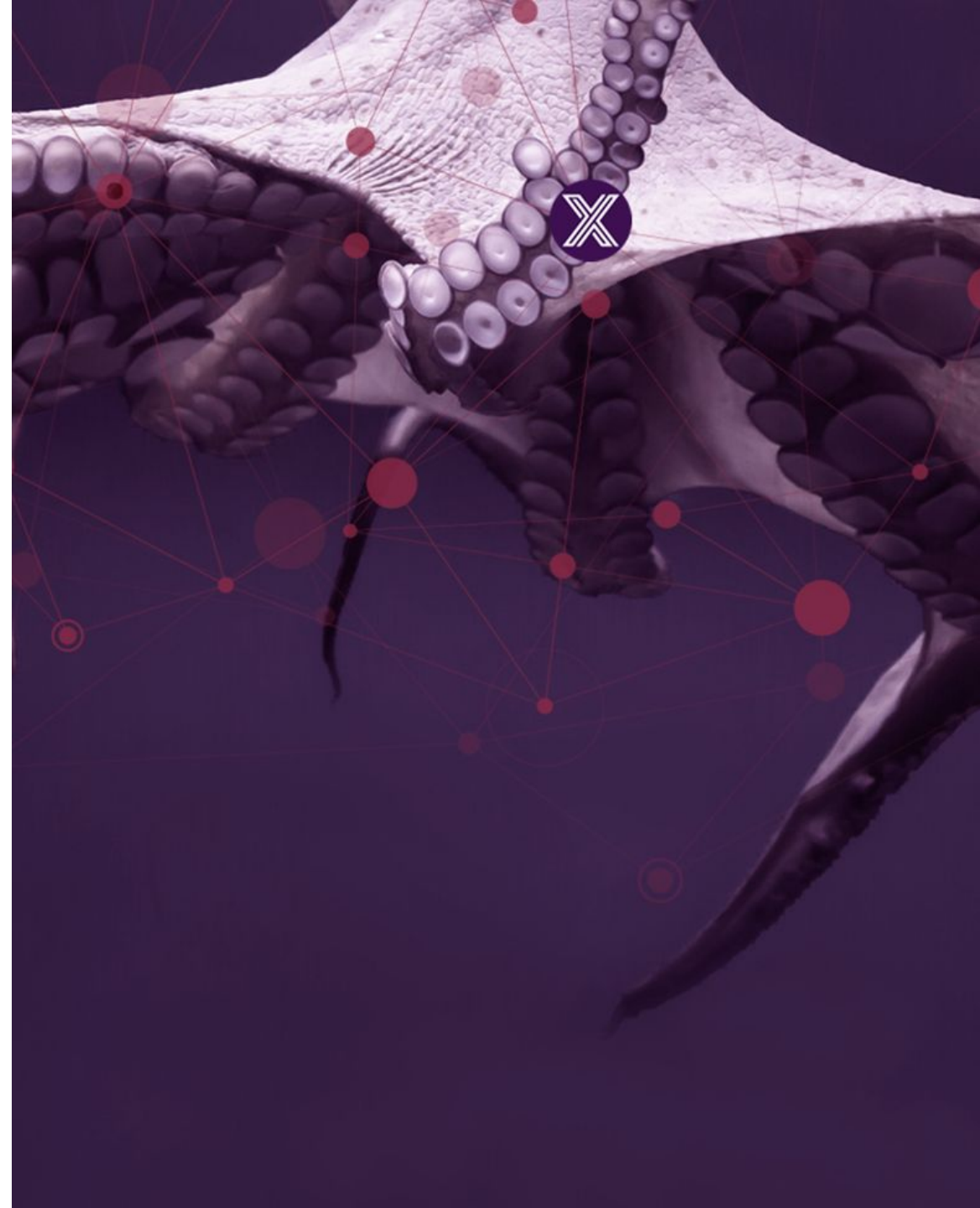


EDGE X FOUNDRY™

TSC Meeting

Sep 21, 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)

+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
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
 - Update from LF EdgeX Annual Review
 - Levski Release Schedule Planning
 - Agenda for Monthly Architect's Meeting (Sep 26th)



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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 (09/20/22) - Levski

[Cross Cutting Issues](#)

Icebox (1)

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

Backlog (2)

- **Microservice Auth**
- **Go 1.19 (<https://tip.golang.org/doc/go1.19>)**

In Progress (4)

- **Commands via MessageBus (aka N/S MessageBus)**
 - **Message Envelope - DONE**
 - **Core Command Service - WIP**
 - **go-mod-bootstrap - DONE**
 - **Go Device SDK - WIP**
 - **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**

