

EDGE X FOUNDRY™

TSC Meeting

July 10, 2019



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Meeting Logistics

Time: July 10, 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)

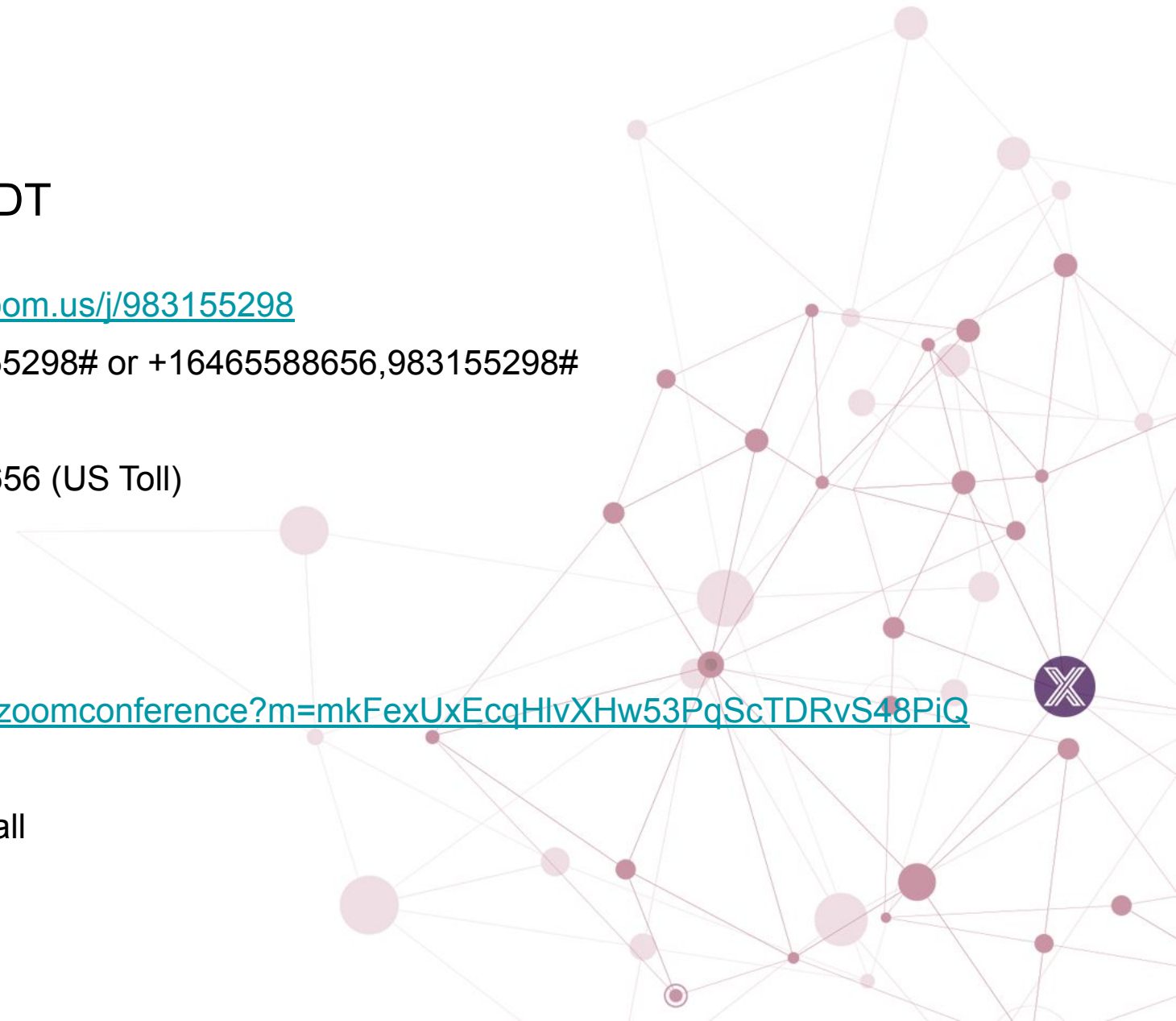
+1 855 880 1246 (US Toll Free)

+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	bradley.w.corrion@intel.com
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VMware	Malini Bhandaru	mbhandaru@vmware.com
Intel	Mike Johanson	michael.johanson@intel.com
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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

- Dot Release
- WG Updates
- CLI demo/discussion
- Deployment and Orchestration
- Fuji Summary
- Upcoming Events
- AOB



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Edinburgh Dot Release (1.0.1)

Need for Dot Release and schedule

- An race condition issue was discovered in go-mod-messaging
 - It occurred when core-data sent data to export services (or appl services)
 - It was intermittent, but was verified as an issue by several people
 - It appears most often on Mac OS machines
 - If this error occurs, nothing upstream will get data from EdgeX
- There may be another issue that needs addressed
 - Issue on low power devices??
- Are there any other issues that have been discovered that require a dot release
- Timing: When can/should dot release be orchestrated?



