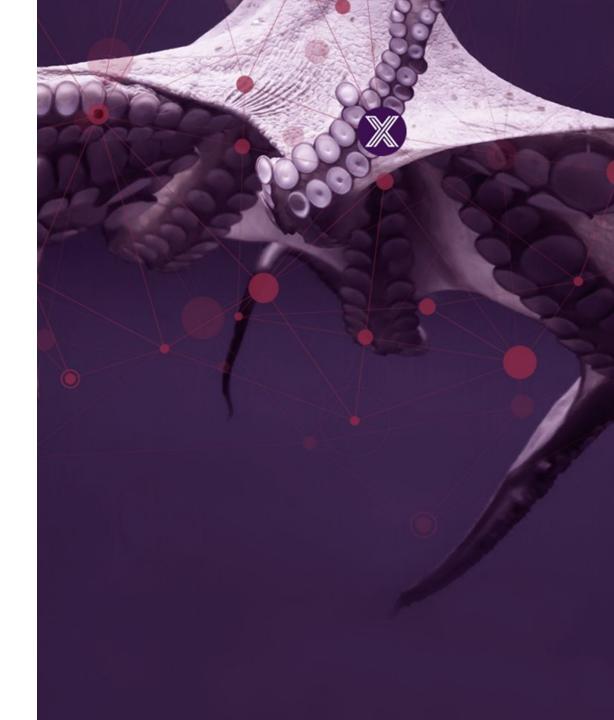# TSC Meeting

Jan 25, 2023

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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

TSC – Members Present Today

Company	Name	Email	Position
IOTech	Iain Anderson	iain@iotechsys.com	Device Services WG Chair
Intel	Ernesto Ojeda	ernesto.ojeda@intel.com	Dev Ops WG Chair
Intel	Bryon Nevis	bryon.nevis@intel.com	Security WG Chair
Intel	Lenny Goodell	leonard.goodell@intel.com	Applications & Analytics WG Chair
IOTech	Cloud Tsai	cloud@iotechsys.com	Core & Test/QA WG Chair

At Large Members:

Gavin Lu (VMWare), Farshid Tavakolizadeh (Canonical), Melvin Sun (Intel), James Butcher (IOTech), Tom Brennan (Eaton)

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
- ADR and UCR updates
- Doc updates
- Miscellaneous

Work Group Updates

Chairs

Working Group Chair Updates

- Around the horn
  - Product Manager - Lenny Goodell
  - Applications - Lenny Goodell
  - Core - Cloud Tsai
  - Device Services - Iain Anderson
  - DevOps - Ernesto Ojeda
  - Release Czar - Bill Mahoney
  - Security - Bryon Nevis
  - PRC Updates - Melvin Sun and Gavin Lu
  - Outreach and Marketing
    - Certification - Rodney Hess
    - LF Edge TAC - Jim White

Product Manager (01/25/23) - Minnesota

[Cross Cutting Issues](#)

Icebox (2)
- Lite Builds (no security features) via Build Tags
- Go 1.20

Backlog (4, +3)
- **V3 Rest API version bumps**
- **Switch to YAML for config files**
- **Remove old metrics collection**
- **Add service name to multi-level Events topic**

In Progress (7, +4)
- **Flattening of consul -**
  - Go Services - **DONE**
  - C SDK - WIP
  - C Device Services - TBD
- **Get Command Parameter type**
  - Go - **DONE**
  - C SDK - WIP
  - C Device Services - TBD
- **MessageBus Request API**
  - go-mod-messaging - **PR pending**
  - go-mod-bootstrap -WIP
  - Core Command - WIP
  - App Services - WIP
  - Go Device SDK - WIP
  - C SDK - TBD
  - C Device Services - TBD

- **Consistent Command-line options and Override names**
  - Doc updates - **DONE**
  - Go Services - **DONE**
  - C Device SDK - WIP
  - C Device Service - TBD

- **Common Config**
  - UCR - **DONE**
  - ADR - **DONE**
  - go-mod-bootstrap - **TBD**
  - core-common-config-bootstrapper - **PR Pending**
  - Compose - **PR Pending**
  - Core/Support services - TBD
  - App SDK - TBD
  - App Services - TBD
  - Go Device SDK - TBD
  - Go Devices Services - TBD
  - C Device SDK - TBD
  - C Device Services - TBD
  - edgex-go Snap - TBD
  - Helm example - TBD

