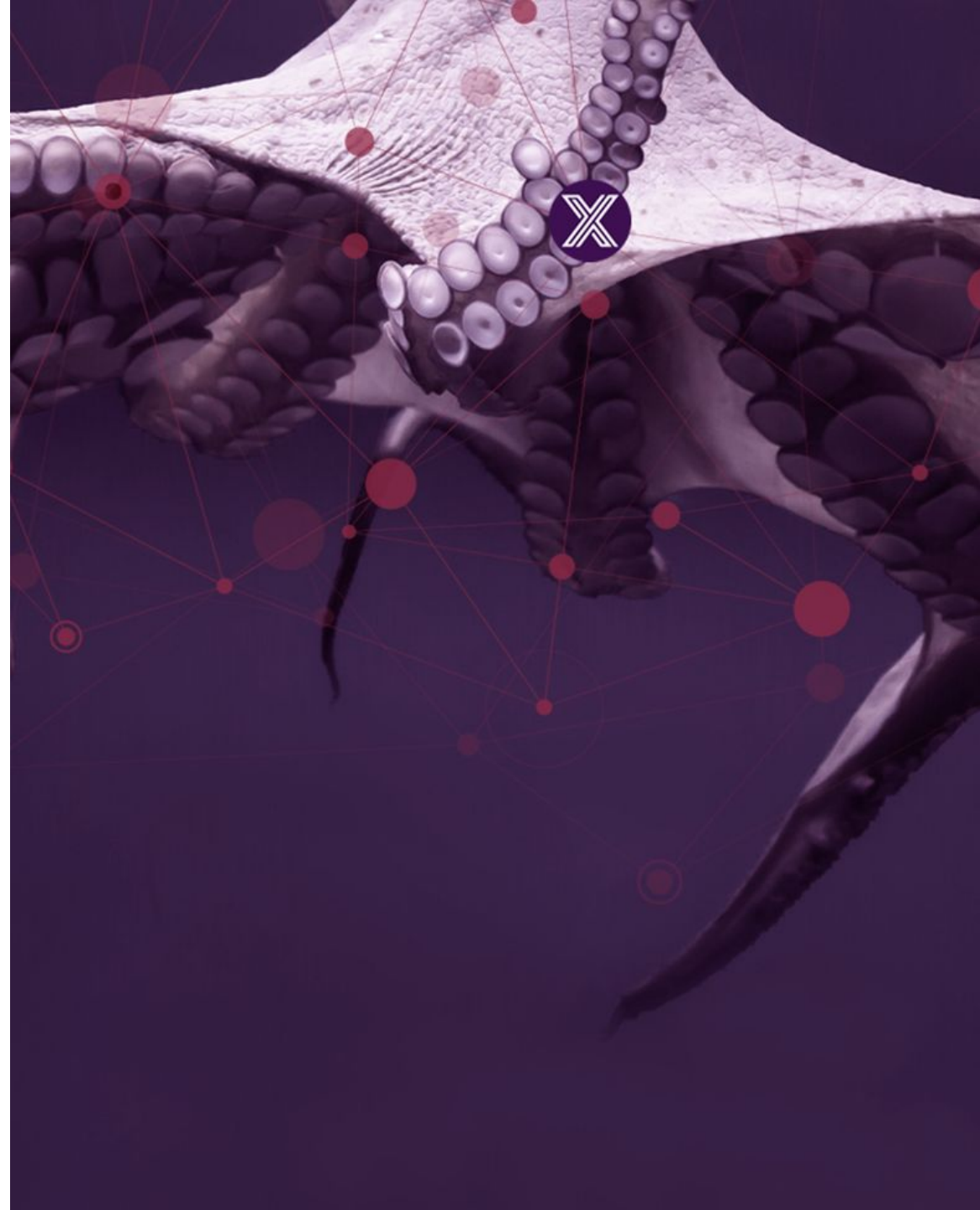


EDGE X FOUNDRY™

TSC Meeting

March 21, 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: March 21, 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/zoomconference?m=mkFexUxEcqHlvXHw53PqScTDRvS48PiQ>

