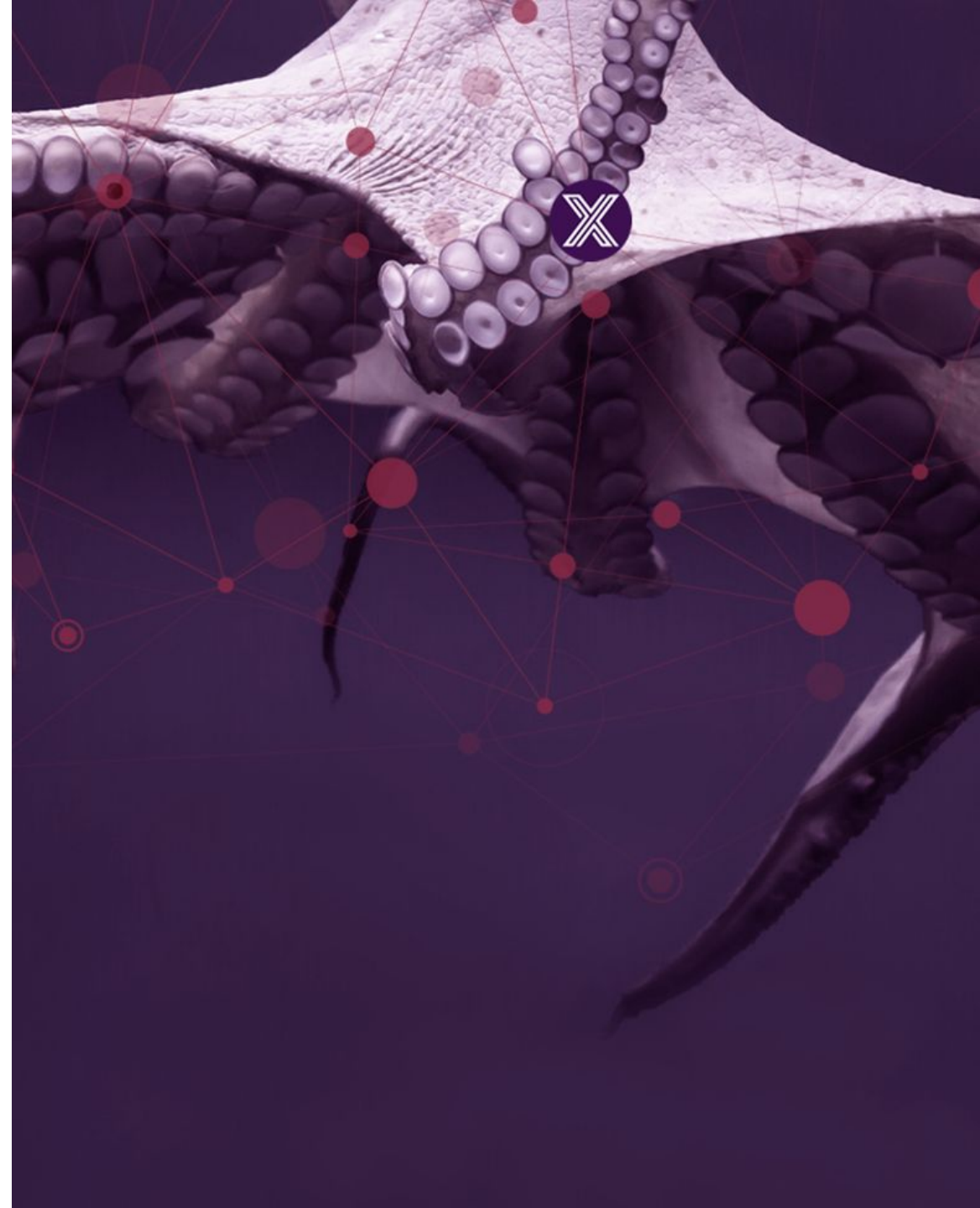


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# TSC Meeting

July 15, 2020



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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>	<u>Position</u>
IOTech	Iain Anderson	<a href="mailto:iain@iotechsys.com">iain@iotechsys.com</a>	Device Services WG Chair
Intel	Ernesto Ojeda	<a href="mailto:ernesto.ojeda@intel.com">ernesto.ojeda@intel.com</a>	Dev Ops WG Chair
IOTech	Keith Steele	<a href="mailto:keith@iotechsys.com">keith@iotechsys.com</a>	Outreach WG Chair
Kong	Colin Hutchinson	<a href="mailto:colin@konghq.com">colin@konghq.com</a>	Security WG Chair
Intel	Mike Johanson	<a href="mailto:michael.johanson@intel.com">michael.johanson@intel.com</a>	Applications & Analytics WG Chair
IOTech	James Butcher	<a href="mailto:james@iotechsys.com">james@iotechsys.com</a>	Test/QA WG Chair
IOTech	Jim White	<a href="mailto:jim@iotechsys.com">jim@iotechsys.com</a>	Core WG Chair

