EDGEXFOUNDRY™

TSC Meeting

Jun 10, 2020

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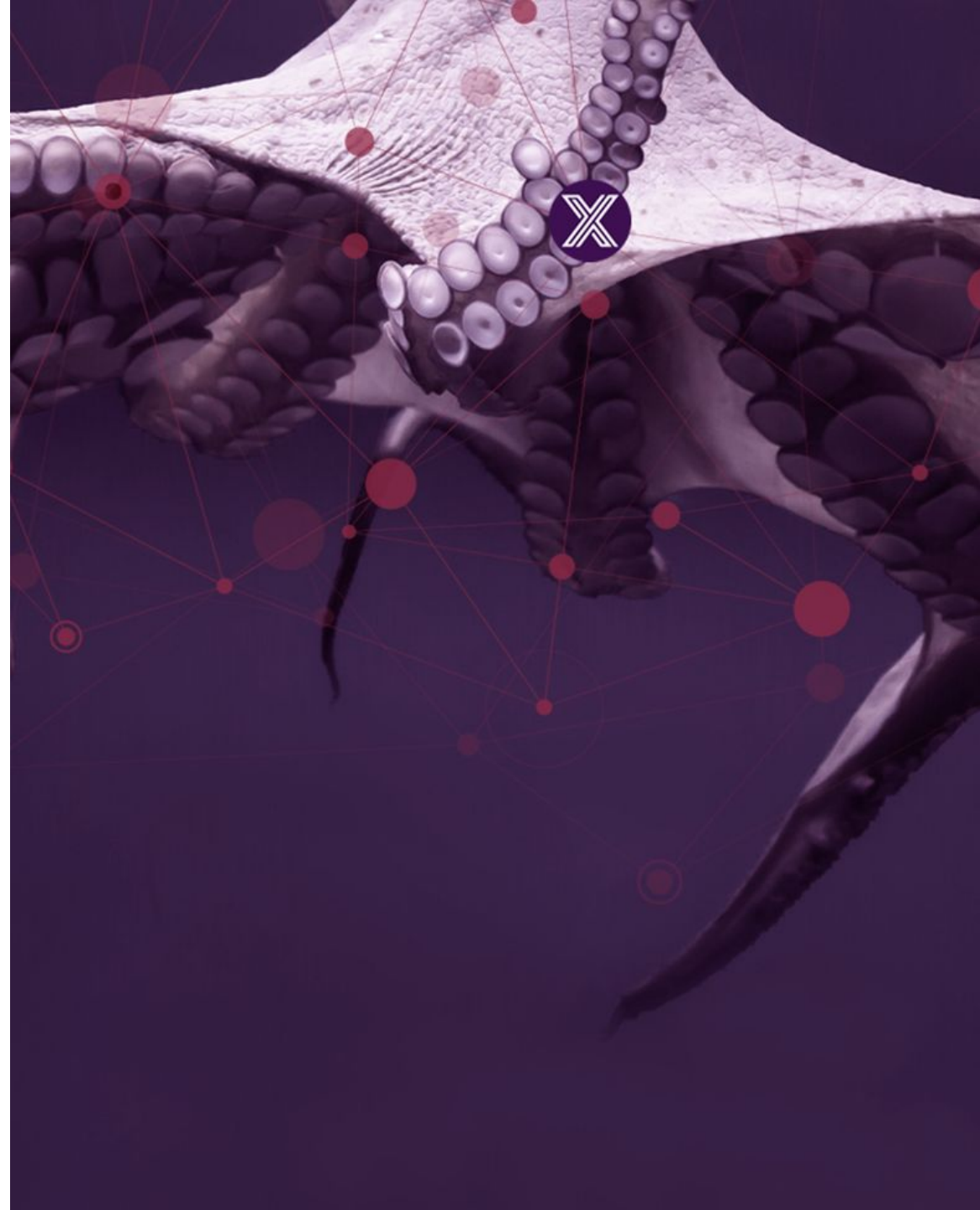
LF Antitrust Policy Notice

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:

