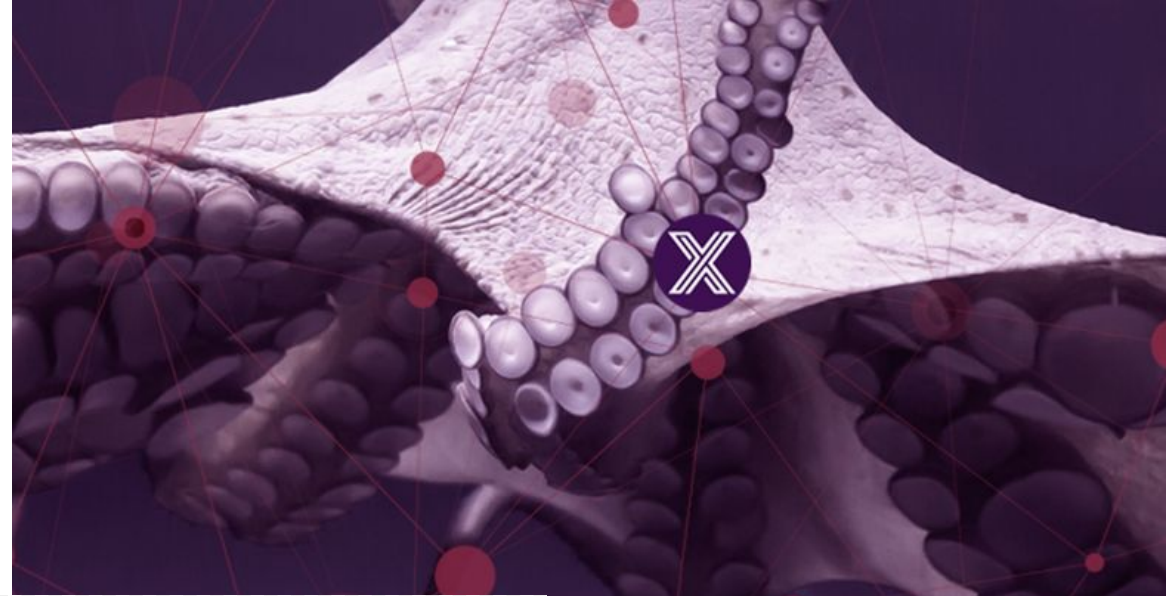


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# TSC Meeting

Feb 17, 2021



## Antitrust Policy Notice

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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#

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Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

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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	<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
IOTech	Keith Steele	<a href="mailto:keith@iotechsys.com">keith@iotechsys.com</a>	Outreach WG Chair
Kong	Colin Hutchinson	<a href="mailto:colin@konghq.com">colin@konghq.com</a>	Security WG Chair
Intel	Mike Johanson	<a href="mailto:michael.johanson@intel.com">michael.johanson@intel.com</a>	Applications & Analytics WG Chair
IOTech	James Butcher	<a href="mailto:james@iotechsys.com">james@iotechsys.com</a>	Test/QA WG Chair
IOTech	Jim White	<a href="mailto:jim@iotechsys.com">jim@iotechsys.com</a>	Core WG Chair

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 review
- Monthly Architect's Meeting Readout
- Ireland timeline (proposed)
- Upcoming Events (Dev Advocate)



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# Work Group Updates

Chairs



# Working Group Chair Updates

- Around the horn
  - Product Manager - Lenny Goodell
  - Release Czar - Bill Mahoney
  - Applications - Mike Johanson
  - Device Services - Iain Anderson
  - ~~Test/QA - James Butcher~~
  - DevOps - ~~Ernesto Ojeda~~ - Bill M
  - Security - Colin Hutchinson
  - Outreach - Keith Steele
    - Certification - Rodney Hess
    - Marketing - Camilo Dennis
    - Vertical Solutions (and LF Edge TAC) - Henry Lau
  - Core/Supporting - Jim White

# Product Manager (2/16)

## Cross Cutting Issues

### In Progress (6, +/- 0)

- V2 Implementations
  - **Core Data APIs - (CBOR WIP)**
  - **Core MetaData APIs - Done**
  - **Core Command APIs - WIP**
  - **Support Notifications Services - WIP**
  - **Support Scheduler Services - WIP**
  - **TAF testing V2 APIs - WIP**
  - **C Device SDK/Services - TBD**
- V2 Consumption
  - **Core Data Clients - **CBOR TBD****
  - **Core Metadata Clients - DONE**
  - **Core Command Clients - TBD**
  - **Support Notification Clients - TBD**
  - **Support Scheduler Clients - TBD**
  - App SDK V2 Clients - TBD
  - Device SDK V2 Clients - TBD
  - C Device SDK/Services - TBD
  - App SDK V2 Event DTO - DONE
- **Registry Usage ADR ( In review)**
- Metrics ADR ( In review)

