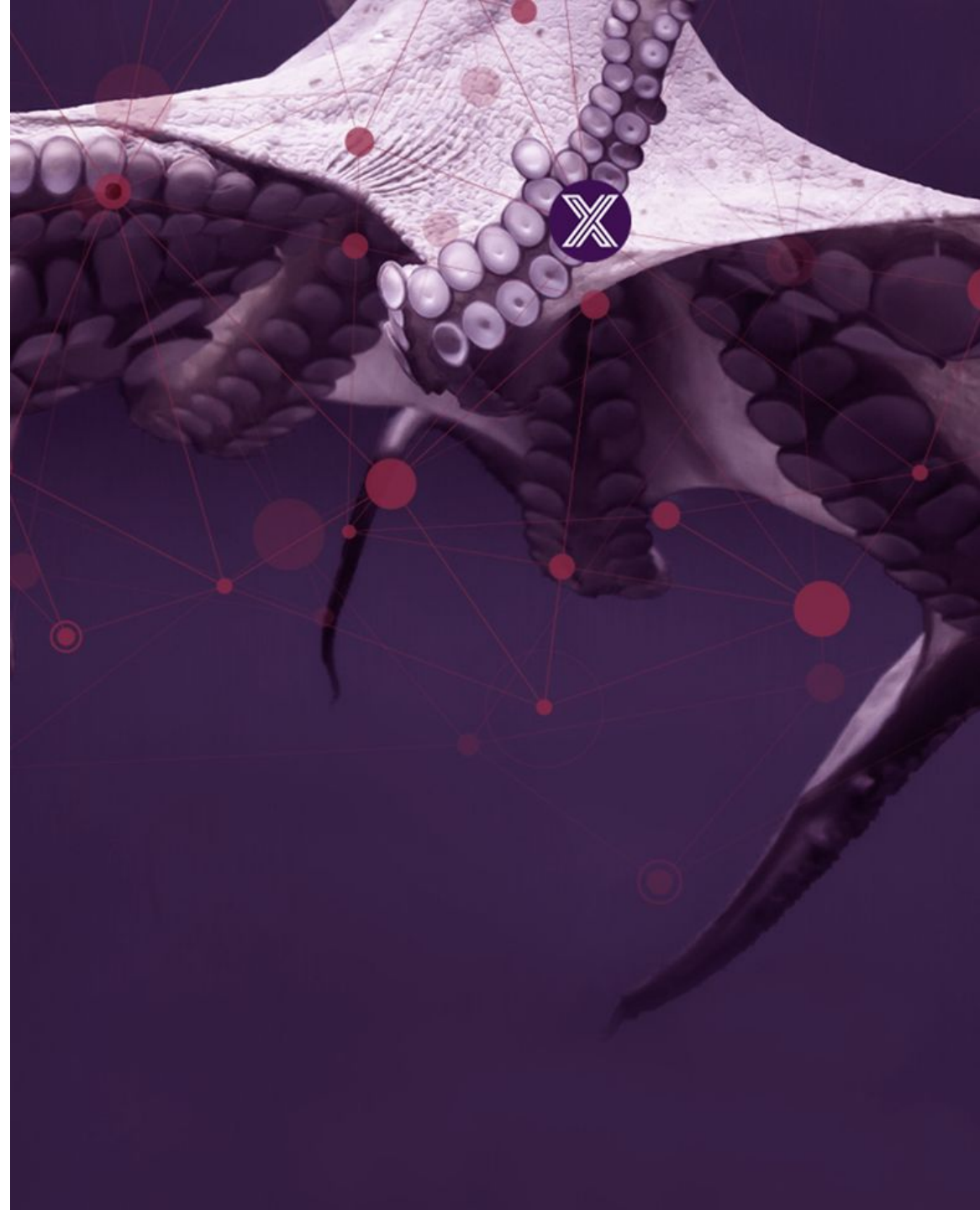# TSC Meeting

February 5, 2020

LF Antitrust Policy Notice

EdgeX Foundry meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.

Examples of types of actions that are prohibited at EdgeX Foundry meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at http://www.linuxfoundation.org/antitrust-policy. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.

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:

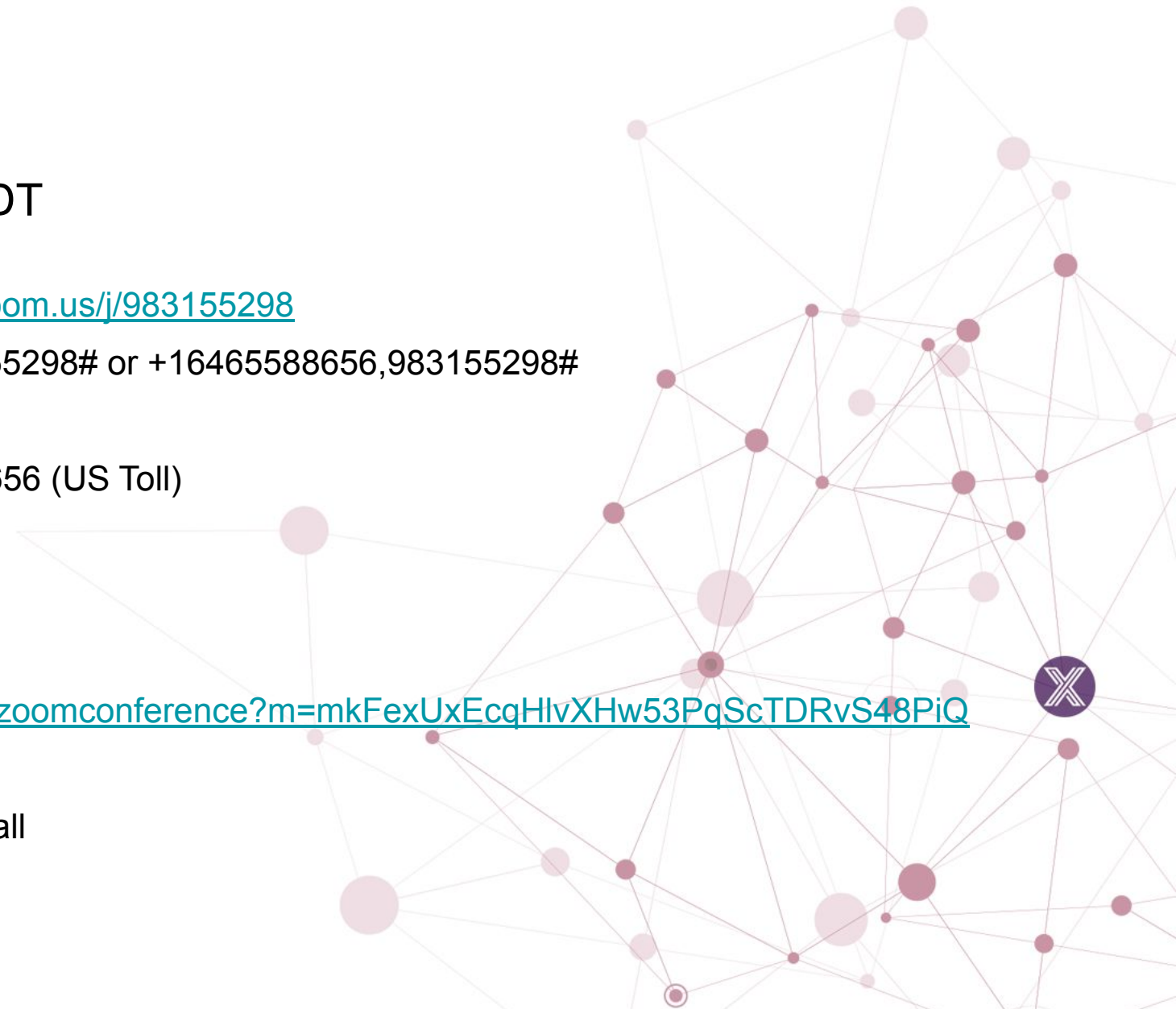Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+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
Intel	Brad Corrion	bradley.w.corrion@intel.com
IOTech	Iain Anderson	iain@iotechsys.com
Intel	James Gregg	james.r.gregg@intel.com
IBM	Joe Pearson	joe.pearson@us.ibm.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
VMware	Malini Bhandaru	mbhandaru@vmware.com
Intel	Mike Johanson	michael.johanson@intel.com
IOTech	Robin Chattergee	robin@iotechsys.com
Beechwoods	Rodney Hess	rodney@beechwoods.com
RSA	Tingyu Zeng	tingyu.zeng@rsa.com
Canonical	Tony Espy	espy@canonical.com
Dell	Trevor Conn	Trevor.Conn@dell.com
Dell	Michael Estrin	m.estrin@dell.com

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

- Congratulations Henry and Camilo
- Welcome our new Dev Advocate
- Lisa's Release Czar Readout
- WG Updates
- January (and December) activity #'s
- Upcoming Events

Congratulations (or Sorry?)

