

EDGE X FOUNDRY™

# TSC Meeting

March 20, 2019



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# Meeting Logistics

Time: March 20, 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)

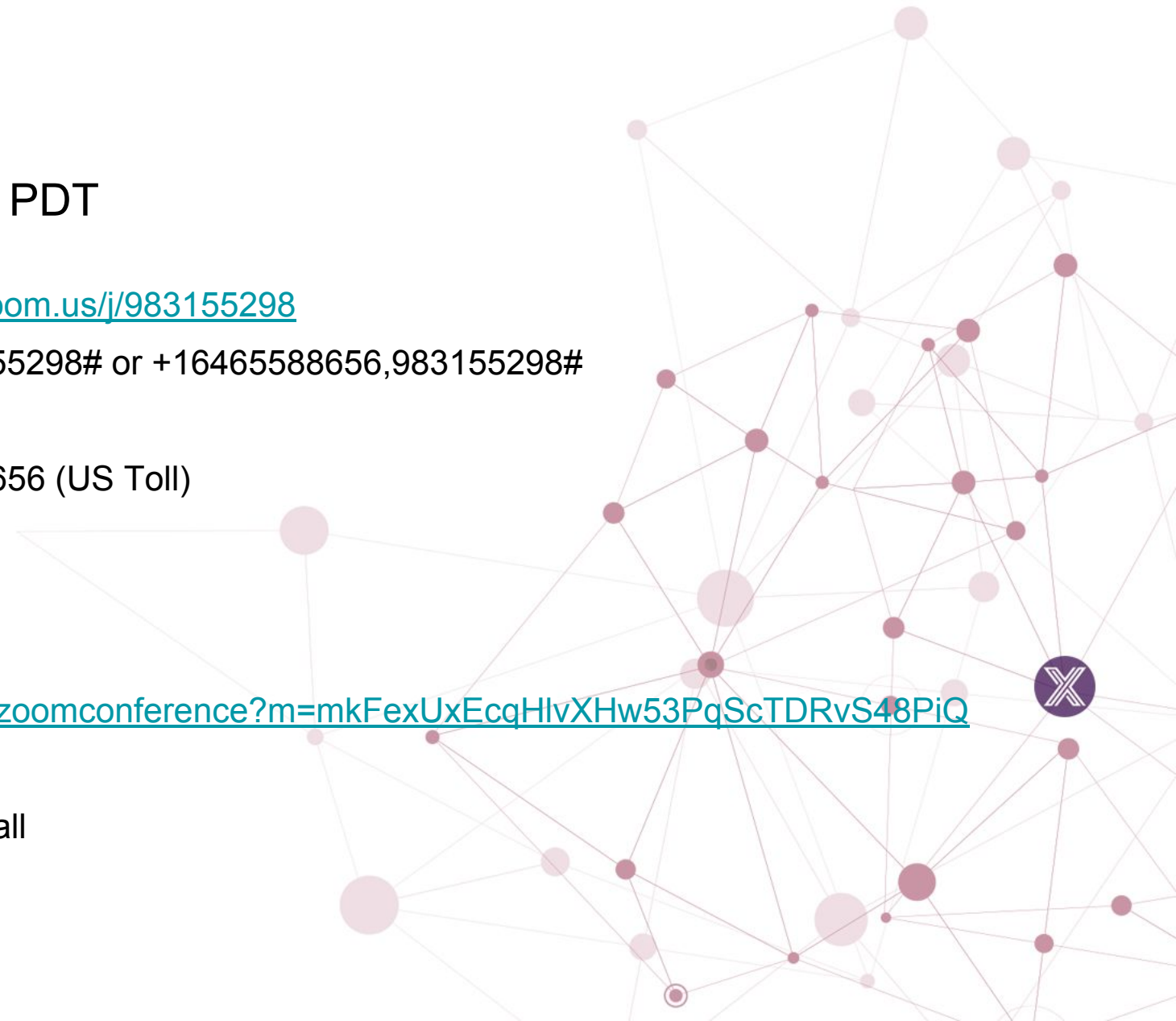
+1 855 880 1246 (US Toll Free)

+1 877 369 0926 (US Toll Free)