- **Secure MQTT MessageBus**
 - **Security Secret Store Setup - DONE**
 - **Compose Builder - DONE**
 - **eKuiper config - DONE**
 - **TAF test updates - WIP**
 - **C SDK/Services - TBD**
- **NATS Make targets and compose**
 - **Compose Builder - DONE**
 - **ASC - DONE**
 - **edge-go - DONE**
 - **App LLRP - WIP**
 - **Device Virtual - DONE**
 - **Device Services - TBD**

Done (7)

- **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 (09/20/22) - Levski

Newly Completed (4)

- [Secure MQTT for eKuiper #4147 \(HIGH\)](#)
- [Expose the SecretProvider rather than wrapping it in the SDK APIs #1163](#)
- [fix: \[SDK\] typo in CommandClient description #1173](#)
- [fix: \[Docs\] Correct typo in CommandClient function description #862](#)

New (0)

- None

WIP (1)

- [ADR for Record and Create Replay feature #471](#)

Backlog (7)

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

ICE BOX (5)

- Leftovers not planned for Levski and old low issues

Next

- Wrap up Record and Replay ADR

eKuiper

- Working on 1.7
 - <https://github.com/lf-edge/ekuiper/milestone/12>
 - Targeting October 26, 2022 release date
 - Major effort is Lookup Table support

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

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 (21 Sep 2022)

- Levski:
 - TAF
 - Functional tests: 605 - 1 failed test case, [#4138 POST device resource didn't validate Units of Measure](#)
 - Integration tests: 55 - 8 failed test cases, [#707 Update script to support secure mqtt message bus](#)
 - Performance tests: 10 - all passed
 - Core
 - Implementing System Event test
 - Implementing delay start service test
 - Implementing north-south messaging

Core Project Board Status

- 1 New Issues (-3)
- 15 Release Backlog (-2)
- 1 In Progress/QA (-1)
- 73 Levski Done (+10)
- 20 Icebox (+1)

QA/Test Project Board Status

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

Next meeting: Tuesday September 27th @ 5 PM Pacific Daylight Time

Device Services WG Update (21 September 2022)

- Proposed UART device service ready for review
- Project board : 16 issues new/backlog (=); 5 in progress/review (=)

Next meeting: September 26th

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 (09-21-2022)

Pipeline Related

- [#407](#) [Complete] Standardize make `version` between Jenkins and Snap builds
- [#409](#) [Complete] edgex-ui: add UI unit test to pipeline (`ng test`)
- [#412](#) [Backlog] Update edgeXReleaseDocs pipeline after latest changes
- [#413](#) [Backlog] Update Swagger API version on release

Other

Moving DevOps WG meeting to Tuesday's at 9AM PST starting October 6th

Next DevOps WG Meeting: Thursday, September 22, 2022 @ 9AM PST

Release Czar (2022-9-21)

Levski (2.3.0) - ~November 2022

- **Finalize Freeze / Release dates**

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: TBD

- In home stretch for committed security backlog
 - One tech debt outstanding, everything else is WIP
 - Didn't get as far as wanted on Helm chart enhancements
- Threat model review still outstanding
- May cancel today's security WG (call for discussion topics)

Security Project Board Status

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

Secure Consul Project Board Status

- 1 Phase 3 To-do (0)
- 0 In-progress (0)
- 0 In-review (n/c)

EdgeX China

- EdgeX Challenge China 2022 Updates
 - Completed preliminary round on Sep 5th
 - 64 proposals received
 - 28 in health, education, consumer industry
 - 36 in energy and heavy industry
 - See breakdown on next slide
- EdgeX Meetup planned for Q4 (Nov/Dec)

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>

EdgeX China Challenge Accepted Use Cases

Health, Education and Consumer

h01	Animal behavior recognition in animal farm to analyze health information, through processing data collected from IPC, temperature sensors, infra imaging, noise detectors
h03	Patient recovery self-practicing & training
h06	5G SASE based capsule bank all-in-one station
h08	CV based medical aesthetics customer evaluation
h09	CV based eye disease screening and evaluation
h10	Interactive mobile robot for retail stores
h12	Facial recognition based smart campus management system (IPCam, access control, borrowing & returning books in Libraries, ...)
h13	CV based customer analytics in shopping mall
h15	Pest and disease identification and management in agriculture
h16	Indoor light & energy management for hospital and schools
h20	CV based heatmap analysis in Museum
h21	Photos taking and sharing system
h22	Smart kitchen management system
h23	CV based smart classroom management
h24	Smart ambulance
h27	Integrated device connector
h29	Video surveillance and security management in gasoline retail station (connecting IPCam, IP speaker)