- **Device Service send Events via MessageBus implementation**
  - Device SDK C - WIP
  - C Device Services - TBD
  - Device SDK Go - TBD
  - Go Device Services - TBD
  - Core Data Subscribe - TBD
  - **Core Data Publish topic - Reopened**
  - App SDK multi-subscriptions - DONE
  - ASC multi-subscriptions - DONE
- **Secret Provider for All**
  - **Secret Store Setup - WIP**
  - **MQTT Device Service - DONE**
  - Camera Device Service - TBD
  - DS SDK C - TBD (**stretch**)
  - C Device Services - TBD (**stretch**)
  - DS SDK Go - DONE
  - go-mod-bootstrap - DONE
  - edgex-go - DONE
  - App Srvs - DONE
  - go-mod-secrets - DONE

### Backlog (2, +/-0)

- Use service keys constants for Clients config
- Implement Generate/Inject passwords into Vault

### Done (9, +/-0)

- LoggingClient DIC bug fix
- ADR Message Bus from Device Service to App Services
- ADR Secret Provider for All
- Remove Mongo code
- Conventional Commits for all
- Change go-mod-x & Go SDKs to be V2 Go Modules
- Consume dependent V2 Go Modules
- ZMQ fix for Hanoi dot release
- **Drop Logging Service completely**

### Icebox (2, +/-0)

- EdgeX Metrics Collection & Control Plane Event Handling
- Secure Message Bus connection



# Release Czar (Feb 16, 2021)

## Misc

- ADR0010 - Release Artifact Update - Docker Descriptions/Overviews

## Release Activity

- Feb 8 - Hanoi Dot Release
  - app-service-configurable v1.3.1
  - edgex-cli v1.0.1
  - edgex-go v1.3.1
- Feb 8 - Device Services Release
  - device-grove-c v.1.3.1

# Applications WG Update (17-Feb-2021)

## Completed:

- Template for Custom App Service Completed
- Changed default TargetType to be AddEventRequest (was dtos.Event) ([#688](#))
- Added debug logging for Event Tags
- Fix: return nil w/ error instead of panic when initializing a custom trigger that fails

## WIP

- Remove “MessageBus” Binding from SDK
- Rename MqttBroker configuration section to ExternalMqtt to make binding type clearer

# Application Services

## Functions (built into SDK)

Current/Complete:

- AES Encryption
- GZIP Compression
- ZLIB Compression
- MarkAsPushed
- PushToCore
- Device Name Filter
- Value Descriptor Filter
- Batch
- AddTags
- JSONLogic Filtering
- XML Conversion
- JSON Conversion
- MQTT(S) Export
- HTTP(S) POST Export
- HTTP(S) PUT Export

NEW!

NEW!

## Features

- Store and Forward
- Web Server
- Configurable App Service
- Vault Integration for Secrets
- MQTT Event triggers

NEW!

## Reference/Example App Services (Geneva)

(built on top of SDK)

- Azure IoT Hub
- Amazon IoT Core
- IBM Watson IoT
- Cloud Event Transformation
- Secret Retrieval Example

# Device Services WG Update (17-Feb-21)

Done: v2 API impl

WIP:

- CoAP, GPIO services - in review
- demo-grove-pi move to edgex-examples
- v2 API consumption
- Project status: 47 issues backlog + 5 new (net -2)

Next meeting: February 22nd

# Device Services - current/coming (as of 11/4/20)

## Open Source connectors (Current):

- Modbus (TCP/RTU) in Go
- Virtual Device in Go
- SNMP in Go
- MQTT in Go
- BACnet (IP & MSTP) in C
- ONVIF Cameras in Go
- REST in Go (NEW!)
- Grove in C

## Open Source connectors (Future):

- Bluetooth Low Energy in C (2021) - contributed
- OPC-UA in C (2021) - under dev
- CoAP (2021) - contributed
- GPIO (2021) - contributed
- UART (2021) - contributed

- GPS

## Commercial connectors (Current):

- File Exporter in C
- 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 Pub/Sub in C
- ONVIF in C
- Siemens S7 in C

