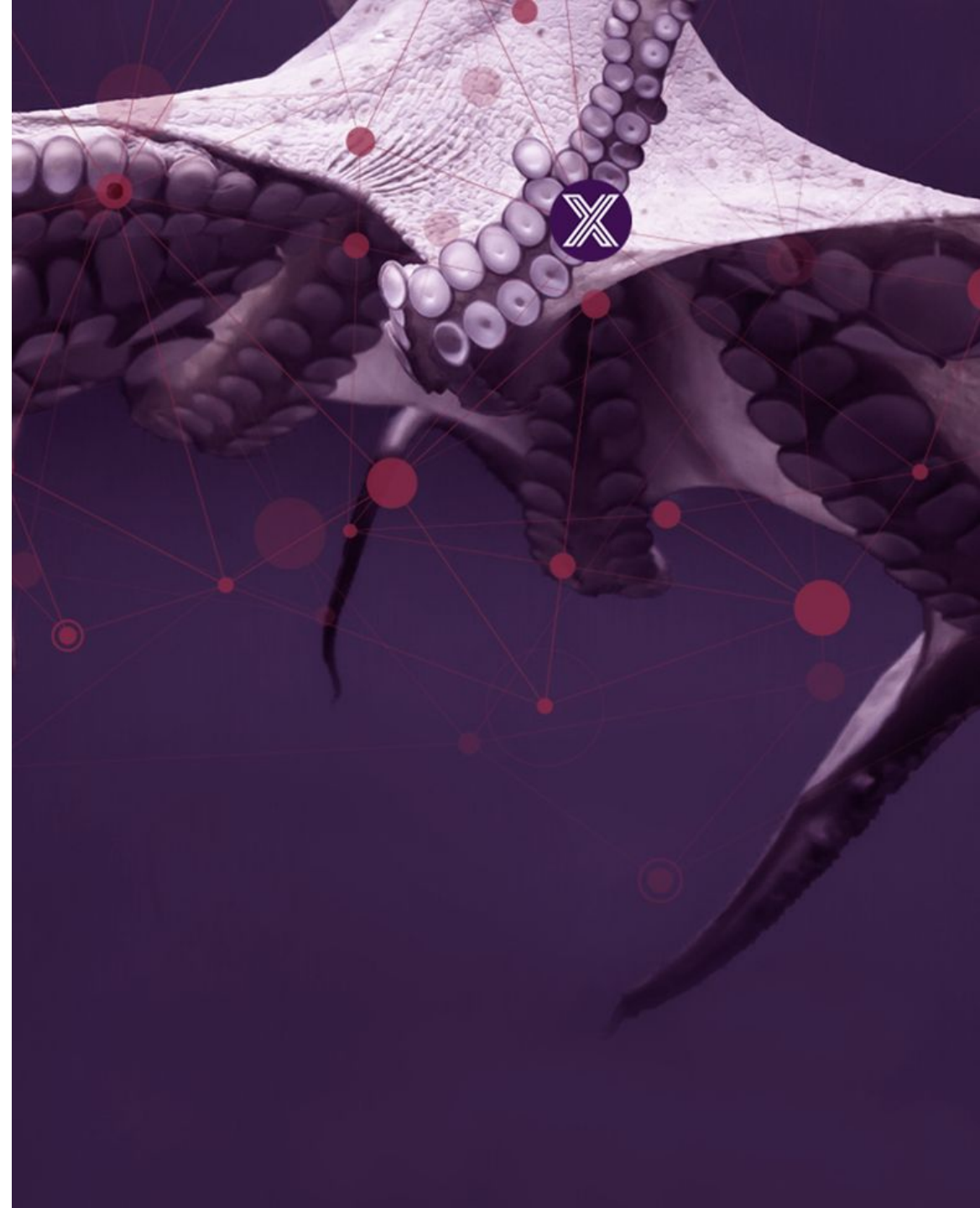


EDGE X FOUNDRY™

TSC Meeting

April 19th, 2023

edgexfoundry.org |  @edgexfoundry



Antitrust Policy Notice

- Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.
- Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at <http://www.linuxfoundation.org/antitrust-policy>. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.

