

EDGE X FOUNDRY™

TSC Meeting

December 18, 2019



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Meeting Logistics

Time: Wednesdays 8am PDT – 9am 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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Canonical	Tony Espy	espy@canonical.com
Dell	Trevor Conn	Trevor.Conn@dell.com
Dell	Michael Estrin	m.estrin@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

- Weekly arch decisions/actions summary
- WG Updates
- Architecture Decision Record (ADR)
- Upcoming Events
- AOB





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Weekly Architecture/Action Summary

Per Phoenix F2F

Architecture Decisions / Discussions Summary

From Architect's meeting on 16th

- ADR - Architect's revisited and optionally recommending to the community to use new ADR space in edgex-docs for design decisions
- Discussion on whether Geneva API changes or new Test framework and interop tests should be priority. Decision to wait for Trevor and Robin teams readouts
- Project management process (from Bryon N) coming soon (January) for TSC review/approval

Core WG

- Geneva API - all commentary should be in to Trevor
 - ADR now available for high level principles
- Review of changes to remove export services for Geneva
 - Post-bootstrap PR
- Bootstrap module being discussed/reviewed
 - "This is not a small PR"
 - Available edgex-go PR, > 150 files modified

Security WG

- Discussion on blackbox security tests, developer-scripts coordination

DevOps

- New lifecycle retention policy for Nexus proposed and being reviewed

Applications WG

- Rejected multiple HTTP endpoints for app srvs for now
- Discussing what UI changes are needed for app services
- Metrics collection for app services

Architecture Decisions / Discussions Summary

Cert WG

- discussed Geneva API design and impacts to Cert

Test QA

- Discussion on Go Test approach (Estrin) v TAF/Python v combination

Device Service

- REST DS approved and ready for move from holding
- Design discussions ongoing on new array of data
- New design document for discovery:
<https://github.com/iain-anderson/device-sdk-c/blob/designdocs/docs/design/discovery.md>

System Mgmt WG

- CLI tool is believed to be ready for move from holding. Michael to do final review and put up for vote (Jan)
- Discussion on how to proceed with new/future metrics collection - start with collecting requirements from each WG (Jim)
- Async requests for SMA API being discussed - working with Core WG on universal approach - Trevor leading



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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 - Michael Estrin
 - Certification - Rodney Hess
 - Vertical Solutions - Brad Corrion
 - Updates from Release Czar - Lisa
 - Updates from Dev Advocate - Michael

Core Working Group (18-Dec-19)

- Go-mod-bootstrap integrated into all core/support/security services
 - New module for common DI container usable by any app
 - Not integrated w/config-seed pending further discussion related to configuration handling
 - Ongoing refactoring to remove global variables
- Export services removal is complete
- Geneva API proposal
 - <https://github.com/tsconn23/edgex-geneva-api>
 - Comment window is closed.
 - Extensively discussed in both Core WG (12-Dec) and Certification (16-Dec)
 - Feasibility/estimate forthcoming this week
- Core Working Group Backlog Triage
 - <https://github.com/orgs/edgexfoundry/projects/25>
- Core WG tomorrow @ 10AM Central/US
 - Cross-WG attendance is encouraged

Applications WG Update (18 December 2019)

- In Progress
 - Continuing implementation of Batch And Send
 - Ability to store new secret capability - (Jim Wang from Intel)
- App Working Group Meeting held on Fridays @ 9AM PST
 - Next meeting Friday, Dec 20th
 - Dec 27th is cancelled
 - Jan 3rd TBD

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
- Configurable AppService

Reference/Example App Services (Fuji)

(built on top of SDK)

- Azure IoT Hub
- Amazon IoT Core

AVAILABLE

WIP

Device Services WG Update (18-December-19)

- Releases
 - Fuji point one
 - BACnet
- REST Device Service proposed move
- Array typing for Readings
- Next meeting Jan 6th

Device Services - current/coming

Open Source connectors (Current):

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

Commercial connectors (Current):

- GPS
- MEMS
- Zigbee
- Bluetooth

Open Source connectors (Future):

- OPC-UA (Feb 2020)
- GPS
- Bluetooth (Feb 2020)
- REST (Jan 2020)
- BLE in Go for Thingy 52 (Ian Johnson)

Commercial connectors (Future):

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

Test/QA WG Update (11-12-19)

- Blackbox Test
 - Fixed issue [#337](#), [#339](#)
 - Merged PR [#340](#), [#341](#), [#345](#)
- New Blackbox Test
 - Open [#14](#) on edgex-taf under review and merged [#7](#) on edgex-taf-common
 - Merged PR [#516](#) on ci-management to build taf-common docker image
 - Above PRs are for running device-virtual and device-modbus on LF Jenkins
- Swagger API document creation
 - Waiting for the decision of the process we presented and the consistent Swagger version
- Certification Support
 - Developing test script for device service
 - Finished testcases: 43 (All completed)
 - Passed testcases : 41, failed testcases:2
 - Issue [#390](#) for failed test cases is fixed, waiting for new image to verify.

