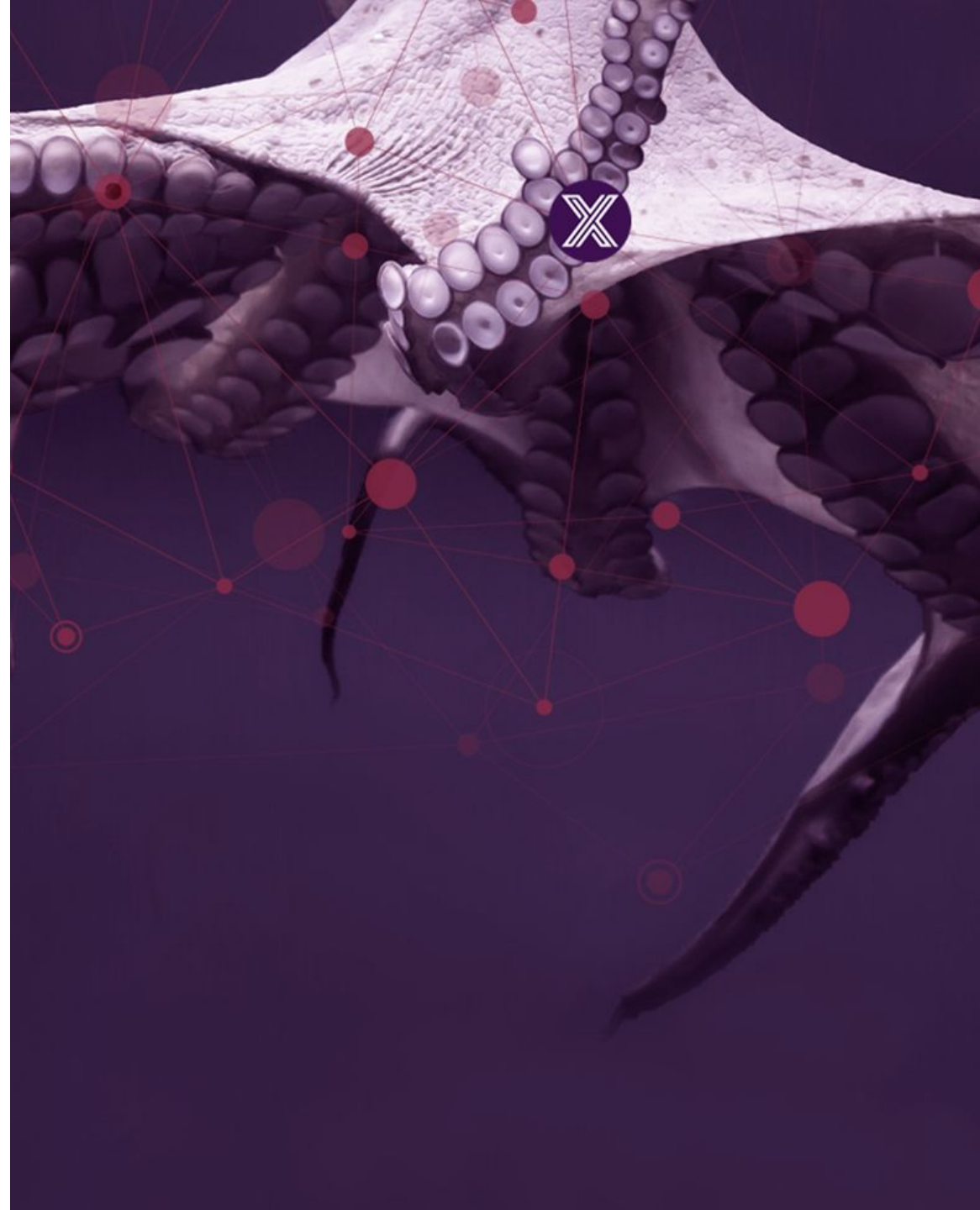# EDGE X FOUNDRY™

TSC Meeting

January 15, 2020

LF Antitrust Policy Notice

EdgeX Foundry meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.

