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TSC Meeting

January 26, 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:

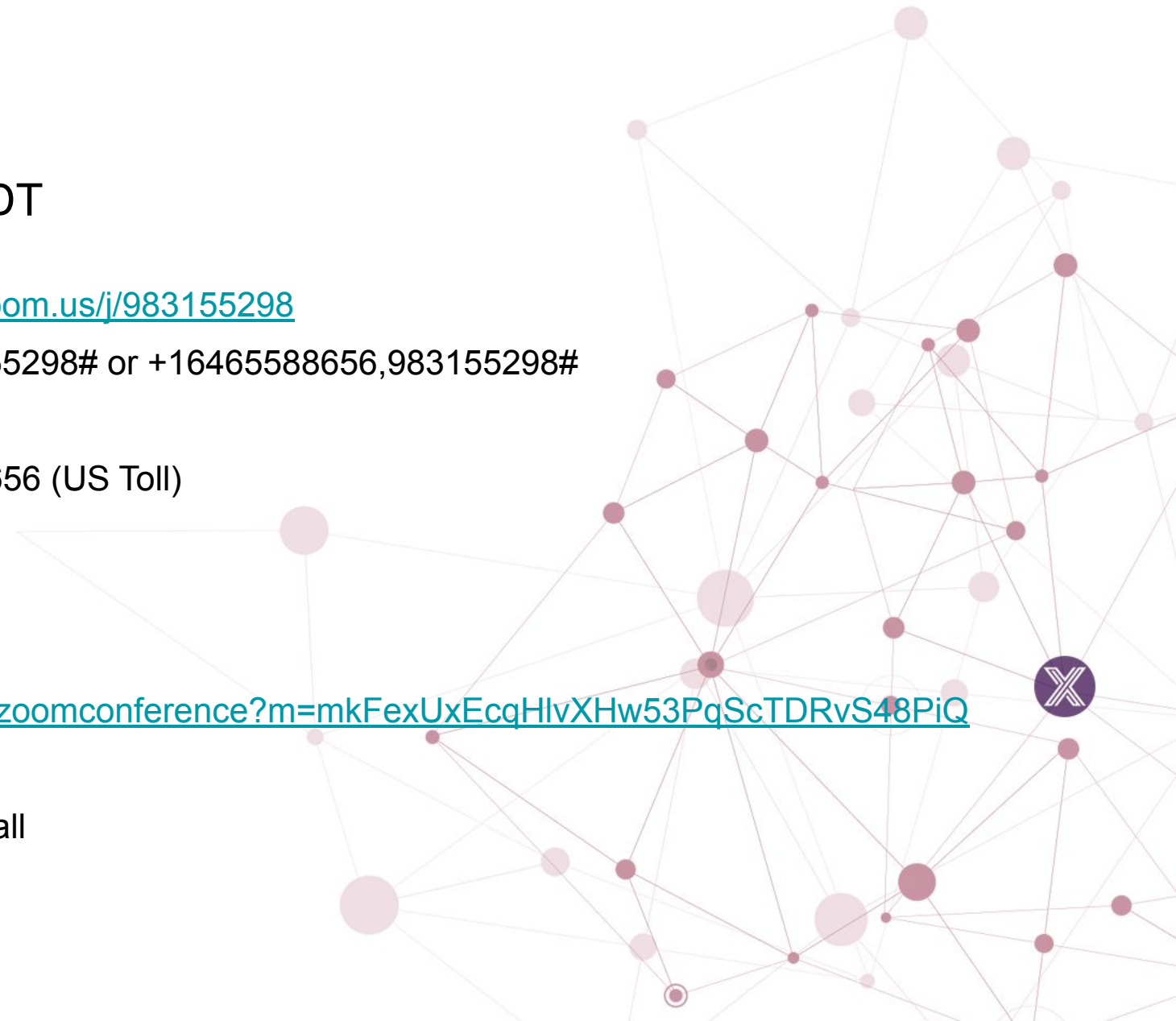   Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

    +1 855 880 1246 (US Toll Free)

    +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

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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
- Miscellaneous
    - Monthly Architect's meeting readout
    - EdgeX Smart * Challenge

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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 (01/25/22) - Jakarta Cross Cutting Issues

Icebox (0)

Backlog (**1, +1**)
- Use of Registry when init Clients

In Progress (**9, +1/-1**)

- **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**

- **Secret Provider for All**
  - DS SDK C - DONE
  - C Device Services - **TBD**

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

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

- **Metrics ADR - WIP**

- **Add service name to common response DTOs**
  - go-mod-core-contracts - **DONE**
  - edgex-go services - **TBD**
  - App SDK - **TBD**
  - Go Device SDK - **TBD**
  - C Device SDK - **TBD**