DevOps WG Update (12-18-19)

Geneva

- Jenkins Transformation to Pipelines
 - Coordination of work needed for GitHub Org plugin changes - DONE
 - Several Issues this week - stability / networking issues with multiple job failures
 - Need to throttle the builds for the existing Pipelines - Will modify JJB templates.
- Nexus Life Cycle Policy for images
 - 6 Votes of Approval from TSC members (Trevor, Michael J, Michael E, Brad, Iain, James)
 - Next Steps - Coordinate the changes to Nexus3 to implement the new LCP with tagging convention

CommunityBridge - Advanced Snyk Reporting

- Meeting with the CommunityBridge team last week
 - <https://jira.linuxfoundation.org/servicedesk/customer/portal/4/SUPPORT-715>
 - We should be able to use the Advanced Snyk Reporting without signing up for CB funding / mentorship program
 - Next Steps - waiting for follow up with CB Team (Agnes)

Next Meeting 12/12/19 @9:00 PST

System Management WG Update (12-18-2019)

- System Management service -- work continues on Geneva deliverables
 - Outstanding PRs merged
- CLI
 - Intro video created for Q/A; follow on conversation around use in testing
 - Certification -- too early to see where it fits; could be used as cert. UI
- Open Horizon -- next action expected on/about Jan 20th
- Additional discussion of system-wide metrics (“instrumentation of the code”)
 - Jim to queue up in each working group; we’ll use input to create proposal
 - *Not* a Geneva deliverable
- Discussion around asynchronous operations (“polling is expensive/bad”)
- Next meeting: January 10, 2020

Security WG Update (12-18-19)

- Ongoing work for token provider server
- Docker-compose file update in blackbox testing due to recent security component bug fix & improvements
- Completed issue scrub (evaluation, label, priority, milestone)
- Next security WG meeting in one hour & will be focusing on discussing some issue solutions

Certification WG Update (12-16-19)

- Discussion on the Geneva API changes
- Next meeting Monday, January 6th, 9 a.m. PST

Vertical Solutions WG Update (China Project)

- China Meetup: ~100 participants / VMware, Linux Foundation, Intel, JD.com, ThunderSoft, WayCloud, EMQ, Microsoft presented slides explaining their eco-system plans, solutions & products.
- In the afternoon sessions, deep-dive coding and hands-on sessions were arranged for developers.
- Preparation meeting of EdgeX China Project: co-hosted by Gavin (VMware) and Melvin (Intel), more than 20 persons jointly reviewed & discussed draft plan of EdgeX China Project in general, and Hackathon planned for March 2020.

Release Czar - 12/18/19

- Dot releases (v1.1.1) for a handful device services is in progress.
- Docker images were built and there is a support ticket with the LF open to push these to public Dockerhub.
 - <https://jira.linuxfoundation.org/servicedesk/customer/portal/2/IT-18548>

Miscellaneous (Jim)

- Jenkins build issue - do we need to escalate
- Developer Advocate update
 - LF Edge to begin recruiting / hiring process (still a contractor position)
 - Working with Michael on tasks to be completed
 - list of roles/responsibilities
 - https://docs.google.com/document/d/1c4yUoQrJYh_PV2g_vMFuxA-u3K5a4eEirXrcdFdPN04/edit
#
 - Web site updates - working with Andy
 - List of docs that need to be created - working with WG leads
 - Issue #49 outlines needs (mostly minor fixes)
 - RP3 dev kit - (John Luo from IOtech taking it over)
- LF Edge Architecture work group is looking for volunteers from EdgeX
 - <https://wiki.lfedge.org/display/LE/TAC+Architecture+WG>
- Holiday schedule
 - Canceling next two weeks of TSC (Christmas and New Years)
 - Pick back up Jan 8th
 - WG chair are advised to check the schedule and likely attendees and cancel meetings next week at your discretion



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Architecture Decision Records (ADR)





Moving to ADR


- ADR's were discussed at the recent F2F (and prior).
 - At that event, decision was to postpone any formal adoption until a later release cycle
 - Recently revisited due to a number of architectural discussions and decision making under way for Geneva
- At the recent architecture's meeting (Dec 16), the decision was made adopt them going forward
 - Make them optional for not (not required) - at the author/WG lead discretion
 - Have them live in edgex-docs under /design/adr folder
 - Also allow WG leads to move past design and requirements documents under respective /legacy- folders
 - Naming to follow RFC naming standard: [sequential number]-[design topic]
 - Content somewhat loosely laid out in the README
 - To all be revisited at the next F2F for adjustments and/or formal adoption.

This branch is 5 commits ahead of edgexfoundry:master.

[Pull request](#) [Compare](#) jpwhitemn fixed spacing in main README file ...

Latest commit 5f4519d 3 hours ago

..		
 adr	revised the root folder to design and added subfolders for legacy doc...	3 hours ago
 legacy-design	revised the root folder to design and added subfolders for legacy doc...	3 hours ago
 legacy-requirements	revised the root folder to design and added subfolders for legacy doc...	3 hours ago
 README.md	fixed spacing in main README file	3 hours ago

README.md 

Architecture Decision Records Folder

This folder contains EdgeX Foundry decision records (ADR) and legacy design / requirement documents.

```
/design
  /adr (architecture decision Records)
  /legacy-design (legacy design documents)
  /legacy-requirements (legacy requirement documents)
```

At the root of the ADR folder (/design/adr) are decisions that are relevant to multiple parts of the project (aka – *cross cutting concerns*). Sub folders under the ADR folder contain decisions relevant to the specific area of the project and essentially set up along working group lines (security, core, application, etc).