Camilo Dennis (Intel) and Henry Lau (HP) - your new co-chairs of the Vertical Solutions WG
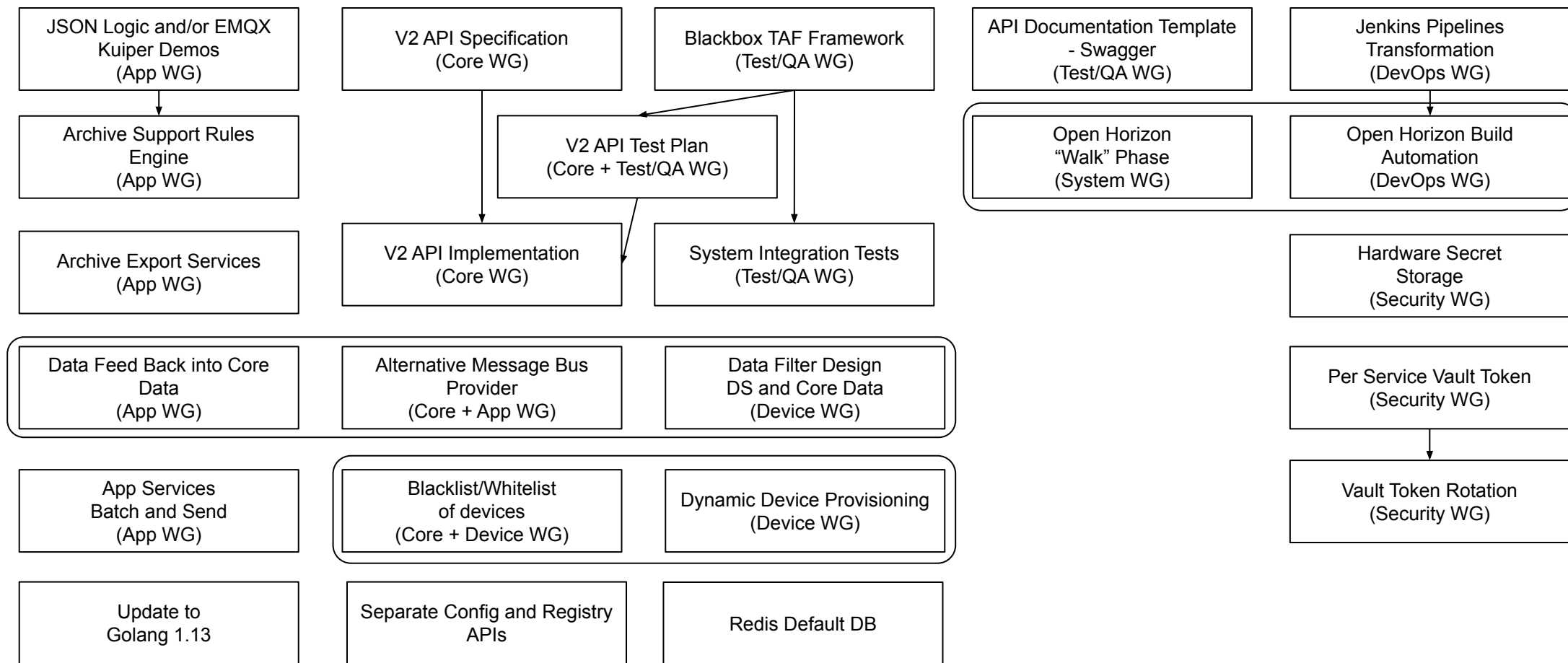
Next meeting: Feb 18

Welcome to our new Developer Advocate

Please welcome Aaron Williams as our new LF Edge developer Advocate

Formerly of Zededa (and Project EVE)

Aaron has been working behind the scenes for about the last month

EdgeX Geneva Release Overview

JSON Logic and/or EMQX
Kuiper Demos
(App WG)

V2 API Specification
(Core WG)

Blackbox TAF Framework
(Test/QA WG)

API Documentation Template
- Swagger
(Test/QA WG)

Jenkins Pipelines
Transformation
(DevOps WG)

Archive Support Rules
Engine
(App WG)

V2 API Test Plan
(Core + Test/QA WG)

Open Horizon
"Walk" Phase
(System WG)

Open Horizon Build
Automation
(DevOps WG)

Archive Export Services
(App WG)

V2 API Implementation
(Core WG)

System Integration Tests
(Test/QA WG)

Hardware Secret
Storage
(Security WG)

Data Feed Back into Core
Data
(App WG)

Alternative Message Bus
Provider
(Core + App WG)

Data Filter Design
DS and Core Data
(Device WG)

Per Service Vault Token
(Security WG)

App Services
Batch and Send
(App WG)

Blacklist/Whitelist
of devices
(Core + Device WG)

Dynamic Device Provisioning
(Device WG)

Vault Token Rotation
(Security WG)

Update to
Golang 1.13

Separate Config and Registry
APIs

Redis Default DB

Work Group Updates

Chairs

Working Group Chair Updates

- Around the horn
  - Core/Supporting - Trevor Conn
  - Applications - Mike Johanson
  - Device Services - Iain Anderson
  - Test/QA - Robin Chatterjee
  - DevOps - James Gregg
  - Security - Malini Bhandaru and Tingyu Zeng
  - System Management - Michael Estrin
    - Open Horizon - Joe Pearson
  - Certification - Rodney Hess
  - Vertical Solutions - Camilo Dennis and Henry Lau
  - Updates from Release Czar - Lisa
  - Updates from Dev Advocate - Aaron

Core Working Group (5-Feb-20)

- V2 API Scaffolding Work
  - Draft PR below, actively under review
  - https://github.com/edgexfoundry/edgex-go/pull/2285
  - ETA for initial use-case specific service endpoint == 2 weeks from merge of above PR
    - e.g. AddAddressable, AddDevice, etc
    - Obviously longer review/merge takes, timeline pushes out to the right
  - Ad-hoc Security Meeting 4-Feb for questions/requirements
    - Tingyu, please share link on Security WG wiki page
- Go-mod-registry refactoring
  - Remaining PR for integration into edgex-go (Lenny / M. Estrin)
    - go-mod-registry #38 (merged)
    - go-mod-bootstrap #34 (merged)
    - edgex-go #2317
  - Extraction of configuration functionality into go-mod-configuration
- Core WG tomorrow @ 10AM Central/US
  - More API V2 discussion

Applications WG Update (5 Feb 2019)

