

EDGE X FOUNDRY™



TSC Meeting

January 5, 2022



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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)

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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
- EdgeX Challenge Shanghai
- ADR updates
- Miscellaneous
 - Log4J security issue
 - EdgeX 2022 Smart * Challenge/Hackathon
 - Topcoder tool
 -



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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 (01/05/22) - Jakarta [Cross Cutting Issues](#)

In Progress (8)

- [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 - WIP
 - Go Device SDK - WIP
 - Go Device Services - TBD
 - C Device Services - N/A
- **Metrics ADR - WIP**

Done (2)

- No ZMQ on Windows
- Secret store tokens for delayed-start services ADR

Backlog (1)

- Switch to Go 1.17

Icebox (0)

Applications WG Update (01/05/2022)

Completed

- Custom Trigger refactoring
- bug(triggers): pipeline child context not passed to response handler
 - Jakarta bug - Only for custom trigger

WIP

- Migration of LLRP App Service (so close!!)

New

- LLRP App Service missing volume for inventory snapshot data (edgex-compose)

eKuiper

- No Update

Protocol App Services

- Defining high level requirements
 - <https://docs.google.com/document/d/1TXFg5tkbDIFa2tj0yfTZcQ4NPNfo-Y8c/edit?usp=sharing&oid=104667835989061964851&rtpof=true&sd=true>

Next

- Metrics once ADR is approved

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

Reminder: Bi-weekly morning App Service WG meetings are now being used for Eaton's discussions on C++Protocol App service. These discussions will continue on **January 18th, 2022 @ 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 (05 Jan 2022)

- Kamakura:
 - TAF - All Pasing
 - Functional tests: 545
 - Integration tests: 43
 - Performance tests: 10
 - **Verified all the services compiled and work well with Go 1.17 via manual integration tests**
 - Lots of dependency bumps (validator, go-kit, etc)

Core Project Board Status

- 7 New Issues (-2)
- 14 Release Backlog (+5)
- 0 Bug Backlog (+0)
- 3 In Progress/QA (+3)
- 16 Done (+7)
- 2 Kamakura Stretch (+0)
- 14 Icebox (-3)

QA/Test Project Board Status

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

Next meeting Thursday January 06th @ 8am Pacific Time

Device Services WG Update (5 Jan 2022)

Device Services for v2.x release

- CoAP - requires release testing
- RFID - some residual issues to address
- GPIO - PR in review
- Grove - has PR
- BACnet - uncertain

ADRs in process

- Device Functions - to be discussed at Device WG next week
- Changes to Device Profiles - to be discussed at Core WG tomorrow

Proposed new Device Services

- UART - in review
- OPCUA - ready for review
- LoRa / LPWA - to be presented Jan 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 (01-05-2022)

Pipeline Related

- [Backlog] [#371](#) Go 1.17 released - [Release Notes](#) - On hold until 2022
- [Complete] [#370](#) Spike: multi-arch builds with buildx (spin up less nodes, speed up builds)
- [Backlog] [#59](#) Spike: rewrite git-semver in python
- [Backlog] 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

- [Backlog] Slight inefficiency found in Dockerfile with Go modules in regards to local docker builds. Will need to update all Go based Dockerfiles to fix.

Last DevOps WG Meeting for 2021: Thursday, January 13, 2021 @ 9AM PST

Release Czar (2022-1-5)

No Updates This Week.

Past Activity:

Jakarta - 2.1.0 LTS: Complete

Security WG Update (1/5/22)

Next Meeting: Today

Today's topics

- Begin long discussion/direction-setting for microservice authentication

Security Project Board Status

- 3 New Issues (+3)
- 8 Release Backlog
- 0 In Progress/QA
- 8 In review
- 6 Done (+2)

Secure Consul Project Board Status

- 0 In-review
- 0 In-progress
- 2 Phase 1 To-do
- 1 Phase 2 To-do
- 4 Phase 3 To-do

Updates on EdgeX in Chinese speaking regions

- ReCap of EdgeX challenge 2021 in a separated deck.
https://docs.google.com/presentation/d/1_eiltuDu-2CIQEgwpFfDSDIA5kqizpu9/edit?usp=sharing&oid=105670038818091004575&rtpof=true&sd=true

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 (1/5/22)

Certification

- V2 API support for EdgeX Ready program

Marketing Efforts

- Working on new tech talks
 - V2 API video
 - Message Bus video

Next meeting Monday Jan 10 at 9am PST

EdgeX Challenge - Smart *

- Sponsors landed
 - Intel, HP, BSI, IOTech
- Next steps
 - LF invoicing sponsors
 - Web site update and Registration
 - **Prep training materials**
 - **Organize Judges**

Topcoder

- 2 submissions available via holding
- **What to do with them - decision needed**
- <https://github.com/edgexfoundry-holding/edge-x-message-monitor>

ADR review

<i>ADR name and PR number</i>	<i>Status</i>	<i>owner</i>	<i>Work Group</i>
Device profile changes / #605	Target input by EOY - vote in early 2022	Jim White	DS
Metrics / #268	Target input now, with final review in early 2022	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	Ready for reveiw	Iain Anderson	DS
North-south message bus / #656	Initial draft available for review	Jim White	Core
Microservice Authentication / #659	Initial draft available for review	Bryon Nevis	Security
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

- Still working on Eaton requirements
 - <https://docs.google.com/document/d/1TXFg5tkbDIFa2tj0yfTZcQ4NPNfo-Y8c/edit>
- EdgeX Challenge Rules
 - Question from probable participant team:
 - Can design work begin early? Coding would start at the open of the contest, but would research, planning, design, etc. be allowed prior to coding?
- Log4J security issue
 - Does not appear to be anything attached to EdgeX directly that is impacted
 - B. Nevis recommends archiving old Java docker images
 - Eric B/LF have confirmed no exposure in our CI/CD processes/tools (per Ernesto)
 - Anyone aware of any other vulnerabilities?
- Intel is looking for speakers to front their Edge Software Hub Hackathon
 - Details coming soon, but we need interest and contact info by Jan 14th



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Thank You