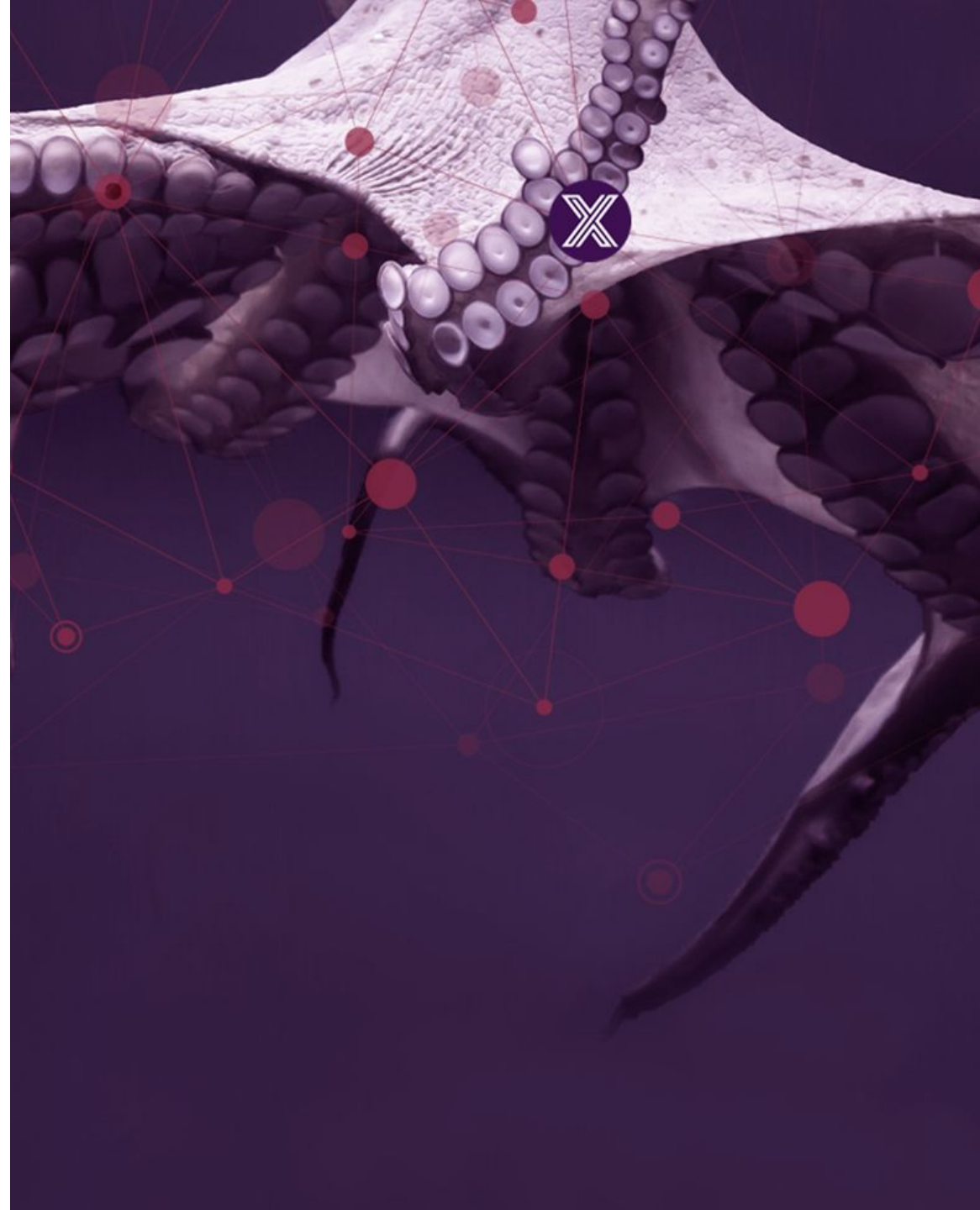


EDGE X FOUNDRY™

TSC Meeting

June 05, 2019



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: June 05, 2019 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)