- ○ Implementing GetSecrets functionality for App Function SDK
  - ■ PR [#276](#) currently being reviewed

- ○ Up next: Ability to handle insecure secrets when vault is not used

- ● App Working Group Meeting held on Fridays @ 9AM PST
  - ○ Next meeting Friday, Feb 7th

Application Services

Functions (built into SDK)

Current/Complete:

Fuji
- AES Encryption
- GZIP Compression
- ZLIB Compression
- MarkAsPushed
- PushToCore **EXPERIMENTAL**

Edinburgh
- Device Name Filter
- Value Descriptor Filter
- XML Conversion
- JSON Conversion
- MQTT(S) Export
- HTTP(S) POST Export

Features

- Store and Forward
- Web Server
- Configurable AppService

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

- Azure IoT Hub **AVAILABLE**
- Amazon IoT Core **WIP**

Device Services WG Update (5-February-20)

- Dynamic Discovery progressing
  - Design document finalized
  - Provision Watcher support in Go SDK under review
- CSDK API in review
- Working towards REST device service release
- Fix available for missing "overwrite" option in C

Device Services - current/coming

Open Source connectors (Current):
- Modbus (TCP/RTU)
- Virtual Device
- Grove C - ARM only
- SNMP
- MQTT
- BACnet (IP & MSTP)
- ONVIF Cameras

Open Source connectors (Future):
- OPC-UA (Geneva?)
- GPS
- Bluetooth (Feb 2020)
- REST (Feb 2020)
- BLE in Go for Thingy 52 (Ian Johnson)

Commercial connectors (Current):
- GPS
- MEMS
- Zigbee
- Bluetooth
- EtherCat
- PROFINET

Commercial connectors (Future):
- CAN SocketCAN, CANopen
- EtherNet/IP
- Siemens s5/s7

Test/QA WG Update (05-02-2020)

- Blackbox Test
  - Issue opened for failed testcases
    - Issue #384 on blackbox-testing for SMA operation "restart" failed on Arm
    - Issue #2237 on edgex-go will fix core-command test failure
  - Reviewing PR
    - Draft PR #371, sending tests through kong. It's waiting for security WG review
    - Draft PR #374 working in progress, run blackbox test on both database, mongo and redis
- New Blackbox Test
  - PR #14 on edgex-taf for how to run edgex-taf document, needing to update for new folder structure
  - Opened draft PR #28 on edgex-taf for changing file structure under review
  - Merged PR #16 on edgex-taf for adding edgex-cli testcases
- Swagger
  - Opened PR #2329, for adding v1 API files to edgex-go repository under review
  - Opened PR #2331, for posting API files to SwaggerHub automatically under review

DevOps WG Update (02-05-2020)

Geneva

- Jenkins Transformation to Pipelines
  - Work continues on the transformation to Jenkins Pipelines
    - Lisa is starting the explore work to look into full automation of the release
    - Dhatri completed the SPIKE to look at script that we can use to create GitHub Issue labels
      - Work still needed to automate the label creation
    - EdgeX-Go will be the next Pipeline converted in the next sprint.
      - Sandbox testing of new edgex-go pipeline has been WIP for a few weeks
    - git-semver unit testing - WIP
    - Configuration of PROBOT commitlint for 2 Application WG repos - WIP
    - Snyk accepted the feature request for the Snyk CLI issue raised last week

CommunityBridge - Advanced Snyk Reporting
- EdgeX Foundry added to the CommunityBridge Vulnerability Reporting
  - Ticket still open with Heather Willson & David Deal / CommunityBridge team
  - EdgeX Project now visible but not sure how to get into the advanced reporting

Next Meeting 02/06/2020 @9:00 PST

System Management WG Update (02-05-2020)

- System Management
  - Work underway to create OpenAPI document for APIv2
- CLI
  - Mike J. (Intel) agreed to review and provide assessment to chair on adoption
- EdgeX-specific system-wide metrics follow up
  - Jim White has started ADR
  - Still needs to get input from Device Service Working Group
- Next meeting: February 7th @ 10AM CST

Open Horizon Update

- Held kickoff meeting Monday, February 3rd
    - 14 in attendance including WG Chairs, 6 from IBM, 8 from EXF
    - Recording and Slides available
- Identified Open Horizon leads to coordinate w/EXF WGs
    - Test/QA - Jon McGuire
    - DevOps - Carl Girouard
- This week leads will attend WGs, begin work breakdown, create GitHub issues
- Opens:
    - Identify ML scenario/use case
    - Evaluate leadership plan

Security WG Update (02-05-2020)

- Ongoing work for Geneva release (100 items done, 13 items in progress, 9 items backlog)
- Security discussion regarding API V2 proposal in progress
- Next security WG meeting focusing on proposal of security enhancement in API V2

Certification WG Update (2-3-20)

- Clarified interpretation of Minor API Versioning rule #5: adding values to an enumerated property does not inherently change the fundamental interpretation of a property's value

  - https://lists.edgexfoundry.org/g/EdgeX-TSC-Certification/message/95

- Decided that certification mandates forward and backwards compatibility within minor API versions

