

EDGE X FOUNDRY™

TSC Meeting

April 11, 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: April 11, 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

Current quorum = 8 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

- Working Group Updates
- Next TSC F2F Meetings
- EdgeX Test Beds
- IIC Liaison Updates & Opportunities
- Website Updates
- Upcoming Events
- AOB



Working Group Updates

Jim White

Working Group Updates

- Reminder to get your votes in for innovation/contribution awards
- New Security Testing project meeting meetings on Tuesday mornings
 - Connect with Andy/Brett to participate
- New documentation coming on line this week for evaluation/comment
 - PR already in place#127
- Large contributions
 - Samsung Core Config Seed - recommend accept
 - Will require significant rework to bring under the mono repo (Dell Team to lead)
 - Scheduler Service - Vino Yang (independent)
 - EdgeX UI - Huaqiao Zhang (VMWare)
- Technical Debt identification/submissions
 - In preparation of June F2F (Delhi planning)
 - Provide your inputs to Jim W.

Working Group Updates (cont.)

- Security WG good progress
 - Kong/JWT demo in Sect WG (up next)
 - Task list online:
<https://docs.google.com/spreadsheets/d/1gHgJvW1A5NtzVwAIT9Lr7hsZB4z-ITHgJ8zNHIX0sJI/edit?ts=5acbdedc#gid=0>
- Snap Deployment
 - All of EdgeX in Snappy
 - About to be enter part of CI process
 - Project meeting every other Tuesday
- Core Refactoring
 - Core data proposal to be presented by Trevor Conn at Core WG tomorrow
 - 40%+ unit testing
- Vertical Solutions
 - Working IIC Testbed
 - Proposing vertical marketplace

Other Working Group Chair Updates

- Around the horn
 - Applications - Janko
 - Device Services - Tony
 - Test/QA - Andy
 - DevOps - Jeremy
 - Security - Doug
 - System Management - Salim
 - Vertical Solutions - Moonki
- Others

Upcoming WG Chair/TSC Elections

- Start thinking about nominations. Rules:
 - There shall be a nomination and election period for electing Contributors or Maintainers to the TSC.
 - Voting Members of the TSC must be Contributors or Maintainers in the Project.
 - The Contributors and Maintainers of each Working Group shall elect a Working Group Chair for their Working Group. Each Working Group Chair will serve as a voting member of the TSC.
 - All Contributors and Maintainers in the Project shall elect three TSC at-large representatives to serve as voting members of the TSC.
 - Additionally, Platinum members of the Project when not otherwise represented as a voting member of the TSC, may appoint one representative to serve as a voting member of the TSC.
 - No member or group of Related Companies shall have more than 3 votes on the TSC.



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Next TSC F2F Meetings

Jim White

EdgeX TSC F2F Meeting(s)

- April - California Contributor Meeting F2F for contributors at Hannover Messe (ad hoc)
- Tuesday & Wednesday 5th/6th June -- Location VMWare Palo Alto, California
 - RSVP at <https://goo.gl/forms/fzunofabMiliT5Ht1>
- October To coincide with LF's Embedded Linux Conference EU / OpenIoT Summit is October Monday, 22 - Wednesday 24, 2018 in Edinburgh, UK - Propose meeting for Tuesday/Wednesday 23rd/24th October.
 - Rather than booth, target CFP submissions (CFP closes July 1)
 - AI - Brett: Work with LF events team to secure meeting space 23-24 October - *WIP*
- Following meeting would be in Asia at Samsung Facilities?



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EdgeX Test Beds

Jim White

EdgeX Test Beds

- Discussion on EdgeX Test Beds
- Test Bed Collaboration
- Vertical Solutions Working Group call held Monday, April 11
 - [Meeting Recording](#)



