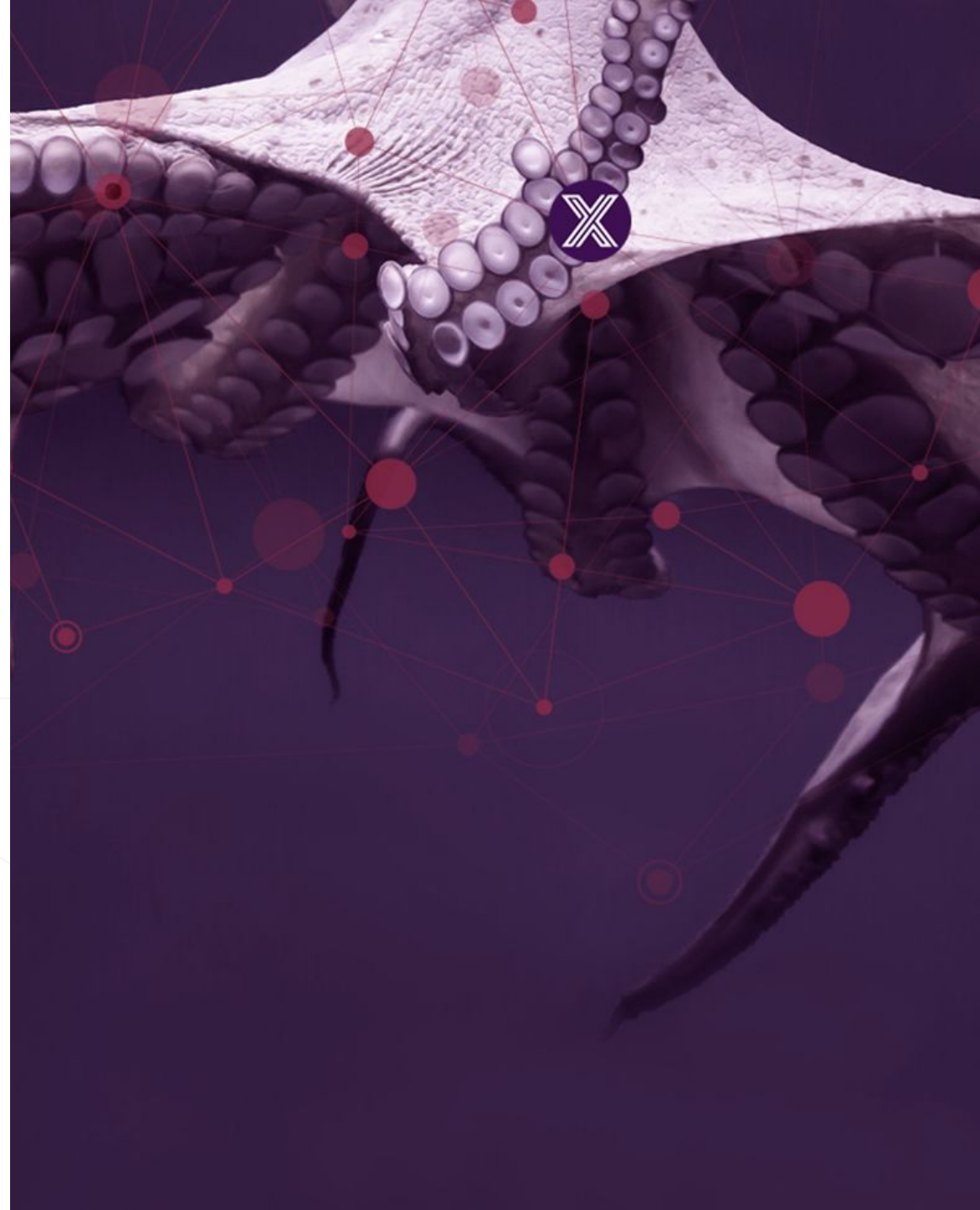


EDGE X FOUNDRY™

TSC Meeting

August 3, 2017



Meeting Logistics

Time: August 3, 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, and 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 |
| Mainflux | Janko Isidorovic | janko@mainflux.com |
| Dell | Jason Shepherd | Jason.A.Shepherd@dell.com |
| Analog Devices | John Walsh | john-j.walsh@analog.com |
| IOTech | Keith Steele | keith@iotechsys.com |
| Analog Devices | Michael Murray | michael.murray@analog.com |
| VMware | Salim AbiEzzi | salim@vmware.com |
| Canonical | Tony Espy | espy@canonical.com |

