

Antitrust Policy Notice

- › Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.
- › Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at <http://www.linuxfoundation.org/antitrust-policy>. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrave of the firm of Gesmer Updegrave LLP, which provides legal counsel to the Linux Foundation.

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)

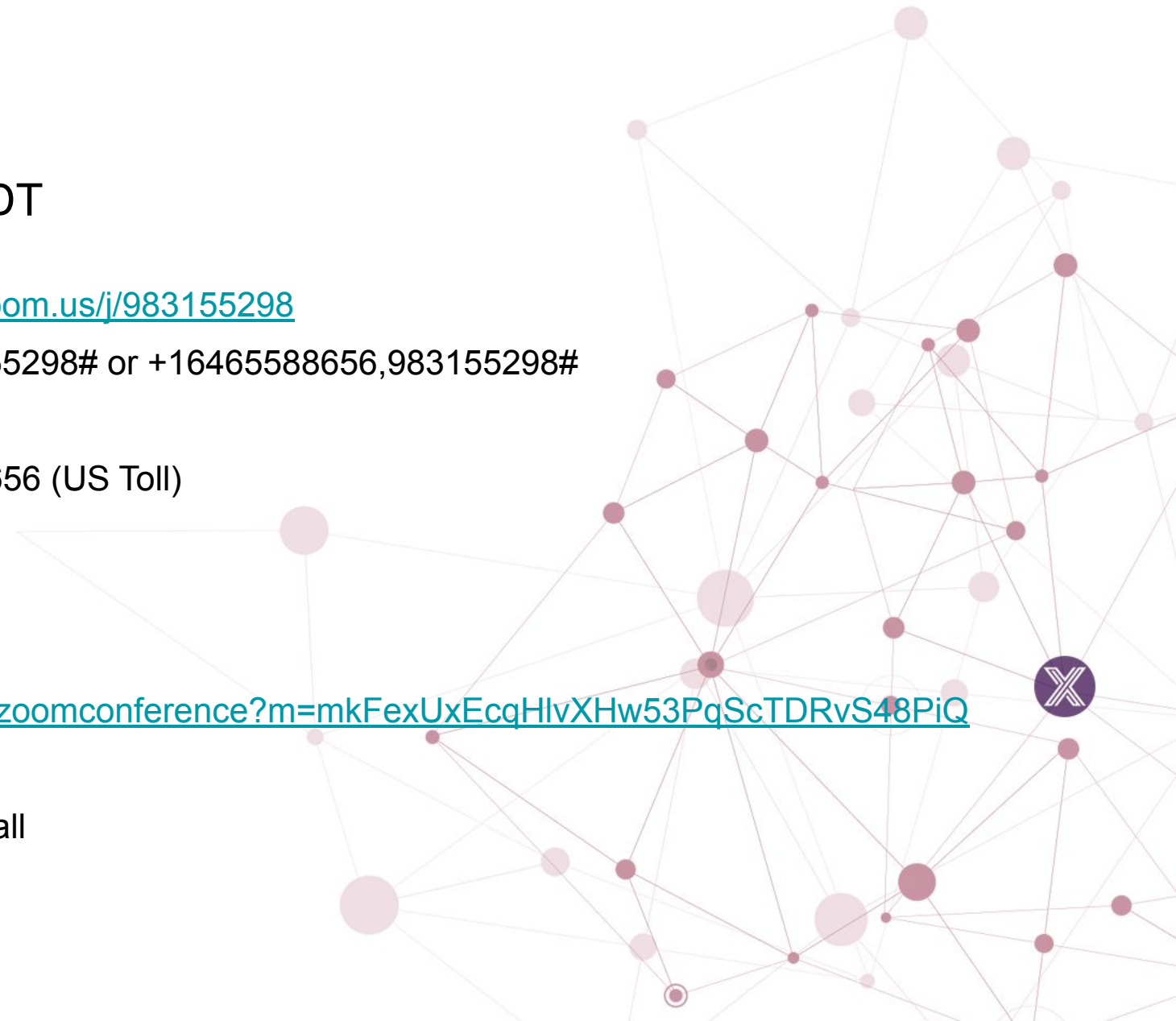
+1 855 880 1246 (US Toll Free)