Meeting ID: 983 155 298

International numbers available: <https://zoom.us/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	Andy Foster	<a href="mailto:andy@iotechsys.com">andy@iotechsys.com</a>
ForgeRock	David Ferriera	<a href="mailto:david.ferriera@forgerock.com">david.ferriera@forgerock.com</a>
Mainflux	Drasko Draskovic	<a href="mailto:drasko@mainflux.com">drasko@mainflux.com</a>
Intel	James Gregg	<a href="mailto:james.r.gregg@intel.com">james.r.gregg@intel.com</a>
Mainflux	Janko Isidorovic	<a href="mailto:janko@mainflux.com">janko@mainflux.com</a>
Dell	Jim White (TSC Vice Chair)	<a href="mailto:james.white2@dell.com">james.white2@dell.com</a>
IOTech	Keith Steele (TSC Chair)	<a href="mailto:keith@iotechsys.com">keith@iotechsys.com</a>
Samsung	Moonki Hong	<a href="mailto:moonki1.hong@samsung.com">moonki1.hong@samsung.com</a>
Dell	Randy Thompson	<a href="mailto:Randy.T@dell.com">Randy.T@dell.com</a>
IOTech	Steve Osselton	<a href="mailto:steve@iotechsys.com">steve@iotechsys.com</a>
Canonical	Tony Espy	<a href="mailto:espy@canonical.com">espy@canonical.com</a>
Dell	Trevor Conn	<a href="mailto:Trevor.Conn@dell.com">Trevor.Conn@dell.com</a>

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



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## Akraino TSC Presentation

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

Kandan Kathirvel (Akraino TSC chair)





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## 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





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# Work Group Updates

Chairs

# 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 (19-Mar-19)

- Redis
  - Scheduler support completed
  - Andre back on deck to work on some refactoring and provide leadership w/r/t support-notifications integration
- CBOR
  - Work complete to provide callable stub into core-data
    - Involves core-contracts / core-data changes
    - core-data/AddEvent will return 501 Not Implemented until ingestion from Device SDK is completed.
  - Messaging abstraction
    - go-mod-messaging initial commit is in
    - edgex-go PR is pending review
      - Allows us to route messages differently by factors like Topic and ContentType
      - This allows for different handling of messages based on one of the above

# Applications WG Update (20-Mar-19)

Work on the Application Function SDK is progressing according to plan.

Code contributions for Application Functions SDK:

- #25 - System mgmt agent integration
- #29 - Added custom ApplicationSetting so apps can add their own configuration values
- Some bug fixes and code cleanup PRs
- Initial Message Bus abstraction PR is submitted - Please take a look <https://github.com/edgexfoundry/go-mod-messaging/pulls>

Export Services

- #1174 - Change influxdb export to use an independent influxdb client repo (issue 1173)

# Device Services WG Update (18-3-19)

- Go SDK
  - Completing integration with latest Go core contracts
- C SDK
  - Adding support for new Protocol Properties and base64 encoding
- Demo of Virtual Device Service
  - Support for additional data types (string, CBOR) TBD
  - Being moved from holding repository
- Akram to review SMA integration with Go/C SDKs
- Additional design work required on reading cache feature
- Proposal to simplify C/Go SDK API under discussion #213