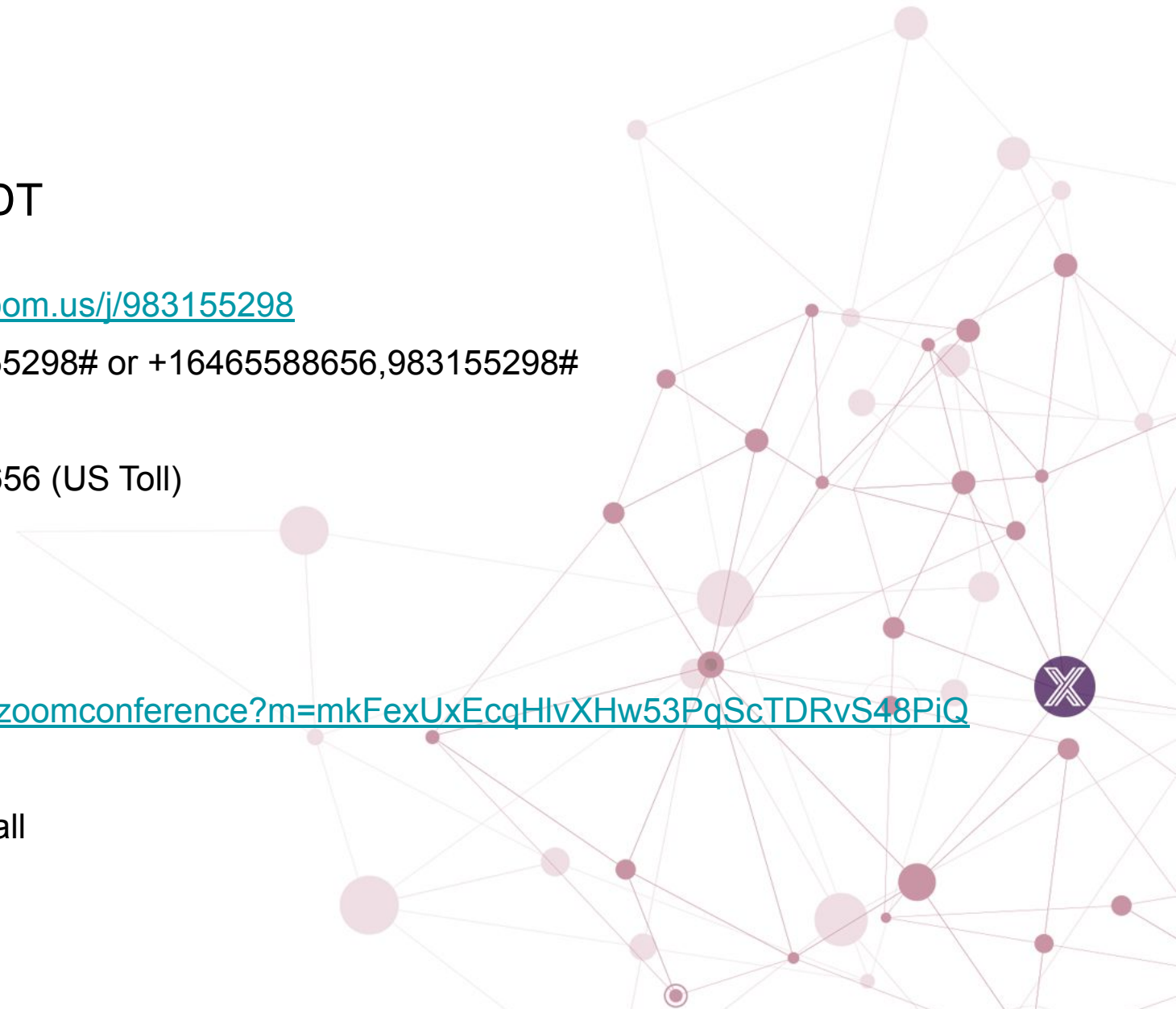Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+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	Camilo Dennis	camilo.a.dennis@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
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Beechwoods	Rodney Hess	rodney@beechwoods.com
RSA	Tingyu Zeng	tingyu.zeng@rsa.com
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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