  - Ruled out certifying against a specific minor API, e.g. "our implementation only supports the latest minor API"

- Within Core WG, PR 2285 needs review and feedback

  - Add Skeletal Support for API V2 Implementation: https://github.com/edgexfoundry/edgex-go/pull/2285

- Next meeting Monday, February 10th, 9 a.m. PST

Vertical Solutions WG Update (2/5/2020)

- China EdgeX Hackathon Apr 2-3 in Shanghai
  - Postponed
- Next call: Feb 18, 2020, 10:00am PST
- Tentative agenda:
  - Vertical Solutions working group organization
  - Ideas for future hackathons in virtual/remote format
  - Real time sensor fusion for loss detection at checkout reference solution

Miscellaneous (Jim)

- Yocto project/community overture - sent not to Richard Purdie
- Face-to-Face meeting in Ireland
  - Registration now up. Please register early so that we can get an early indication of #'s
  - http://www.cvent.com/d/nhqhc8/4W
- API V2 - PR 2285

Dec-Jan Stats

Docker Downloads

- Total Downloads: **2,312,939**
  - **57% growth** since last reported in Nov 2019
  - Measured just over 2,000,000 in mid Jan (~15% growth)
  - ARM growth just 3%
- Estimated Deployments: 151,515
  - ARM makes up only 5-6% of deployments (down from 8% late last year)
- Estimated New Downloads: 843,473
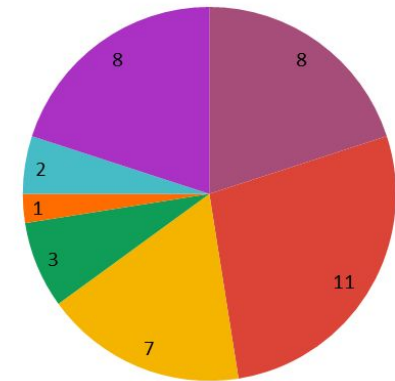- **Estimated New Deployments: 56,546**
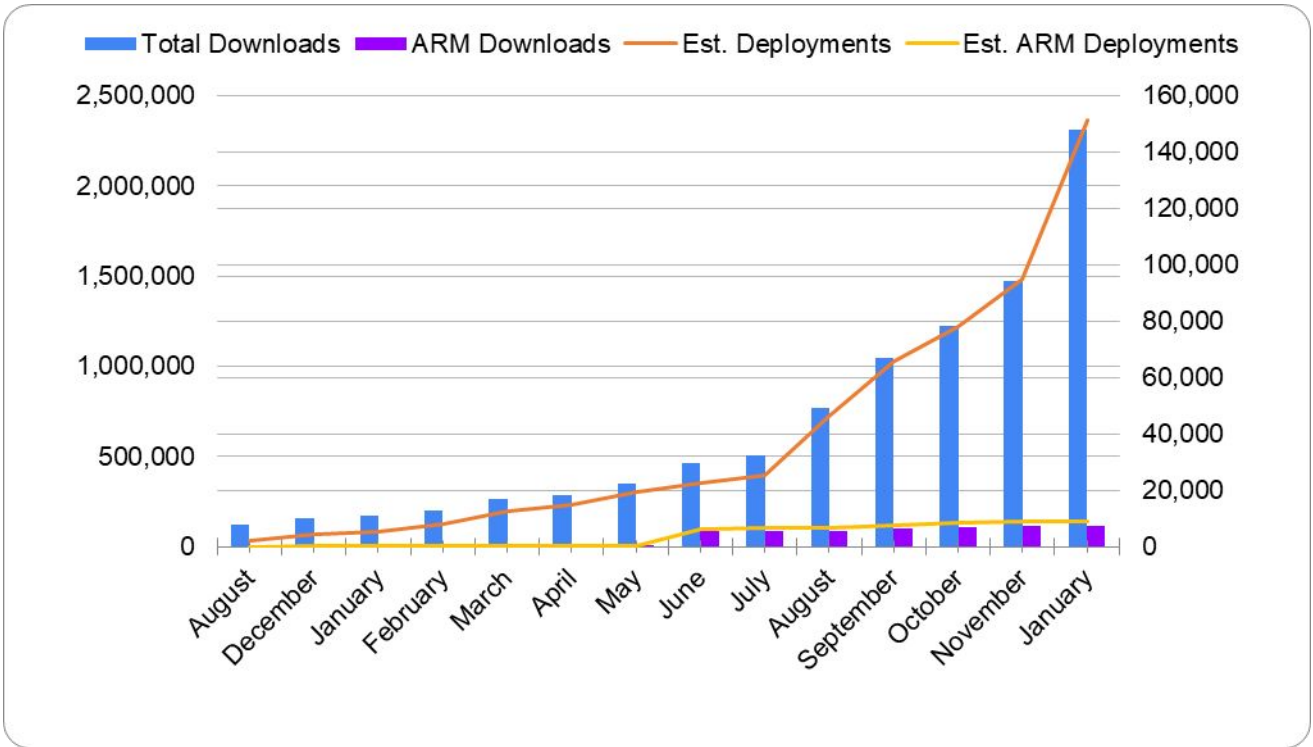
Note: no stats for December
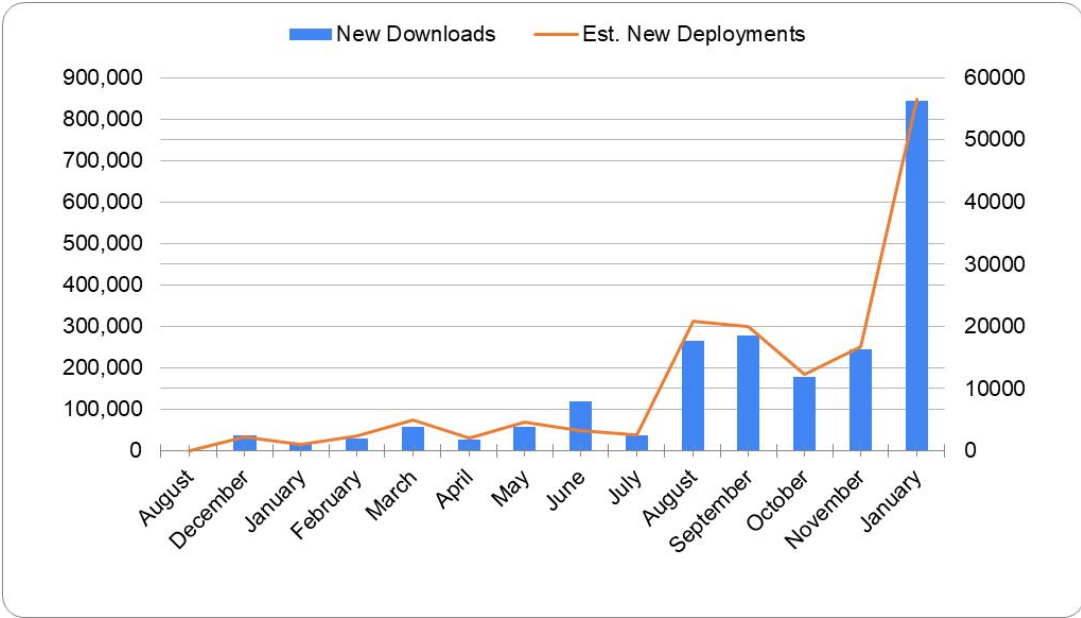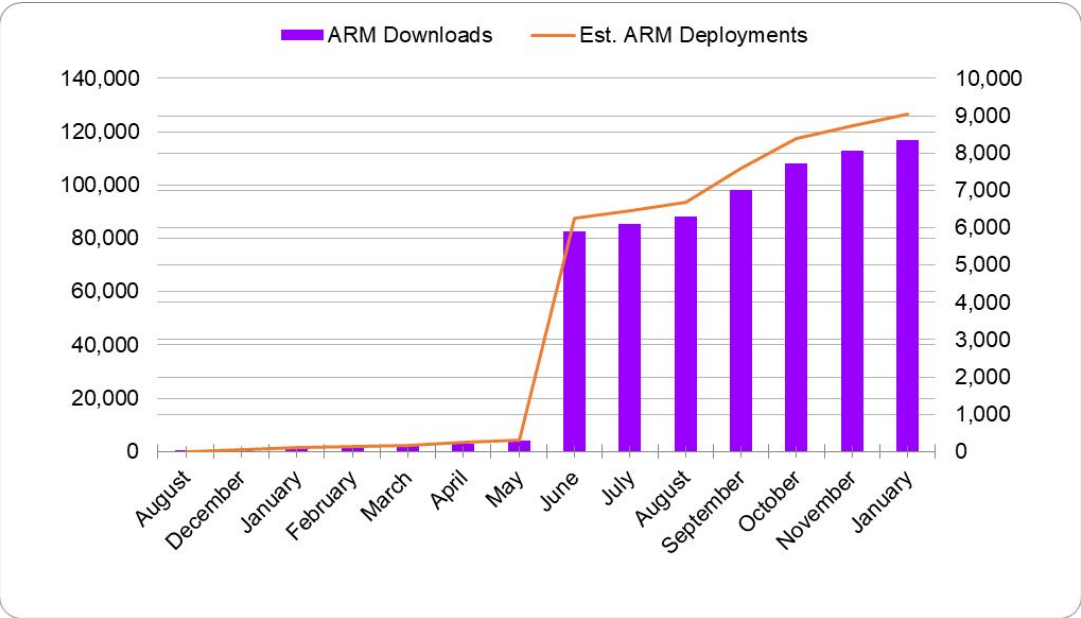
Contributions/Authors (Dec-Jan 2020)

- 41 Contributors Dec/Jan

- **10 new authors**

- 273 commits in Dec/Jan

- 62643 LoC added

- Commits down a little due to holiday season

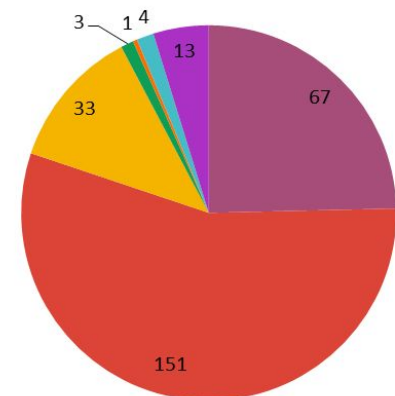- Authors and Commits coming from fewer companies than in the past

Authors by Company
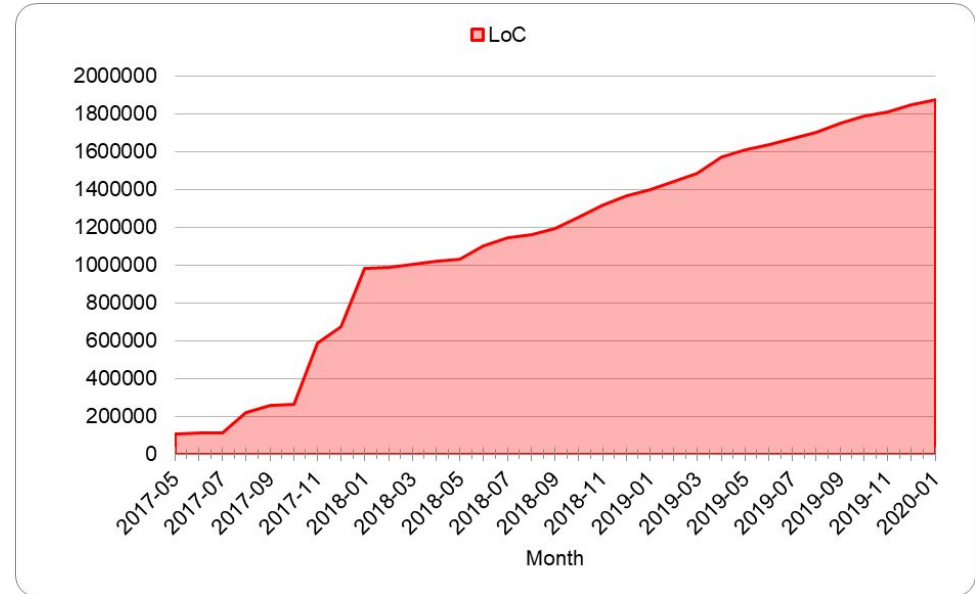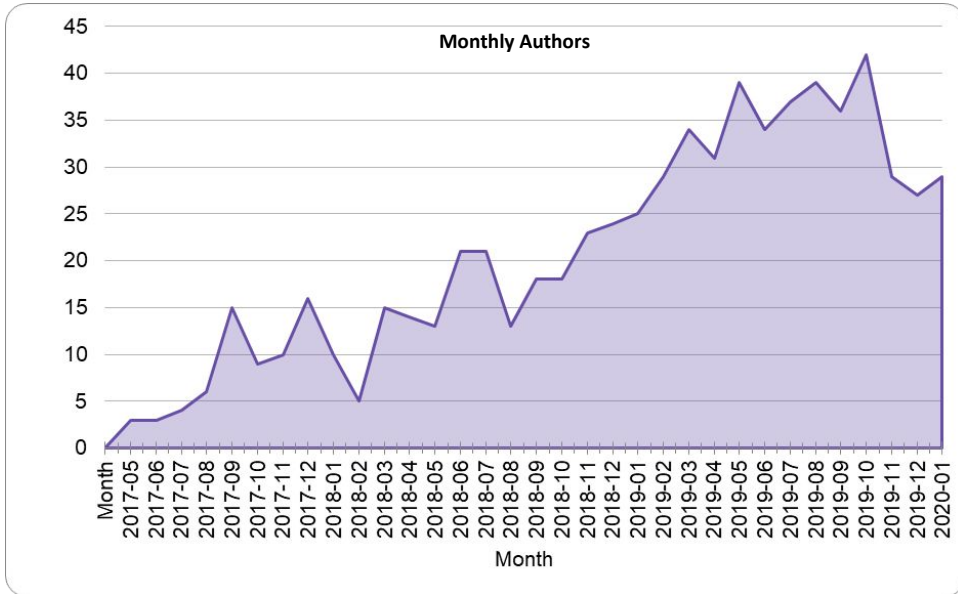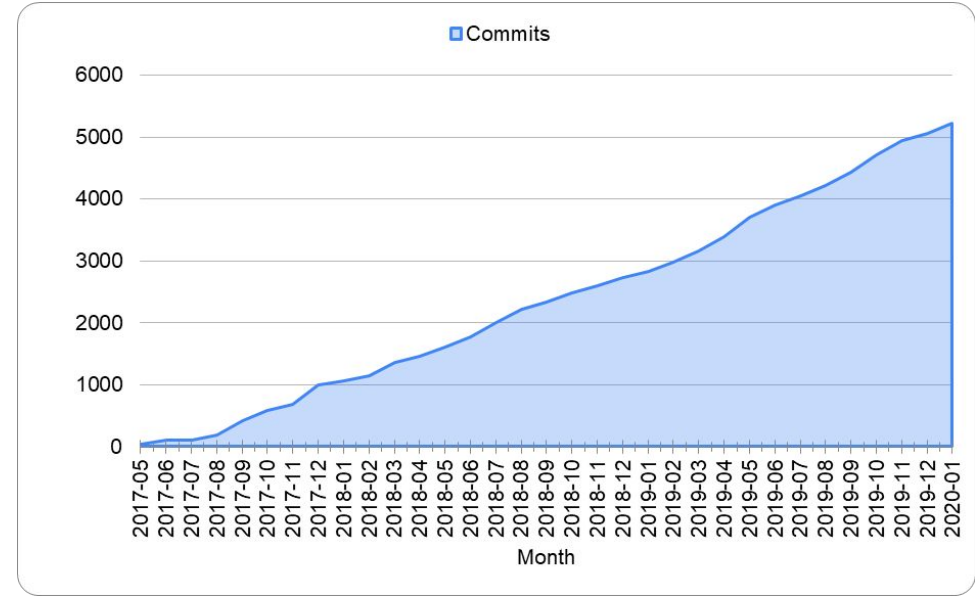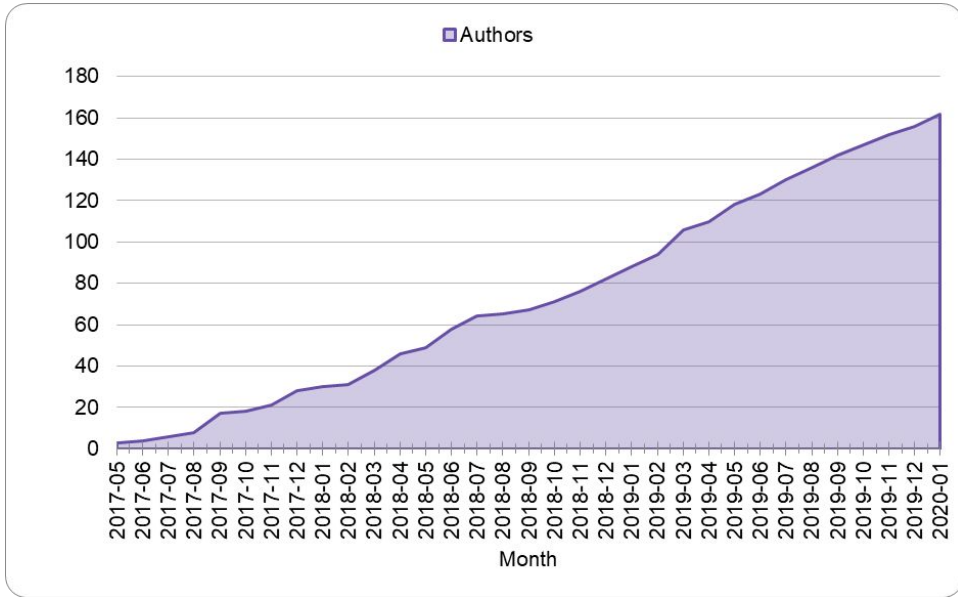
Dell | Intel | IoTech | LF | Redis | RSA | Unknown

