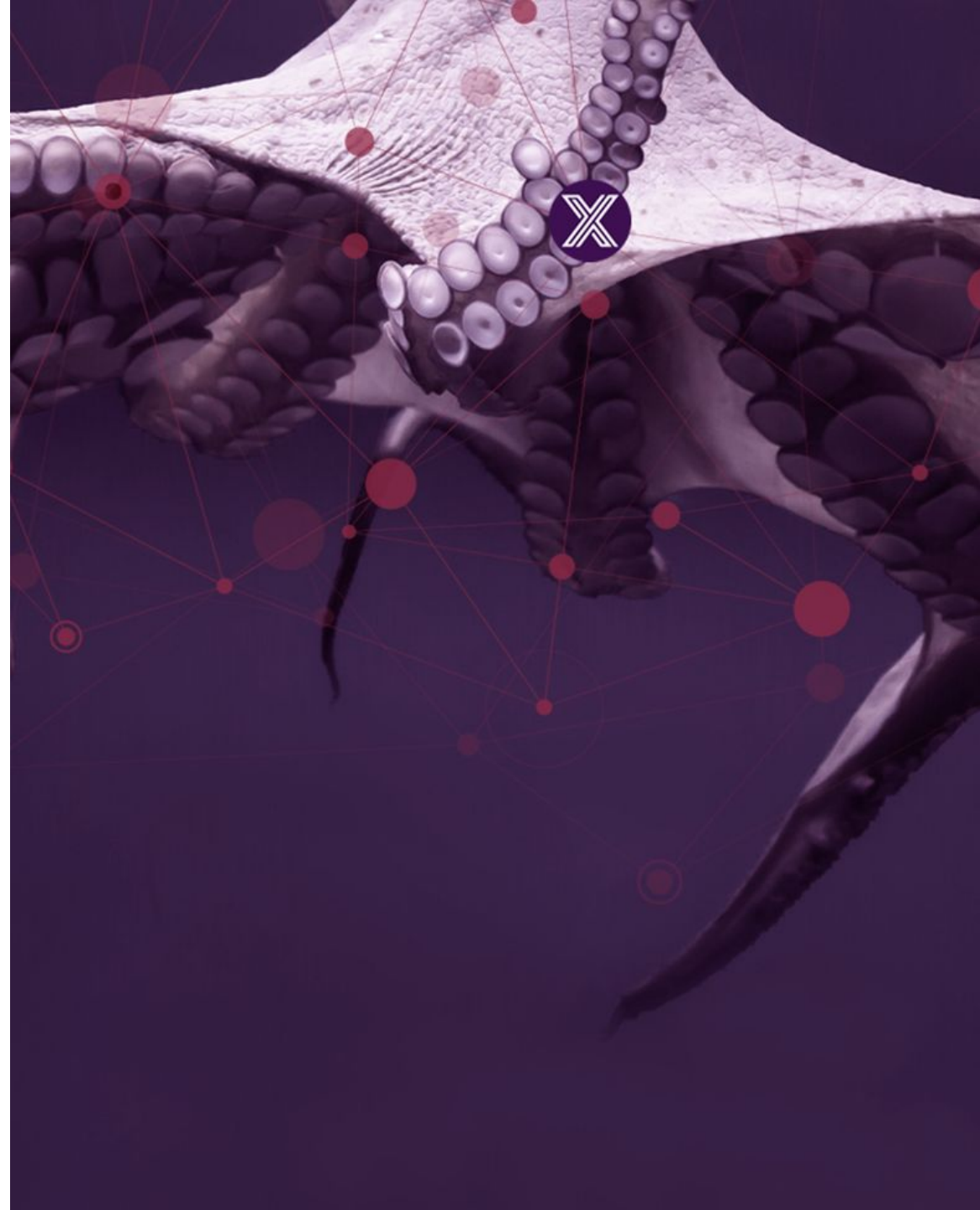


EDGE X FOUNDRY™

TSC Meeting

September 4, 2019



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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 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)