** 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 = 7 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
- California Development Platform Needs
- Next TSC F2F Meetings
- EdgeX Test Beds
- IIC Liaison Updates & Opportunities
- Upcoming Events
- EdgeX Community Awards
- AOB



Working Group Updates

Jim White

California Project Plan & Resourcing

- Detailed task list needs input from chairs and major contributors
 - See Jim's email with attached spreadsheet from last week
- Responses by 22nd March
- Follow up virtual meeting to discuss

QA/Test WG California Release Status

- California Release QA/Test MVP tasks:
 - Automated Blackbox testing of outstanding EdgeX services: logging, notifications, logging, rules engine, notifications, schedule, export client, device service (generic)
 - Committed resources: IOTech is committed to deliver this for California, other volunteers welcome. Very good starting point for new member companies planning to get in involved with EdgeX
- Automated performance testing: footprint, startup, latency
- Committed resources: IOTech is committed to deliver this for California, again additional resources welcome
- New California EdgeX Services testing: security, system management
- Need to better understand what will be delivered in the areas for California and then define testing strategy and scope work required, particularly with respect to Security
- Documentation: GitHub hosted documentation
- Committed resources: IOTech have committed to deliver this for California

Core WG Significant Updates

- Go Project Work now complete and folding back into Core Working Group
 - Mono Repo up and running; code work in full swing
 - 0MQ replacement or alternatives postponed past California
- Snap Project Work starting (March 27) - all welcome
- New documentation review coming up (April)

Security WG Significant Updates

- Work progressing on Reverse Proxy. Looks like we will be using KONG/JWT authentication services. Also have a contribution from Drasko (will be presenting on today's Security WG call). Riaz and Beechwoods have been working on the use of Vault.



California Release Timing & Development Platform Needs

Keith Steele

Required California Development Environment

Developer/QA Tools

Accounts and some amount of available cloud resources (number of storage, compute, etc. hours) for

- Google IoT Core
- Azure IoT Hub
- AWS IoT Core
- Watson IoT Platform
- Pivotal Cloud Foundry Instance
- Cloud provided MQTT broker for testing various parts of EdgeX MQTT use (export services, device services, etc.)

Virtual Lab

- Cloud-based environment that is cable of launching, running and monitoring thousands of instances of EdgeX for volume, scalability and performance concerns.
- Also allows testing system management functionality as it relates to multiple deployments

- Devices in this lab would be virtual devices simulated through software

Physical Device Lab

- Intel and Arm based gateway(s) to run EdgeX
- Devices (for those protocols already supported by EdgeX) connected to the gateway(s)
 - BACNet
 - Modbus
 - BLE
 - SNMP
 - Serial
 - OPC-UA
 - Other devices would be added as more protocols are handled by EdgeX
- A small local network may be necessary
- Internet connectivity and firewall protection
- Internet camera mounted over the devices to be able to see any physical actuation

Action

- Cost the environment KRS
- Board approval for release of Project Funds to set up the environment



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Next TSC F2F Meetings

Keith Steele

EdgeX TSC F2F Meeting(s)

- Discussion on next TSC F2F Meeting(s)
- Developer/Contributor Conference - London -- [virtual](#)
- Member host
- April - California Contributor Meeting (London/Hanover) -- [potential F2F for Hanover](#)
- June - US (Austin) Dell host? -- [Keith will confirm with Jason](#)
- October
 - Barcelona World Solutions Congress
 - LF's [Open Source Summit EU](#) / [Embedded Linux Conference EU](#) is scheduled for October 22-24, 2018 in Edinburgh, UK
- Following meeting would be in Asia



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EdgeX Test Beds

Keith Steele

EdgeX Test Beds

- Discussion on EdgeX Test Beds
- Test Bed Collaboration



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IIC Updates & Opportunities

Jim 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)