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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 (3-Jul-19)

- Go-mod-messaging race condition
 - Fix <https://github.com/edgexfoundry/go-mod-messaging/pull/26>
 - Consumed in master and edinburgh branches of edgex-go
- Initial Security Service PR is ready for merge (PKISetup)
 - <https://github.com/edgexfoundry/edgex-go/pull/1500>
 - Been out there for a week, planning to do this today
 - Will apply diff of the ongoing security-secret-store review once that PR is closed
 - <https://github.com/edgexfoundry/security-secret-store/pull/69>
- Continuing work
 - Value descriptors
 - Decoupling DeviceProfile from Device, resultant Command handling
 - Nearly finished with this one.
 - Unit tests

Applications WG Update (10-July-19)

- Dynamic/Configurable Function Pipeline SDK Code is merged
- Bug Fix(ed):
 - <https://github.com/edgexfoundry/app-functions-sdk-go/issues/126>
- Currently Working On:
 - Configurations/Profile for App Service Configurable
 - Slides for customer consumption
 - Black Box Tests - Planning

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 Post Export

Future:

- MQTTS (Fuji) + Vault integration
- HTTPS (Fuji) + Vault integration

Reference App Services (Fuji)

(built on top of SDK)

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

Device Services WG Update (10-7-19)

- Device tracking for drivers
- Fixed number handling issue in JSON library

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 (10-07-19)

- Blackbox Test
 - Fixed issue [#248](#)
 - Merged PR [#247](#), [#249](#)
- Performance Summary
 - Preparing automation script and document to collect data for performance summary report
- Performance Test
 - Opened a new ticket [IT-16630](#) on LF help desk to request the instruction of setting up TIG Server
 - Received LF TIG Server configuration files.
 - Updated the status on [#31](#)
 - Updated document for developing performance test script. PR [#36](#) is under review

DevOps WG Update (07-10-19)

Edinburgh Release

- Edinburgh docs - ticket submitted to publish
- Discuss Patch release in DevOps WG

Fuji Scope

Container Scanning (Clair Server landing request)





Risk for Fuji if the landing doesn't happen

- Mitigations in place as a interim solution
- Codecov.io integration completed on all repos with tests
- Static Code Analysis Tools - Enabled SonarCloud for EdgeX Foundry - will need to update all JJB templates to enable use of the tool
- edgex-go docs - migrated out and major refactor by Ernesto close to wrapping up

Release Czar Proposal to use GitHub Projects for all Issues as an aide for the release and overview of what's needed for Fuji release. Demo in DevOps WG tomorrow.

Next DevOps WG meeting - 7/11/2019 Thursday 7AM PDT

EdgeX DevOps Commitments (Fuji)

Scope of Work	
Add static artifact analysis into the EdgeX Jenkins Pipeline (analysis of Docker /runtime artifacts, not the source code)	
Add code and artifact signing with semantic versioning	
Conduct build performance optimizations by: <ul style="list-style-type: none">• Adding Pipelines for EdgeX Foundry base build images• Allow base build images to be managed locally within Nexus• Leverage PyPi Proxy for local pip dependencies	
Explore static code analysis like Checkmarx , Coverity , GuardRails , Synk , SonarQube	

- Clair Server landing at **Risk** for Fuji
 - Work Around will be to use Intel hosted Clair server until decision is made by LF to support landing dedicated infrastructure
 - Work related to automating the scans as part of the build, will defer to Geneva scope
- [gitsemver](#) along with [lftools](#) used for artifact signing and semantic versioning
- Jenkins build performance optimizations for base build images completed
- All base build images will now be stored in Nexus (Snapshot):10003
- [PyPi](#) enabled as part of Edinburgh scope
- Initial review of [GuarRails](#) showed that the product was identifying issues which were not applicable for microservices architecture

System Management WG Update (7-10-19)

- Open Horizon discussion on going
 - POC defined and being worked
- Fuji Focus
 - Set configuration work on hold pending Core WG meeting
 - Metrics collection - working
 - Next items
 - Start/stop/restart all done by the executor to include stop/restart of SMA
 - Safe shutdown
 - WatchForChanges blocking function handling
 - SMA Translation layer (stretch)
- Added to roadmap
 - handling multiple key sets
 - caching

Security WG Update (7-3-19)

Malini (Tingyu on vacation)

- August 1, 2019 Security F2 in Santa Clara at Intel
 - Host Jim Wang yutsung.jim.wang@intel.com
 - Location: SC-12/Intel, 3600 Juliette Ln, Santa Clara, CA 95054
 - Attendees: Jim Wang, Bryon Nevis, Tingyu, Jim White, Malini, Doug (remote).
 - Agenda: Hardware Security
- EdgeX Security abstract submitted to OSS/Europe (just-in-time!)
- Created a secure deployment related issue that should be documented that reduces Docker Container user privileges (Snaps already do so).
- Seeking Input: who reviewed the secret store code? Any concerns?
-

