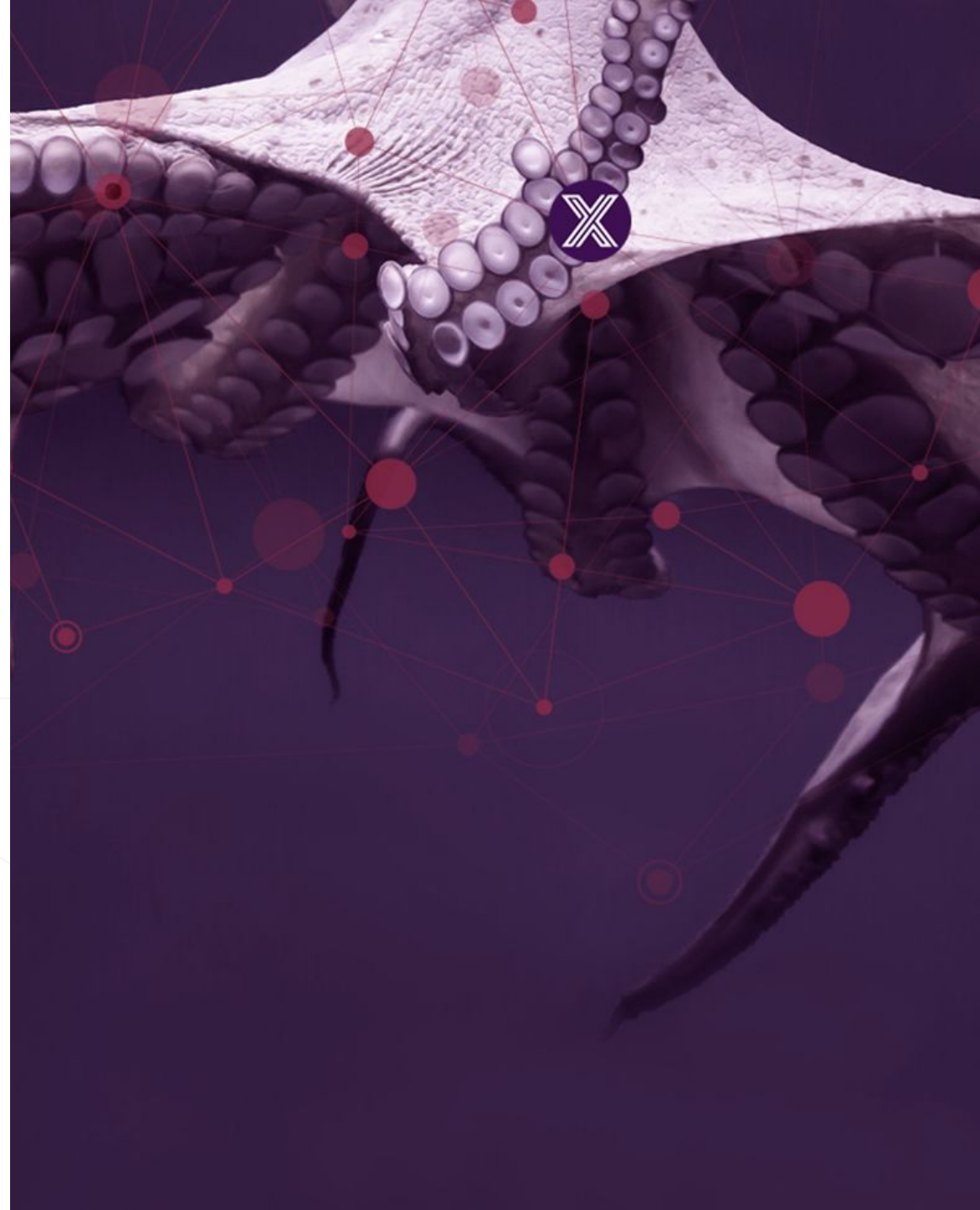


EDGE X FOUNDRY™

TSC Meeting

September 7, 2017



Meeting Logistics

Time: September 7, 2017 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

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.

TSC – Members Present Today

<u>Company</u>	<u>Name</u>	<u>Email</u>
Canonical	Alex Newman	alex.newman@canonical.com
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
Dell	Jim White	james.white2@dell.com
Analog Devices	John Walsh	john-j.walsh@analog.com
IOTech	Keith Steele	keith@iotechsys.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

- Security & Systems Management Group Face to Face
- Core Working Group Update
 - Including Test, QA & Dev Ops, Applications and Device SDK
- December Preview Release
- TSC Meeting Barcelona Agenda Discussion
- TSC Meeting Boston California Release Planning
- CII Badge Program
- IOT World Congress Update
- AOB