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
- UCR & ADR Updates
- Doc Updates





EDGE X FOUNDRY™

Work Group Updates

Chairs

Working Group Chair Updates

- Around the table:
 - 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 (04/19/23) - Minnesota

[Cross Cutting Issues](#)

Icebox (1)

- Lite Builds (no security features) via Build Tags

Backlog (2)

- V3 Rest API version bumps
- Add main branch Warning to all Repos

In Progress (3, -1)

- **Switch to YAML for config files**
 - go-mod-bootstrap - **DONE**
 - edgex-go - **DONE**
 - App SDK - **DONE**
 - Device SDK Go - **DONE**
 - App Services - **DONE**
 - Go Device Services - **DONE**
 - EdgeX Docs - **DONE**
 - C Device SDK/Service - TBD
- **URIs for Files**
 - UCR - **Approved**
 - ADR - **Approved**
 - Implementation - 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 - **DONE**
- Go Device SDK - **DONE**
- Go Devices Services - **DONE**
- edgex-go Snap - **DONE**
- Helm example - **#187**
- -cc/-commonConfig - **DONE**
- bootstrap fixes/rework - **WIP**
- Doc Updates - **WIP**
- C SDK/Services - TBD

Done (14, +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
- Go 1.20
- MessageBus Request API
- Consistent MessageBus Topic wildcards
- Topics as constants and Add service name to multi-level topic when publishing Events
- Microservice Auth
- Remove use of TOML package
- **Secret Path => SecretName refactoring**



Applications WG Update (04/19/23) - Minnesota

Newly Completed (9)

- App Services Compression function randomly crashes. #1250
- [SDK hangs when calling docker-compose stop #500](#)
- Post secret API got error "SecretRequest.Path field is required"#522
- Camera Mgmt Example - Add documentation on how to ingest EVAM results into EdgeX#123
- [WIP BUG] Store and Forward Enabled missing from profiles #537
- Upgrade compose to eKuiper 1.9 #360
- Multiple PRs to back port Compression function fix to Levski and Jakarta
- Released APP SDK and ASC patches for Levski and Jakarta
- Fixed/confirmed multiple TAF failures are fixed

Newly added (1)

- Refactor Compression functions to use mutex to ensure thread safe for better benchmark result#1384

WIP (1)

- Camera Mgmt Example - Auto start EVAM on new camera devices#122

Done for Minnesota (82, +14)

Backlog (1)

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

ICE BOX (9)

Next

- Documentation

eKuiper

- eKuiper rules cannot send commands via HTTP in Secure EdgeX 3.0
 - <https://github.com/edgexfoundry/edgex-go/issues/4508>
 - eKuiper documented how to use Commands via External MQTT
 - https://ekuiper.org/docs/en/latest/edgex/edgex_rule_engine_command.html#create-rules
 - We need to update our **Commands via Messaging** docs to include how to connect securely to the External MQTT connection.
- Released 1.9.1
 - <https://github.com/lf-edge/ekuiper/releases/tag/1.9.1>
- Working on 1.10.0 (target release with Minnesota)
 - <https://github.com/lf-edge/ekuiper/releases/tag/1.10.0-alpha.0>
 - <https://github.com/lf-edge/ekuiper/milestone/18>

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 (19 April 2023)

- TAF:
 - Functional tests:
 - Non-Security **589** tests - **1 failed** / Security **590** tests - **1 failed**
 - Integration tests:
 - Non-Security **121** tests - **56 failed** / Security **124** tests - **55 failed**
 - Performance tests:
 - Non-Security **10** tests - all pass / Security **10** tests - **1 failed**
- QA Progress
 - Keep tracking the impact of breaking changes and adjusting the test scripts
- Core Progress
 - Common configuration feature is almost done
 - Some bugs fixed
 - Writing new documentation



Device Services WG Update (19 April 2023)

- Configuration for locations of metadata files (devices, profiles) moved out of common
- Project board - 18 issues backlog (-2), 3 in progress / review (==)

Next meeting: April 24th



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 (4/19/2023)

Pipeline Related

- [#428](#) [Complete] edgex-docs investigate htmlproofer issues
 - Issue causing PR failures was related to Connection Refused errors connecting to a few hosts
 - Issue identified as an upstream issue from ISP.
 - [PR #1019](#) has been merged to enable htmlproofer again
- [#423](#) [In Progress] POC Simple GitHub Actions and Simple Reusable workflow for Go builds
 - Initial Demo done April, 11th. Next demo will show a more complete example.
 - Plan will be presented next WG meeting on next steps

