

EDGE X FOUNDRY™

TSC Meeting

April 21, 2021



4 years old April 17th

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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
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

- LF Edge - Outreach committee re-launch
- WG Updates
- ADR review
- Miscellaneous updates
 - Monthly Architect's Meeting
- EdgeX Award Voting
- Upcoming Events (Dev Advocate)



EDGE X FOUNDRY™

Work Group Updates

Chairs

re-launch of LF Edge Outreach

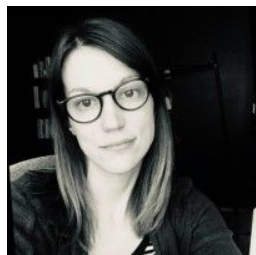
Arpit Joshipura - GM Networking + Edge/IOT at Linux Foundation

LF Edge project director



Jill Lovato - Head of Communications for Networking & Edge at the Linux Foundation

Our “new” Mae



https://docs.google.com/presentation/d/12Y_XQv_GYBHFeiHK-hIJmMBI4T4eCe4dQ9Rk2c9QQ88/edit#slide=id.p1

Working Group Chair Updates

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

Release Czar (April 21, 2021)

Ireland (2.0.0) Release - Key Dates

- Freeze Date:
 - Monday, June 21st, 2021 (8 weeks)
- Jakarta Virtual Planning Meeting:
 - June 21-24 (Monday - Thursday)
- Release Date:
 - Wednesday, June 30th, 2021 (10 weeks)
- EdgeX 2.0.1
 - ~ August 2021
- Jakarta Release:
 - ~ Early November 2021

Release Concerns:

Please let Lenny, Jim and myself be aware of issues as soon as possible.

Product Manager (4/20)

In Progress (5, -1)

- **V2 Implementations**
 - Support Notifications APIs - **WIP**
 - Support Scheduler APIs - **WIP**
 - TAF testing V2 APIs - **WIP**
 - Device SDKs - DONE
 - Core Services - DONE
- **V2 Consumption**
 - Support Notification Clients - **TBD**
 - Support Scheduler Clients - **WIP**
 - App SDK V2 Clients - **TBD**
 - Device REST - **TBD**
 - Device ModBus - **DONE**
- **V1 Code removal**
 - Core/Support Services - **TBD**
 - App Services - **DONE**
 - Device Services - **DONE**
- Securing Consul with Access Token
 - Device SDK C - **WIP**
 - Compose for Device Services - **DONE**
 - Security Services - **DONE**
 - Core/Support services - **DONE**
 - Device SDK GO - **DONE**
 - Device Virtual - **DONE**
 - App Services - **DONE**

Cross Cutting Issues

- Device Service send Events via MessageBus implementation
 - Device SDK C - **WIP**
 - C Device Services - **TBD**
 - Core Data Subscribe - **TBD**
 - Device REST - **TBD**
 - go-mod-messaging (Redis) - **DONE**
 - Kuiper Redis password - **WIP**
 - Device SDK Go - **DONE**
 - Device Virtual - **DONE**
 - Device ModBus - **DONE**
 - Core Data Publish topic - **DONE**
 - App SDK multi-subscriptions - **DONE**
 - ASC multi-subscriptions - **DONE**
- Secret Provider for All
 - Secret Store Setup - **WIP**
 - Camera Device Service - **TBD**
 - DS SDK C - **WIP**
 - C Device Services - **TBD**
 - Go Device Services - **DONE**
 - App Services - **DONE**

Done (12, +1)

- Use service keys for Clients config
- Switch Service to 2.0 config path for Consul
- Registry Usage ADR
- LoggingClient DIC bug fix
- ADR Message Bus from Device Service to App Services
- ADR Secret Provider for All
- Remove Mongo code
- See project board for more...

Backlog (2, +/-0)

- Implement Generate/Inject passwords into Vault
- Metrics ADR

Icebox (2, +/-0)

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

Applications WG Update (21-Apr-2021)

WIP

- LF Edge ticket to be submitted for adding LGTM/CodeQL to App Functions SDK
- Working with Kuiper on injecting secrets (Proof of concept done, working on making more robust)

Old WIP :)

- Reviewing edgexfoundry-holding/rfid-llrp-inventory-service - Changes in-progress
- Documentation Updates

Kuiper Team Update:

- **TODO**
 - New minor release 1.2.0, to be released at Apr or May
 - Continuous table
 - The last function support (from EdgeX community)
 - Memory optimization for windows operations
 - New EdgeX message-bus integration
 - Any bug fixes

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 (21-Apr-21)

Done

- MQTT device service upgraded to v2

WIP

- Secret provider / Vault capabilities for C
- Last remaining sdk-go issues
- GPIO, RFID service reviews

Project status: 30 issues backlog + 3 new (net -4)

Next meeting: April 26th

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 (20th April)

- TAF tests
 - Status: only 2 unresolved test failures
 - Core-Command return codes bug: [edgex-go#3345](#)
 - MQTT / App Service issue: [edgex-taf issue#376](#)
 - Fixed Issues
 - [#52](#) [#53](#) Securing Consul phase two - security bootstrapping test updates
 - [#110](#) [#111](#) V2 Support Scheduler tests
 - [#360](#) [#369](#) [#373](#) V2 Device Service changes and updated V2 sample config profiles
 - Working Issues
 - Failing test cases (above)
 - [taf-pipelines#64](#) enable full device-virtual tests - will increase functional tests cases

Next Meeting May 4th, 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	311	0	2	0
x86_64 / CentOS	Security	Redis	311	0	2	0
arm64 / Ubuntu	Non Security	Redis	311	0	2	0
arm64 / Ubuntu	Security	Redis	311	0	2	0

