TSC Meeting

March 23, 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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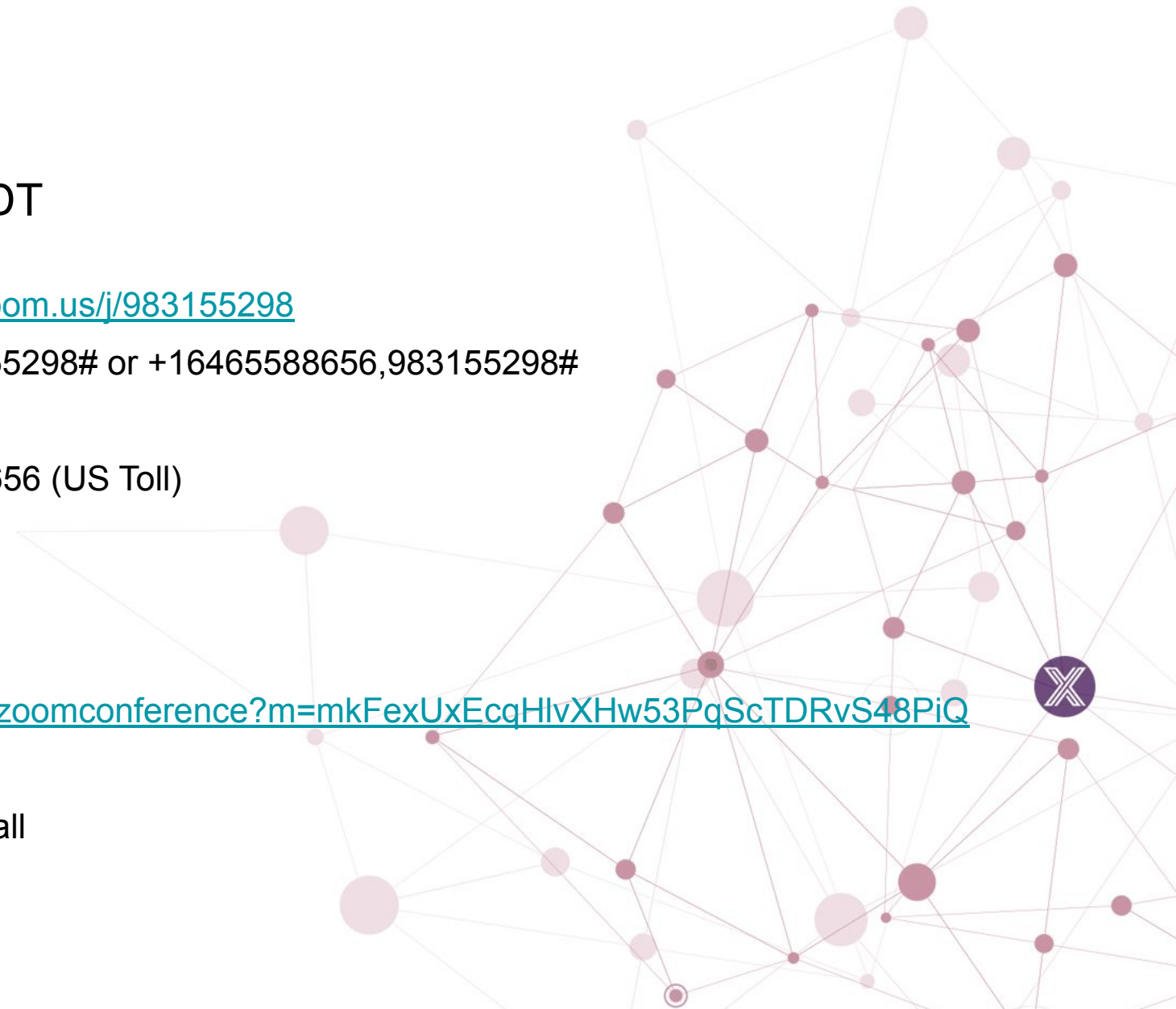   Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

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    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
- ADR review
- Consideration of planned EdgeX 2.0.1 release
- Digital Twin Liaison Status
- Flogo Integration
- Annual EdgeX Awards
- 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 (3/24)

Cross Cutting Issues

In Progress (6, +/- 0)

- V2 Implementations
  - **Support Notifications APIs - WIP**
  - **Support Scheduler APIs - WIP**
  - **TAF testing V2 APIs - WIP**
  - Device SDKs - DONE
  - Core Services - DONE

- V2 Consumption
  - **Core Data Clients - DONE**
  - Support Notification Clients - **TBD**
  - Support Scheduler Clients - **TBD**
  - App SDK V2 Clients - **TBD**
  - **Device Services (C & Go) - WIP**
    - **Device Virtual - DONE**
    - Device ModBus - **WIP**
  - Core Metadata Clients - DONE
  - Core Command Clients - DONE
  - Device SDKs - DONE
  - App SDK V2 Event DTO - DONE

- **Use service keys for Clients config**
  - edgex-go : DONE
  - **App SDK: DONE**
  - **ASC: DONE**
  - Device SDK Go: TBD
  - Go Device Services: TBD

Device Service send Events via MessageBus implementation
- Device SDK C - **WIP**
- C Device Services - **TBD**
- Device SDK Go - **WIP**
- 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 (Pending TSC Approval)**

Backlog (2, +/-0)
- Use service keys constants for Clients config
- Implement Generate/Inject passwords into Vault
- Metrics ADR

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 24, 2021)

Ireland Release - Key Dates

- Freeze Date:
  - Monday, June 21st, 2021 (12 weeks)
- Release Date:
  - Wednesday, June 30th, 2021 (14 weeks)
- Jakarta Virtual Planning Meeting:
  - June 21-24 (Monday - Thursday)
- Jakarta Release:
  - ~ Early November 2021

Any release concerns:
Please let Lenny, Jim and myself be aware as soon as possible.

