

EDGE X FOUNDRY™

TSC Meeting

October 2, 2019



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Meeting Logistics

Time: Wednesdays 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	bradley.w.corrion@intel.com
IOTech	Iain Anderson	iain@iotechsys.com
Intel	James Gregg	james.r.gregg@intel.com
Dell	Jim White (TSC Vice Chair)	james.white2@dell.com
IBM	Joe Pearson	joe.pearson@us.ibm.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
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Beechwoods	Rodney Hess	rodney@beechwoods.com
RSA	Tingyu Zeng	tingyu.zeng@rsa.com
Canonical	Tony Espy	espy@canonical.com
Dell	Trevor Conn	Trevor.Conn@dell.com

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
 - EdgeX Working Group Meeting Times
 - Architect's monthly meeting
 - Fuji freeze/release date discussion
 - Release Schedule Debate
 - Phoenix F2F meeting
 - Geneva Planning
 - Features
 - Architectural topics
 - Upcoming Events
 - AOB
- 
- TSC Votes Required



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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
 - Updates from Release Czar - Lisa
 - Updates from Dev Advocate - Michael

Core Working Group (2-Oct-19)

- Bootstrap refactoring
 - All services done with exception of pending PRs
 - support-notifications (PR #1854)
 - core-command (PR #1850)
 - Security services will be deferred until post Oct-23
 - Agreed 30-Oct-2019 on a call with Tingyu, Trevor, Michael E., Anthony
- Security/core service integration
 - Following from the above, creating a SecurityClient bootstrap handler
 - PR #1834 -- Anthony
- Call for Core WG Topics for Tomorrow
 - Wrapping up Fuji deliverables
 - Architectural topics for Geneva are on the wiki
 - <https://wiki.edgexfoundry.org/display/FA/Geneva+Planning+Items>
 - Send me items you'd like to discuss, otherwise we'll probably do a status review

Applications WG Update (2-October-19)

- **Ready for Review**

- Store & Forward

- <https://github.com/edgexfoundry/app-functions-sdk-go/pull/215>

- **In Progress**

- AWS IoT Core

- First Rev merged

- Documentation pending

- Swagger Documentation

- Snap Package for App Service Configurable

Application Services

Functions (built into SDK)

Current/Complete:

Fuji

- AES Encryption
- GZIP Compression
- ZLIB Compression
- MarkAsPushed
- PushToCore

EXPERIMENTAL

Edinburgh

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

Features

- Store and Forward
- Web Server
- Vault integration for secrets (TBD)

Reference/Example App Services (Fuji)

(built on top of SDK)

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

AVAILABLE

WIP

AVAILABLE

Device Services WG Update (2-October-19)

- BACnet device service in main project
- New REST device service being uploaded to -holding
- Looking to publish CSDK artefacts

Device Services - current/coming

Open Source connectors (Current):

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

Commercial connectors (Current):

- GPS
- MEMS
- Zigbee
- Bluetooth

Open Source connectors (Future):

- OPC UA (Oct)
- GPS (Oct)
- Bluetooth (Oct)
- ONVIF Cameras (Oct)
- REST

Commercial connectors (Future):

- CAN SocketCAN, CANopen
- EtherNet/IP
- EtherCat
- PROFINET
- Siemens s5/s7

Test/QA WG Update (02-10-19)

- Blackbox Test
 - PR [#271](#) for new tests of APP Function SDK has been merged
- New Blackbox Test
 - PR [#8](#) on [edgex-taf](#) and [#5](#) on [edgex-taf-common](#) are under review
- RAML -> Swagger conversion
 - Jim has set up a free trial account, waiting for further discussion with Smart Bear
 - PR [#357](#) for Device-SDK API document is updated and under review (no progress due to QA team vacation)
 - PR [#1786](#) opened for converting all existing RAML to OAS 3.0 (Swagger)
- Certification Support (no progress due to QA team vacation)
 - Developing test script for device service
 - Designing the general test profile

DevOps WG Update (10-02-19)

Fuji Scope

Static Code Analysis Tools

- Snyk Integration with Jenkins **DONE**
 - Configuration of the GitHub repo (edgex-go) and Docker public image for docker-edgex-mongo **DONE**
 - Configure notifications to repo owner and Security WG (SIR team members) - Still Pending

