TSC Meeting

March 27, 2019

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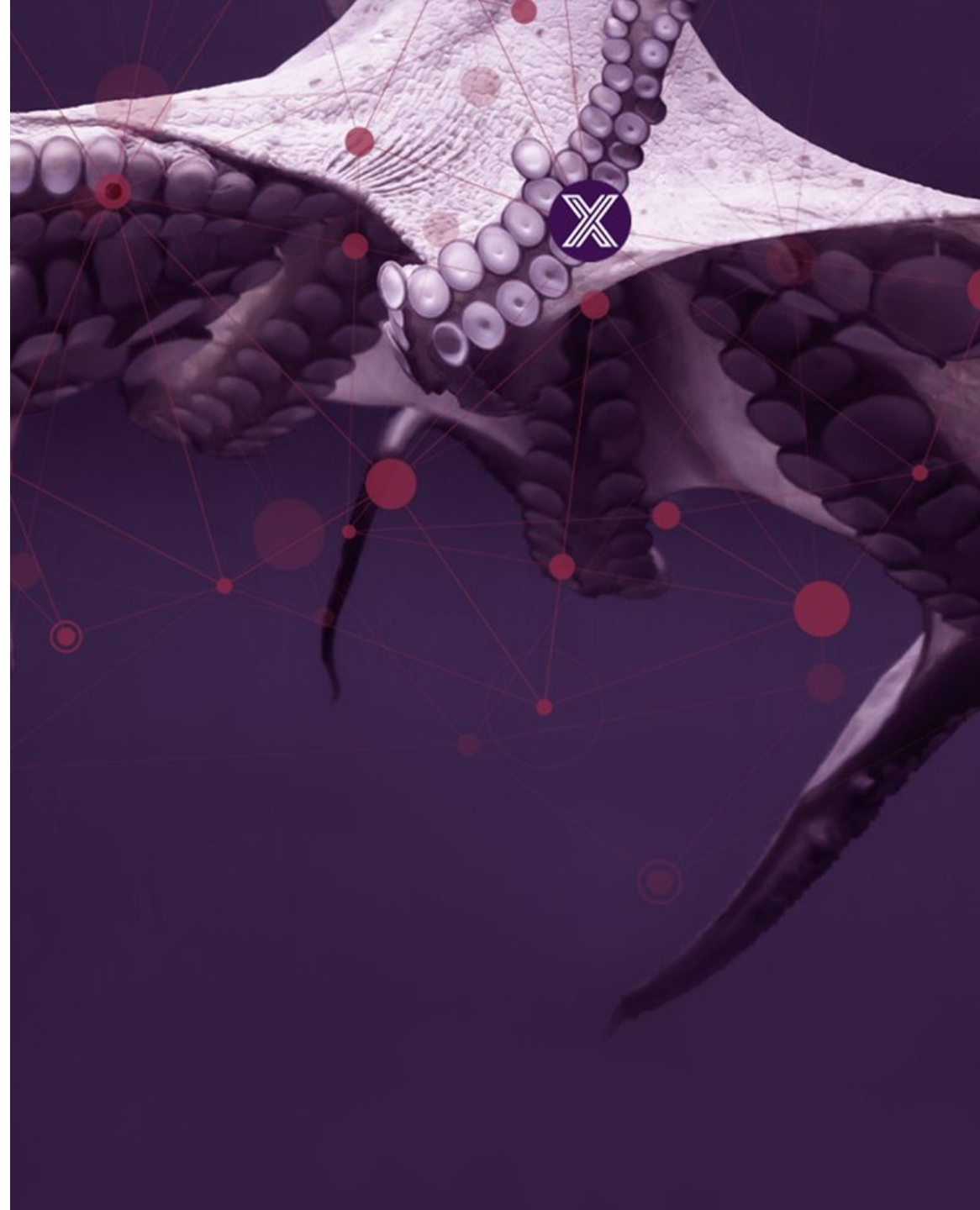
LF Antitrust Policy Notice

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Meeting Logistics

Time: March 27, 2019 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:

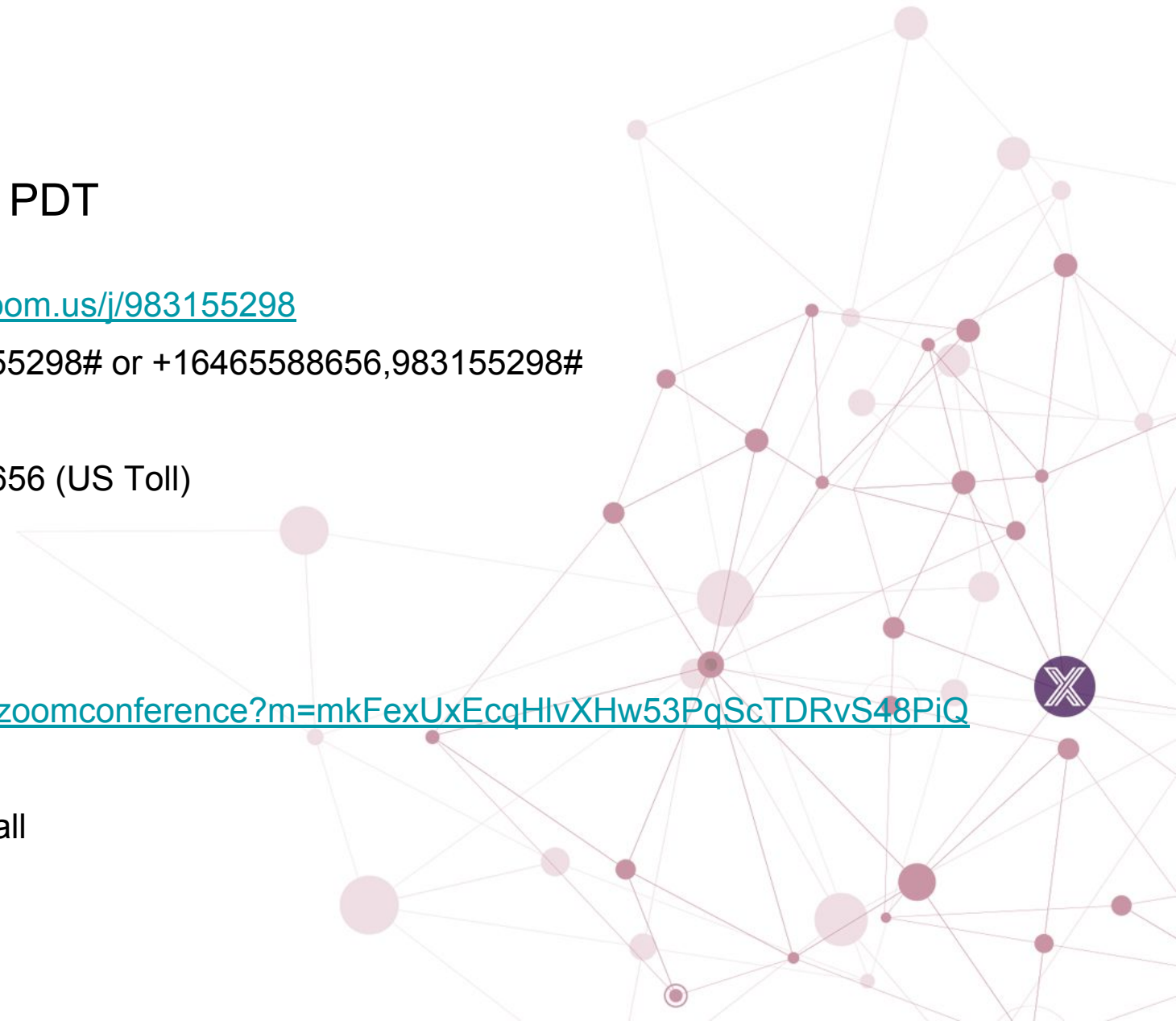Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+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
Mainflux	Drasko Draskovic	drasko@mainflux.com
Intel	James Gregg	james.r.gregg@intel.com
Mainflux	Janko Isidorovic	janko@mainflux.com
Dell	Jim White (TSC Vice Chair)	james.white2@dell.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
Samsung	Moonki Hong	moonki1.hong@samsung.com
Dell	Randy Thompson	Randy.T@dell.com
IOTech	Steve Osselton	steve@iotechsys.com
Canonical	Tony Espy	espy@canonical.com
Dell	Trevor Conn	Trevor.Conn@dell.com