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
- Where should Example code go - discussion time permitting
- Upcoming Events (Dev Advocate)



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# Work Group Updates

Chairs

# Working Group Chair Updates

- Around the horn
  - Product Manager - Lenny Goodell
  - Release Czar - Lisa Ranjbar
  - Applications - Mike Johanson
  - Device Services - Iain Anderson
  - Test/QA - James Butcher
  - DevOps - Ernesto Ojeda
  - Security - Colin Hutchinson
  - Outreach - Keith Steele
    - Certification - Rodney Hess
    - Marketing - Camilo Dennis
    - Vertical Solutions (and LF Edge TAC) - Henry Lau
  - Core/Supporting - Jim White

# Product Manager (7/15/20)

## Cross Cutting Issues (<https://github.com/orgs/edgexfoundry/projects/35>)

### In Progress (9)

- V2 Implementations (Event API and metadata DTOs WIP)
- **Configurable address for ListenAndServe (good progress)**
  - **App Services complete (Example WIP)**
  - **Edgex-go complete**
  - **Device SDK-go complete**
- Remove Support Rules Engine (waiting on Refactored Compose files PR to merge)
- Remove Client Monitoring (individual Device Services TBD)
- Drop Logging Service completely (no new progress)
- Generate/Inject random passwords into Vault
  - ADR PR needs reviewing (<https://github.com/edgexfoundry/edgex-docs/issues/132>)
- Refactored Compose files (one last BB Test scripts update)
- Remove Mongo code (No new Progress)
- Allow device services to be distributed to alternate hosts
  - ADR PR in review, holding repo created. (<https://github.com/edgexfoundry/edgex-docs/issues/134>)

### Backlog (2)

- Message Bus from Device Service to App Services
- Multiple arch docker images support

### Done (0)

### Icebox (4)

- Added **Update config.Clients usage for new naming scheme**



# Release Czar (7/15/20)

- Introducing Bill Mahoney from Intel
  - Nominee to take Lisa's place
- ADR 0010 - Release Artifacts
  - <https://github.com/edgexfoundry/edgex-docs/pull/165>
  - Outlines the current release artifacts and which of them are tied to a code release
  - Tied to Code Release:
    - Docker Images, Docker Compose Files, Snaps, Github Tags, Testing Framework
  - Not tied to Code Release:
    - EdgeX Docs Github Page, Swaggerhub Docs

# Applications WG Update (15-July-2020)

## Complete:

Added configurable ListenAndServe address to SDK

Remove Mongo from App Functions SDK

## WIP:

V2 API

App Working Group Meeting held on **Thursdays @ 3:30PM PDT**

- Next meeting July 16th, 2020
- Merged w/ Biweekly Rules Engine Meeting

# Application Services

## Functions (built into SDK)

Current/Complete:

- AES Encryption
- GZIP Compression
- ZLIB Compression
- MarkAsPushed
- PushToCore
- Device Name Filter
- Value Descriptor Filter
- Batch
- JSONLogic Filtering
- XML Conversion
- JSON Conversion
- MQTT(S) Export
- HTTP(S) POST Export

NEW!

NEW!

## Features

- Store and Forward
- Web Server
- Configurable App Service
- Vault Integration for Secrets
- MQTT Event triggers (via go-mod-messaging)

NEW!

NEW!

## Reference/Example App Services (Geneva)

(built on top of SDK)

- Azure IoT Hub
- Amazon IoT Core
- IBM Watson IoT
- Cloud Event Transformation
- Secret Retrieval Example

AVAILABLE

AVAILABLE

NEW!

# Device Services WG Update (15-Jul-20)

- 21 issues in backlog for Hanoi
- 20 new issues
- Some documentation and tech-debt work ongoing

Next WG meeting July 20

# Device Services - current/coming (as of 5/7/20)

## Open Source connectors (Current):

- Modbus (TCP/RTU) in Go
- Virtual Device in Go
- SNMP in Go
- MQTT in Go
- BACnet (IP & MSTP) in Go
- ONVIF Cameras in Go
- REST in Go (NEW!)

