EDGEXFOUNDRY™

TSC Meeting

March 2, 2022

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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:

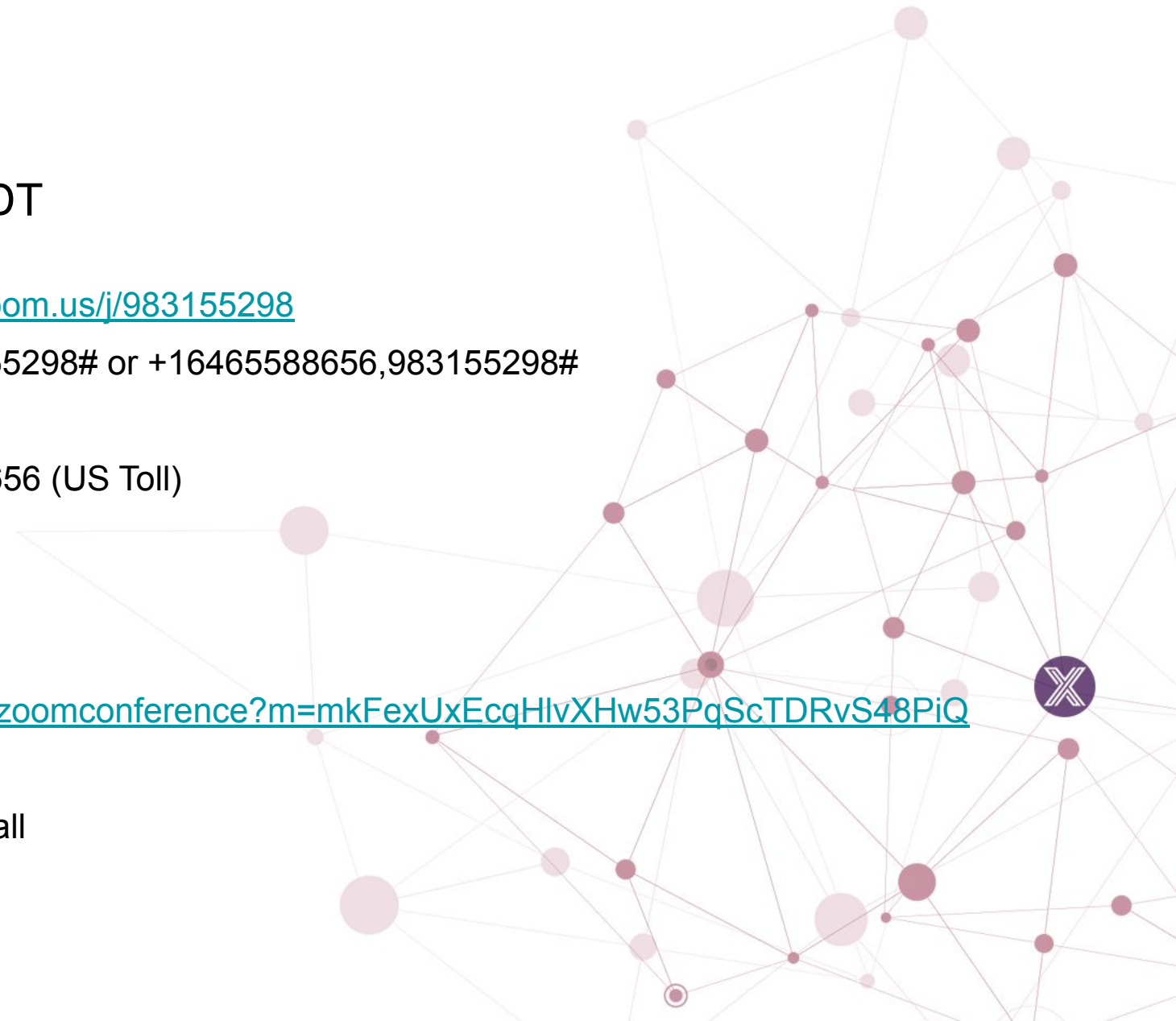Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+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	Jim White	jim@iotechsys.com	Outreach WG Chair
Intel	Bryon Nevis	bryon.nevis@intel.com	Security WG Chair
Intel	Lenny Goodell	leonard.goodell@intel.com	Applications & Analytics WG Chair
IOTech	James Butcher	james@iotechsys.com	Core/Test/QA WG Chair

Gavin Lu (VMWare), Tony Espy (Canonical), Melvin Sun (Intel)

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 updates
- Monthly Architect's Meeting Readout
- Miscellaneous
  - Spring schedule

Work Group Updates

Chairs

Working Group Chair Updates

- Around the horn
  - Product Manager - Lenny Goodell
  - Applications - Lenny Goodell
  - Core - James Butcher
  - Device Services - Iain Anderson
  - DevOps - Ernesto Ojeda
  - Release Czar - Bill Mahoney
  - Security - Bryon Nevis
  - PRC Updates
  - Outreach - Jim White
    - Certification - Rodney Hess
    - Marketing - Camilo Dennis
    - Vertical Solutions (and LF Edge TAC) - Henry Lau