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Security WG Update

Doug Gardner

Security WG F2F Meeting Recap

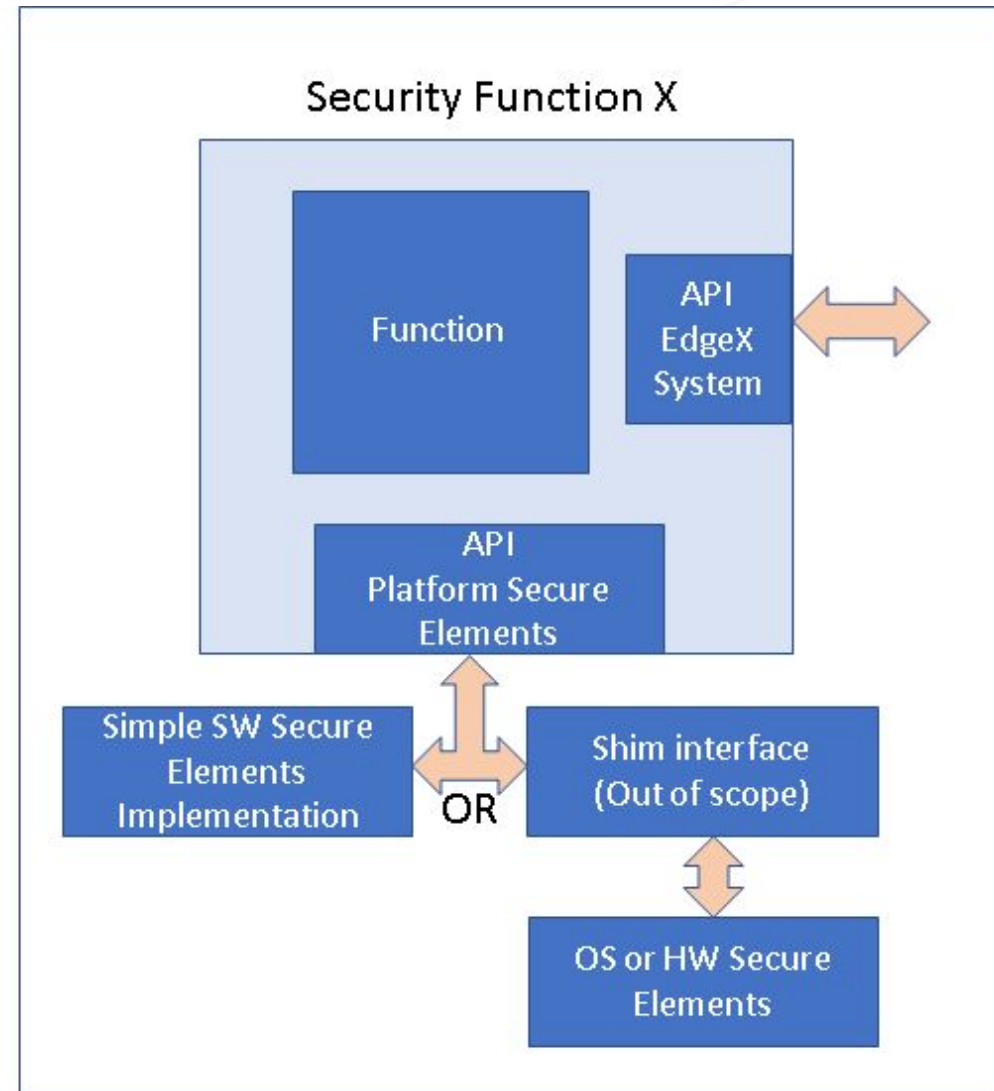
Summary of Meeting Actions and Decisions

1. Protected communication (inbound and outbound) over the public internet on north bound interface. Using PKI certificate methods, Mutually authenticated TLS, and OAuth 2.0 methods.
2. Create Key Management API
3. Create Inbound Connection Manager (Firewall)
4. Overall plan - Provide well defined API interfaces for security services with basic software implementation of functionality
5. Allow commercial partners to supply enhanced features and services using the same API interface with drop in replacements

