EDGE X FOUNDRY™

TSC Meeting

April 4, 2018

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Meeting Logistics

Time: April 4, 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

Company	Name	Email
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 Planning - based on last week's review
- Development Platform Needs
- Next TSC F2F Meetings
- EdgeX Test Beds
- TSC Elections
- IIC Liaison Updates & Opportunities
- Upcoming Events
- EdgeX Community Awards
- AOB

Core Working Group Updates

- New documentation coming on line this week for evaluation/comment
- Configuration standardization & improved Consul integration
- Samsung config-seed-go review
- System Management - Requirements closure
- Join the service naming & availability discussion
  - Will be discussed during Core WG call on Thursday, April 5
  - Reference https://wiki.edgexfoundry.org/display/FA/Architecture+Issues+and+Decisions#ArchitectureIssuesandDecisions-ServiceIdentifiers
- Join the Snappy Deployment meetings
  - Next meeting @ April 10 (Tuesday) 1pm CDT
  - Email info@edgexfoundry.org to be added to meeting invite

California Planning

Keith Steele

California Release Planning Summary

- Options: reduce scope, move the date, increase resources
- Decision:
  - Keep June delivery date - June 30th
  - resource levels may be growing, but cannot be counted on to accelerate the delivery without some ramp time (and time to integrate works)
  - therefore, reducing scope

California Release

What is in scope and looks within reach?

- Core Services in Go (all four including core data, metadata, command, config-seed)
- Logging in Go (support service)
- Export Services in Go (including all the current connectors like Google, Azure, etc.)
- Security Services (reverse proxy with JWT authentication, data protection services via vault)
- Device Service SDKs (Go and C)
- REST API Blackbox testing
- Arm 64 support (artifact production and native testing)
- Revamped and improved documentation (in GitHub)

California Release - Scope reductions

What potentially gets moved to Delhi?

- System Management
- Support Services
  - Notifications in Go
  - Scheduling in Go
  - Rules Engine replacement
- Additional/replacement Device Services in Go or C
- Performance testing
- Security testing
- Reduced unit testing across services
- Arm 32 support (artifact production and native testing)

California Development Platform Needs

Keith Steele

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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
- IOT Pulse System management Test Environment

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**

EdgeX TSC F2F Meeting(s)

- April - California Contributor Meeting F2F for contributors at Hannover Messe (ad hoc)
- Tuesday & Wednesday 5th/6th June -- Location VMWare California (to be confirmed)
- October To coincide with LF's Open Source Summit EU / Embedded Linux Conference EU 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
- Following meeting would be in Asia at Samsung Facilities?

EdgeX Test Beds

Keith Steele

EdgeX Test Beds

- Discussion on EdgeX Test Beds
- Test Bed Collaboration
- Working Group call to be scheduled

TSC Elections

Keith Steele

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).

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, alignm 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)

Use Case Campaign Update

Brett Preston

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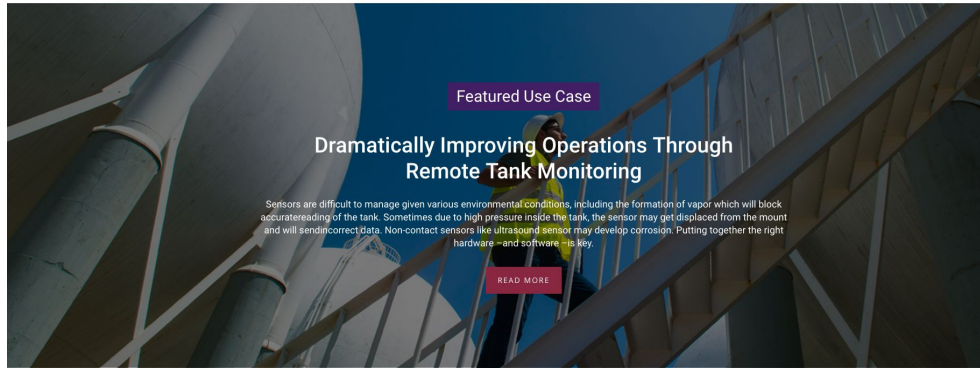
EdgeX Use Case Campaign