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	6	0	6
x86_64 / CentOS	Security	Redis	6	6	1	5
arm64 / Ubuntu	Non Security	Redis	6	6	0	6
arm64 / Ubuntu	Security	Redis	6	6	1	5

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	1	1	0

Jenkins Job: [performance-test](#)

DevOps WG Update (04-21-2021)

Pipeline Enhancements

- [#102](#) [Hold] Docker image renaming. On hold until 30 days before Ireland release

Other

- [#51](#) [Complete] Spike: Semantic versioning git-semver replacement
- [Reviewing] Automated CHANGELOG creation
- [In Progress] Repo Badges
- [Planning] edgex-compose 
- [Planning] Developer Badging Program

DevOps WG Meeting April 22, 2021 @ 9:00 AM PST

Security WG Update (Apr 21)

- Next Meeting: Today & April 21
- Backlog
 - Security Board: 7 (+1)
 - Consul Board: 7 (0)
- Development
 - Security Board: 0 (0)
 - Consul Board: 1 (-1)
- In Review
 - Security Board: 3 (0)
 - Consul Board: 0 (-2)
- Done
 - Security Board: 74 (+1)
 - Consul Board: 33 (+5)

Outreach WG Updates (4/21/21)

Certification Team

- Submission portal coming together

Vertical Solutions Team

- Open Retail Reference Architecture sub-project:
<https://wiki.edgexfoundry.org/display/FA/Open+Retail+Reference+Architecture>
- next call tomorrow (4/15/21) at 10am PDT.
- Now meeting every week; participation welcome

Marketing Team

- Website in Chinese - SOW signed; work to begin in May

Core Working Group (4-21-2020)

- Ireland
 - Support services (notifications)
 - TAF tests (work underway)
 - System Management service
 - Integration / use of V2 APIs (work underway)
 - Documentation
 - Message bus support (work underway)
- status
 - 22 in backlog (-4)
 - 19 in bug backlog (+1)
 - 1 in progress (even)
 - 157 done (+8)
- Next call - 4/22/21 @ 8AM PDT

ADR review (in order of priority)

<i>ADR name and PR number</i>	<i>Status</i>	<i>owner</i>	<i>Work Group</i>
Upload threat model / #259 (quasi ADR)	review - ready to approve???	Bryon Nevis	Secty
Metrics / #268	a refresh coming soon	Jim White	Core
ADR on dynamic service list	new ADR coming soon	Jim White	Core

* - indicates some work this week

Miscellaneous Issues/Topics

- Go Version: from Go 1.15 to 1.16
 - Waiting for TAF testing
- Monthly Architect's Meeting Readout
 - Discussion on the service list. Needed for:
 - Security bootstrapping to know what tokens to generate and distribute
 - SMA - to know what services to monitor and manage
 - CLI & UI - to know what services exist to display/assist with control
 - Decision: need adopters input and need an ADR outlining options
 - crux of the future decision: do we want to be able to dynamically add/remove services and have other services and the system know this without a restart

2021 EdgeX Award Nominations

Congratulations to all nominees!!!

Contribution Award

Nominated again this year but a winner last year:
Bryon Nevis

Innovation Award

1. Web Redesign team: Andy Foster, Camilo Dennis, Jean Marie Martini, Mae Maynor
2. Camilo Dennis
3. Cherry Wang
4. Lenny Goodell
5. Ernesto Ojeda
6. EdgeX UI team: Huaqiao Zhang and Shengqi Wang

1. Bruce Huang
2. Cloud Tsai
3. Emilio Reyes (with two nominations)
4. Ernesto Ojeda (with two nominations)
5. China Evangelists: Gavin Lu and Melvin Sun
6. Ginny Guan
7. Iain Anderson
8. Jim Wang (with two nominations)
9. Lenny Goodell
10. Rocky Jin
11. IOTech V2 API team: Cloud Tsai, Jack Chen, Lindsey Cheng, Ginny Guan, Wendy Huang, Bruce Huang, Jude Hung, Chris Hung, Felix, Ting, Cherry Wang (with two nominations)



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Upcoming Events & Dev Advocate Update

Aaron's updates

EdgeX Awards

- › Email should have been sent out
 - › let me know if you didn't receive it
- ›

Full list of LF events available at:
<https://events.linuxfoundation.org/>

Additional LF Edge events available at:
<https://www.lfedge.org/events/>



Upcoming External Events

- › **SoTE speaking at the IoT Hub 21 April, 2021**
- › [Embedded IoT World](#): 28-29 April, 2021 - Virtual
- › [Kubernetes on Edge Day](#): 4 May, 2021 - Virtual
- › [Open Source Summit Europe](#): 28 Sept - 1 Oct, 2021 - Dublin, Ireland
 - › [CFP](#) Deadline: 13 June, 2021
- › [IoT Solutions World Congress](#): 5-7 October, 2021 - Barcelona, Spain
 - › [CFP](#) is now open (Closes 15 April)
 - › [Call for Testbeds](#) is now open (Closes 20 May)
- › [Open Networking & Edge Summit North America](#): 11-12 October, 2021 - Los Angeles, CA +Virtual
- › [KubeCon/CloudNative NA](#) Oct 12-15
 - › [KubeCon/CloudNative NA CFP](#) Closes 23 May (new date was 11 April)
- › Discussions around upcoming events occur in the LF Edge Outreach Committee
- › Members may subscribe at: <https://lists.lfedge.org/g/outreach-committee>
- › [IoT Hub](#)- 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