Commits by Company

Dell | Intel | IoTech | LF | Redis | RSA | Unknown

Code Stats

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Upcoming Events

Hanoi TSC

Arrangements for the spring TSC meetings has been finalized

- WG Chair/Architects Pre-Wire meeting will be March 31st (Tue)
  - Dell EMC office , Research Triangle Park, 62 T.W Alexander Dr., Durham, NC 27709, Room: Aspen Cedar, first floor, Capacity: 50
- Hanoi TSC F2F will be April 27-30
  - Dell IOT Lab, Limerick Ireland
  - April 27 - Architect's day (invite only)
  - April 28-29 - General planning sessions with business topics to lead off
  - April 30 - Training day (additional hackathon or other planning meetings as necessary)

Upcoming External Events

› Embedded World: 25-27 February - Nuremberg, Germany
  › Jim White: **Extending EdgeX Foundry– How to Build an IoT Solution from an open source, platform independent framework**
› Industry of Things World: Mar 12-13 - San Diego CA
› IoT Tech: Mar 17-18 - London, UK
› KubeCon EU 2020: 31 March - 2 April, 2020 - Amsterdam

  › CFP closed 22 November

› IoT World: Apr 6-9 - San Jose, CA
› Hannover Messe: April 20-24 - Hannover GE
› Open Networking & Edge Summit North America: 20-21 April, 2020 - Los Angeles, CA
  › CFP Status: open til Feb 3
› Open Source Summit North America: 22-24 June, 2020 - Austin, TX
  › CFP Status: open til Feb 16

Upcoming External Events

› IIOT World Day: Jun 30-Jul 1
  › Call for papers until March
› Open Source Summit Japan: 15-16 September, 2020 - Tokyo, Japan
  › CFP Status: Details Available Late 2019
› Open Networking & Edge Summit Europe: 30 September - 1 October, 2020 - Antwerp, Belgium
  › CFP Status: Open til Jun 7, 2020
› Open Source Summit Europe: 26-28 October, 2020 - Dublin, Ireland
  › CFP Status: Details Available Late 2019
› IOT SWC: 27-29 Oct, 2020 - Barcelona, Spain
› Discussions around upcoming events occur in the LF Edge Outreach Committee
› Members may subscribe at: https://lists.lfedge.org/g/outreach-committee

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Thank You