EDGEXFOUNDRY™

TSC Meeting

August 19, 2020
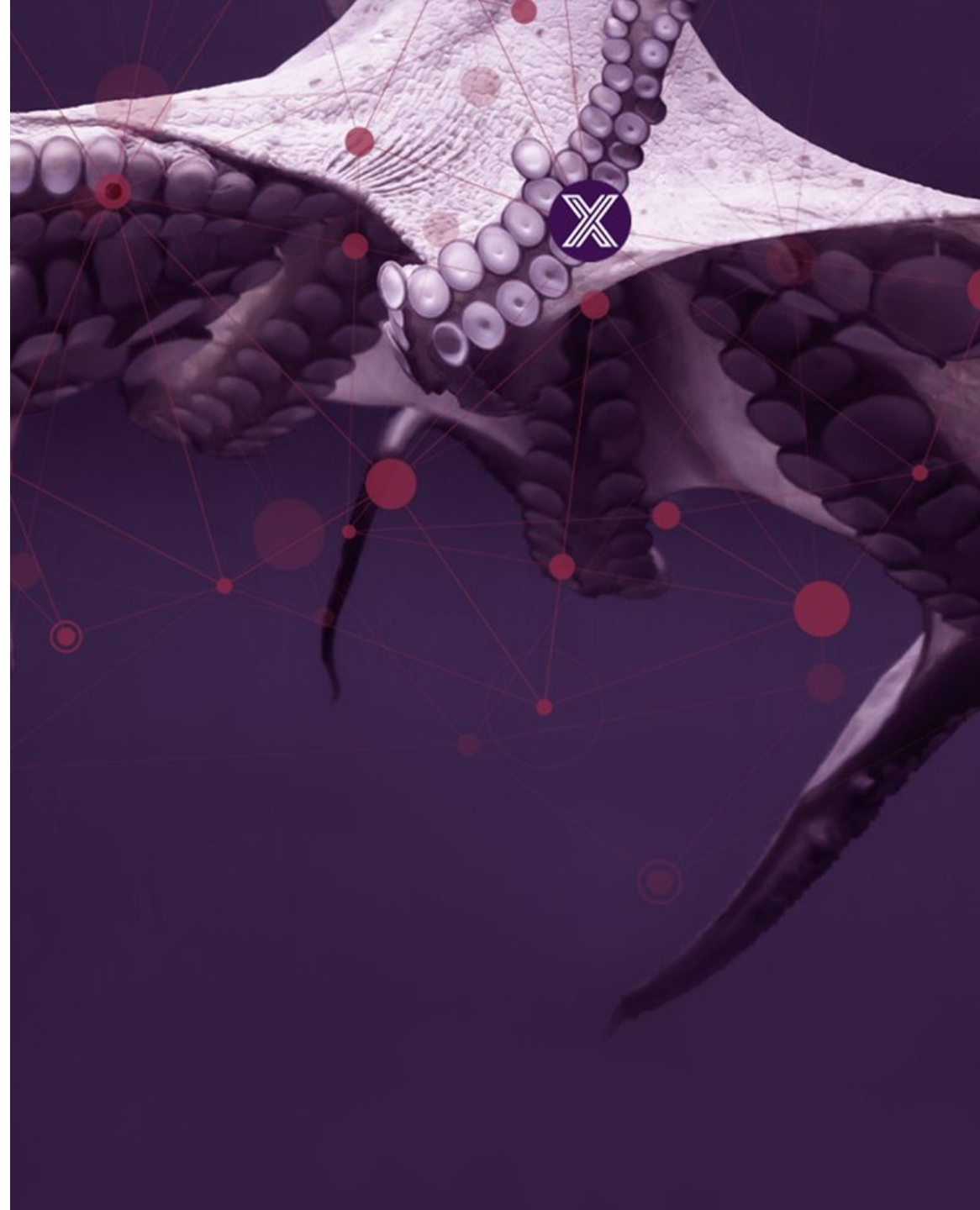
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Meeting Logistics