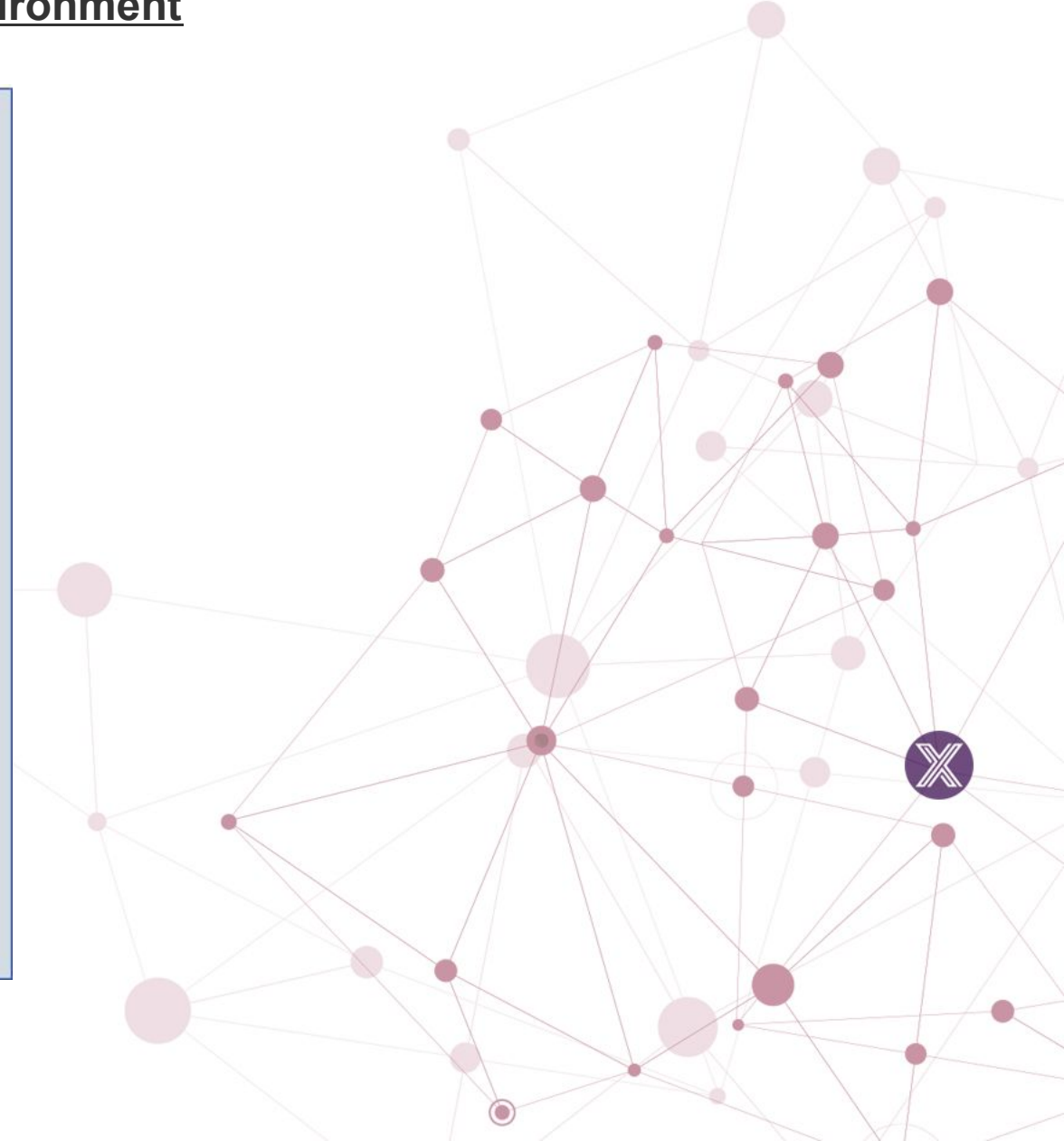
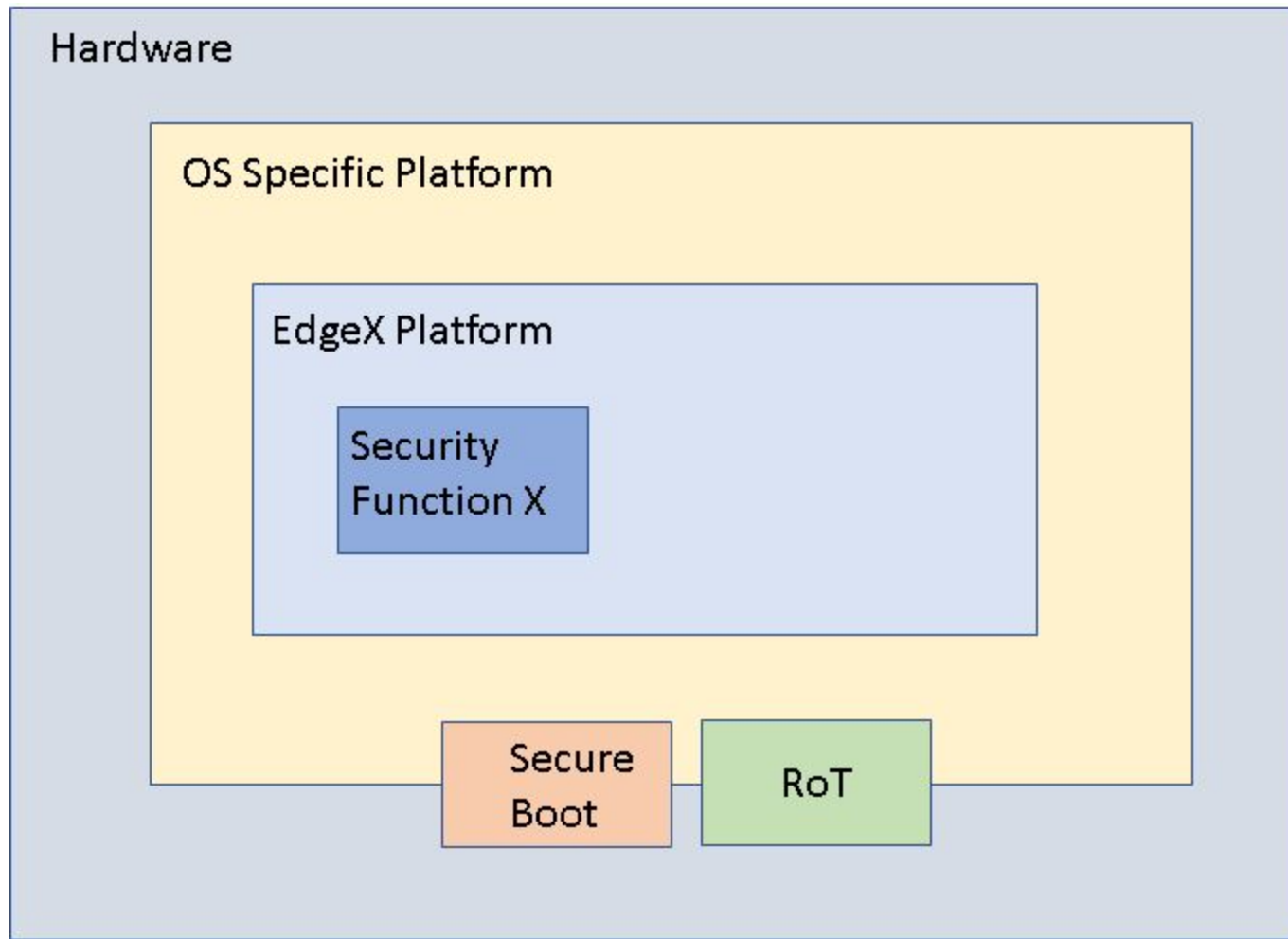
ref: <https://wiki.edgexfoundry.org/display/FA/29+and+30+August+2017%3A+Palo+Alto%2C+CA>