- 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

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

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
- Internet of Things World, May 14-17, 2018, Santa Clara
  - Panel
- 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

EdgeX Community Awards

Brett Preston

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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 close **April 5, 2018** (https://goo.gl/forms/Pk4GcJ7amSPqtyVJ2)
  - Awards will be announced at Hannover Messe, April 23-27 2018 in Hannover, Germany and in PR and marketing materials

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?
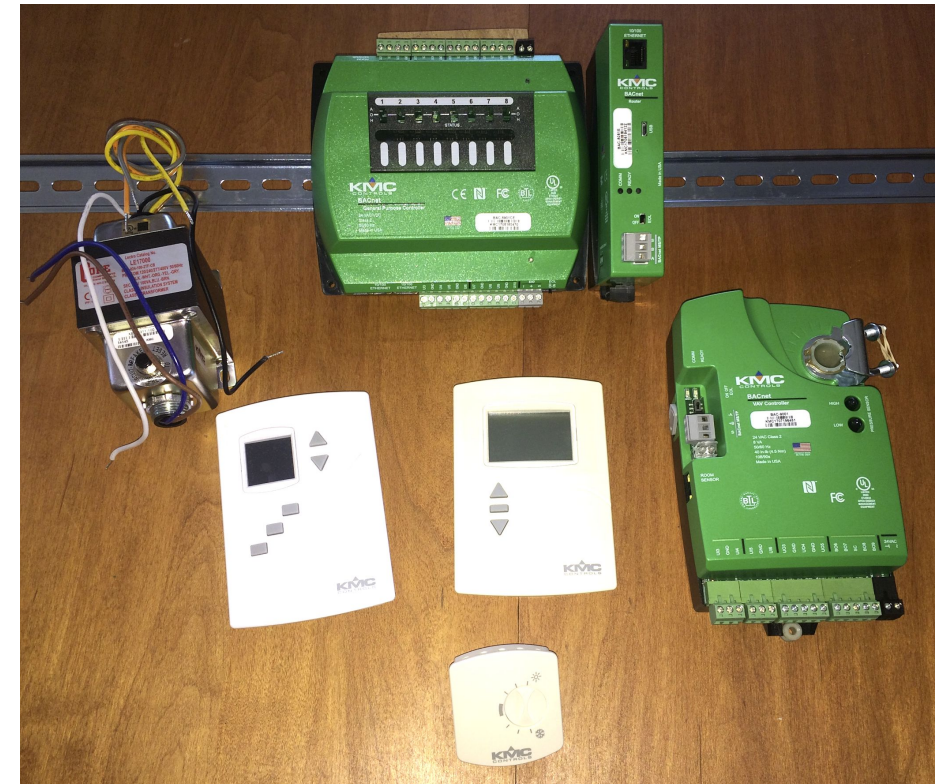
- A great way to put your products in the hands of other members so they can help build a better EdgeX!
  - https://wiki.edgexfoundry.org/display/FA/Device+Exchange

Special thanks to Dave Bohlman and KMC Controls for making this awesome kit and how-to guide available to members!!