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)
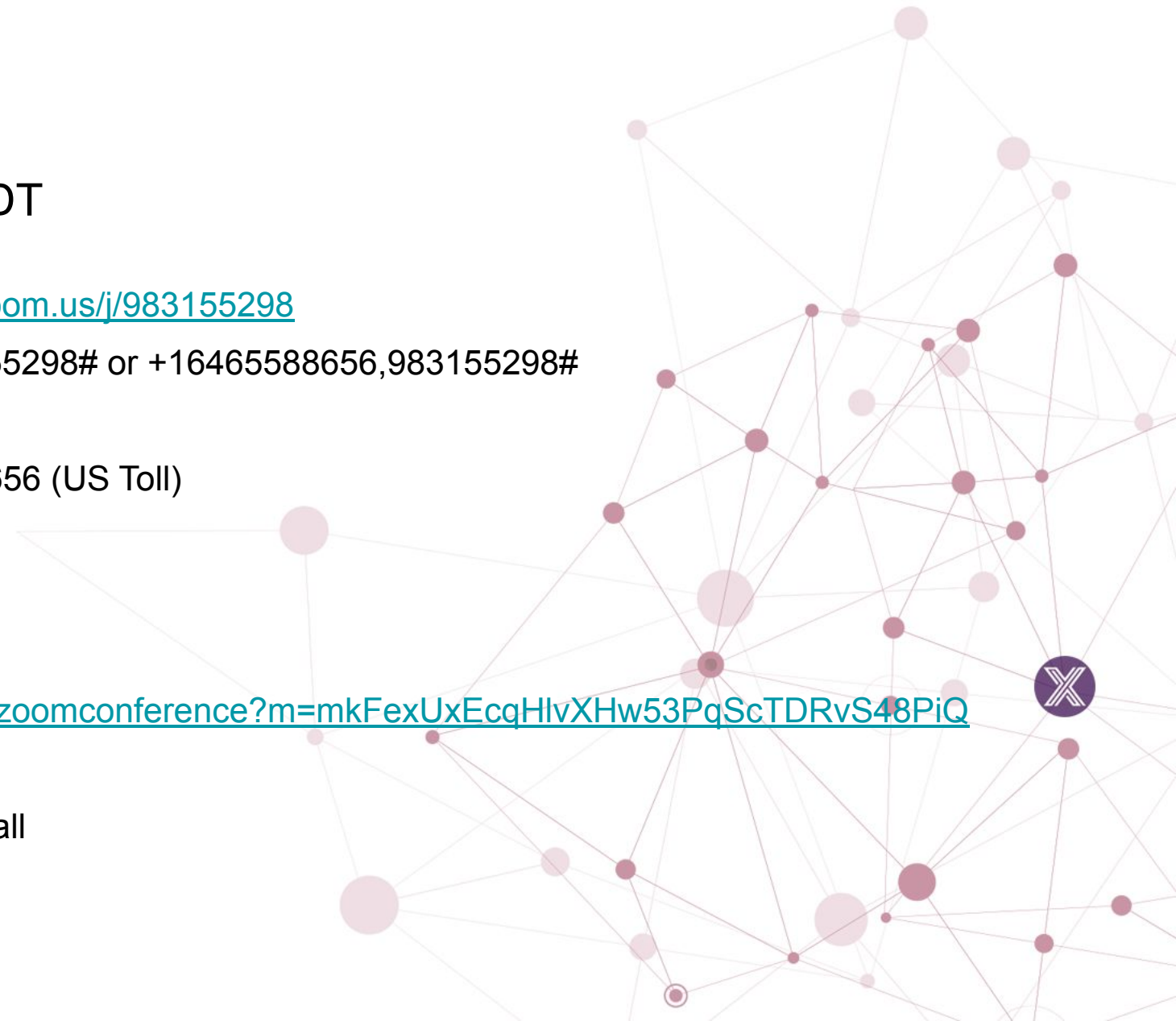
+1 855 880 1246 (US Toll Free)

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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

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Company	Name	Email	Position
IOTech	Iain Anderson	iain@iotechsys.com	Device Services WG Chair
Intel	Ernesto Ojeda	ernesto.ojeda@intel.com	Dev Ops WG Chair
IOTech	Keith Steele	keith@iotechsys.com	Outreach WG Chair
Kong	Colin Hutchinson	colin@konghq.com	Security WG Chair
Intel	Mike Johanson	michael.johanson@intel.com	Applications & Analytics WG Chair
IOTech	James Butcher	james@iotechsys.com	Test/QA WG Chair
IOTech	Jim White	jim@iotechsys.com	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.