Other

- N/A

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



Release Czar (2023-4-19)

Upcoming Releases - Minnesota (3.0.0)

- Code Freeze - 2023-5-10
- Release - 2023-5-31

Levski / Jakarta(LTS) Patch - (2.3.1 / 2.1.2)

- app-service-configurable

Recent Release History

- device-usb-camera 2.3.1 - 2023-3-21
- device-onvif-camera 2.3.1 - 2023-3-21
- device-sdk-go 2.3.1 - 2023-3-20

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



Security WG Update

Next Meeting: [4/19](#) (today)

- No OpenZiti update this week
- In review
 - #1029 - update JWT auth documentation
 - #187 - Helm chart updates
- In progress
 - #374 - add more security metrics
 - #714 - fuzzing (won't be finished by time of release)
- Opens - validation failures
 - #567 - device-mqtt-go leaks msgbus credentials
 - **#4508 - eKuiper authentication when invoking core services' REST events**

Security Project Board Status

- 0 New Issues (-2)
- 0 Release Backlog (-2)
- 3 In Progress/QA (+2)
- 1 In review (+1)
- 67 Done (+15)

Helm Chart - Board Status

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



Outreach Update (4/18/23)

Social Media

Next meeting: May 15th @ 10am PDT

- Eaton use case due to be done this week and out 1st week in May
- Social media raw stats and followership on Outreach wiki
 - More research forthcoming (along with possible actions)
- Looking for content for social media posts. If you have some ideas, please reach out

Web Site

- LF Edge's web site page on EdgeX being updated
 - See <https://docs.google.com/document/d/1yAJsMOjNSMXNxiqVmwn5nQOIZlpImCR61Q1eFAf6Wfs/edit?usp=sharing>
- SEO improving - results spreadsheet on Outreach wiki
 - Now in #1 or 2 position for lots of IoT/edge related terms thanks to Laura/Gavin/others @ IOTech

Events

- Intel Student Hackathon
 - 44 registered so far (more probably forthcoming as registration is open until Apr 20th)
 - Teams in UK, US, China. New university partner signed on (RPI)
 - Runs through June - possibly longer (winners announced in July)
 - Development around Matter device service
 - **Looking for volunteers to help answer questions on forum channels (Slack-like). Contact Jim or Dan Brooks**
 - <https://edgex-hackathon.com/>

Ready/Certification

- No updates
- edgexfoundry.org |  [@edgexfoundry](https://twitter.com/edgexfoundry)



EdgeX China Update

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>

Intel EdgeX Hackathon is underway

- Focusing on EdgeX and home automation
 - Opening and registration open: March 21
 - Registration and team building ends: April 20
 - Training: April-June
 - Training based on existing EdgeX material delivered by large Chinese company Jing Dong <https://www.jd.com/>
 - Announcement of shortlisted teams: end of April
 - Finals and Roadshow: July
 - Announcement of winners: July
- Ongoing efforts to ask Chinese companies to announce their usage of EdgeX





EDGE X FOUNDRY™

Other Topics

Quick Summary: EdgeX 3.0 High Level Updates

James to transfer/update the EdgeX wiki release pages with this information

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 - Now out of scope	✓	Med	S/M	-	ADR not needed; Eaton to raise PR
Extending Device Data - Now out of scope	✓	Med	L	-	ADR required (Eaton)
Provision Watch via Device Metadata - Now out of scope	✓	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 4/18/23)

UCR/ADR Name	Status	Owner	Work Group
BYO Vault	Approved - still a chance to get the ADR submitted in this cycle	Jim	Security
Common Config	Updated ADR approved	Lenny	Common



Document work (as of 4/18/23)

Docs that should be done for Minnesota

- #1031 M [rework deployment page] (new)
- #1028 M [update JWT auth instructions] (new)
- #1026 M [add common config to container names doc] (new)
- #1024 S [fix text and links that reference older releases] (new)
- #1023 M [Polish Common Config] (new)
- ~~#992 L [Delay start security] (done)~~
- #985 - L [Document summary of data model changes in v3]
- #956 - S [Device GPIO port doc]
- ~~#913 - S [remove V2/EdgeX sections] (done)~~
- #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]

Network issues build
problem fixed - thanks
Ernesto and Eric B.





EDGE X FOUNDRY™

Thank You