

EDGE X FOUNDRY™

# TSC Meeting

April 6th, 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#

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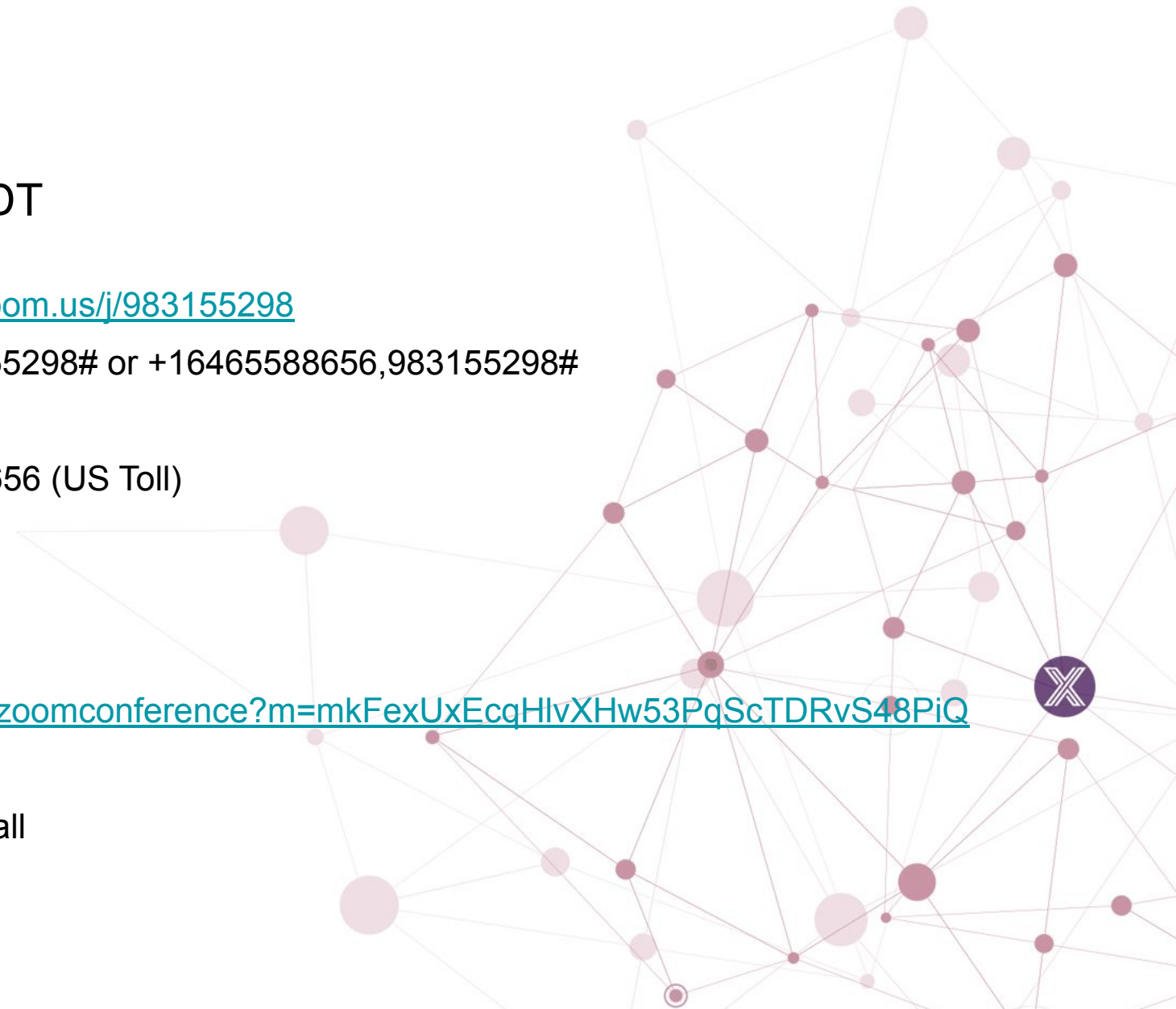
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Meeting ID: 983 155 298