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Today's Agenda

- WG Updates
- Upcoming Events (Dev Advocate)

Work Group Updates

Chairs

Working Group Chair Updates

- Around the horn
  - Product Manager - Lenny Goodell
  - Release Czar - Bill Mahoney
  - 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 (8/19/20)

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

In Progress (5)

- V2 Implementations
  - **Core Data V2 AddEvent API - <mark>DONE!</mark>**
  - **Metadata DTOs - <mark>DONE!</mark>**
  - **App Services V2 APIs - <mark>DONE!</mark>**

- Configurable address for ListenAndServe
  - **Bac-net-c Device Services remaining.**

- Generate/Inject random passwords into Vault
  - **ADR PR - <mark>DONE!</mark>**
  - **Implementations TBD**

- Allow device services to be distributed to alternate hosts
  - **Overlay Network & Service Mesh examples <mark>WIP</mark>**
- Startup Configuration/Env does nothing
  - **App SDK and Core/Support service - <mark>DONE!</mark>**
  - **App Service Config - <mark>DONE!</mark>**
  - **Device SDK Go - - <mark>DONE!</mark>**
  - **Device Services - TBD**

Backlog (<mark>6</mark>)

- Message Bus from Device Service to App Services
- Dockerfiles incorrectly uses ENTRYPOINT
- **EdgeX Go services move to Go 1.15**
- **Secure Message Bus connection**
- **Secret Provider abstraction for all**
- **Design metadata about the "gateway" or host platform**

Done (3)

- Refactored Compose files
- Remove Support Rules Engine (just from compose files)
- Remove Client Monitoring

Icebox (<mark>7</mark>)

- V2 API Consumption
- Explore possible collapse of core command and metadata
- EdgeX Metrics Collection & Control Plane Event Handling
- Drop Logging Service completely (Revert WIP)
- Remove Mongo code (Revert WIP)
- Update config.Clients usage for new naming scheme
- Multiple arch docker images support

Release Czar (8/19/20)

Releases Pending:

1. device-grove-c   (-> v1.2.1)
2. device-camera-go   (-> v1.1.2)
3. device-modbus-go   (-> v1.2.2)
4. device-mqtt-go   (-> v1.2.2)
5. device-random   (-> v1.2.2)
6. device-rest-go   (-> v1.1.2)
7. device-snmp-go   (-> v1.2.2)
8. device-virtual-go   (-> v1.2.3)

Applications WG Update (19-Aug-2020)

Hanoi Progress Check:
- V2 API - Done!
- Message Bus (DS -> App Service)- WIP
- Drools Deprecation - Done!
- Metadata about "gateway" or host platform - Starting
- Kuiper & EdgeX Enhancements - Done!

App Working Group Meeting Schedule update:
    Alternating Thursdays @ 4:30PM PDT (Asia Friendly) and Friday @ 8AM PDT(EMEA Friendly).
    - Next meeting Aug 20th, 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

Features

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

Reference/Example App Services (Geneva)
(built on top of SDK)

- Azure IoT Hub   AVAILABLE

- Amazon IoT Core   AVAILABLE

- IBM Watson IoT
- Cloud Event Transformation   NEW!
- Secret Retrieval Example

Device Services WG Update (19-Aug-20)

Geneva point release: in progress

Issue list:

- 22 in backlog (-2)
- 3 new issues (=)

Hanoi status:

- V2 API work progressing
- Nothing yet on Data Filter design
- Stretch: Device Service to App Service via MessageBus may come in
- Additional: Binary data for device writes

Next WG meeting August 24

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!)
- Grove in C

Open Source connectors (Future):
- Bluetooth in C (summer 2020)
- BACnet (IP & MSTP) in C (summer 2020)
- OPC-UA in 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)

QA/Test WG Update (18th August)

- Postman blackbox test - all tests passing
- TAF blackbox test - all tests passing
  - Fixed issues
    - Issue #138, [Implement Performance Metrics] retrieve image and executable footprint.
    - Issue #141, [Implement Performance Metrics] CPU & Memory Usage.
  - Working issues
    - Issue #137, Modbus scalability test.
    - Issue #139, [Implement Performance Metrics] Service Uptime - Deploy all services at once.

TestQA - Hanoi Progress

- EdgeX V2 API Blackbox tests (TAF)
- User guidance on platform needs
    - Performance test development underway

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 (08-19-2020)

Hanoi

Pipeline Enhancements

- #64 [In Progress] SPIKE Research Functionality to rebuild artifacts.
- #43 [In Progress] Rewrite sample-service to better facilitate testing of DevOps services.