Product Manager (03/02/22) - Kamakura

Icebox (0)

Backlog (0)

In Progress (8)

- **Securing Consul with Access Token**
    - C Device SDK - **TBD**
    - C Device Services - **TBD**

- **Secure Message Bus connection**
    - C Device SDK - **TBD**
    - C Device Services - **TBD**

- **CORS for all (secure and non-secure)**
    - Go services - DONE
    - C SDK/Services- **TBD**

- **Request new Consul token on Auth failures**
    - Go Services - DONE
    - C SDK/Services - **TBD**

- **Implement Generate/Inject passwords into Vault**
    - Go Services - DONE
    - C SDK/Services - **TBD**

- **Use latest Redis (redigo) version (ignore bad v2.0.0 tag)**
    - edgex-go - **DONE**
    - App SDK - **PR**

- **Add a "make lint" target**
    - Go Device Services - **WIP**
    - LLRP App Service - DONE
    - edgex-go - DONE
    - App Services - DONE
    - go-mods - DONE
    - Go Device SDK - DONE
    - C Device Services - N/A

- **Metrics ADR - Pending Approval**

Done (6)

- **Secret Provider for All** - **C Device Services - DONE (COAP)**
- Add service name to common response DTOs
- Switch to Go 1.17
- Update Swagger publishing to use version 2.2.0 (docs to point to 2.2.0)
- No ZMQ on Windows
- Secret store tokens for delayed-start services ADR

Applications WG Update (03/02/22)

Completed
- None

WIP (2)
- App SDK Controller tests not actually run
- Improve service initialization process#1046
- Not using latest Redis (regigo) module version due to bad tagging #1048

Backlog (11)
- https://github.com/orgs/edgexfoundry/projects/23

New
- None

Protocol App Services aka Digital Twin
- Defining high level requirements
  - https://docs.google.com/document/d/1TXFg5tkbDlFa2tj0yf TZcQ4NPNfo-Y8c/edit?usp=sharing&ouid=104667835989 061964851&rtpof=true&sd=true
- Moving to weekly meetings

Next
- Metrics once ADR is approved

eKuiper

- No update this week

> **Reminder**: Bi-weekly morning App Service WG meetings are now being used for Eaton's discussions on C++ Protocol App Service. These discussions will continue on **March 8th, 2022 @ 9am PST**

Project Board: https://github.com/orgs/edgexfoundry/projects/23

Next meeting **March 8th, 2022 @** 2:30pm Pacific

Application Services - Ireland

Functions (built into SDK)

- Add Tags
- Batch
- Compression (GZIP & ZLIB)
- Conversion (XML & JSON)
- PushToCore
- ~~MarkAsPushed~~
- Encryption (AES256)
- Encryption (AES) ** DEPRECATED**
- Export
  - MQTT
  - HTTP POST & PUT
- Filtering
  - By Profile Name
  - By Device Name
  - By Source Name
  - By Resource Name
- JSONLogic
- Set Response Data

Features

- Store and Forward
- Batch and Send
- Web Server
- Configurable App Service
- Vault Integration for Secrets
- MQTT Event triggers
- Filter by Topics
- Custom Triggers
- Publish Topics and URL Placeholders
- Structure Custom Configuration
- Background Publishing

- Received Topic
- Context Storage
- Clients
  - Logging, Event
  - Command
  - Device, DeviceService
  - DeviceProfile
  - Notification
  - Subscription
  - Registry

Reference/Example App Services
(built on top of SDK)

- Simple Filter
- Simple Filter and MQTT Export
- Simple Filter and HTTP Export
- Simple CBOR
- Azure IoT Hub
- Amazon IoT Core
- Cloud Event Transformation
- Secret Retrieval
- JsonLogic

- Send Command
- Convert & Publish
- Custom Target Type
- IBM Watson IoT (ASC Profile)
- Custom Trigger
- Influx DB Export
- Fledge Export

Core WG Snapshot (02 March 2022)

- Kamakura:
  - TAF - all passing
    - Functional tests: 545
    - Integration tests: 43
    - Performance tests: 10
    - Recent fixes: store and forward test #575
  - ADRs ongoing
    - Metrics (vote)
    - UoM (final comments in Core WG call)
    - N/S Message Bus (review in Core WG call)

Core Project Board Status

- 6 New Issues (+1)
- 9 Release Backlog (+0)
- 0 Bug Backlog (+0)
- 2 In Progress/QA (+0)
- 44 Done (+0)
- 2 Kamakura Stretch (+0)
- 12 Icebox (+0)

QA/Test Project Board Status

- 1 New Issues (+0)
- 1 Release Backlog (+0)
- 0 In Progress/QA (+0)
- 8 Done (+1)
- 0 Icebox (+0)

Next meeting Thursday March 03rd @ 8am Pacific Time

Device Services WG Update (2 Mar 2022)

SDKs

- ProtocolProperties validation - landed (Go)
- Provisioning - device services to populate Provision Watchers?

