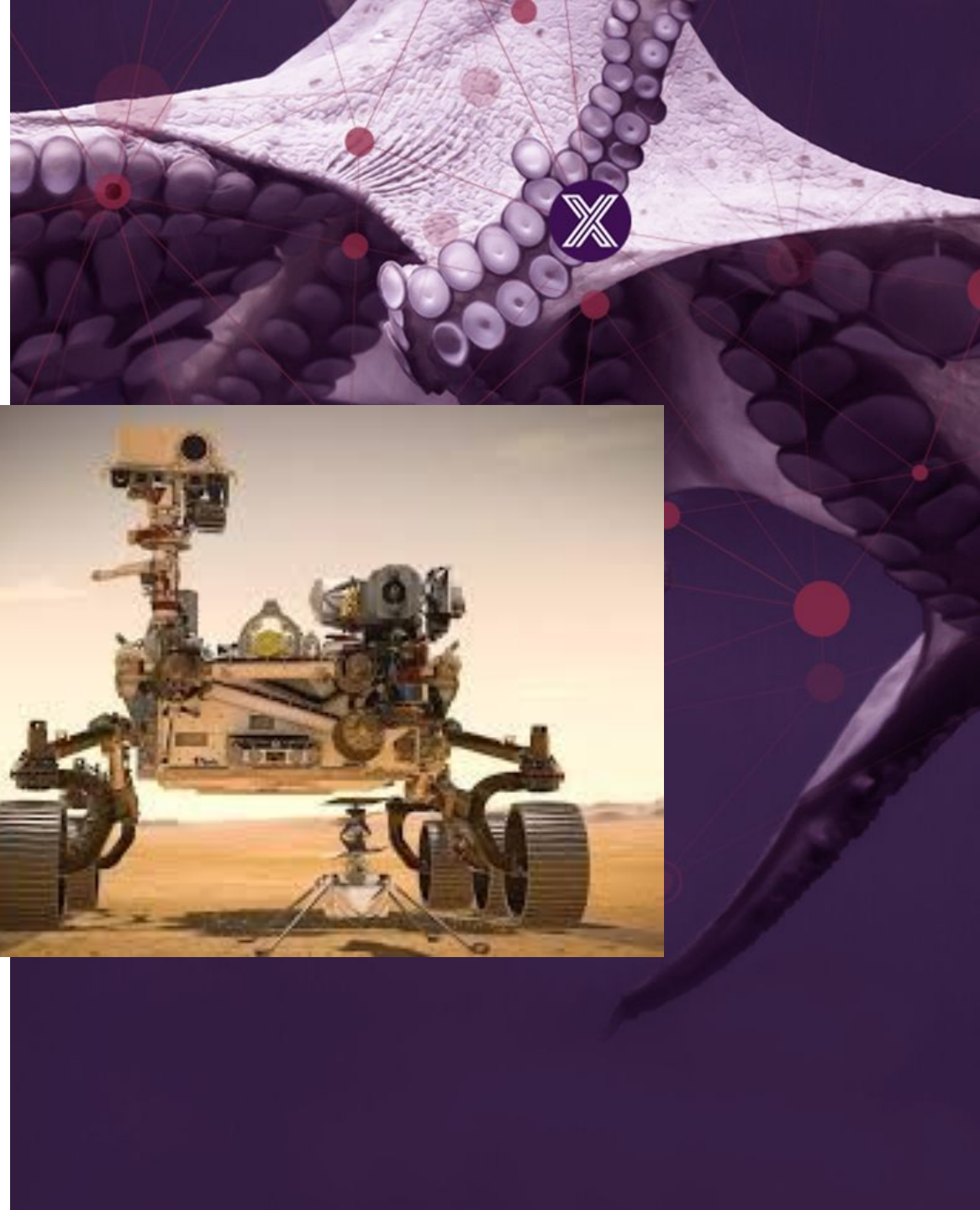


EDGE X FOUNDRY™

TSC Meeting

Feb 24, 2021



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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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+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
IOTech	Keith Steele	keith@iotechsys.com	Outreach WG Chair
Kong	Colin Hutchinson	colin@konghq.com	Security WG Chair
Intel	Mike Johanson	michael.johanson@intel.com	Applications & Analytics WG Chair
IOTech	James Butcher	james@iotechsys.com	Test/QA WG Chair
IOTech	Jim White	jim@iotechsys.com	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
- Ireland planning
- 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 (2/24)

Cross Cutting Issues

In Progress (6, +/- 0)

- V2 Implementations
 - **Core Data APIs - (CBOR WIP)**
 - **Support Notifications Services - WIP**
 - **Support Scheduler Services - WIP**
 - **TAF testing V2 APIs - WIP**
 - **Device Services (C & Go) - TBD**
 - **C Device SDK - DONE**
 - **Core Command APIs - DONE**
 - Core MetaData APIs - Done
 - Go Device SDK - Done
- V2 Consumption
 - **Core Data Clients - CBOR WIP**
 - **Support Notification Clients - TBD**
 - **Support Scheduler Clients - TBD**
 - **C Device SDK/Services - WIP**
 - App SDK V2 Clients - TBD
 - **Device Virtual - WIP**
 - **Device ModBus - WIP**
 - Core Metadata Clients - DONE
 - **Core Command Clients - DONE**
 - **Go Device SDK V2 Clients - DONE**
 - App SDK V2 Event DTO - DONE