- Dot release details
- WG Updates
- Glossary / Landscape project of LF Edge (Molly Wojcik)
- APJ ?'s/feedback/updates
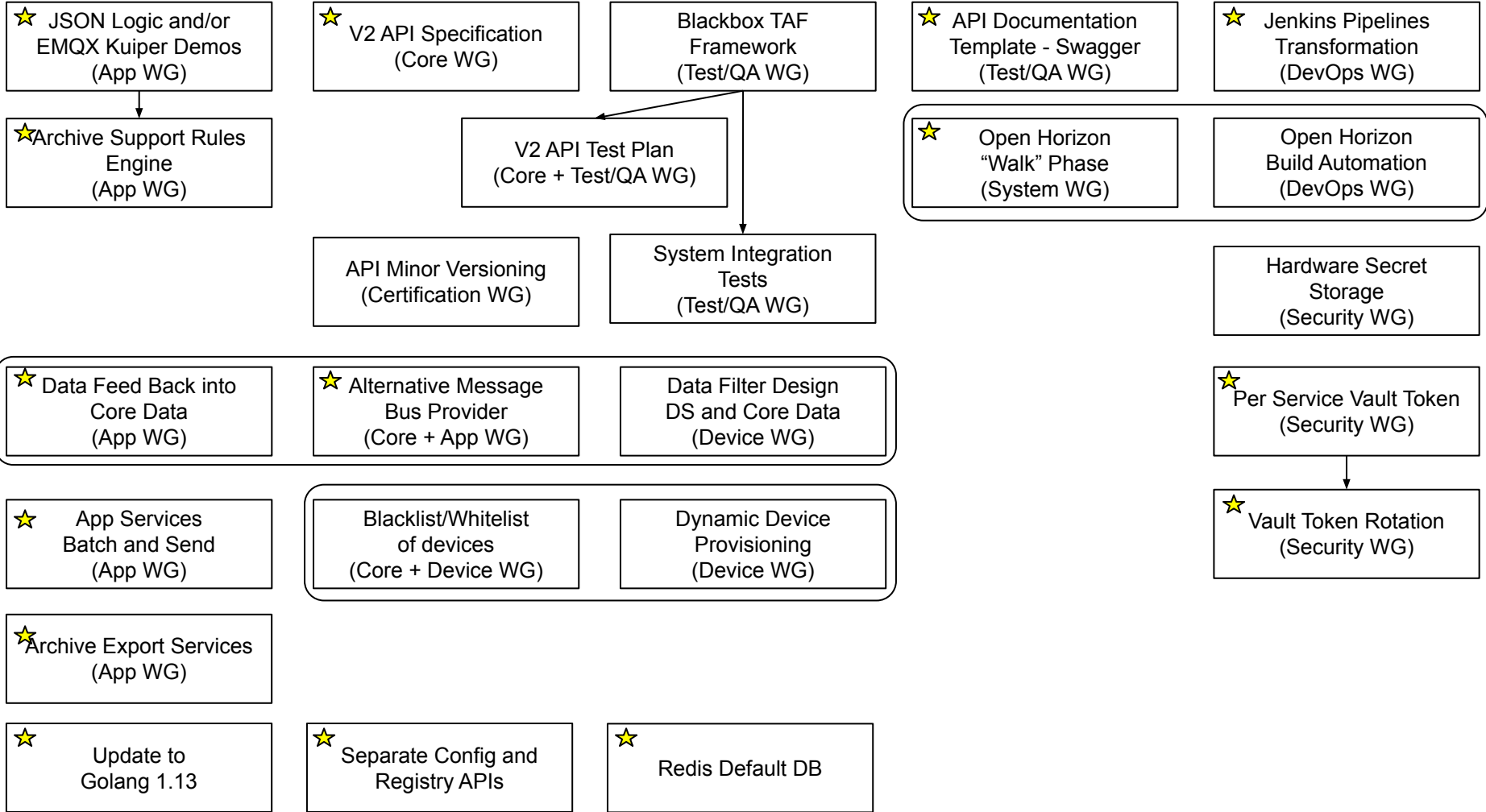- TSC Elections info and status
- Upcoming Events (Dev Advocate)

Geneva Release & Release Czar readout

EdgeX Geneva Release Overview

⭐ JSON Logic and/or EMQX Kuiper Demos (App WG)

⭐ V2 API Specification (Core WG)

Blackbox TAF Framework (Test/QA WG)

⭐ API Documentation Template - Swagger (Test/QA WG)

⭐ Jenkins Pipelines Transformation (DevOps WG)

⭐ Archive Support Rules Engine (App WG)

V2 API Test Plan (Core + Test/QA WG)

⭐ Open Horizon "Walk" Phase (System WG)

Open Horizon Build Automation (DevOps WG)

API Minor Versioning (Certification WG)

System Integration Tests (Test/QA WG)

Hardware Secret Storage (Security WG)

⭐ Data Feed Back into Core Data (App WG)

⭐ Alternative Message Bus Provider (Core + App WG)

Data Filter Design DS and Core Data (Device WG)

⭐ Per Service Vault Token (Security WG)

⭐ App Services Batch and Send (App WG)

Blacklist/Whitelist of devices (Core + Device WG)

Dynamic Device Provisioning (Device WG)

⭐ Vault Token Rotation (Security WG)

⭐ Archive Export Services (App WG)

