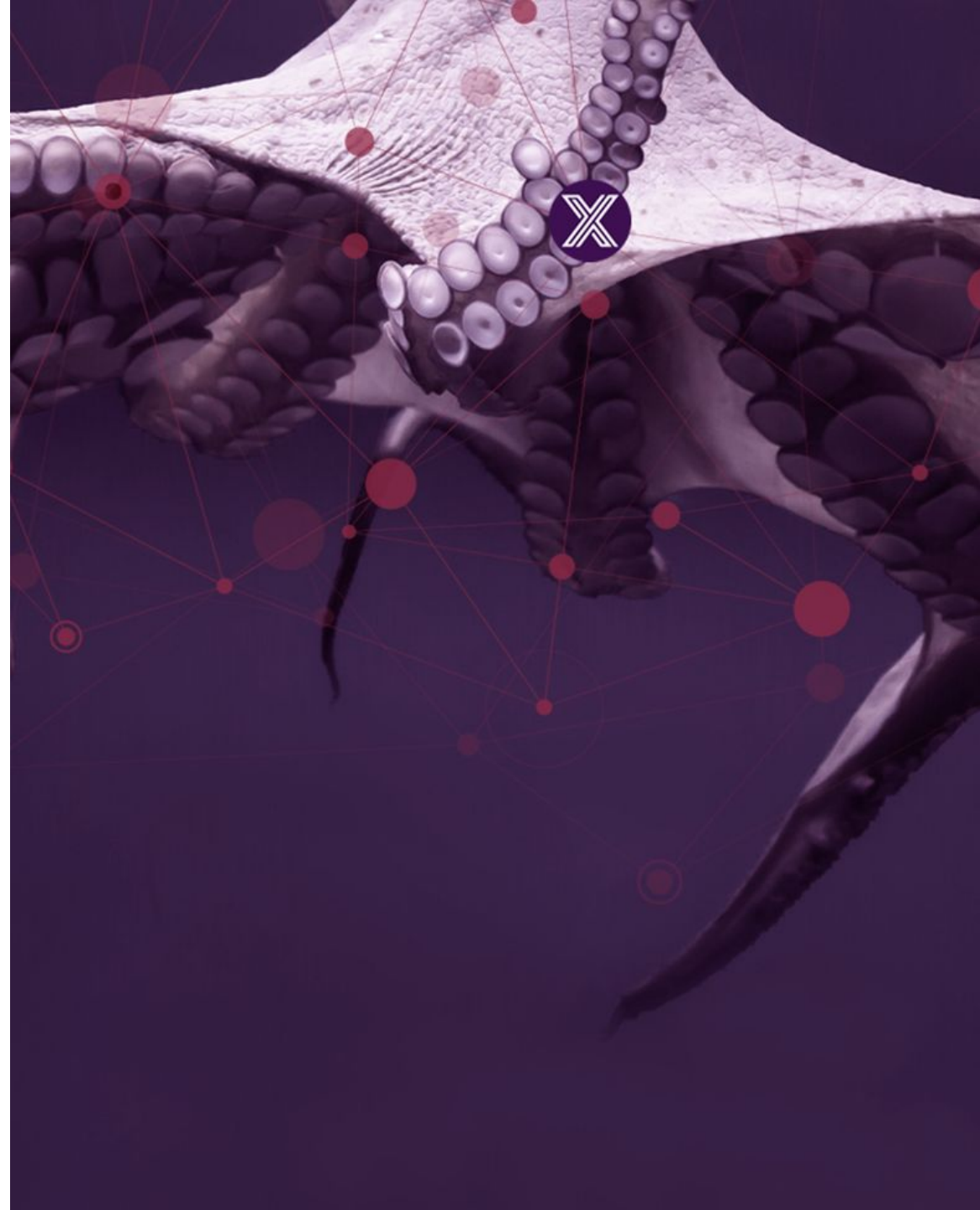


EDGE X FOUNDRY™

TSC Meeting

June 13, 2018



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 13, 2018 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
Analog Devices	Doug Gardner	doug.gardner@analog.com
Mainflux	Janko Isidorovic	janko@mainflux.com
Dell	Jason Shepherd	Jason.A.Shepherd@dell.com
The Linux Foundation	Jeremy Phelps	jphelps@linuxfoundation.org
Dell	Jim White	james.white2@dell.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
Samsung	Moonki Hong	moonki1.hong@samsung.com
Samsung	MyeongGi Jeong	myeong.jeong@samsung.com
VMware	Salim AbiEzzi	salim@vmware.com
Canonical	Tony Espy	espy@canonical.com