EdgeX Security Micro Service High level Architecture Function

- API interface to rest of EdgeX platform
- API interface to Platform Secure Elements
- Simple SW Secure Element Implementation
- Out of Scope -Shim interface per deployment
 - Shim will interface with OS provide secure elements or hardware secure elements of the hardware platform (TPM)

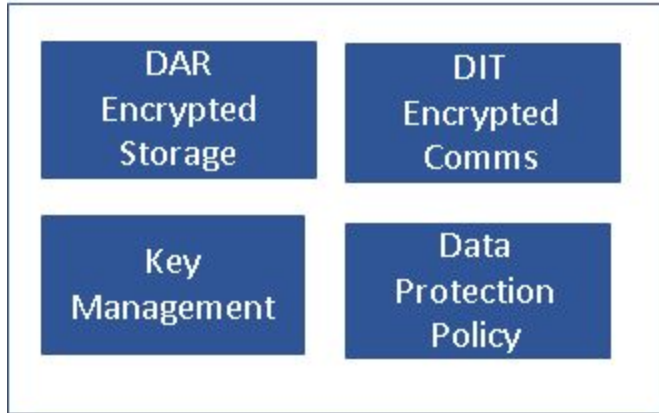


EdgeX Security Micro Service High Level Architecture Environment

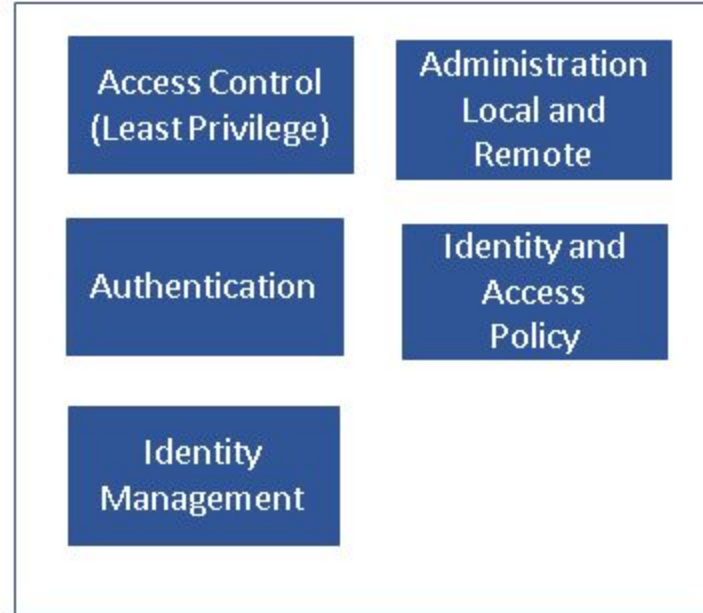


EdgeX Security High Level Architecture Services

Data Protection



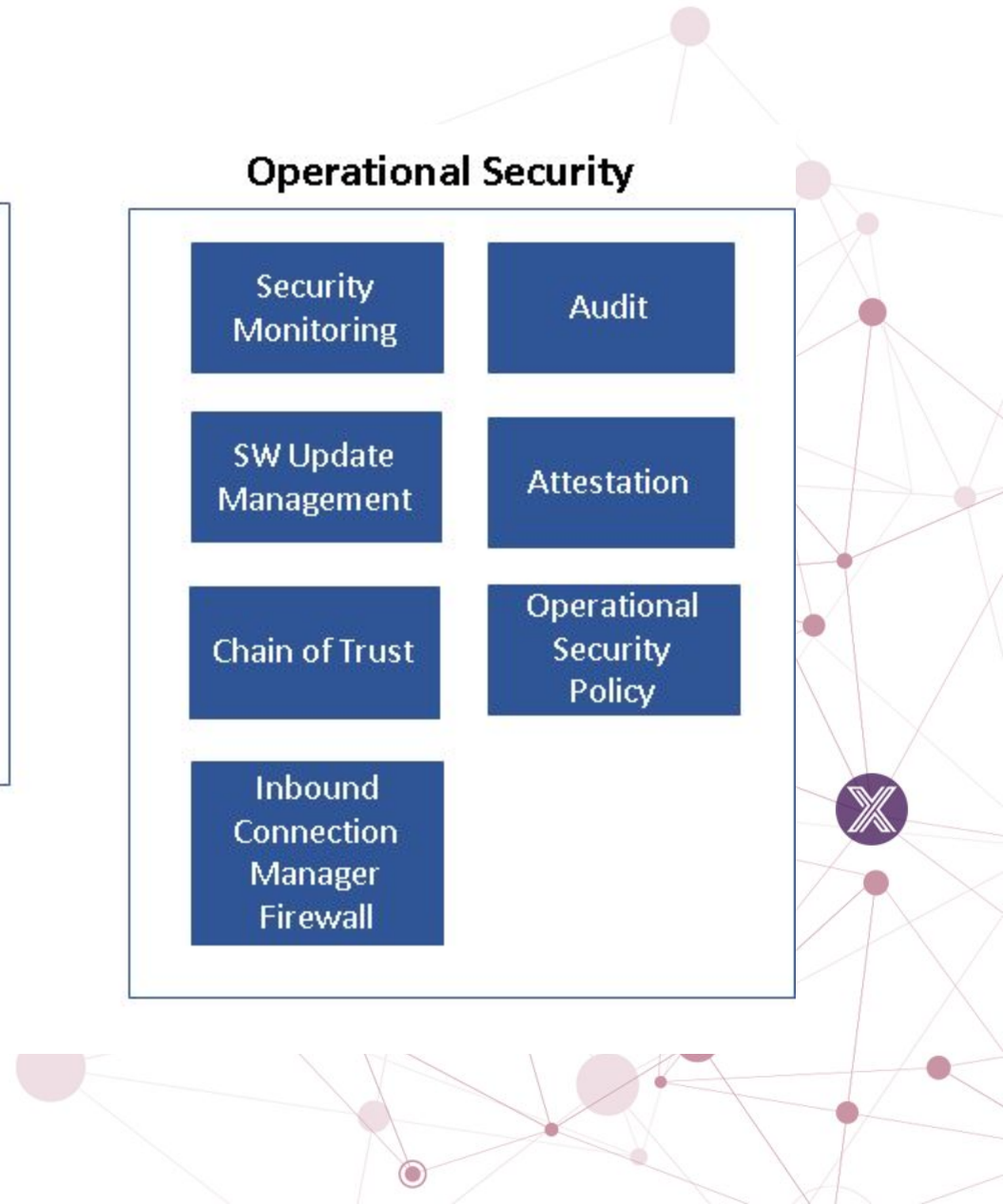
Identity and Access



Operational Security



Guidelines





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Core WG Update

Jim White

Core WG Significant Updates

- Project Management Tool in place (GitHub Projects)
 - tracking MVP and tasks @ <https://github.com/orgs/edgexfoundry/projects>
 - Some security issues being resolved
- New additions to contributor page
 - Versioning scheme
 - Code guidelines
- 3rd party contributions coming in
 - Combined mongo/mongo seed (Cavium)
 - Export to Google IoT Core (Schlumberger)
- Hardening/Refactoring work of core services in full stride
 - Beware that this may require you to pull/rebuild locally

Core & Support Services Improved Testing

Core and Support Services Hardening						
	Previous Tests		Current Tests			
	Unit	Integration	Unit	Integration	Coverage %	
core domain	24	0	232	0	76%	
core test	0	0	0	0	0%	
core exception	0	0	0	0	0%	
support domain	0	0	1	0	5%	
support logging	0	10	76	106	90%	
support logging client	0	1	70	16	84%	
support notificaiton	0	0	160	81	89%	
support notificaiton client	0	8	0	20	60%	
support scheduler	25	2				
core data	1	168				
core data client	0	51				
core metadata	1	629	438	527	95%	
core metadata client	0	248				
core command	2	26				
core command client	0	7				
core-config-watcher	0	0				
core-config-seed	0	0				