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	<a href="mailto:iain@iotechsys.com">iain@iotechsys.com</a>	Device Services WG Chair
Intel	Ernesto Ojeda	<a href="mailto:ernesto.ojeda@intel.com">ernesto.ojeda@intel.com</a>	Dev Ops WG Chair
IOTech	Jim White	<a href="mailto:jim@iotechsys.com">jim@iotechsys.com</a>	Outreach WG Chair
Intel	Bryon Nevis	<a href="mailto:bryon.nevis@intel.com">bryon.nevis@intel.com</a>	Security WG Chair
Intel	Lenny Goodell	<a href="mailto:leonard.goodell@intel.com">leonard.goodell@intel.com</a>	Applications & Analytics WG Chair
IOTech	James Butcher	<a href="mailto:james@iotechsys.com">james@iotechsys.com</a>	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
- Kamakura deliverable review
- ADR updates
- Miscellaneous
  - Deprecation and Archive policy (proposed)
  - EdgeX Awards
  - Docs updates
  - Levski planning



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# Work Group Updates

Chairs

# Spring Schedule **approved**

- Per our new [planning schedule policy](#)
- Release on May 11th (Wednesday)

Freeze: Apr 27th, Wednesday
Pre Wire: Apr 20th, Wednesday
Planning: May 16-19, Monday-Thursday

# Release Czar (2022-4-6)

## **Kamakura:**

Pre Wire: Apr 20th, Wednesday (2 weeks)

Freeze: Apr 27th, Wednesday (3 weeks)

Release: May 11th, Wednesday (5 weeks)

Levski Planning (~Nov 22): May 16-19, Monday-Thursday (6 weeks)

## **Upcoming:**

Releases of GPIO and LLRP App / Device Services



# 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 (04/05/22) - Kamakura [Cross Cutting Issues](#)

Icebox (0)

Backlog (1, +1)

- **Generate security credential from Mosquitto broker**

In Progress (5, -1)

- [Securing Consul with Access Token](#)
  - C Device SDK - TBD
  - C Device Services - TBD
- **Request new Consul token on Auth failures**
  - Go Services - DONE
  - C SDK/Services - TBD
- **Service Metrics**
  - go-mod-core-contracts - **Draft PR**
  - go-mod-bootstrap - **Draft PR**
  - Core Data - **Draft PR**
- **Security: Implement CGO binary hardening**
  - edgex-go - DONE
  - Device SDK - **DONE**
  - App SDK - TBD
  - App Services - TBD
  - Device Services - TBD

- **Delay Start Services**
  - edgex-go - DONE
  - Compose - **DONE**
  - App Services - **WIP**
  - Device Services - **WIP**

Done (13, +1)

- **Add a "make lint" target**
- Implement Generate/Inject passwords into Vault (C SDK/DS)
- CORS for all (secure and non-secure) (C SDK/DS)
- Secure Message Bus connection (C SDK/DS)
- Metrics ADR - Approved
- Use latest Redis (redigo) version (ignore bad v2.0.0 tag)
- Use of Registry when init Clients
- [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 (04/05/22)

## Completed (0)

- 

## WIP (1)

- /api/v2/config doesn't return Custom Config sections #1035

## Backlog (12)

- <https://github.com/orgs/edgexfoundry/projects/23>

## New (4)

- SDK Docs: [Incorrect environment variables for app-service-mqtt setup](#)
- SDK: [Improve the retry mechanism inside the external MQTT trigger](#)
- SDK: [Swagger for /secret endpoint is missing apiVersion](#)
- Compose: [Update eKuiper environment variables #227](#)

## Next

- Continue Bug fixes
- Metrics (when prototype approved)

## Eaton App discussions

- Jim created initial outlines for ADRs to enable Eaton apps
  - Control Plane events (Core Metadata)
  - Core Data as better cache engine

## eKuiper

- No update due to canceled meeting

**Reminder:** Weekly morning App Service WG meetings are now being used for Eaton's App discussions. These discussions will continue on **April 12th, 2022 @ 9am PST**

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

Next meeting **April 19th, 2022 @ 3:30pm 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 (06 April 2022)