New TSC terms begin June 25, 2018

Current quorum = 9 members

Note: TSC meetings shall require a quorum of two-thirds of the TSC total members to take a vote or make a decision. If a TSC meeting fails to meet the quorum requirement, discussions may proceed, however there shall be no voting or decisions.

Today's Agenda

- Palo Alto F2F Highlights
- Roadmap updates
 - Delhi/Edinburgh/Fuji Roadmap
 - Wiki Roadmap
- Working Group Updates
- Next TSC F2F Meetings
- TSC Elections Updates
- IIC Updates
- Evangelist Hiring
- Upcoming Events
- AOB



Palo Alto F2F Highlights (Delhi Planning)

Jim White

Delhi Roadmap

- System Management
 - Agent & supporting API in each service (stop, configuration, metrics)
 - Stretch support systemd initialization
 - Stretch tie to 3rd party management system (Azure, Pulse IoT, etc)
- Security
 - Next blocks - TBD by WG (ACL and others among the candidates)
 - secure the bootstrapping (protect Vault secret)
- Improve testing, documentation, quality
 - Performance testing
 - Blackbox everything
 - Easier for developers to onboard with docs/videos/etc.
- DS SDKs
 - In Go and C
 - At least one sample DS (simple virtual device service)

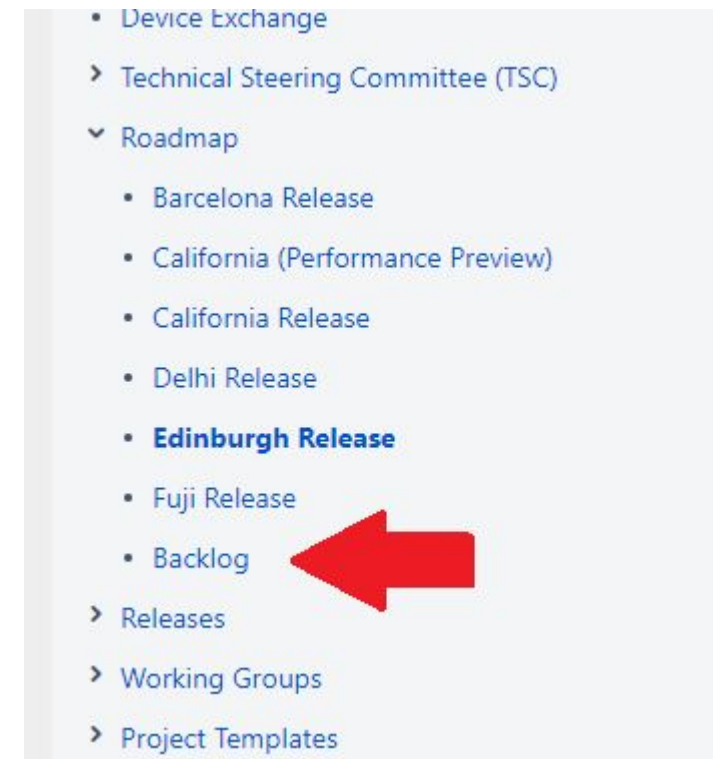
Other decisions and highlights

- Performance targets for EdgeX are already being hit (except Java DS)
- Support for binary data to be processed by EdgeX for the first time to allow for carrying video images, audio data, and the like
- Refactored services to incorporate better isolation to allow for future replacement of infrastructure elements such as the local persistent store or message infrastructure
- The addition of an EdgeX UI which will be previewed this summer but officially released with Delhi
- Research and design on a new application services layer to replace the existing export services layer of EdgeX will be published with Delhi (implement by Edinburgh)
- Research and recommendations on options for a MongoDB replacements will also be announced with Delhi (intention of offering changes by the Edinburgh)
- Develop a Wiki page for EdgeX value add/extensions/replacement services (code that is available by community but not in EdgeX)

