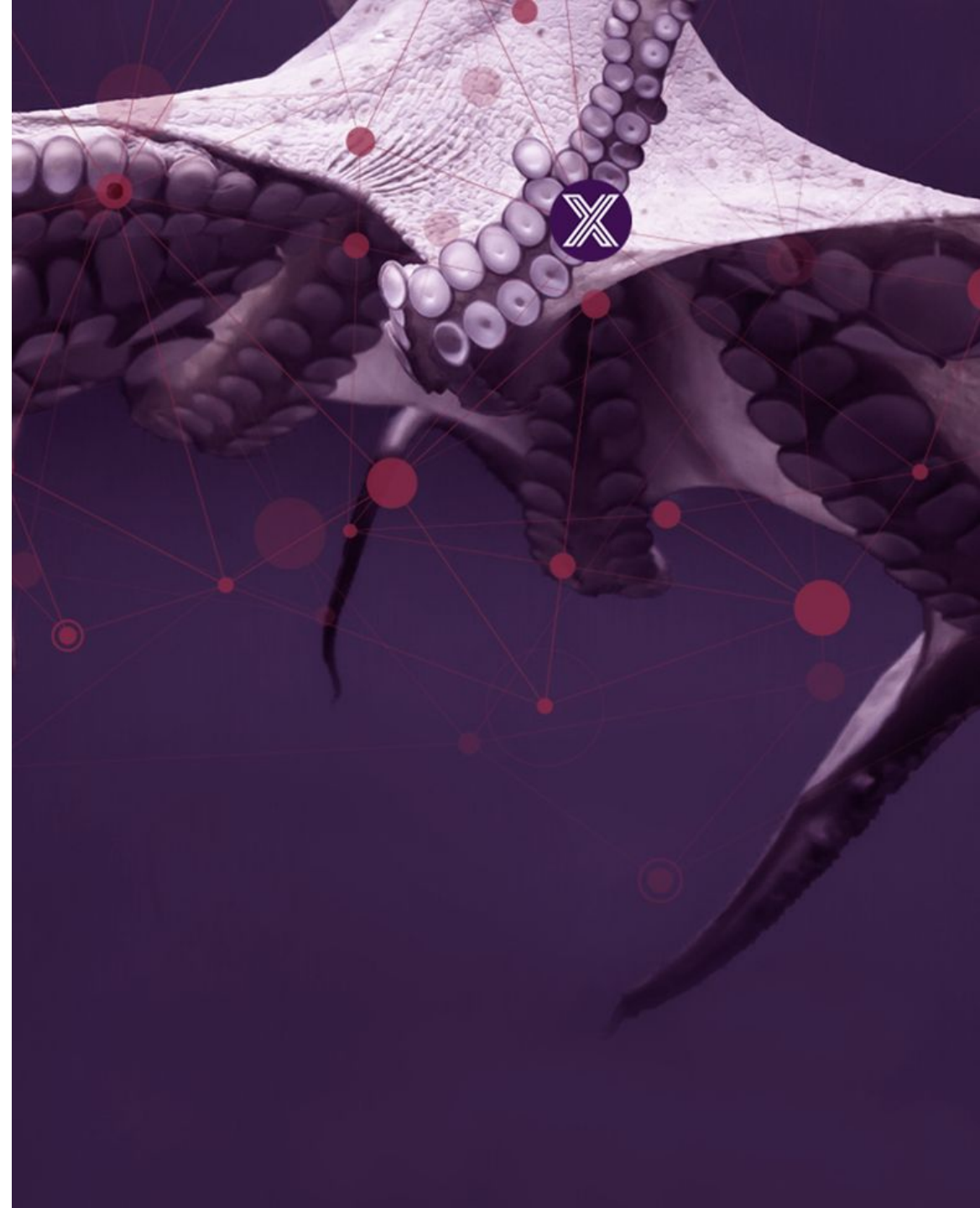


EDGE X FOUNDRY™

TSC Meeting

Feb 22nd, 2023

edgexfoundry.org |  @edgexfoundry



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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