⭐ Update to Golang 1.13

⭐ Separate Config and Registry APIs
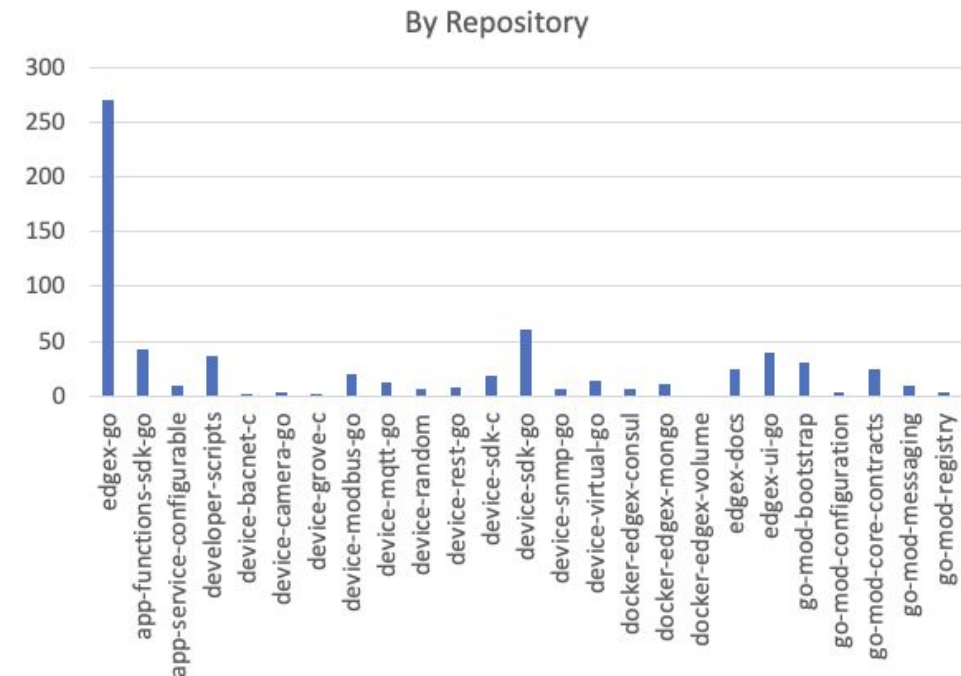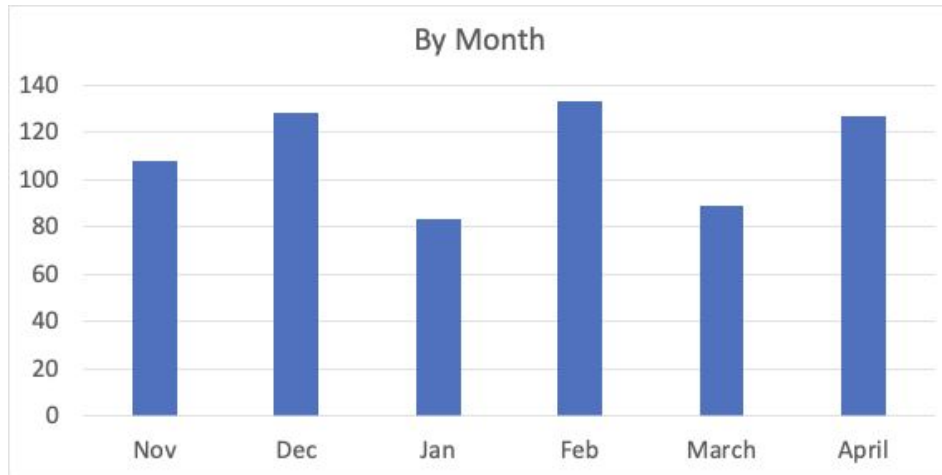
⭐ Redis Default DB

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Release Overview

Release Artifact Status

- Docker Images are staged in Nexus for release
- Snap channels are created for Geneva

Closed Issues - 668 Overall

Geneva Dot 1.2.1 Release

- Mini freeze to master on most repositories until we get the freeze out on Friday
- Coding done by Wednesday
- Check for issues on Thursday as well as tag 1.2.1
- Release on Friday
- Update compose files shortly after

1.2.1 Release contents

- Fix in device-sdk-go to address issue #532 (critical CPU consumption issue based on inappropriate interval)
  - This will also require all Go based device services to be released with the fix as well.
- Small one line bug fixes to device-mqtt-go and device-modbus-go to address env override for profile dir(issues #149 and #152 respectively)
- Changes in edgex-ui-go to address gateway / security issues (addressing short term fixesfor some of #222, #223, #224, #225 and #226 in edgex-ui-go)
- Changes to scheduler service (as part of edgex-go) to eliminate bug on removal of interval (#2554 and associated to issue #2520 and PR #2552)
- Changes to support-rulesengine for remote logging URL (#74)
- Changes to go-mod-bootstrap to address issue #76 – empty vars being ignored especially as it relates to webserver host name & Consul callback issue
  - This will also require artifact creation for all core/supporting services, device services, and app services that consume go-mod-bootstrap
- There are a few identified Snap changes
- There is a change to the app functions SDK and therefore associated configurable app service (inclusive of issue #376)
- C SDK 1.2.1 is already tagged at 1.2.1