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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:

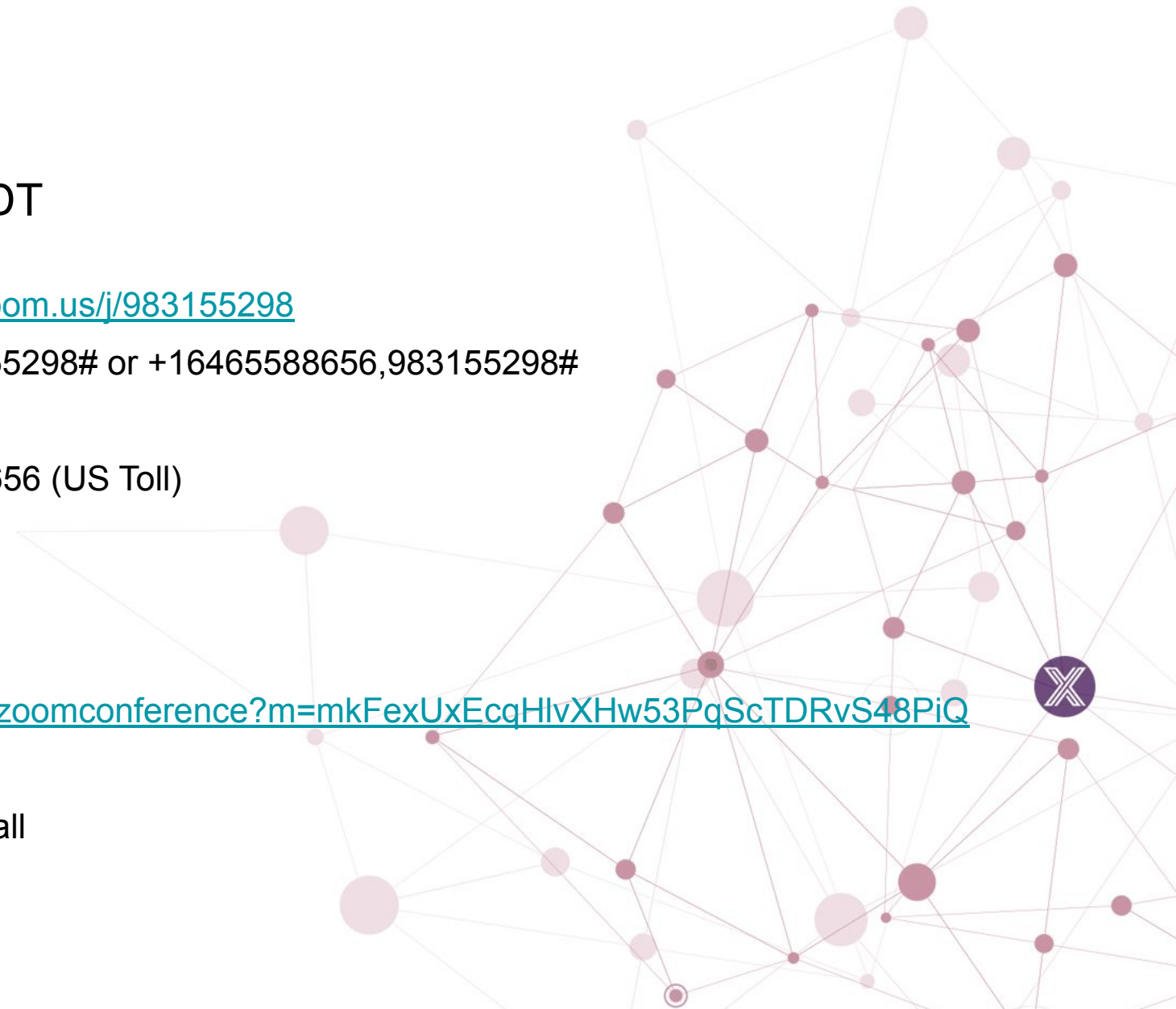Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+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/zoomconference?m=mkFexUxEcqHlvXHw53PqScTDRvS48PiQ