*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

- Collaboration between Security and Systems Management WGs
- Security Working Group Updates
- Systems Management Working Group Updates
- Security / Systems Management WG: Face-to-Face meeting
- Project Templates Review
- AOB
 - Project Resources
 - Marketing
 - Events
 - Reminders
 - Next Time



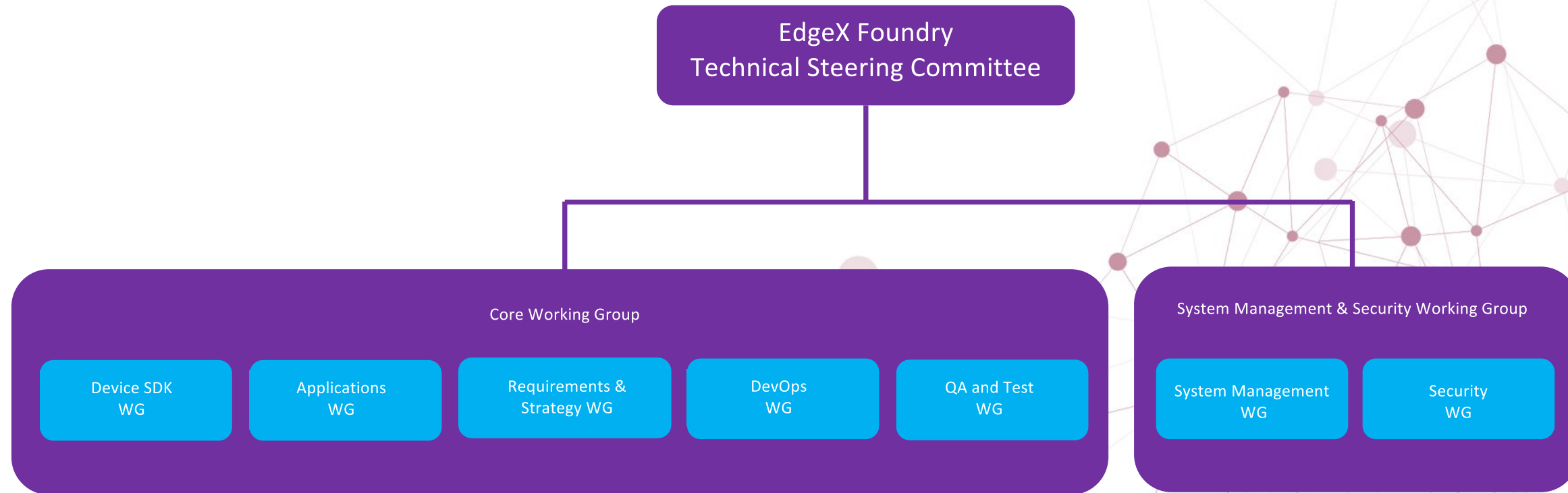
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Security/Systems Mgmt - Collaboration

Doug Gardner / Salim AbiEzzi

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



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Security Working Group Updates

Doug Gardner

Security

- Build longer term roadmap – the EdgeX security story
 - Agreement on what security features are going to be in EdgeX and what's going to be provided by the platform that EdgeX runs on (example: the underlying platform must have a keystore)
 - Agreement on security requirements
- Define what EdgeX security service(s) need to be eventually implemented
- Define what security hooks need to be added to the existing micro services
- Define what standards, protocols, etc. are going to be adhered to and followed by EdgeX (ex: IIC specs, OAuth tokens, etc.)
- Provide guidance on how security features can/should be tested



Systems Management Working Group Updates

Salim AbiEzzi

System Management

- What is the objective and scope of system management in EdgeX?
- What is in EdgeX vs. what is **enabled by EdgeX**?
 - Principle of **minimal but sufficient**
- What is in underlying OS? What is left for value add by SI?
- Should we adopt an existing management OSS?
- What hooks need to be implemented by EdgeX microservices?