## Open Source connectors (Future):

- Bluetooth in C (summer 2020)
- BACnet (IP & MSTP) in C (summer 2020)
- OPC-UA in C (summer 2020)
- Grove C (summer 2020)

## Commercial connectors (Current):

- File Exporter in C
- BLE in C
- Zigbee in C
- GPS in C
- CAN in C
- MEMS in C
- EtherCat in C
- Profinet in C

There are additional commercial MQTT (Go), Modbus (Go), OPC-UA (in C) and BACnet (in C) that have added features over the community editions

## Commercial connectors (Future):

- EtherNet/IP in C (summer 2020)
- CanOpen in C (summer 2020)
- OPC-UA Pub/Sub in C (summer 2020)
- ONVIF in C (summer 2020)

# Test/QA WG Update (07-14-2020)

- Postman blackbox tests - all passing
  - Working issues
    - Issue [#452](#), update to use new multi-file compose file (in review)
- TAF blackbox tests - all passing
  - Working issues
    - Issue [#122](#), to update to use new multi-file compose file (approved)
    - Issue [#134](#), for loop header ':For' is deprecated on robotframework v3.2.1
    - Issue [#130](#), to modify API path to go through Kong when security is enabled (PR opened)
- New Business
  - Geneva Performance Summary Collection for Dell Gateway 3000, HP MP9, Raspberry Pi3 B+, and Raspberry Pi4  
[https://docs.google.com/spreadsheets/d/131AVzDQk0Bq8Y3\\_NePScoP2PPVzwxYBe2fuztG3jetA/edit#gid=0](https://docs.google.com/spreadsheets/d/131AVzDQk0Bq8Y3_NePScoP2PPVzwxYBe2fuztG3jetA/edit#gid=0)
  - IOtech will produce an EdgeX branded Geneva performance document containing the above metrics
  - Issue [#102](#), to design how to collect performance metrics data - what and how?

# Postman Blackbox Test Cases

OS		DB	Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Non Security	Redis	1308	0	0	0
x86_64 / CentOS	Security	Redis	1338	0	0	0
arm64 / Ubuntu	Non Security	Redis	1308	0	0	0
arm64 / Ubuntu	Security	Redis	1338	0	0	0

# TAF Functional Blackbox Test Cases

OS		DB	Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Non Security	Redis	52	0	0	0
x86_64 / CentOS	Security	Redis	52	0	0	0
arm64 / Ubuntu	Non Security	Redis	52	0	0	0
arm64 / Ubuntu	Security	Redis	52	0	0	0



# TAF Integration Test Cases

## Integration tests

OS		DB	Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Non Security	Redis	6	0	0	0
x86_64 / CentOS	Security	Redis	6	0	0	0
arm64 / Ubuntu	Non Security	Redis	6	0	0	0
arm64 / Ubuntu	Security	Redis	6	0	0	0

## Compatibility tests

OS		DB	Total TCs No.	Failed TCs No. of Past Week	Failed TCs No. of This Week	Fixed TCs No.
x86_64 / CentOS	Security	Redis	12	0	0	0
arm64 / Ubuntu	Security	Redis	12	0	0	0

# DevOps WG Update (07-15-2020)

## Hanoi

- **Pipeline Enhancements**

- Prune-Github-Tags: <https://github.com/edgexfoundry/cd-management/tree/prune-github-tags>
  - Clean old -dev tags across EdgeX GitHub repos [#49](#)
- edgex-global-pipelines new features:
  - Blue/Green deployment of DevOps services – Complete/Merged. [#203](#)
- edgex-go new Jenkins pipeline: New code under development, functional testing in progress [#207](#)
- Audit DockerHub Images – Will present findings in a future WG meeting
- Snap Builds failing due to expired credentials and other snapcraft changes
  - Snap builder image updated...ongoing updates(weekly) requested. [#141](#)
  - Ticket open for LF to renew credentials and store in Jenkins. Complete. [IT-20176](#)
- Multi-Arch docker images added to the backlog (app-service-configurable will be guinea pig) [#618](#)
- New Ubuntu based build node for x86\_64 builds? Will discuss in next WG meeting [#619](#)

- **DevSecOps**

- Vetting of OSS dependencies
  - PDR on hold pending changes from Jim, Lenny, James, Tony <https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=46760301>
  - Jim White has done a paper study on existing 30+ dependencies. Will discuss in next DevOps WG meeting 7/9/2020

- **Other**

- LF Infra Cost analysis
  - LF working on new global pipeline library to enable log shipping and cost analysis per build. LF to find out where cost data is pushed.
  - Once cost data source is identified, maybe work with the Project Insights (Community Bridge) team to feed cost data into Project Insights?

