TSC Meeting

March 10, 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#

Or Telephone:

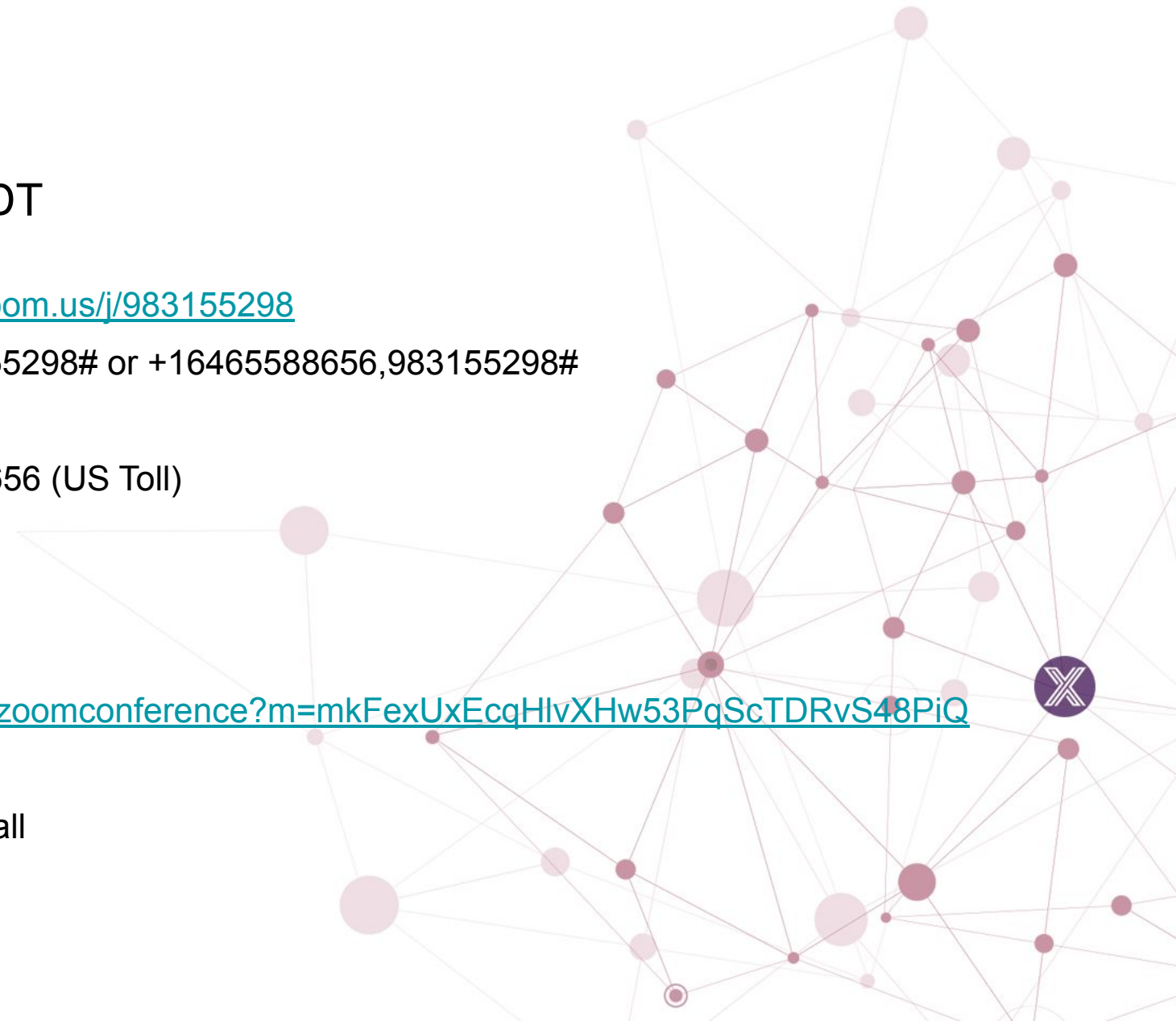 Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

  +1 855 880 1246 (US Toll Free)

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  Meeting ID: 983 155 298

  International numbers available: https://zoom.us/zoomconference?m=mkFexUxEcqHlvXHw53PqScTDRvS48PiQ