** TSC calls are recorded and added to Wiki post-call

TSC – Members Present Today

Company	Name	Email
Intel	Brad Corrion	bradley.w.corrion@intel.com
IOTech	Iain Anderson	iain@iotechsys.com
Intel	James Gregg	james.r.gregg@intel.com
IBM	Joe Pearson	joe.pearson@us.ibm.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
VMware	Malini Bhandaru	mbhandaru@vmware.com
Intel	Mike Johanson	michael.johanson@intel.com
IOTech	Robin Chattergee	robin@iotechsys.com
Beechwoods	Rodney Hess	rodney@beechwoods.com
RSA	Tingyu Zeng	tingyu.zeng@rsa.com
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
- Go 1.13 decision
- V2 API - current decisions, discussion, additional decisions
- Vertical Solutions WG Chair
- Dev Advocate update
- Upcoming Events

Weekly Architecture/Action Summary

Per Phoenix F2F

Architecture Decisions / Discussions Summary

Device Services WG

- continued discussion on dynamic device discovery: https://github.com/edgexfoundry/edgex-docs/pull/67
- ADR available and feedback sought on array of data types: https://github.com/edgexfoundry/edgex-docs/blob/master/design/adr/device-service/0002-Array-Datatypes.md

Core

- V2 API discussion ongoing (will be covered in this meeting)
- ADR for review on go-mod-registry refactor (separate registry/config): https://github.com/edgexfoundry/go-mod-registry/pull/38

Application WG

- Batch/Send first impl available for review/comment - check with Mike J
- EMQX Kuiper / EdgeX Demo - special Jan 23rd meeting (possible Drools replacement)
- How to handle app services secrets - queued up for next meeting

DevOps

- Some recent infrastructure outages - noticed first by EdgeX devops; following up with LF
- Commit linter explored but not proceeding

Security

- Go lang 1.13 upgrade discussion (covered later)

Architecture Decisions / Discussions Summary

System Management

- CLI move to main GIthub org pending Michael review/announcement

Test/QA WG

- Move to Markdown has been tentatively approved
  - Mike working technical (scripting, conversion tools, etc)
  - Lisa looking at schedule for swap out
  - Robin/Jim working organization so versioning can also be taken care of
- Discussions on going with regard to TAF repo organization

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Work Group Updates

Chairs

edgexfoundry.org | @edgexfoundry

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 (15-Jan-20)

- go-mod-configuration
  - Ready to bring out of holding via TSC vote
  - https://github.com/edgexfoundry-holding/go-mod-configuration/pull/3
  - Any objections / questions?
    - If not, Trevor will kick off the email vote
- Geneva items
  - Ongoing work to POC side-by-side V1/V2 implementation
    - Intend to present to community during Core WG meeting 23-Jan
  - Refactoring in prep for service-level testing
    - Discussed in QA/Test WG during December
- Core WG tomorrow @ 10AM Central/US
  - Follow-up discussion related to API V2 estimate
  - Cross-WG attendance is highly encouraged

Applications WG Update (15 Jan 2019)

- In Progress
  - EMQ X Kuiper Demo Jan 23
  - Batch and Send PR will be available for feedback by end of the week

- App Working Group Meeting held on Fridays @ 9AM PST
  - Next meeting Friday, Jan 17th

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   AVAILABLE
- Amazon IoT Core   WIP

Device Services WG Update (15-January-20)

- device-bacnet-c released
- Design work for Geneva features ongoing
- SDK interface rationalisation: versioning implications
- Implementing Device LastConnected property

