EDGEXFOUNDRY™

TSC Meeting

May 11th, 2022

RELEASE DAY!!!

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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:

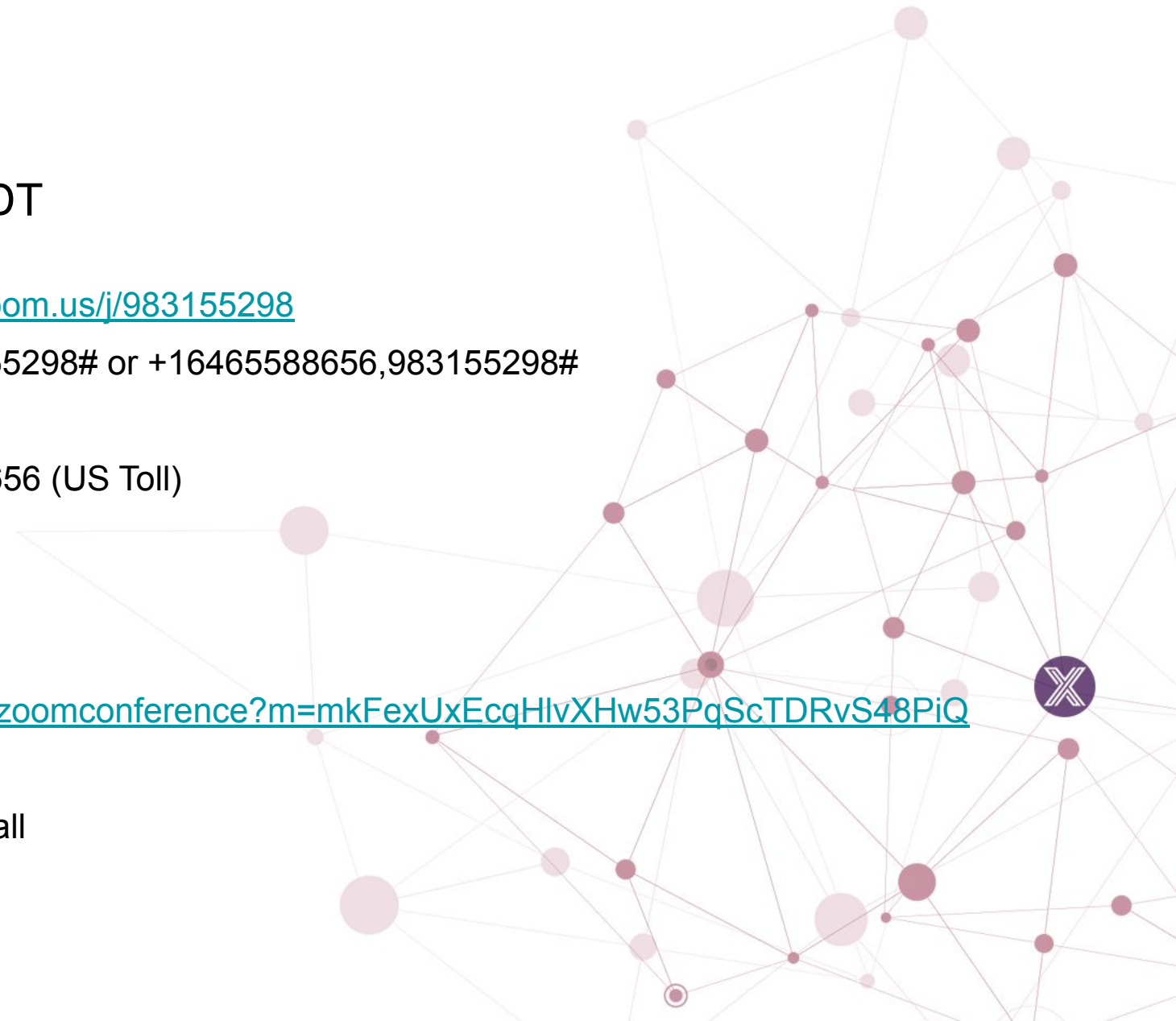Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+1 855 880 1246 (US Toll Free)

+1 877 369 0926 (US Toll Free)

