

A network diagram background consisting of numerous yellow circular nodes connected by thin blue lines, set against a dark blue gradient background.

LF Edge TAC Technical Advisory Council

7 October 2020

 THE **LINUX** FOUNDATION

 **LF** EDGE

Meeting Details

- › October 7, 2020 (@ 7:00am PDT)
- › Meeting Info:
 - › Join Zoom Meeting
 - › <https://zoom.us/j/286673048?pwd=RElIT1E2RmU3T3lpL0YrMzFHWWsdz09>
 - ›
 - › Meeting ID: 286 673 048
 - › Passcode: 254638
 - ›
 - › Dial by your location
 - › 855 880 1246 US Toll-free
 - › 877 369 0926 US Toll-free
 - › Meeting ID: 286 673 048
 - › Find your local number: <https://zoom.us/u/aeeh8taqXU>

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LF Edge TAC

Project/Member	Representative	Named Alternate	Project/Member	Representative	Named Alternate
Altran	Shamik Mishra	Nilanjan Samajdar	GE Research	Joel Markham	James Ward
Arm	Reed Hinkel	Tina Tsou	HP Inc.	Henry Lau	
AT&T	Kandan Kathirvel		HPE	Rodney Richter	Arun Thulasi
Baidu	Leding Li		Huawei	JianGuo Zeng	Gabriel Yuyang
Charter	Jeffrey Saelens	Mohammad Zebetian	IBM	Joseph Pearson	Ryan Anderson
Dell	David Lake	Trevor Conn	Intel	Jim St. Leger (TAC Chair)	Sharad Mishra
Dianomic	Bill Hunt	Tom Arthur	Inwinstack	Thor Chin	
Equinix	Justin Dustzadeh		MobiledgeX	Vikram Siwach	
Ericsson	Torbjörn Keisu	Andrew Wilkinson	Nokia	Tapio Tallgren	
Fujitsu	Toshimichi Fukuda	Hatsumi Iino	NTT	Takeshi Kuwahara	
Futurewei	Chaker Al-Hakim	Jane Shen	OSIsoft	Daniel Lazaro	

LF Edge TAC

Project/ Member	Representative	Named Alternate	Project/ Member	Representative	Named Alternate
Qualcomm	Lisa Lammens		Akraino	Tina Tsou	Oleg Berzin
Radisys	Adnan Saleem	Prakash Siva	EdgeX Foundry	Henry Lau	
Red Hat	Frank Zdarsky	Thomas Nadeau			
Samsung	MyeongGi Jeong	Chi-Hyun Cho			
Seagate	Matt Shumway				
Tencent	Yachen Wang	Wei Chen			
Western Digital	Jorge Campello De Souza				
Wipro	Subhas Mondal				
ZEDEDA	Erik Nordmark	Roman Shaposhnik			

Topics

1. CII Best Practices Program [15 minutes]
2. State of the Edge - 2021 Report [15 minutes]
3. 2021 Planning [15 minutes]
4. LF Edge Virtual Tech Event [5 minutes]
5. Upcoming Events [5 minutes]
6. Next Meeting [5 minutes]

CII Best Practices Program
David Wheeler, The Linux Foundation

CII Best Practices Badge

- › Identifies a set of best practices for OSS projects, focusing on security
- › Provides a mechanism for projects to self-certify that they meet these criteria
 - › Automation helps & prevents some false answers
- › Full presentation here:
 - › <https://github.com/coreinfrastructure/best-practices-badge/blob/master/doc/cii-bp-badge-intro.pptx>
- › Website where projects can receive a badge here:
 - › <https://bestpractices.coreinfrastructure.org>
- › EdgeX Foundry and Open Horizon badging already in progress!
 - › <https://bestpractices.coreinfrastructure.org/en/projects/1226>
 - › <https://bestpractices.coreinfrastructure.org/en/projects/4300>
- › LF Edge Wiki tracks badge progress here: <https://wiki.lfedge.org/>
- › Proposal: All LF Edge projects be encouraged to get a CII Best Practices badge

State of the Edge - 2021 Report
Jacob Smith, Equinix Metal, SOTE Co-Chair
Matt Trifiro, Vapor IO, SOTE Co-Chair

State of the Edge - 2021 Report - Status Update

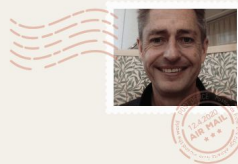
- › