

EDGE X FOUNDRY™

# TSC Meeting

July 31, 2019



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# Meeting Logistics

Time: July 31, 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)

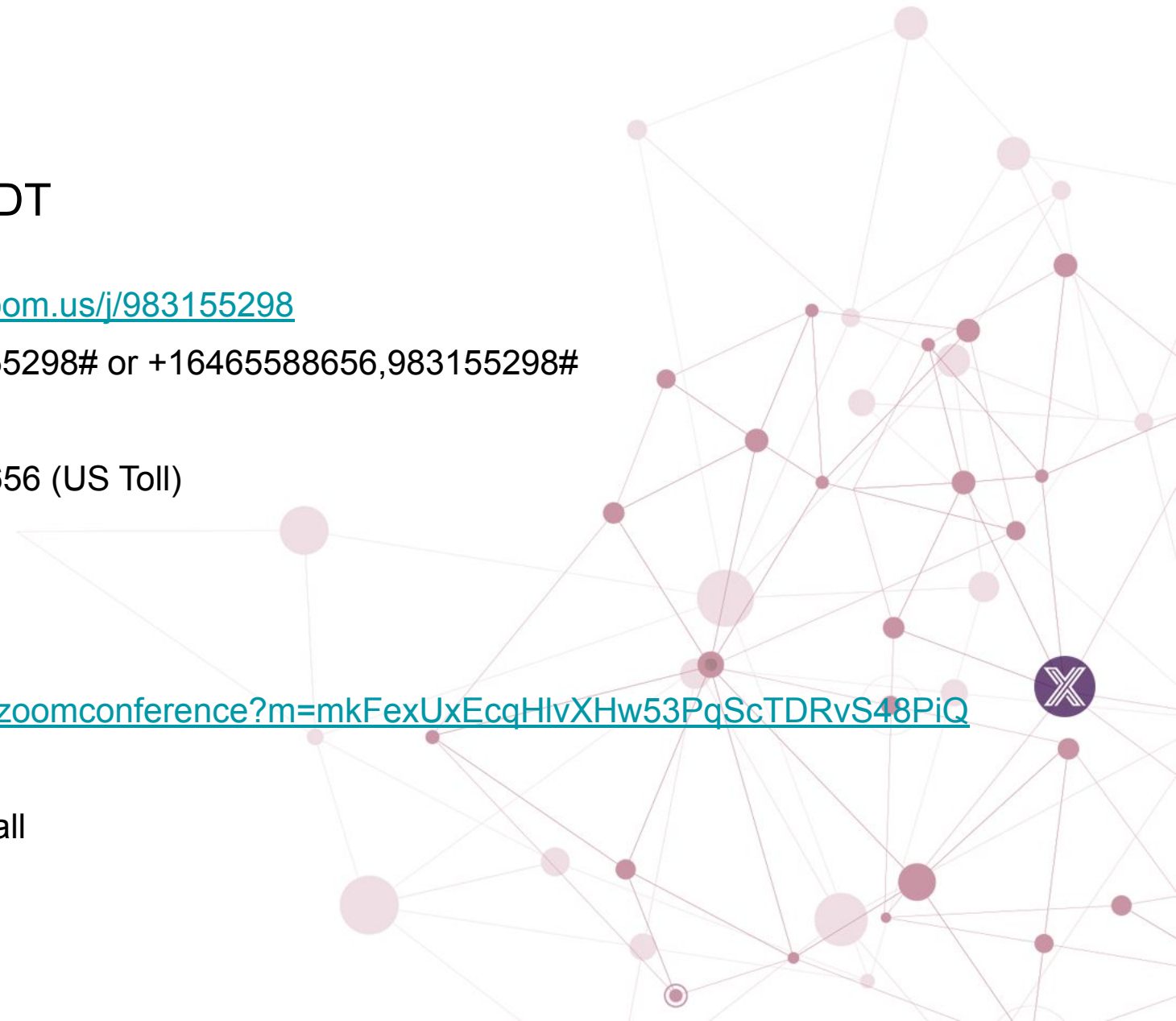
+1 855 880 1246 (US Toll Free)

