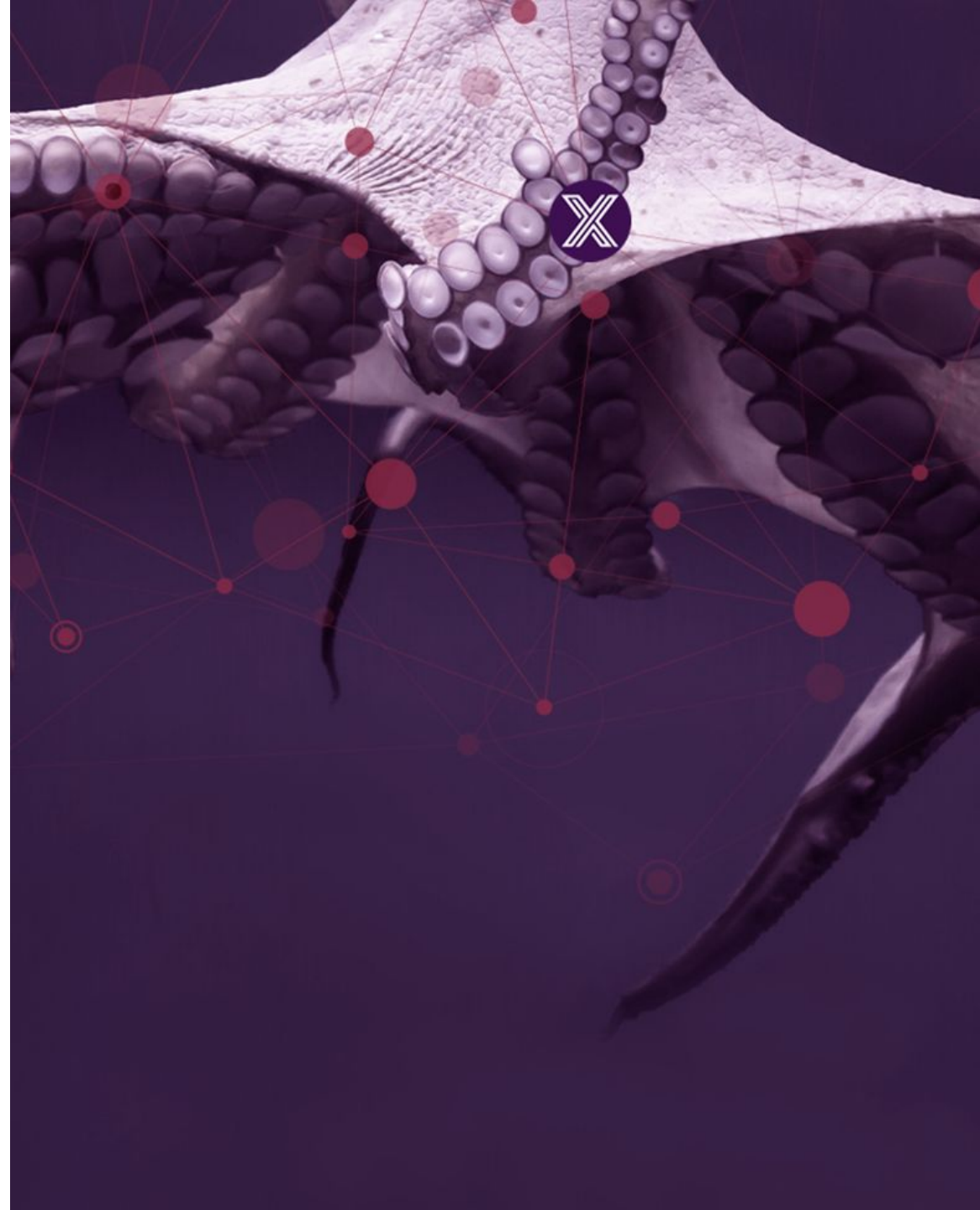


EDGE X FOUNDRY™

TSC Meeting

Aug 28, 2019



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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 7am PDT – 8am 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)