<u>Company</u>	<u>Name</u>	<u>Email</u>	<u>Position</u>
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 (nothing today)





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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 (02/22/23) - Minnesota

Cross Cutting Issues

Icebox (1)

- Lite Builds (no security features) via Build Tags

Backlog (2, -2)

- V3 Rest API version bumps
- Switch to YAML for config files

In Progress (6, +1/-1)

- **MessageBus Request API**
 - go-mod-messaging - **DONE**
 - Core Command - **DONE**
 - App SDK - **DONE**
 - App Services - **DONE**
 - Go Device SDK - **DONE**
 - Go Device Services - **WIP (non-TAF)**
 - C SDK/Services - TBD
- **Consistent MessageBus Topic wildcards**
 - go-mod-messaging - **DONE**
 - App SDK - **DONE**
 - App Services (ASC & LLRP) - **DONE**
 - Go Device SDK - **DONE**
 - Go Device Services - **DONE**
 - C SDK/Services - TBD

- **Go 1.20**
 - Smoke tests of build - **WIP**
 - DevOps base CI image - TBD
 - Update Dockerfiles for all services - TBD
- **Common Config**
 - UCR - **DONE**
 - ADR - **DONE**
 - go-mod-bootstrap - **DONE**
 - core-common-config-bootstrapper - **DONE**
 - Compose - **DONE**
 - edgex-go - **DONE**
 - App SDK - **DONE**
 - App Services - **WIP (non-TAF)**
 - Go Device SDK - **DONE**
 - Go Devices Services - **WIP (non-TAF)**
 - edgex-go Snap - **DONE**
 - Helm example - TBD
 - C SDK/Services - TBD
- **Microservice Auth**
 - UCR - **Approved**
 - ADR - **Approved**
 - Prototype with OpenZiti - **WIP**
 - Implementation - **WIP**

- **URIs for Files**
 - UCR - **Approved**
 - ADR - **Approved**
 - Implementation - TBD
 -
- **Topics as constants and Add service name to multi-level topic when publishing Events**
 - Go Device SDK - **DONE**
 - Go Device Services - **WIP (non-TAF)**
 - Core Data - **DONE**
 - App SDK - **DONE**
 - App Services - **WIP (non-TAF)**
 - C SDK/Services - TBD

Done (7, +1)

- V3 Go Mods
- Remove ZMQ
- Flattening of consul
- Get Command Parameter type
- Consistent Command-line options and Override names
- MessageBus Config refactoring
- **Remove old metrics collection**



Applications WG Update (02/22/23) - Minnesota

Newly Completed (6)

- [LLRP] Update config for Trigger/MessagQueue config changes #126
- Adjust App SDK for Common Config #1295
- Adjust ASC for Common Config #513
- feat!: Consume additional level in event publish topic #145
- refactor!: Replace internal topics from config with new constants and use base topic #520
- feat!: Prepend base topic to all topics #1313

Newly added (1)

- Core Command message bus Time out #1296

WIP (2)

- § [MQTT Export] Error registering metric when MQTT Broker is reconnected #1320
- Web server crashes due to a nil pointer error when enabling HTTPS #1315

Done for Minnesota (48, +8)

Backlog (8, +2)

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

ICE BOX (8, +1)

Next

- More refactoring for 3.0

eKuiper

- 1.8.1 was released
 - Small bug fixes and doc updates
- 1.9.0 plan defined and in progress
 - Targeting last week of march
 - <https://github.com/lf-edge/ekuiper/milestone/17>

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



Application Services - Minnesota

Functions (built into SDK)

- Add Tags
- Batch
- Compression (GZIP & ZLIB)
- Conversion (XML & JSON)
- PushToCore **** DEPRECATED****
- **EventWrapper - NEW**
- 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) - 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 (22 Feb 2023)