+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>
Intel	Brad Corrion	<a href="mailto:bradley.w.corrion@intel.com">bradley.w.corrion@intel.com</a>
IOTech	Iain Anderson	<a href="mailto:iain@iotechsys.com">iain@iotechsys.com</a>
Intel	James Gregg	<a href="mailto:james.r.gregg@intel.com">james.r.gregg@intel.com</a>
Dell	Jim White (TSC Vice Chair)	<a href="mailto:james.white2@dell.com">james.white2@dell.com</a>
IBM	Joe Pearson	<a href="mailto:joe.pearson@us.ibm.com">joe.pearson@us.ibm.com</a>
IOTech	Keith Steele (TSC Chair)	<a href="mailto:keith@iotechsys.com">keith@iotechsys.com</a>
VMware	Malini Bhandaru	<a href="mailto:mbhandaru@vmware.com">mbhandaru@vmware.com</a>
Intel	Mike Johanson	<a href="mailto:michael.johanson@intel.com">michael.johanson@intel.com</a>
IOTech	Robin Chattergee	<a href="mailto:robin@iotechsys.com">robin@iotechsys.com</a>
Beechwoods	Rodney Hess	<a href="mailto:rodney@beechwoods.com">rodney@beechwoods.com</a>
RSA	Tingyu Zeng	<a href="mailto:tingyu.zeng@rsa.com">tingyu.zeng@rsa.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 = 7 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

- WG Updates
- Geneva Face-to-Face in Phoenix AZ
- Upcoming Events
- AOB



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Edinburgh Dot Release (1.0.1)

# Need for Dot Release and schedule

- Thanks again to those contributing to finding, addressing and getting this release out - including our LF partners.
- Dot release artifacts and compose files now available
  - Look for Edinburgh 1.0.1 files (1.0.0 files have been removed)



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# Work Group Updates

Chairs



# Working Group Chair Updates

- Around the horn
  - Core/Supporting - Trevor Conn
  - Applications - Mike Johanson
  - Device Services - Iain Anderson
  - Test/QA - Robin Chatterjee
  - DevOps - James Gregg
  - Security - Malini Bhandaru and Tingyu Zeng
  - System Management - Jim
  - Certification - Rodney Hess
  - Vertical Solutions - Brad Corrin

# Core Working Group (31-Jul-19)

- Value Descriptors
  - Primary Core Service functionality (PR #1557) merged
  - Core Service functionality toggled via configuration, disabled by default
  - Follow-up work captured in issue #1603
- Security-Proxy-Setup Migration
  - Calling this complete.
  - Waiting for functional verification from Tingyu Zeng
    - Delayed due to Security F2F this week
  - Will create PR in edgex-go ASAP
- Vault Secrets Integration
  - Asking Diana from VMWare to drive this
  - Formalize plan around how to assign DB credentials with/without security enabled
    - <https://github.com/edgexfoundry-holding/edgex-mongo-init/pull/1>
  - Also need Vault integration in all Core Services
    - <https://github.com/edgexfoundry-holding/go-mod-core-security>

# Applications WG Update (24-July-19)

- Currently Working On:
  - App Service Configurable will be available in holding this week
  - Black Box Tests - In Progress
    - REST based to start
    - Robot based once QA/Test WG has it working
    - Will be documented and shared with Test/QA WG
- On Deck:
  - Azure Export Functions for supporting IoT Hub
  - Documentation for recommendation approach on how to extend the App Functions SDK with your own go modules

# Application Services

## Functions (built into SDK)

Current/Complete:

### Fuji

- AES Encryption NEW!
- GZIP Compression NEW!
- ZLIB Compression NEW!

### Edinburgh

- Device Name Filter
- Value Descriptor Filter
- XML Conversion
- JSON Conversion
- MQTT(S) Export
- HTTP(S) POST Export

Future:

- MQTTS (Fuji) + Vault integration

## Reference App Services (Fuji)

(built on top of SDK)

- Azure IoT Hub (Fuji)
- Amazon IoT Core (Fuji)
- Configurable AS (Fuji)

AVAILABLE  
THIS WEEK

# Device Services WG Update (31-7-19)

- Agreed versioning policy
- Establishing support for ValueDescriptor changes
- Improving documentation coverage
  - Process for acceptance of new DSs
  - API specification

