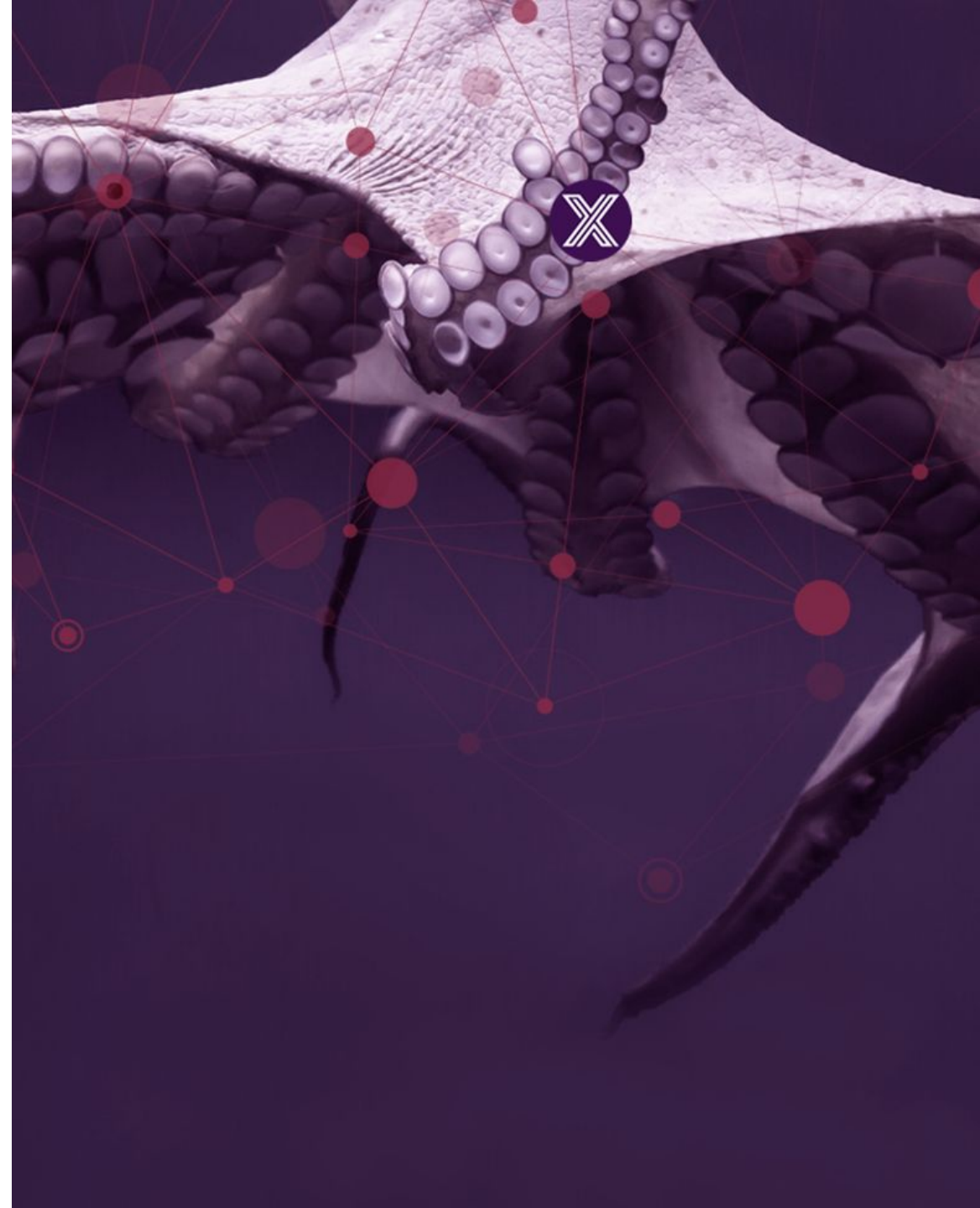


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# TSC Meeting

Sep 28, 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	<a href="mailto:iain@iotechsys.com">iain@iotechsys.com</a>	Device Services WG Chair
Intel	Ernesto Ojeda	<a href="mailto:ernesto.ojeda@intel.com">ernesto.ojeda@intel.com</a>	Dev Ops WG Chair
Intel	Bryon Nevis	<a href="mailto:bryon.nevis@intel.com">bryon.nevis@intel.com</a>	Security WG Chair
Intel	Lenny Goodell	<a href="mailto:leonard.goodell@intel.com">leonard.goodell@intel.com</a>	Applications & Analytics WG Chair
IOTech	Cloud Tsai	<a href="mailto:cloud@iotechsys.com">cloud@iotechsys.com</a>	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
  - HacktoberFest 2022



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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 (09/27/22) - Levski

## Cross Cutting Issues

### Icebox (3, +2)

- **Lite Builds (no security features) via Build Tags**
- Go 1.19 (<https://tip.golang.org/doc/go1.19>)
- Microservice Auth

### Backlog (0, -2)

•

### In Progress (3, -1)

- **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**

- **NATS Make targets and compose**
  - Compose Builder - **DONE**
  - ASC - **DONE**
  - edge-go - **DONE**
  - App LLRP - **DONE**
  - Device Virtual - **DONE**
  - Device Services - **WIP (3 PRs left to merge)**

### Done (8, +1)

- **Secure MQTT MessageBus**
  - Security Secret Store Setup - **DONE**
  - Compose Builder - **DONE**
  - eKuiper config - **DONE**
  - TAF test updates - **DONE**
  - C SDK/Services - **TBD**
- 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 (09/27/22) - Levski