Current quorum = 6 members

Note: Quorum for TSC meetings requires at least fifty percent of all voting members of the TSC to be present. The TSC may continue to meet if quorum is not met, but will be prevented from making any decisions at the meeting. Except as provided in Section 7.c. and 8.a, decisions by vote at a meeting require a majority vote of those in attendance, provided quorum is met. Decisions made by electronic vote without a meeting require a majority vote of all voting members of the TSC.

Today's Agenda

- Akraino presentation
- Strike Team updates
- WG Updates
- EdgeX Awards
- Edinburgh release
- EdgeX Mail List / Calendar Updates
- TSC F2F (planning, dates, etc.)
- Upcoming Events
- AOB

Akraino TSC Presentation

https://wiki.edgexfoundry.org/download/attachments/329436/Akraino%20Overview.pdf

Kandan Kathirvel (Akraino TSC chair)

Strike Team Updates

Strike Team leads

Strike team Updates

- CBOR/binary support - Toby on point with Trevor and Janko to assist with core, supporting and export services changes
  - Strike team to determine best WG to use to review design and work issues
- Redis implementations of DB services - Andre & Trevor
- Initial performance (and load) testing infrastructure and results - Andy
  - LF support for TIG stack
- Certification Program - Randy and Jim
- SDK Unit testing (to the point short of any major refactoring) - Steve
- SIGL Static Analysis - James (with LF support)
- Kong Upgrade - Tingyu

- Device services (Edinburgh public availability of Modbus, MQTT, BACNet, BLE, Virtual Device, SNMP) - Steve
  - Dell to provide SNMP DS
- Security storing service secrets in Vault and protecting the master token - Jim and Tingyu with Intel resource assistance
- Documentation clean up - Michael with WG leads to nominate areas of need first and complete doc updates by deadline
- UI updates
  - IoTech UI - Keith
  - VMWare UI - Jim to check with Huaqiao
  - UIs not able to be updated will be archived to the Delhi release

EDGE X FOUNDRY™

Work Group Updates

Chairs

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Working Group Chair Updates

- Around the horn
  - Core/Supporting - Trevor
  - Applications - Janko
  - Device Services - Steve
  - Test/QA - Andy
  - DevOps - James
  - Security - Jim
  - System Management - Jim
  - Certification - Randy
  - Vertical Solutions - Moonki
  - Developer Outreach - Michael

Core Working Group (26-Mar-19)

- Redis
  - Targeting Friday 28-March for main PR
  - Subsequent PR for notifications support on April 8 (IOTech)
- CBOR
  - Work complete to provide callable stub into core-data
  - Will start creating issues for the implementation details in core services
- Documentation
  - Added GoDoc documentation to the service clients in go-mod-core-contracts
    - Discussion in Core WG calls about how we can host this on a release by release basis.
  - Revised Configuration documentation found in edgex-go/docs
  - More to come...

Applications WG Update (26-Mar-19)

Work on the Application Function SDK is progressing according to plan.
Code contributions for Application Functions SDK:

- #43 - Message Bus Integration - Initial implementation of message bus integration is done.

- Trevor had a few remarks on the App Functions SDK code structure and organization

Device Services WG Update (25-3-19)

- Technical discussion on Auto Event implementation
  - Decided on event interval specification
- Analysis of required documentation for Edinburgh
- Ongoing review of Edinburgh device services requirements document
- Planned call to discuss use/elimination of value descriptors in core data
- Jim looking at use of Go FMT in CI process

Known Connector Development

Available

In development

- **Ethernet– Industrial and Building Automation:**
  - Modbus TCP
  - BACnet/IP
  - OPC DA
  - OPC UA
  - EtherNet/IP
  - EtherCat
  - Profinet
  - Siemens s5 and s7 Protocols
  - Omron FINS
  - Zigbee
  - KNX
  - IOTivity