**Next DevOps WG Meeting 07/16/2020 @9:00AM PST**

# Security WG Update (06-17-2020)

- Hanoi release working items in progress/review
  - ADR's still pending
- SIR update
  - No major issues found
- Security WG meeting
  - No major updates
- Next Meeting: Today & July 22
- Hanoi
  - 5 Done
  - 4 In Review
  - 3 In Progress
  - 15 Backlog
  - 0 New

# Outreach WG Updates (7/15/20)

## Certification Team

- Presentation of an AWS template at next Monday's meeting

## Vertical Solutions Team

- 7/14: ThunderSoft - Pengcheng Zou, CTO
- 7/28: Jiangxing Intelligence - Prof Jiangchuan Liu, CEO

## Marketing Team

# Certification WG Update (6-15-20)

- Determining documentation requirements for the cloud templates
- Discussion on marketing needs for the Endorsement program
- Next meeting is Monday, June 29th, 9 a.m. PDT

# Vertical Solutions WG Update (July 14, 2020)

- Kicked off the EdgeX Foundry Adopter Series
  - June 30th Accenture AIP+ adoption of EdgeX
    - Speaker: Allan Haughton, Digital Mobility Mobile IOT and Mobile Security lead
    - 70+ Attendees
  - July 14th Thundersoft, Tuesday 8AM Pacific
    - Speaker: Pengcheng Zou, CTO
  - Jiangxing Intelligence:
    - Speaker: Professor Jiangchuan Liu, CEO

Register here: <https://www.edgexfoundry.org/adopter-series/>

# Marketing update (7/14/20)

- Continue to drive Website project with El Roboto (3rd party)
  - Folder with key documents milestones and information at the Marketing WG wiki <https://wiki.edgexfoundry.org/display/FA/Marketing+WG>

# Core Working Group (15-Jul-2020)

- V2 API
  - working metadata DTOs & Events controller/handler
  - Addressable removable being explored/tested
- Next call - 7/16/20 @ 10AM US/Central tomorrow
  - V2 API
  - Next steps CLI
  - Requirements for UI
  - Kubernetes next steps



# Miscellaneous Issues/Topics

- WG Chairs
  - Brett @ LF no longer handling recording posting to our Wiki
  - Look for message from Jim about how to get and post your recording
- Looking to appoint an EdgeX Secretary
  - Volunteer role
  - Help with Wiki updates
  - Meeting notes/postings
  - TSC meeting stand in
- Release Czar
- Rework of docs continue
- Thundersoft working on RaspPi dev kit and support



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## Example Code

Discussion from Architects' Topics

# Example Code discussion - Arch Topic

- How should we deal with example code?
  - We have lots of examples
    - Example code for app services lives in holding.
    - Example code for Device Services lives in the device service SDK (although to some extent, device random and virtual are examples).
    - Security is about to create some example code for SSH tunneling.
    - Thundersoft about to create EdgeX Rasp Pi examples (some of these dev kit like example exist in lots of places)
  - Should all this be collected somewhere?
    - Should it live in Github or in the docs (or on the Wiki or other location)?
    - Should it be consolidated?
  - Is it managed code or is it "buyer beware" code?
  - Holding was about a staging area for code on its way (potentially) to edgexfoundry org
    - Do we need another GitHub org?