Done (**4, +1**)

- **Switch to Go 1.17**
  - **Strange issue with failing Device SDK unit test (removed -race)**
- 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 (01/25/2022)

Completed
- [LLRP] Refactor to use time.UnixMilli() instead of own helper
- Go 1.17

WIP
- [LLRP] use background publisher instead of Push to Core
- Tests should run cleanly when passed the "-race" argument
- Compose: Update to using eKuiper 1.4 (unpinned to patch)

New
- [LLRP] Update snaps for a Jakarta Release
- [LLRP] Remove Mock CommandClient (Kamakura) - **OnHold**

Protocol App Services
- Defining high level requirements
  - https://docs.google.com/document/d/1TXFg5tkbDIFa2tj0yf TZcQ4NPNfo-Y8c/edit?usp=sharing&ouid=104667835989 061964851&rtpof=true&sd=true
  - **Moving to next stage before ADR**

Next
- Metrics once ADR is approved

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

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eKuiper

- 1.4.2 released
  - https://github.com/lf-edge/ekuiper/releases/tag/1.4.2
- 1.5.0 in progress (target for mid March)
  - https://github.com/lf-edge/ekuiper/milestone/6

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 **February 1st, 2022 @ 9am PST**

Next meeting **February 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

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Core WG Snapshot (26 Jan 2022)

- Kamakura:
  - TAF - Functional tests: 545, Integration tests: 43, Performance tests: 10
    - 4 failures due to #1028: AppFunctions no response body when trigger pipeline with matching device name
    - Fixed #553/554: Check scheduler service is ready for interval action test
  - ADRs - Device Profile (new doc) and Metrics discussions ongoing
  - #3868 Include ServiceName in Common Responses - PR awaiting

Core Project Board Status

- 11 New Issues (+1)
- 8 Release Backlog (+0)
- 0 Bug Backlog (+0)
- 1 In Progress/QA (+0)
- 30 Done (+1)
- 2 Kamakura Stretch (+0)
- 12 Icebox (-1)

QA/Test Project Board Status

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

Next meeting Thursday January 27th @ 8am Pacific Time

Device Services WG Update (26 Jan 2022)

New example Device Service proposal

- LoRa / LPWA
- To be contributed to examples repository (by Fujitsu)

Project board

- 32 issues New+Backlog
- 6 In Progress+Review
- More to be added pending finalisation of various ADRs

Next meeting: January 31st

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 (01-26-2022)

Pipeline Related

- [Complete] #371 Go 1.17 released - Release Notes
  - All 27 PR's merged .Thanks Lenny.
- [In Progress] #59 Spike: rewrite git-semver in python
- [In Progress] 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

Other

- [Complete] Slight inefficiency found in Dockerfile with Go modules in regards to local docker builds. Will need to update all Go based Dockerfiles to fix.

Next DevOps WG Meeting: Thursday, February 3, 2021 @ 9AM PST

Release Czar (2022-1-26)

No Updates This Week.

Security WG Update (2/2/22)

Next Meeting: Feb 2

- 1/26 meeting cancelled due to meeting conflict
- Beware of the 2/2/22 bug. The ocean will boil. Planes will fall out of the sky. <just kidding>

Security Project Board Status

- 3 New Issues (+1)
- 6 Release Backlog (-1)
- 1 In Progress/QA (+1)
- 1 In review (Δ=0)
- 14 Done (Δ=0)

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

Intel, Baidu, and 3 EdgeX adopters are working together on EdgeX + Baetyl joint solution whitepaper (under final review) and promotion video (https://www.bilibili.com/video/BV1ba411q7ga), with 3 industries/partners as follows, to be published in 1H'22.

- Medical cart (Healthcare segment): HYDsoft corporation
- IDC energy saving (Energy segment): Process Vision corporation
- Waterway management (Transportation segment): H3C corporation

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 (1/19/22)