- **Microservice Auth**
  - UCR -**Approved**
  - Prototype with OpenZiti - **WIP**
  - ADR - **WIP**
  - Implementation - **Prototyping**

- **MessageBus Config refactoring**
  - Doc updates - **TBD**
  - Go services - **DONE**
  - Compose Builder - **DONE**
  - C Device SDK - WIP
  - C Device Service - TBD

- **URIs for Files**
  - UCR - **TSC Vote**
  - ADR - TBD
  - Implementation - TBD

Done (2, +1)
- **V3 Go Mods**
- **Remove ZMQ**
  - Compose Builder - **DONE**

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Applications WG Update (01/25/23) - Minnesota

Newly Completed <mark>(11)</mark>
- refactor!: Update config for removal of SecretStore from services' configuration file #1268
- Unable to receive HTTPExportSize metrics #1266
- refactor!: Rework code for refactored stand alone MessageBus Configuration #1255
- Refactor MessageBus config to separate out of Trigger into MessageQueue like other services have #1221
- Enable Core Command Client via Messaging #490
- [SDK] Factory and Receiver functions for all transforms should use pointers (Breaking Change) #1131
- refactor: change mqtt connect handler for multiple subscribe #1232
- NewTags factory method in app functions sdk #1225
- Remove old Secret APIs now that Secret Provider is available #1224
- General cleanup for deprecated trigger/pipelines APIs #1227
- Enhance MessageError to implement the Error interface #1125

New (2)
- Support multiple triggers #1233
- App Services Compression function randomly crashes. #1250

WIP <mark>(1)</mark>
- Remove Deprecated PushToCoreData #1279

Done for Minnesota (<mark>34, +13</mark>)

Backlog (<mark>7, -5</mark>)

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

ICE BOX (7)

Next
- More refactoring for 3.0

eKuiper
- No update due to Lunar New Year

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

Next meeting **February 7th, 2023 @ <mark>3:30pm AZ</mark>**

Application Services - Minnesota

Functions (built into SDK)

- Add Tags
- Batch
- Compression (GZIP & ZLIB)
- Conversion (XML & JSON)
- PushToCore **** DEPRECATED****
- **EventWrapper** - <mark>NEW</mark>
- Encryption (AES256)
- Encryption (AES) **** DEPRECATED****
- 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)** - <mark>NEW</mark>

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 - <mark>NEW</mark>
- 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 - <mark>NEW</mark>

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Core WG Snapshot (12 Jan 2023)

- TAF:
  - Functional tests:
    - Non-Security **589** tests - all passed
    - Security 590 tests - all passed
  - Integration tests:
    - Non-Security **122** tests - 2 failed which caused by edgex-taf #751
    - Security **125** tests - 2 failed which caused by edgex-taf #751
  - Performance tests:
    - Non-Security **10** tests - all passed
    - Security **10** tests - all passed
- Working on the rename config flag rename
- Implemented support for specifying a ProvisionWatchersDir
- Replacing REST device callbacks with Device System Events
- The meeting on Jan 24th is cancelled due to Chinese New Year

Chinese New Year: 23rd-30th Jan

Next meeting: Tuesday Jan 17th 2023 @ 10 AM Pacific Time

Device Services WG Update (25 January 2023)

Device services:

- Enhancements to REST DS for 2-way communication - In review, doc clarification needed

Minnesota development:

- Go SDK - Use system events for device updates, remove secretstore config
- C SDK - Consul flattening, commandline consistency, message bus config rework
- Issues created for virtual resources, generate event on write
- Project board - 25 issues backlog, 1 in review

Next meeting: January 30th

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
- MEMS 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 (1/25/2023)

Pipeline Related

- #928 [Complete] Spike - Research mkdocs-swagger-ui (Demo at next DevOps WG Meeting)
- #421 [Backlog] Upgrade pipeline to Go 1.20 (Feb 2023)
- #203 [Backlog] Create Go 1.20 base CI image
- Working with Jim on edgex-docs robots.txt and sitemap

Other

- Reminder: DevOps WG meeting moving to once per month. Second Tuesday of the month @ 9AM PST.