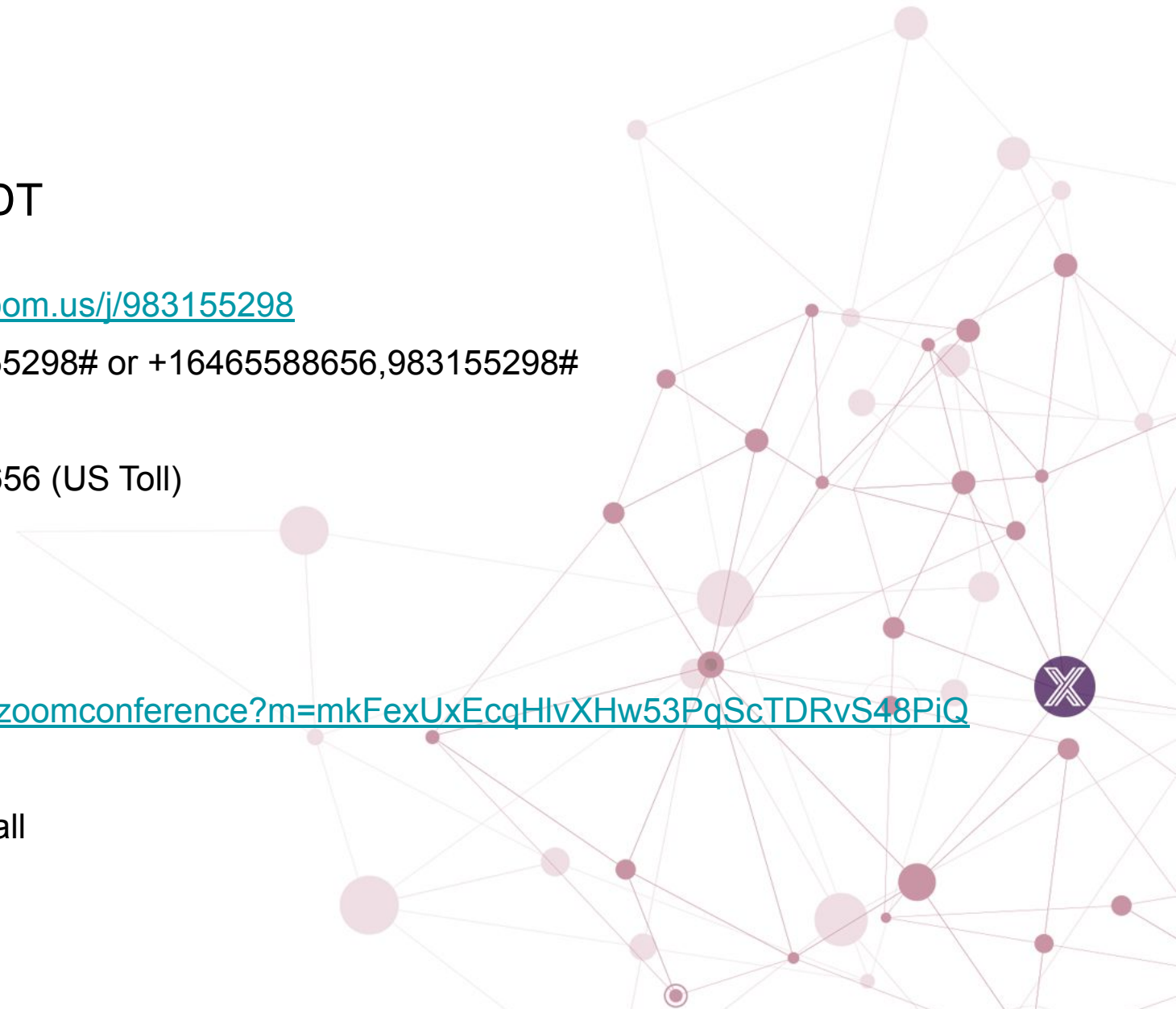
+1 855 880 1246 (US Toll Free)

+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	bradley.w.corrion@intel.com
IOTech	Iain Anderson	iain@iotechsys.com
Intel	James Gregg	james.r.gregg@intel.com
Dell	Jim White (TSC Vice Chair)	james.white2@dell.com
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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

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
- Architects Meeting
- Fuji work status
- Geneva Face-to-Face in Phoenix AZ
- Upcoming Events
- AOB



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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 - Akram for Jim
 - Certification - Rodney Hess
 - Vertical Solutions - Brad Corrin
 - Updates from Release Czar - Lisa
 - Updates from Dev Advocate - Michael