** TSC calls are recorded and added to Wiki post-call

TSC – Members Present Today

Company	Name	Email	Position
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
  - Ireland planning under Czar update
- ADR review
- Digital Twin Liaison
  - Charter
  - Press Release
  - Working Group
- LF Matrix (Slack alternative)
- Annual EdgeX Awards
- Calendar updates
- Upcoming Events (Dev Advocate)

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 (3/3)

Cross Cutting Issues

In Progress (6, +/- 0)

- V2 Implementations
  - **Core Data APIs - DONE**
  - **Support Notifications APIs - WIP**
  - **Support Scheduler APIs - WIP**
  - **TAF testing V2 APIs - WIP**
  - 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 - DONE**
  - App SDK V2 Clients - **TBD**
  - **Device Services (C & Go) - WIP**
    - **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 - 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 - 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 (Mar 10, 2021)

Ireland Release

- Release Date: Wednesday, June 30th, 2021
- Freeze Date: Monday, June 21st, 2021
- Virtual Planning Meeting (Jakarta): June 21-24 (Monday - Thursday)
- Some Device Services may release afterwards in July 2021
- Any release concerns, please let Lenny, Jim and myself be aware as soon as possible.

Jakarta: ~ Early November 2021

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

Prior 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 (10-Mar-2021)

Completed:
- Refactoring Pipeline configuration for ASC
- Added a new "FilterBySourceName" Transform since SourceName has been added to an Event

(Kuiper) Rules Engine Update:
- v1.1.2 was released Mar 3rd
- Integration with TensorFlowLite
- Added GeoHash Plugins

WIP:
- Reviewing edgexfoundry-holding/rfid-llrp-inventory-service

Next meeting **Mar 12th, 2021** @ 8:00 AM PST (9:00 AZ)

Application Services

Functions (built into SDK)

Current/Complete:

- AES Encryption
- GZIP Compression
- ZLIB Compression
- MarkAsPushed
- PushToCore
- Device Name Filter
- Value Descriptor Filter
- Batch
- AddTags   NEW!
- JSONLogic Filtering
- XML Conversion
- JSON Conversion
- MQTT(S) Export
- HTTP(S) POST Export
- HTTP(S) PUT Export   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 (10-Mar-21)

- CoAP DS: needs to consume v1.3.1 SDK
- GPIO DS: proposed simplification of pin management
- RFID/LLRP DS: in review
- DS Filtering ADR: PR approved
- Device Profile model updates: Draft PR raised
- Project status: 40 issues backlog + 6 new (net +2)

Next meeting: March 15th

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

Commercial connectors (Future):

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

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

QA/Test WG Update (9th March)

- TAF tests - tests failures... waiting on PR#20 to be merged (refactor: Update ASC and Proxy setup env overrides and compose for Consul ACL Setup.)
  - Fixed Issues
    - #322, update App Service TAF Tests for ASC function config changes
    - #104/#105, [V2] create Core Command test cases - positive & negative
    - #319, [V2] Update all event data and testcases to add `SourceName`
    - #304, Correct TAF instructions for easier developer usage
  - Working Issues
    - #108/#109, [V2] create Support Notifications test cases - positive & negative
    - #324, [V2] tests for support-notification subscription POST method
    - #325, [V2] core command testcases (remaining functions not addressed by #104/105)

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	287	0	1	1
x86_64 / CentOS	Security	Redis	287	0	287	1
arm64 / Ubuntu	Non Security	Redis	287	0	1	1
arm64 / Ubuntu	Security	Redis	287	0	287	1

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	3	0
x86_64 / CentOS	Security	Redis	6	0	6	0
arm64 / Ubuntu	Non Security	Redis	6	0	3	0
arm64 / Ubuntu	Security	Redis	6	0	6	0

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	2	0
arm64 / Ubuntu	Non Security	Redis	10	0	2	0

Jenkins Job: performance-test

DevOps WG Update (03-10-2021)

Pipeline Enhancements

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

Other

- #51 [In Progress] Spike: Semantic versioning git-semver replacement
- #319 [Reviewing] Developer enablement: Update documentation for pre-built pipelines
- Intermittent network failures causing snaps to fail. Working with the LF to determine if a root cause can be found

