

EDGE X FOUNDRY™

# TSC Meeting

March 4, 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/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>
Intel	Brad Corrion	<a href="mailto:bradley.w.corrion@intel.com">bradley.w.corrion@intel.com</a>
IOTech	Iain Anderson	<a href="mailto:iain@iotechsys.com">iain@iotechsys.com</a>
Intel	James Gregg	<a href="mailto:james.r.gregg@intel.com">james.r.gregg@intel.com</a>
IBM	Joe Pearson	<a href="mailto:joe.pearson@us.ibm.com">joe.pearson@us.ibm.com</a>
IOTech	Keith Steele (TSC Chair)	<a href="mailto:keith@iotechsys.com">keith@iotechsys.com</a>
VMware	Malini Bhandaru	<a href="mailto:mbhandaru@vmware.com">mbhandaru@vmware.com</a>
Intel	Mike Johanson	<a href="mailto:michael.johanson@intel.com">michael.johanson@intel.com</a>
IOTech	Robin Chattergee	<a href="mailto:robin@iotechsys.com">robin@iotechsys.com</a>
Beechwoods	Rodney Hess	<a href="mailto:rodney@beechwoods.com">rodney@beechwoods.com</a>
RSA	Tingyu Zeng	<a href="mailto:tingyu.zeng@rsa.com">tingyu.zeng@rsa.com</a>
Canonical	Tony Espy	<a href="mailto:espy@canonical.com">espy@canonical.com</a>
Dell	Trevor Conn	<a href="mailto:Trevor.Conn@dell.com">Trevor.Conn@dell.com</a>
Dell	Michael Estrin	<a href="mailto:m.estrin@dell.com">m.estrin@dell.com</a>

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

- Recommendation to cancel March and April F2F Meetings
  - What's next
  - Release impact
- Release Czar Readout
- WG Updates
- EdgeX Awards
- February numbers
- Upcoming Events (Dev Advocate)



EDGE X FOUNDRY™

F2F

# Cancelled

Due to Coronavirus - many organizations have suspended all travel until after April

TSC First Action:

We need to vote to cancel the April F2F (as well as the March pre-wire meeting) as it is clear we would have less than half the expected audience.

TSC Additional Actions:

what do we do for Hanoi planning?

what do we do for Geneva release?

# Hanoi Planning

## Options:

- Delay meeting until June
  - Allow V2 API goals, design, etc. to progress a little providing better vision into future release
  - Align with TSC elections
  - Could see travel suspensions continue well into the summer requiring another postponement
  - Need to confirm venue availability
- Attempt virtual meeting
  - Based on past experience, very challenging to hold conference calls to work design/architecture & doesn't maximize participation
  - Doesn't allow for broader exchange, training, etc.
  - Allows current timelines to be maintained



# Geneva Release

## Options

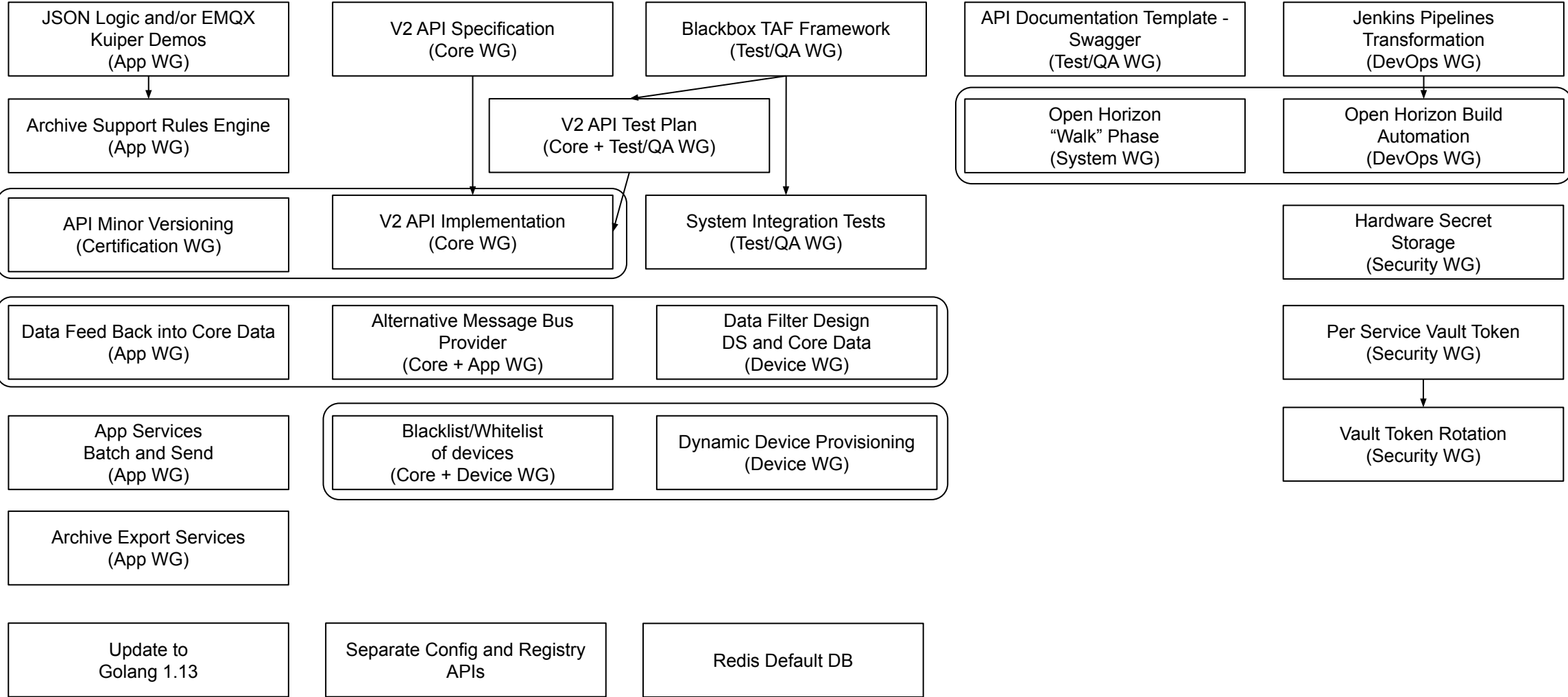
- Release 1.2 (Geneva) goes out as planned
  - Make determination on Hanoi release with decision on Hanoi planning meeting
- Release Geneva in June with F2F timing
  - Allowing progress of V2 API to again be incorporated with the release



EDGE X FOUNDRY™

# Release Tsar Readout

# EdgeX Geneva Release Overview



# Geneva Release Update

- Update to Go 1.13
  - Most repositories have been updated to Go 1.13
  - device-rest-go and device-camera-go still on Go 1.12



EDGE X FOUNDRY™

# 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 (4-Mar-20)

- V2 Implementation Update
  - Architects Group special session (3-Mar-2020)
  - Initial agreement on scope, refining details about “common impl” across platform
- Ongoing efforts from last week
  - Provision Watcher (Brandon Forster)
  - Redis Streams (Anthony / Andre)
    - Feature delivery target for RedisConf (May 12-14)
- V1 Swagger Audit for Completeness
  - Per QA/Test Feedback and review
- Core WG tomorrow @ 10AM US/Central
  - Agenda includes
    - Device blacklisting demo, integrating Core/AppFunctions w/Kuiper (Jason Bonafide)
    - Discuss dependency chain for getting to removal of config-seed
    - Issue #2403 (Tracking Error Handling Improvement Suggestions)

# Applications WG Update

- Ability to handle insecure secrets when vault is not used
  - PR#285 is closed
- adding endpoint for storing secret through SDK to vault leveraging go-mod-secrets
  - PR#295 closed

## In Progress:

- JSONLogic PR#292 - WIP - Draft
- App Working Group Meeting held on Fridays @ 9AM PST
  - Next meeting Friday, Mar 3rd



# 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
- Amazon IoT Core

AVAILABLE

WIP

# Device Services WG Update (4-March-20)

- Dynamic discovery
  - WIP in both SDKs
- Value Type information in Readings

# Device Services - current/coming

## Open Source connectors (Current):

- Modbus (TCP/RTU)
- Virtual Device
- Grove C - ARM only
- SNMP
- MQTT
- BACnet (IP & MSTP)
- ONVIF Cameras
- REST

## Open Source connectors (Future):

- OPC-UA (Geneva?)
- GPS
- Bluetooth (March 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 (04-03-2020)

- Blackbox Test
  - Issue opened for failed testcases
    - Issue [#401](#), Mongo-based security blackbox tests are failing due to missing redis, this issue blocked all security tests.
    - Issue [developer-script#228](#), used mongo db on docker-compose file, but some service still tried to connect to redis.
    - Issue [edgex-go#2414](#), deleting notification by inexistent id returns wrong status code.
    - Issue [edgex-go#2421](#), for failed tests on core-command.
  - Fixed issue
    - Issue [#398](#), to fix MongoDB support-logging retrieving token from vault failed.
- New Blackbox Test
  - Fixed issue
    - [#48](#), to add test case for querying readings by device name and value descriptor
    - [#43](#), to set compose image to variable.
  - Open draft PR [edgex-taf-pipeline#1](#), adding Jenkinsfile to trigger functional testing from edgex-taf. (Blocked by [ci-build-image#109](#))
  - Open issue [ci-build-image#109](#) and PR [ci-build-image#118](#), for creating arm64 compose image .
- Swagger
  - Opened issue [#579](#) and PR [#585](#) on ci-management, to publish v1 APIs to SwaggerHub
  - Should we set both APIs, v1 and v2, to “public” or “private” on SwaggerHub

# Testcases Number Count (Master Branch)

OS		Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Non Security	1414	17	9	15
x86_64 / CentOS	Security	1434	17	Blocked by issue	Blocked
arm64 / Ubuntu	Security	1434	20	Blocked by issue	Blocked
arm64 / Ubuntu	Non Security	1414	18	8	15

Failed TCs No. of Past Week is calculated by last success run before 17/02/2020.

# DevOps WG Update (03-04-2020)

## Geneva

- Jenkins Transformation to Pipelines
  - Work continues on the transformation to Jenkins Pipelines
    - “release-kraken” full automation of the release continues
      - demo last week in DevOps WG meeting
      - cd-management repo moved out of holding - Thank you TSC members who voted
      - Will need to coordinate working session with LF Release Engineering
    - Automation for the GitHub Issue labels - WIP
    - ARM builds now using new build agent - `ubuntu18.04-docker-arm64-4c-16g`
      - edgex-go build performance improved building faster for ARM
      - ~15 min average improvement which helps the whole pipeline
    - PR “recheck” now resolved with new Jenkins Plugin
    - git-semver unit testing - decided to fix existing code vs. rewrite - WIP
    - Update lftools for ci-build images - WIP
    - Snap Global Library developed with plans to demo this week in DevOps WG meeting

## CommunityBridge - Advanced Snyk Reporting

- EdgeX Foundry added to the CommunityBridge Vulnerability Reporting
  - We now have Advanced Snyk Reports but working through multiple new issues

Next Meeting 03/05/2020 @9:00AM PST

# System Management WG Update (Mar 4, 2020)

- CLI
  - Requested improvements underway
- EdgeX-specific system-wide metrics follow up
  - <https://github.com/edgexfoundry/edgex-docs/pull/97> - request review
- Next meeting: March 6th @ 10AM CST

# Open Horizon Update

- In progress:
  - Splitting instructions into four discrete steps
  - Adding multi-arch support to POC
  - Makefile refactoring
  - Work breakdown on next steps
- ~~Submit completed [project proposal](#) to LF~~  
~~Edge TAC by EOW~~ - done, will present to TAC on March 11
- Current TAC Sponsors:  
Intel, Juniper, Red Hat, IBM





# Security WG Update (03-04-2020)

- Ongoing work for Geneva release ( 135 items done, 6 items in progress, 8 items backlog )
- SIR team update
- Threat modeling for Geneva in progress
- Next security WG meeting in one hour, Bryon to present improved security design based on discussion of March 3rd special architecture meeting

# Certification WG Update (3-2-20)

- Discussed the existing certifiable surfaces of a device service and the impact of the v2 API on them.
- Monitoring progress on v2 API effort
- Starting with the next Monday's meeting, meetings will be happening **one hour earlier** due to daylight savings in the US. Next meeting is Monday, March 2nd, 9 a.m. PDT

# Vertical Solutions WG Update (Mar 4, 2020)

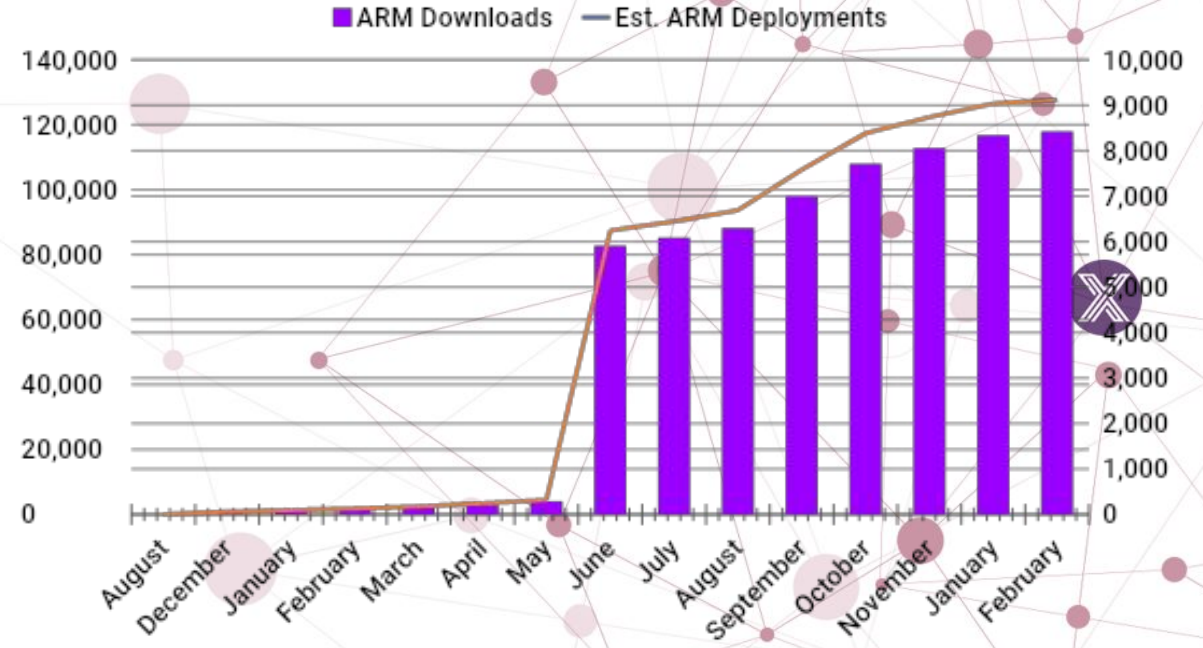
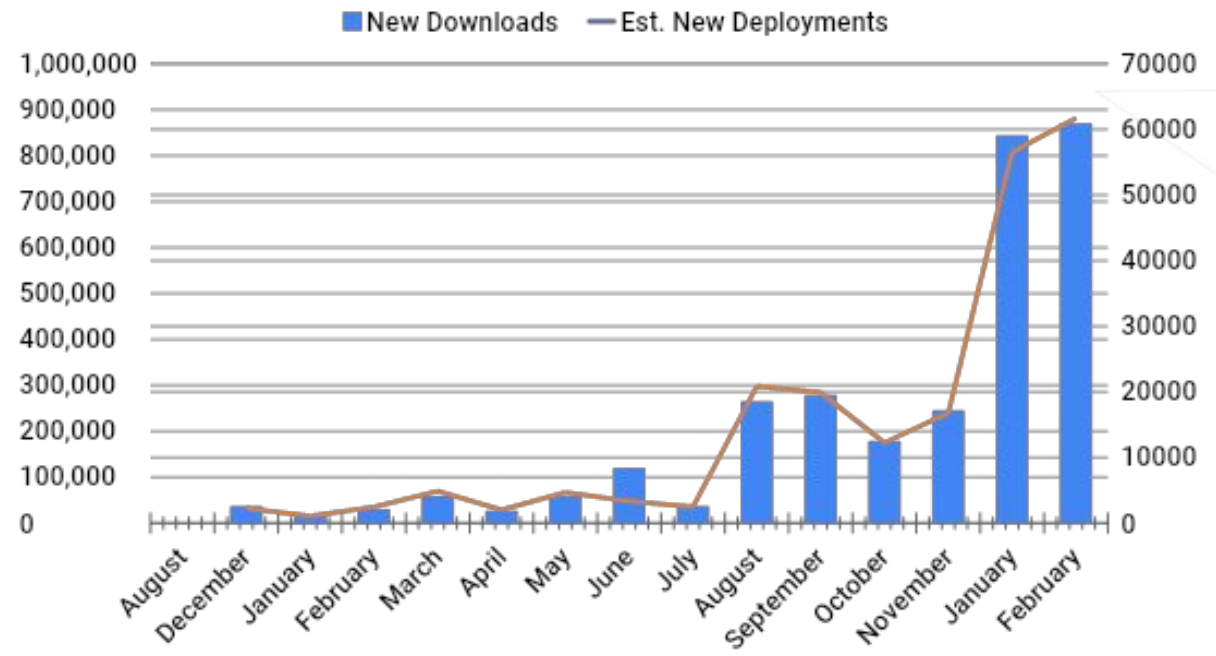
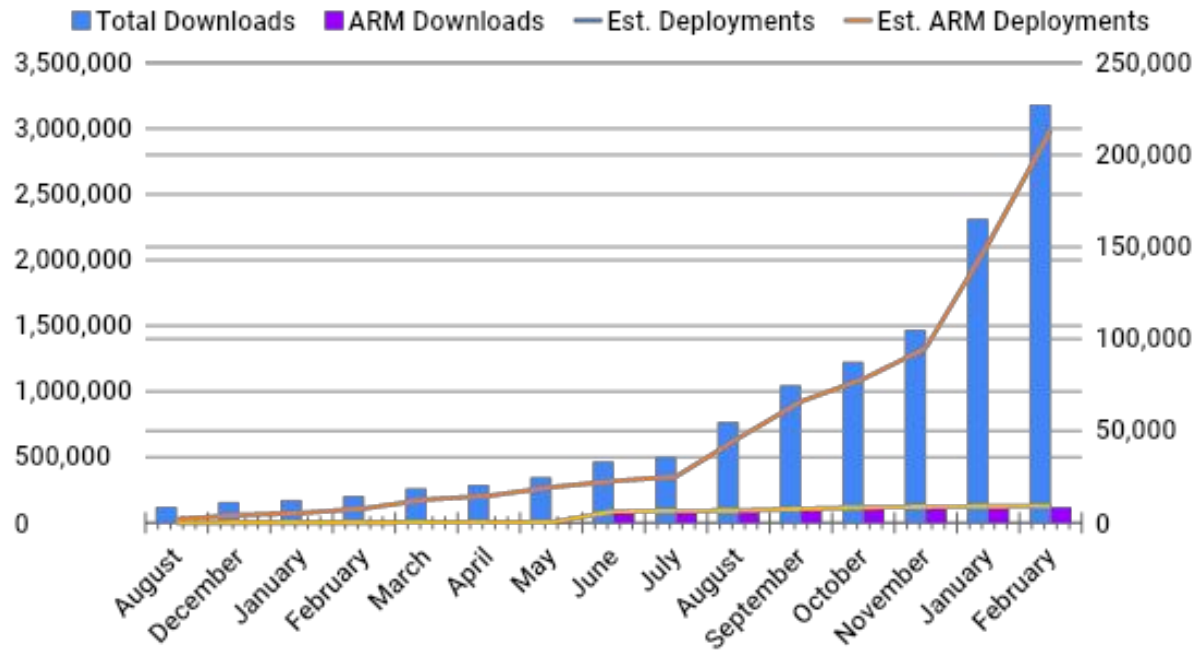
- This week's call cancel due to last minute conflicts.
- Next meeting: March 17, 2020, 10:00am PDT
- 
- China Project:
  - April Hackathon to be rescheduled for later in summer
  - Webinar series for 5 weeks
  - Feb 28, 2020, by VMWare, write a new MQTT device service
  - 130 people registered, 70 people joined

# Miscellaneous (Jim)

- V2 API update - reported by Trevor
- EdgeX Wiki - pages pointing to docs (broken)
  - How many people use the Wiki to get to the docs?
  - Can we remove all the old “this page has moved” pages?
- EdgeX Awards
  - Nominations being accepted
  - Innovation award & Contribution Award
    - Requires a paragraph on nominee and rationale
    - Managed by Aaron Williams (our Dev Adv) - Aaron@lfedge.org
    - Nomination form forthcoming
  - See <https://wiki.edgexfoundry.org/display/FA/EdgeX+Awards> for details
- Performance #'s
  - Detailed document forthcoming (Draft prepared if interested)
- Feb Stats

# Docker Downloads

- Total Downloads: **3,183,264**
  - **38% growth** since last reported in Jan 2020
  - **ARM growth just 1% (falling further in Feb largely due to growth of other)**
- Estimated Deployments: 213K
  - ARM makes up only 4% of deployments
- Estimated New Downloads: 843,473
- **Estimated New Deployments: 61K (9% growth)**



# Contributions/Authors (Feb 2020)

- 30 active repositories in Feb
- 37 Contributors Feb
- 6 new authors
- 173 commits in Feb
- **199736 LoC added in Feb**

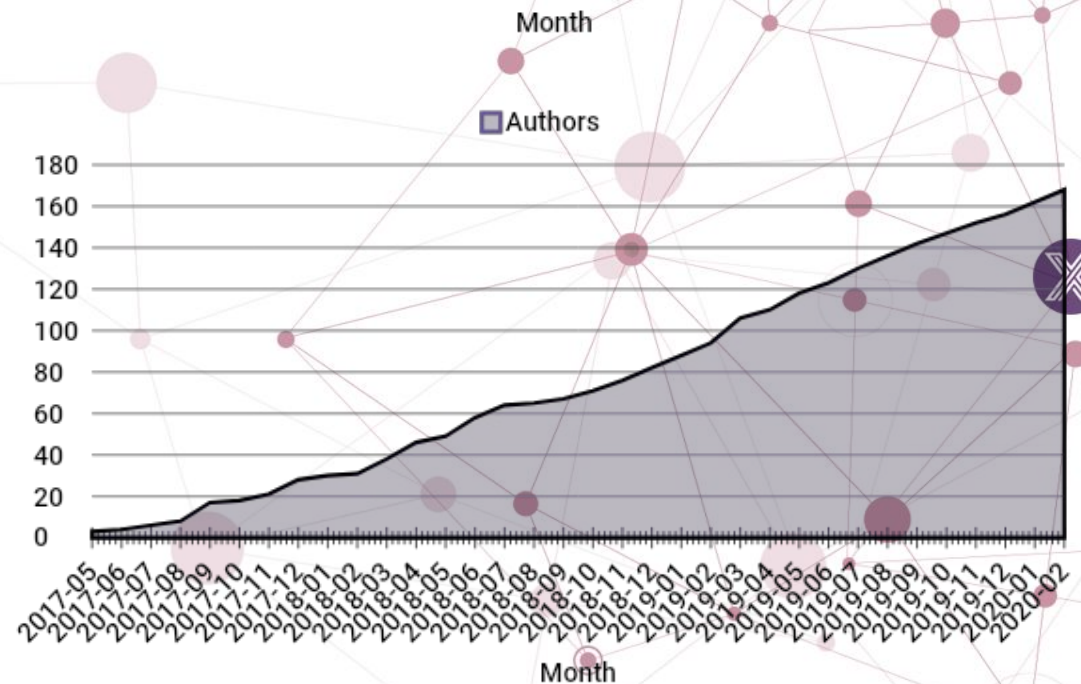
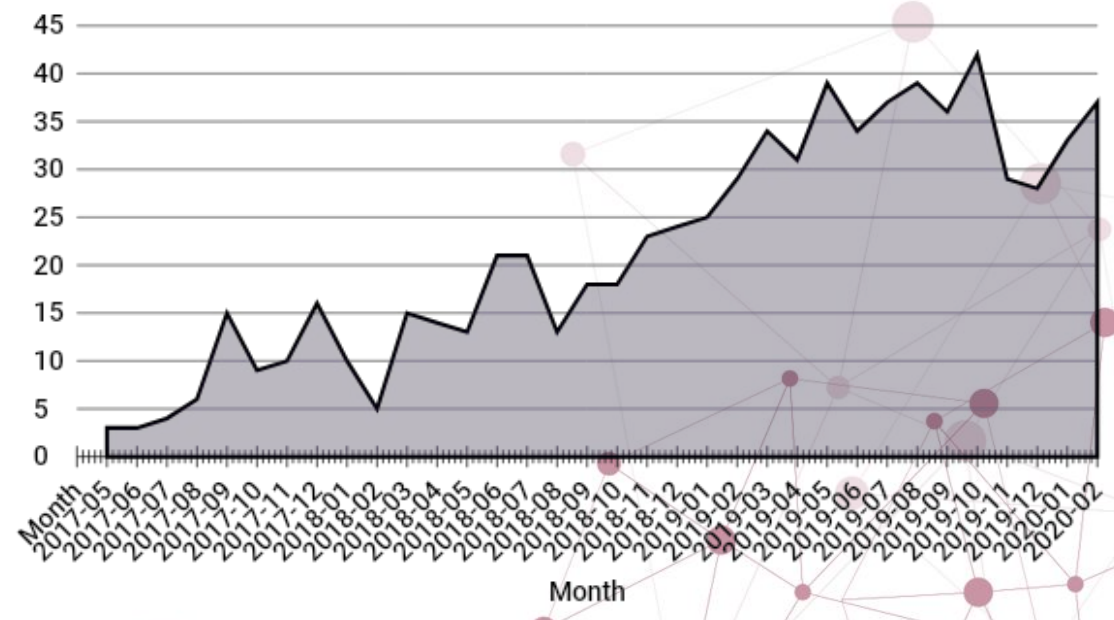
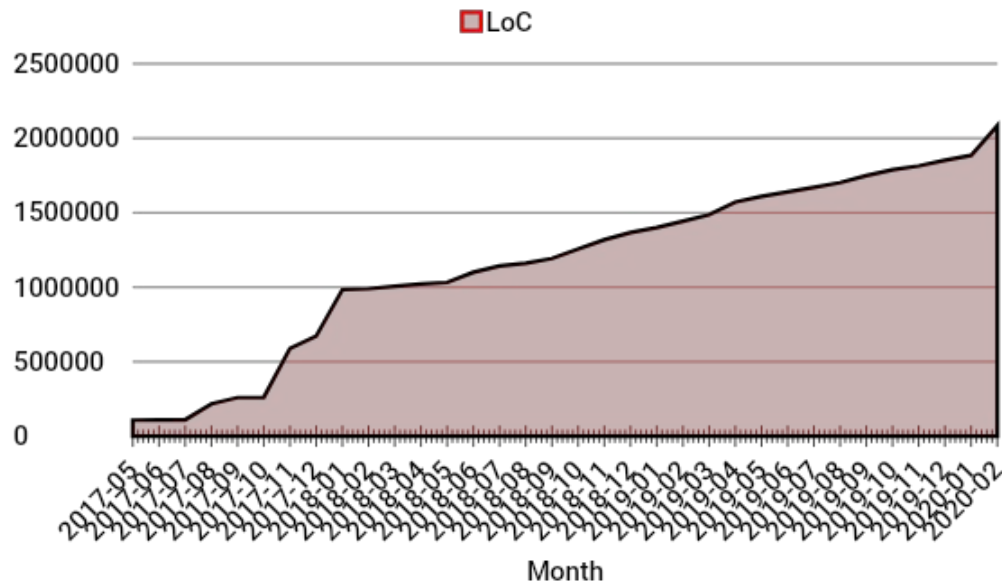
