in Go
- GPIO in Go

Open Source connectors (Future):

- UART in Go

Commercial connectors (Current):

- BLE in C
- Zigbee in C
- GPS in C
- CAN in C
- CANOpen in C
- EtherCat in C
- EtherNet/IP in C
- PROFINET in C
- OPC-UA in C
- OPC-UA Pub/Sub in C
- Siemens S7 in C
- File reader in C
- WebSockets in Go

There are additional commercial MQTT (Go), Modbus (C), REST (Go), and BACnet (in C) that have added features over the community editions

DevOps WG Update (10/25/2023)

Pipeline Related

- [In Progress] #438 Implement git-cliff, a git-chglog replacement
- [In Progress] #376 Automate release branch creation

Other

- N/A

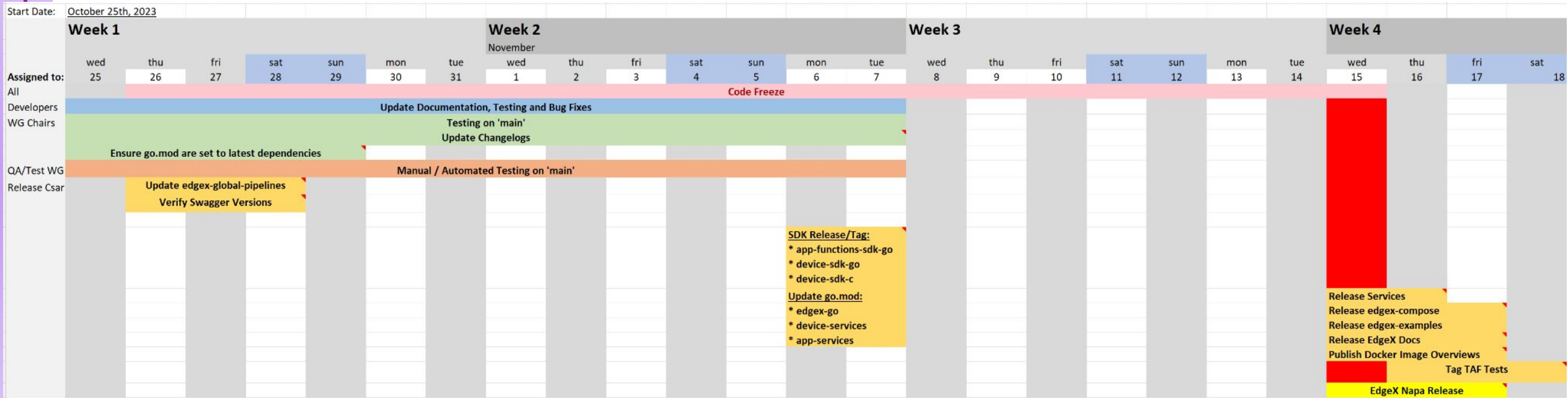**Next DevOps WG Meeting: Tuesday, November 14, 2023 @ 9AM PST**

Release Czar (2023-10-25)

Napa (3.1)

Code Freeze - 2023-10-25

Release Date - 2023-11-15 (3 weeks)

Start Date:	October 25th, 2023																			
	Week 1							**Week 2** November								**Week 3**				**Week 4**		
	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat	sun	mon	tue	wed	thu	fri	sat
Assigned to:	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
All											Code Freeze														
Developers							Update Documentation, Testing and Bug Fixes																		
WG Chairs							Testing on 'main'																		
							Update Changelogs																		
			Ensure go.mod are set to latest dependencies																					
QA/Test WG							Manual / Automated Testing on 'main'																		
Release Csar		Update edgex-global-pipelines																							
		Verify Swagger Versions																							

SDK Release/Tag:
* app-functions-sdk-go
* device-sdk-go
* device-sdk-c

Update go.mod:
* edgex-go
* device-services
* app-services

Release Services
Release edgex-compose
Release edgex-examples
Release EdgeX Docs
Publish Docker Image Overviews

Tag TAF Tests

EdgeX Napa Release

EdgeX Release Process: https://wiki.edgexfoundry.org/display/FA/Release+Checklist

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Outreach Update (10/24/23)

<u>No update this week</u>

Next meeting Nov 20th

EdgeX China Update

- Website: https://cn.edgexfoundry.org/
- OSChina: https://www.oschina.net/group/edgex-foundry
- CSDN: https://blog.csdn.net/edgexfoundry
- Zhihu: https://www.zhihu.com/people/edgex-foundry
- Bilibili: https://space.bilibili.com/550595847