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

- Kamakura Release
  - Issues/bugs
- Jakarta LTS Update Release
- WG Updates
- ADR updates
- Miscellaneous
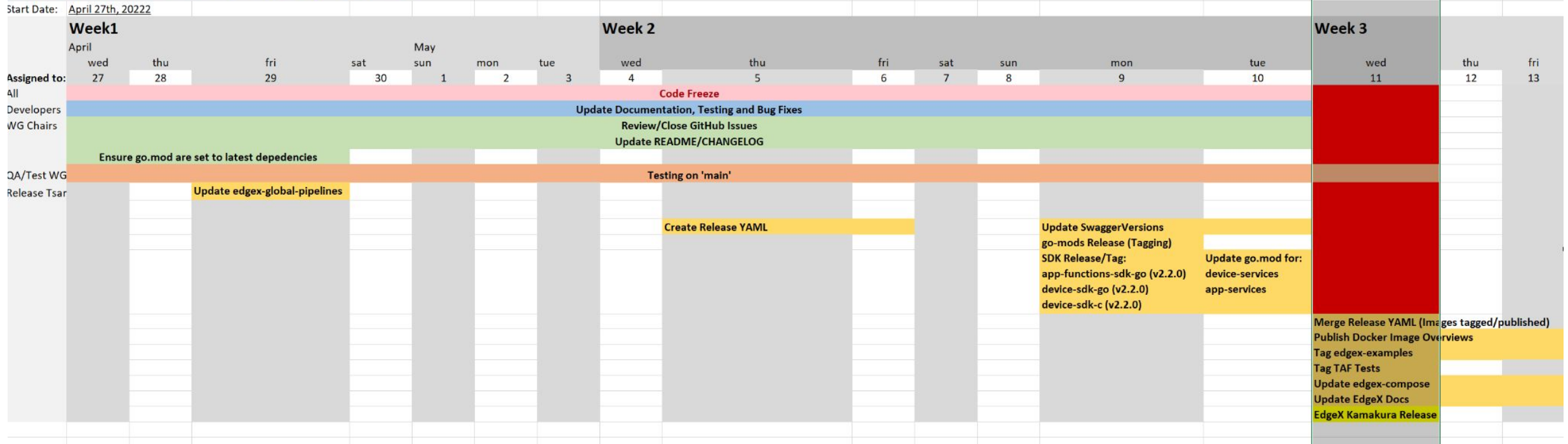 - Levski Planning
  - Tech Talks

Work Group Updates

Chairs

Release Czar (2022-5-11)

Kamakura (2.2.0):

- Go-mods / Changelogs updated
- TAF Testing
- Go / No Go - TSC Approval

Kamakura Release

Core Data optional and client dependency issue in Device Services

  SDKs fixed

Security Issue

  Config API surfacing credentials

  Fix in services and SDKs

Any other known issues?

Jakarta LTS

- Patch release - target date?
  - Jun 8th target
- What will it contain?
  - Config API security CVE issue

- https://github.com/orgs/edgexfoundry/projects/47

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 (05/11/22) - Kamakura Cross Cutting Issues

Icebox (0)

Backlog (1)

- **Generate security credential from Mosquitto broker**

In Progress (2, -3)

- **Securing Consul with Access Token**
  - C SDK/Services - **WIP**

- **Request new Consul token on Auth failures**
  - C SDK/Services - **WIP**

Done (16, +3)

- **Service Metrics**
- **Security: Implement CGO binary hardening**
- **Delay Start Services**
- 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

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Applications WG Update (05/11/22)

Completed (5)

- [ASC] Add LineProtocol Metrics export profile #400
- [App Metrics] Document App Service built in service metrics #747
- [App Metrics] Document SDK new ToLineProtocol function and ASC new metrics-influxdb profile #748
- Fixed Security Issue
- Change Logs
- Released SDK
- Update App service with released SDK
- LLRP backlog for Kamakura

WIP (1)
- None

Backlog (4)
- https://github.com/orgs/edgexfoundry/projects/23

New (0)

- [Compose Builder] Add service for new ASC metrics-influxdb profile #234
- [App Service] Update examples for Kamakura once SDK released. #104

ICE BOX (6)
Next
- TBD

eKuiper

- 1.5 for released
- Kamakura will use 1.4.4
  - 1.5.0 doesn't have anything new for EdgeX users

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

Next meeting **May 31st, 2022 @ 3:30pm Pacific**

○ Delay Start, Metrics, etc

Application Services - Kamakura

Functions (built into SDK)

- Add Tags
- Batch
- Compression (GZIP & ZLIB)
- Conversion (XML & JSON)
- PushToCore ** DEPRECATED**
- ~~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
- **ToLineProtocol (transforms Metric DTO)**

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)

Released Services
- App Service Configurable
- App RFID LLRP Inventory

Examples
- Simple Filter
- Simple Filter and MQTT Export
- Simple Filter and HTTP Export
- Simple CBOR
- Cloud Export

- Cloud Event Transformation
- Secret Retrieval
- JsonLogic
- Send Command
- Convert & Publish
- Custom Target Type
- IBM Watson IoT (ASC Profile)
- Custom Trigger
- Influx DB & Flege Exports

Core WG Snapshot (11 May 2022)

- Kamakura:
  - TAF
    - Functional tests: 594 - all passing (includes 46 new tests)
    - Integration tests: 47- all passing (includes 2 new tests)
    - Performance tests: 10 - all passing