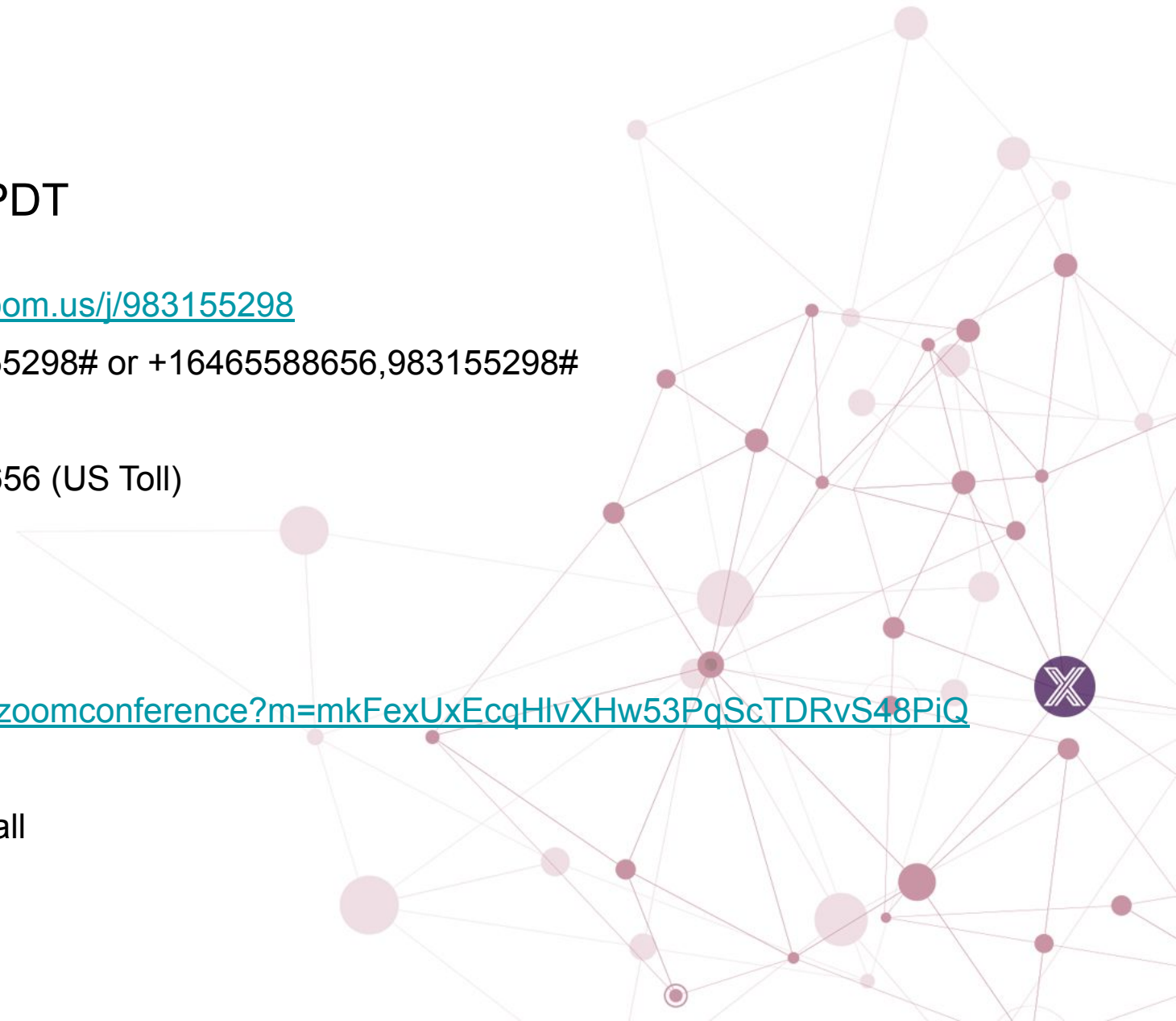
+1 855 880 1246 (US Toll Free)