* Cancelled This Weeks DevOps WG Meeting March 11, 2021 @ 9:00 AM PST *

Security WG Update (Mar 10)

- Next Meeting: Today & March 17
- Design Review
  - Service Registry
  - Upload Threat Model
- In Backlog: 16 (0)
- In Development: 4 (0) In Progress / 2 (0) In Review
  - Secret Provider
  - Docker Container Guidelines
  - Secret Creation & Distribution
  - Securing Consul
- Done 64 (+1)
  - EdgeX TLS Usage
  - EdgeX OCI Bootstrapping

Outreach WG Updates (3/10/21)

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 (3-10-2020)

- V2 API
  - Support services (notifications/scheduler) ongoing
- What remains for Ireland (beyond V2 APIs & clients)
  - TAF tests
  - System Management service
  - Integration / use of V2 APIs
  - Documentation
  - Message bus support (minimal for core)
- status
  - 22 in backlog (-1)
  - 16 in bug backlog (+2)
  - 0 in progress (-1)
  - 117 done (+5)
- Next call - 3/11/21 @ 10AM US/Central

ADR review (in order of priority)

ADR name and PR number	Status	owner	Work Group
Service Registry / #283 (HOT)	cleanup - Tony	Tony Espy	Core
Upload threat model / #259 (quasi ADR)	review	Bryon Nevis	Secty
Metrics / #268	a refresh coming soon	Jim White	Core
DS Filters / #282	ready for approval??	Jim White	DS

* - indicates some work this week

Miscellaneous Issues/Topics

- Daylight Savings Time starts in the US March 14th
  - Calendars should be updated now for meetings starting next week
  - PLEASE refresh your calendars. No, I can't send you personal invites.
  - Reminder - Outreach meeting now meets on 2nd Tuesday morning of the month (next meeting is April 13th)
  - Outside the US, calendar meetings will be off by one hour
  - UK spring forward on 28 March
- Digital Twin Consortium liaison
  - memo of understanding signed
  - [Draft charter and press release proposed](#)
  - Next step - working meeting to present EdgeX to DTC and start to identify deliverables
  - proposing this effort be worked under application services and core work groups

LF to support Matrix platform

Matrix is an open source Slack

Message retention issue resolved

Would not be our own instance - would be shared with LF Edge

Would need to provide LF with a list of features/bots/plugins we deem necessary and nice to have

No movement until after Jun 30

Annual EdgeX Awards

Proposed schedule:

- Nominations from now until April 7 (4 week window)
- Voting by TSC between April 8-15th
- Announcement of the award via virtual ceremony - TBD - to be determined by marketing and LF. Near end of April or first part of May.

TSC approved???

EdgeX Awards

See https://wiki.edgexfoundry.org/display/FA/EdgeX+Awards for details and past winners

Right now, we give out 2 awards ea. in Innovation and Contribution

- **Innovation**: recognizes individuals who have contributed the most innovative solution to the open source EdgeX project over the past year.
- **Contribution**: recognizes individuals who have contributed leadership and helped EdgeX Foundry advance and continue momentum in the past year. This includes individuals who have led work groups, special projects, and/or contributed large amounts of code, bug fixes, marketing material, documentation, or otherwise significantly advanced the efforts of EdgeX with their drive and leadership.
- Only rule - winners last year cannot win this year. i.e. you can't win two years in a row.

EdgeX Award addition - proposed

Subject to TSC approval, I would like to add an EdgeX Award starting this year:

EdgeX Organization Award: given to an adopting organization that has demonstrated the best use of EdgeX in a fielded solution (not a demo or proposed solution - but an actual fielding of EdgeX in a production environment). The nominations should include:

- A description of the use case
- A description of the solution
- An impact statement from the end user on how the solution improved their business, made people's lives better/safer, improved the environment, or otherwise made the world a better place.

Voted on by the TSC (as with the other awards). Under the same rules except the winners would be organizations or groups of people providing the solution

Subject to Outreach group's refinement of the language/award name

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, OSIsoft, 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-MmP1Rl6Vkzn3ULpiAA
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...

Thank You