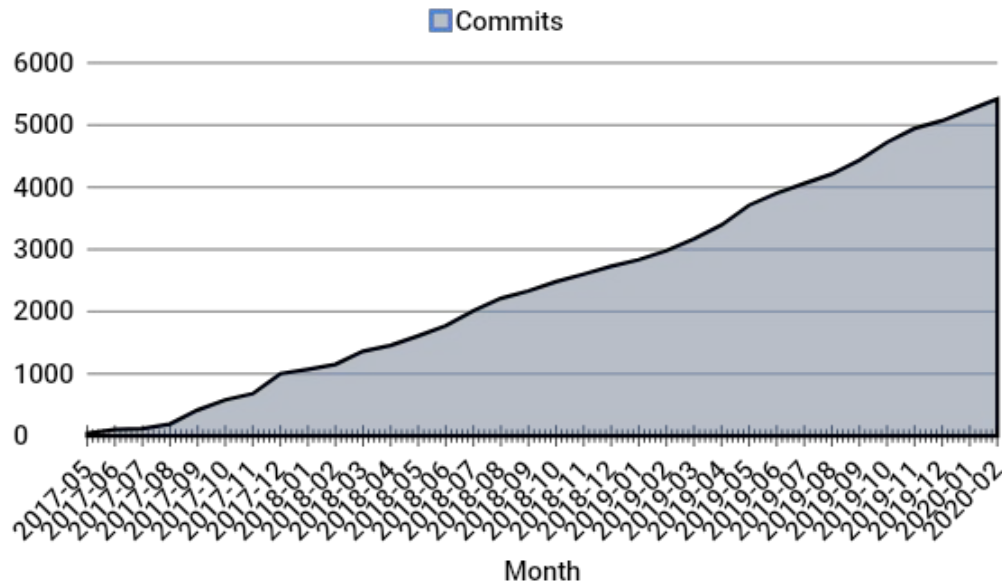
Authors by Company



Commits by Company



# Code Stats







EDGE X FOUNDRY™

# Upcoming Events & Dev Advocate Update

Aaron's updates

## Upcoming External Events

- › [Industry of Things World](#): Mar 12-13 - San Diego CA
  - › Henry Lau will be in attendance
- › [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
- › Open Source Summit North America: 22-24 June, 2020 - Austin, TX



## 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 2020
- › 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 2020
- › [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>





EDGE X FOUNDRY™

Thank You