- Kamakura:
  - TAF
    - Functional tests: 545, Integration tests: 43 (all passing)
    - Performance tests: 10 - 1 failure, due to spiffe-go image increase (discussed on Sec and Core calls)
  - Device Profiles - Ginny implementing [#710](#)
    - Two PRs to review please: [#3936](#) and [#3937](#)
  - Metrics - Lenny has applied revisions, new demo on Core WG call tomorrow

## Core Project Board Status

- 11 New Issues (+1)
- 5 Release Backlog (-1)
- 0 Bug Backlog (+0)
- 3 In Progress/QA (+0)
- 56 Done (+2)
- 2 Kamakura Stretch (+0)
- 14 Icebox (+)

## QA/Test Project Board Status

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

Next meeting: **Tomorrow** Thursday April 07 @ 8am Pacific Time

# Device Services WG Update (6 Apr 2022)

## **GPIO Device Service**

- Issue discovered during snap testing
  - Also occurs if running native
  - Blocking bug

## **ONVIF Camera Device Service**

- Review in progress
  - Various updates in the last 24 hours

## **Project board**

- 25 issues New+Backlog (+1)
- 4 In Progress+Review (=)

*Next meeting: April 11th*

# 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 (04-06-2022)

## Pipeline Related

- [In Progress] edgex-docs release automation

## Other






- [Backlog] edgex-global-pipelines documentation

**Next DevOps WG Meeting: Thursday, April 7, 2021 @ 9AM PST**



## FROM the November Planning Meeting - final action/scope slides

# DevOps Scope

- Pipeline Optimizations:
  -  [Complete] Tech Debt: Fix multiple nodes being spun up during edgeXBuildGoApp and edgeXBuildCApp
    - T-shirt size: small
  -  [Complete] Spike: docker image multi-arch builds with buildx (spin up less nodes, speed up builds)
    - T-shirt size: small for the research; implementation TBD (see below)
    - Use of Docker buildx so we wouldn't need to spin up ARM image to build docker arm images
    - Explored in the past; revisit approach (separate images)
    - Implementation: depending on spike docker image multi-arch builds with buildx
  -  [In Progress] Spike: rewrite git-semver in python
    - T-shirt – medium size (impl TBD)
    - Implementation: depending on spike, rewrite git-semver in python
    - Punt on Semantic release work for now
- Assist in go lang linting/scanning
  -  [Complete] See security scope
- Documentation
  - T-shirt size: medium
  -  [In Progress] Continued documentation updates (DevOps online docs)
  - Find it through README of DevOps repository

# Security WG Update

## Next Meeting: Today, next

- Delayed start status update
  - Rolling out device-sdk-go updates to device services
  - Not yet started work on conditional compilation
  - Compiling spire components from source; testing on aarch64
    - Discovery: make docker in aarch64 doesn't append -arm64 to local docker images! PR pending!
  - TODO: Roll out configuration.toml updates everywhere
- **Unrelated. slack.edgexfoundry.com is dead.**
- **Unrelated. Should be caching go.mod downloads during container build.**

### Security Project Board Status

- 14 New Issues (+9)
- 3 Release Backlog (-1)
- 2 In Progress/QA (n/c)
- 2 In review (-3)
- 33 Done (+a lot)

### 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 (4/5/22)

Next meeting Monday April 18 at 9am PST

## Web Site

- Updating some issues on EdgeX Ready page

## Ready/Certification

- Rodney working on Wiki update
- Fixing wording around device profile use

## Kamakura Release Workstream

- Blog post
- News release

## Tech Talks - mid-May through June

- Revising the old tech talks
- Getting started (Jim)
- Build an AS (Lenny)
- Build a DS (?? - looking to Iain/Cloud for help)
- Build a Device Profile w/ mention of Ready program (Jim)
- Getting started with Snaps (Canonical??)
- Others???