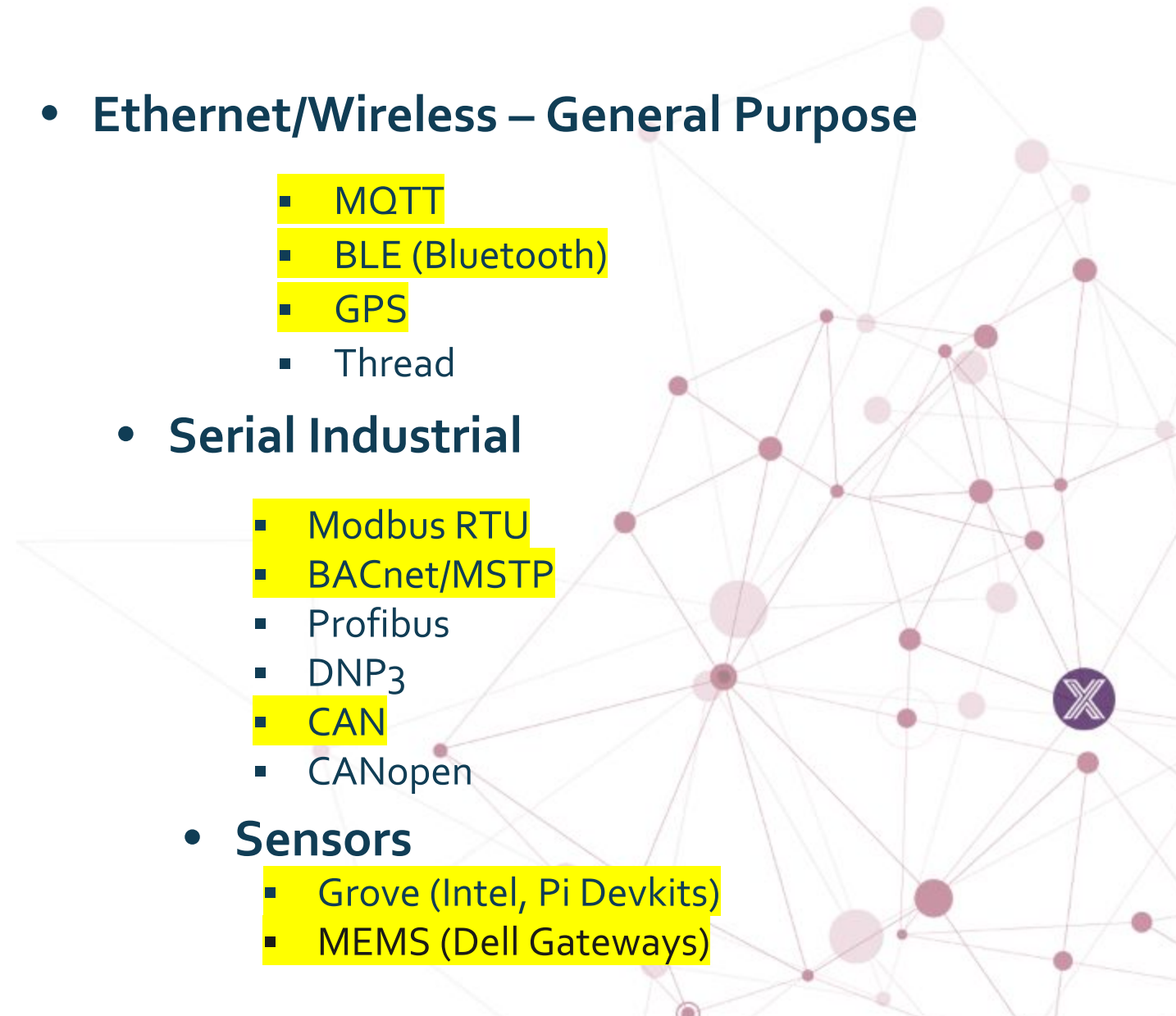- **Ethernet/Wireless – General Purpose**
  - MQTT
  - BLE (Bluetooth)
  - GPS
  - Thread