Objective

- Control/infrastructure plane vs. data/application plane
- Insure that infrastructure is operating reliably and securely
- So application-data flows smoothly



Proposed Scope

- Infrastructure telemetry: infrastructure vital signs
- Infrastructure notification/alerts: important change in infrastructure
- Configuration updates: affect change in infrastructure
- IoT system software updates: newer version or security updates

Infrastructure Telemetry

- Edge device: CPU, storage, memory
- End device (sensor): battery charge, connection state, heartbeat, etc.
- Aggregation device (e.g., RPi aggregate data from sensors)
- Edge server

Notification/Alerts

- Adding a new device
- Battery is low
- Available memory is low

Configuration Updates

- SSH port
- Firewall settings
- NAT traversal
- Wifi passcode
- Certificate revocation
- Installing new certificate

Software Updates

- Three types:
 1. Micro-services
 2. End devices
 3. Edge device system
- #1 is within scope
- If #2 & 3 are out of scope, then need a way to shut down, apply update and resume microservices
 - Update might require a reboot. How to do so gracefully?

Adopt Existing OSS Solution?

- LwM2M was proposed in Norwood meeting
- DMTF for Edge device since PC grade?
- Some think it is a mistake to adopt one, since so many
- Define our own custom/minimalist solution?



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Security + Systems Management WGs: Face-to-Face Meeting

Doug Gardner / Salim AbiEzzi

F2F the Week of August 28

- EdgeX Security Work Group proposed face to face Meeting in the US in August (John Walsh to organise) > include System Management at mtg
- Dates?
- Location?





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Project Templates Review

Andy Foster

Background

- Project is at a stage where we need to identify procedures and guidelines for:
 - Repository Management and Committing Code
 - Issue Tracking
 - Coding Standards
 - Testing
- Identify MVP best practice in each of these areas based on existing OS projects and wider industry practice
- Make any adaptations/customizations to tune the guidelines so that they are more specific to the EdgeX project
- In addition there are already a number of more general project related template on the Wiki waiting for TSC approval

Repository Management and Committing Code

- EdgeX repository management and code commit/check in procedures and guidelines derived from:
 - GitHub Flow (overview of GitHub flow and branching)
 - <https://guides.github.com/introduction/flow/>
 - GitHub Branching Model
 - Git-flow <http://nvie.com/posts/a-successful-git-branching-model/>) or
 - GitHub flow <https://hackernoon.com/a-branching-and-releasing-strategy-that-fits-github-flow-be1b6c48eca2>
 - GitHub Hello World (including making a Pull Request (PR) general process)
 - <https://guides.github.com/activities/hello-world/>
 - Project Specific PR Process (should be adapted for EdgeX)
 - <https://github.com/kubernetes/community/blob/master/contributors/devel/pull-requests.md#the-pr-submit-process>
 - Contributor License Agreement (believe EdgeX needs one of these)
 - <https://github.com/kubernetes/community/blob/master/CLA.md>
 - Release Versioning (proposed for EdgeX)
 - <https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=329324>) and <http://semver.org/>
 - Git Commit Messages (should be adapted for EdgeX)
 - <https://wiki.openstack.org/wiki/GitCommitMessages>

Issue Tracking

- Submitting an EdgeX issue and issue management procedures and guidelines derived from:
 - GitHub Issues (overview of submitting an issue using GitHub)
 - <https://guides.github.com/features/issues/>
 - Reporting an Issue – includes information a user should supply when submitting an issue and should be adapted for EdgeX
 - http://intelledger.github.io/community/issue_tracking.html
 - Managing Issues Guidelines – should be adapted for EdgeX
 - <https://github.com/kubernetes/community/blob/master/contributors/devel/issues.md>
 - GitHub Labels for Issues – should be adapted for EdgeX
 - <https://github.com/kubernetes/kubernetes/labels>