- 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**
 - Camera Device Service - **TBD**
 - DS SDK C - **TBD (stretch)**
 - C Device Services - **TBD (stretch)**
 - MQTT Device Service - **DONE**
 - DS SDK Go - **DONE**
 - go-mod-bootstrap - **DONE**
 - edgex-go - **DONE**
 - App Srvs - **DONE**
 - go-mod-secrets - **DONE**
- **Registry Usage ADR (In review)**
- **Metrics ADR (In review)**

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 24, 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` v1.3.1

Applications WG Update (24-Feb-2021)

Completed:

- Added secrets capability in Encryption pipeline
- Return status code of 400 when DTO fails validation (previously 500)
- App Service Template for Ireland
- Prioritized backlog for App Services
 - Focusing on Breaking Changes first before new features

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 (24-Feb-21)

WIP:

- CoAP, GPIO services - in review
- v2 API consumption - done for Go, C in review
- Project status: 41 issues backlog + 4 new (net -7)

Next meeting: March 1st

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 (23rd February)

- TAF tests - 1 test fail [#702](#) (trigger request returning 500 Internal Server Error)
 - Fixed Issues
 - V2 API testing
 - [#291](#), core-metadata provision watcher
 - Other
 - [#292](#), security tokens causing out of memory error, solved by explicitly deleting each session between tests
 - [#312](#), update test scripts to pull compose files from new edgex-compose repo
 - ... and archived the developers-script repo
 - Working Issues
 - [#304](#), Correct TAF instructions for easier developer usage
- Other Business
 - HCL interested in scalability testing and potential for contribution to the QA/Test WG

Next Meeting Tuesday 2nd March, 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	1	0
x86_64 / CentOS	Security	Redis	221	261	1	261
arm64 / Ubuntu	Non Security	Redis	221	0	1	0
arm64 / Ubuntu	Security	Redis	221	261	1	261

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	0	0	0
arm64 / Ubuntu	Non Security	Redis	10	0	0	0

Jenkins Job: [performance-test](#)

DevOps WG Update (02-24-2021)

Pipeline Enhancements

- [#102](#) [Hold] Docker image renaming. On hold until end of Ireland release
- [#312](#) [In Progress] Add email notifications on build failures
- [Complete] Collaboration with LF to capture job cost with parallel pipelines

Other

- [#51](#) [In Progress] Spike: Semantic versioning git-semver replacement
- [#319](#) [In Progress] Developer enablement: Update documentation for pre-built pipelines

Next DevOps WG Meeting **Feb 25, 2021 @ 9:00 AM PST**

Security WG Update (Feb 24)

- Next Meeting: Today & March 3
- Design Review
 - [Service Registry](#)
 - [Upload Threat Model](#)
- In Backlog: 15 (1)
- In Development: 3 (-1) In Progress / 2 (0) In Review
 - [Secret Provider](#)
 - [EdgeX OCI Bootstrapping](#)
 - [Docker Container Guidelines](#)
 - [Secret Creation & Distribution](#)
- Done 60 (+4)
 - [EdgeX TLS Usage](#)

Outreach WG Updates (2/24/21)

Certification Team

- Awaiting LF Edge Board approval (voting in-process)

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 (2-24-2020)

- V2 API
 - Core done (minus CBOR - but this is under way)
 - Support services (notifications/scheduler) underway
- status
 - 26 in backlog (+4)
 - 15 in bug backlog (-1)
 - 0 in progress (even)
 - 106 done (-4)
- Next call - 2/25/21 @ 10AM US/Central

ADR review (in order of priority)

<i>ADR name and PR number</i>	<i>Status</i>	<i>owner</i>	<i>Work Group</i>
Service Registry / #283 (HOT)	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	nearing final	Jim White	DS
Update Docker Hub overview / #343	Ready for approval today	Bill Mahoney	DevOps

* - indicates some work this week

Miscellaneous Issues/Topics

- 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 liaison
 - memo of agreement
- Docker hub limits and open source “licensing” to escape some limit issues
 - have been eliminated!!
 - Thanks Eric Ball!

Ireland Planning

Working Group	Completion target
Core	Jun 30
Application	Jun 30 (some refactoring/cleanup may not be done by then)
Device Service	Jun 30 (some device services like SNMP, Camera may come later)
Security	
DevOps	Jun 30
TestQA	Jun 30
OutReach	
PM/Release Czar concerns	Secret provider for all (C SDK and C DS)

Timeline (proposed)

Target release: June 30th

Freeze date: June 21st (because of super smooth release processes)

Virtual Planning Meeting (Jakarta): June 21-24

Some device services released in July

Jakarta: ~ early November

- Bug fixes only
- Any other feature would be subject to TSC approval and feature flag
- LTS release



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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

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

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

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

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

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

› More to follow...





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Thank You