# Known Connector Development

<https://bit.ly/2tWH9Lv>

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**

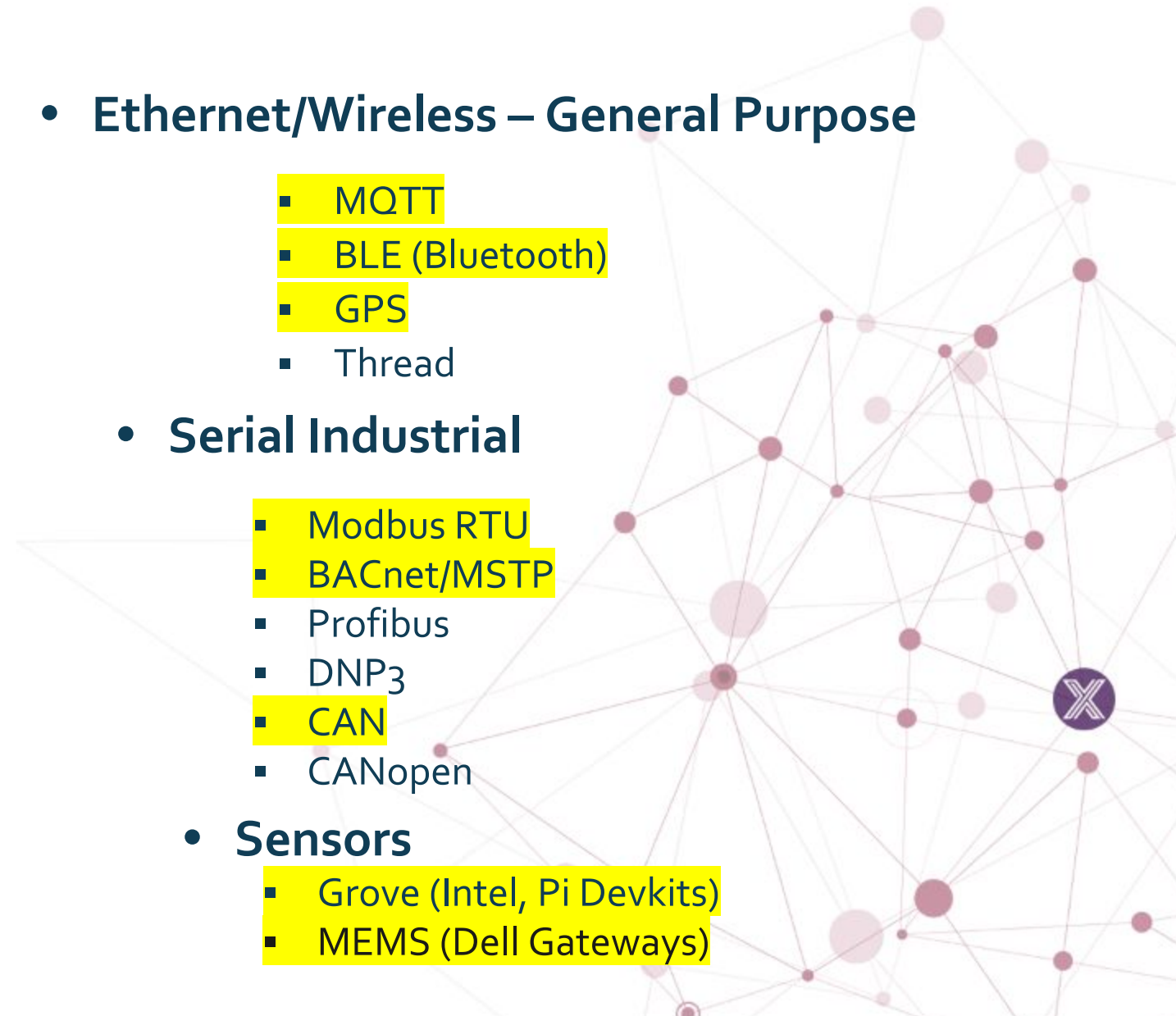
- MQTT
- BLE (Bluetooth)
- GPS
- Thread

- **Serial Industrial**

- Modbus RTU
- BACnet/MSTP
- Profibus
- DNP3
- CAN
- CANopen

- **Sensors**

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



# Test/QA WG Update (03-13-19)

- Continue to monitor and resolve black box test issues
- Fixed issue [#178](#)
- Automating the performance test.
  - Currently integrating performance tests with Jenkins
- Edinburgh objectives
  - Better visualization/dashboarding (Allure) of test results (complete)
  - Automated capture of resource metrics to monitor performance - LF still to deploy TIG stack (target mid April)
  - Security test automation - implemented by Security WG (on track)
  - Code contributors will now be required to supply additional or updated blackbox tests (complete)
- Next QA/Test meeting Thursday 21st March, 4pm PDT

# DevOps WG Update (03-20-19)

Several User Stories currently being worked in current sprint.

- Work in progress to demonstrate build automation which supports the release version tagging for go modules.
- **Risk:** Landing of the EdgeX TIG stack infrastructure still pending - LF dependency
- 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. This work was not scoped for Edinburgh.
  - LF dependency with resource assigned / planned and prioritized for Edinburgh
- **Risk:** New Device services will require build automation
- 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 (3-20-19)

- Sorry Jim can't be at the meeting today.
- System management features for Edinburgh are in
- Now working....
  - Go SDK and C SDK equivalence with regard to sys mgmt (Akram on point)
  - Documentation
  - Working issues and any stretch goals within reason
  - Fuji and beyond roadmapping and planning

# Security WG Update (3-20-19)

- Securing service secrets with Vault
  - Initial design document drafted and Tingyu/Jim preparing for next WG meeting
- CVE plan
  - Initial draft plan document and Tingyu/Jim preparing for next WG meeting
- Kong upgrade
  - Hashicorp not addressing the issue but we'll continue to monitor
  - use of 0.13 until the issue is fixed
- Working with Intel (David, Beau and Bryon) on Fuji and beyond roadmap



# Certification WG Update (3-18-19)

- Discussion around Project definition document (Google docs)
  - Link on Certification WG wiki
- Need more participation from developers/QA experts on technical aspects of Certification eval tests
- Working toward presenting high level plan at Seoul TSC meeting
  