Roadmaps have been updated

- Delhi roadmap now up for review/commentary
- Edinburgh/Fuji are just key themes and objectives
- New Backlog page holds all the ideas, tech debt, etc. that has/is considered but not pinned to a release yet
 - Please provide commentary and add your missing items

side note: Wiki documentation is getting updated this week to freeze pages that are now in Github





EDGE X FOUNDRY™

Work Group Updates

Working Group Chair Updates

- Around the horn **& state of WG for Jun 15 Freeze**
 - Core/Supporting - Trevor
 - Applications - Janko
 - Device Services - Steve
 - Test/QA - Andy
 - DevOps - Jeremy
 - Security - David
 - System Management - Jim
 - Vertical Solutions - Moonki
- Others

Core WG Update

- **State of code for CA (are these ready for 15th freeze)**
 - Core refactors/bug fixes in
 - Config-seed in Go should be ready by 15th
 - Stretch - Support Notifications in review (will not be in by 15th, but hopefully by release date)
 - Pushing scheduling to soon after release date (dot release offering)
 - Other updates

Application WG Update

- **State of code for CA (for 15th freeze)**
 - Are the following ready???
 - Azure IoT export connector - Dejan Mainflux working
 - XMPP export connector - WIP - Contribution is merged
 - ThingsBoard IoT export connector - WIP - Contribution is merged
 - Brightics IoT export connector - development to start in June 2018.
 - Google IoT export connector - Dejan Mainflux working
 - Other updates

DS/SDK WG Update

- Nother for the freeze
- New requirements doc

QA/Test Working Group Updates

Blackbox Testing

- Currently running blackbox tests against both Java and Go services – tests are finding bugs and differences between implementations that we are in the process of fixing or submitting as issues
- Have created new blackbox tests for Logging and Rules Engine, Notifications, Scheduling, Export Client and Device Service (will be complete by 15th June)
- In the process of pushing new blackbox tests back to the project

Security Functionality Testing

- Still need to create test plan/strategy and identify resources to implement tests for California Security functionality

Documentation

- Have reviewed documentation on Wiki and new docs in GitHub are currently up to date with respect to Wiki content.
- Plan is to start making any new changes to GitHub docs and not the Wiki.
- Eventually Wiki content for product docs will be deprecated

DevOps Working Group Updates

1. License and Copyright built into images now for distribution.
2. Full publishing of go bins and images from edgex-go.
3. Made contribution to blackbox-testing (fetch images from nexus).
4. Email notifications from blackbox-testing failures ([subscribe](#)).

TO DO:

1. Copy attribution files from edgex-go into image and bin tar.
2. California branch cutting and final release (are we releasing Java services?)

Security WG Update

- **State of code for CA (are these ready for 15th freeze)**
 - Kong and Kong seed application
 - Vault and Vault init scripts
 - Miscellaneous
 - complete 2nd docker-compose
 - Firewall / port access configuration via Docker
 - Documentation
- Other Updates

System Mgmt WG Update

- Look for more soon as we ramp up

Vertical Solutions WG Update

- TBA



Next TSC F2F Meetings

Keith Steele

EdgeX TSC F2F Meeting(s)

- Tuesday & Wednesday 23rd/24th October -- Location Edinburgh, UK
 - Rather than booth, target [CFP submissions](#) (CFP closes **July 1**)
 - **RSVP** at <https://goo.gl/forms/QR3WgP4ybB5KUT3w2>
 - Current registration count: 3 in-person; 0 dial-in
 - Hotel/Travel:
<https://events.linuxfoundation.org/events/elc-openiot-europe-2018/attend/venue-travel/>
 - Open question: WG meetings on Monday, October 22
 - Does each WG need their own room? (or would the main meeting room, with rounds of 6-8 suffice?)
 - If separate rooms, how many people per room? Assume dial-in needed?
 - 6 rooms? Security, System Mgmt, Core/Support, Applications, Device Services, Test QA (what about Vertical Solutions?)
 - For Tuesday night dinner/activity, please connect whisky tasting/tour company with Brett
- April 2019 -- Location Seoul or Suwon (South Korea)