## Hackathon

- Looking at worldwide event - fall 2022
- Some onsite element/ some virtual element
- Involve PRC (and use some of their model)
- Possibly expand to LF Edge

# Kamakura Scope To-Do

Yellow - in jeopardy to slip

Green - done

## General

- Dynamic Profiles implementation - <https://github.com/edgexfoundry/edgex-docs/pull/605>
- Metrics Collection implementation - <https://github.com/edgexfoundry/edgex-docs/pull/268>
  - proof of concept service and module additions in Go
  - Lenny presenting to Core on Thursday
- UoM ADR - <https://github.com/edgexfoundry/edgex-docs/pull/386>
  - Complete
- North-South Message Bus ADR
  - Device functions ADR
- Kubernetes Support
  - Helm Chart example - merged
- Add “make lint” target
  - PRs in place
- Support
  - Build services on Windows; need docs

# Kamakura Scope To-Do

Yellow - in jeopardy to slip

## Core

- Update lastConnected should not trigger device service callback (low priority)

## GUI

- Fix to no allow banned activity (ex: modify device profile)
  - Fixing OpState update
  - Checking on device profile updates

## Device Services

- Complete securing consul with access tokens
- Complete securing the message bus
- Injecting secrets during bootstrapping
- CORs support in C SDK / C device services
- Implement ProtocolProperties validation mechanism
- CoAP DS accepted
- GPIO DS accepted
- UART DS accepted
- Grove DS accepted
- ONVIF DS accepted
- USB DS accepted

# Kamakura Scope To-Do

Yellow - in jeopardy to slip

Red - pushed to next release

## Security

- Implement ADR 0019 - Delayed start secret store tokens (SPIFFE ADR)
- Update Swarm for remote Device Service how to for V2
  - Half done
- Doc how to use SPIFFE as example of how to do distributed services in edgex-examples (Stretch)

## Snaps

- Updating the basis for core 22
- Set env vars via Snap CLI (today we map between env names to snap lowercase names)
- Add github action to build full snap when changes made to all snaps

## DevOps

- Spike: rewrite git-semver in python
- Continued documentation updates (DevOps online docs)

## Docs

- Many areas of doc updates, additions, etc.

# Document Issues to address this release

#719 S

#599 L

Nice to have

#718 S

#479 L

#643 M

#715 S

#642 L

#702 M

#598 L

#692 M

#489 M (with #121, #21)

#685 L

#392 S

#673 L

#641 L



# ADR review

<i>ADR name and PR number</i>	<i>Status</i>	<i>owner</i>	<i>Work Group</i>
Device functions / #644	On deck	Iain Anderson	DS
North-south message bus / #656	New edits as of Monthly Architect's meeting Seeking Core WG approval this week	Jim White	Core
Microservice Authentication / #659	discussed in security WG On hold for the moment	Bryon Nevis	Security
control plane events	Underway (draft outline in docs)	Jim White	Core
core data cache	Underway (draft outline in docs)	Jim White	Core
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	

Move to backlog/Levski consideration??

Levski scope

# Miscellaneous

- **EdgeX Award Nominations now open**
  - Send in your nominations for Innovation Award or Contribution Award to LF's Kendall Waters Perez: [kperez@linuxfoundation.org](mailto:kperez@linuxfoundation.org)
  - Nominations due by April 14th
  - See <https://wiki.edgexfoundry.org/display/FA/EdgeX+Awards> for past winners and the two types of awards

# EdgeX Award Nominations

- Award Type: Innovation or Contribution
- Nominee's Name (and email address if you have it)
- Nominee's Company
- Nomination paragraph (why you are nominating this person)
- Supporting links (optional - ex: links to Github PR, documentation, design proposal, etc.)
- Your name and company



Anyone can nominate and anyone can be a nominee

TSC will vote later in April. Awards to be presented during our planning meeting.

*Note: last year's winners are ineligible (sorry Lenny, Ernesto, Cloud, Jack Chen, Lindsey Cheng, Ginny Guan, Wendy Huang, Bruce Huang, Jude Hung, Chris Hung, Felix Ting, and Cherry Wang)*

# Deprecation and Archival policy

Per TSC meeting of 3/16

Action item on TSC chair to propose policy on these

# Levski early planning/scoping

Chairs - start to consider/consolidate your upcoming release scope

Deck to be started (by Jim) containing scope possibilities

- Approved ADRs with implementation need
- backlog items
- project board icebox items
- EdgeX future release and EdgeX 3.0 boards
- Repository issue items (features not bugs)

Target April 22 for first consolidate draft of scope doc/deck



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Thank You