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Upcoming Events

Brett Preston

Upcoming Events - Confirmed

- [Open Networking Summit North America](#), March 26 - 29, 2018, Los Angeles
 - Community Partner: Save 15% on Attendee Registration with discount code ONSNA18COM15
- [IoT Build](#), March 27-28, 2018, San Francisco
 - Speakership and panel - Noah Harlan (Two Bulls), Deb Noller (Switch Automation), Jason Shepherd (Dell), Rod Schultz (Rubicon Labs)
- [Hannover Messe](#), April 23-27, Germany
 - Member booth - confirmed so far: Canonical, IoTium, RSA/Dell, Software AG, VMware (2 other members in progress)
- [Internet of Things World](#), May 14-17, 2018, Santa Clara
 - Panel - Philip DesAutels (Linux Foundation - EdgeX Foundry)
- [LinuxCon + ContainerCon + CloudOpen China](#), June 25 - 27, 2018, Beijing
 - Community Partner
- [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](#)

Upcoming Events - Confirmed (continued)

- [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](#)

Event Participation Opportunities

IOT Solutions World Congress

- <http://www.iotsworldcongress.com/>
- October 16-18, 2018
- Barcelona
- [Call For Papers](#)
 - Submitted: ---
- [Call For Testbeds](#)
 - Submitted: ---
- Email info@edgexfoundry.org if you submit for CFP or Testbeds so that we can track



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EdgeX Community Awards

Brett Preston

EdgeX Community Awards

- **Innovation Award:** The Innovation Award recognizes individuals who have contributed (contributing back to open source) the most innovative solution to the open source EdgeX project over the past year. Once the submission deadline is closed, the EdgeX Technical Steering Committee will review the nominees and select 2 winners.
- **Contribution Award:** The Contribution Award recognizes individuals who have contributed leadership and helped EdgeX Foundry advance and continue momentum in the past year. This includes individuals who have led work groups, special products, and/or contributed large amounts of code, bug fixes, marketing material, documentation, or otherwise significantly advanced the efforts of EdgeX with their drive and leadership. The Governing Board will evaluate the nominees and select 2 winners.
- **Timing:**
 - Nominations open March 22 and close April 5, 2018 (email will be sent)
 - Awards will be announced at Hannover Messe, April 23-27 2018 in Hannover, Germany and in PR and marketing materials



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AOB / Reminders

Brett Preston

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



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

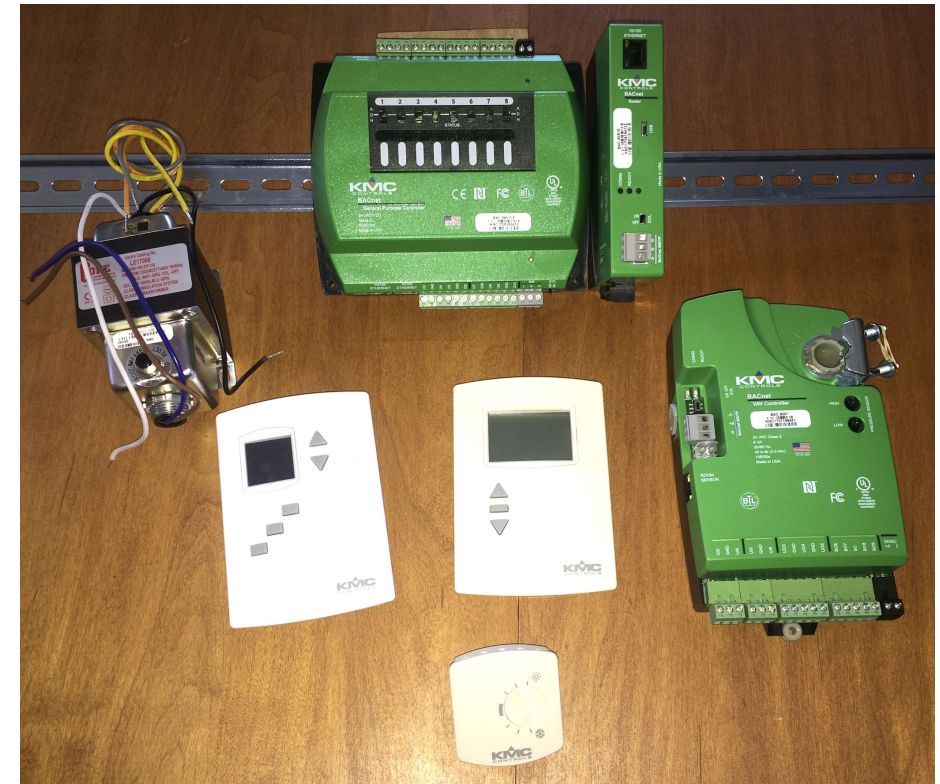
What is the Device Exchange?