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
    - Open Horizon - Joe Pearson
  - Certification - Rodney Hess
  - Vertical Solutions - Camilo Dennis and Henry Lau
  - Updates from Release Czar - Lisa
  - Updates from Dev Advocate - Aaron

Core Working Group (10-Jun-2020)

- No report today. Trevor on vacation
- Core WG call @ 10AM US/Central tomorrow - cancelled

Applications WG Update (10-Jun-2020)

Complete:
- Filter Out Device Transform
- Azure Resource Management Templates (For Endorsement)
- Documentation update for Pipeline Config for ASC

WIP:
- Bug fix for message formatting in logs

- App Working Group Meeting held on Fridays @ 9AM PDT
  - Next meeting June 12th, 2020

Application Services

Functions (built into SDK)
Current/Complete:

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

Features

- Store and Forward
- Web Server
- Configurable App Service
- **NEW!** Vault Integration for Secrets
- **NEW!** 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
- Secret Retrieval Example — **NEW!**

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Device Services WG Update (10-Jun-20)

- C SDK tagged at 1.2.1
  - Updated Grove device service in progress
- Go SDK needs to consume newer go-mod-bootstrap
  - Go device services release depend on edgex-go issue #2580
- -holding repository created for RFID/LLRP device service

Next WG meeting June 15th

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 (06-10-2020)

- Blackbox Test
  - Working issues
    - Refactor scripts to pull and deploy using new multi-file compose files PR#459 (Approved and verified on sandbox)
    - Remove Mongo from Jenkins pipeline ci-management#611
- TAF
  - Working issues
    - Issue #122, to update to use new multi-file compose file.
    - Docker daemon permission denied on x86_64 VM, opened Jenkins ticket to LF IT-19912
  - Fixed issues
    - Issue #27, to remove Mongo test.
- New Business
  - Create Device SDK and App SDK API document page on edgex-doc PR#157 (Merged)
  - Up the version number of Swagger files in edgex-go PR#2562, and upload v1.2 onto SwaggerHub.(Merged)
  - Set the SwaggerHub automatically upload as a public document ci-management#609 (Merged)

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	Mongo	1312	0	0	0
		Redis	1312	0	0	0
x86_64 / CentOS	Security	Mongo	1342	0	0	0
		Redis	1342	0	0	0
arm64 / Ubuntu	Non Security	Mongo	1312	0	0	0
		Redis	1312	0	0	0
arm64 / Ubuntu	Security	Mongo	1342	0	0	0
		Redis	1342	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	52	0
x86_64 / CentOS	Security	Redis	52	0	52	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	Non Security	Redis	12	12	0	12
x86_64 / CentOS	Security	Redis	12	0	0	0
arm64 / Ubuntu	Non Security	Redis	12	0	0	0
arm64 / Ubuntu	Security	Redis	12	0	0	0

DevOps WG Update (06-10-2020)

Hanoi

- **Performance Optimizations**
  - Build Optimizations for edgex-go
    - Image promotion
    - Improvements to support same type of optimizations for all other pipelines (edgeXBuildGoApp and edgeXBuildDocker) - WIP
  - Planning next sprint - grooming backlog user stories to align to the same process we used in Geneva - phases of work
- **DevSecOps**
  - Continued explore of options for addressing Issue #1947 - vetting of OSS dependencies
    - Now looking at FOSSA since it's something being used by other LF projects (CNCF)
  - Community Bridge Feature Requests
    - Transitive dependencies for Go modules - findings don't match other tools like Sonatype - No Update
- **Other**
  - `githubsync` **- GitHub Automation to create labels used across all EdgeX Foundry repos**
    - New feature with the refactor (Python) the full sync takes ~`5m` to complete compared to ~`2h17m` before; half of that 5m is from building the python container.
  - **Self Service Committers**
    - Aric Gardner presented self-service committers as an option to move from the need to submit JIRA tickets for managing permissions on repos.
  - **Code Signing - lftools /sigul replacement**
  - LFTools / Sigul latest version that supports Python 3.x
      - LF is now considering an alternative signing tool
      - LF encountered some of the challenges within their fork trying to refactor sigul to support the latest Python 3.x

Next DevOps WG Meeting 06/11/2020 @9:00AM PST

System Management WG Update (June 10, 2020)

- No report today.
- Next meeting: Friday, June 19th @ 10AM CST

Security WG Update (06-10-2020)

- Hanoi release working items in progress/review
- SIR team update - No major issues found
- Security WG meeting
  - Stop security scanning on docker-edgex-volume
  - Keep security scanning on docker-edgex-mongo for dot release/security fix
  - Move discussion of 3rd party vetting process to future architecture meeting