TSC Elections Updates

Brett Preston

Upcoming WG Chair/TSC Elections

- WG Chair terms scheduled to end June 24, 2018
- Steady State TSC composition includes:
 - Working Group Chairs
 - Three (3) TSC at-large representatives
 - Platinum member representatives (when not otherwise represented above)
- Voting members of the TSC must be Contributors or Maintainers in the Project
- Contributor definition: Anyone in the technical community that contributes code, documentation or other technical artifacts to the EdgeX Foundry Project codebase.

WG Chair Electees

- Applications Working Group Chair: Janko Isidorovic (Mainflux)
- Core WG Chair: Trevor Conn (Dell)
- DevOps WG Chair: Jeremy Phelps (LF)
- DS/SDK WG Chair: Steve Osselton (IOTech)
- Security WG Chair: David Ferriera (ForgeRock)
- System Management WG Chair: Jim White (Dell)
- Test/QA WG Chair: Andy Foster (IOTech)
- Vertical Solutions WG Chair: Moonki Hong (Samsung)

Upcoming WG Chair/TSC Elections - Timeline

- Friday, June 8 - Friday, June 15: TSC At-large Elections
- Monday, June 18 - Friday, June 22: TSC Chair Nominations
- Sunday, June 24: End of current TSC term
- Monday, June 25: 1st day of new TSC
- Monday, June 25 - Friday, June 29: TSC Chair Voting



EDGE X FOUNDRY™

IIC Updates

Riaz Zolfonoon

Next steps for planning IIC/EdgeX Workshop

Sept 10-14

Chicago, IL

1. Finalize/approve the agenda (time-sensitive)

a. Notify IIC of our decision

2. Identify the speakers for EdgeX topics

3. Estimate the size of EdgeX attendees and arrange for passes

4. Work with IIC on setting up the exact timing

The time for the workshop comes from the IIC Security Working Group (SWG) track during Chicago meeting. It will be finalized as IIC SWG finalizes its own agenda for Chicago.

5. Start promoting the event

The IIC Marketing can do very little on this since the event is held during their meetings –to stay neutral/fair to other member activities

Note: Just FYI and for planning considerations for those traveling to Chicago: At the same time as IIC meeting, there is also Hannover Messe USA and Intelligent Transportation Forum (ITS) happening in Chicago. On Friday 9/15, IIC and ITS are planning some joint activities.

<https://hannovermesseusa.com/>

Proposed Agenda

- 1. Introductions and Workshop Overview (10 min)**
Speakers: SWG Chair, LWG Chair, [EdgeX](#)
- 2. Overview of the IIC Liaison Working Group (10)**
Speaker: LWG Chair
- 3. Overview of EdgeX Foundry Initiatives/Activities (10)**
Speaker: [EdgeX](#)
- 4. IIC Security Initiatives (30)**
Speakers:
- 5. EdgeX Architecture/Security Overview (30)**
Speakers: [EdgeX](#)
- 6. Break (15)**
- 7. EdgeX Vertical Solutions Groups (15)**
Speakers: [EdgeX](#)
- 8. Panel Discussion & Q/A on Collaboration/Way Forward(55)**
Moderator: SWG Chair, Panelists: all presenters
- 9. Closing (5)**

Total: 3 hrs



EDGE X FOUNDRY™

Evangelist Hiring

Brett Preston

EdgeX Developer Advocate & Project Evangelist

- The EdgeX Foundry Project (EdgeX) is seeking a project evangelist and developer advocate to help grow and support the global EdgeX community
- Technical skills include: You are hands-on with EdgeX and Embedded technologies
- If you know of anyone, send them our way (link below)
- Full information available at <https://www.edgexfoundry.org/jobs/>