QA and Test, DevOps WG Update

Andy Foster

Update

- Build/CI
 - Docker upgrade to 17.06 now complete, build process should be completed soon
- Testing
 - Postman integration tests are now being triggered from Jenkins now running, need to complete integration of final test collections + repository config, then liaise with LF to push this work back to the project
- Tools
 - Project chose GitHub Projects (available for free with GitHub) as Project Management tool and WGs have created initial project boards/tasks/assignments - problem “organization level project boards viewable only to members”
- Template and Guidelines
 - Published Contributing Code Guidelines (.pdf) on Wiki for final comments - Andy (IOTech) in the process of incorporating changes before adding as HTML to the Wiki
- Other - held third joint meeting with LF DevOps team to co-ordinate build/test/CI work



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System WG Management Update

Salim AbiEzzi



Device SDK WG Update

Tony Espy



Applications WG Update

Janko Isidorovic

Update

- Google IoT Core Export Client. Many thanks to Bernard Van Haecke for contributing.
- Google IoT Core pull request under review.
- Need for Google IoT account access for Testing.
- Evaluating Vault (<https://www.vaultproject.io/>) as secure store for certificates.
- Paho-based MQTT client in the export-distro micro service for SSL/TLS connections.



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Barcelona Resourcing: Updates / Needs / Timing

Keith Steele

Proposed Agenda (high level)

Barcelona Release

- What didn't get done that we said we wanted done?
- What's left to do and does it move to California release task list?
- What organizationally is not working/working?
- Aftermath Lessons learned

Upcoming Release Strategy - Discussion & Decisions

- Late January or Early Feb 2018 – Specific date and any method of release to be discussed and ratified
- Proposed for reaction/discussion/ratification
 - o June 2018 – California @ IoT DevCon, Santa Clara, CA June 5-6 (<https://www.iot-devcon.com/>)
 - o Nov 2018 – IoT Tech Expo (Santa Clara) or IoT World (London)

California Preview Release

- Includes the Go Services (core data, core metadata, command, export client, and elements of Go SDK)
- Can Go services “certified” as drop in replacements by our test framework(s) by that time?
- Can it include ARM versions of these and other services?
- Could a demo be created for that release (even if it is just a video demo for release in media)?

C SDK

Security and System Management (we may want to move this up in the agenda before talking specific releases)

- What are the requirements/design outcome of these two working groups?
- What is our implementation strategy?
- What are we hearing from potential customers/partners?
- What needs to get done for California?

Proposed Agenda Continued

California Release

- What do we want to target as deliverables for California release?
- Suggestions for reaction/discussion
 - o First security and system management capabilities (what are they?)
 - o Footprint and performance targets met (what are they and how achieved?)
 - o Full Arm support (what does this mean?)
 - o Additional OS support (which specific OS?)
 - o Additional north bound connectivity (to what?)
 - o Additional south bound connectivity (to what?)
 - o Would we have an additional SDK at this time?

Release after California

- Suggested Name
- High level roadmap targets

Elections in Jan/Feb meeting

- What to know
- How accomplished



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CII Badge Program

Look for email invite from Brett Preston

LF Core Infrastructure Initiative (CII) Badge Program

- The Best Practices Badge is an open source secure development maturity model. Projects having a CII badge will showcase the project's commitment to security.
- The [Linux Foundation \(LF\) Core Infrastructure Initiative \(CII\)](#) Best Practices badge is a way for Free/Libre and Open Source Software (FLOSS) projects to show that they follow best practices. Projects can voluntarily self-certify, at no cost, by using this web application to explain how they follow each best practice. The CII Best Practices Badge is inspired by the many badges available to projects on GitHub. Consumers of the badge will be able to quickly assess which FLOSS projects are following best practices and as a result are more likely to produce higher-quality secure software.
- Overview A: <https://www.coreinfrastructure.org/programs/badge-program>
- Overview B: <https://bestpractices.coreinfrastructure.org/>
- Examples of Badge Program in action:
<https://bestpractices.coreinfrastructure.org/projects?q=hyperledger>
<https://wiki.hyperledger.org/>
- Question:** Is this something the community is interested in? Any volunteers to help complete application?



