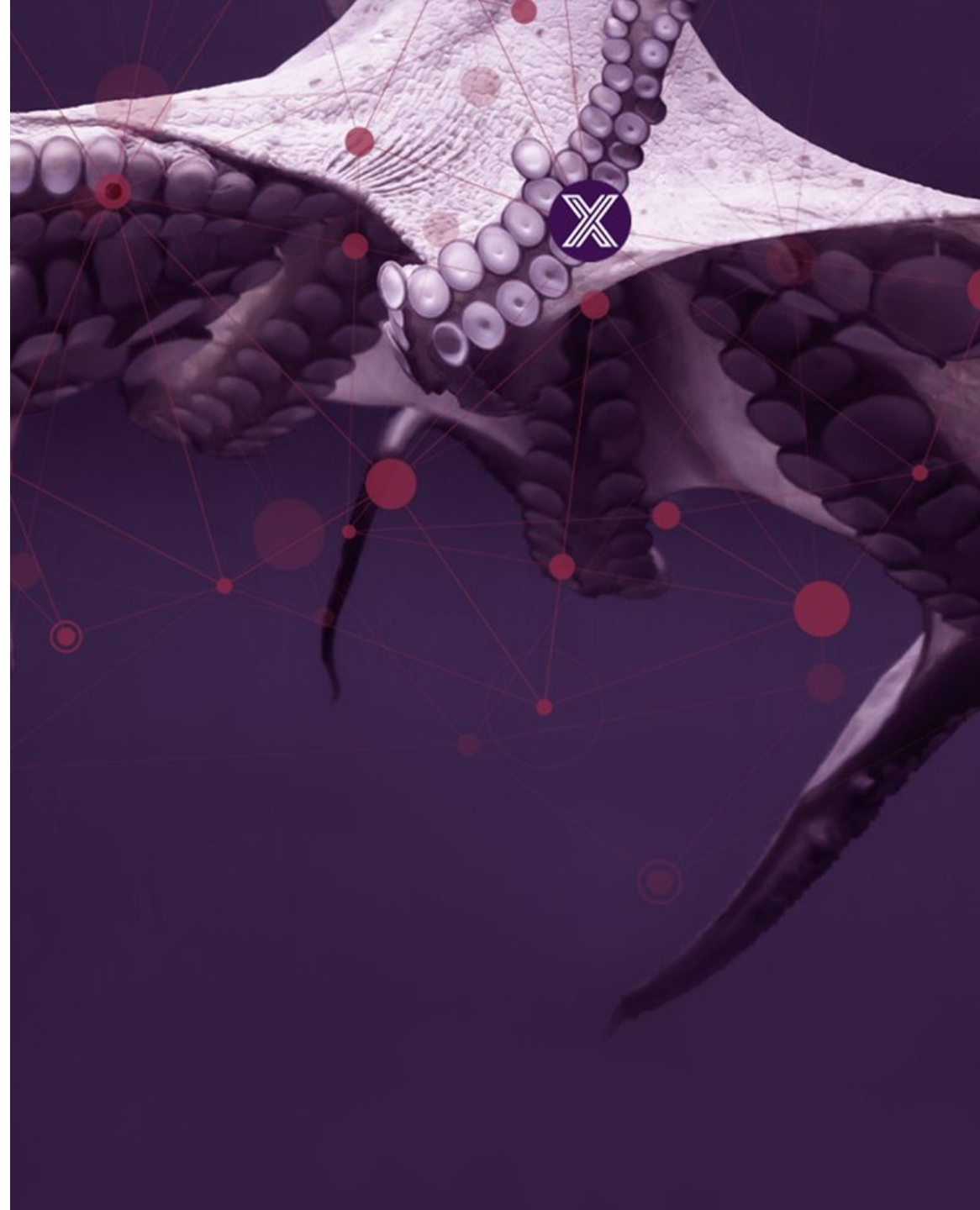


EDGE X FOUNDRY™

# TSC Meeting

July 11, 2018

edgexfoundry.org |  @edgexfoundry



# 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: July 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	<b>Andy Foster</b>	<a href="mailto:andy@iotechsys.com">andy@iotechsys.com</a>
ForgeRock	<b>David Ferriera</b>	<a href="mailto:david.ferriera@forgerock.com">david.ferriera@forgerock.com</a>
Analog Devices	Doug Gardner	<a href="mailto:doug.gardner@analog.com">doug.gardner@analog.com</a>
Mainflux	<b>Drasko Draskovic</b>	<a href="mailto:drasko@mainflux.com">drasko@mainflux.com</a>
Mainflux	<b>Janko Isidorovic</b>	<a href="mailto:janko@mainflux.com">janko@mainflux.com</a>
The Linux Foundation	<b>Jeremy Phelps</b>	<a href="mailto:jphelps@linuxfoundation.org">jphelps@linuxfoundation.org</a>
Dell	<b>Jim White (TSC Vice Chair)</b>	<a href="mailto:james.white2@dell.com">james.white2@dell.com</a>
IOTech	<b>Keith Steele (TSC Chair)</b>	<a href="mailto:keith@iotechsys.com">keith@iotechsys.com</a>
Samsung	<b>Moonki Hong</b>	<a href="mailto:moonki1.hong@samsung.com">moonki1.hong@samsung.com</a>
IOTech	<b>Steve Osselton</b>	<a href="mailto:steve@iotechsys.com">steve@iotechsys.com</a>
Canonical	<b>Tony Espy</b>	<a href="mailto:espy@canonical.com">espy@canonical.com</a>
Dell	<b>Trevor Conn</b>	<a href="mailto:Trevor.Conn@dell.com">Trevor.Conn@dell.com</a>

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

- Introducing Michael Hall EdgeX Developer Advocate
- California Release & Working Group Updates
- Delhi Roadmap
- Security Progress - Special Meeting Wednesday 18th July
- MongoDB Presentation - Wednesday 25th July
- EdgeX Project Visibility
- Next TSC F2F Meetings
- IIC Update
- Upcoming Events
- AOB



# California Release & Work Group Updates

Jim White

