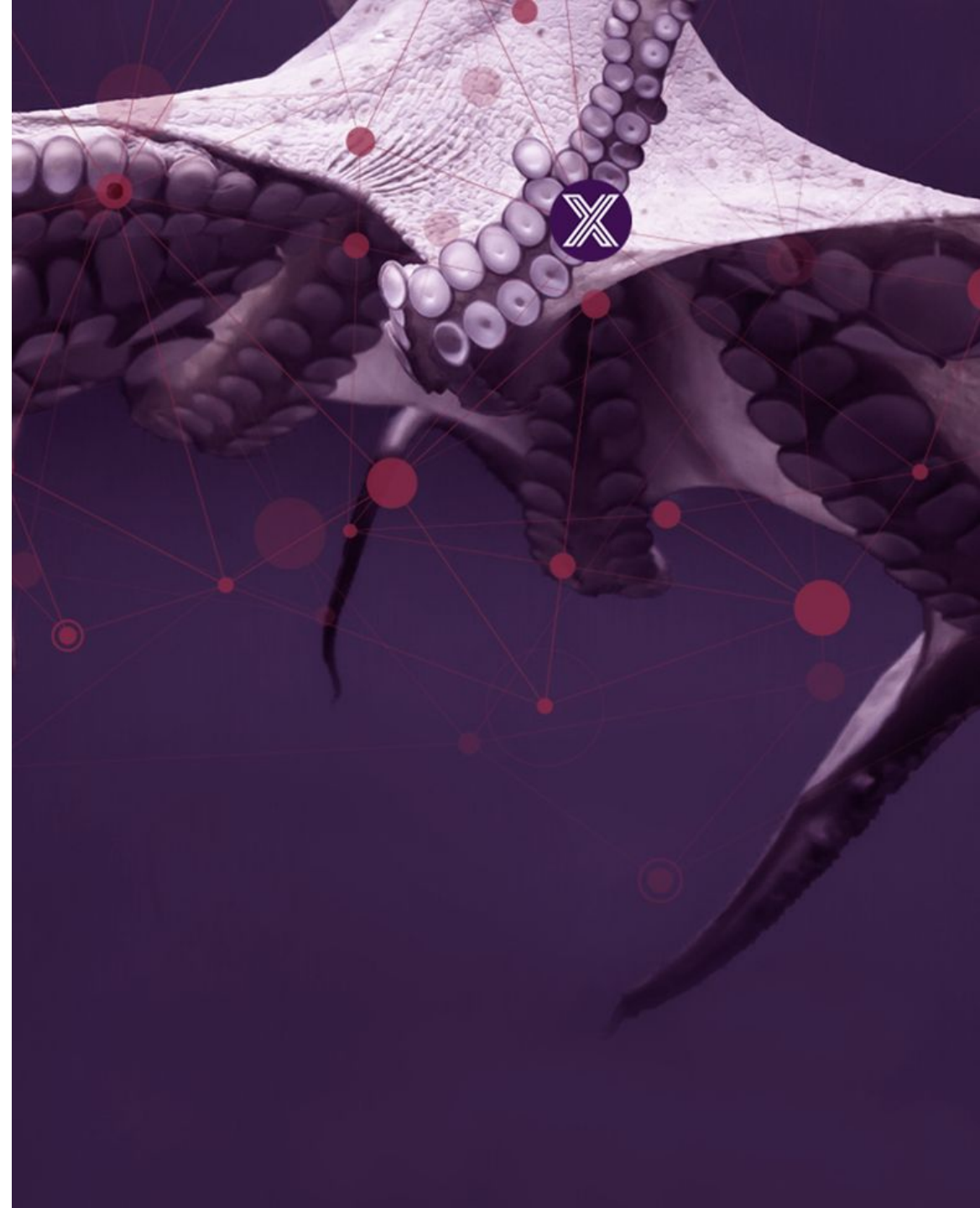




TSC Meeting Special Release Planning Mtg for CA

March 28, 2018



Meeting Logistics

Time: March 28, 2018 7am 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

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Examples of types of actions that are prohibited at EdgeX Foundry meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at <http://www.linuxfoundation.org/antitrust-policy>. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.