Coding Standards

- EdgeX coding standards derived from:
 - Google Coding Standards (EdgeX has already agreed to adopt Google standards)
 - <https://github.com/google/styleguide>
 - Opendaylight.org coding standards for Code Headers and Checkstyle process (should be adapted for EdgeX)
 - https://wiki.opendaylight.org/view/BestPractices/Coding_Guidelines#General_Code_Style

Testing

- Testing conventions and guidelines derived from:
 - Testing Conventions (general guidelines should be adapted for EdgeX)
 - <https://github.com/kubernetes/community/blob/master/contributors/devel/coding-conventions.md#testing-conventions>
 - Testing Guide (specific guidance on running unit and integration tests – should be adapted for EdgeX)
 - <https://github.com/kubernetes/community/blob/master/contributors/devel/testing.md>

General

- The following project templates are still waiting for approval by the TSC:
 - Project Principles: <https://wiki.edgexfoundry.org/pages/viewpage.action?pagelId=329316>
 - Project Incubation Exit Criteria: <https://wiki.edgexfoundry.org/pages/viewpage.action?pagelId=329318>
 - Project Lifecycle: <https://wiki.edgexfoundry.org/pages/viewpage.action?pagelId=329320>
 - Proposal Template for EdgeX Project: <https://wiki.edgexfoundry.org/pages/viewpage.action?pagelId=329322>
 - Release Taxonomy: <https://wiki.edgexfoundry.org/pages/viewpage.action?pagelId=329324> (as referenced in slide 2)
 - Technical Work in the EdgeX Foundry Project: <https://wiki.edgexfoundry.org/pages/viewpage.action?pagelId=329327>
 - Working Group Charter Template: <https://wiki.edgexfoundry.org/pages/viewpage.action?pagelId=329329>



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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

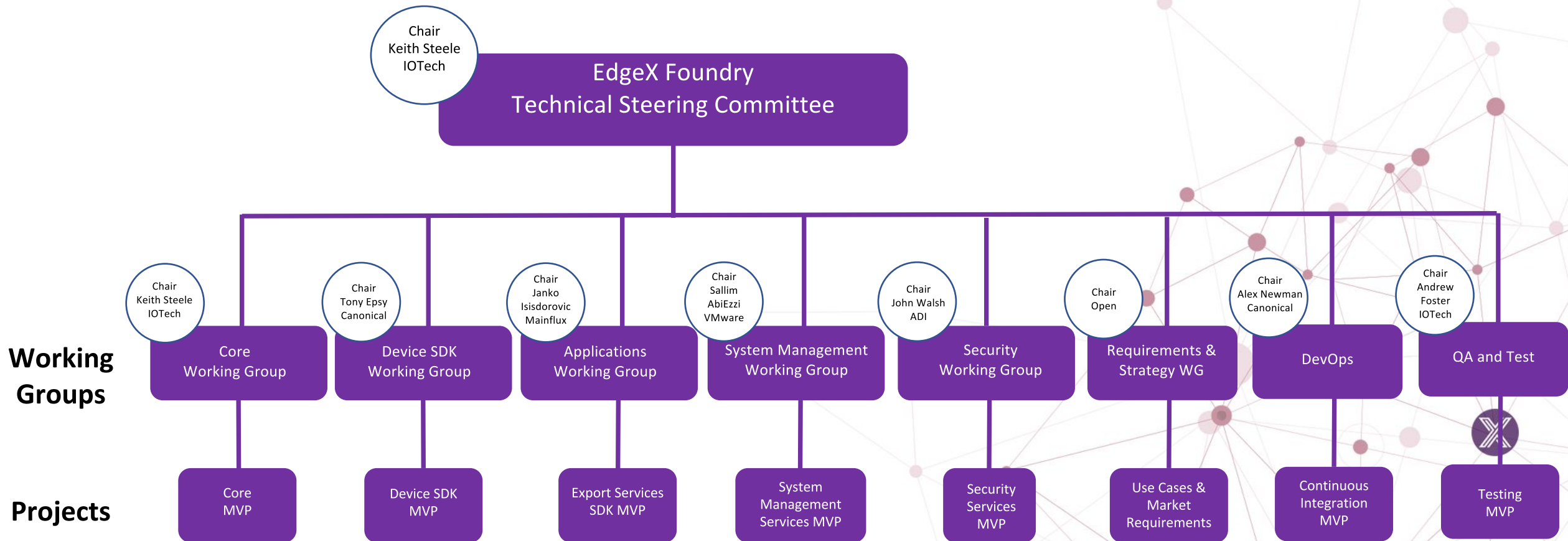
Thursdays @ alternating times (6pm & 9am EDT)