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

## Commercial connectors (Future):

- ZeroMQ (Q1 2021)
- RFID (Q1 2021)

# QA/Test WG Update (9th February)

- TAF tests - failing on security tests and will be solved by [developer-scripts#403](#) (redis env changes)
  - Fixed Issues
    - V2 API testing
      - [#298](#), Rename Put Command to Set Command.
    - Performance Tests
      - [#293](#), Increase the footprint threshold to 1.5 times
  - New and Working Issues
    - [#291](#), Implement core-metadata provision watcher API tests.
    - [#292](#), Out of memory error on x64 tests (Robot library in
    - [#304](#), Correct TAF instructions
- Other Business
  - TAF for EdgeX developers to *James out today - no big updates* test first approach.... how to run locally? Is Docker required?

Next Meeting Tuesday 16th Feb, 8am PST



# TAF Functional Test Cases

OS		DB	Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Non Security	Redis	221	0	0	0
x86_64 / CentOS	Security	Redis	221	221	14	221
arm64 / Ubuntu	Non Security	Redis	221	0	0	0
arm64 / Ubuntu	Security	Redis	221	221	0	221

Jenkins Job: [functional-test](#)

# TAF Integration Test Cases

OS		DB	Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Non Security	Redis	6	0	0	0
x86_64 / CentOS	Security	Redis	6	6	0	6
arm64 / Ubuntu	Non Security	Redis	6	0	0	0
arm64 / Ubuntu	Security	Redis	6	6	0	6

Jenkins Job: [integration-test](#)

# TAF Performance tests

OS		DB	Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Non Security	Redis	10	1	1	0
arm64 / Ubuntu	Non Security	Redis	10	2	2	0

Jenkins Job: [performance-test](#)

# DevOps WG Update (02-17-2021)

## Pipeline Enhancements

- [#102](#) [Hold] Docker image renaming. On hold until end of Ireland release
- [#312](#) [In Progress] Add email notifications on build failures

## Other

- [#104](#) [Complete] Clean up EdgeX DevOps Wiki pages

**\*\*Cancelled Next DevOps WG Meeting Feb 18, 2021 @ 9:00 AM PST \*\***

# Security WG Update (Feb 10)

- Next Meeting: Today & Feb 24
- Design Review
  - [Service Registry](#)
  - [Upload Threat Model](#)
- In Backlog: 14 (-2)
- In Development: 4 (0) In Progress / 2 (-1) In Review
  - [Secret Provider](#)
  - [EdgeX OCI Bootstrapping](#)
  - [Docker Container Guidelines](#)
  - [Secret Creation & Distribution](#)
- Done 56 (+5)
  - [EdgeX TLS Usage](#)

# Outreach WG Updates (2/17/21)

## Certification Team

- Working towards LF Edge Board approval

## Vertical Solutions Team

- Open Retail Reference Architecture sub-project:  
<https://wiki.edgexfoundry.org/display/FA/Open+Retail+Reference+Architecture>

## Marketing Team

- Website in Chinese



# Core Working Group (2-17-2020)

- Chinese new year in Taiwan - not a lot of change on V2 APIs
- status
  - 22 in backlog (-7) - some clean up of stale and closed tasks
  - 16 in bug backlog (even)
  - 0 in progress (even)
  - 102 done (+9)
- Next call - 2/18/21 @ 10AM US/Central
  - Discuss possible meta data device resource shortcuts API v. dig the details out of the profile

# ADR review (in order of priority)

<i>ADR name and PR number</i>	<i>Status</i>	<i>owner</i>	<i>Work Group</i>
<b>Securing Consul / #318 (HOT)</b>	Seeking approval this week	Bryon Nevis	Secty
<b>Service Registry / #283 (HOT)</b>	review (target next week)	Tony Espy	Core
Upload threat model / #259 (quasi ADR)	review	Bryon Nevis	Secty
Metrics / #268	refactored/cover in Core WG re-review	Jim White	Core
DS Filters / #282	*review on going - close to final	Jim White	DS
<b>Discover spec (legacy ADR)</b>	<b>Approved</b>	<b>Iain Anderson</b>	<b>DS</b>
Update Docker Hub overview / #343	Needs review (short)	Bill Mahoney	DevOps

\* - indicates some work this week

# Miscellaneous Issues/Topics

- Need approval for new library for Consul 1.8.1
  - <https://github.com/hashicorp/go-hclog>
- TSC PRC - Feb 25th, 5pm PST
  - Thanks to Lenny and Henry for volunteering
  - Topics to cover: V2 API, ORRA, Adopter Series
  - Looking for 2 TSC/Community Leaders for March
- Digital Twin Consortium meeting readout
  - First step - setup a charter and establish memo of agreement
- Docker hub limits and open source “licensing” to escape some limit issues
  - LF working