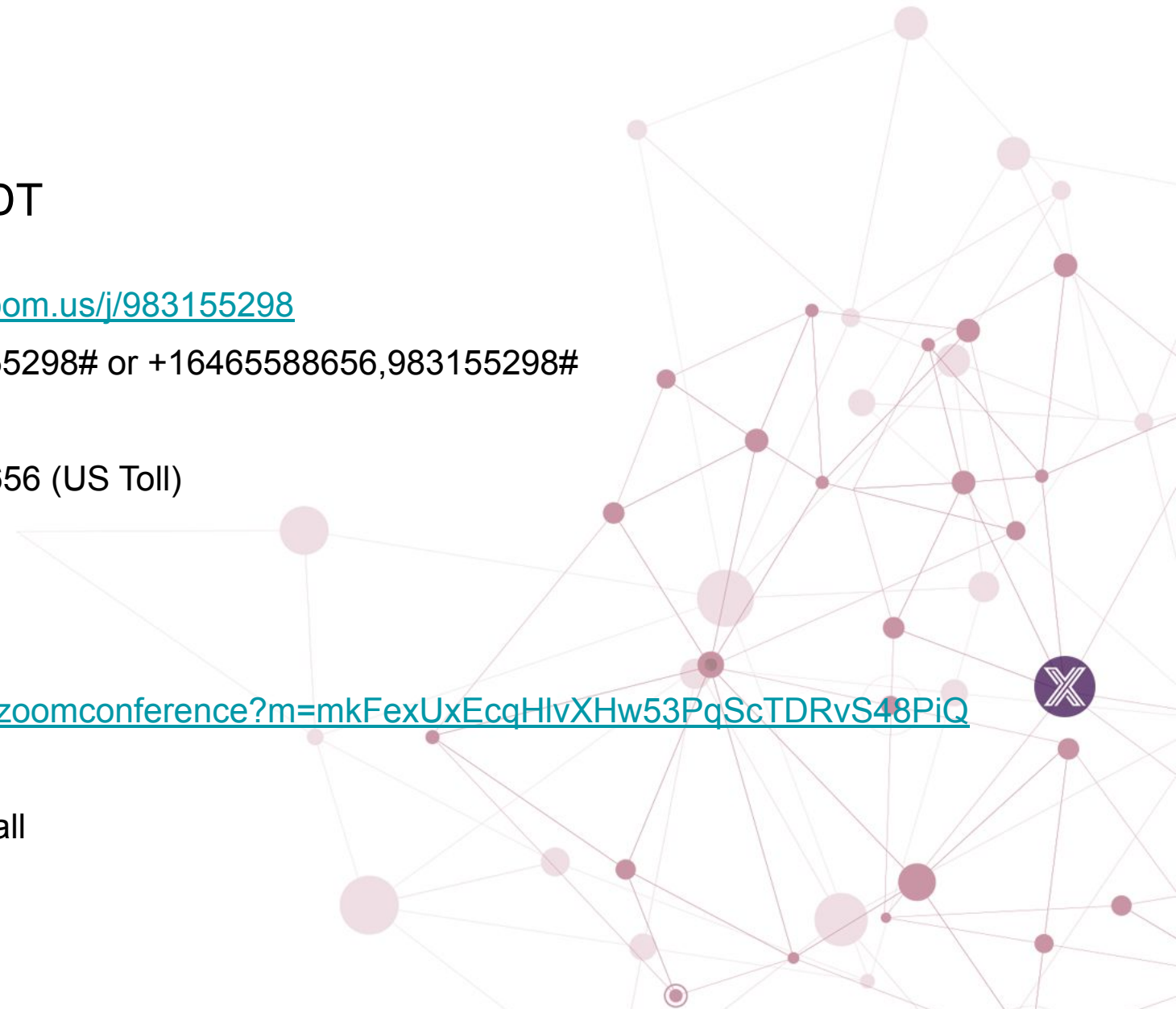
+1 855 880 1246 (US Toll Free)

+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
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

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
- Fuji work status
- Geneva Face-to-Face in Phoenix AZ
- Marketing Committee Meeting
- 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 - Jim
 - Certification - Rodney Hess
 - Vertical Solutions - Brad Corrin
 - Updates from Release Czar - Lisa
 - Updates from Dev Advocate - Michael

Core Working Group (4-Sept-19)

- Security/core service integration
 - Mongo DB bootstrapping, integration with Vault
 - docker-edgex-mongo/PR #35 -- 1st round of comments provided
- Found an Edinburgh bug
 - Issue <https://github.com/edgexfoundry/edgex-go/issues/1731>
 - Fixed in master/Fuji PR #1732
 - Should we backport to Edinburgh w/dot release?
 - Not aware of anyone else finding this
 - Why didn't blackbox testing find it?
 - Because, as has been discussed previously, blackbox tests only run with default configuration
 - This bug was found by testing service interactions between Core-Data and Core-Metadata
 - Propose adding an agenda item to this week's QA/Test meeting

Applications WG Update (04-September-19)

- **In Progress**

- AWS Export (In Progress by Alex)
- Store & Forward
- Expose WebServer to Developers to add custom endpoints
- Experimental Feature
 - Push To Core - function that allows pushing data to core data

- Topics for pre F2F meeting in October

- Messaging - Proper Pub/Sub replacement for ZMQ

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 (4-September-19)

- No report this week

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)

DevOps WG Update (09-04-19)