+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>
IOTech	Andy Foster	andy@iotechsys.com
Mainflux	Drasko Draskovic	drasko@mainflux.com
Intel	James Gregg	james.r.gregg@intel.com
Mainflux	Janko Isidorovic	janko@mainflux.com
Dell	Jim White (TSC Vice Chair)	james.white2@dell.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
Samsung	Moonki Hong	moonki1.hong@samsung.com
Dell	Randy Thompson	Randy.T@dell.com
IOTech	Steve Osselton	steve@iotechsys.com
Canonical	Tony Espy	espy@canonical.com
Dell	Trevor Conn	Trevor.Conn@dell.com

Current quorum = 6 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

- Release Planning
- WG Updates
- TSC Chairs and upcoming Elections
- LF Edge Update
- Upcoming Events
- AOB



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Release Planning

Release Update

Release status: Trevor/James/Lenny et al

Branching status

Issues, comments, concerns

Status of document updates (Michael Hall)

Release target: June 20



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Work Group Updates

Chairs

Working Group Chair Updates

- Around the horn
 - Core/Supporting - Trevor
 - Applications - Janko
 - Device Services - Steve
 - Test/QA - Andy
 - DevOps - James
 - Security - Jim
 - System Management - Jim
 - Certification - Randy
 - Vertical Solutions - Moonki
 - Developer Outreach - Michael

Core Working Group (5-Jun-19)

- Fuji items starting
 - Go 1.12 update
 - If you aren't already using this locally, go for it
 - Event timestamps in nanoseconds
 - Working with Device Services team on device auto-provisioning requirements
 - POC for refactoring to support increased unit test coverage
 - "Add new device" use case
- Ongoing documentation efforts for Edinburgh
- Please let Trevor know if you would like to add any agenda items to tomorrow's Core Working Group call.

*** Trevor travelling today, may not attend TSC call ***

Applications WG Update (5-June-19)

Lenny gave a demo of End 2 End CBOR in App Functions SDK

Fuji Topics:

1. Prebuilt App Services for testing
 - a. Rules Engine - prebuilt service readily available to send events to rules engine
2. Black Box Testing (a sample service(s) to test)
 - a. Create document and proposal, then share with the rest of WG
 - b. List of items to test
 - c. Dynamic Configurations for testing
3. Vault Integration
4. Parity with Export services:
 - a. Compression
 - b. Encryption
 - c. HTTPS/MQTTS
 - d. Reference/Examples to connect to cloud services
5. Store and Forward data

Device Services WG Update (5-6-19)

- Minor bug fixes on Edinburgh SDK branches
- Device services rebuilds ongoing
- Agreed to update Event/Readings with nanosecond timestamp
 - Effects Origin/Created/Modified
 - edgex-go #1404
- Start of discussion on device provisioning mechanisms
 - Tony has provided overview of previous Java SDK approach
 - Aim to create a design document

Test/QA WG Update (06-05-19)

- Blackbox Tests
 - Fixed issue [#237](#)
 - Merged PR [#239](#)
- Performance Tests
 - Preparing performance summary report
 - Investigating JMeter data loss issue with performance tests
- Edinburgh objectives
 - Better visualization/dashboarding (Allure) of test results (complete)
 - Automated capture of resource metrics to monitor performance - complete subject to final validation
 - Security test automation
 - Tests running on x86 successfully
 - Problems with new Kong docker image for ARM - requires native 64 bit ARM build and will not make code freeze - issue currently being investigated
- Next QA/Test meeting June 13th, 4pm PDT

DevOps WG Update (06-05-19)

Code Freeze 5/28

- JJB Templates updated for repos
 - device-snmp-go Pipeline has outstanding PR - will discuss in DevOps WG call tomorrow
 - build issues with the edgex-ui-clojure - OOM jvm issues during build
 - California jobs deleted