# Monthly architect's meeting readout

Micro service Authentication: great presentation by Bryon

Next steps: ADR via Secty WG; addressing a number of questions and features

Timeline: won't be implemented for Ireland (ADR not done by Ireland)

Device Resource API on metadata: to be reviewed / decided in Core WG

Advocates to bring their approach and research to Core

# Ireland timeline

WG chairs - add this to your agendas for upcoming meetings

- What is the state of Ireland tasks and what is your best guess on completion?
- What are your dependencies that prevent tasks from being worked?
- Do we have known “unknown size” tasks still remaining?
- When do we think we can have a good estimate ready

From Core - it's looking like end of June

- Most V2 API done by April (- sys mgmt); inclusive of TAF and clients
- Integration / use of V2 APIs and the anticipated issues - May & June
- Documentation - June



# Upcoming Events & Dev Advocate Update

Aaron's updates



## Upcoming External Events

- › [The Linux Foundation Spring Member Meeting](#): 9 March, 2021 - Virtual
- › [Open Networking & Edge Executive Forum](#): 10-12 March, 2021 - Virtual
- › [Open Source Summit Europe](#): 28 Sept - 1 Oct, 2021 - Dublin, Ireland
- › [IoT Solutions World Congress](#): 5-7 October, 2021 - Barcelona, Spain
- › [Open Networking & Edge Summit North America](#): 11-12 October, 2021 - Los Angeles, CA
  
- › Discussions around upcoming events occur in the LF Edge Outreach Committee
- › Members may subscribe at: <https://lists.lfedge.org/g/outreach-committee>
- › [IoTHub](#)- Meetup group



# LF Edge Webinar Series

## Akraino Edge Stack

Held Thursday, April 2 - [Your Path to Edge Computing with Akraino Edge Stack](#)

› On-demand recording available at: [https://zoom.us/webinar/register/WN\\_Zjdo4-5fTQSIqH7pL8iHrQ](https://zoom.us/webinar/register/WN_Zjdo4-5fTQSIqH7pL8iHrQ)

## EdgeX Foundry

› Held Thursday, April 23 - [EdgeX Foundry 101: Intro, Roadmap and Use Cases](#)

› On-demand recording available at: [https://zoom.us/webinar/register/4515850788014/WN\\_xCd6YPjEQrCwLiFhBWPkug](https://zoom.us/webinar/register/4515850788014/WN_xCd6YPjEQrCwLiFhBWPkug)

## Project EVE

› Held Friday, May 29 - [Building the “Android of the IoT Edge”](#)

› On-demand recording available at: [https://zoom.us/webinar/register/6415888722675/WN\\_35oZJ3hrQE69snMaiJUTPg](https://zoom.us/webinar/register/6415888722675/WN_35oZJ3hrQE69snMaiJUTPg)

## White Paper

› Held Thursday, July 9 - [Demystifying the Edge with the new LF Edge Taxonomy and Framework](#)

› On-demand recording available at: [https://zoom.us/webinar/register/WN\\_icv5h6wFTcuw9O0xvMpgLw](https://zoom.us/webinar/register/WN_icv5h6wFTcuw9O0xvMpgLw)

## Fledge

› Held Thursday, August 13 - [How Google, OSIssoft, FLIR and Dianomic use Fledge to implement Industrial 4.0](#)

› Recording available at: <https://www.youtube.com/watch?v=6JXNv3AJWog>

## State of the Edge

› Held Thursday, September 17 - [State of the Edge: Exploring the Intersection of IoT, AI, 5G and Edge Computing](#)

› On-demand recording available at: [https://zoom.us/webinar/register/8115959695936/WN\\_4rt-MmP1RI6Vkzn3ULpiAA](https://zoom.us/webinar/register/8115959695936/WN_4rt-MmP1RI6Vkzn3ULpiAA)

## Home Edge

› Held Thursday, October 15 - [Home Edge: How Your Home Devices Get Deployed in An Edge Computing Services Ecosystem](#)

› On-demand recording available at: [https://zoom.us/webinar/register/WN\\_uSlgb-R5Q4etkDhxoSXISQ](https://zoom.us/webinar/register/WN_uSlgb-R5Q4etkDhxoSXISQ)

› More to follow...





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Thank You