EDGEXFOUNDRY™

TSC Meeting

August 17, 2022

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

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

Company	Name	Email	Position
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 = 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 and UCR updates
- Doc updates
- Miscellaneous

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
    - Vertical Solutions (and LF Edge TAC) - Henry Lau

Product Manager (08/17/22) - Levski

Icebox (1)
- **Lite Builds (no security features) via Build Tags**

Backlog (2, -1)
- **Secure MQTT MessageBus**
- **Microservice Auth**

In Progress (1, -2)
- **Commands via MessageBus (aka N/S MessageBus)**
  - **Message Envelope - WIP**
  - **Core Command Service - TBD**
  - **Go Device SDK**
  - **Go Device Services - TBD**
  - **C Device SDK - TBD**
  - **C Device Services - TBD**
  - **Command Client (core-contracts) - TBD**
  - **App SDK - TBD**
  - **APP Services - TBD**

- **Additional Metrics**
  - App Services - **Done**
  - Device Services - **Defined**
  - Core - **Defined**
  - Security - **Defined**

Done (7, +3)
- **Request new Consul token on Auth failures**
- **System Events (aka CPE) (UC/ADR/Impl)**
- **Go 1.18**
- NATs MessageBus
- Explore goweight to see impact of individual libs (nothing actionable)
- eclipse/paho.mqtt.golang 1.4.1 (License update to v2.0)
- Securing Consul with Access Token

Applications WG Update (08/17/22) - Levski

Newly Completed (2)

- **feat(microservices): Add NATS MessageBus Overview for App Service Trigger #805**

New (1)

- eKuiper 1.6.0 is not backward compatible #267
  - 1.6.1 will resolve this

WIP (2)

- [App SDK Docs] Document how to decrypt data from the AES256 encrypt function #784
- Record and Replay - Use Case Requirements #832
  - Draft PR here: https://github.com/edgexfoundry/edgex-docs/pull/833

Backlog (10, -2)

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

ICE BOX (6)

- Leftovers not planned for Levski and old low issues

Next

- UCR for Record and Replay
- Build option on ASC for including NATS MessageBus

eKuiper

- 1.6.0 released
  - Release notes: https://github.com/lf-edge/ekuiper/releases/tag/1.6.0
  - Has backward compatibility issue which looks to be fixed
    - https://github.com/lf-edge/ekuiper/issues/1361
    - We will use 1.6.1 when released
- Started 1.6.1
  - https://github.com/lf-edge/ekuiper/milestone/11
  - Plug-in from default library for Alpine versions
- No 1.7 milestone no defined yet

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

Next meeting **August 23th, 2022 @ 3:30pm Pacific**

Application Services - Levski

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 Snapshot (17 August 2022)

- Levski:
  - TAF
    - Functional tests: 594 - all passing
    - Integration tests: 55 - all passing
    - Performance tests: 10 - all passing
  - Core
    - Fixed some minor issues
    - Implementing UoM ADR
    - Implementing north-south messaging

Per UI meeting 8/15
Note: EdgeX UI team continues to work on integration testing
Report 14% coverage with 100 tests

Core Project Board Status

- 5 New Issues (+1)
- 19 Release Backlog (+0)
- 1 In Progress/QA (-1)
- 60 Levski Done (+5)
- 17 Icebox (+0)

QA/Test Project Board Status

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

Next meeting: Tuesday 23th August @ 5 PM Pacific Daylight Time

Device Services WG Update (3 August 2022)

- Camera device services and C SDK released for 2.2
- Initial discussions on Provision Watcher enhancement, Device relationships

Project board : 17 issues new/backlog (-1); 3 in progress/review (-3)

Next meeting: August 8th

Device Services - current/coming (as of v2.2)

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 and USB Cameras in Go
- REST in Go
- Grove in C (v1 only)
- 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
- WebSockets in Go

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 (08-17-2022)

Pipeline Related

- [#407](#) [In Progress] Standardize make `version` between Jenkins and Snap builds
- [#409](#) [Backlog] edgex-ui: add UI unit test to pipeline `(ng test)`