Certification WG Update (6-8-20)

- Michael Johanson's presentation and demonstration of an Azure-based template for an EdgeX instance
- Discussion with Lisa about what's needed in an AWS-based template

- Next meeting is Monday, June 15th, 9 a.m. PDT

Vertical Solutions WG Update (June 10, 2020)

- Recent meetings: Use cases, and opportunities for EdgeX community
  - 5/12 Conexxus: Convenience stores technology standards and use cases
  - 5/26 Appcard: Customer Engagement solutions ISV, use cases for grocery stores and QSRs
  - 6/9 RF Rain: RFID ODM, use cases across various verticals
- Last 2 meetings with 30+ attendees

- Next meeting: June 23rd, 2020, Tuesday 10am PST

Marketing update (6/10/20)

- 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
- Geneva landing page created (Thank you Andy!)
- Topcoder Challenge
  - Working to secure SME(s) for second topcoder challenge
- Pulse with meeting participants. Start, Stop, Continue for Marketing meeting.
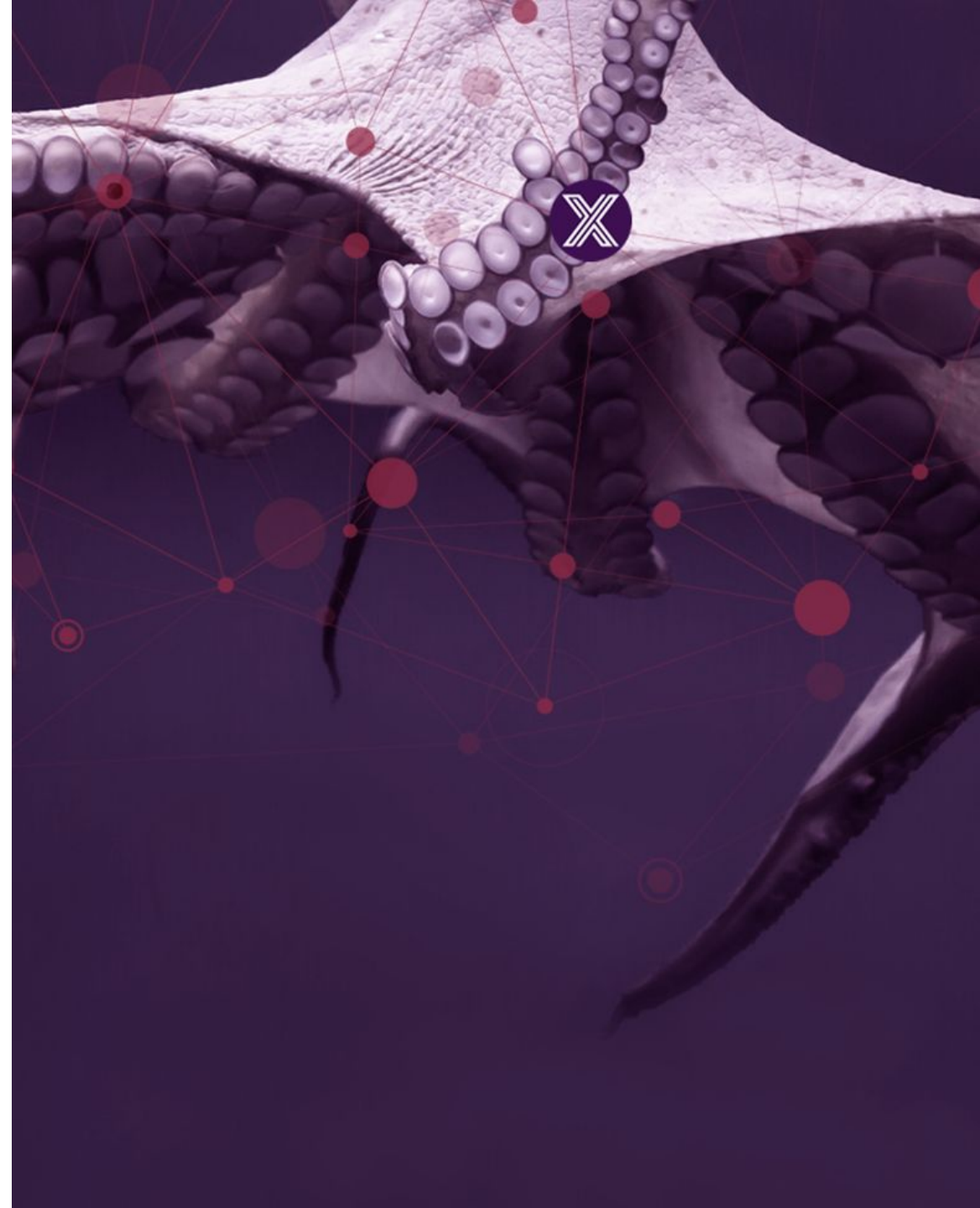
Miscellaneous (Jim)