Other Issues:

- Roadmap for addressing technical debt not understood by Linux Foundation for build dependencies (python version)
 - One new thing on Python is that RHEL 8 has been released, which means CentOS 8 should be released soon. Once it is, we can standardize on 3.6 (centos 7 defaults to 3.4). Once that happens, it's going to open the door for moving everything forward, and dropping support for all versions ``<3.6``
- Fuji Scope - Container Scanning (Clair Server landing request)
 - Update as of WW23 from LF Infrastructure team indicated the solution is still discussed internally as to the overall strategy for hosting K8s based services

System Management WG Update (6-5-19)

- Open Horizon discussion
 - Started a project group to discuss integration opportunities
 - Meet every other Monday at noon CDT (next meet Jun 17)
- Fuji Focus
 - Started design work on setting configuration
 - Next items
 - Start/stop/restart all done by the executor to include stop/restart of SMA
 - Executor for metrics collection
 - SMA Translation layer (stretch)

Security WG Update (6-5-19)

- “Dot” release current work (Tingyu)
 - Release date and whether part of Fuji or dot release TBD
 - Refactor Secret Store service, improved go-mod-core-security module, changed mongodb init script all being tested
 - Still some work on module cleanup / unit testing adds
 - Refactor API Gateway
- Security Issue Process (Malini)
 - working Wiki/doc presenting issues
 - Collecting issues
 - SIR team formulation
- Fuji work (many parties)

Certification WG Update (6-5-19)

- No new activity
- Plan of Record available on Wiki
 - Self-assessment for Device services first
 - Available by end of year based on Fuji release

- Meetings are on Mondays at 7am PDT (1500 CET)

Vertical Solutions WG Update (5-29-19)

- Upcoming Commerce Project call : Tuesday June 4th 8AM PST
 - Guest Speaker: Andy Laudato, CTO of Vitamin Shoppe
 - Zoom Meeting : <https://zoom.us/j/975881686>
 - Mobile
 - +1 669 900 6833 (San Jose)
 - +1 646 558 8656 (New York)
 - +1 855 880 1246 (US Toll-free)
 - +1 877 369 0926 (US Toll-free)
 - Meeting ID : 975 881 686
 - Find your local number : <https://zoom.us/u/aA4GBJB8>

Project Metrics - May 2019

Github:

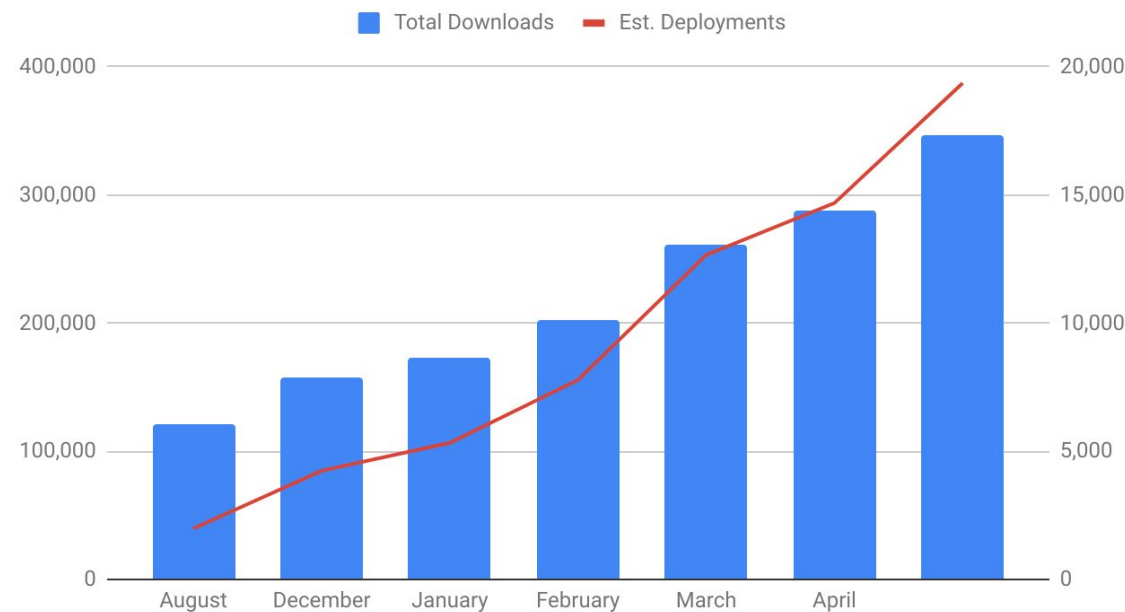
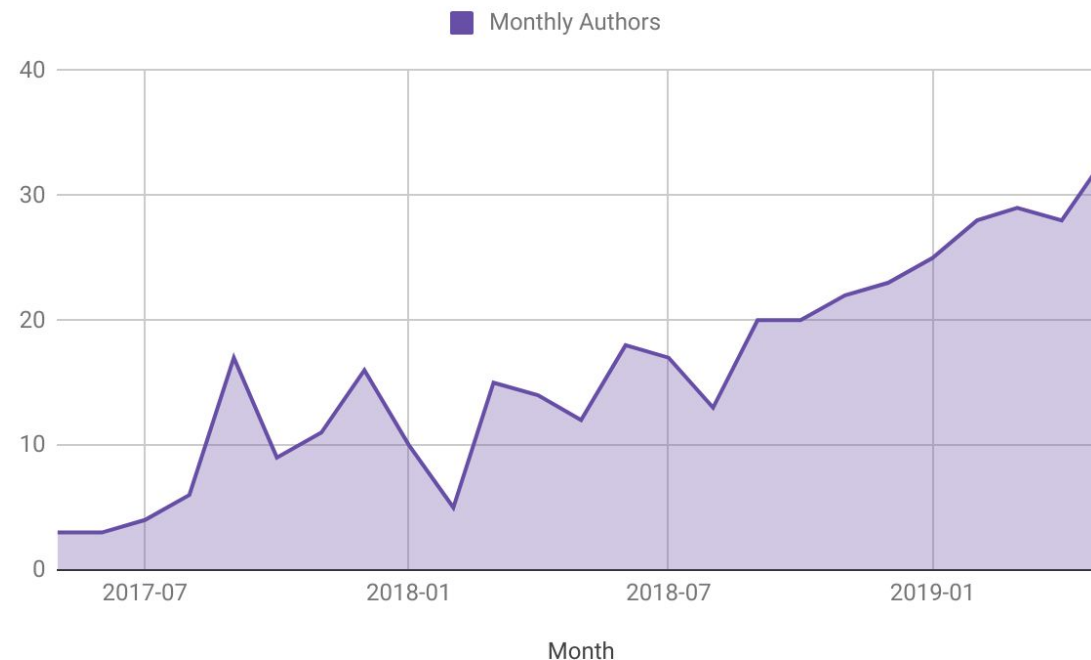
- 217 commits
- 33 authors, including 3 new
- 26 issues & 49 PRs closed

Docker:

- 58,000 new downloads
- 4,500 new deployments
- 130% increase over April

Website:

- 12,667 visitors
- 107% increase over April
 - Mostly to <https://www.edgexfoundry.org/about/members/>





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TSC Annual Elections

Congratulations to our new TSC Chairpersons

- Core/Supporting - Trevor Conn
- Applications - Mike Johanson
- Device Services - Iain Anderson
- Test/QA - Robin Chattergee
- DevOps - James Gregg
- Security - Tingyu Zeng & Malini Bhandaru
- System Management - Jim White
- Certification - Rodney Hess
- Vertical Solutions - Brad Corrion