IIC Updates & Opportunities

James Clardy

IIC Liaison Updates and Opportunities

- Chicago F2F - September 12, 2018
 - Latest update (March 21): Kickoff meeting between both teams proposed - who's on point at EdgeX?
 - Hosted by IIC Security WG (Email sven.schrecker@intel.com, wael.william.diab@huawei.com)
 - EdgeX Liaison: James Clardy
 - If you'd like to contribute, please email info@edgexfoundry.org to be added to EdgeX-IIC liaison mail list
 - Need to propose Agenda Topics/Speakers
 - Example: <http://www.iiconsortium.org/liaison-workshop.htm>
 - Primary goal: Educate people about EdgeX, align to IIC Member goals / needs
 - Potential Agenda Items:
 - 1. Introductory presentation EdgeX (including architecture overview)
 - 2. IIC Reference Architecture
 - 3. System Management, Security - How does this align to IISF and IIC Endpoint Security Best Practices?
 - 4. Overview of Vertical Activities - alignment to IIC testbeds?
 - 5. Presentations from IIC - what's desired by EdgeX Members?
 - 6. Representatives from member companies to present use cases; how they fit in, what they are contributing (examples: Samsung, RSA)
 - 7. Map EdgeX to IIC
 - Session length? TBD - (IIC/oneM2M workshop was 3.15 hours)
 - Indicated interest in participating (as of April 10): Keith Steele, Doug Gardner, Riaz Zolfonoon, Salim AbiEzzi
 - Email info@edgexfoundry.org to RSVP



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Website Updates

Brett Preston

Website Update: New Jobs Board

Now live: <https://www.edgexfoundry.org/jobs/>
Post your EdgeX job listings

Community: Jobs Board

We would be happy to link to your EdgeX related job listing here. Feel free to add your information via our form. We'll review the information and if appropriate, we'll add it to this page. Job listings will expire in a month so if still unfilled, you'll need to post it again.

[POST A JOB OPENING](#)

IOTech
Software Engineer

Software Engineers across a range of technology skills and experience. Experience of software product development environments. Programming proficiency in C and/or GO and/or Java.

Multiple, Newcastle and Edinburgh
UK

[VIEW JOB DETAILS](#)

Your Company Name
Your Open EdgeX Related Job Here

Please enter using the Post a Job Opening link

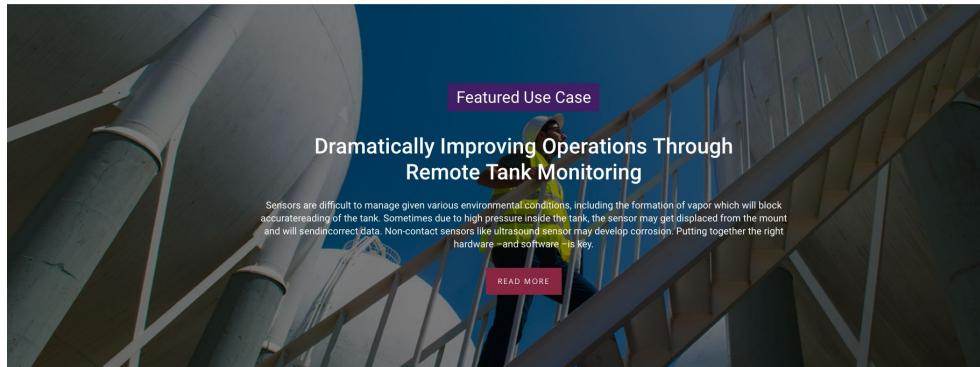
City, Any State
Any Country

EdgeX Use Case Campaign

- Seeking EdgeX specific Use Cases
- Including examples of how EdgeX helps with a use case; which can include how a third party applies their commercial value add
- Vertical industries targeted for launch:
 - Agriculture
 - Oil & Gas
 - Manufacturing
 - Retail
 - Smart City
 - Smart Building
- **REQUESTED:**
Email usecases@edgexfoundry.org if you have examples you can share

EdgeX Use Case Campaign

EDGE X FOUNDRY™ [About](#) [Developer's Guide](#) [News & Events](#) [Community](#) [EdgeX in Market](#) [Twitter](#) [LinkedIn](#) [Facebook](#) [Instagram](#) [Search](#)



Use Cases

- Volunteer to help QA prior to launch:
 - <https://www.edgexfoundry.org/use-cases/>
 - all passwords set to UseCase!
 - send feedback to Cynthia (email below)
- Email new ideas for Use Cases to usecases@edgexfoundry.org

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**



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Upcoming Events

Brett Preston

Upcoming Events - Confirmed

- [Hannover Messe](#), April 23-27, Germany
 - Member booth: Canonical, IOTech, IoTium, RSA/Dell, Software AG, VMware
 - Members outside booth: Analog Devices, CloudPlugs, FIWARE Foundation, FogHorn Systems, NetFoundry, Object Management, Tulip Interfaces
 - EdgeX Foundry and IIC Networking Dinner scheduled for Tuesday, April 24 from 6:30 - 9:30pm
 - [RSVP here](#)
- [FIWARE Summit](#), May 8-9, 2018, Porto, Portugal
 - Richard Henderson, Absolute
- [Internet of Things World](#), May 14-17, 2018, Santa Clara
 - Panel
- [Connectivity Expo](#), May 21-24, 2018, Charlotte, North Carolina
 - Galeal Zino, NetFoundry
- [LinuxCon + ContainerCon + CloudOpen China](#), June 25 - 27, 2018, Beijing
 - Community Partner