Other

- **DockerHub updated TOS retention policy:**
  https://www.docker.com/pricing/retentionfaq
  - **Beginning November 1, 2020 Docker will enact a new retention policy for images**
    - Free plans will have a 6 month image retention limit
    - Pro and Team plans will have unlimited image retention

DevOps edgex-cli pipeline proposal

- enable git-semver to consistent versioning automatically version builds
- Create pipeline with the following stages
  - Test
  - Cross Compile (New make target, developers will own)
    - Linux (amd64/arm64)
    - Windows (amd64/arm64)
    - MacOS (maybe)
  - Package artifacts (tarball)
  - Git-semver Push signed version tag
  - Push tarball to GitHub releases page (new scope)
    - This is a release activity when should this be done. How much involvement from the Release Czar is required? Update ADR10?
- Potential Additions
  - Snyk scan
  - Codecov.io

Next DevOps WG Call 8/20/20 @ 9:00AM PST

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Security WG Update (08-04-2020)

- Hanoi release
  - Items in Good shape: the heavy lifts have begun
  - Items that are not going to make it: TBD
  - Items that are stretch that are going to make it: TBD
- Requesting reviews/awareness on edgex-docs/pull/140
- Security WG meeting
  - Next Meeting: Today & Aug 26
- Security Board
  - 26 Done (+8)
  - 3 In Review (-1)
  - 3 In Progress (+2)
  - 12 Backlog (-5)
  - 1 New (-2)

Outreach WG Updates (8/5/20)

Certification Team

- Discussed how to enable users of the device profiles and sample data

Vertical Solutions Team

- Adopter Series continues - Tibco will present their Project Air product which includes EdgeX Aug 25 (Tuesday) at 8:00am Pacific

Marketing Team

- Web site progress
- Kicking off next week planning for 2nd topcoder challenge targeted for the fall

Core Working Group (Aug-19-2020)

- Current Status
  - Backlog: 14 (same)   In progress: 2 (-1)   Done: 44 (+11)
  - Bugs: 4 (same)   Under review: 0 (-1)
- V2 API
  - metadata DTOs & Events controller/handler
- CLI Hanoi release outlined
- Next call - 8/20/20 @ 10AM US/Central tomorrow
  - V2 API
  - CLI - Hanoi Release Cleanup
  - EdgeX UI
    - Roadmap discussion

Hanoi Progress

- V2 API (core, device services, application services & SDKs)
  - in progress
- Go 1.15
  - 1.15 is now available, not tried yet
- Allow DS to be distributed
  - Security work nearing completion
- Design message bus impl between DS and application services
  - Not started
- ADR 0006 - metrics collection and handling control plane events
  - No more activity yet
- Deployment / orchestration options
  - Improve facilitation of K8s
  - Explore with OH

Hanoi Progress

- Roadmap for CLI
  - Fix issues
  - Move out of holding
- Roadmap for UI
  - In progress
- Explore collapse of core command and metadata (stretch)
- SMA - Service list fix
  - Not started

Deferred to EdgeX 2.0 (Ireland?)

- Remove Mongo
- Remove Logging

Miscellaneous Issues/Topics

- PRs in for rework of docs
- Reminder - Monthly Arch's meeting is on Thursday (20th) @ noon central time

Upcoming Events & Dev Advocate Update

Aaron's updates

Upcoming External Events

› 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

Mark your calendar for upcoming webinars:

- "How Google, OSIsoft, FLIR and Dianomic use Fledge to implement Industrial 4.0"
  - Thursday, August 13 - 9 AM PT
  - Register here:
    https://zoom.us/webinar/register/6715959696017/WN_1jGqjfJoT4-Iv2y6YDGgYg
- State of the Edge
  - Thursday, September 17 - 9 am PT
  - More details to come
- Home Edge
  - Thursday, October 15 - 7:30 am PT
  - More details to come

Watch past webinars (**Akraino, EdgeX Foundry, Project EVE, LF Edge Taxonomy**) on-demand on the "On the Edge with LF Edge" playlist on Youtube - https://bit.ly/3kmUciC

›

Upcoming/Recent Project Releases and Whitepapers

Akraino R3

- August 2020- https://www.lfedge.org/projects/release-3/

Recent & Upcoming LF Edge Publications:

- (Recent) White Paper: Linux Foundation Edge: Taxonomy & Framework
- (Recent) White Paper: "Akraino Edge Stack APIs"
- (Recent) Solution Brief: "Edge Networking: An Introduction" (co-produced with LF Networking)
- (Upcoming) White Paper: Akraino APIs, Part 2
  - ›

Linux Foundation edX Course

› Business Considerations for Edge Computing:
https://www.edx.org/course/business-considerations-for-edge-computing

› Official EdgeX Training at LF
› https://training.linuxfoundation.org/training/getting-started-with-edgex-foundry-lfd213/

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Thank You

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