# Developer Advocate: Michael Hall

- Will be working to grow the number of developers contributing to EdgeX Foundry
- 6 years Community Management and Developer Advocacy experience
- [mhall@linux.com](mailto:mhall@linux.com)
- @mhall119 on Rocket.Chat, WeChat and Slack
- <https://www.edgexfoundry.org/blog/2018/07/06/michael-hall-joins-edgex-foundry/>



# Working Group Chair Updates

- Around the horn
  - Core/Supporting - Trevor
  - Applications - Janko
  - Device Services - Steve
  - Test/QA - Andy
  - DevOps - Jeremy
  - Security - David
  - System Management - Jim
  - Vertical Solutions - Moonki
- Others



# Core Working Group (11-July-2018)

- Face-to-face in Austin creating Delhi backlog (Mon-Weds)
- End of July dot Release
  - To include support-notifications
  - Support-scheduler TBD
    - Still digesting feedback from Tony RE: Device Services and scheduling
- Request DevOps help w/r/t ARM64 and Blackbox Test builds
- Blackbox Test PRs -- Can we help?

# Security (11-July-2018)

**California Release Complete** - Thanks to Alain, Jeremy and Tingyu

**Delhi List of Deliverables (AI from F2F):**

## **Technical Debt Items**

- Vault init/unseal and TLS/PKI script logics converted to Golang
- Vault Docker volume consolidation/cleanup
- Testing
- Define a logical structure for Vault materials (K/V paths)

## **New Features**

- Secure Storage abstraction layer
- Root of Trust abstraction layer

**Detail Document:** [Here](#)

# System Management WG (7/11/18)

- Working on design; open for commentary
  - See
    - <https://wiki.edgexfoundry.org/display/FA/Phase+1%2C+System+Management+Delhi+Release>
    - <https://wiki.edgexfoundry.org/download/attachments/17498212/System%20Management%20Design.odt?version=1&modificationDate=1531106926000&api=v2>
- May have to reduce initial scope
  - start/stop/restart services
  - get (but not update properties)
  - get one or two metrics (memory)