Upcoming Events - Confirmed (continued)

- [Open Source Summit North America](#), August 29 - 31, 2018, Vancouver, Canada
 - Community Partner: Save 15% on Attendee Registration with discount code OSSNA18COM15
 - CFP open through **April 29** / Submit your EdgeX talk [here](#)
- [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](#)
- [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](#)

Upcoming Events - Confirmed (continued)

- [ELC / OpenIoT Summit Europe](#), October 22 - 24, 2018, Edinburgh, UK
 - CFP open through July 1 / Submit your EdgeX talk [here](#)

Event Participation Opportunities

IOT Solutions World Congress

- <http://www.iotsworldcongress.com/>
- October 16-18, 2018
- Barcelona
- [Call For Papers](#) (CFP closes **April 16**)
 - EdgeX Submitted:
 - Security issues and practices in the IoT Edge Computing Era
 - How to build open source IoT ecosystems
- [Call For Testbeds](#) (Call for Testbeds closes June 11)
 - Submitted: ---
- Email info@edgexfoundry.org if you submit for CFP or Testbeds so that we can track



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AOB / Reminders

Brett Preston

TSC Elections

- **Election Process In summary:**
- Current TSC terms run through 6/24/201, will initiate elections at next TSC meet.
- The Contributors and Maintainers of each Working Group shall elect a Working Group Chair for their Working Group. Each Working Group Chair will serve as a voting member of the TSC.
- All Contributors and Maintainers in the Project shall elect three TSC at-large representatives to serve as voting members of the TSC.
- The voting members of the TSC will elect a TSC Chair annually, who will serve as a voting member of the Governing Board, and will liaise between the Governing Board and technical leadership of the EdgeX Foundry Project. The TSC Chair... must be representative of a member company.

TSC Elections

Definitions

- i. Contributors: anyone in the technical community that contributes code, documentation or other technical artifacts to the EdgeX Foundry Project codebase.
- ii. Maintainers: Contributors who have the ability to commit code and contributions to a project's main branch on the EdgeX Foundry Project. A Contributor may become a Maintainer by a majority approval of the existing Maintainers.

Process

- Typically managed over email.
- Working Groups manage their own elections. LF can support if needed.
- Once the TSC has been put in place, the new TSC will take nominations for Chair. If there is more than one nomination, there will be a vote.
- One week for a nomination period, and one week for voting (if needed).

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](#) by Jim White, Dell (james_white2@dell.com)

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

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

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

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:



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

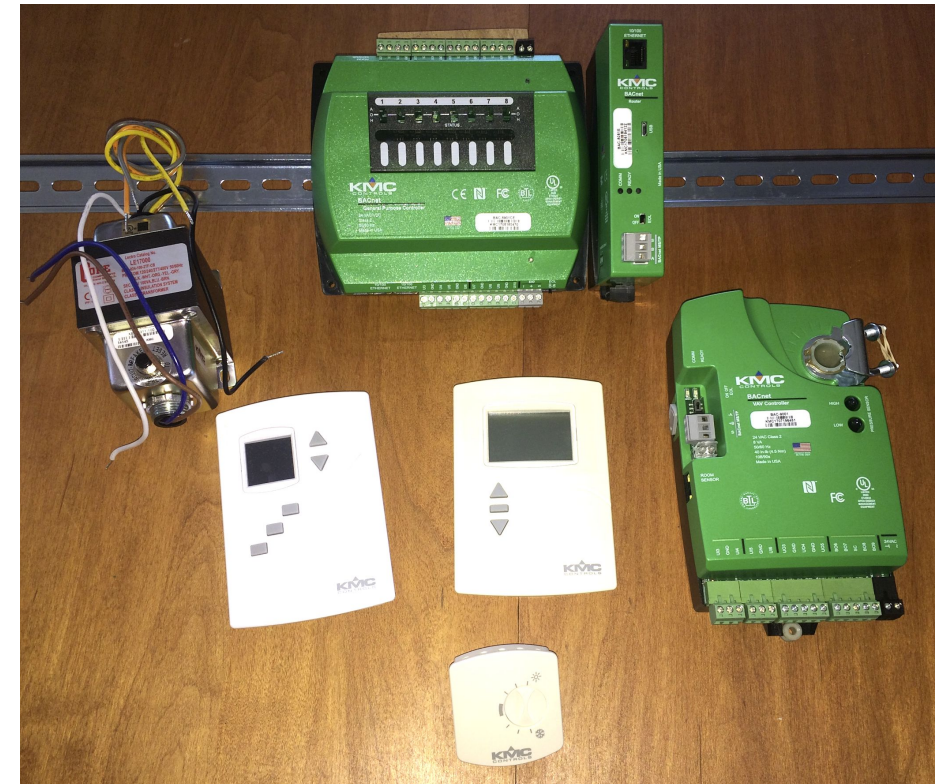
What is the Device Exchange?