EdgeX Smart * Challenge

- Postponed until summer or fall

Certification

- V2 API support for EdgeX Ready program

Marketing Efforts

- Working on new tech talks
  - V2 API video
  - Message Bus video

Topcoder

- Message Monitor Tool now available in holding
  - https://github.com/edgexfoundry-holding/edgex-message-monitor
  - PR on this repo provides slightly different 2nd version
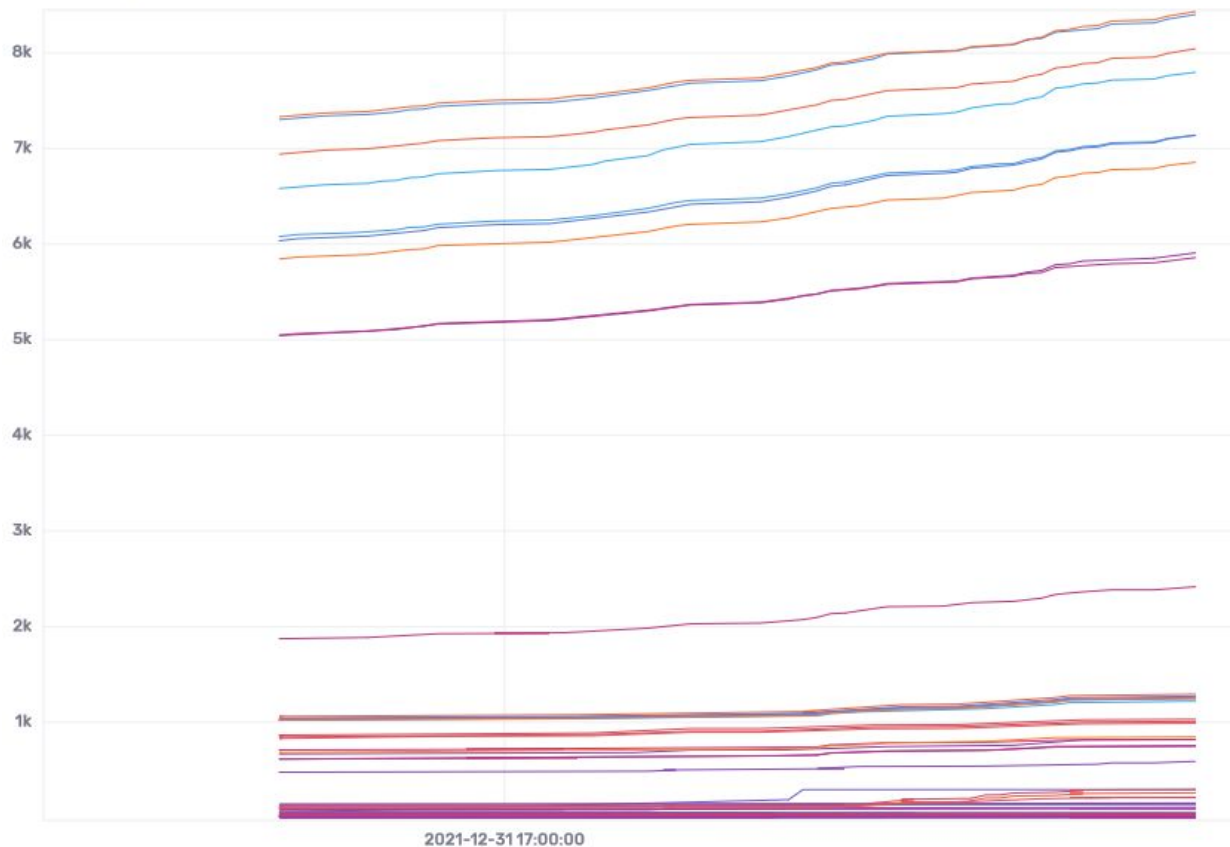- Next step - create it into some sort of example project

ADR review

ADR name and PR number	Status	owner	Work Group
Device profile changes / #605	final reviews/small updates; vote soon	Jim White	DS
Metrics / #268	small updates; vote soon	Jim White	Core
ADR on unit of measure / #386	small updates coming	Jim White	Core
Device functions / #644	discussed in last DS Working Group; Under review	Iain Anderson	DS
North-south message bus / #656	ready for re-review	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	