Next call Thursday, August 3 @ 9am EDT: “Topic TBD”

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

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

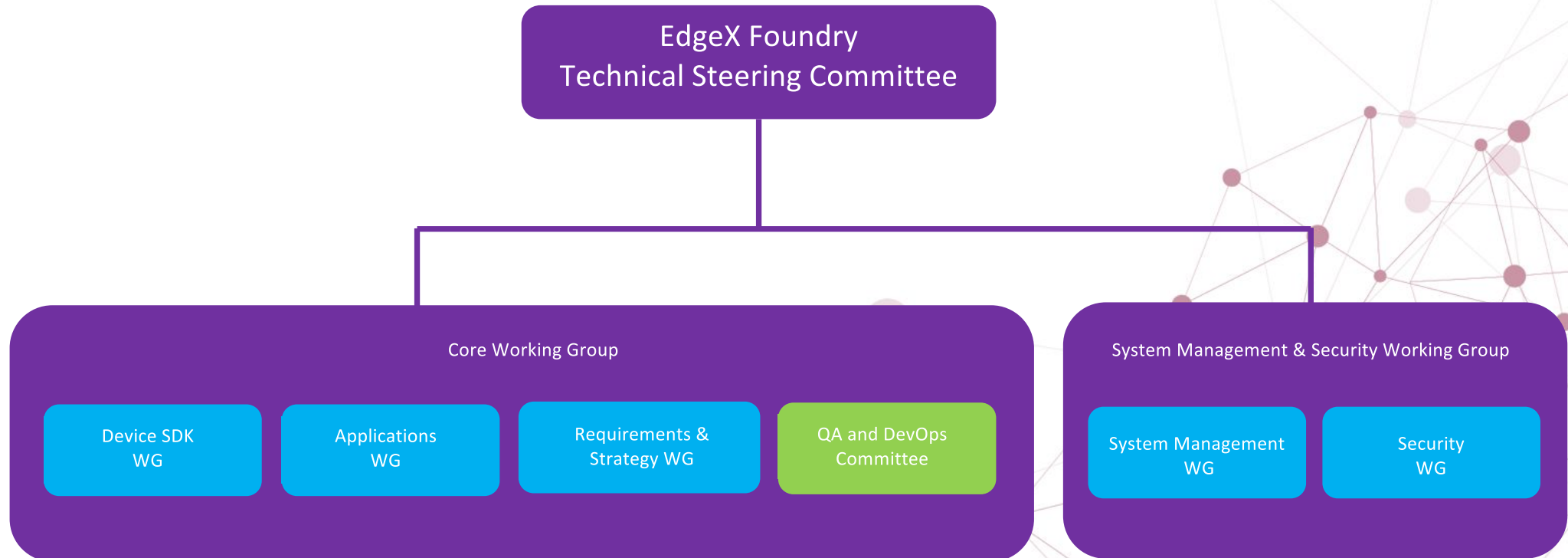
EdgeX Project Organization



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/>

Upcoming Events

- [IOT Solutions World Congress Barcelona](#)
 - **3-5 October 2017**
 - **EdgeX Foundry Booth featuring Members + Demos**
 - [CloudPlugs](#)
 - [Dell / RSA](#)
 - [IOTech](#)
 - [Linaro](#)
 - [NetFoundry](#)
 - [Neustar](#)
 - [RFMicron](#)
 - [Vantiq](#)
 - [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: 8/9/2017**



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Thank You