# Compose file & Documentation Updates (7/11/18)

- In Developer Scripts
  - California release (0.6.0) docker compose file available
  - Updated “latest” and “latest nexus” compose files as well
- Updated/updating...
  - Getting Started for Users (done)
  - Getting Started for Developers (wip)
  - Getting Started in Hybrid environment
  - README's

# QA/Test WG Update (11/07/18)

- Reviewed all the failed tests in Go services (38 errors)
  - Around 20 for logging, 2 for rulesengine, 14 for export-client, 2 for core-data (performance)
  - Fixed the issue about the blackbox tests cannot be started on both IOTech and EdgeX Foundry servers
  - 4 logging bugs have been opened
- To do
  - Review and merge blackbox PR backlog
  - Investigate the failed test cases in rulesengine and export-client

# Device Services WG Update (11-July-2018)

- Requirements for binary encoder used to evaluate CBOR and protobuf. Adoption of CBOR recommended
- Estimated 4 man months for completion of Go SDK
- Added requirement for integrated local scheduler



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# Security Progress - Special Meeting Wednesday 18th July

David Ferriera



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# MongoDB - Presentation Wednesday 25th July

Drew Dipalma





# EdgeX Project Visibility - Progress

Keith Steele



## Next TSC F2F Meetings

Keith Steele

# EdgeX TSC F2F Meeting(s)

- Wednesday & Thursday 24th/25th October -- Location Edinburgh, UK -- [Wiki page](#)
    - Working Group technical meetups on Tuesday, October 23
  - **RSVP at <https://goo.gl/forms/QR3WgP4ybB5KUT3w2>**
    - Current registration count: 5 in-person; 0 dial-in
    - Tuesday Working Group Counts
      - Core: 1
      - Applications: 1
      - Security: 1
  - Hotel/Travel:  
<https://events.linuxfoundation.org/events/elc-openiot-europe-2018/attend/venue-travel/>
  - For Wednesday night dinner/activity, Scotch whisky tasting!!
- 
- April 2019 -- Location Seoul or Suwon (South Korea)



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# IIC Updates

Keith Steele

# Next steps for planning IIC/EdgeX Workshop

**Sept 10-14**

**Chicago, IL**

- Exact date/time for the workshop still under discussion
  - In part depends on the content and timing requirements for other security sessions during the September member meeting (this workshop is part of the Security Track at the member meeting)
  - Hoping to discuss topic during the upcoming IIC Security WG call on Thursday, July 12
- Social evening event TBD
  - Waiting on confirmation on the details including exact location, to be able to research and provide options

**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/>

# Agenda

- 1. Introductions and Workshop Overview (10 min)**  
Speakers: Sven Schrecker, SWG Chair, Wael William Diab, Liaison WG Chair, Jason Shepherd: EdgeX (title)
- 2. Overview of the IIC Liaison Working Group (10)**  
Speaker: Wael Diab, Senior Director, Huawei Technologies
- 3. Overview of EdgeX Foundry Initiatives/Activities (10)**  
Speaker: Keith Steele (title)
- 4. IIC Security Initiatives (30)**  
Speakers:
- 5. EdgeX Architecture/Security Overview (30)**  
Speakers: Jim White/ David Ferriera
- 6. Break (15)**
- 7. Joint IIC/EdgeX Activities (15)**  
Speakers: TBD
- 8. Panel Discussion & Q/A on Collaboration/Way Forward(55)**  
Moderator: Sven Panelists: all presenters
- 9. Closing (5)**

**Total: 3 hrs**



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## Upcoming Events

# Upcoming Events - Confirmed

- [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
- [IOT Solutions World Congress](#), October 16-18, 2018, Barcelona
  - CFP and Call for Testbeds have closed. Email [pr@edgexfoundry.org](mailto:pr@edgexfoundry.org) if you were selected so that we can track/promote
  - EdgeX is in process of securing a booth (call for booth staff volunteers will follow)
  - Who is planning to be on-site?
    - Brett Preston (LF), ...