- We are holding a survey to get feedback from the community and beyond with regard to our command line interface tool (CLI).
    - Please take a couple of minutes to fill it out when you receive the link
    - https://www.surveymonkey.com/r/QWKHZZZ
    - https://bit.ly/EdgeXCLI
- Monthly Architect's meeting next monday - June 15, 12noon CDT
- PM discussion
- Outreach discussions

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LF Edge
Glossary Project

Molly Wojcik & Matt Trifiro

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STATE OF THE
EDGE

LF Edge Interactive Landsc

How to ensure that your org/tech is properly represented

State of the Edge Project

Vendor-neutral platform for open research on edge computing that is dedicated to accelerating innovation by crowdsourcing a shared vocabulary for edge.

- Founded in 2017

- Recently transitioned under the umbrella of LF Edge

- Assets:
  - State of the Edge reports
  - Open glossary of Edge Computing
  - Edge Computing Landscape

CNCF Cloud Native Interactive Landscape

The Cloud Native Trail Map (png, pdf) is CNCF's recommended path through the cloud native landscape. The cloud native landscape (png, pdf), serverless landscape (png, pdf), and member landscape (png, pdf) are dynamically generated below. Please open a pull request to correct any issues. Greyed logos are not open source. Last Updated: 2020-06-04 16:19:48Z

You are viewing 1,407 cards with a total of 2,269,396 stars, market cap of $16.5T and funding of $66.13B.

CLOUD NATIVE Landscape

CLOUD NATIVE COMPUTING FOUNDATION

KubeCon | CloudNativeCon
Europe 2020
Virtual
August 17 - 20

| Landscape | Card Mode | Serverless | Members |

120%

Landscape

App Definition and Development
- Database
- Streaming & Messaging
- Application Definition & Image Build
- Continuous Integration & Delivery

Orchestration & Management
- Scheduling & Orchestration
- Coordination & Service Discovery
- Remote Procedure Call
- Service Proxy
- API Gateway
- Service Mesh

Runtime
- Cloud Native Storage
- Container Runtime
- Cloud Native Network

Provisioning
- Automation & Configuration
- Container Registry
- Security & Compliance
- Key Management

Platform
- Certified Kubernetes - Distribution
- Certified Kubernetes - Hosted
- Certified Kubernetes - Installer
- PaaS/Container Service

Observability and Analysis
- Monitoring
- Logging
- Tracing
- Chaos Engineering

Serverless

- Kubernetes Certified Service Provider
- Kubernetes Training Partner
- Special
- Members

CLOUD NATIVE COMPUTING FOUNDATION Landscape
Redpoint // Amplify

This landscape is intended as a map through the previously uncharted terrain of cloud native technologies. There are many routes to deploying a cloud native application, with CNCF Projects representing a particularly well-traveled path.

l.cncf.io

Helping navigate the expansive edge ecosystem

https://landscape.lfedge.org/

Taxonomy

- **.Org:** Standards and collaboration groups involved in facilitating discussion by edge stakeholders of edge.
- **Traffic Routing:** DNS and software/projects to monitor and route traffic to the correct place.
- **Platforms:** Platforms focused on deploying, managing, and scaling custom-workloads at the edge (CDN & Distributed Caches, Application Delivery Network (ADN), Edge PaaS, IoT Focused, Decentralized)
- **Security:** Applications and projects focused primarily on security.
- **Networking:** Software or solutions that control the movement of packets (e.g. SD-WAN, NFV, NOS)
- **Infrastructure:** Infrastructure as a Service tools, vendors, and platforms for edge compute (Monitoring, Provisioning, Virtualization, Physical).
- **Hardware:** Physical gear, including assembled components (Core Silicon, Accelerators).
- **Edge OEMs:** Original Equipment Manufacturers (OEM) building key components critical for the edge ecosystem.
- **Wireless & Wireline:** Physical network infrastructure , protocols, & tooling focused and used at the edge (Fiber & Peering, Wireless).
- **Real Estate / Land / Data Centers:** Companies focused on building, maintaining, and operating data centers and related critical infrastructure for the edge (Tradition, Non-Traditional, Towers & Related, Municipal Right of Way)
- **Services / System Integrators:** Services for people integrating and deploying at the edge.
- **Other Edge Related Software:** Software projects /platforms common, but not specific to any of the other categories.
- **LF Edge Member Companies:** Member companies of LF Edge.