Naming and Formatting

ADR documents are requested to follow RFC (request for comments) naming standard. Specifically, authors should name their documents with a sequentially increasing integer (or serial number) and then the architectural design topic (sequence number - topic). Example: 0001-SeparateConfigurationInterface. The sequence is a global sequence for all EdgeX ADR.

Per RFC and Michael Nygard [suggestions](#) the makeup of the ADR document should generally include:

- Title
- Status (proposed, accepted, rejected, deprecated, superseded, etc.)
- Context and Proposed Design
- Decision
- Consequences/considerations



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Hanoi TSC

Arrangements for the spring TSC meetings has been finalized

- **WG Chair/Architects Pre-Wire meeting will be March 31st (Tue)**
 - Dell EMC office , Research Triangle Park, 62 T.W Alexander Dr., Durham, NC 27709, Room: Aspen Cedar, first floor, Capacity: 50
- **Hanoi TSC F2F will be April 27-30**
 - Dell IOT Lab, Limerick Ireland
 - April 27 - Architect's day (invite only)
 - April 28-29 - General planning sessions with business topics to lead off
 - April 30 - Training day (additional hackathon or other planning meetings as necessary)

Upcoming External Events

- › [Embedded World](#): 25-27 February - Nuremberg, Germany
 - › Jim White: **Extending EdgeX Foundry– How to Build an IoT Solution from an open source, platform independent framework**
- › [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
- › Open Networking & Edge Summit North America: 20-21 April, 2020 - Los Angeles, CA
 - › CFP Status: Details Available Late 2019
- › Open Source Summit North America: 22-24 June, 2020 - Austin, TX
 - › CFP Status: Details Available Late 2019
- › Open Source Summit Japan: 15-16 September, 2020 - Tokyo, Japan
 - › CFP Status: Details Available Late 2019
- › Open Networking & Edge Summit Europe: 30 September - 1 October, 2020 - Antwerp, Belgium
 - › CFP Status: Details Available Late 2019
- › Open Source Summit Europe: 26-28 October, 2020 - Dublin, Ireland
 - › CFP Status: Details Available Late 2019
- › 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 EU 2020](#): 31 March - 2 April, 2020 - Amsterdam
 - › CFP closes 22 November





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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](#)

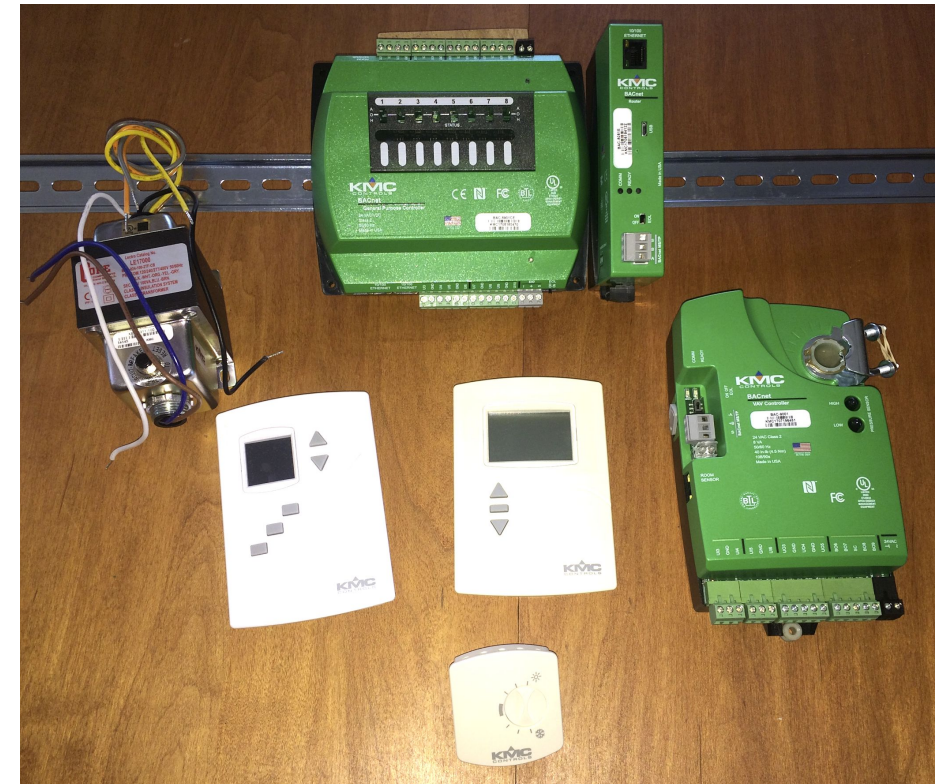
What is the Device Exchange?

- 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