

EDGE X FOUNDRY™

# TSC Meeting

Aug 14, 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>
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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>
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Intel	Mike Johanson	<a href="mailto:michael.johanson@intel.com">michael.johanson@intel.com</a>
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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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# 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 (14-Aug-19)

- Security-Proxy-Setup Migration
  - PR #1627 in edgex-go, review is almost complete. Hoping for merge today, pending Security WG call
    - I cannot review/merge since I worked on the branch
- Vault Secrets Integration
  - Backlog has been created for this
    - <https://github.com/edgexfoundry/edgex-go/projects/12>
  - Anthony Bonafide (Dell) has nearly completed deliverables for the go-mod-security module
  - Discussion has started w/r/t enablement of “secrets” -- env var, configuration, cmd line flags
- Security Service Integration
  - Configuration structures will be changing for Fuji release
    - We will need to outline the changes in the Release Notes



# Applications WG Update (14-August-19)

- In Progress:
  - Repos created in holding for AWS and Azure
  - Azure Export Functions for supporting IoT Hub (Thanks Cloud from IOtech!)
  - AWS Export Functions (Thanks Alec from VMWare!)
  - Store & Forward discussion yesterday
  
- On Deck
  - Vault Integration

# 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:

- MQTT(S) (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 (14-8-19)

- Feature support
  - query-params
  - create/update/delete notifications
  - started: dynamic discovery
- Device services
  - bacnet and bluetooth code drops (in -holding)

# 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 (Sept)
- GPS (Aug)
- Bluetooth (Aug)
- ONVIF Cameras (Oct)

## Commercial connectors (Current):

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

## Commercial connectors (Future):

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

# Test/QA WG Update (14-08-19)

- Blackbox Test
  - Investigating new failed test-cases.
  - edgex-go issue opened for one of the failed testcases  
<https://github.com/edgexfoundry/edgex-go/issues/1632>
- New Blackbox Test
  - Initial code of [edgex-taf](#) and [edgex-taf-common](#) are under review.
  - Initial [robot file](#) of device virtual
- Performance Summary
  - Done - Working on Redis and security supported cases
- Performance Test
  - Data lost issue is closed.
- Completed the investigation of RAML -> Swagger conversion

# Swaggerhub Features <https://swagger.io/tools/swaggerhub/pricing/>

	Free	Team	Enterprise
Basic API Design & Documentation	✓	✓	✓
Privacy & Access Control	✓	✓	✓
Collaboration		✓	✓
Integrations		✓	✓
Style Guide Enforcement			✓
Custom Features			✓
On-Premise Installation			✓
Support	Community	In-App Chat & Email	Priority Chat (SaaS Only) & Email Support
APIs (Public / Private)	3 Public, 1 Private	100	Unlimited
API Consumers	1	30	100 Included

# Swaggerhub Pricing

## Explore SwaggerHub Plans

<h3>Free</h3> <p><b>\$0</b></p> <p>1 User</p> <p>API Editor, Hosted Docs &amp; Mocking</p> <p>Start Now</p>	<h3>Team</h3> <p><b>\$30</b>/Month</p> <p><b>Billed:</b> <input checked="" type="radio"/> Annually <input type="radio"/> Monthly</p> <p>2 Users</p> <p>Collaboration, Team Management &amp; API Lifecycle Integrations</p> <p>Start Free Trial</p>	<h3>Enterprise</h3> <p>SaaS or On-Premise</p> <h2>Contact Us</h2> <p>Starts at 25 Users</p> <p>Style Guide Enforcement, Priority Support &amp; Enterprise SSO</p> <p>Contact Us</p>
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<https://swagger.io/tools/swaggerhub/pricing/>

# Host Swagger doc with Github Page

- Pros
  - Free
  - Host on Github
- Cons
  - Only can publish master branch
  - Need to add swagger ui code to the repository
  - No edit page
- Reference url :
  - <https://cherrycl.github.io/device-virtual-go>
- Setup steps reference :
  - <https://peterevans.dev/posts/how-to-host-swagger-docs-with-github-pages/>

## Github repository setting page

### GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

✓ Your site is published at <https://cherrycl.github.io/device-virtual-go/>

#### Source

Your GitHub Pages site is currently being built from the master branch. [Learn more.](#)

master branch ▾

#### Select source

✓ master branch  
Use the master branch for GitHub Pages.

master branch /docs folder  
Use only the /docs folder for GitHub Pages.

None  
Disable GitHub Pages.