Core Working Group (28-Aug-19)

- Not much of an update this week due to vacation
- Security/core service integration
 - Mongo DB bootstrapping, integration with Vault (ongoing)
- Re-evaluation of error handling
 - <https://github.com/edgexfoundry/edgex-go/issues/1671>
 - Progress report in tomorrow's Core WG
 - See #core channel for links to feature branch if you'd like to review
- Working with QA/Test team on test strategy for minor release backward compatibility
 - Sent proposal via email list on Monday, open for comments
 - See Core WG page on Wiki, August 29th meeting entry for PDF
 - Will review in tomorrow's Core WG

Applications WG Update (28-August-19)

- **Cloud Exports:**

- AWS Export (In Progress by Alex)
- Azure IoT Export (PR Merged - Thanks team @ IOTech)
 - <https://github.com/edgexfoundry-holding/app-functions-azure>

- **Store & Forward Progress Update**

- Implementation has begun - thanks to Brandon @ Dell for helping out with the DB Layer
- Calling out Batch as a stretch goal for Fuji

Application Services

Functions (built into SDK)

Current/Complete:

Fuji

- AES Encryption
- GZIP Compression
- ZLIB Compression
- MarkAsPushed

NEW!

Edinburgh

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

Coming Soon:

- Store and Forward
- Vault integration for secrets

Reference App Services (Fuji)

(built on top of SDK)

- Azure IoT Hub (Fuji) AVAILABLE
- Amazon IoT Core (Fuji) WIP
- Configurable AS (Fuji) AVAILABLE

Device Services WG Update (28-8-19)

- Updated
 - Device service functional requirements
- In review
 - API documentation in Swagger
 - Bluetooth device service
- Post-review
 - BACnet device service
- Re-consideration of device profile features
 - Default values
 - Operation ordering
 - Minimum / maximum restrictions

Device Services - current/coming

Open Source connectors (Current):

- Modbus (TCP/RTU)
- Virtual Device
- Random
- Grove C - ARM only
- SNMP
- MQTT

Open Source connectors (Future):

- BACnet (IP & MSTP) (Sept)
- OPC UA (Sept)
- GPS (Sept)
- Bluetooth (Sept)
- ONVIF Cameras (Oct)

Commercial connectors (Current):

- MQTT
- Modbus (TCP/RTU)
- BACnet (IP & MSTP)
- OPC UA
- GPS
- MEMS

Commercial connectors (Future):

- CAN SocketCAN, CANopen (Sept)
- EtherNet/IP (Sept)
- EtherCat (Sept)
- PROFINET (Sept)
- Siemens s5/s7 (Sept)

Test/QA WG Update (21-08-19)

- Blackbox Test
 - edgex-go issue opened [#1706](#)
 - PR [#260](#) for the new command APIs is under reviewing
- New Blackbox Test
 - Initial code of [edgex-taf](#) and [edgex-taf-common](#) are under review
 - Making the adjustment on edgex-taf, and will present in the next QA WG meeting
- RAML -> Swagger conversion
 - Waiting for swaggerhub account
 - PR [#357](#) for Device-SDK API document is under reviewing
- Certification
 - Preparing test-cases for device service

DevOps WG Update (08-28-19)

Fuji Scope

Container Scanning

- Switched Jenkins Pipeline to the new LF hosted endpoint for Clair scanned container reports.

Static Code Analysis Tools

- Snyc Integration with Jenkins
 - Tested new Snyc build image within Jenkins Pipeline - edgex-go scans compared against known good CLI scan and image scan found a bug in the build image that needed remediated to set GO PATH correctly in the image.
 - Create a new global library that will be used with Jenkins Pipeline stage that runs the Snyc CLI scan using the new Snyc build-agent image - **WIP**
 - SPIKE:
 - Need to figure out the way we want to integrate Open Source repos using a common / shared account to Snyc
 - Configure notifications to SIR team members
- **NEW** Jenkins Pipeline for go-mod-secrets (Issue #468) – **DONE**
- go-mod-core-security repo in EdgeX Foundry holding

Next Meeting 8/29/19 @7:00 PST

System Management WG Update (8-27-19)