EdgeX Container Download Stats

Jakarta/Ireland

Old

Active Images

8k

7k

6k

5k

4k

3k

2k

1k

2021-12-31 17:00:00

Archived Images
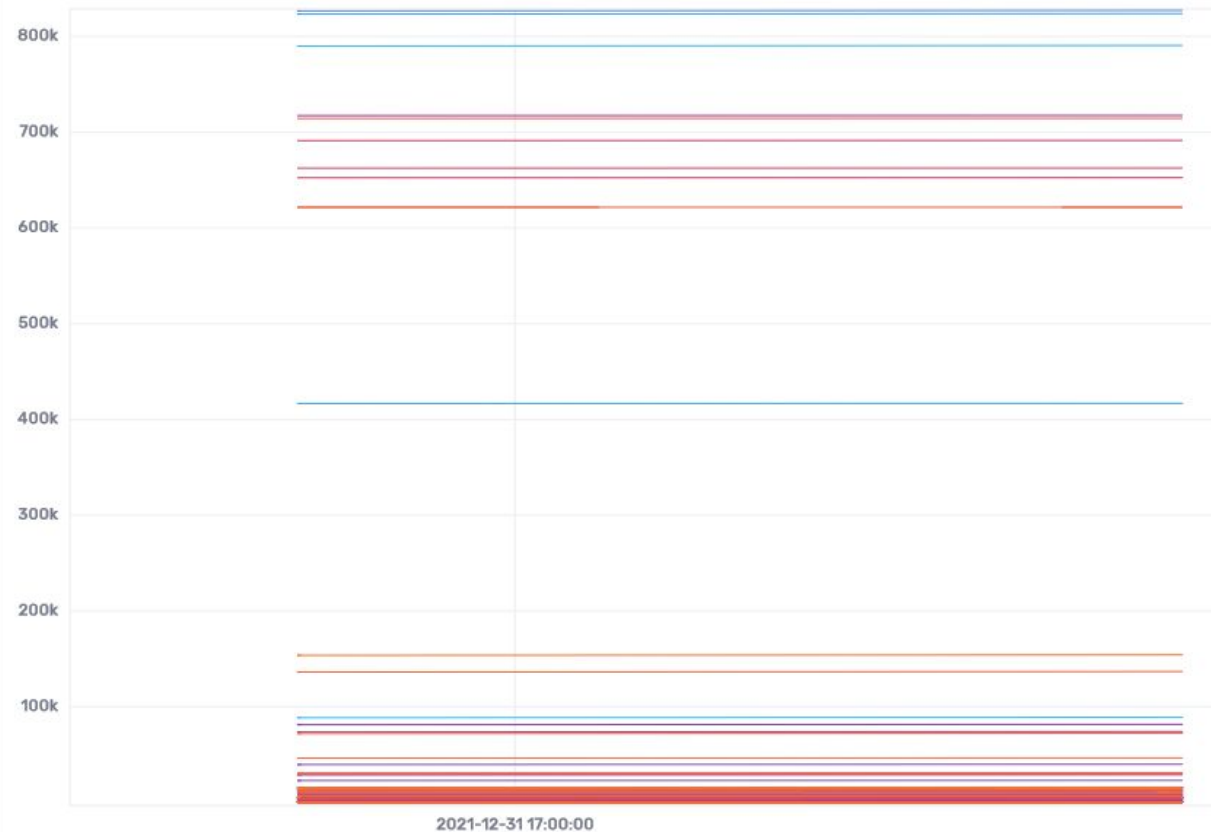
800k

700k

600k

500k

400k

300k

200k

100k

2021-12-31 17:00:00

Total Active Image Pulls

84,957

Total Archived Image Pulls (Clone)

8,137,727

Monthly Architect's Readout

Topics

- EdgeX message bus topic naming (to prefix or not to prefix)
  - Lenny/Jim dealing with 3.0 issue
- Discussion on possible registry ADR items to be worked
  - Jim to add issue on getting the location of the service from the registry vs configuration
  - Sending to Core WG for evaluation / action
- Metrics ADR
  - Good input; allow multiple message bus connections; remove REST API
- Unit of Measure ADR
  - Good input; SenML impacts; look at device resource units/standard organization

IOTech DCT Updates

The Device Configuration Tool is for simplifying the creation and editing of EdgeX device profiles
- https://dct.iotechsys.com
- Free use for EdgeX community

Recent Updates address V2 profile format changes and better support for scale of devices:

- Support EdgeX V2 device profile syntax and V1/V2 migration (shown during TSC 12th Jan 2022)
- Importing device resources through CSV files
  - Needed when devices have many attributes
- Multi-Select groups of device resources (hold and SHIFT) and synced table widget
  - e.g. for inclusion in Device Commands

See docs for all changes:

https://dct.iotechsys.com/docs/

Miscellaneous

- Eaton requirements
  - https://docs.google.com/document/d/1TXFg5tkbDIFa2tj0yfTZcQ4NPNfo-Y8c/edit
- Intel is looking for speakers to front their Edge Software Hub Hackathon
  - "The talks we are looking for are anything to drive excitement among developers about three themes "AI", "Infrastructure", "Realtime". We give our speakers quite some flexibility in what you'd like to speak on. However, if you can link your talk to some of our softwares on Edge Software Hub, such as EII, OpeVINO, or Edge Insights for Fleet, etc, to talk about the synergies you see between EdgeX and Intel's edge softwares, that'll be great.
  - https://page-preview.instapage.com/preview/702116c242a8d4ddcb4ffe6de1a08f4de9e8cf145e97b69905d31dd69c82fdcd?displayMode=0&variation=A&shared=yes&featureMode=0

Thank You

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