- Meetings are on Mon at 7am PDT
- Link to doc, minutes, and recording available on wiki

# Vertical Solutions WG Update (3-20-19)

- [WIP] Wiki updates : Willing to getting members' feedback
  - Smart Factory Project : Repository & explanation, tech. descriptions
    - <https://wiki.edgexfoundry.org/display/FA/Code+Repositories>
    - <https://wiki.edgexfoundry.org/display/FA/Protocols%2C+data+models+for+command+of+metadata%2C+and+data+representation>
    - <https://wiki.edgexfoundry.org/display/FA/ezMQ+-+Data+transmission+based+on+message+queue+among+the+microservices>
    - <https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=7602659>
  - Operation guideline : Charter & work scope
    - <https://wiki.edgexfoundry.org/display/FA/Operation+Guideline>
- Upcoming Commerce Project call : Mar. 27th 4pm in PDT

# Developer Outreach (03-13-19)

- Documentation not being published, [Jenkins jobs](#) failing
- Edinburgh [documentation strike team](#)
  - 21 open issues
  - 12 assigned / 9 unassigned
- [EdgeX Forums](#) ready to use
- 2019 EdgeX Foundry Awards [open for nominations](#)



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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





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## Mail List / Calendar Updates

Brett Preston

# 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>



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## 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





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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: 22 in-person; 0 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](#)



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## Upcoming Events

Full list of LF events available at  
<https://events.linuxfoundation.org/>

Additional LF Edge events available at  
<https://www.lfedge.org/events/>

# Upcoming Events

- [Hannover Messe, April 1-5, 2019](#) | Hannover, Germany
  - EdgeX will have a presence in the Dell booth, 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
    - Need volunteers to help staff the booth: [Sign-up sheet](#)
    - Need project demo submissions - Submit demo title, summary, project/relevance and contact names to [pr@lfedge.org](mailto:pr@lfedge.org)
  - Presentation: Edge Computing League - LF Edge Umbrella (April 5 at 11:30)
- [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](mailto: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>



Full list of LF events available at  
<https://events.linuxfoundation.org/>

Additional LF Edge events available at  
<https://www.lfedge.org/events/>

# 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

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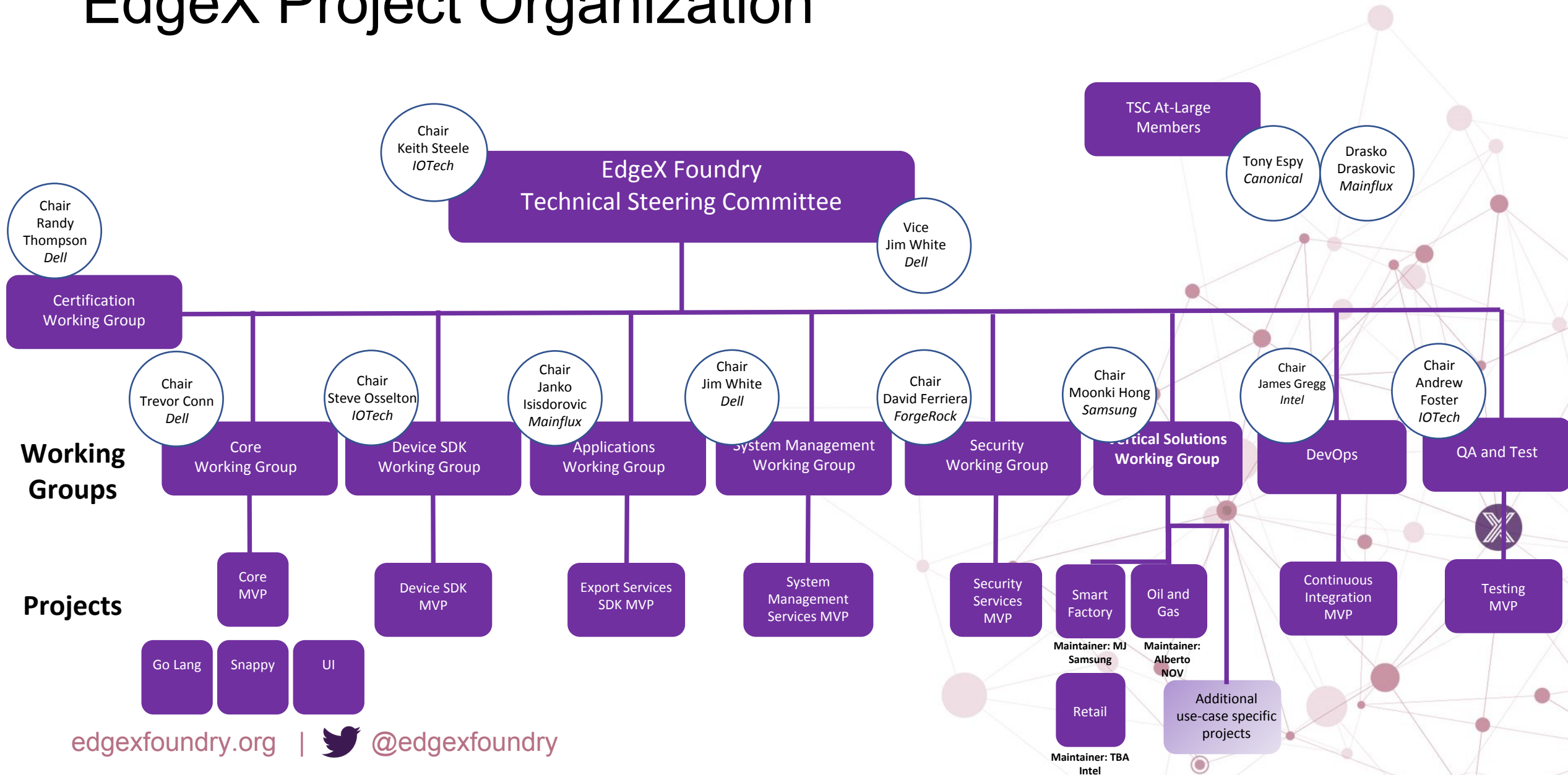
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AOB / Reminders