Fuji Scope

Static Code Analysis Tools

- Snyk Integration with Jenkins **WIP**
 - Create a new global library that will be used with Jenkins Pipeline stage that runs the Snyk CLI scan using the new Snyk build-agent image - **WIP**
 - SPIKE:
 - Need to figure out the way we want to integrate Open Source repos using a common / shared account to Snyk
 - Configure notifications to SIR team members

New Jenkins jobs for Fuji

- The following repos have new build automation slotted for Fuji but are currently still in holding - **BLOCKED**
 - device-bacnet-c, device-bluetooth-c, device-gps, regression-test
- docker-edgex-mongo has a bootstrap application (Go) coming

Geneva scope

- DevOps has big CI transformations scoped for Geneva
- We've already started talking about Geneva planning, scope and architecture reviews for Geneva

Next Meeting 9/4/19 @7:00 PST

System Management WG Update (9-4-19)

- Open Horizon POC (Working on standing up POC - almost there)
- Fuji Release Items
 - Metrics collection - done but cleanup underway.
 - Set configuration - nearing initial completion, but some cleanup/testing to be done
 - ~~• Start/stop/restart by executor including SMA - Planned~~
 - ~~• Safe shutdown~~
- Deployment/orchestration/management survey (In progress)

Security WG Update (09-04-19)

- 1) Project of merging security-secretstore-setup into EdgeX: Issue-1673 & Issue-1675 work in progress. Discussion on 1673 expected in today's security WG meeting - possible change of the project structure.
- 2) Samsung interested in sharing their penetration testing learnings from OPNFV to apply to EdgeX
- 3) Should we bring out EdgeX 1.2 to release a patch to PKI setup from Jim Wang/Intel? It fixes the bug where PKI materials for Security Gateway were created at build time making it same for all deployments versus at launch time to have unique ones per instance. (Trevor/Dell: security has not been widely adopted yet. Tony/Ubuntu: It works correctly for Ubuntu snaps)

Test/QA WG Update (04-09-19)

- Blackbox Test
 - edgex-go issue opened [#1706](#) for incorrect return code on core-command
 - Merged PR [#260](#) to fix issue [#259](#) [#203](#)
 - PR [#263](#) for new tests of APP Function SDK is under reviewing
- New Blackbox Test
 - Initial code of [edgex-taf](#) and [edgex-taf-common](#) are under review
 - Making the adjustment on edgex-taf
- RAML -> Swagger conversion
 - Waiting for swaggerhub account
 - PR [#357](#) for Device-SDK API document is under reviewing
- Certification Support
 - Testcases for device service are under review
 - Test Plan v0.2 for device service is under review

Certification WG Update (9-3-19)

- Reviewed progress on the Swagger implementation for Device Services SDK and on the Robot Framework-based QA tests
- Reviewed deliverables as part of a task breakdown

- Next meeting this Monday, September 9th, 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

- Held at TechNexus in Chicago on Oct7/8th (Mon/Tue).
- Event landing page launched:
<https://www.lfedge.org/event/edgex-foundry-hackathon/>
- Slack channel is #edgexgames
- 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
- Team has been reviewing terms and conditions. Target to have registration site go live end of this week.
- Team also working on sponsors list. Current sponsors are: Dell, HP, Intel, RILA.
- Confirming the number of gateway boxes available from Dell, HP, Intel.

Would this help: <https://data.world/datasets/retail>

Release Update 9-04-19

Lisa

-

Miscellaneous

Hackathon - in Chicago Oct 7/8



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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
- Self-cert process for device services (Dec 2019, many dependencies)

Not Gonna Happen

- go-mod-registry refactor
- System Management start/stop/restart (architecture issue and non-backward compatible - pushed to Geneva)



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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>

Architect's Day RSVPs

- Open to all EdgeX contributors or by invitation of TSC member; but **does require RSVP**
- **Assuming all WG chairs, TSC members unless I hear otherwise**
- Other RSVPs (4)
 - Lisa (Intel)
 - Lenny (Intel)
 - Eno (Intel)
 - Diana (VMWare)

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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Marketing Committee Meeting

Marketing Committee Meeting

Resumption of regular cadence for EdgeX Marketing Committee (every 2 weeks)

- EdgeX Budget priorities and requirements 2020
- Maintenance and Update of EdgeX Website
- Planning Fuji Launch
- Vertical Market Expansion & Promotion
- IOT Solutions World Congress Marketing
- Hackathon Chicago - Marketing
- AOB

Proposed Meeting date: Friday 13th September 5pm UK time



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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/>