- Open Horizon POC (Working on standing up POC - almost there)
- Fuji Release Items
 - Metrics collection - The implementation is being augmented for improved and unified client experience and usability. Wrapped up unit testing.
 - Set configuration - Is underway
 - Start/stop/restart by executor including SMA - Planned
 - Safe shutdown
- Deployment/orchestration/management survey (In progress)

Security WG Update (8-28-19)

Malini & Tingyu in OSS NA 2019

- 1) Security related PRs in Edgex-Go: PR-1627 & PR-1638 - Closed
- 2) Security related PR in Edgex-Go: Feature branch for API-Gateway merge verification done, ready to open PR
- 3) Project of merging security-secretstore-setup into EdgeX: Follow workflow #13 under EdgeX-Go, framework pilot project done, in Tingyu's feature branch for review.
<https://github.com/tingyuz/edgex-go/tree/feature/fix-issue-1673>
- 4) Malini working on documenting the security components of EdgeX
- 5) Daniel from DELL working on latest user guide document for security-proxy-setup

OSS-NA 3 talks, with 30 (Malini: EdgeX 1.0) , 20 (Tingyu: EdgeX Security) , and 38 (Alex - RPI/EdgeX) attendees respectively. Tingyu and Malini also presented at the LF-Edge pre-event on EdgeX and its security.

Certification WG Update (8-27-19)

- Reviewed progress on the Swagger implementation for Device Services SDK and on the Robot Framework-based QA tests
- Discussion on what needs to be in place before engaging certification sites
- Need for a task list

- Next meeting this Tuesday, September 3rd, 10 a.m. EDT?

Vertical Solutions WG Update (8-27-19)

- Henry reviewed the event week in San Diego: LF Edge, Akraino and the OSS summit
- More time on the hackathon

Hackathon Update (8-27-19)

- Held at TechNexus in Chicago on Oct7/8th (Mon/Tue).
- EdgeX Games will be focused on retail solutions based on EdgeX and sponsor's ingredients.
- Event landing page launched:
<https://www.lfedge.org/event/edgex-foundry-hackathon/>
- Slack channel is #edgexgames
- Use cases being proposed are: Loss prevention, personalized customer experience and inventory management.
- Estimating a total of 100 participants, ~20 teams of 5
- Sponsors providing software or hardware should also expect to provide people and supporting materials both pre-event and during the event