  - Good progress on Dynamic Device Profile testing
  - NATS discussion: Alex Ullrich joined us last week. Will discuss in Levski planning
  - Performance Metrics (footprint, CPU, Memory, etc) to come once released

Core Project Board Status

- 10 New Issues (+0)
- 0 Release Backlog (+0)
- 0 Bug Backlog (+0)
- 1 In Progress/QA (+0)
- 95 Done (+10)
- 22 Icebox (+0)

QA/Test Project Board Status

- 2 New Issues (-6)
- 0 Release Backlog (+0)
- 1 In Progress/QA (+1)
- 22 Done (+6)
- 2 Icebox (+0)

Next meeting: **Tomorrow** Thursday May 12th @ 8am Pacific Time

Device Services WG Update (11 May 2022)

To be released today

- MQTT
- Modbus
- Camera (existing ONVIF service)
- REST
- Virtual
- RFID-LLRP (?)
- SNMP (?)

Later v2.2 releases

- GPIO
- C SDK and related services - CoAP, BacNET, Grove

Next meeting: May 23rd

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 (05-11-2022)

Pipeline Related

- [Complete] edgex-docs release automation.
- [Complete] git-semver functional testing before cutover.
- [Complete] edgex-compose automation cleanup.

Other

- [Complete] edgex-global-pipelines documentation

Next DevOps WG Meeting: Thursday, May 26, 2022 @ 9AM PST

Security WG Update

Next Meeting: Today, next

- Disposition of remaining issues
  - device-camera-go issue to be dropped once ONVIF camera support moved out of holding
  - Consul remaining hardening: push to next release
  - SPIFFE/SPIRE distributed service example: TODO

Security Project Board Status

- 15 New Issues
- 3 Release Backlog (n/c)
- 0 In Progress/QA
- 1 In review
- 61 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

- Working with outreach WG on possible worldwide EdgeX challenge.
  - Due to pandemic situation, there is possibility to make it virtual or hybrid.
- Negotiating partnership with datawale.club to promote EdgeX based Edge.AI recipe in PRC.
- EdgeX is adopted by Alibaba OpenYurt, to connect IoT things/devices on the edge which interworks with the cloud as a K8S worker node.

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 (5/11/22)

Ready/Certification

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

Kamakura Release Workstream

- Blog post out Thursday or Monday
- News release ready on release complete

Events

- Wait and see - looking for feedback on recent events
- Checking on LF and fall events plan
- Probably looking for more speaking roles than booth engagement

Hackathon

- Wait and see mode with July 1 deadline
- Looking at success of others

ADR review

ADR name and PR number	Status	owner	Work Group
control plane events	Underway (not for this release cycle)	Jim White	Core
core data cache	Underway (not for this release cycle)	Jim White	Core

Document Issues to address this release

#719 S [Slack refs]

#718 S [App Config override bug]

#715 S [walkthrough Json]

#702 M [supported archs in getting started]

#692 M [ADR0002 clean up]

#685 L [build/run ARM32]

in progress

#673 L [build/run outside of Docker]

in progress

#641 L [EdgeX w/ K8s]

#599 L [build/run on Windows]

in progress

#479 L [CLI v2]

Nice to have

#643 M

#642 L

#598 L

#489 M (with #121, #21)

#392 S [better docs on lastconnected and reported]

Document work for Kamakura

Snaps

Metrics

Miscellaneous

- Alex Ullrich presented on NATs @ 5/5 Core Working Group
  - Recording and presentation on the Wiki
- NetFoundry presenting on Ziti @ 5/11 Security Working Group
- Camera (ONVIF and USB) Device Services moved from holding
  - Decided to still release current Camera device service for Kamakura
  - Will deprecate and archive as appropriate when other services released

Levski planning/scoping

Pre-Wire: was completed on April 20th

See the Wiki for details, recording and results (deck with possible scope)

Planning Meeting: May 16-19

- Please register: https://bit.ly/LevskiPlanning
- Planning deck (with scope from the PreWire)
- **Chairs and those with topics to discuss, have a look at the deck and send me a note if there is an issue, topic or bug to discuss not listed**

Upcoming Tech Talks

Tech Talks - mid-May through June

- Revising the old tech talks
- May 24 - Getting started (Jim)
- June 7 - Build an AS (Lenny)
- June 14 - Build a DS (IOTech)
- June 21 - Build a Device Profile w/ mention of Ready program (Jim)
- June 28 - Getting started with Snaps (Canonical)

Registration Links

May 24: https://zoom.us/webinar/register/WN_c6c-4LAfRD6AJP1BQM6QeQ

June 7-28: https://zoom.us/webinar/register/WN_hyrYdafeR5mSM5oLcM75hA

Thank You