Project board

- 27 issues New+Backlog (-1)
- 6 In Progress+Review (-1)

Next meeting: March 7th

Device Services - current/coming (as of v2.1)

Open Source connectors (Current):

- Modbus (TCP/RTU) in Go
- Virtual Device in Go
- SNMP in Go
- MQTT in Go
- BACnet (IP & MSTP) in C (v1 only)
- ONVIF Cameras in Go
- REST in Go
- Grove in C
- CoAP in C
- LLRP / RFID in Go
- GPIO in Go

Open Source connectors (Future):

- UART in Go
- OPC-UA in Go

Commercial connectors (Current):

- 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 in C
- OPC-UA Pub/Sub in C
- Siemens S7 in C
- File reader in C

There are additional commercial MQTT (Go), Modbus (C), REST (Go), ONVIF (C) and BACnet (in C) that have added features over the community editions

DevOps WG Update (03-02-2022)

Pipeline Related

- [Complete] #378 Linux Foundation will be working on Ubuntu 20 based build agents for use in the pipelines
  - Will also be migrating away from CentOS due to EOL
- [Backlog] edgex-docs release automation
- [Backlog] Setup bi-weekly builds for less active repos for Snyk vulns

Other

- edgex-docs: mkdocs htmlproofer updates.

Next DevOps WG Meeting: Thursday, March 17, 2021 @ 9AM PST

Release Czar (2022-3-2)

No Updates This Week.

Upcoming:
Kamakura - May 2022

Security WG Update

Next Meeting: Today, next

- Summary: Colin Peters' presentation
  - https://wiki.akraino.org/display/AK/Smart+Data+Transaction+for+CPS+Blueprint+Architecture
  - Uses single-pod approach.
    Containers that terminate with success (i.e. proxy-setup) are problematic since restart policies can't be set at a container level.
    Kong doesn't run in the single pod environment without low-level patching.
  - Will miss the Blueprint 6 release for Akraino in April
  - If we get Kubernetes support stable for Kamakura we could help them meet their October release window

- Delayed start summary
  - Making good progress. Hope to be able to demo soon.

Security Project Board Status

- 5 New Issues (n/c)
- 4 Release Backlog (n/c)
- 3 In Progress/QA (n/c)
- 1 In review (n/c)
- 16 Done (n/c)

Secure Consul Project Board Status

- 0 In-review
- 0 In-progress
- 2 Phase 1 To-do
- 1 Phase 2 To-do
- 4 Phase 3 To-do

Updates on EdgeX China Project

- No updates this week.

EdgeX China community channels:

- Website: https://cn.edgexfoundry.org/
- OSChina: https://www.oschina.net/group/edgex-foundry
- CSDN: https://blog.csdn.net/edgexfoundry
- Zhihu: https://www.zhihu.com/people/edgex-foundry
- Bilibili: https://space.bilibili.com/550595847

Outreach WG (3/1/22)

Certification

- New EdgeX Ready applicant

ADR review

ADR name and PR number	Status	owner	Work Group
Metrics / #268	Out for TSC vote	Jim White	Core
ADR on unit of measure / #386	To be finalized this week in Core Vote to go out this week pending any major issues	Jim White	Core
Device functions / #644	discussed in last DS Working Group; awaiting N/S	Iain Anderson	DS
North-south message bus / #656	To be covered in Core WG this week	Jim White	Core
Microservice Authentication / #659	discussed in security WG On hold for the moment	Bryon Nevis	Security
control plane events	Needed per planning meeting (low priority this release)		
cmake options to optimize dependencies	Needed per planning meeting	Eaton	
Global config	Needed per planning meeting (low priority this release)		
Securing the EdgeX message bus when using MQTT	Needed per planning meeting		
device parent/child relationship	Needed per planning meeting (labels vs other option)	Eaton	

Monthly Architect's Meeting

Finalized: Metrics ADR, UoM ADR

Reviewed North/South Messaging

- With Device Functions ADR auxiliary discussion

Next meeting: Scope of ADRs issue discussion

Miscellaneous

- work continues on Eaton App Service/Device Service design
  - WIP:
  - This is becoming an effort to support digital twins in EdgeX
  - https://docs.google.com/document/d/1oT2za9_CeFIuESritp7VRmIO-Enc5owZMCsJBzvrzlk/edit

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Spring Schedule for TSC approval

- Per our new [planning schedule policy](#)
- Release was May 4th, May 11th or May 18th (Wednesday)

4th	11th	18th
Freeze: Apr 20th (Wednesday)	Freeze: Apr 27th	Freeze: May 4th
Pre Wire: Apr 14th (Thursday)	Pre Wire: Apr 20th	Pre Wire: Apr 27th
Planning Mtg: May 9-12 (M-Th)	Planning: May 16-19	Planning: May 23-26th

Memorial weekend: May 28-30th

UK bank holiday & Taiwan Labor Day: May 2

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Thank You