# Device Services - current/coming

## Open Source connectors (Current):

- Modbus (TCP/RTU)
- Virtual Device
- Random
- Grove C - ARM only
- SNMP
- MQTT

## Open Source connectors (Future):

- BACnet (IP & MSTP) (Aug)
- OPC UA (Aug)
- Bluetooth (Aug)
- ONVIF Cameras (Oct)

## Commercial connectors (Current):

- MQTT
- Modbus (TCP/RTU)
- BACnet (IP & MSTP)
- OPC UA

## Commercial connectors (Future):

- GPS (Aug)
- MEMS (Aug)
- CAN SocketCAN, CANopen (Sept)
- EtherNet/IP (Sept)
- EtherCat (Sept)
- PROFINET (Sept)
- Siemens s5/s7 (Sept)

# Test/QA WG Update (31-07-19)

- Performance Summary
  - Preparing automation script to collect data for performance summary report
    - Working on Redis and security supported cases
- Performance Test
  - Data lost issue
    - Last 2 runs were no data loss after updating the TIG infrastructure.
- Investigating RAML -> Swagger conversion
  - Adopt OAS 3.0 <https://swagger.io/specification/>
  - Preparing presentation of Swagger Hub account creation <https://swagger.io/tools/swaggerhub/>
  
- Next QA/Test WG meeting August 1st, 4pm PST

# DevOps WG Update (07-31-19)

## Fuji Scope

- Container Scanning (Clair Server landing request) has now been committed to by Linux Foundation with resources planned and funding approved for hosting on AWS.
  - Need update from LF on status of the landing
- Static Code Analysis Tools
  - Snyc demo (previously scheduled 7/31) Security WG will need to be rescheduled
- Review of the Linux Foundation Infrastructure as Code re: Performance Testing Data Loss
  - Seeking feedback from QA-Testing WG on performance
- Audit of GitHub repos / teams identified owners and opportunities for cleanup
  - Received initial LF pushback that the recent update to the wiki wasn't inclusive of other actions (e.g. change requests such as delete or archive obsolete teams)
    - Suggestion to include additional verbiage to include other action verbs that are explicitly not required for TSC approval for edgexfoundry-holding repos / teams

Next DevOps WG meeting - 8/1/2019 Thursday 7AM PDT



# System Management WG Update (7-30-19)

- Open Horizon POC
- Review and acceptance of CLI tool
- Fuji Release Items
  - Metrics collection - implemented
  - Set configuration - working
  - Start/stop/restart by executor including SMA
  - Safe shutdown
- Deployment/orchestration/management survey

# Security WG Update (7-31-19)

Tingyu & Malini

- Merging API-Gateway project into EdgeX-Go in progress. ( Fuji release plan)
- Merging SecretStore-Setup into EdgeX-Go in progress. ( Fuji release plan)
- PR for PKI-init project under review ( part of Fuji release plan)
- August 1, 2019 Security F2 in Santa Clara at Intel
  - Host Jim Wang [yutsung.jim.wang@intel.com](mailto:yutsung.jim.wang@intel.com)
  - Location: SC-12/Intel, 3600 Juliette Ln, Santa Clara, CA 95054
  - Agenda: Hardware Security & possibly PKI, details shared in the security WG meeting last week.

# Certification WG Update (7-29-19)

- No meeting this week
- Productive discussion on versioning in Device Services WG
- Next meeting this Monday, August 6th, 10 a.m. EDT

# Vertical Solutions WG Update (7-17-19)

- Focused on “Edge X Games” (aka hackathon)
  - Working meetings underway, moving to Marketing Subteam forum
- Hot off the presses: Congratulations to Henry Lau who has graciously stepped up to chair the Commerce Project for the next year