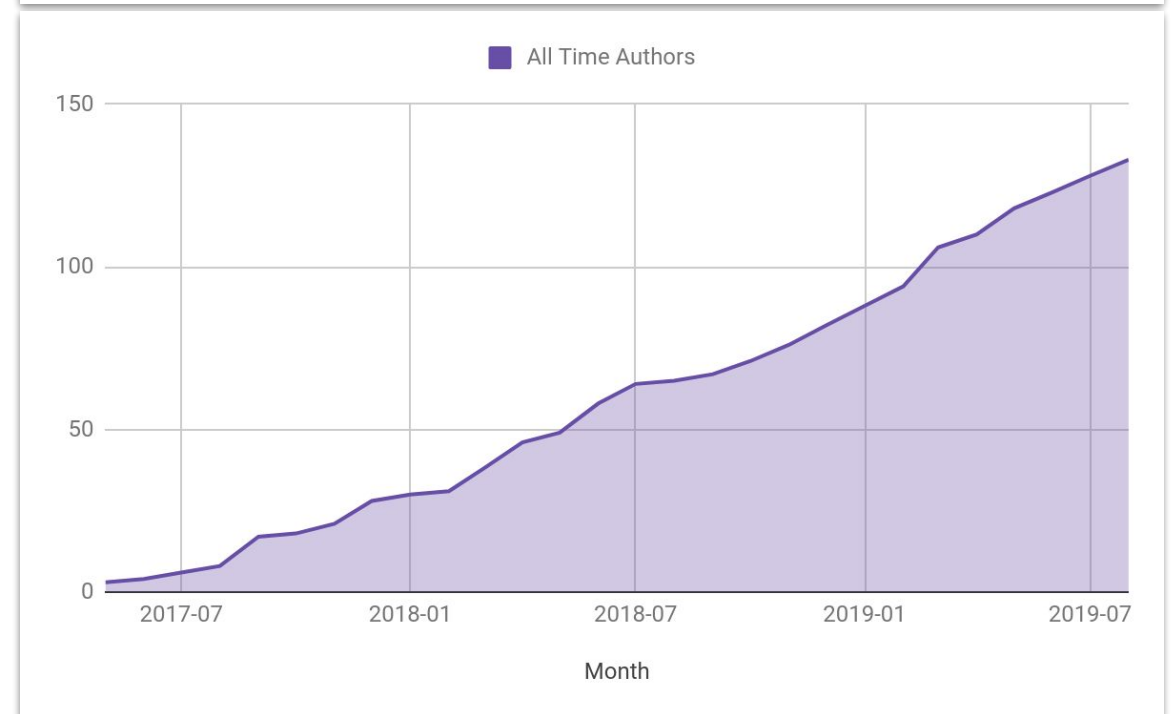
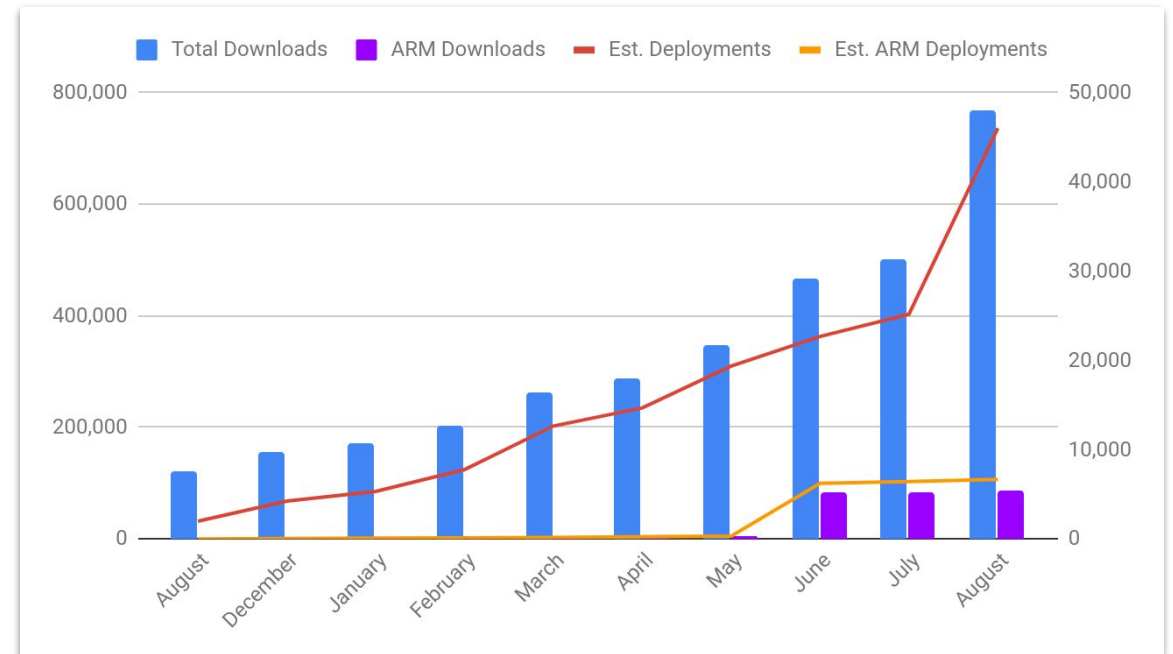
Release Update 8-28-19

Lisa

- Nexus artifacts
 - A lot of discrepancies across the project with the artifacts in Nexus
 - There isn't good metadata to correlate the artifacts with the repositories in Github
 - We have active 31 repositories but not necessarily a 1-to-1
- Create a standard for release artifacts so we can track this

Project Metrics

- Spike in Docker downloads
 - ~25,000 downloads of each core image
 - Except export-*, rule-engine (~6,000)
 - Est. 45,000 deployments to date
- 133 git contributors
- Website traffic down ~10%
- Fuji:
 - 28 active repos
 - 269 commits
 - 44 authors



Miscellaneous



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Architect's Discussion Period