Device Services - current/coming

Open Source connectors (Current):
- Modbus (TCP/RTU)
- Virtual Device
- Grove C - ARM only
- SNMP
- MQTT
- BACnet (IP & MSTP)
- ONVIF Cameras

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 (Current):
- GPS
- MEMS
- Zigbee
- Bluetooth
- EtherCat
- PROFINET

Commercial connectors (Future):
- CAN SocketCAN, CANopen
- EtherNet/IP
- Siemens s5/s7

Test/QA WG Update (08-01-2020)

- Blackbox Test
  - Fixed issue/PR
    - Update How-to-run-blackbox-testing document for getting compose-file from developer-script repo
    - Fixed device-virtual ping failed tests
    - Fixed system-management test result didn't show on allure report
  - Reviewing PR
    - Draft PR #371, sending tests through kong
    - Draft PR #374, run blackbox test on both database, mongo and redis
- New Blackbox Test
  - PR #14 on edgex-taf for how to run edgex-taf document, still under review
  - PR #16 on edgex-taf for adding edgex-cli testcases, reviewed and added comments, waiting for response
  - The edgex-taf image was created
  - Edgex-taf file structure
- Swagger
  - Opened draft PR #3 on edgex-api-docs repository under review
  - Opened draft PR #531 on ci-management repository under review.5

DevOps WG Update (1-15-2020)

Geneva

- Jenkins Production Environment
  - Recent outages - instability of the Jenkins environment
    - LF has enabled additional monitoring of the Jenkins build infrastructure
- Jenkins Transformation to Pipelines
  - Work continues on the transformation to Jenkins Pipelines
  - Need to standardize the way of building C code to avoid "snowflakes" in our Pipelines
  - Fix applied to Pipelines to address missing org name in Snyk CLI stage
    - Need to configure Snyk for each project that's added to ensure it's set as public open source

CommunityBridge - Advanced Snyk Reporting

- EdgeX Foundry added to the CommunityBridge Vulnerability Reporting
  - Issues identified after the project was added but is now no longer visible.
    - Need to follow up with Heather Willson / CommunityBridge team

Next Meeting 1/16/2020 @9:00 PST

System Management WG Update (01-15-2020)

- System Management service
  - Last week's API V2 decisions allow asynchronous work to move forward
- CLI
  - Evaluation pending for TSC recommendation to move out of holding
  - Discussed potential to be first application to use API V2
- Open Horizon -- next action expected on/about Jan 20th
- Discussed adding a control plane -- first of many conversations
  - External requirement to support reactive event-driven dashboard UI
  - Have individual services emit metrics, change, and control events
  - Reuse existing data plane path and application services for delivery
- Revisited Kubernetes support (edgex-kubernetes-support holding repository)
- No meeting this week -- next meeting: January 24th @ 10AM CST

Security WG Update (01-15-2020)

- Ongoing work for token provider server
- ARM testing platform provided by Linaro test drive
- Backlog issues handled
- Next security WG meeting in one hour & will be focusing on Snyk & Get/Put Secrets in both secure and non-secure modes

Certification WG Update (1-13-20)

- Started a discussion on certifying the v2 API
  - Verifying HTTP 500 responses are out of scope
    - However… if one is accidentally found, will be verified and logged
- Discussion on the nature of an extensible API. Undefined:
  - Mixed versioned deployments, e.g. v2.1 working with v2.0
  - New features requiring multiple services to have been upgraded in order to function
  - Note: Not the same as v1.x interoperating with v2.x

- Next meeting Monday, January 20th, 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 - 01/15/20

- No release updates
- Decisions to make about the scope and versioning of Geneva

Miscellaneous (Jim)

- UI Project update
- Next Architect's meeting was moved back a week due to MLK day in the US
  - Check your calendars and make sure it is on the 27th v 20th.
- Face-to-Face meeting in Ireland
  - Trevor Conn has agreed to help orchestrate the event (big thanks Trevor)
- Hanoi F2F registration - should be available as of this evening
  - Brett P to send out notice
- Developer Advocate update
  - Candidate going through interview process with other projects
- Vertical Solutions WG Chair
  - Nominations opening soon
- Japan EdgeX meetup: 2/6 @ 7pm Tokyo time
  - https://www.meetup.com/ja-JP/EdgeX-Foundry-Tokyo/events/267901288/