# Upcoming Events & Dev Advocate Update

Aaron's updates

## Upcoming External Events

- › [Open Source Summit North America](#): 29 June - 2 July, 2020 - Virtual
  - › LF Edge and projects will be featured in several sessions
- › [IIOT World](#): 30 June - 1 July, 2020 - Virtual
  - › Arpit Joshipura: “Uniting the Edge for Tomorrow’s Demands.”
  - › Jim White: “Using Open Source Technology to Manage IoT/Edge Solutions.”
- › [LF Edge Mini-Summit](#): 2 July, 2020 - Virtual
- › [Open Source Summit Japan](#): 15-16 September, 2020 - Tokyo, Japan
  - › CFP Closes July 11:  
<https://events.linuxfoundation.org/open-source-summit-japan/program/cfp/>
- › [Open Networking & Edge Summit North America](#): 28-29 September, 2020 - Virtual
  - › [ONES Unconference Track](#)
- › [Open Source Summit Europe](#): 26-28 October, 2020 - Dublin, Ireland
  - › CFP Closes July 26:  
<https://events.linuxfoundation.org/open-source-summit-europe/program/cfp/>
- › [KubeCon/CloudNativeCon North America](#): 17-20 November, 2020 - Boston, MA
- › [IoT Solutions World Congress](#): 11-13 May, 2021 - Barcelona, Spain
  
- › Discussions around upcoming events occur in the LF Edge Outreach Committee
- › Members may subscribe at: <https://lists.lfedge.org/g/outreach-committee>



# LF Edge Webinar Series

- › Demystifying the Edge with the new LF Edge Taxonomy and Framework
  - › Scheduled for July 9
  - › **Register today** at: [https://zoom.us/webinar/register/WN\\_icv5h6wFTcuw9O0xvMpgLw](https://zoom.us/webinar/register/WN_icv5h6wFTcuw9O0xvMpgLw)
- › Akraino Edge Stack
  - › Your Path to Edge Computing with Akraino Edge Stack
  - › Held Thursday, April 2
  - › On-demand recording available at: [https://zoom.us/webinar/register/WN\\_Zjdo4-5fTQSIqH7pL8iHrQ](https://zoom.us/webinar/register/WN_Zjdo4-5fTQSIqH7pL8iHrQ)
- › EdgeX Foundry
  - › EdgeX Foundry 101: Intro, Roadmap and Use Cases
  - › Held Thursday, April 23
  - › On-demand recording available at:  
[https://zoom.us/webinar/register/4515850788014/WN\\_xCd6YPjEQrCwLiFhBWPKug](https://zoom.us/webinar/register/4515850788014/WN_xCd6YPjEQrCwLiFhBWPKug)
- › Project EVE
  - › Building the “Android of the IoT Edge”
  - › Held Friday, May 29
  - › On-demand recording available at:  
[https://zoom.us/webinar/register/6415888722675/WN\\_35oZJ3hrQE69snMaiJUTPg](https://zoom.us/webinar/register/6415888722675/WN_35oZJ3hrQE69snMaiJUTPg)
- › More to follow...



# Upcoming Project Events

- › [EdgeX Challenge Shanghai 2020](#)
  - › Launch Date: July 3rd, 2020
  - › Location: Shanghai + Online
  - › Organizer: Linux Foundation APAC and [Science & Technology Commission \(STCSM\) of Shanghai Municipal Government](#)
  - › Sponsors: Intel, VMware, InnoSpace, Dell Technologies, Thundersoft
  - › Supporting Organizations: CCFA (China Chain Store & Franchise Association), Tencent, IOTech
  - › Tracks:
    - › Commercial (Retail, Hospitality, Banking, Education, etc.)
      - › Using EdgeX, based on IOT, AI and data analysis technologies, build innovative applications related to consumer, merchandise, and store.
      - › Use EdgeX to build multi-sensor correlated IoT applications.
      - › Use EdgeX to build applications beneficial to defeat COVID-19.
      - › Combine EdgeX with 5G, blockchain or service robot to build innovative applications
    - › Industrial (Factories, Power, Oil/Gas, Utilities)
      - › For the multi-edge node scenario, build an SDN + containerized IT solution based on EdgeX
      - › In discrete or process (with lower latency requirements) manufacturing, use EdgeX to achieve low latency fault detection and response on the production line
      - › In Discrete Manufacturing, use EdgeX to Detect Product Defects Online
      - › Using EdgeX to collect data, proceed with energy management of electric/gas/coal/oil, to improve energy efficiency. (Such as: building a thermodynamic model, completing heat meter data collection and automatic valve opening control to optimize heating efficiency)
      - › Using EdgeX to realize remote unmanned monitoring of multiple data sources and automatic control of the on-site environment.



## Linux Foundation edX Course

- › Business Considerations for Edge Computing:  
<https://www.edx.org/course/business-considerations-for-edge-computing>
- › Additional Course targeted to EdgeX Foundry scheduled for launch shortly







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Thank You