General Schedule

Done - Monday, June 3: Establish list of Contributors, WG Chair Nominations

Now – Friday, June 7: TSC At-large nominations

Week of June 3 – June 7: WG Chairs elected by their perspective WGs

There was only one nominee per chair. No elections necessary

Next Week (Week of June 10 – June 14): TSC At-large Elections

Currently have 3 nominees

Week of June 17 – June 21: TSC Chair & Vice Chairman Nominations (by newly elected WG Chairs and TSC At Large members)

Monday, June 24: End of current TSC term

Tuesday, June 25: 1st day of new TSC

Week of June 24 – June 28: TSC Chair Voting



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LF Edge Update

LF Edge News and Updates

- EdgeX Foundry was approved by the TAC to move to Stage 3 in the LF Edge Product Lifecycle Definition.
 - Stage 1: At Large Projects - projects showing promise; get minimal LF Edge resources; provide a neutral home or “sandbox” for the project
 - Stage 2: Growth Stage Projects - projects that are incubating; have shown a plan to get to Impact stage; get TAC mentorship; demonstrate community and progress to integration
 - Stage 3: Impact Stage Projects - self-sustaining projects; widely used in products; receive financial and marketing support
 - Stage 4 - Emeritus projects - archived projects
- EdgeX is the first project to Stage 3 if approved by the LF Edge governing board
- Akraino and Eve are at Stage 2
- Home Edge is at Stage 1
- Some new projects are applying for entry at Stage 1: Foglamp, OpenEdge, ...



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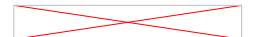
Upcoming Events

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 Source Community Event](#): 11-12 June, 2019 - Shanghai, China
 - › Hosted by Intel
 - › Projects to include ACRN, AliOS, Android/IoT, Celadon, Clear/IoT, ROS, Zephyr, StarlingX
- › [EdgeX Meetup](#): 19 June, 2019 - Austin, Texas
 - › Brandon Forster from Dell will give an EdgeX overview and answer questions
- › [IoT Tech Expo Europe 2019](#): 19-20 June, 2019 - Amsterdam
 - › Janko Isidorovic from Mainflux will give a presentation on EdgeX Foundry & participate in an IoT panel.
 - › EdgeX is the media sponsor for the event and is providing a 20% off discount code, "EDGEX20".
- › [Open Source Summit China 2019](#): 24-26 June, 2019 - Shanghai
 - › June 25: Arpit Joshipura - LF: Keynote on Edge Computing
 - › June 25: Yachen Wang - Tencent: LF Edge: Open Source to Enable 5G, IOT and AI Development
 - › June 25: Drasko/Janko - Mainflux: Integration of Edge & Cloud IoT Platforms
 - › June 25: Xuan Jia - China Mobile: 5 Biggest Issues in Edge Computing
 - › June 25: LF Edge Panel: Edge Computing in the IoT
 - › June 26: Tina Tsou - Arm: Your Path to Edge Computing
- › [IoT Meetup - Shanghai](#): 25 June, 2019 - Shanghai, China
 - › Hosted by VMware
 - › Speakers from LF, VMware, Arm, Baidu, Tencent, Huawei



Upcoming External Events continued

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

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

- › [Open Source Summit Japan](#): 17-19 July, 2019 - Tokyo, Japan
 - › July 17: BoF - Getting the Edge in Edge Computing
 - › July 19: Tiejun Chen, VMware - Build Edge Computing with EdgeX Foundry over Kubernetes
 - › July 19: Hyde Sugiyama, Red Hat - Kubernetes Native Infrastructure and CoreOS Operator Framework for 5G Edge Cloud Computing
- › [Embedded Linux Conference \(ELC\)](#): 21-23 August, 2019 - San Diego
 - › August 20: [LF Edge Mini-Summit](#) - Half-day, single-track event on the topic of IoT and Edge Computing
 - › August 21: Tingyu Zeng, Dell: An Agile Approach to Threat Modeling for Securing Open Source Project EdgeX Foundry
 - › August 22: Malini Bhandaru, VMware & Trevor Conn, Dell - IoT Action at the Edge - EdgeX Foundry 1.0 Released!
 - › August 23: Alexandre Courouble, VMware - Easy as a pi: EdgeX on Raspberry Pi for Automotive IoT