# Upcoming Events - Confirmed (continued)

- [Open Source Summit Europe](#), October 22 - 24, 2018, Edinburgh, UK
  - Community Partner: Save 15% on Attendee Registration with discount code OSSEU18COM15
  - Schedule announced August 14
- [ELC / OpenIoT Summit Europe](#), October 22 - 24, 2018, Edinburgh, UK
  - Schedule announced August 14



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AOB / Reminders

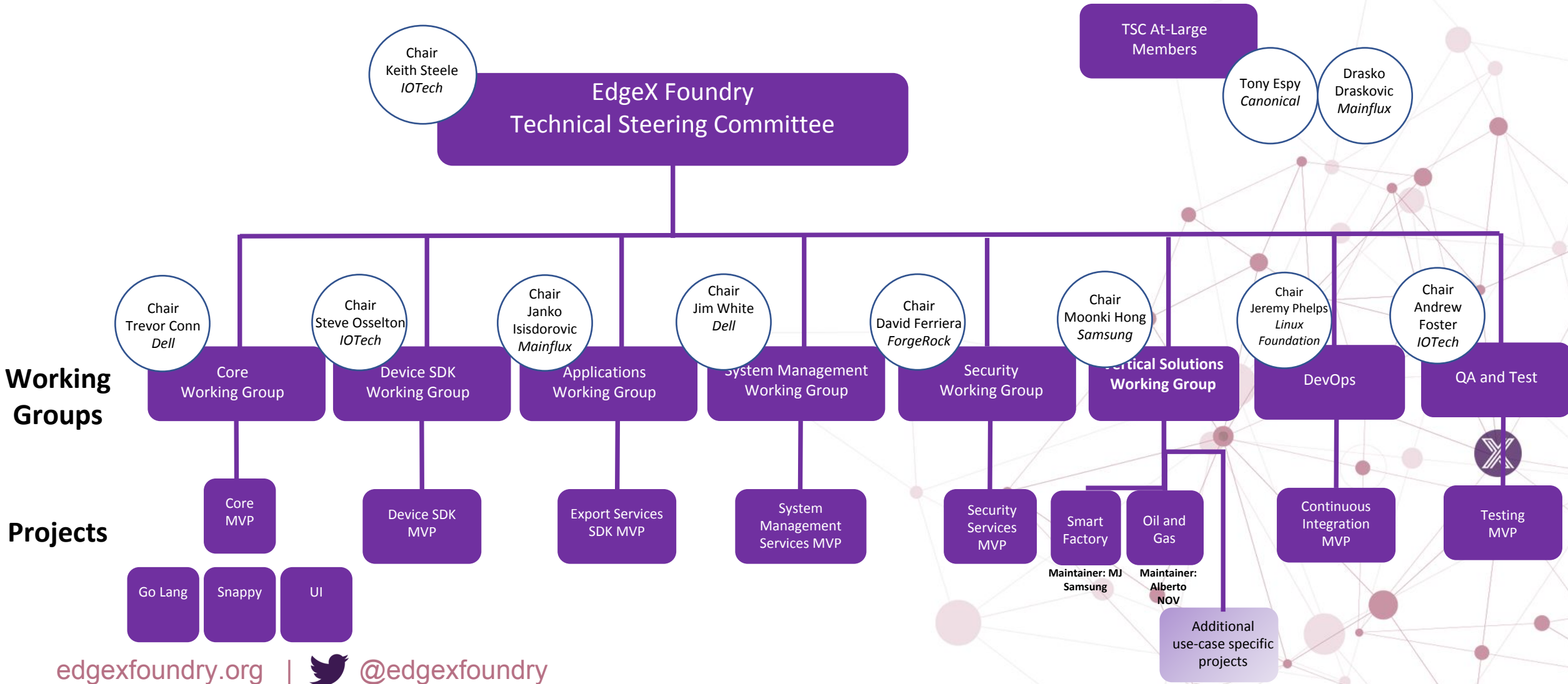
# Release Management

- The release process...(TBD)
  - <https://wiki.edgexfoundry.org/display/FA/Technical+Work+in+the+EdgeX+Foundry+Project#TechnicalWorkintheEdgeXFoundryProject-ReleaseProcess>
- **Need a volunteer to be Release Manager**
  - Document the process
  - Manage tags/branches/milestones in the repo
  - Gather release notes
  - Make release announcement