- Recent events proved very popular
    - Q3 meetup in Shenzhen
    - KubeCon, One Summit China
- EdgeX Worldwide university hackathon is complete
    - Results have been announced in China
    - Awaiting final result for other countries and the overall winners
    - Announcement and blog coming

Quick Summary: EdgeX 3.1 High Level Plans

Info transferred to EdgeX wiki release page: https://wiki.edgexfoundry.org/display/FA/Napa+Release

Theme / Title	In Scope	Priority	T-Shirt	Notes
URIs for Files - done, except for C Device Service SDK	✔	High	M/L	Well-defined UCR and ADRs already. Owner: Lenny, Testing: Cherry
EdgeX V3 Docs Enhancements - ongoing, in progress	✔	High	M	Elizabeth (list issues) and Jim (perhaps ADR)
Zero Trust / Secure Distributed EdgeX (OpenZiti Integration) - in review	✔ (ADR)	High	S	ADR owner Bryon. Out of scope to implement for 3.1
Bring Your Own Vault - Hashicorp licensing may change this ● See Devaultification of EdgeX	✔ (ADR)	High	S	ADR owner Jim. Out of scope to implement for 3.1
Common Config - Support for C Devices - done	✔	Med	M	Owner: Felix, support from Iain
Modelling & Relationships – Parent/Child Devices - slipped to 3.2	✔	Med	S	Limited to Metadata. Owner: Eaton
Modelling & Relationships – Virtual Device Resources - slipped to 3.2	✔	Med	S	Limited to Device SDKs and Metadata. Owner: Eaton
Modelling & Relationships – Device Metadata in Provision Watchers - slipped to 3.2	✔	Med	S/M	Limited to Device SDKs and Metadata. Owner: Eaton
Core Data Retention - done and tested	✔	Med	S	Limited to Core Data. Owner: Cloud (Core WG)
NanoMQ (Provide as Experimental Feature) - done available as an option	✔	Low	S	Adds option in compose-builder to obtain performance metrics, ahead of a decision for 3.2
Common Config - Design for addressing the limitation with removing settings from writable / code refactor	STRETCH (Design)	Low	S	Out of scope to implement for 3.1

Other Topics

Hashicorp Licensing Model Changes

- Discussed on TSC meeting last week
- edgex-keeper now available to inspect (for IBM and others) in edgex holding repo
- https://github.com/edgexfoundry-holding/edgex-core-keeper

Recommendation

- Consul
  - Fork Consul now as a back up to any issues post 12/31/23
  - Update and review edgex-keeper during the next release cycle (Odessa)
  - Drop in replace Consul for Odessa or later
- Vault
  - Fork Vault now
  - Join other organizations in maintaining OpenVault for foreseeable future
    - Come to agreement about EdgeX effort in such a group
    - Get EdgeX member companies to agree to support OpenVault in addition to EdgeX
  - Setup a task force to design a Vault replacement during Odessa release
    - Using Bryon's feature set – establish requirements, outline architecture
    - Determine whether a single capability is needed or should it be multiple services
    - Examine "buy-vs-build" (buying other open source effort for some parts)
    - Monitor OpenVault

UCR & ADR Review (as of 9/20/23)

UCR/ADR Name	Status	Owner	Work Group
Microservice auth based on end-to-end-encryption	[In Review] ADR for OpenZiti integration #935	Bryon	Security
Devaultification of EdgeX	[Draft] ADR for EdgeX to go Vault-less (needs a UCR to link to) #1222	Bryon	Security

Document work (as of 10/24/23)

Docs that should be done for Napa

#1261 M [replace sample compose] `new`

#1249 L [refactor device docs] `new`

#1244 l [refactor core metadata] `new`

#1230 S [Last connect metric add to config] `completed`

#1197 M [explain insecure secrets]

#1196 m [add secret API to docs]

#1161 M [Protocol spec]

#899/900 - L [why EdgeX security requirements are met]

#855 - L [extend Go SDK API docs]

#732 L [role based access for Mosquitto]

#714 L [images to LFS]

#667 L [how to build containers]

#642 L [export to cloud]

#489 M (with #121, #21) [consume/send binary]

Documentation refactor / overhaul

- 1st phase complete
- Working on 2nd phase
  - ~~order of pages and naming~~
  - ~~standardize service pages~~
  - tutorials
  - API in References
  - Diataxis organizing

Next Meeting

- James out next week - <mark>Jim agreed to run the TSC meeting on Wed 1st Nov</mark>
- Following week (Nov 8th) is Architects
- Nov 15th is TSC and release date

Thank You

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