TSC – Members Present Today

<u>Company</u>	<u>Name</u>	<u>Email</u>
IOTech	Andy Foster	andy@iotechsys.com
Analog Devices	Doug Gardner	doug.gardner@analog.com
Mainflux	Janko Isidorovic	janko@mainflux.com
Dell	Jason Shepherd	Jason.A.Shepherd@dell.com
The Linux Foundation	Jeremy Phelps	jphelps@linuxfoundation.org
Dell	Jim White	james.white2@dell.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
Samsung	Moonki Hong	moonki1.hong@samsung.com
Samsung	MyeongGi Jeong	myeong.jeong@samsung.com
VMware	Salim AbiEzzi	salim@vmware.com
Canonical	Tony Espy	espy@canonical.com

Current quorum = 7 members

*Note: TSC meetings shall require a **quorum of two-thirds of the TSC total members to take a vote or make a decision.** If a TSC meeting fails to meet the quorum requirement, discussions may proceed, however there shall be no voting or decisions.*

Today's Agenda

- California Release Planning
- Understanding (today - focus on current status and estimates)
 - level of efforts (in crude man-week #'s)
 - roadblocks (dependency tasks, tools needed, etc.)
 - resource needs and shortages (who is working the task and likely of completion by early June)
- Planning (next meeting - addressing the gaps)
 - reset scope
 - adjust the timeline
 - options for resources

Ground Rules

- We aren't trying to fix a problem; we are attempting to avoid one
 - We have come a long way with a lot of hard work
 - We want to avoid expectations set too high or a mistakes that are costly
- It is open source and we all have other work
 - Provide realistic and reasonable level of effort estimates
 - Don't try to be a hero. If you can do the work great, but be honest
 - Just because it isn't in California doesn't mean it won't be in EdgeX
 - Remember we are setting the scope of a release not the project
- We do have some time to make some adjustments


Estimate planning

- Man weeks of work (gross estimate)
- Stuck items/roadblocks/big issues
- Red/Green/Yellow complete by June status
 - Green - 80% done and good chance of completing (with current resources)
 - Yellow - 50% done and a chance of completing (with current resources)
 - Red - < 50% done and little chance of completing
- Recommendations for scope reduction


Understanding - Review of each EdgeX area

- Review Order (with time estimates in CDT)
 - Core Services (data, metadata, command, config seed) - 9am
 - Support Services (logging, notifications, scheduler)
 - Application Services (export client, export distro, rules engine)
 - Device Services (DS SDK, DS's) - 9:30am
 - Break 9:55-10:05
 - Security (reverse proxy and AA) - 10:05am
 - Security (data storage; Vault)
 - System management (service API, sys mgmt agent) - 10:30am
 - Testing (blackbox, security) - if time permits; pick up in following meeting
 - DevOps (Arm artifacts, Arm testing, ...) - if time permits; pick up in following meeting
 - Documentation (in code, cleanup) - if time permits; pick up in following meeting


Core Services

- Core Data, Core Metadata, Core Command in Go
 - Config cleanup
 - Interfaces and unit testing
- Core Config Seed in Go
 - Samsung contribution reviewed
 - Improvements to profile loading
 - documentation & testing
- Total man weeks: 9
 - Dell Technologies
- Status: 
- Issues:
 - Samsung code through review process
- Scope reductions
 - No config seed changes
 - Reduced interface/unit testing work (Delhi)



Supporting Services

- Logging in Go
 - Complete Cavium work
 - Logging to MongoDB
 - Config cleanup
 - Interfaces and unit testing
- Notifications in Go
 - Not started yet
- Scheduler in Go
 - Not started yet
- Total man weeks: 12+
 - Dell Technologies
 - May need some help from Cavium on ?'s
- Status: 
- Scope reductions
 - Keep notifications & scheduler in Java for now
 - Reduced interface/unit testing work (Delhi)

Application Services

- **Export Distro in Go**
 - Config cleanup
 - Interfaces and unit testing
 - Validate event
 - Azure IoT Hub connector
 - Google IoT Core connector
 - OMQ connector
 - Security Implementation based on Security Recommendation?
- **Export Client in Go**
 - Config cleanup
 - Interfaces and unit testing
 - Security Implementation based on Security Recommendation?
- **Rules Engine replacement**
 - Evaluating: Comcast - Rulio <https://github.com/Comcast/rulio>
 - Evaluating: Comcast - Sheens <https://github.com/Comcast/sheens>
- Total man weeks: 20+
 - Mainflux & Cavium(?)
 - Some help from Dell on config cleanup
 - Beechwoods on Security (Java or Go?)
- Status: 
- Scope reductions
 - Keep rules engine in Java for now
 - Reduced interface/unit testing work (Delhi)