EDGE X FOUNDRY™

Upcoming Events

Brett Preston

Upcoming Events - Confirmed

- [LinuxCon + ContainerCon + CloudOpen China](#), June 25 - 27, 2018, Beijing
 - Community Partner: Save 15% on Attendee Registration with discount code LC318COM15 (<http://linux.31huiyi.com>)
 - Meetup being planned for June 26. RSVP at: <https://www.bagevent.com/event/1491965>
- [EdgeX Tokyo Meetup](#), July 3, 2018, Tokyo
 - Agenda: <https://www.edgexfoundry.org/event/edgex-foundry-meetup-in-tokyo-on-july-3/>
 - RSVP at: <https://goo.gl/forms/TaClMtm5jGu8JhuH2>
- [Open Source Summit North America](#), August 29 - 31, 2018, Vancouver, Canada
 - Community Partner: Save 15% on Attendee Registration with discount code OSSNA18COM15
- [EdgeX / IIC Workshop](#), September 12, 2018, Chicago, IL
 - Hosted jointly by:
 - IIC Security (Chair: Sven Schrecker, Intel)
 - Liaison Working Group (Chair: Wael William Diab, Huawei)
 - EdgeX Liaisons: James Clardy, NetFoundry, Riaz, Salim AbiEzzi VMware
- [Open Networking Summit Europe](#), September 25 - 27, 2018, Amsterdam, Netherlands
 - Community Partner: Save 15% on Attendee Registration with discount code ONSEU18COM15
 - CFP open through **June 24** / Submit your EdgeX talk [here](#)

Upcoming Events - Confirmed (continued)

- [IOT Solutions World Congress](#), October 16-18, 2018, Barcelona
 - CFP and Call for Testbeds have closed. Email pr@edgexfoundry.org if you were selected so that we can track/promote
 - EdgeX is exploring booth options (call for booth staff volunteers will follow)
- [Open Source Summit Europe](#), October 22 - 24, 2018, Edinburgh, UK
 - Community Partner: Save 15% on Attendee Registration with discount code OSSEU18COM15
 - CFP open through **July 1** / Submit your EdgeX talk [here](#)
- [ELC / OpenIoT Summit Europe](#), October 22 - 24, 2018, Edinburgh, UK
 - CFP open through **July 1** / Submit your EdgeX talk [here](#)