- IoT Summit Bulgaria (<http://www.iotsummit.tech>) Sept 14
 - Nikolay S to talk on EdgeX performance testing
 - Diana A to talk on EdgeX and Microservices at the Edge
- [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.
 - Jason Shepherd 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
 - **Microservices at the Edge - Best Practices: Diana and Malini**
 - **From API to CLI. Designing and building a CLI for EdgeX: Alex and Nikolay S**
 - **Securely Store IOT Data with IPFS and Distributed Ledger - Trevor Conn**
- IoT SWC: 29-31 October, 2019 - Barcelona, Spain
 - LF Edge/EdgeX booth
- [Embedded World](#): 25-27 February - Nuremberg, Germany
 - Call for papers closed, booth opportunities
- [Industry of Things World](#): Mar 12-13 - San Diego CA
- [IoT Tech](#): Mar 17-18 - London, UK
- [IoT World](#): Apr 6-9 - San Jose, CA

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](#)

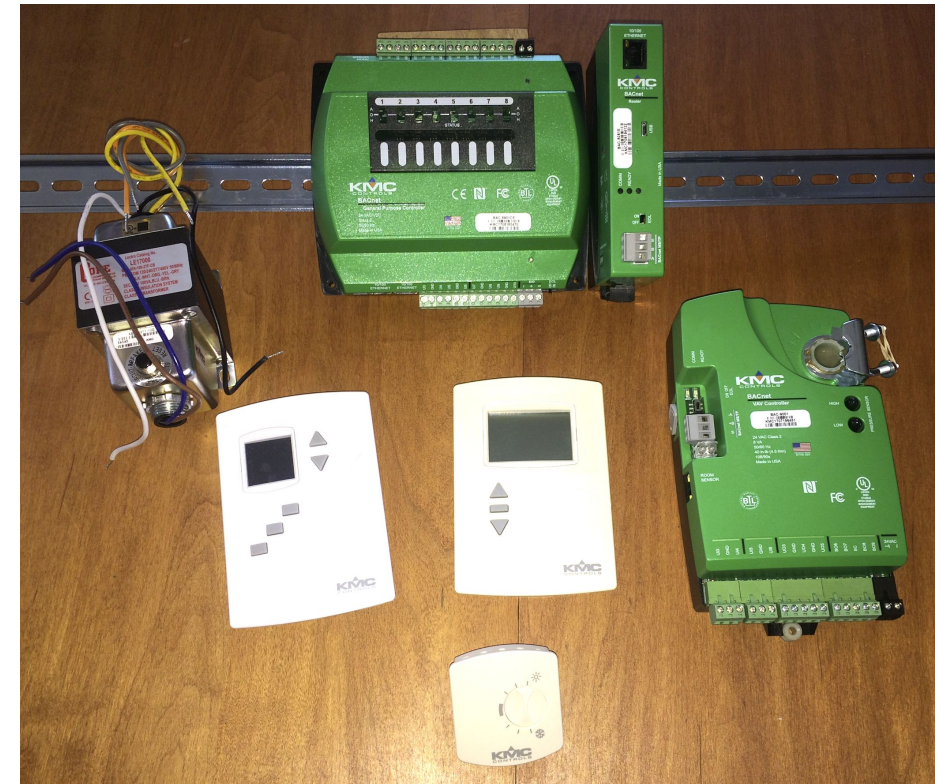
What is the Device Exchange?

- 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>

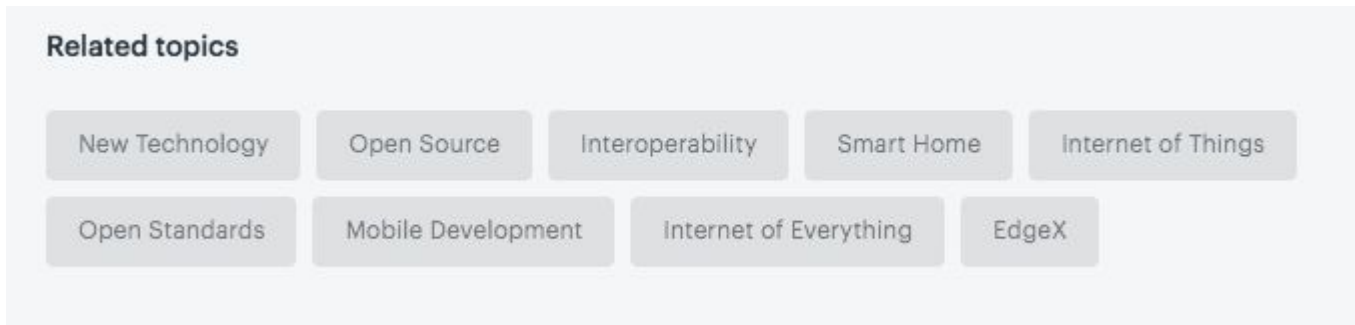


Special thanks to [Dave Bohlman](#) and [KMC Controls](#) for making this awesome kit and how-to guide available to members!!



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



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