DS & DS SDK

- Device Service SDK in Go
 - Requirements completion
- Device Service SDK in C/C++
- Example DS in Go
 - Improved documentation
- Total man weeks: 18+
 - Canonical (Go)
 - IoTech (C)
- Status: Go  C 
- Issues: resolve some open requirements issues
- To be determined:
 - DS in Go or C (Non-MVP)


Security Services

- Reverse Proxy
 - Token (JWT) based AA
- Data Protection Services (Vault)
- Security Testing
- Total man weeks: 10 (???)
 - ForgeRock/Dell - reverse proxy/AA
 - RSA/Beechwoods - DPS
 - IoTech - testing
- Status: 
- Scope reductions
 - reduced or no testing


System Management

- System Management API in each service
- System Management Agent
- Sys Mgmt tie to one cloud system (non MVP)
- Total man weeks: 12+ (???)
 - Dell
- Status: ████████
- Issues: still some design issues with regard to config/registry integration
- Scope reductions
 - Move all of sys mgmt to Delhi

Testing/QA

- Automated Blackbox testing of all services
 - logging, notifications, rules engine, scheduler, export client, device service (generic)
 - Performance Testing
 - “Rasp Pi 3” measures
 - < 250 Mb RAM, startup under 1 min, latency from ingest to actuate 1 min
 - Native ARM Testing
- Total man weeks: 9
 - IoTech
 - DevOps, Cavium support of ARM testing
 - Status: 
 - Issues: where/how to do the performance testing
 - Scope reductions
 - Performance tests to Delhi

Documentation & Miscellaneous

- Move documentation to Github
- Update and cleanup documentation
- Other tasks???
- Total man weeks: 4 (???)
 - IoTech
 - Entire community
- Status: 

DevOps

- Arm 64 artifacts
 - EXE and Docker containers
- Arm 32 artifacts
 - EXE and Docker containers
- Intel artifacts
 - EXE and Docker containers
- Total man weeks: 6 (???)
 - LF
- Status: 
- Scope reductions
 - No ARM 32 support



Development Environment Needs

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Required California Development Environment

Developer/QA Tools

Accounts and some amount of available cloud resources (number of storage, compute, etc. hours) for

- Google IoT Core
- Azure IoT Hub
- AWS IoT Core
- Watson IoT Platform
- Pivotal Cloud Foundry Instance
- Cloud provided MQTT broker for testing various parts of EdgeX MQTT use (export services, device services, etc.)

Virtual Lab

- Cloud-based environment that is capable of launching, running and monitoring thousands of instances of EdgeX for volume, scalability and performance concerns.
- Also allows testing system management functionality as it relates to multiple deployments

- Devices in this lab would be virtual devices simulated through software
- IOT Pulse System managed Test Environment

Physical Device Lab

- Intel and Arm based gateway(s) to run EdgeX
- Devices (for those protocols already supported by EdgeX) connected to the gateway(s)
 - BACNet
 - Modbus
 - BLE
 - SNMP
 - Serial
 - OPC-UA
 - Other devices would be added as more protocols are handled by EdgeX
- A small local network may be necessary
- Internet connectivity and firewall protection
- Internet camera mounted over the devices to be able to see any physical actuation



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Action Planning

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California Release Planning Action Items

- Scope Reductions
- Resource Additions
- Other



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Next TSC F2F Meetings

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EdgeX TSC F2F Meeting(s)

- Discussion on next TSC F2F Meeting(s)
- April - California Contributor Meeting (London/Hanover) -- [potential F2F for Hanover \(ad hoc\)](#)
- Week 11th June June - US California Dell to host -- [Dell/VMWare to confirm](#)
- October
 - LF's [Open Source Summit EU](#) / [Embedded Linux Conference EU](#) is scheduled for October 22-24, 2018 in Edinburgh, UK
- Following meeting would be in Asia



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Thank You