Proposed (thanks Mike): alternate meeting for deep dive on architect topics

Separate meeting

Use Wed TSC meeting

Separate meeting called as needed

Cover in appropriate WGs

No thanks



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Fuji work items

Fuji Deliverables at risk or not going to be delivered

At Risk

Security area: Secret Store, dependency check
wrapper apps

Not Gonna Happen

go-mod-registry refactor



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Geneva F2F

Registration now open

EdgeX TSC Face-to-Face meeting (semi-annual)

- Capacity of 90. Currently with ~45. **(HALF FULL!!)**
- If you want to attend Architect's day, send Jim White, Dennis Camilo or a WG chair an email or slack message
 - Architect's day is invite only - any contributor is automatically invited but we request RSVP
 - WG Chairs - will soon be organizing topics for consideration with you.
- Planning for the Geneva release (and lessons learned on Fuji)
- Nov 4-7th
 - Nov 4th - Architects' topics must be a contributor (have at least one Git contribution) or have invitation of WG chair
 - Located @ Galvanize Phoenix at 515 E Grant St, Phoenix, AZ
 - Hotel and other logistical info available on the [Wiki](#)
- Register now at <http://www.cvent.com/d/b6qcr0>

Planning

Work Group Chairs

- please provide me your list of Geneva features and requirements (scope) for F2F planning purposes
- provide me your architecture topics (items that may fit on architect's day of F2F)

All

- please provide any training topics you'd like to see @ the F2F



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Upcoming Events

Upcoming External Events

Full list of LF events available at:
<https://events.linuxfoundation.org/>

Additional LF Edge events available at:
<https://www.lfedge.org/events/>

- [Open Networking Summit EU](#): 23-25 September, 2019 - Antwerp, Belgium
 - LF Edge Members receive a 20% discount on registration. Email info@lfedge.org for code.
 - Jim White's talk accepted
- [Open Source Summit EU / ELC](#): 28-30 October, 2019 - Lyon, France
 - October 31: LF Edge Mini-Summit - Half-day, single-track event on the topic of IoT and Edge Computing
 - **How Secure is your Edge with EdgeX? Tingyu and Malini**
 - **Microservices at the Edge - Best Practices: Diana and Malini**
 - **From API to CLI. Designing and building a CLI for EdgeX: Alex and Nikolay S**

Upcoming CFP Due Dates

>



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AOB / Reminders

AOB/Cadence

- Meeting Cadence Reminder
 - Currently held weekly at 7am PDT on Wednesday's
 - Calls without TSC quorum will still be used to review issues

- **Next Meeting: June 26, 2019**

Marketing

- **CTA:** If your company will be presenting EdgeX at an upcoming event/webinar/other, please email pr@lfedge.org so that we can help promote

EdgeX in Market

- Page showcases momentum in the project, including solutions already available
- <https://www.edgexfoundry.org/edgex-in-market/>
- Email info@edgexfoundry.org if you have any additions

Project Contributions Welcome!

- Our objective is to make EdgeX use & deployment pervasive!
- EdgeX success is 100% dependent on the vibrancy of a proactive community
- Getting Involved
 - Project membership growing - want to join contact Mike Woster at LF (mwoster@linuxfoundation.org)
 - First Priority is the MVP - potential contributors please contact keith@iotechsys.com (people, equipment, technology)
 - If interested in adding new projects please contact the relevant working group chair

Project Resources

Quick links to most commonly used Community Resources

- Code: <https://github.com/edgexfoundry>
- Documentation: <https://wiki.edgexfoundry.org/>
- Discussion: <https://slack.edgexfoundry.org/>
- Mail Lists: <https://lists.edgexfoundry.org/mailman/listinfo>
- Twitter: <https://twitter.com/EdgeXFoundry>
- LinkedIn: <https://www.linkedin.com/company/22298339/>
- YouTube: <https://www.youtube.com/c/EdgeXFoundry>

EdgeX - Where to learn more

- EdgeX Foundry Wiki

<https://wiki.edgexfoundry.org/display/FA/EdgeX+Foundry+Project+Wiki>

- EdgeX Foundry Slack

<https://slack.edgexfoundry.org/>

- [Weekly EXF Technical Spin up calls](#)