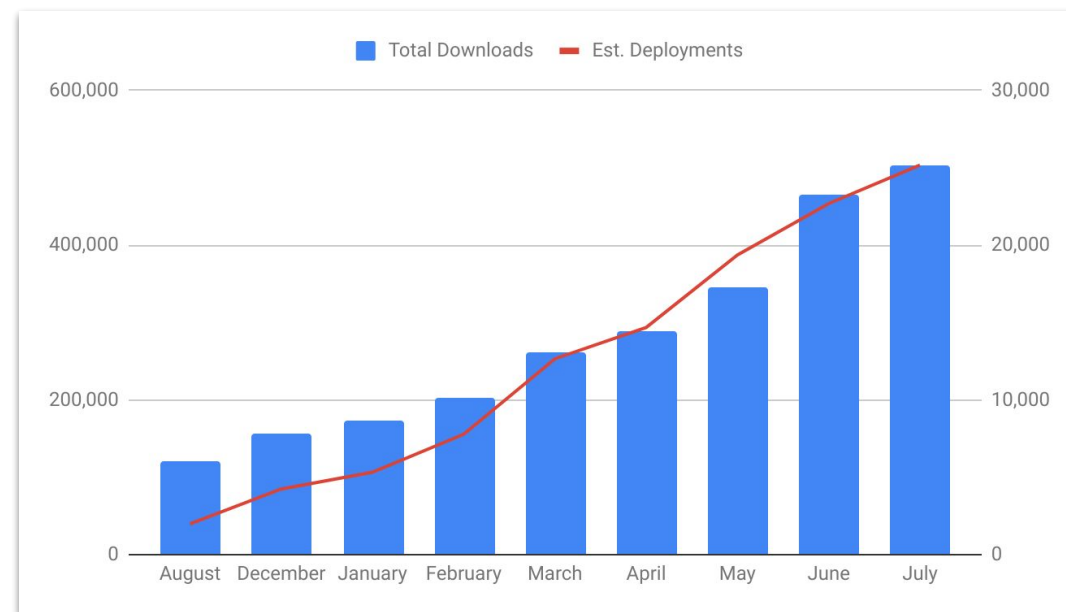
# Project Metrics

## Delhi:

- 350,000 docker downloads
  - Estimated 20,000 deployments

## Edinburgh:

- 67 authors
  - 1,150 commits
  - 969 issues closed
  - 1,185 PRs closed
  - 47 PR reviewers
- +20% web traffic
  - +350% social media referrals
  - Most from USA, China & India
  - Growth in Russia, Taiwan & India



# Miscellaneous

- Repository Creation/Ownership/Committers policy has been created
  - Approved by TSC on July 26th
  - Rationale: LF IT requiring all requests to be voted or appropriately documented
  - <https://wiki.edgexfoundry.org/display/FA/Repository+creation%2C+ownership+and+access+rights>
- Release/Version Strategy policy has been updated for SDKs & resulting services
  - Question on App Functions SDK version not yet at 1.x - still in beta
  - Some objections may still need to be worked out in DS WG
  - <https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=21823969>
- James Gregg is cleaning up holding repos owners/committers



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Geneva F2F

# Registration now open

## EdgeX TSC Face-to-Face meeting (semi-annual)

- Planning for the Geneva release (and lessons learned on Fuji)
- Nov 4-7th
  - Nov 4th - Architects' topics must be a contributor (have at least one Git contribution) or have invitation of WG chair
  - Located @ Galvanize Phoenix at 515 E Grant St, Phoenix, AZ
  - Hotel and other logistical info available on the [Wiki](#)
- Register now at <http://www.cvent.com/d/b6qcr0>





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## Upcoming Events

# Upcoming External Events

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

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

- › [Open Source Summit Japan](#): 17-19 July, 2019 - Tokyo, Japan
  - › July 17: BoF - Getting the Edge in Edge Computing
  - › July 19: Tiejun Chen, VMware - Build Edge Computing with EdgeX Foundry over Kubernetes
  - › July 19: Hyde Sugiyama, Red Hat - Kubernetes Native Infrastructure and CoreOS Operator Framework for 5G Edge Cloud Computing
- › [Open Source Summit / Embedded Linux Conference](#) NA: 21-23 August, 2019 - San Diego
  - › LF Edge Members receive a 20% discount on registration. Email [info@lfedge.org](mailto:info@lfedge.org) for code.
  - › August 20: [LF Edge Mini-Summit](#) - Half-day, single-track event on the topic of IoT and Edge Computing
  - › August 21: Tingyu Zeng, Dell: An Agile Approach to Threat Modeling for Securing Open Source Project EdgeX Foundry
  - › August 22: Malini Bhandaru, VMware & Trevor Conn, Dell - IoT Action at the Edge - EdgeX Foundry 1.0 Released!
  - › August 23: Alexandre Courouble, VMware - Easy as a pi: EdgeX on Raspberry Pi for Automotive IoT
  - › August 23: Gavin Lu, VMware - Open and Neutral Edge Computing Architecture on Heterogeneous Devices
- › [Open Networking Summit EU](#): 23-25 September, 2019 - Antwerp, Belgium
  - › LF Edge Members receive a 20% discount on registration. Email [info@lfedge.org](mailto:info@lfedge.org) for code.
    - › Jim White's talk accepted