- 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!!



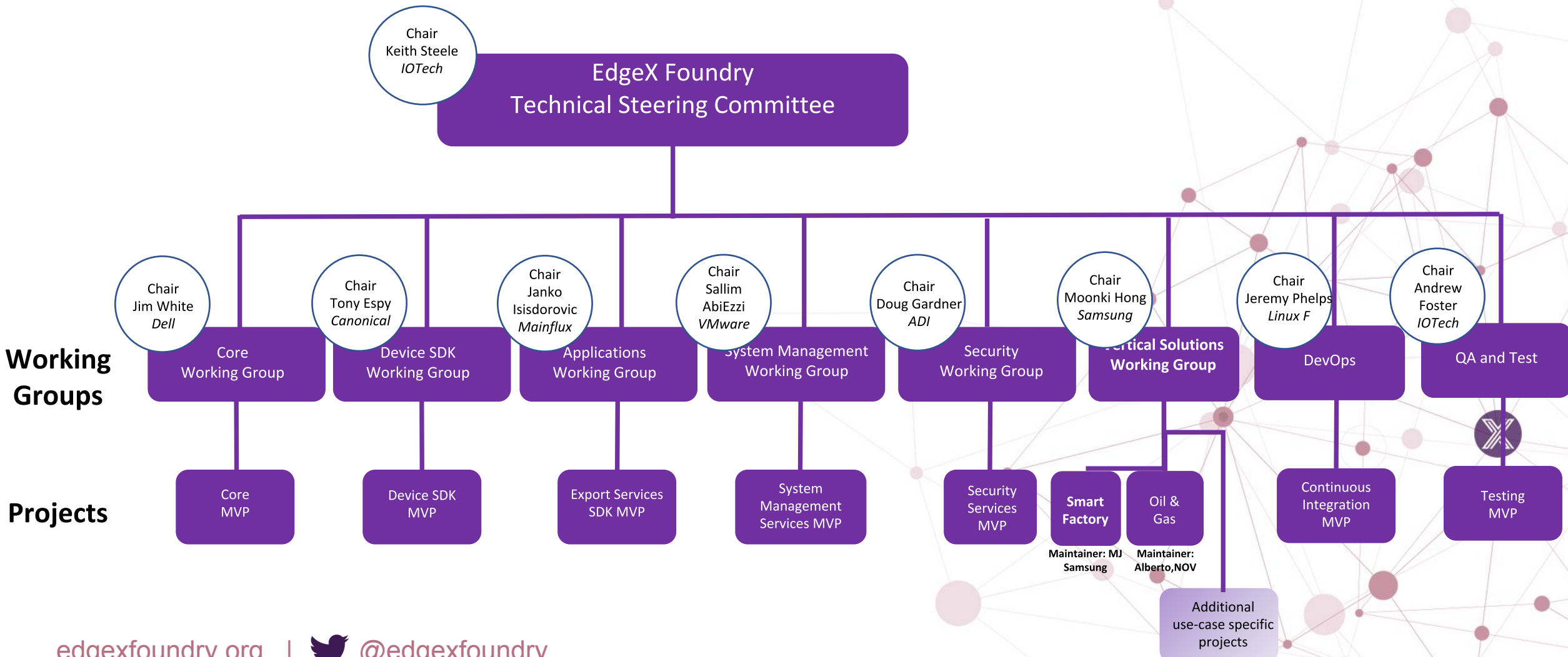
Hackathon Events

- 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: March 28, 2018**



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Thank You