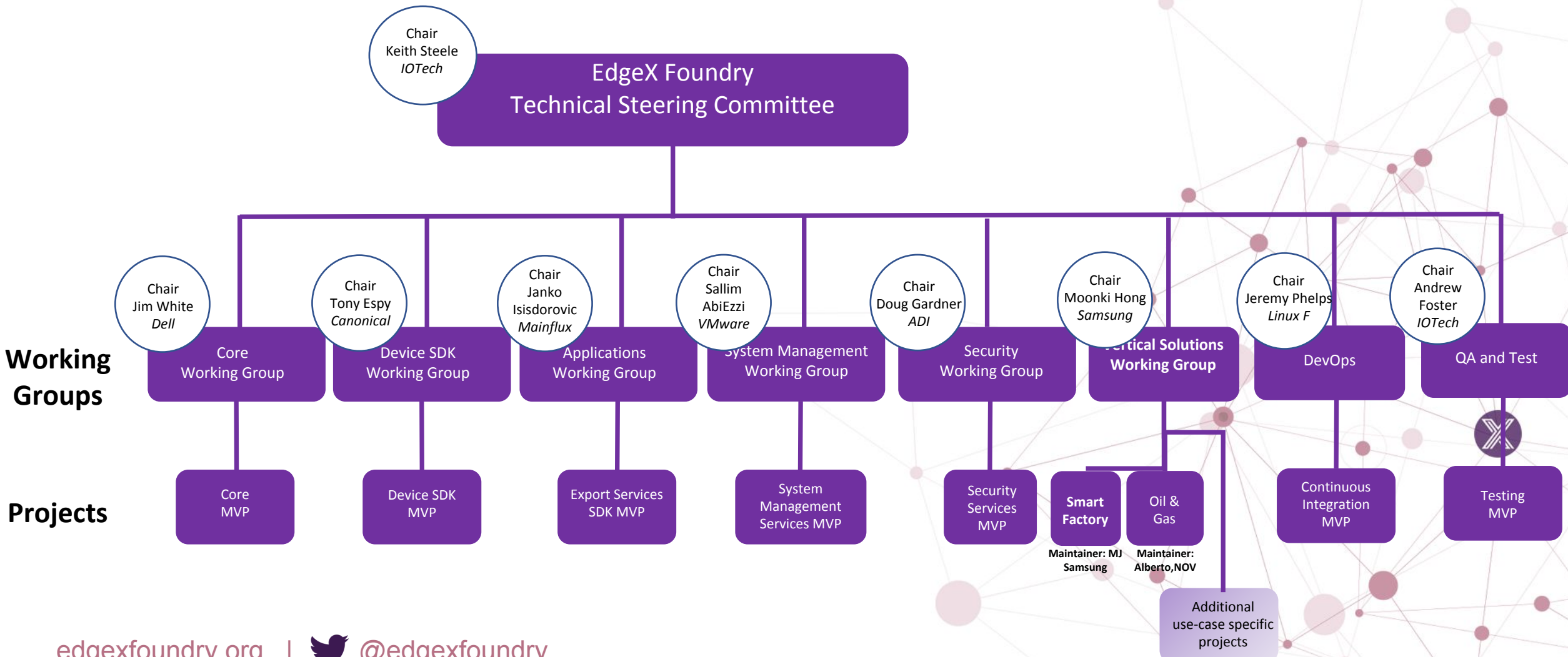# Hackathon Events

- 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

Working Groups

Projects

EdgeX Foundry
Technical Steering Committee

Chair
Keith Steele
IOTech

Chair
Jim White
Dell

Chair
Tony Espy
Canonical

Chair
Janko
Isisdorovic
Mainflux

Chair
Sallim
AbiEzzi
VMware

Chair
Doug Gardner
ADI

Chair
Moonki Hong
Samsung

Chair
Jeremy Phelps
Linux F

Chair
Andrew
Foster
IOTech

Core
Working Group

Device SDK
Working Group

Applications
Working Group

System Management
Working Group

Security
Working Group

Vertical Solutions
Working Group

DevOps

QA and Test

Core
MVP

Device SDK
MVP

Export Services
SDK MVP

System
Management
Services MVP

Security
Services
MVP

**Smart
Factory**

Oil &
Gas

Continuous
Integration
MVP

Testing
MVP

Maintainer: MJ
Samsung

Maintainer:
Alberto,NOV

Additional
use-case specific
projects

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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**

Thank You