- **Serial Industrial**
  - Modbus RTU
  - BACnet/MSTP
  - Profibus
  - DNP3
  - CAN
  - CANopen

- **Sensors**
  - Grove (Intel, Pi Devkits)
  - MEMS (Dell Gateways)

Test/QA WG Update (03-27-19)

- Continue to monitor and resolve black box test issues
- Fixed issue [#182](#)

- Automating the performance test.
  - Successfully triggering performance test using pipeline project on IOTech Jenkins.
  - Investigating how to trigger performance test from EdgeX Jenkins
- Carried out evaluation of Robot framework - candidate for supporting integration testing e.g. Device

  Service testing

- Edinburgh objectives
  - Better visualization/dashboarding (Allure) of test results (complete)
  - Automated capture of resource metrics to monitor performance - LF has completed deployment of TIG stack, some setup remaining but are ahead of schedule
  - Security test automation - implemented by Security WG (investigating problems on ARM)
  - Code contributors will now be required to supply additional or updated blackbox tests (complete)

- Next QA/Test meeting Thursday 28th March, 4pm PDT

DevOps WG Update (03-27-19)

Several User Stories currently being worked in current sprint.

- Demo last week showed build automation using Jenkins Pipelines which supports the release version tagging for go modules. This week will demo this working in the EdgeX Jenkins build environment.
- Landing of the EdgeX TIG stack infrastructure complete. Currently working with LF to implement required dashboards, setting up backups and monitoring.
- Sigul is being positioned to be used for signing release artifacts using Jenkins EdgeX build automation. Sigul to be enhanced to enable signing of git tags and Docker images.
    - LF dependency with resource assigned / planned and prioritized for Edinburgh
- Risk: New Device services will require build automation - No Code Dropped
- New scope to add codecov.io config to edgex-go repo - deprioritized until Sigul work completed

Next DevOps WG meeting - Thursday 7AM PDT

System Management WG Update (3-27-19)

- System management features for Edinburgh are in
- Now working....
  - C SDK integration with DS team
  - Documentation
  - Working issues and any stretch goals within reason
    - Manifesting services
  - Fuji and beyond roadmapping and planning

Security WG Update (3-27-19)

- Call with Intel security team and David F last Friday
  - additional help and Fuji roadmapping
- Current Edinburgh efforts
  - modify secret store service initialization to create namespace & secrets
  - modify secret store service initialization to encrypt the Vault master token
  - Share namespace definitions with the consuming services/scripts
  - Create bash script wrapper around mongo_init
  - Create a client Go module to fetch secrets (stretch)
  - Add code to SMA responders so that secret settings are not sent to SMA
- Addressing Security Issues (CVE style planning)
  - Draft plan for Edinburgh (crawl stage)
- Kong upgrade
  - Now working with 1.0.3 (Thanks Tingyu!); still some Oauth2 issues to be resolved

Certification WG Update (3-25-19)

- Looking at real world example of certifying a device service as an exercise to uncover requirements and tools

- Meetings are on Mon at 7am PDT
- Link to plan doc, minutes, and recording available on wiki

Vertical Solutions WG Update (3-27-19)

- Upcoming Commerce Project call : Mar. 27th 4pm in PST
  - Zoom Meeting : https://zoom.us/j/975881686
  - Mobile
    - +1 669 900 6833 (San Jose)
    - +1 646 558 8656 (New York)
    - +1 855 880 1246 (US Toll-free)
    - +1 877 369 0926 (US Toll-free)
    - Meeting ID : 975 881 686
    - Find your local number : https://zoom.us/u/aA4GBJBi8

Developer Outreach (03-27-19)

- Edinburgh [documentation strike team](#)

  - 22 issues

  - 1 done / 20 assigned / 1 unassigned

- 2019 EdgeX Foundry Awards [open for nominations](#)

- Raspberry Pi GPIO device service in progress

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Edinburgh Release

Proposed timeline

- Freeze: May 28 (Tue after Memorial Day)
  - Create new branch; update version numbers on master, etc.
  - Testing and bug fixes between 5/28 and 6/20 (23 days)
- Release date: June 20

Mail List / Calendar Updates

Brett Preston

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Reminder: Changes coming to mail lists / calendaring

Current status: All meeting scheduling, calendar invites, mail list management is dependent on one person.