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

Release Czar (2023-1-25)

Tentative Upcoming Releases
- Minnesota - *May 2023*

Recent Release History
- device-usb-bacnet 2.3.1 - *2023-1-5*
- device-usb-camera 2.3.0 - *2023-1-5*

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

Security WG Update

Next Meeting: 2/1 (propose cancel for today)

- OpenZiti and Vault JWT authentication prototypes are well along
  - JWT prototype: 155 MB RAM saved (160->5+change), 329MB images saved (docker, 353->(11+15))
  - OpenZiti: no numbers yet

Security Project Board Status

- 1 New Issues (-1)
- 9 Release Backlog (-1)
- 4 In Progress/QA (0)
- 2 In review (-1)
- 10 Done (+3)

Helm Chart - Board Status

- 15 To do (+1)
- 0 In progress
- 0 In review (-1)
- 16 Done (+1)

EdgeX China Update

EdgeX Challenge China 2022 Complete

- (Chinese) Press Release: https://mp.weixin.qq.com/s/rsbPO2mpoV24e-KNBIJbDQ
- Congratulations to all involved, a huge effort:
  - 64 entries, 37 teams into the finals, 4 months of training, competition and roadshow

EdgeX China community channels:

- 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

Outreach WG (1/24/23)

Ready/Certification

- No updates

Events

- Intel Student Hackathon for early 2023 (still pending)
- Edge F2F next spring
  - nice if it could be collocated with other LF event
  - COVID &/or travel budget issues

Docs via Google Search

- working on Google search that points to old version of docs

Switching Slack to GitHub Discussions (owner: James)

- later slide covers progress

Next meeting: Feb 27th @ 10am MST
Moved from Feb 20th - which is presidents day

Other Topics

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Quick Summary: EdgeX 3.0 High Level Updates

Theme / Title	In Scope	Priority	T-Shirt	Breaking	Notes
Common Configuration	✔	High	L	✔	UCR approved. ADR approved
URIs for Configuration	✔	High	M/L	-	UCR needs approving
Configuration Formats	✔	Med	L	✔	Documentation to describe the need
Microservice Authentication	✔	High	L	✔	UCR approved, ADR next
Parent/Child Devices	✔	Med	S/M	-	ADR not needed; Eaton to raise PR
Extending Device Data	✔	Med	L	-	ADR required (Eaton)
Provision Watch via Device Metadata	✔	Med	S/M	-	ADR not needed; Eaton to raise PR
Notification Service Improvements	Stretch	Low	S/M	-	
Core Data Retention	✔ (UCR)	Med	S/M	-	UCR in scope; options in Core Data, Scheduling
Lowering the JSON Overhead	Stretch	Low	S/M	-	Need more customer stats (IOTech)
Replace Kong, Consul, Vault with Lighter Options	Stretch	Med	L/XL	-	Eaton solutions available, testing ongoing
EdgeX Lite	Stretch	Low	S	-	Incubation work

UCR & ADR Review (as of 01/25/23)

UCR/ADR Name	Status	Owner	Work Group
Core Data Retention (Renamed from Core Data Cache)	UCR for review: https://github.com/edgexfoundry/edgex-docs/pull/884 Ready for re-review	Jim White	Core
URI reference (profiles, config, etc.)	UCR out to vote. ADR next?	Lenny	Core
Microservice authentication	UCR approved: https://github.com/edgexfoundry/edgex-docs/pull/920 ADR for review: https://github.com/edgexfoundry/edgex-docs/pull/659	Bryon	Security

Document work (as of 1/24/23)

Docs that should be done for Minnesota

#940 - S [ConfiProvider command line flag missing default value]

#924 - L [common config documentation]

~~#923 - L [secret store config changes]~~ Done

#913 - S [remove V2/Edgey sections]

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

#859/843 - L [version warning popup] (Jim working - and we now have WIP for latest)

#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]

Is this still an issue: **URL checks blocking documentation publication #801**

Miscellaneous

- EdgeX UI / CLI Tooling Poll: https://github.com/orgs/edgexfoundry/discussions/34

- Migrating from Slack to GitHub Discussions
  - Update GitHub discussion welcome - done
  - Archive EdgeX Slack channels - in progress
    - Info about archiving: Slack Article.
  - EdgeX Wiki - done
  - EdgeX Website - in progress
  - EdgeX Repos - TODO

Thank You