## Newly Completed (0)

- None

## New (0)

- [Cloud Export example transform always error with "Unexpected type received" #133](#)

## 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

- No update this week

Added **hacktoberset** label to appropriate issues

**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: Non Security 604 / Security 605 - all passing
    - Integration tests: 55 - 8 failed test cases, [#307 Got error "Failed to subscribe internal command request" while deploying device-virtual](#)
    - Performance tests: 10 - all passed
  - Core
    - Implementing System Event test
    - Implementing delay start service test
    - Implementing north-south messaging

## Core Project Board Status

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

## QA/Test Project Board Status

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

Next meeting: Tuesday October 5th @ 5 PM Pacific Daylight Time

# Device Services WG Update (28 September 2022)

- NATS option available in most services
- Project board : 14 issues new/backlog (-2); 4 in progress/review (-1)

*Next meeting: October 10th*

# 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 (09-28-2022)

## 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](#) [In Progress] Update edgeXReleaseDocs pipeline after latest changes
- [#413](#) [In Progress] Update Swagger API version on release

**Next DevOps WG Meeting: Tuesday, October 4, 2022 @ 9AM PST**

# Release Czar (2022-9-26)

## Levski (2.3.0) - November 9 2022

- TSC Approved

**Levski Release Date: Wed Nov 9**

Code Freeze: Oct 26 (Wed) (4 weeks)

Pre Wire: Oct 20 (Thurs)

Planning: Nov 14-17 (Mon-Thurs)

# Security WG Update

## Next Meeting: TBD

- In home stretch for committed security backlog
  - Didn't get as far as wanted on Helm chart enhancements
  - MQTT TLS auth bug in app-functions-sdk-go in PR review
- Threat model review still outstanding
- Will review LFX security dashboard today

### Security Project Board Status

- 5 New Issues (0)
- 2 Release Backlog (0)
- 4 In Progress/QA (-2)
- 1 In review (+1)
- 33 Done (+1)

### Secure Consul Project Board Status

- 0 Phase 3 To-do (-1)
- 1 In-progress (+1)
- 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 (9/27/22)

## Ready/Certification

- No updates

## Social Media

- Opportunity for additional Tech Talks
- Hacktoberfest (see next slide)

## 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 pushed to LF marketing

Next meeting: Oct 10 @ 11am - Jim will be out;  
need volunteer to hold the meeting

# Hacktoberfest 2022

- 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

<https://github.com/search?q=is%3Aissue+is%3Aopen+label%3Ahacktoberfest+user%3Aedgexfoundry+user%3Aedgexfoundry-holding>

Currently shows 12 issues

# ADR & UCR PROCESS review (as of 9/26/22)

<b><i>ADR name and PR number</i></b>	<b><i>Status</i></b>	<b><i>owner</i></b>	<b><i>Work Group</i></b>
Extending Device Data (UCR) - split from parent/child UCR	<a href="https://github.com/edgexfoundry/edgex-docs/pull/845">https://github.com/edgexfoundry/edgex-docs/pull/845</a> up for TSC vote	Tom-Eaton	AS/core
Provision Watch more Device Properties (UCR)	<a href="https://github.com/edgexfoundry/edgex-docs/pull/806">https://github.com/edgexfoundry/edgex-docs/pull/806</a> up for TSC vote: 6 votes received, UCR to be merged	Tom-Eaton	DS
Hybrid App-Device Services (UCR)	<a href="https://github.com/edgexfoundry/edgex-docs/pull/809">https://github.com/edgexfoundry/edgex-docs/pull/809</a> under re-review	Tom-Eaton	DS
Record and Replay (ADR)	<a href="https://github.com/edgexfoundry/edgex-docs/pull/863">https://github.com/edgexfoundry/edgex-docs/pull/863</a> under review	Lenny	App Service
core data cache	<a href="https://github.com/edgexfoundry/edgex-docs/pull/723">https://github.com/edgexfoundry/edgex-docs/pull/723</a> Jim to add UCR for this	Jim White	Core
global configuration	EdgeX 3.0 item (not in scope now)	Lenny	Core
URI reference (profiles, config, etc.)	EdgeX 3.0 item (not in scope now; may be sub part of global config)	Lenny	Core

# Document work (as of 9/27/22)

#641 L [EdgeX & CNCF] PR refreshed and ready for re-review

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

#732 L [role based access for Mosquitto]

#778 S [broken links] Levski links were fixed but this addresses Kamakura links

#781 L [Metrics docs]

#788 M [fix notifications pages]

#843 M [SE indexing old docs]

#855 - L [extend Go SDK API docs]

#859 - L [version warning popup]

#860 - L [update UI secty docs]

#864 - M [metadata population by DS at startup]

#866 - L [n-s messaging]

## Nice to have

#796, #392 M [timestamps]

#731 L [images to LFS]

#642 L [export to cloud]

#667 L [build containers]

#489 M (with #121, #21) [consume/send binary]

# LF Question: The Jenkins server at [jenkins.lfedge.org](https://jenkins.lfedge.org)

- Been online since February of 2020, and only seen a tiny use from April-June of 2021
- Seems that most LF Edge projects are using Github Actions (GHA) for their CI needs
- **Does this need to be kept online?**
- It was originally requested by EVE, and saw some use from Open Horizon, but it looks like both projects are now using GHA. Are there any projects that are still interested in using it, or could we bring the server down? As it is, it's costing the project money to keep the server online, and my team, Release Engineering, has to spend time maintaining it so that it does not become a security liability.
- If no one intends to use it, I'd like the TSC's approval to shutdown the server.



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Thank You