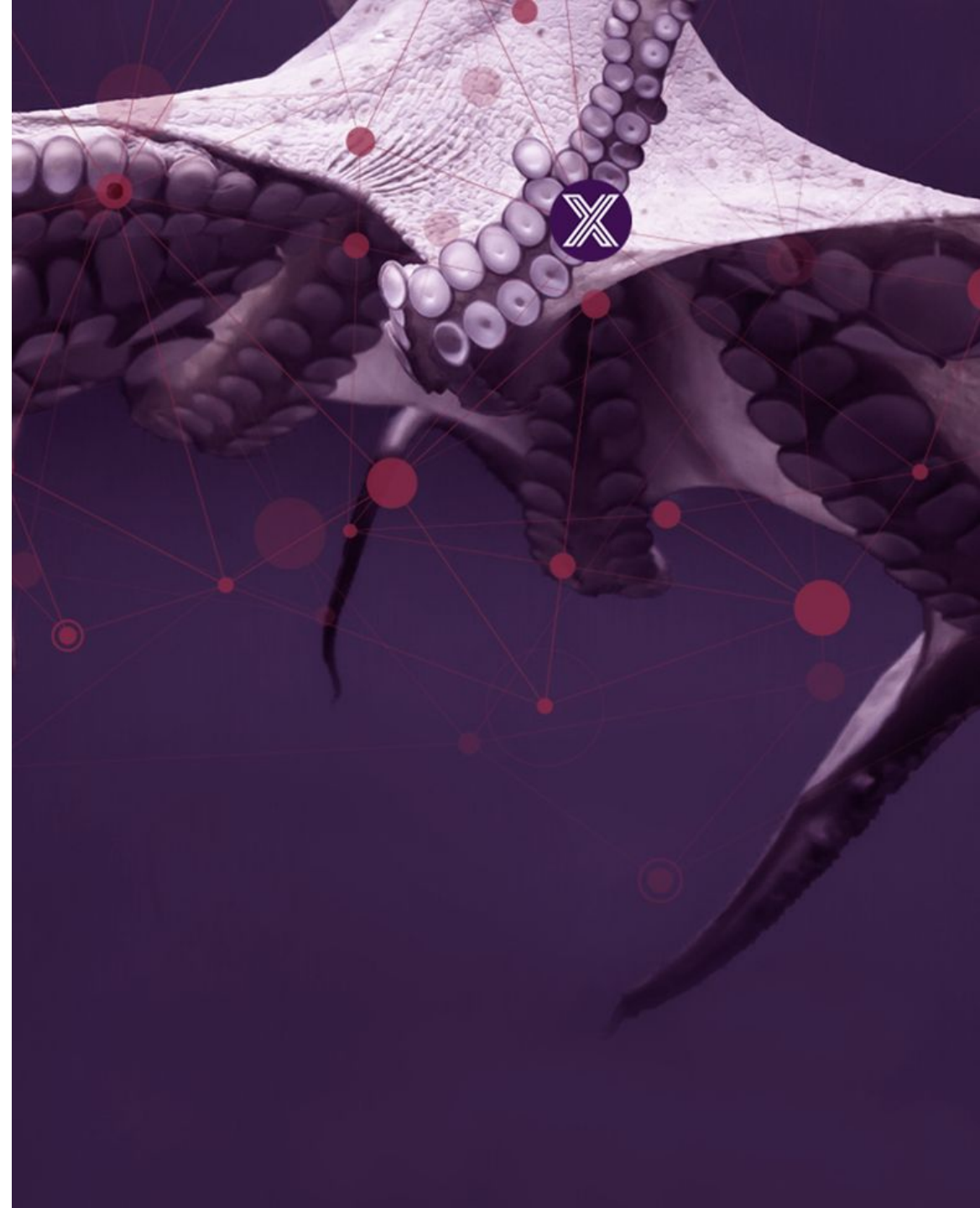


EDGE X FOUNDRY™

TSC Meeting

June 28th, 2023

edgexfoundry.org |  @edgexfoundry



Antitrust Policy Notice

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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

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.