Forward thinking: WG Chairs will be enabled to execute all of the above via self-service tools; while still having full access to PM for support. Akraino successfully migrated to this model a few months back and they now have 20 hosts on-boarded (reference https://wiki.akraino.org/pages/viewpage.action?pageId=6128052).

Google vs Outlook challenges no more: The new calendaring model accurately sends out updates when meeting(s) are modified.

Next Steps:

1. Meeting invitees will be provided instructions on how to subscribe to a meeting series (options via either Groups.io or Confluence/Wiki dependent on preference). Reminders will be sent out over the coming weeks across multiple modes of communication, including Brett joining WG calls to help walk through the process. Gmail invites will be kept up for 1 month, giving plenty of time for folks to subscribe to the calendar invites, at which point they will be removed/sunset. Note: Dial-in information does not change during this process. **Drop Date: April 12, 2019**
2. WG Chairs/Meeting Hosts will be provided Zoom log in and Groups.io Moderator status to allow them to both schedule new meetings and distribute invites to all on a particular mail list.
3. Those looking to jump right in can do so, with information already up at https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=21824127

Fuji F2F Planning

WG Chairs - start thinking about Seoul meeting

- WG leads - get with Jim to setup topics and time needs for the WG Chair day's (1st day) meetings
  - Start thinking about who you want there (invitation only for the 1st day)
- WG Chairs - draft a roadmap for Fuji for your areas
  - What do you think needs to go into a Fuji release
- Community - what new topics/features/etc. would you like discussed?
  - Send Keith or Jim an email
- Jim will start to work with WG Chairs to organize the agenda and content

EDGE X FOUNDRY™

EdgeX TSC F2F Meetings

EdgeX TSC F2F Meeting(s)

- **29 April - 2 May, 2019** -- Location Seoul, South Korea -- [Wiki page](#)
  - Technical Business Discussions + EdgeX 101 on Monday, April 29
  - Architect's Day / WG Breakout Sessions + Social Event on Tuesday, April 30
  - Technical F2F - Day 1 + Dinner Reception on Wednesday, May 1
  - Technical F2F - Day 2 on Thursday, May 2
- **RSVP at https://goo.gl/forms/oMptkNU90RRxhK5g1**
  - RSVP by EOD April 12
  - Current registration count: 27 in-person; 1 dial-in
- Hotel/Travel: Recommended hotels listed on [Wiki](#)
  - Rideshare sign-up: Brett will email those who have RSVP'd with link to sign up
    - **Update:** Recommended Hotel is Sheraton Seoul Palace Gangnam (11 out of 12 respondents are staying at)

- **4 November - 8 November, 2019** -- Location Chandler, Arizona (USA) -- [Wiki page](#)

Upcoming Events

Upcoming Events

- Hannover Messe, April 1-5, 2019 | Hannover, Germany
  - EdgeX will have a presence in the Dell booth (Hall 6, Stand C40), including the EdgeX Community Demo
    - Community demo running Delhi release
- Open Networking Summit, April 3-5, 2019 | San Jose, CA
  - LF Edge will have a booth and multiple presentations
  - Add-on events
    - Home Edge Community Kickoff Meeting - April 2 (8-12pm PT) - More info - RSVP here
    - LF Edge Members Happy Hour - April 2 (5:30-6:30pm PT) - Members can RSVP here
- Internet of Things World, May 13-16, 2019 | Santa Clara, CA
  - LF Edge will have a booth
    - Submit related project demos to showcase in the booth to pr@lfedge.org

Discussions around upcoming events occur in the LF Edge Outreach Committee.
Members may subscribe at: https://lists.lfedge.org/g/outreach-committee

Additional Events & Speaking Opps

- IoT Tech Expo Europe, June 19-20, 2019 | RAI, Amsterdam
  - Speaking Opportunity - Enterprise IoT Solutions Track - Janko Isidorovic/Drasko Draskovic, Mainflux (confirmed)
- Open Source Summit China, June 24-26, 2019 | Shanghai
  - Arpit giving a keynote on LF Edge
- IoT Solutions World Congress, October 29-31, 2019 | Barcelona
  - Call for Testbeds is Open
    - January 7 - April 30: Submission
    - May 1 - June 20: Review
    - June 20 - June 30: Notification
    - July 5: Publication