- TAF:
 - Functional tests:
 - Non-Security **589** tests - **47 failed** / Security **590** tests - **57 failed**
 - Integration tests:
 - Non-Security **121** tests - **63 failed** / Security **124** tests - **64 failed**
 - Performance tests:
 - Non-Security **10** tests - all pass / Security **10** tests - all pass
- QA Progress
 - Keep tracking the impact of breaking changes and adjusting the test scripts
- Core Progress
 - Common configuration feature is under development
 - Implemented Device Service, Profile, and Provision Watcher System Events
 - Felix is going to run Go 1.20 smoke test with the 2.3 code base
 - Bruce has implemented the URL escape draft PR for review. Get by regex command needs this feature
- Any Other Business
 - Discuss protocol properties type values <https://github.com/edgexfoundry/go-mod-core-contracts/issues/592>
 - Core WG meeting next week (Feb 28) will be canceled due to the Taiwanese public holiday
 - As agreed in 3.0 planning, EdgeX CLI will be deprecated. [Announced on GitHub Discussions](#) along with requests for help



Device Services WG Update (22 February 2023)

Minnesota development:

- Go SDK - Simplify topic configuration, use system events for metadata updates
- C SDK - MessageBus abstraction (WIP)
- Wildcards in resource specifiers - looking to use URL-escaping method
- Project board - 21 issues backlog (-5), 2 in progress / review (=)

Next meeting: February 27th



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 (2/22/2023)

Pipeline Related

- [#928](#) [Complete] Spike - Research mkdocs-swagger-ui
- [#4832](#) [In Progress] edgex-docs swagger-ui-tag implementation
- [#421](#) [In Progress] Upgrade pipeline to Go 1.20 ([Feb 2023](#))
- [#203](#) [In Progress] Create Go 1.20 base CI image
- Working with Jim on edgex-docs robots.txt and sitemap

Other

- N/A

Next DevOps WG Meeting: Tuesday, March 7, 2023 @ 9AM PST



Release Czar (2023-2-22)

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: 3/1 (cancelled for today)

- JWT authentication in deployment phase
- OpenZiti - no updates

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)



Outreach WG (2/22/23)

Ready/Certification

- No updates

Events

- Intel Student Hackathon
 - March-June
 - Virtual event with possible f2f portions
 - May be a need for volunteer helpers (stay tune)
- Edge F2F next spring
 - nice if it could be collocated with other LF event
 - COVID &/or travel budget issues

Docs via Google Search

- still working on Google search that points to old version of docs (partially fixed - still working)

Next meeting: Feb 27th @ 10am MST

Will be discussing

Intel home edge hackathon (Mar-June)

LinkedIn social media account - control & content

Conferences and events

Website SEO fixes



EdgeX China Update

Intel Hackathon Planned March-June 2023

- Joint initiative for UK, USA and China
- Online across the countries, but likely to include on-site in-person aspect at Shanghai University
- More details TBC in due course

VMware Update

- Gavin Lu looking to focus on other development areas
- Melvin Sun will approach other Chinese EdgeX users for interest in membership and code contributions (particularly to UI) ahead of EdgeX TSC elections in June

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>





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Other Topics

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 approved. ADR approved
Configuration Formats	✓	Med	L	✓	Issue here
Microservice Authentication	✓	High	L	✓	UCR approved, ADR approved
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 approved; ADR not needed. Impl with Core WG
Lowering the JSON Overhead	Stretch	Low	S/M	-	Need more customer stats (IOTech)
Replace Kong, Consul, Vault with Lighter Options	Stretch	Med	L/XL	-	Kong being replaced as part of Microservice Authentication
EdgeX Lite	Stretch	Low	S	-	Incubation work

UCR & ADR Review (as of 2/22/23)

All UCR and ADRs required for Minnesota are approved and merged

<i>UCR/ADR Name</i>	<i>Status</i>	<i>Owner</i>	<i>Work Group</i>



Document work (as of 2/8/23)

Docs that should be done for Minnesota

#956 - S [Device GPIO port doc]

#950 - S [Misplaced DTO Validation page]

~~#940 - S [ConfigProvider command line flag missing default value]~~ closed

#924 - L [common config documentation]

#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]





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Thank You