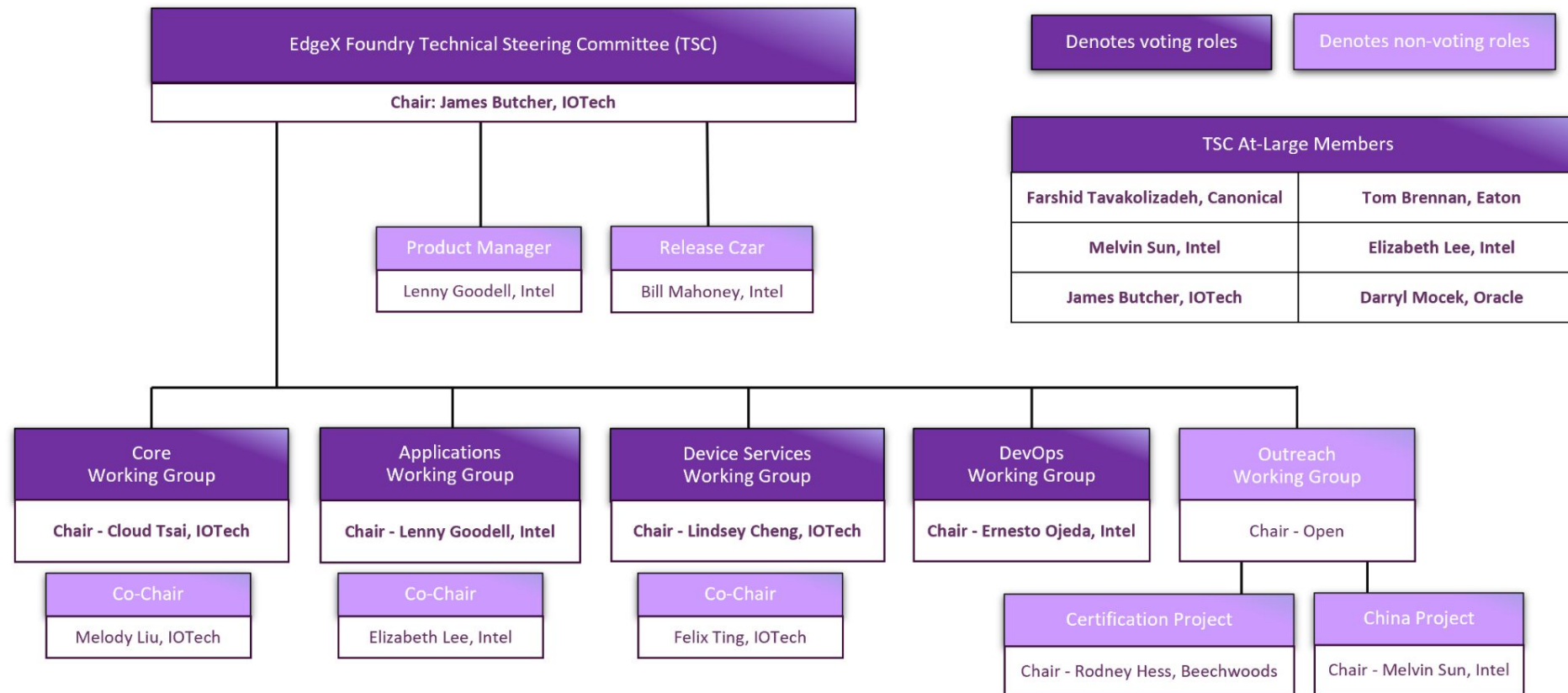
Today's Agenda

- Welcome to new TSC
- Working Group Updates
- UCR & ADR Updates
- Doc Updates
- LF Edge Alvarium project update and potential integration



EdgeX TSC 2023-2024

- Welcome to all new and existing TSC members
- 10 voting members plus other roles and committee members
- Pages updated at [EdgeX TSC Wiki Pages](#)





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Work Group Updates

Chairs

Working Group Chair Updates

- Around the working groups:
 - **Release Czar** - Bill Mahoney
 - **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
 - **Outreach and Marketing**
 - **Certification** - Rodney Hess
 - **China Updates** - Melvin Sun
 - **LF Edge TAC** - Jim White



Release Czar (2023-6-27)

Release Activity:

- Minnesota (3.0.0) - 2023-5-31

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

edgexfoundry.org |  [@edgexfoundry](https://twitter.com/edgexfoundry)



Product Manager (06/28/23) - Napa

[Cross Cutting Issues](#)

Icebox (1)

- Lite Builds (no security features) via Build Tags

Backlog (0)

-

In Progress (2)

- **Common Config**
 - C SDK/Services - TBD
- **URIs For Files**
 - go-mod-bootstrap function - **DONE**
 - go-mod-bootstrap Config - TBD
 - Core Metadata (UoM) - TBD
 - Go Device SDK files - TBD
 - C Device SDK files - TBD

Done (0)

-



Applications WG Update (06/28/23) - Napa

Newly Completed (2)

- [App SDK Docs] Rename secretName to secretValueKey and secretPath to secretName#1096
- App-service template not working (SDK version incorrect)#1427

Newly added (0)

-

WIP (3)

- Add support for regular in filters ? #1037
- Record and Replay (<https://github.com/orgs/edgexfoundry/projects/54>)
- HTTPRequestHeaders parameter for ASC HTTP Export #1426

Done for Napa (2)

Backlog (1) <https://github.com/orgs/edgexfoundry/projects/50/views/2>

- Add ability to set MQTT Will options for external MQTT server connections #1117

ICE BOX (9)

Next

- More Record and Replay
- Finish WIP

eKuiper

- Working on 1.11 release (target release date is August 23rd)
 - <https://github.com/lf-edge/kuiper/milestone/20>