Discussions around upcoming events occur in the LF Edge Outreach Committee.
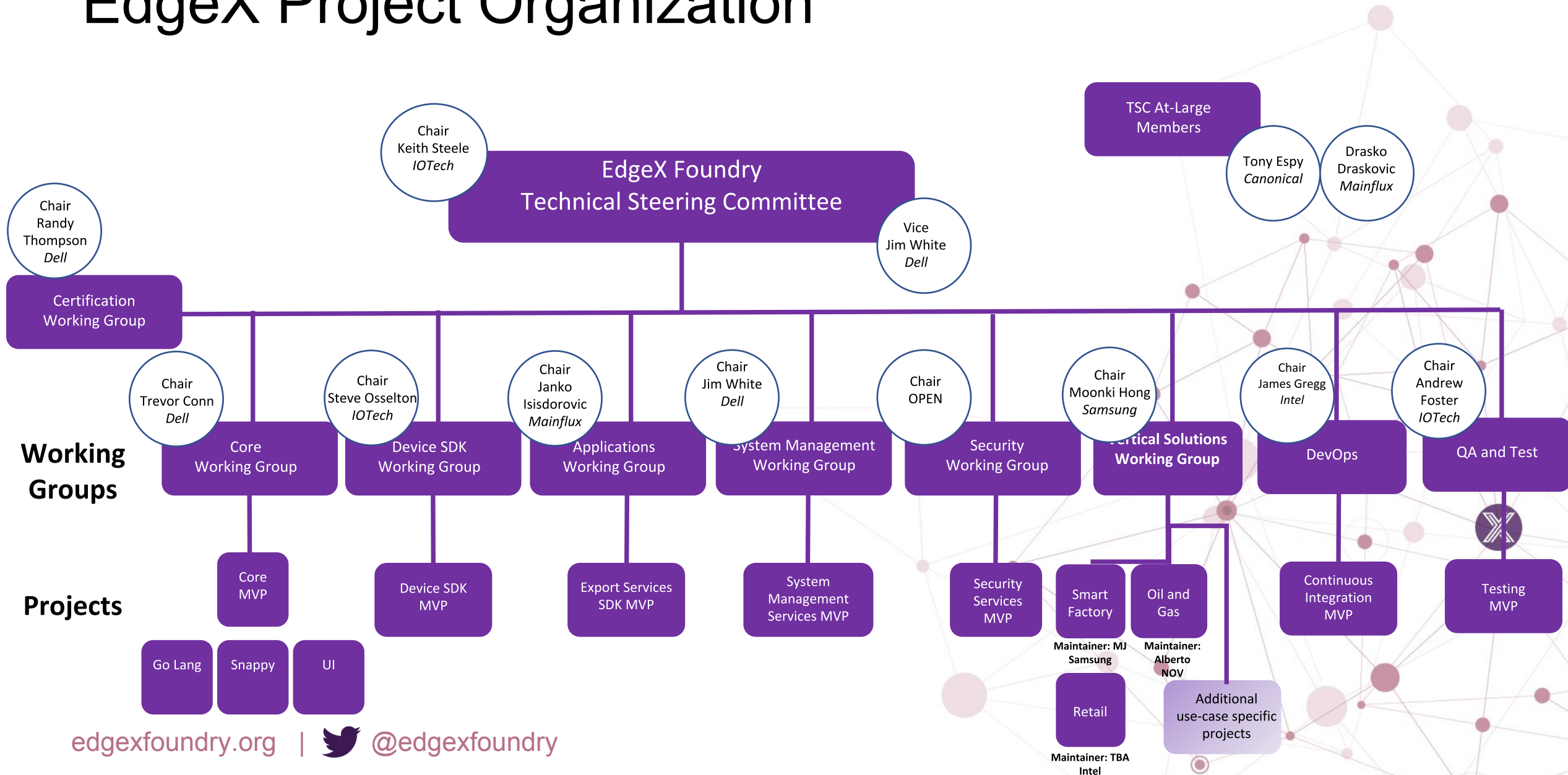Members may subscribe at: https://lists.lfedge.org/g/outreach-committee

AOB / Reminders

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 3, 2019**
  - Cancel? Between Hannover Messe and ONS?