+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

- Dot release
- WG Updates
- ADR review
- TSC PRC
- Monthly Architect's Meeting
- Upcoming Events (Dev Advocate)

Dot Release

Hanoi 1.3.1 is now available (Device Grove C also released)

Release notes available on the Wiki

Does not include EdgeX Ready - new timeline to be addressed



EDGE X FOUNDRY™

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
 - 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 (2/10)

Cross Cutting Issues

In Progress (6, -1)

- 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 - DONE?
 - 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, +1)

- 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 10th, 2021)

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
- Feb 2 - Device Services Release
 - device-modbus-go v1.3.1
 - device-mqtt-go v1.3.1
 - device-random v1.3.1
 - device-virtual-go v1.3.1
 - device-snmp-go v1.3.1
 - device-bacnet-c v1.3.1
 - device-rest-go v1.2.1
 - device-camera-go v1.2.1

Applications WG Update (10-Feb-2021)

Completed:

- Updated Filters for V2 DTOs
 - FilterByProfileName
 - FilterByResource vs ValueDescriptor
- Enhanced Debug Messages
- ASC Profiles updated to use new filters

WIP

- Template for Custom App Service

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 (3-Feb-21)

Done:

- Grove DS release
- MQTT: credentials via Vault
- support-logging removal

WIP:

- CoAP, GPIO services - in review
- demo-grove-pi move to edgex-examples
- device-sdk-c updates to v2 API
- Project status: 49 issues backlog + 5 new (net -3)

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 issue)
 - [#304](#), Correct TAF instructions
- Other Business
 - TAF for EdgeX developers to encourage 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 (02-10-2021)

Pipeline Enhancements

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

Other

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

Next DevOps WG Meeting **Feb 11, 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 (2/10/21)

Certification Team

- EdgeX Ready Program: Rallying everyone to get this out the door!
- Next hurdle is 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 (2-9-2020)

- Chinese new year in Taiwan until Feb 16
- V2 API work
 - Core command has 1 API left and then CBOR work
 - Support notifications well under way (about 7 APIs done)
 - Support scheduler just started
 - Projected API work TBD: ~ week of April 12
- status
 - 27 in backlog (+2)
 - 16 in bug backlog (-1)
 - 0 in progress (-1)
 - 91 done (+25)
- Next call - 2/11/21 @ 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>
Securing Consul / #318 (HOT)	ready for approval/merge?? will need rebase	Bryon Nevis	Secty
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	*review on going - close to final	Jim White	DS
Discover spec (legacy ADR)	* couple line change - need to finalize	Iain Anderson	DS
Source name addition to Msg Bus ADR/ #342	Approved	Lenny Goodell	Core
removed V2 proposal from Array ADR / #336	Approved	Jim White	Core

* - indicates some work this week

Miscellaneous Issues/Topics

- **A new project board for non-backward compatible features**
 - <https://github.com/orgs/edgexfoundry/projects/40>
- 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
- Monthly Architect's Meeting moved to Feb 16th @ 10am MST (from 15th)
 - President's Day in the US
 - Topics to include:
 - Should we add security foundation added to that (per some of earlier V2 API designs via Dell and Bryon N)
 - Address how to get device resource info (for app services and Kuiper)
- Digital Twin Consortium meeting
- Docker hub limits and open source "licensing" to escape some limit issues
 - LF working



Upcoming Events & Dev Advocate Update

Aaron's updates

Upcoming External Events

- › [IOT Hub meetup](#)
 - › Jim to present Thur (28th) @4:45 MST
 - › Looking for other presenters
- › [The Linux Foundation Spring Member Meeting](#): 9 March, 2021 - Virtual
- › [Open Networking & Edge Executive Forum](#): 10-12 March, 2021 - Virtual
- › ~~[Open Source Summit North America](#): 3-6 August, 2021 - Vancouver, Canada~~
 - › This is canceled. They switching to focus on OSS Europe
- › [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>
- › [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...





EDGE X FOUNDRY™

Thank You