Save

#### Enforce HTTPS

— Required for your site because you are using the default domain (cherrycl.github.io)

HTTPS provides a layer of encryption that prevents others from snooping on or tampering with traffic to your site. When HTTPS is enforced, your site will only be served over HTTPS. [Learn more.](#)



# API sample

## Device Virtual

<https://app.swaggerhub.com/apis/edgex-swagger/device-virtual/v1-oas3>

## Core Data

<https://app.swaggerhub.com/apis/weichou/core-data/1.0.0>

# DevOps WG Update (08-14-19)

## Fuji Scope

- **Container Scanning**
  - Clair server has now been landed by Linux Foundation on AWS.
  - Troubleshooting with Daniel Nunez to debug issues with the endpoint (503 Errors).
  - Provided CloudFormation template last week.
- **Static Code Analysis Tools**
  - Great demo of Snyk in the Security WG meeting last week.
  - Coverity scan not an option since it doesn't support Go
- **Audit of GitHub repos / teams** of main edgexfoundry org completed
  - Discuss in next DevOps WG
    - Changes to add repo owners will require TSC approval
    - Email sent out 8/13/19

Next DevOps WG meeting - 8/15/2019 Thursday 7AM PDT

# System Management WG Update (8-14-19)

- 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 (8-14-19)

Malini (Tingyu on vacation today)

- 1) Final revisions hopefully on PR 1627 <https://github.com/edgexfoundry/edgex-go/pull/1627>
- 2) Trevor: Discussion around environment variable or command line flag for enabling/disabling security
- 3) Bryon has updated document based on F2F discussions
- 4) Thanks to Jim Wang and Bryon on quick turnarounds on <https://github.com/edgexfoundry/edgex-go/pull/1638>
- 5) Malini working on documenting the security components of EdgeX

# Certification WG Update (8-12-19)

- Reviewing the impact of Device Profile on Certification testing
- Discussing ways to avoid having data found in the APIs not be part of the test
  
- Next meeting this Monday, August 19th, 10 a.m. EDT

# Vertical Solutions WG Update (8-14-19)

- EdgeX Games
  - Multiple delegated teams underway
  - RILA (Retail Industry Leaders Association) Agreed to put their name on the games, more participation details under discussion
  
- Poll: Which verticals should we be going for next?
  
- Next Commerce Project meeting, today at 4PM PST:  
<https://zoom.us/j/975881686>

# Release Update 8-14-19

Lisa

- Github Projects and Issues
  - Continue creating GitHub issues with release labels: fuji, geneva
  - Currently investigating automation (bots, etc) to help us with our GitHub projects based off of Github issues
- Release Artifacts
  - Researching creating a Nexus artifact report
  - Will be reaching out to see what artifacts we expect to have for Fuji

# Miscellaneous

- Welcome back Lisa - our release manager
  - WG leads - look to sync with Lisa on Fuji release items
- Vote request to move application service configurable to edgexfoundry org (from holding)





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Geneva F2F

# Registration now open

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

- Capacity of 90. Currently with ~40.
- 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

- [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 - 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
  - › **How Secure is your Edge with EdgeX? Tingyu and Malini**
  - › **Microservices at the Edge - Best Practices: Diana and Malini**
  - › **From API to CLI. Designing and building a CLI for EdgeX: Alex and Nikolay S**

- › 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](#)

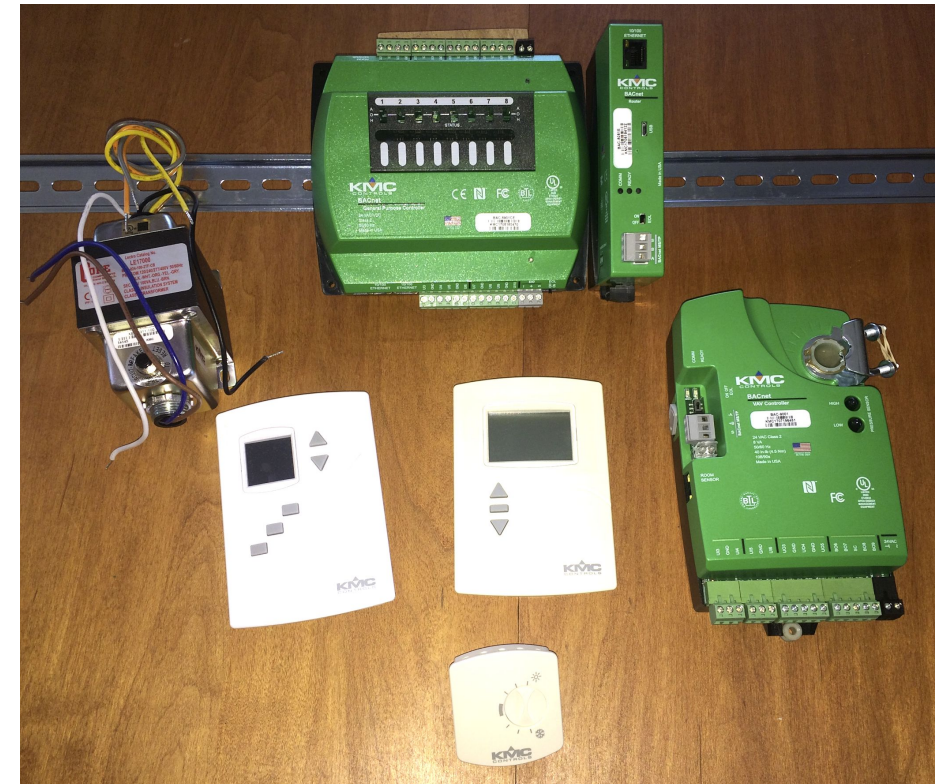
# What is the Device Exchange?

- 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