New Jenkins jobs for Fuji

- The following repos have new build automation slotted for Fuji but are currently still in holding - **BLOCKED**
 - device-bluetooth-c, device-gps, regression-test

New Issues

- SonarCloud Duplicated code - Unknown root cause and no response from community for case opened last week
- support-rules-engine - converting to Pipeline job
- Kong ARM64 image - fixed image - need help from QA-Test WG to update blackbox-test scripts to use updated dependencies

Next Meeting 10/03/19 @7:00 PST

System Management WG Update (10-2-19)

- Open Horizon Project
- CLI effort
- Fuji Release Items Completed
 - Metrics collection
 - Set configuration
- Working some additional long standing issues but otherwise Fuji feature complete on sys mgmt

Security WG Update (10-02-19)

- Fuji Major release scope
 - Security features in Edinburgh with code integration into edgeX-go
 - Improvement: increased unit test coverage
 - Improvement: unique certs, by way of generation at run time vs build time
 - Improvement: Cert import
- Fuji Minor release scope
 - Security file token server
 - Registry support within security components
- Details of progress can be found
<https://docs.google.com/document/d/1rZEjaMd3KqFGqGMcQNSTgn8-4Wc0ZEh7zCdVSCo7cnE/edit#heading=h.1akr8w5h08fh>

Certification WG Update (9-30-19)

- No meeting this week—team on vacation
- Next meeting this Monday, October 7th, 10 a.m. EDT

Vertical Solutions WG Update (9-10-19)

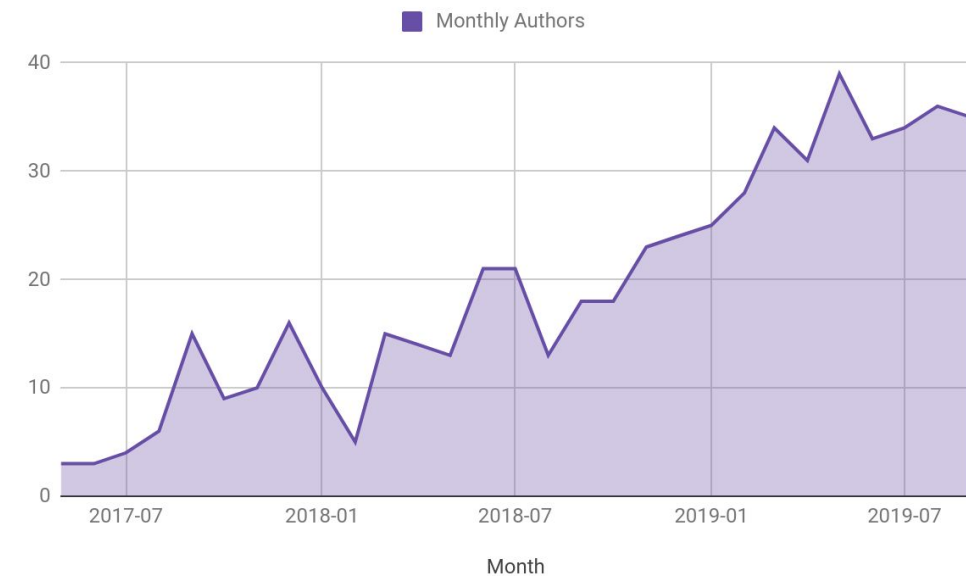
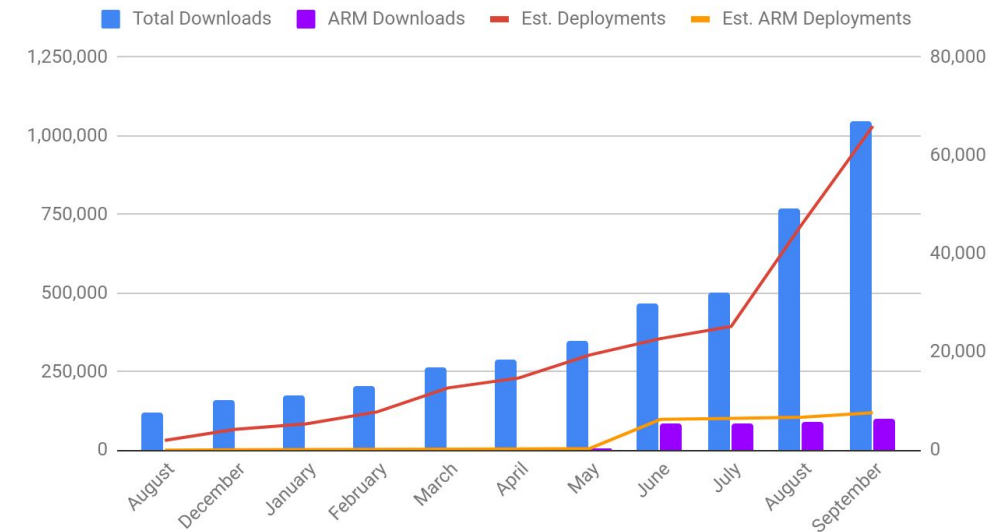
- Next meeting, Wednesday at 4PM: but will rescheduled due to hackathon travel
- Pending move to newly proposed meeting times