# 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: July 18, 2018**

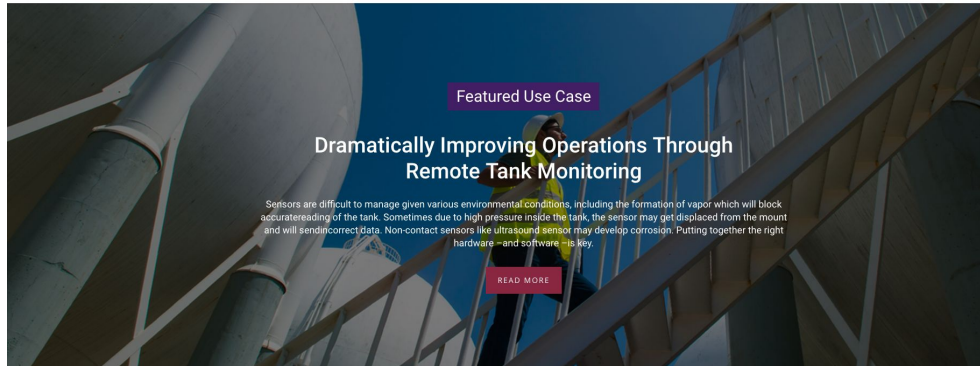
# EdgeX Project Organization



# Marketing

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

# EdgeX Use Case Campaign



## Use Cases

- Draft site is available for review:
  - <https://www.edgexfoundry.org/use-cases/>
  - all passwords set to UseCase!
- 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](mailto: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](mailto: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](mailto:bpreston@linuxfoundation.org))
  - First Priority is the MVP - potential contributors please contact [keith@iotechsys.com](mailto: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](#)

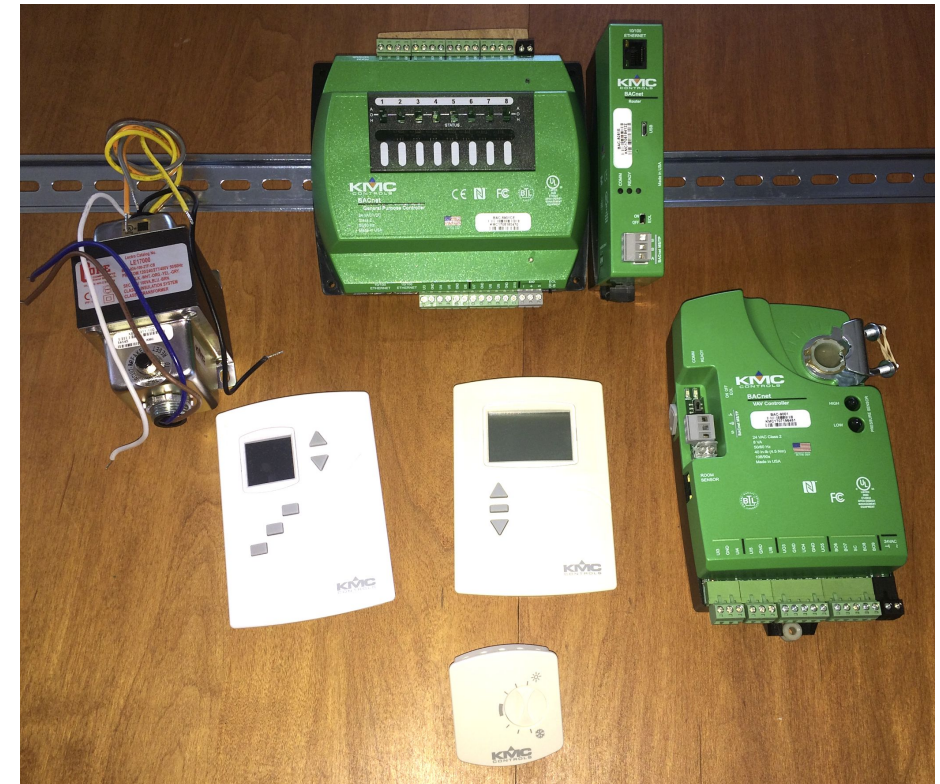
# What is the Device Exchange?

- 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](mailto: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:



# 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](mailto: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



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Thank You