Certification WG Update (7-8-19)

- Reviewing Device Service Functional Requirements doc
- Identifying documentation needs unique to the certification process
-
- Next meeting Monday, July 15th, 10 a.m. EDT

Vertical Solutions WG Update (7-2-19)

- Reviewed feedback on guest presentation
- Seeking new energy and leadership for additional VS projects, starting with Industrial
 - All feedback is welcome
 - As well as leader nominees
- Began conversation, since continued over email, regarding late summer Hackathon

Miscellaneous

FYI - Lisa R (Intel); our new Release Czar is on sabbatical until August



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CLI demo

Alex Courouble and Malini Bhandaru (VMWare)

Command Line Interface tool

- Discussed at Seoul - now a reality thanks to VMWare efforts
- Currently in holding
 - <https://github.com/edgexfoundry-holding/edgex-cli>
- Goal of making EdgeX developers more productive
- Covers the entire EdgeX API set
- Looking for community feedback



Deployment/Orchestration/Management options

Jim/Jeremy

Deployment/Orchestration/Management Survey

- Per our chair, a request has been made to survey deployment/ orchestration/ management solutions.
- At Dell Technologies, we have been collecting requirements and options
 - The matrix on the next slide is not complete, but starts to give one an appreciation of the requirements and solution options
- We believe most deployments will likely require a collection of products vs one

Deployment/Orchestration/Management Survey

- Per Keith's request, we can work to bring organizations from this list and speak to their capabilities.
 - Open Horizons is actively working with us already
 - Open Horizon's meeting happening every two weeks. Next meeting July 15th @ 1pm CST
- Are there other organizations not on this list we'd like to see present?
- Are there other requirements you'd like to add?
- Should this be done as part of TSC, System Management, separate meeting??



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Fuji Release (anticipated scope)

Jim

Fuji Summary

See:

<https://wiki.edgexfoundry.org/download/attachments/329436/Fuji%20Release.pdf?version=1&modificationDate=1562680294976&api=v2>



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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 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 for code.

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

- › [Open Source Summit Europe](#): Oct. 28 - 30, 2019, Lyon
 - › CFP Due: July 1
 - › <https://events.linuxfoundation.org/events/open-source-summit-europe-2019/program/cfp/>
- › [Embedded Linux Conference](#) (Co-located w/ OSS Europe): Oct. 28 - 30, 2019, Lyon
 - › CFP Due: July 1
 - › <https://events.linuxfoundation.org/events/embedded-linux-conference-europe-2019/program/cfp/>
- › [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 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](#)

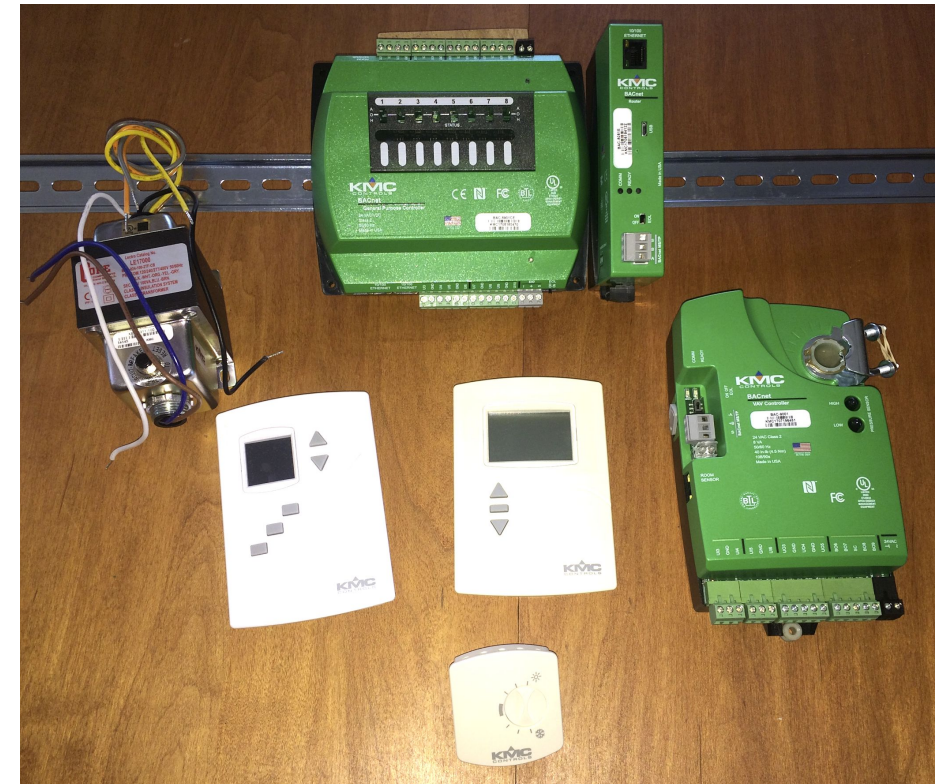
What is the Device Exchange?

- 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