Other

- [#389](#) [Complete] Help optimize local developer make docker builds

Next DevOps WG Meeting: Thursday, August 18, 2022 @ 9AM PST

Release Czar (2022-8-17)

Kamakura (2.2.0):

- Released - 2022-5-11
- device-usb-camera released - 2022-7-28
- device-onvif-camera released - 2022-7-29
- C SDK- 2022-7-29

Security WG Update

Next Meeting: Today

- Progress
  - Redis 7 major version upgrade unblocked
- Agenda for today
  - IOTech considering donating a whole-EdgeX threat model (MSFT threat modeling tool + STRIDE)

Security Project Board Status

- 6 New Issues (0)
- 5 Release Backlog (+1)
- 2 In Progress/QA (-1)
- 1 In review (n/c)
- 16 Done (+3)

Secure Consul Project Board Status

- 2 Phase 3 To-do (-1)
- 0 In-progress (+1)
- 1 In-review (+1)

EdgeX China- EdgeX challenge 2022 (China region)

Updates of EdgeX challenge China 2022
- Entry level training (5 courses in total) on each workday this week
- Opening ceremony is scheduled on Aug 3rd
- Calling for sponsorship till end of July

Level	Cost		Benefits			
	RMB	USD	Logo exposure on KV, news reports, blogs	Keynote	Judge	OSS ingredient included in EdgeX Hackathon
Strategic Partner	260K	40K	Y	Y	Y	Y
Diamond	100K	15K	Y	Y	Y	
Gold	70K	10K	Y	Y		
Silver	35K	5K	Y			

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

edgexfoundry.org | @edgexfoundry

Outreach WG (8/16/22)

Ready/Certification

- Rodney working on Wiki update

Social Media

- Performance blog post coming this summer
- Opportunity for additional Tech Talks

Events

- Exploring 2023 options

WebSite Changes (order or priority)

- Tech talks now available through the web site (both English and Chinese)
- Looking at spend of funding for ($4500 budget)
  - Security Audit issues
    - SOW signed off
  - SEO updates (shared between English and China sites)
    - WIP
- Update some content (diagrams, et al) - internal
- Google Analytics for docs now set up on all branches

Next meeting Aug 29th@ 11am CDT (noon EDT)
Still looking for new group leader

ADR & UCR PROCESS review (as of 8/16/22)

ADR name and PR number	Status	owner	Work Group
Parent/Child device relationship & Application Services Extending Device Data (UCR)	https://github.com/edgexfoundry/edgex-docs/pull/800 under review	Tom-Eaton	DS
Provision Watch more Device Properties (UCR)	https://github.com/edgexfoundry/edgex-docs/pull/806 under review	Tom-Eaton	DS
Hybrid App-Device Services (UCR)	https://github.com/edgexfoundry/edgex-docs/pull/809 under review	Tom-Eaton	DS
Record and replay service	https://github.com/edgexfoundry/edgex-docs/pull/833 draft - under review	Lenny	App Services
core data cache	Levski release		Core
global configuration	EdgeX 3.0 item (not in scope now)		
URI reference (profiles, config, etc.)	EdgeX 3.0 item (not in scope now; may be sub part of global config)		

Document work (as of 8/16/22)

#641 L [EdgeX w/ K8s]   <u>Nice to have</u>

    <mark>PR in - under review and needs updating</mark>   #643 M

#788 M [fix notifications pages]   #642 L

#787 M [fix scheduler pages]   #598 L

#731 M [V2 migration guide fix event/reading DTO]   #489 M (with #121, #21)

#732 L [role based access for Mosquitto]

#778 S [broken links]

    <mark>WIP - need assistance from Lenny on where old examples went</mark>

#784 M [document how to decrypt data]

#808 M [add document section for the internal EdgeX MessageBus

Miscellaneous

- EdgeX examples and branching
- Meeting next week - Aug 24th (James out)

Thank You