Addition to New Repo procedure (vote needed)

Per Lenny's email, when requesting a new repo, please complete the following in the repo request to LF

- Project: EdgeX Foundry
- Summary: <repo-name>
- Description:
- - Repo Name: <repo-name>
- - Repo Description: "<some description> | Owner: <owning WG name>"
- - Organization: <edgexfoundry | edgexfoundry-holding>
- - Committers: devops-core-team, <list of other committer IDs>
- - Branch Protection: master branch protection (1 committer approval)
- - File Creation: <repo-name>-settings and <repo-name>-codecov-token
- - Approval: Reference to the TSC approval (example: link to the meeting minutes containing the approval)

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Go Lang 1.13

Move from Go Lang 1.12 to 1.13 (vote needed)

- Per Geneva face to face meeting, decision was made to move to Go Lang 1.13
- Checking with the various work groups and there does not appear to be any significant impact to make this move
- Many developers are already using 1.13
- Can we officially adopt Go Lang 1.13 and have all work groups start to move to this platform?
  - Any issues, warnings or suggestions that further research is required
  - Do we need to pin to a particular 1.13 dot release?

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V2 API

Current Decisions

As of Core and Test/QA WG meetings last week

- TAF will be used as overarching API/blackbox testing platform. Tests for V2 APIs (only) will be created by TEST/QA team
- Postman tests remain for V1 APIs
- Dev teams are welcome to (encouraged?) to provide language dependent service level tests in their code base as they see fit (example Go Tests) but this is optional at this point
- We proceed with V2 API implementation - reasons listed in email
- We start implementing V2 API with Geneva - as beta in core services (beta = use at your discretion but are not required or fully supported)
- Important new features of Geneva (ex: automatic provisioning) still use V1 APIs
- SDKs and other services would still generally call on V1 APIs (still rely on V1 clients)

Pending Decisions

- What Geneva pinned tasks are now pushed to Hanoi
  - Value descriptor removal?
  - generic error handling?
  - export service archive?
  - app service feed back to core data?
  - moving a device from DS to DS?
  - sys management APIs async
  - Design of HTTPS in EdgeX
- Who completes the work? Do we have enough resources to complete the work?
  - Can the work be completed in 2 releases or will it take even more?
- Would we retire V1 APIs immediately after V2 APIs come out or support some overlap
- Is Geneva now 1.2?
- Is everything in Geneva backward compatible? What about the removal of export services?
- Is Geneva at 1.2 LTS worthy?
- After V2 API is out, can the next release be fix only release to provide some stability (Czar request)?

Upcoming Events

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
› KubeCon EU 2020: 31 March - 2 April, 2020 - Amsterdam
  › CFP closed 22 November
› IoT World: Apr 6-9 - San Jose, CA
› Hannover Messe: April 20-24 - Hannover GE
› Open Networking & Edge Summit North America: 20-21 April, 2020 - Los Angeles, CA
  › CFP Status: open til Feb 3
› Open Source Summit North America: 22-24 June, 2020 - Austin, TX
  › CFP Status: open til Feb 16

Upcoming External Events

› IIOT World Day: Jun 30-Jul 1
  › Call for papers until March
› 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: Open til Jun 7, 2020
› Open Source Summit Europe: 26-28 October, 2020 - Dublin, Ireland
  › CFP Status: Details Available Late 2019
› IOT SWC: 27-29 Oct, 2020 - Barcelona, Spain
› Discussions around upcoming events occur in the LF Edge Outreach Committee
› Members may subscribe at: https://lists.lfedge.org/g/outreach-committee

Thank You