Hackathon Update

- Held at TechNexus in Chicago on Oct7/8th (Mon/Tue).
- Event landing and registration page launched:
<https://www.lfedge.org/event/edgex-foundry-hackathon/>
- Please register - no walk-ins are allowed
- Webinar recorded and posted last week
- Slack channel is **#edgexopen**
- All hardware from Dell, HP and intel is en route to Chicago
- Still seeking additional shared devices and applications for consumption at the event (with adequate support)
- Current numbers:
 - 60 total registered, including event support staff
 - 9 teams registered (recall that we have comfortable room for ~15)

Project Metrics

- **Over 1 million downloads on Docker Hub!**
 - 275k new downloads in September
 - Est. 65k deployments (20k new)
 - Continues increasing trend from August
- **September**
 - 35 authors (4 new, 139 total)
 - 186 commits
 - 20 repos
 - 151 issues closed
- **Edinburgh**
 - 94 authors
 - 56 reviewers
 - 36 repos
 - 1437 issues closed





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New WG Meeting Times

TSC VOTE REQUIRED!!

Suggested New Meeting Times

Purpose:

Avoid too early or too late (for any time zone - save possibly Asia)

Avoid meeting overlaps/conflicts - allowing for more participation

Avoiding > 2 meetings a day for EdgeX

Consistency makes for more predictability in workflows

May need to adjust a few times, such as test Group would prefer a non Friday slot since most members are from Asia (and it would be their Friday night)

Seeking formal TSC approval vote today

Already have 9 TSC members that have voiced positive reaction to this plan

Agreement to start this schedule right after the Phoenix F2F??

Proposed Weekly EdgeX Meeting Schedule

- Monday 8am: Certification
- Monday 9am: DS WG

All times shown in Pacific Daylight

~~Time~~
- denotes change from plan sent to TSC

- Tuesday 8am: Marketing
- Tuesday 9am: Test WG *
- Tuesday 10am: Commerce WG (the one meeting that falls outside of the 8-10am time but meets every other week.)

- Wednesday 8am: TSC
- Wednesday 9am: Security

- Thursday 8am: Core
- Thursday 9am: DevOps

- Friday 8am: System Management WG *
- Friday 9am: Application WG



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Monthly Architect Meeting

TSC VOTE REQUIRED!!

Monthly Architect's Meeting

- During the summer, it was agreed that a monthly architect's meeting was to be established to discuss architectural and cross-cutting issues more regularly
- This meeting would happen monthly, but only if there was an established set of topics / agenda for the meeting
 - It would be cancelled if that month's meeting did not have sufficient material to discuss
- Propose this meeting take place the 3rd Monday of the month at 10am PDT
 - After the DS Working Group Meeting
 - Allows topics to be discussed in advance of the week's TSC for voting purposes
- Propose starting this meeting on Nov 18th
 - The first week of the Geneva release



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Fuji Freeze and Release Dates

TSC VOTE REQUIRED!!

