

EDGE X FOUNDRY™

TSC Meeting

December 8, 2021



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Meeting Logistics

Time: Wednesdays 8am PDT – 9am PDT

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/join?j=983155298>

** 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 |
| IOTech | Jim White | jim@iotechsys.com | Outreach WG Chair |
| Intel | Bryon Nevis | bryon.nevis@intel.com | Security WG Chair |
| Intel | Lenny Goodell | leonard.goodell@intel.com | Applications & Analytics WG Chair |
| IOTech | James Butcher | james@iotechsys.com | Core/Test/QA WG Chair |

Gavin Lu (VMWare), Tony Espy (Canonical), Melvin Sun (Intel)

Current quorum = 7 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

- WG Updates
- ADR updates and list of new needs
- Misc
 - December schedule
 - Monthly architect's meeting



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Work Group Updates

Chairs

Working Group Chair Updates

- Around the horn
 - Product Manager - Lenny Goodell
 - Applications - Lenny Goodell
 - Core - James Butcher
 - Device Services - Iain Anderson
 - DevOps - Ernesto Ojeda
 - Release Czar - Bill Mahoney
 - Security - Bryon Nevis
 - PRC Updates
 - Outreach - Jim White
 - Certification - Rodney Hess
 - Marketing - Camilo Dennis
 - Vertical Solutions (and LF Edge TAC) - Henry Lau

Product Manager (12/8/21) - Jakarta

[Cross Cutting Issues](#)

In Progress (9 -1)

- [Securing Consul with Access Token](#)
 - C Device SDK - TBD
 - C Device Services - TBD
- **Secure Message Bus connection**
 - C Device SDK - TBD
 - C Device Services - TBD
- [Secret Provider for All](#)
 - DS SDK C - DONE
 - C Device Services - TBD
- **CORS for all (secure and non-secure)**
 - Go services - DONE
 - C SDK - TBD
- **Request new Consul token on Auth failures**
 - Go Services - DONE
 - C SDK/Services - TBD
- **Implement Generate/Inject passwords into Vault**
 - Go Services - DONE
 - C SDK/Services - TBD

- **add a "make lint" target**
 - edgex-go - DONE
 - App Services - DONE
 - go-mods - TBD
 - Go Device SDK - TBD
 - Go Device Services - TBD
 - C Device Services - N/A
- **Metrics ADR - WIP**
- **Secret store tokens for delayed-start services ADR - WIP**

Done (1, +1)

- **No ZMQ on Windows**

Backlog (1 +1)

- **Switch to Go 1.17**

Icebox (0)

Applications WG Update (12/8/2021)

Completed

- None

WIP

- Migration of LLRP App Service

eKuiper

- No Update

Next

- Metrics once ADR is approved

Project Board: <https://github.com/orgs/edgexfoundry/projects/23>

Note: Bi-weekly morning App Service WG meetings are now being used for Eaton's discussions on C++ Data/App service. These discussions will continue on **January 4th @ 9am PST**

Application Services - Ireland

Functions (built into SDK)

- Add Tags
- Batch
- Compression (GZIP & ZLIB)
- Conversion (XML & JSON)
- PushToCore
- ~~MarkAsPushed~~
- 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

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
- Clients
 - Logging, Event
 - Command
 - Device, DeviceService
 - DeviceProfile
 - Notification
 - Subscription
 - Registry

Reference/Example App Services

(built on top of SDK)

- Simple Filter
- Simple Filter and MQTT Export
- Simple Filter and HTTP Export
- Simple CBOR
- Azure IoT Hub
- Amazon IoT Core
- Cloud Event Transformation
- Secret Retrieval
- JsonLogic

- Send Command
- Convert & Publish
- Custom Target Type
- IBM Watson IoT (ASC Profile)
- Custom Trigger
- Influx DB Export
- Fledge Export

Core WG Snapshot (8 Dec 2021)

- Kamakura:
 - TAF - All Pasing
 - Functional tests: 543 (2 new tests: MessageBus QoS Config: [#505](#) & [#551](#))
 - Integration tests: 37
 - Performance tests: 10
 - Main Issues Fixed:
 - [#685](#) HTTP REST Address should support PATCH method in Data Transfer Object
 - doesnt require a Jakarta patch on its own
 - [#3827](#) Snaps installation bug
 - Other:
 - [#3705](#) EdgeX with Prometheus - code available

Core Project Board Status

- 3 New Issues (+0)
- 10 Release Backlog (+0)
- 0 Bug Backlog (+0)
- 2 In Progress/QA (+2)
- 9 Done (+2)
- 2 Kamakura Stretch (+0)
- 17 Icebox (+0)

QA/Test Project Board Status

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

Next meeting Thursday December 9th @ 8am Pacific Time

Core WG (GUI team)