30 minute deep-dive topics followed by 30 minute open Q&A

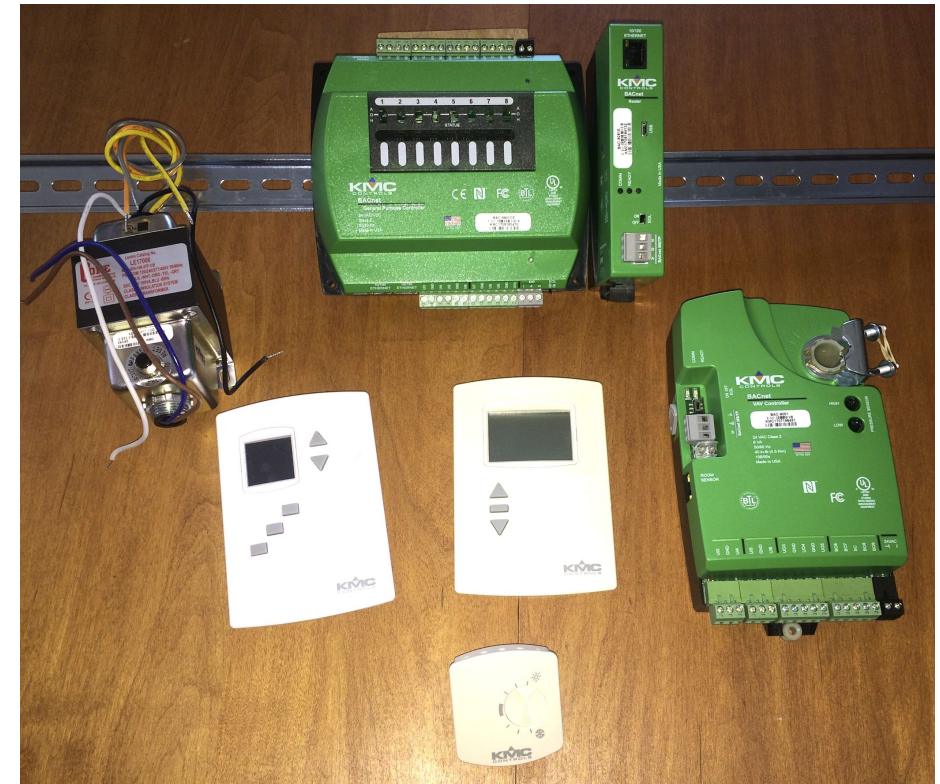
Call recordings are available on the [Wiki](#)

What is the Device Exchange?

- A great way to put your products in the hands of other members so they can help build a better EdgeX!
- <https://wiki.edgexfoundry.org/display/FA/Device+Exchange>



Special thanks to [Dave Bohlman](#) and [KMC Controls](#) for making this awesome kit and how-to guide available to members!!



Meetups

- Help us grow awareness!
- Present, and Tag, EdgeX in your local IoT Meetups
- <https://www.meetup.com/topics/edgex/>
- Email info@edgexfoundry.org for assistance

Related topics

New Technology Open Source Interoperability Smart Home Internet of Things

Open Standards Mobile Development Internet of Everything EdgeX

EdgeX ▾

Find out what's happening in EdgeX Meetup groups around the world and start meeting up with the ones near you.

Related topics:



Meetups: Reimbursement Program

- <https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=7602724>
- Wiki page built for the community to leverage
- Encourage community to begin introducing EdgeX in your local Meetup groups
- EdgeX Foundry will fund/sponsor the talk in which EdgeX is scheduled to be presented
 - Up to \$250 for F&B, once per Meetup group, per quarter
- Let us help drive traffic to your event! Email pr@lfedge.org once Meetup has been scheduled
- Post-event, please consider doing a blog about the event

Hackathons: How can you help?

- <https://wiki.edgexfoundry.org/display/FA/Hackathons>
- Provide any local volunteers onsite to help with technical work, potentially help judge, etc. (see list below of known hackathons coming up and locations)
- Sponsor breakfast/lunch/dinner for the participants (usually things like donuts/coffee, pizza lunch or cater sandwiches)
- Sponsor \$ rewards (incentives) for teams that successfully implement projects (these could even be projects that particular sponsors want to see accomplished - we just need them scoped appropriately so as to be something that can be accomplished in a 2 day period)
- Help provide or resource hackathon winner prizes
- Sponsor or provide any swag (t-shirts, mugs, etc.)
- Provide marketing assistance



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Thank You