Proposed Freeze and Release dates

- Freeze: Oct 23rd (Wednesday)
- Release: Nov 13th (Wednesday)
- 3 weeks between freeze and release (inclusive of F2F)
- Other events to consider in the timeline
 - IoT SWC (Oct 29-31)
 - OSS Lyon (Oct 28-30)
 - EdgeX Phoenix F2F (Nov 4-8)
 - US Thanksgiving holiday week (Nov 27-Dec 1)

Freeze/Release Date Discussion

OCTOBER 2019						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27				31	1	2

Printable Calendars From 123Calendars.Com

NOVEMBER 2019						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	38	29	30	31	1	2
3				7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26				30

Printable Calendars From 123Calendars.Com

Fuji Deliverables at risk or not going to be delivered

At Risk

- Self-cert process for device services (Dec 2019, many dependencies)
- All the CI/CD for all the new device services

Not Gonna Happen

- go-mod-registry refactor
- System Management start/stop/restart (architecture issue and non-backward compatible - pushed to Geneva)
- Some security features



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Release Scheduling

Release Scheduling Going Forward

- We have missed most release plans and/or not delivered anticipated features
- Should we take any action to improve this circumstance
- Approaches:
 - Train leaves on time (release schedule always holds, scope may be reduced to meet the schedule)
 - Ready when it's ready (scope is king, we release when the scope is complete)
 - Do nothing - it ain't that broke
- Additional options to consider
 - smaller release cycles (quarterly?)
 - identify critical features and those must be done to deliver a release; all others are optional and require hitting the deadline to go in
- Not to be decided today - but looking to make a decision @ F2F



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Phoenix F2F meeting

Registration now open

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

- Capacity of 90. Currently with ~45. **(HALF FULL!!)**
- If you want to attend Architect's day, send Jim White, Dennis Camilo or a WG chair an email or slack message
 - Architect's day is invite only - any contributor is automatically invited but we request RSVP
 - WG Chairs - will soon be organizing topics for consideration with you.
- 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>

Architect's Day (Nov 4) RSVPs

- Open to all EdgeX contributors or by invitation of TSC member; but **does require RSVP**
- Attendees (so far)
- WG leads & TSC: Tingyu, Malini, Jim, Michael, Trevor, Iain, Brad, Rodney, James, Keith, Joe, Tony, ~~Robin~~
- Other RSVPs (5)
 - Lisa (Intel)
 - Lenny (Intel)
 - Eno (Intel)
 - Diana (VMWare)
 - Michael E (Dell)

Geneva Scope (*proposed*)

See: [scope deck](#)

- General
 - message bus alternatives and default
 - error handling
 - config watcher
 - configuration
- Appl
 - batch mode
 - additional language SDKs
 - config application services libs in SDK
 - feeding data back to core
- Core/Supporting
 - separate config/reg APIs
 - explicit request/response
 - eliminating value descriptor
 - Query string in event payload
 - metadata/command cleanup
- Security
 - finish Fuji work
 - hardware secret storage
 - PKI init merged into secret store
 - better support for role based security
- Device Service
 - dynamic onboarding of new devices
 - clean API for query parameters
 - more dynamic config
 - driver to manage device op state
 - driver to feed back error info
 - mix/max restrictions
 - filter options
 - downsampling
 - tooling for profile creation
- Certification
 - next steps in self-cert

Geneva Scope (*proposed*)

See: [scope deck](#)

- UI
 - consolidate UIs
- System management
 - async calls
 - read only configuration data
 - start/stop/restart including SMA
 - CLI additions
 - OH roadmap items
- Test QA
 - interop testing
 - user guidance on platform needs
 - TAF improvements
- DevOps
 - Snyk integration
 - Pipelines
 - Ocean Blue Jenkins plugin
 - Github Org plugin
 - Re-organize Jenkins Views
 - Add unit testing to global libraries
 - Nexus cleanup
 - Slack integration with Pipelines

Geneva Architecture Topics (*proposed*)

- Release planning improvements
- Best practice improvements
- Supporting V2 and V1
- Environmental var overrides & removing docker config.toml
- To Markdown (vs RST) for docs
- Harmonize the SDKs
- Dynamic service management - services coming and going for SMA
- Multi-service deployment artifacts
- Simplifying EdgeX for the users
- OH project support and integration
- Supporting other deploy/orch tech (K8s, K3s, ...)
- Config complexity
- Cloud Events
- Adding message support between services
- Expanding Event/Reading to include maps/arrays
- Collecting non-device/sensor data
- Application services returning data to core data
- Supporting database flexibility
- Rules engine replacement
- Fine-grained access control
- service high-availability and resiliency
- load management in DS
- Sys Mgmt Executor security vulnerability
- SDK for sys mgm executors
- CLI expansion
- C SDK artifact creation (library, tarball, etc.)
- How to tag/version C SDK