- Has started development of automated testing of GUI
- Using Selenium (<https://www.selenium.dev/>)
- In our next meeting, should get some idea of how much can be tested by next release

Device Services WG Update (8-Dec 2021)

WIP

- Update PR for OPC/UA
- Device Functions ADR
- LLRP service refactoring

New proposed Device Service

- Fujitsu looking to contribute LoRA DS
- Presentation at WG meeting January 17th

Next meeting: January 10th

Device Services - current/coming (as of v2.1)

Open Source connectors (Current):

- Modbus (TCP/RTU) in Go
- Virtual Device in Go
- SNMP in Go
- MQTT in Go
- BACnet (IP & MSTP) in C (v1 only)
- ONVIF Cameras in Go
- REST in Go
- Grove in C
- CoAP in C
- LLRP / RFID in Go
- GPIO in Go

Open Source connectors (Future):

- UART in Go
- OPC-UA 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

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

DevOps WG Update (12-08-2021)

Pipeline Related

- [Complete] Archive 3rd Party compose images in edgex-compose for LTS releases
- [Backlog] [#371](#) Go 1.17 released - [Release Notes](#) - On hold until Kamakura
- [Backlog] [#370](#) Spike: multi-arch builds with buildx (spin up less nodes, speed up builds)
- [Backlog] [#59](#) Spike: rewrite git-semver in python
- Linux Foundation will be working on Ubuntu 20 based build agents for use in the pipelines
 - Will also be migrating away from CentOS due to EOL

Other

- [Complete] Developer Badge Program is live:
<https://www.lfedge.org/2021/12/07/how-do-you-say-thank-you-to-contributors-edgex-is-trying-to/>

Next DevOps WG Meeting Thursday, December 16, 2021 @ 9AM PST

Release Czar (12-8-2021)

Jakarta Release - **Complete**

Docker Hub Image Overview Updates - **Complete**

Security WG Update (12/8/21)



Delayed Services Start ADR 0019

December 13, 2021

“Your vote counts!”

Updates on EdgeX in Chinese speaking regions

- Q4 meetup scheduled on Dec 11th in Shenzhen, the first time in South China region.

EdgeX China community channels:

- Website: <https://cn.edgexfoundry.org/>
- OSChina zone: <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 (12/7/21)

Certification

- EdgeX Ready social media blitz

Marketing Efforts

- Press release (out)
- Developer Badge Blog (out)
- EdgeX Challenge Press Release (coming this week)
- EdgeX 3.0 Blog (coming soon/perhaps this week)
- Jakarta Performance #s Blog (coming soon)
- V2 API video (January)

EdgeX Challenge - Smart *

- Sponsors landed
 - Intel, HP, BSI, IOTech
- Next steps
 - Formalize sponsor contracts
 - Web site update and Registration
 - Prep training materials
 - Organize Judges

Topcoder

Contest now underway and a winning tool forthcoming

Next meeting Monday Dec 13th at 9am PST

ADR review

| <i>ADR name and PR number</i> | <i>Status</i> | <i>owner</i> | <i>Work Group</i> |
|---|--|---------------------|--------------------------|
| ADR for delay start service secret store token / #389 | Target EOY - ready for approval/TSC vote | Bryon Nevis | Security, DS |
| Device profile changes / #605 | Target EOY - read for re-review/Monthly Arch Meeting | Jim White | DS |
| Metrics / #268 | Target EOY - ready for re-review/Monthly Arch Meeting | Jim White | Core |
| ADR on unit of measure / #386 | Target Jan 2022 - ready for re-review/Monthly Arch Meeting | Jim White | Core |
| Device functions / #644 | New - initial draft (discussed in DS work group) | Iain Anderson | DS |
| North-south message bus | Needed per planning meeting | | |
| control plane events | Needed per planning meeting (low priority this release) | | |
| cmake options to optimize dependencies | Needed per planning meeting | Eaton | |
| Global config | Needed per planning meeting (low priority this release) | | |
| Securing the EdgeX message bus when using MQTT | Needed per planning meeting | | |
| device parent/child relationship | Needed per planning meeting (labels vs other option) | Eaton | |

Miscellaneous

- Eaton presented on combined app/device service idea at app service meeting
 - Requirements being documented/prioritized
 - Some requirement refinement and initial design ideas to be done by email over holidays
 - Next meeting Jan 4th app services morning meeting
- December schedule
 - No EdgeX meetings between Dec 20 - Dec 31.
 - Return to normal schedule Jan 3 (Monday)
- Monthly Architect's meeting - Dec 13th @ 10am PST
 - Issue #3777 in edgex-go
 - Few minutes on new decision board
 - Priority then given to pressing ADRs
 - Delayed start / security service
 - Device profile changes
 - Metrics collection
 - UoM



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Thank You