- › Discussions around upcoming events occur in the LF Edge Outreach Committee
- › Members may subscribe at: <https://lists.lfedge.org/g/outreach-committee>



Upcoming CFP Due Dates

- › [Open Networking Summit Europe](#): Sept. 23 - 25, 2019, Antwerp
 - › CFP Due: June 16
 - › <https://events.linuxfoundation.org/events/open-networking-summit-europe-2019/program/cfp/>
- › [Open Source Summit Europe](#): Oct. 28 - 30, 2019, Lyon
 - › CFP Due: July 1
 - › <https://events.linuxfoundation.org/events/open-source-summit-europe-2019/program/cfp/>
- › [Embedded Linux Conference](#) (Co-located w/ OSS Europe): Oct. 28 - 30, 2019, Lyon
 - › CFP Due: July 1
 - › <https://events.linuxfoundation.org/events/embedded-linux-conference-europe-2019/program/cfp/>



EdgeX TSC F2F Meeting(s)

4 November - 8 November, 2019 -- Location Phoenix, Arizona (USA) -- [Wiki page](#)

- Latest agenda available on the [Wiki](#)

Venue

- Galvanize – 515 E. Grant Street, Phoenix, AZ 85004

Coming Soon (before EoM June):

- **RSVP:** Links to register will be available on [Wiki](#). Will include registration for each section.
- **Hotel/Travel:** Recommended hotels



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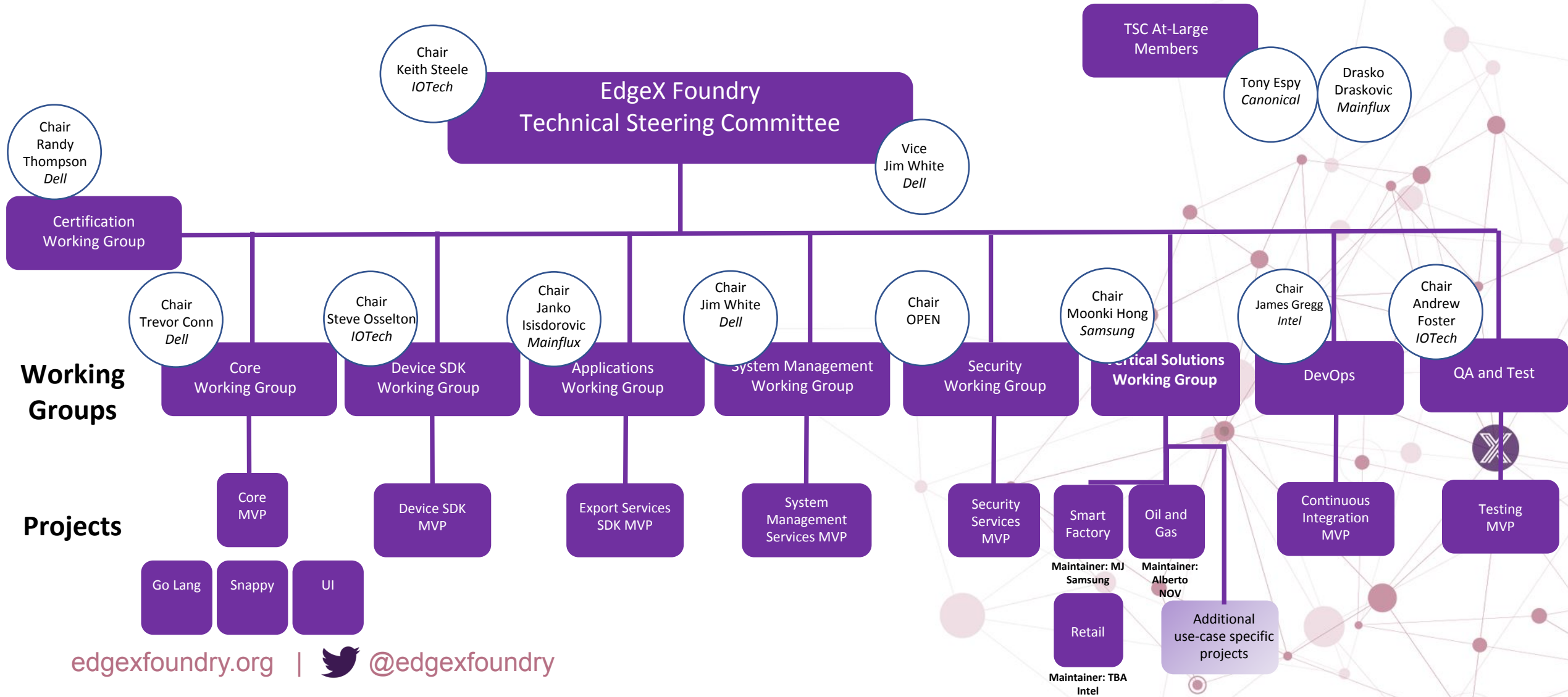
AOB / Reminders