How to add a new listing / edit an existing entry

Github repo:
https://github.com/State-of-the-Edge/lfedge-landscape

- Open a PR or issue (with edits to the landscape.yml)

- Required inputs:

    ○ Name of organization or technology

    ○ Homepage url

    ○ .svg logo *Important: Only .svg format logos are accepted

    ○ Twitter url

    ○ Crunchbase url

    ○ Assigned category (Descriptions for categories can be found in the README.md)

Alternate option: Email the required inputs to glossary-wg-landscape@lists.lfedge.org

```
landscape:
  - category:
    name: .ORG
    subcategories:
      - subcategory:
        name: .ORG
        items:
          - item:
            name: Cloud Native Computing Foundation
            homepage_url: 'https://www.cncf.io/'
            logo: 'https://github.com/cncf/artwork/blob/master/other/cncf/stacked/color/cncf-stacked-color.svg'
            twitter: 'https://twitter.com/cloudnativefdn'
            crunchbase: 'https://www.crunchbase.com/organization/cloud-native-computing-foundation'
```

How to get involved

- Make sure your listing is up to date

- Join the email list: https://lists.lfedge.org/g/glossary-wg-landscape

- Join the bi-weekly calls: https://lists.lfedge.org/g/glossary-wg-landscape/calendar

Molly Wojcik
Chair of State of the Edge
Landscape Working Group

molly@section.io

Matt Trifiro
Co-Founder & Chair of
State of the Edge

matt@vapor.io

EdgeX Elections

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Election Schedule (approved by TSC)

- Collection of voter registries (now to June 12)
- Nominations for any chair or TSC at-large positions (now to June 12)
- Chair and at-large elections (week of Jun 15-19)
  - We will have an election for at-large seats as we have 3 nominees and 2 seats
- TSC Chair election (week of Jun 25-29)

Chairs - please provide changes/additions on voter list by EOD June 12th (Friday)

Changes to date: addition of Rocky Jin as contributor

Election Schedule (approved by TSC)

- Current Nominations (now to June 12)
  - DevOps: Ernesto Ojeda (Intel)
  - Application/Analytics: Mike Johanson (Intel)
  - Outreach: Keith Steele (IOTech)
  - TestingQA: James Butcher (IOTech)
  - Device Services: Iain Anderson (IOTech)
  - Security: Colin Hutchinson (Kong)
  - Core: Jim White (IOTech)
  - **At Large: Lenny Goodell (Intel), Tony Espy (Canonical), Sean McGinnis (Dell Technologies)**
- Volunteer positions (non-TSC voting)
  - Release Czar: Lisa Ranjibar
  - PM: Lenny Goodell

Open Roles
- User Advocate

Thank you APJ!!

APJ Opens

Questions that the community can answer?

Initiatives you'd like to let us know about?

How can EdgeX do more in APJ?

How can we better support your efforts?

Upcoming Events & Dev Advocate Update

Aaron's updates

Upcoming External Events

› **"On the Edge with LF Edge" Webinars**
  › Project EVE Webinar (May 29 at 9 am PDT):
    › Register for the webinar!
      https://zoom.us/webinar/register/8815888722994/WN_35oZJ3hrQE69snMaiJUTPg
› Open Source Summit North America: 29 June - 2 July, 2020 - Virtual
  › 90 minute session(s) - July 2 at 12-1:30pm CST
› 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."
› Open Source Summit Japan: 15-16 September, 2020 - Tokyo, Japan
  › CFP Open: https://events.linuxfoundation.org/open-source-summit-japan/program/cfp/

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Upcoming External Events

› Open Networking & Edge Summit North America: 28-29 September, 2020 - Los Angeles, CA
   › ONES Unconference Track- **Virtual**
› Open Source Summit Europe: 26-28 October, 2020 - Dublin, Ireland-
   › CFP Open: https://events.linuxfoundation.org/open-source-summit-europe/program/cfp/
› IoT Solutions World Congress: **MOVED** 11-13 May, 2021 - Barcelona, Spain
   › Call for Testbeds Open: https://www.iotsworldcongress.com/activities/testbeds/
› Open Networking & Edge Summit Europe: TBD Q4, 2020 - Antwerp, Belgium- **Cancelled**
   › CFP Open: https://events.linuxfoundation.org/open-networking-edge-summit-europe/program/cfp/

› Discussions around upcoming events occur in the LF Edge Outreach Committee
› Members may subscribe at: https://lists.lfedge.org/g/outreach-committee

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Upcoming Project Events

› none

› Projects can add their events to this list by sending the Wiki page listing the information to
info@lfedge.org

Thank You

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