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IOT World Congress Updates

IOT World Congress Updates

- TSC F2F meeting to be held Thursday, October 5 (last day of the conference)
 - All day meeting
 - Location being finalized. Likely to be offsite now, given number of RSVPs and venue room capacity.
- More info will be posted to <https://wiki.edgexfoundry.org/display/FA/5+October+2017%3A+IOT+Solutions+World+Congress+Barcelona> as it becomes available
- Email info@edgexfoundry.org to be directly added to meeting invite
- RSVP to attend to bpreston@linuxfoundation.org



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AOB / Reminders

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

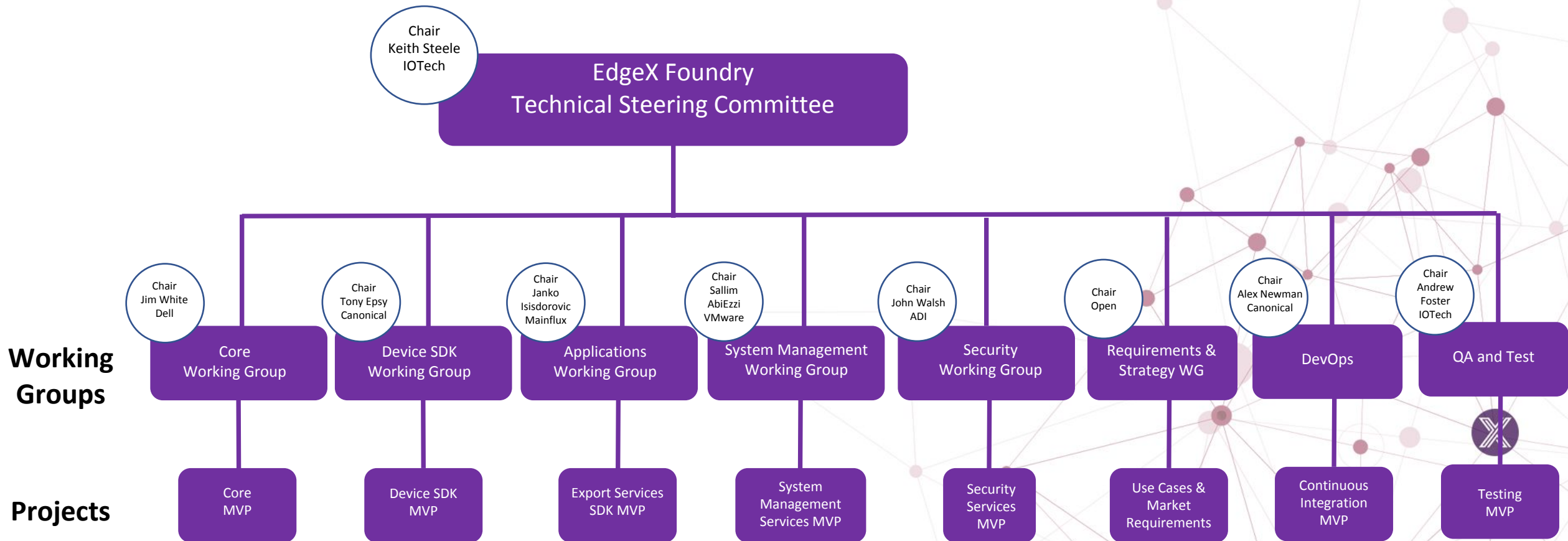
Thursdays @ alternating times (6pm & 9am EDT)

Next call **Thursday, September 7 @ 6pm EDT**: TBD

Email info@edgexfoundry.org to request to be added directly to meeting invite

Previous call recordings are available on the [Wiki](#)