## Upcoming External Events continued

- › [Open Source Summit EU / ELC](#): 28-30 October, 2019 - Lyon, France
  - › October 31: LF Edge Mini-Summit - Half-day, single-track event on the topic of IoT and Edge Computing
  
- › Discussions around upcoming events occur in the LF Edge Outreach Committee
- › Members may subscribe at: <https://lists.lfedge.org/g/outreach-committee>

## Upcoming CFP Due Dates

- › [KubeCon + CloudNativeCon NA](#): Nov. 19-21, 2019, San Diego
  - › CFP Due: July 12
    - › <https://events.linuxfoundation.org/events/kubecon-cloudnativecon-north-america-2019/cfp/>

# EdgeX TSC F2F Meeting(s)

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

- Latest agenda available on the [Wiki](#)

## Venue

- Galvanize – 515 E. Grant Street, Phoenix, AZ 85004

## Coming Soon (before EoM June):

- **RSVP:** Links to register will be available on [Wiki](#). Will include registration for each section.
- **Hotel/Travel:** Recommended hotels



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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: June 26, 2019**

# 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](#)

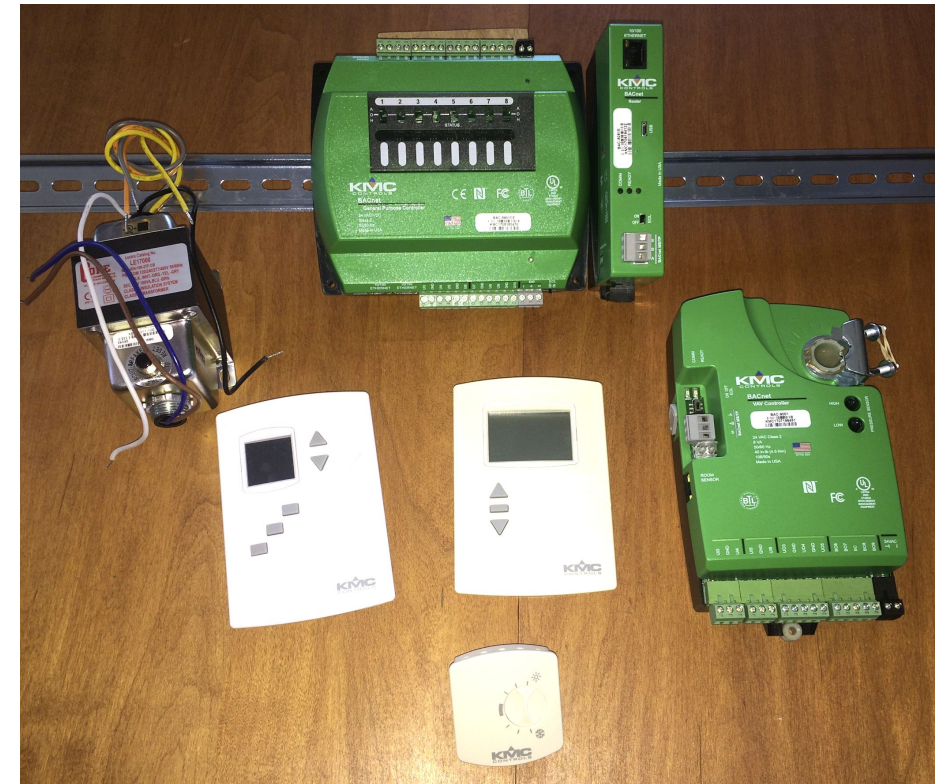
# What is the Device Exchange?

- 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