EDGE X FOUNDRY™

AOB / Reminders

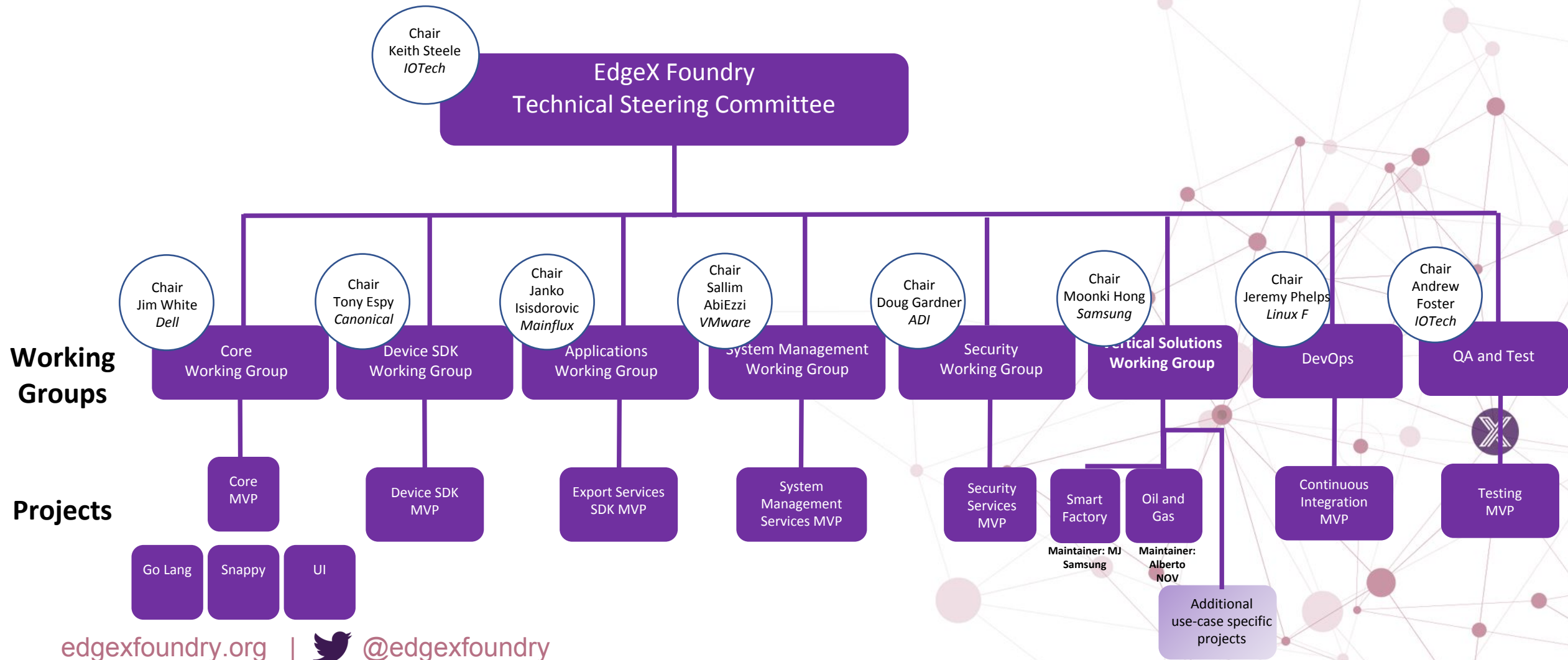
Brett Preston

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 20, 2018**

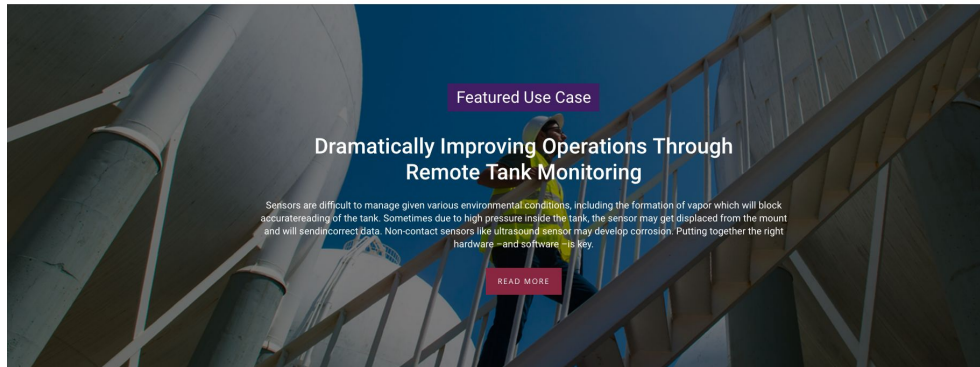
EdgeX Project Organization



Marketing

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

EdgeX Use Case Campaign



Use Cases

1. Draft site is available for review:
 - <https://www.edgexfoundry.org/use-cases/>
 - all passwords set to UseCase!
2. Seeking volunteers to help work in EdgeX connection
 - EdgeX specific use cases
 - examples of how EdgeX helps with a use case; which can include how a third party applies their commercial value add
 - email usecases@edgexfoundry.org to sign up

Use Cases

Enterprises, government agencies and service providers are starting to experience the benefits of implementing large-scale IoT and Industrial IoT projects. Whether they are reducing the cost of operations, improving safety on work sites and in factories, or building their own connected products to remain closer to their customers, bringing value to them, decision makers need solid business cases to attract funding.

EdgeX Foundry's technology ecosystem makes it easier to roll out robust enterprise IoT and Industrial IoT systems with less risk, given more predictable, proven integration of multiple elements at the very edge of the network, from silicon to sensors, from connectivity to cloud, with security and reliability ensured along the entire system.

EdgeX Foundry's members are working across vertical industries on exciting projects we will share here, along with use cases to stimulate thinking and support creativity and innovation, with practical use cases that stand to save businesses money, while making them more competitive and profitable in an increasingly hyper-connected, digital world.