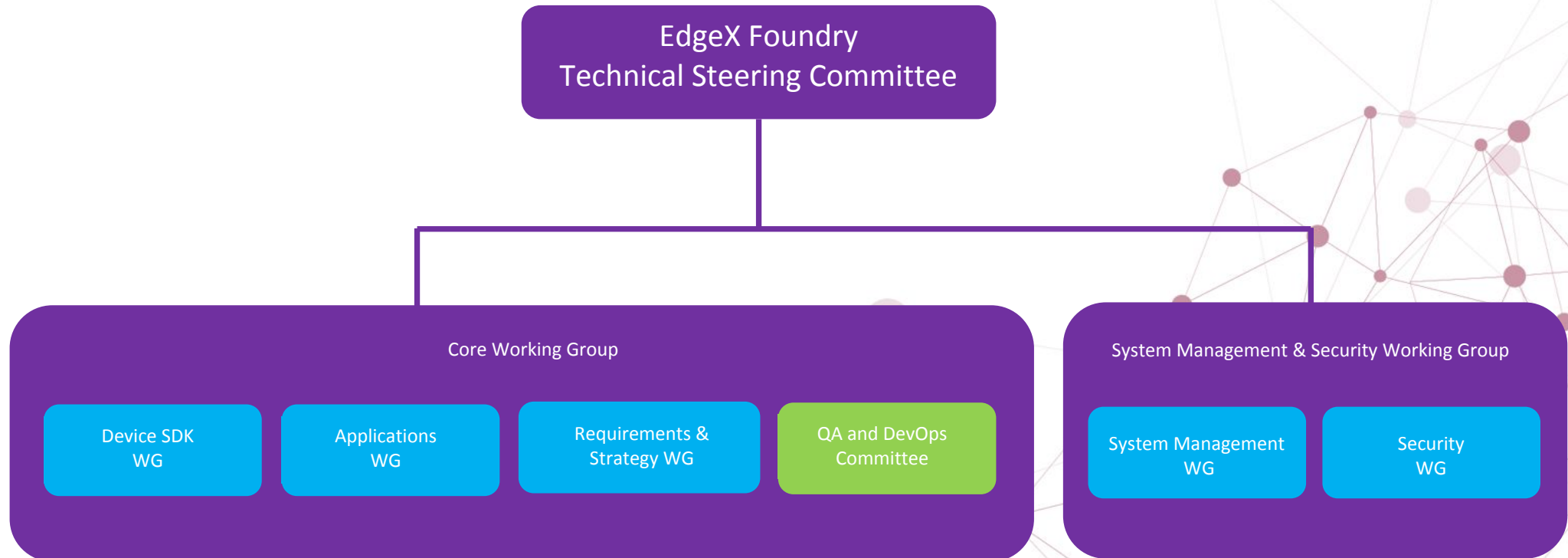
EdgeX Project Organization



TSC and WGs Meeting Structure June 2017

Combined Meetings during MVP 'Design Phase'

Meeting Groups



- Please register Interest for working groups where you'd like to participate: Mail lists @ <https://lists.edgexfoundry.org/mailman/listinfo>
- You will automatically receive notifications of all meetings and events

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 Philip DesAutels at LF (pdesautels@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

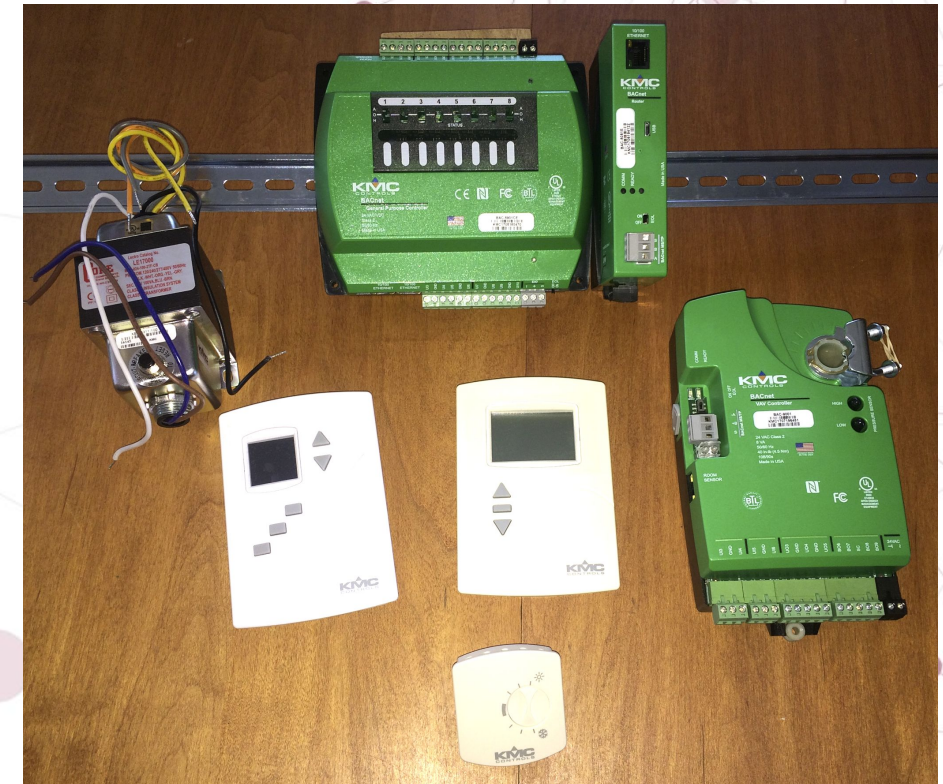
- Code: <https://github.com/edgexfoundry>
- Documentation: <https://wiki.edgexfoundry.org/>
- Discussion: <https://chat.edgexfoundry.org/>
- Mail Lists: <https://lists.edgexfoundry.org/mailman/listinfo>
- Twitter: <https://twitter.com/EdgeXFoundry>
- LinkedIn: <https://www.linkedin.com/company-beta/22298339/>

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!!



Upcoming Events

- [IOT Solutions World Congress Barcelona](#)
 - **3-5 October 2017**
 - **EdgeX Foundry Booth featuring Members + Demos**
 - [Canonical](#)
 - [CloudPlugs](#)
 - [Dell / RSA](#)
 - [IOTech](#)
 - [Linaro](#)
 - [NetFoundry](#)
 - [Neustar](#)
 - [RFMicron](#)
 - [Vantig](#)
 - [VMware](#)
 - EdgeX Members receive discounted [Registration](#)
 - Email info@edgexfoundry.org for discount code

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: 9/13/2017**



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Thank You