Applications WG Update (23-Mar-2021)

Complete
- SDK main components now use interfaces and factory methods for better testability

WIP:

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

- Support for custom structured configuration

- Documentation Updates

- New maintenance release 1.1.3, to be released at Mar
  - New EdgeX message–bus integration
  - Any bug fixes

Next meeting **Mar 26th, 2021** @ 8AM 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

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Device Services WG Update (24-Mar-21)

- Custom configuration support: in review
- Messagebus implementation: in progress on both SDKs
- device-virtual: updated to v2
- Project status: 36 issues backlog + 5 new (net unchanged)

Next meeting: March 29th

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 (23rd March)

- TAF tests - all passing**
- ** except performance test: edgex-core-command image size 17.28 > prior release size 11.41 * 1.5
  - Fixed Issues
    - #3264, [V2] upload deviceprofile return code
    - #337, [V2] remove ApiVersion except request, response, and event DTO
  - 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
  - New issue
    - #343, [V2] implement tests for support-notification subscription GET/DELETE/PATCH methods.

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

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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 (03-24-2021)

Pipeline Enhancements

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

Other

- #51 [Reviewing] Spike: Semantic versioning git-semver replacement
  - Will be presenting a follow up to this in next WG meeting to figure out next steps
- #319 [Complete] Developer enablement: Update documentation for pre-built pipelines
- Matrix/Slack Discussion in next WG meeting

DevOps WG Meeting March 25, 2021 @ 9:00 AM PST

Security WG Update (Mar 24)

- Next Meeting: Today & March 31
- Design Review
  - Service Registry
  - Upload Threat Model
- In Backlog: 6 (-11)
- In Development: 2 (-1) In Progress / 3 (0) In Review
  - Secret Provider
  - Docker Container Guidelines
  - Secret Creation & Distribution
  - Securing Consul
- Done 70 (+3)
  - EdgeX TLS Usage
  - EdgeX OCI Bootstrapping

Outreach WG Updates (3/24/21)

Certification Team

- Working on submission portal and logo

Vertical Solutions Team

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

- Had their first call last Thursday.

Marketing Team

- Website in Chinese - team working with leading bidder

Core Working Group (3-23-2020)

- V2 API
  - Support services (notifications/scheduler) ongoing
- What remains for Ireland (beyond V2 APIs & clients)
  - TAF tests (ongoing)
  - System Management service
  - Integration / use of V2 APIs
  - Documentation
  - Message bus support (minimal for core)
- status
  - 24 in backlog (+2)
  - 16 in bug backlog (-1)
  - 0 in progress (even)
  - 125 done (+4)
- Next call - 3/25/21 @ 8AM PST

ADR review (in order of priority)

ADR name and PR number	Status	owner	Work Group
Service Registry / #283 (HOT)	**TSC voting**	Tony Espy	Core
Upload threat model / #259 (quasi ADR)	review	Bryon Nevis	Secty
Metrics / #268	a refresh coming soon	Jim White	Core

* - indicates some work this week

Planned EdgeX 2.0.1 Release

- EdgeX 2.0 release is still being worked, how can we be talking about a dot release already?
- Some considerations:
  - migration scripts/tools will probably be an after June 30 offering
  - Some device services won't be ready by June 30th
  - Bug fixes - almost inevitable given the size of change for V2
- Plan a release to incorporate these for summer
  - Provides adopters with answers about missing elements
  - Lessens the bug burden on Jakarta

Flogo Integration

- Flogo is an open source integration platform
  - https://www.flogo.io/
- Many similarities to app services (as well as other integration platforms) - especially with regard to enterprise export
  - Cloud support for MQTT to Azure IoT and AWS IoT
- Built by Tibco
- Might it provide an additional option to EgdeX adopters
  - Allow EdgeX the opportunity - in the future - to focus on OT connectivity and less on Cloud/IT connectivity?
- Exploring first steps in potential integration with Tibco at this time
- More updates as this relationship evolves

Miscellaneous Issues/Topics

- Digital Twin Consortium liaison
  - memo of understanding signed
  - Press release out
  - Draft charter complete
  - Working meeting to present EdgeX to DTC and start to identify deliverables - TBD
- LF's Matrix examination
  - Discussed in DevOps
  - Gap/issue list provided to LF - stay tuned
- EdgeX Awards
  - Nominations now until April 7
  - Input from Outreach on proposed Organization Award
- China/PRC TSC - March 25 9pm EST
  - Rodney to present on EdgeX Ready

Upcoming Events & Dev Advocate Update

Aaron's updates

EdgeX Awards

› Nominations end 7 April
› http://bit.ly/EdgeX_Awards_wiki
›

Upcoming External Events

› [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
  › [Call for Testbeds](#) is now open
› [Open Networking & Edge Summit North America](#): 11-12 October, 2021 - Los Angeles, CA
› [KubeCon/CloudNative NA](#) Oct 12-15
  › [KubeCon/CloudNative NA CFP](#) Due 11 April

› 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...

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Thank You