EdgeX Project Organization

EDGEXFOUNDRY™

EdgeX Foundry Technical Steering Committee

Chair
Keith Steele
IOTech

Vice
Jim White
Dell

TSC At-Large Members

Tony Espy
Canonical

Drasko Draskovic
Mainflux

Chair
Randy Thompson
Dell

Certification Working Group

Working Groups

Chair
Trevor Conn
Dell

Chair
Steve Osselton
IOTech

Chair
Janko Isisdorovic
Mainflux

Chair
Jim White
Dell

Chair
OPEN

Chair
Moonki Hong
Samsung

Chair
James Gregg
Intel

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

Projects

Core MVP

Device SDK MVP

Export Services SDK MVP

System Management Services MVP

Security Services MVP

Smart Factory

Oil and Gas

Continuous Integration MVP

Testing MVP

Go Lang

Snappy

UI

Maintainer: MJ Samsung

Maintainer: Alberto NOV

Retail

Additional use-case specific projects

Maintainer: TBA Intel

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Marketing

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

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

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 Mike Woster at LF (mwoster@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://slack.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 Slack

  https://slack.edgexfoundry.org/

- Weekly EXF Technical Spin up calls

  30 minute deep-dive topics followed by 30 minute open Q&A
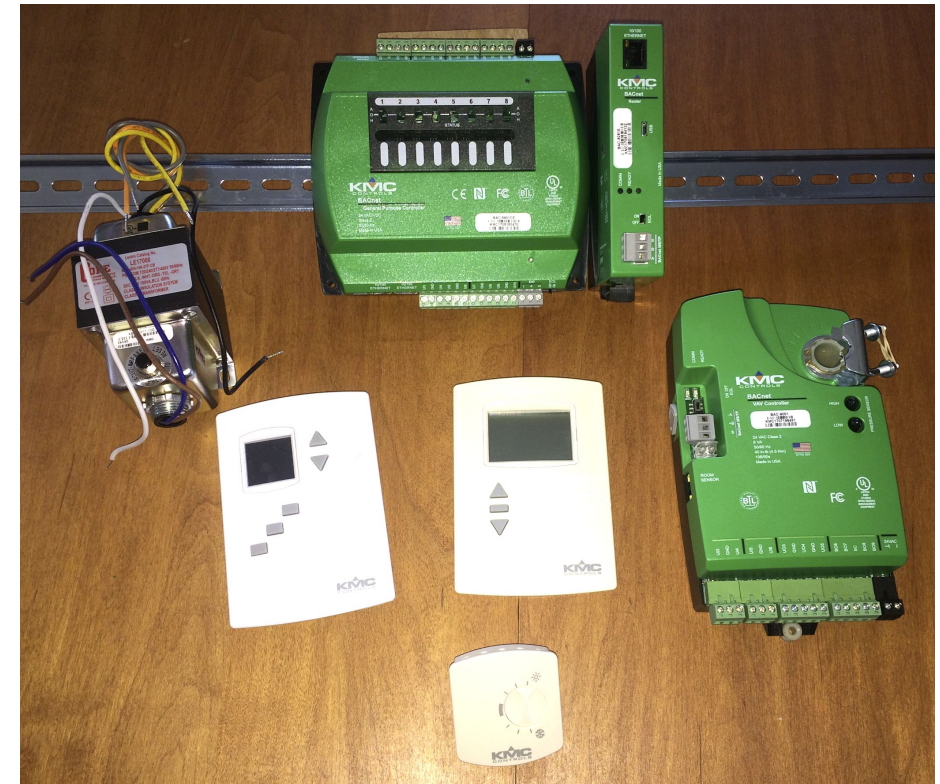
  Call recordings are available on the Wiki

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 for assistance

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@lfedge.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

Thank You