- 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!!



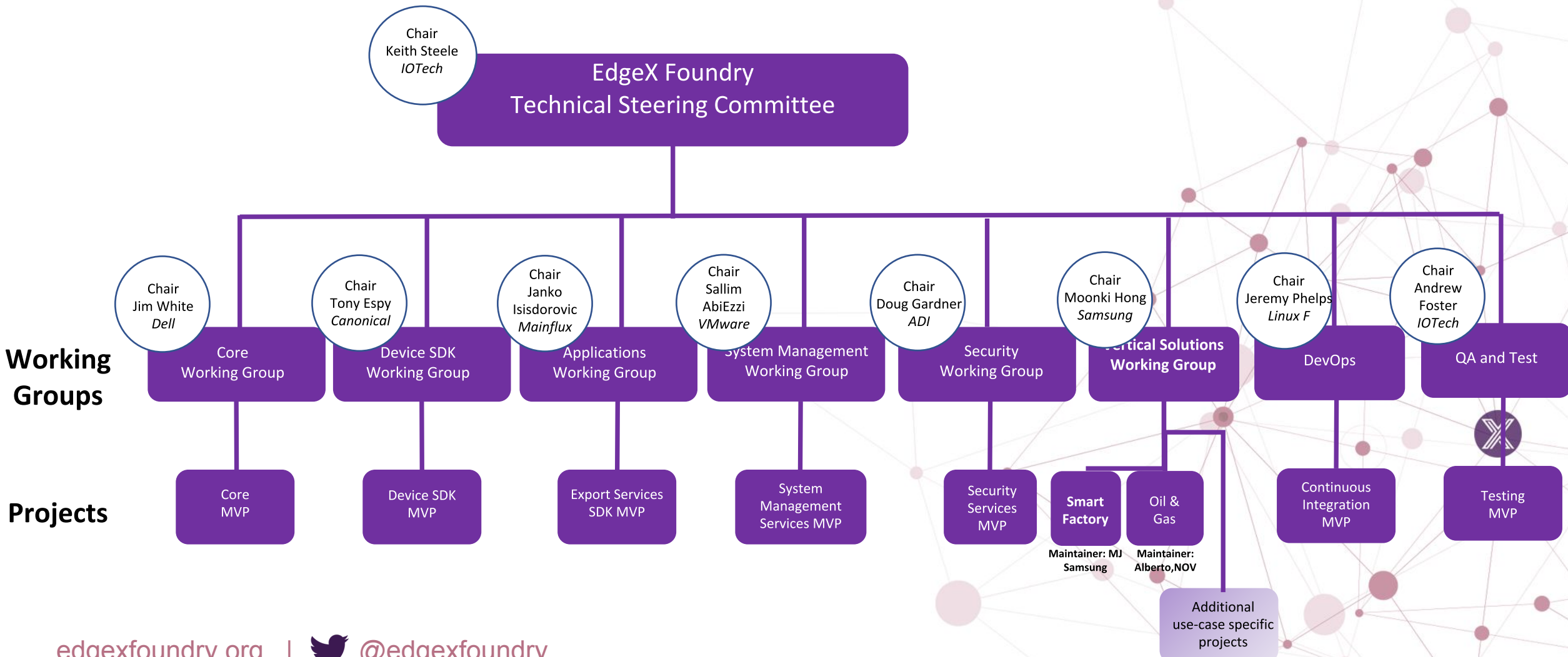
Hackathon Events

- Jim White and Tyler Cox putting together hackathon starter kit.
- More coming

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

EdgeX Project Organization



Marketing

- **CTA:** If your company will be demoing technologies that utilize the EdgeX framework, please email events@edgexfoundry.org so that we can add to <https://www.edgexfoundry.org/events/>
- **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

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: April 11, 2018**



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Thank You