F2F Training Suggestions (so far)

Intro to EdgeX for users (Alex - VMWare)

Suggested but not confirmed yet

- *How to build device services with the SDK(s)*
- *How to build application services with the SDK*
- *Introducing the new security services (setup and use)*



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Marketing Committee Meeting

Marketing Committee Meeting

EdgeX Marketing Committee

- Hackathon
- EdgeX Budget priorities and requirements 2020
- Maintenance and Update of EdgeX Website

Meeting date: Thursday September 12th 3pm UK time, 7am US Pacific Time

Where:

<https://zoom.us/j/722119691>

Organizer:

Camilo Dennis camilo.a.dennis@intel.com

Details:

EdgeX Foundry is inviting you to a scheduled Zoom meeting.

Topic: EdgeX Marketing Committee - Sub team check in

Time: September 12, 2019 7:00 AM Pacific



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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 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
 - **Microservices at the Edge - Best Practices: Diana and Malini**
 - **From API to CLI. Designing and building a CLI for EdgeX: Alex and Nikolay S**
 - **Securely Store IOT Data with IPFS and Distributed Ledger - Trevor Conn**
- IoT SWC: 29-31 October, 2019 - Barcelona, Spain
 - LF Edge/EdgeX booth
- [Embedded World](#): 25-27 February - Nuremberg, Germany
 - Call for papers closed, booth opportunities
- [Industry of Things World](#): Mar 12-13 - San Diego CA
- [IoT Tech](#): Mar 17-18 - London, UK
- [IoT World](#): Apr 6-9 - San Jose, CA

Upcoming CFP Due Dates

>



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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 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](#)

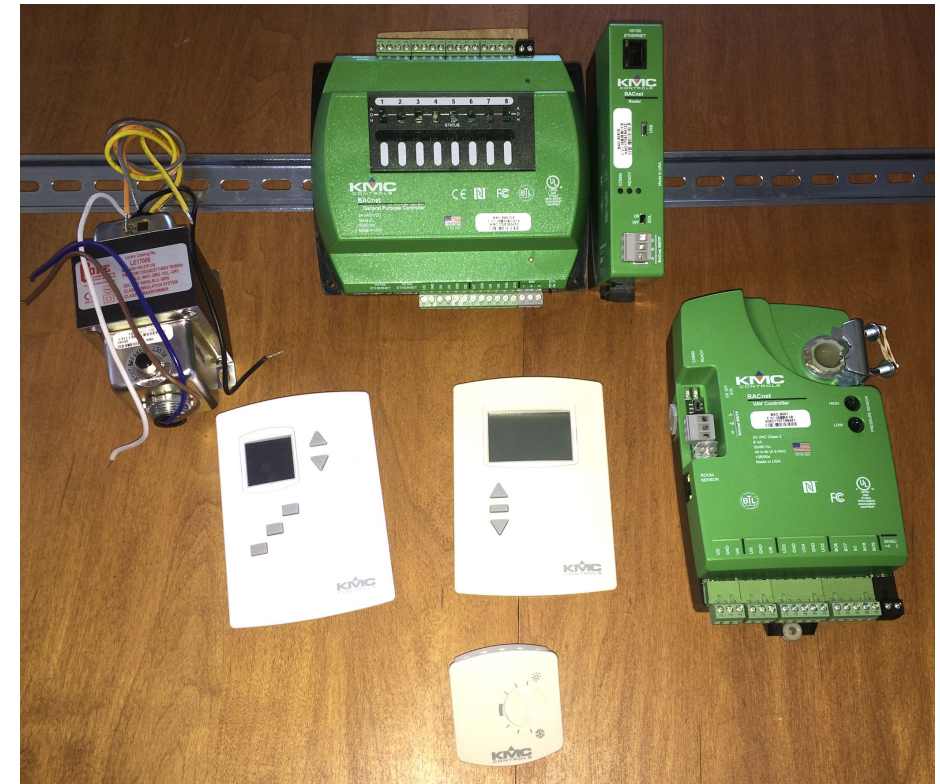
What is the Device Exchange?

- 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

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 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