# 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: March 27, 2019**

# EdgeX Project Organization



# Marketing

- **CTA:** If your company will be presenting EdgeX at an upcoming event/webinar/other, please email [pr@lfedge.org](mailto: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](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 Mike Woster at LF ([mwoster@linuxfoundation.org](mailto:mwoster@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://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](#)

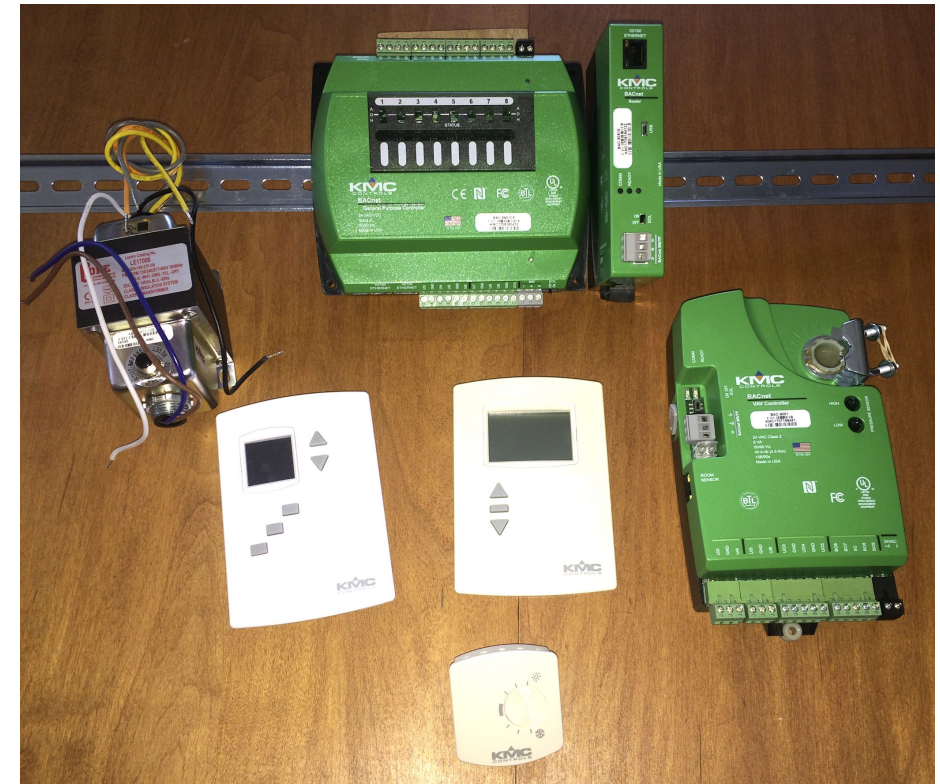
# What is the Device Exchange?

- 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](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@lfedge.org](mailto: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



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Thank You