Energy and Industrial

e04	Smart lighting
e07	Smart management system for oil & gas production
e09	Industrial product appearance inspection
e10	Energy management in smart cities
e12	Bridge & waterway monitoring
e13	5G MEC+AI based power equipment patrol inspection
e14	Video analytics on the edge
e15	EdgeX-based digital edge management system for production sites
e18	Smart energy management platform
e19	Smart energy management in office building
e20	Power Plant & mine Inspection
e26	Data-driven energy optimization services for building central air conditioning systems
e27	Campus fire warning
e30	Access & security management of office building
e31	Fire monitoring & alarm system
e32	Non-secure mode API gateway
e33	Timber storage management
e34	Smart city camera monitoring
e35	5G general edge platform
e36	Vibration monitoring platform

Outreach WG (9/20/22)

Ready/Certification

- No updates

Social Media

- Opportunity for additional Tech Talks

Events

- Exploring 2023 options
- [Building Systems Integrators](#) will present their use of EdgeX during TSC meeting in October

WebSite Changes (order or priority)

- Looking at spend of funding for (\$4500 budget)
 - SEO updates (shared between English and China sites) - WIP
- Address SE issues of directing to latest
 - LF ticket in

Next meeting: Sept 26 @ 11am - email any topics to Jim W prior to the meeting

ADR & UCR PROCESS review (as of 9/20/22)

<i>ADR name and PR number</i>	<i>Status</i>	<i>owner</i>	<i>Work Group</i>
Extending Device Data (UCR) - split from parent/child UCR	https://github.com/edgexfoundry/edgex-docs/pull/845 under review	Tom-Eaton	AS/core
Parent/Child device relationship & Application Services Extending Device Data (UCR)	https://github.com/edgexfoundry/edgex-docs/pull/800 up for TSC vote (5 votes in favor so far)	Tom-Eaton	DS
Provision Watch more Device Properties (UCR)	https://github.com/edgexfoundry/edgex-docs/pull/806 up for TSC vote (3 votes in favor so far)	Tom-Eaton	DS
Hybrid App-Device Services (UCR)	https://github.com/edgexfoundry/edgex-docs/pull/809 under re-review	Tom-Eaton	DS
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 9/20/22)

#641 L [EdgeX w/ K8s]

PR in - under review and needs updating

#731 M [V2 migration guide fix event/reading DTO]

#732 L [role based access for Mosquitto]

#774 Nats

#778 S [broken links]

WIP - just need old examples tagged

#788 M [fix notifications pages]

#843 M [SE indexing old docs]

#847 M [secret provider API] - done

#855 - L [extend Go SDK API docs]

#859 - L [version warning popup]

#860 - L [update UI secty docs]

Nice to have

#796, #392 M

#643 M

#642 L

#598 L

#489 M (with #121, #21)

Miscellaneous

Linux Foundation EdgeX Annual Review

- <https://wiki.lfedge.org/display/LE/Project+Annual+Reviews>
- New 2022 page for EdgeX here:
 - <https://wiki.lfedge.org/display/LE/EdgeX+Foundry+-+Stage+3+-+2022-09-21>

From LF TAC

[Hacktoberfest 2022](#) - this isn't difficult, folks

- › LF Edge Projects ... do you have at least 20 open issues? Need volunteers?
- › Add a "hacktoberfest" **topic** to each repo to opt-in.
- › Add the "hacktoberfest" **label** to each issue you would like help with.
- › Make sure your CONTRIBUTING.md file is up-to-date.
- › Add "hacktoberfest-approved" label to merged PRs.
- › Add "spam" label to rejected spammy PRs.
- › Close invalid contributions with "invalid" label.

That's it!

Sit back and enjoy all the new volunteers flocking to your project.

Disclaimer: expect 2-5 new contributors, on average. YMMV

EdgeX 2.3 Levski Release Schedule - for TSC approval

- Per our new [planning schedule policy](#)
- Possible release dates of Nov 9th, 16th, 23rd or 30th (all Wednesdays)

Wed Nov 9	Wed Nov 16	Wed Nov 23	Wed Nov 30
Code Freeze: Oct 26 (Wed)	Code Freeze: Nov 2	Code Freeze: Nov 9	Code Freeze: Nov 16
Pre Wire: Oct 20 (Thurs)	Pre Wire: Oct 27	Pre Wire: Nov 3	Pre Wire: Nov 10
Planning: Nov 14-17 (Mon-Thurs)	Planning: Nov 21-24	Planning: Nov 28-Dec1	Planning: Dec 5-8

- USA Holidays:
 - Veterans Day: Friday Nov 11 - during Nov 16 code freeze period
 - Thanksgiving: Nov 24-25 - might impact Nov 16 planning meeting
- UK, Germany, Taiwan - None

Monthly Architect's Meeting

<https://wiki.edgexfoundry.org/display/FA/Monthly+Architects%27+Meeting>

This months moved to Monday 26th Sep 10am PT

- Subjects to cover
 - EdgeX 3.0 Considerations
 - UCR and ADR reviews



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Thank You