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 (27 June 2023)

[Core/QA Project Board](#)

- TAF:
 - Functional tests:
 - Non-Security **593** tests - All pass / Security **594** tests - All pass
 - Integration tests:
 - Non-Security **113** tests - All pass / Security **114** tests - All pass
 - Performance tests:
 - Non-Security **10** tests - All pass / Security **10** tests - All pass
- QA Progress
 - All the automation tests are passed
- Core Progress
 - Fixed several bugs and refactored multiple docs
 - Working on the issue of CPU increases abnormal when creating interval with us/ns unit [#4586](#)



Device Services WG Update (26 June 2023)

- **Device UART**

- V3 Migration is in progress (PR opened by Lenny and HCL)

- **URI4Files**

- issues opened for both C and Go sdk

- **Device Last Connected metrics**

- issue [#1470](#) opened and will be included in the v3.0 release scope

Next meeting: 1AM Pacific, 9am UK, July 3rd (for European time zone)



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 (6/27/2023)

Pipeline Related

- N/A

Other

- N/A

Next DevOps WG Meeting: Tuesday, July 11, 2023 @ 9AM PST



Outreach Update (6/28/23)

Social Media & Website

- We reviewed current analytics in the Outreach meeting on Monday.
- Some observations:
 - LinkedIn has better attention than Twitter (by about 3 fold)
 - Best results come from product announcements, real use cases, announcing something of value, and quick polls
- LF Edge Website update of projects still forthcoming

Project Outreach

- Eaton use case now published <https://www.lfedge.org/resources/case-studies/>

Events

- Intel Student Hackathon - ongoing; now through June (possibly early July)
 - Teams in UK, US, China.
 - Development around Matter device service
 - See <https://edgex-hackathon.com/>

Ready/Certification

- No updates

Next meeting: June 19th @ 10am PDT



EdgeX China Update

- Intel EdgeX Coding Competition is underway
 - ~ 95 participants signed up (per Dan Brooks @ Intel)
 - 10 teams applied in China; 8 accepted (per Melvin Sun @Intel)
 - Coding starts this week and goes through July
 - Finals and Roadshow: July
 - Announcement of winners: July
- Recent events in China
 - EdgeX booth on GOTC May 27-28th, Shanghai
 - Q2'23 EdgeX China meetup / Edge.AI summit: Jun 10th, Shanghai

- 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>



UCR & ADR Review (as of 5/16/23)

UCR/ADR Name	Status	Owner	Work Group
BYO Vault	UCR approve; working on ADR	Jim	Security
Microservice auth based on end-to-end-encryption	ADR need to pave way for OpenZiti integration	Bryon	Security



Document work (as of 5/16/23)

Docs that should be done for Minnesota

#1062 M [Update ProvWatcher in Meta DD] (**new**)

#1057-2 L [Update migration guides] (**new**)

#1037 S [Grove link broken]

#1034 L [Connect to secure MQTT to commands] (**new**)

#1031 M [rework deployment page]

#1026 M [add common config to container names doc] (**done**)

#1024 S [fix text and links that reference older releases]

#985 - L [Document summary of data model changes in v3]

#956 - S [Device GPIO port doc]

#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]



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	✓	High	M/L	Well-defined UCR and ADRs already. Owner: Lenny, Testing: Cherry
EdgeX V3 Docs Enhancements	✓	High	M	Elizabeth (list issues) and Jim (perhaps ADR)
Zero Trust / Secure Distributed EdgeX (OpenZiti Integration)	✓ (ADR)	High	S	ADR owner Bryon. Out of scope to implement for 3.1
Bring Your Own Vault	✓ (ADR)	High	S	ADR owner Jim. Out of scope to implement for 3.1
Common Config - Support for C Devices	✓	Med	M	Owner: Felix, support from Iain
Modelling & Relationships – Parent/Child Devices	✓	Med	S	Limited to Metadata. Owner: Eaton
Modelling & Relationships – Virtual Device Resources	✓	Med	S	Limited to Device SDKs and Metadata. Owner: Eaton
Modelling & Relationships – Device Metadata in Provision Watchers	✓	Med	S/M	Limited to Device SDKs and Metadata. Owner: Eaton
Core Data Retention	✓	Med	S	Limited to Core Data. Owner: Cloud (Core WG)
NanoMQ (Provide as Experimental Feature)	✓	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



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Other Topics

Project Alvarium

<https://www.lfedge.org/projects/alvarium/>

Project Alvarium, with initial code seeded by Dell Technologies, is aimed at building a framework and SDK for trust fabrics that deliver data from devices to applications with measurable confidence. Trust fabrics take a system-level approach by layering trust insertion technologies spanning silicon to cloud and will usher in an entire new era of business models and customer experiences driven by interconnected ecosystems. Initial contributing companies include Dell, the IOTA Foundation, Intel, Arm, VMware and ZEDEDA





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Thank You