View All

Agriculture

Oil & Gas

Manufacturing

Retail

Smart City

Smart Building



Agriculture: Precision Irrigation

DECREASING WATER USAGE,
IMPROVING CROP YIELD, AND
ENSURING FOOD SECURITY



Oil & Gas: Tank Monitoring

DRAMATICALLY IMPROVING
OPERATIONS THROUGH REMOTE
TANK MONITORING



*Retail: Inventory Optimization
& Theft Detection*

MAJOR GAINS IN RETAIL SHELF
INVENTORY OPTIMIZATION AND

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 Brett Preston at LF (bpreston@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://chat.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 Rocket Chat

<https://chat.edgexfoundry.org/home>

- [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](#)

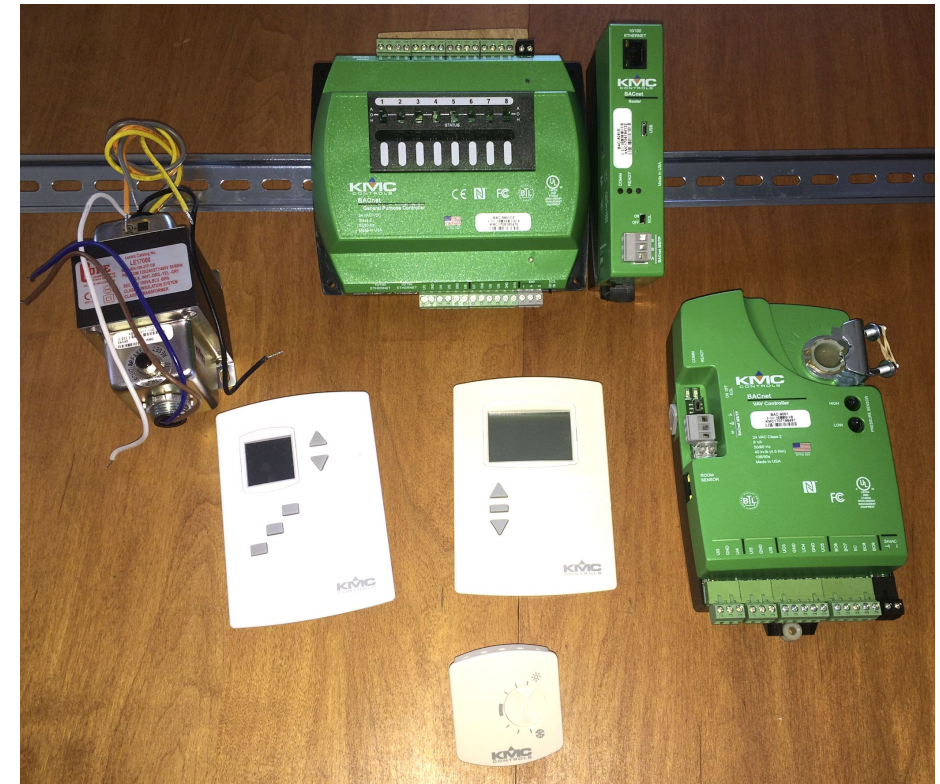
What is the Device Exchange?

- 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



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@edgexfoundry.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

China Presence / Beijing Meetup

WeChat:

- Email info@edgexfoundry.org for invite to EdgeX WeChat group

Beijing Meetup:

- June 26, 6PM - 9PM
- Hosted by VMware
- In collaboration with Zephyr Project
- RSVP/Registration: <https://www.bagevent.com/event/1491965>

Agenda (tentative)

- Opening Address (Alan Ren - VMware, Kate Stewart - Linux Foundation, Gavin Lu - VMware)
- Keynote: Introducing Zephyr (Wei Ren - Synopsys, Jianghao Qiao - NXP)
- Keynote: Introduction to EdgeX (Jim White - Dell, Tiejun Chen - VMware)
- Keynote: BUPT Presentations and demos on both EdgeX and Zephyr (Professor Li - BUPT)
- Keynote: VMware EdgeX Explorations (Tiejun Chen - VMware, Huaqiao Zhang - VMware)
- Keynote: Using EdgeX in optimization of manufacturing processes (Jijun Ma - Wanxiang)
- Keynote: A fast way to deploy IoT application based on EdgeX (Xiao Shen - Quarkdata)
- Roundtable Discussion + Q&A



EDGE X FOUNDRY™

Thank You