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 13, 2019**

EdgeX Project Organization



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](#)

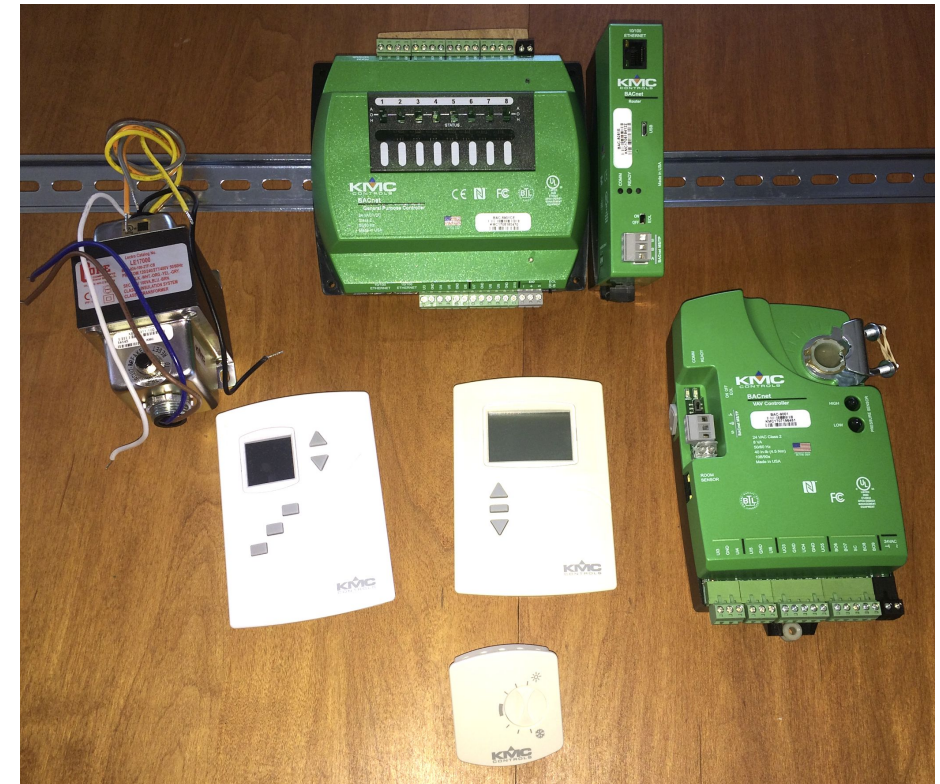
What is the Device Exchange?

- 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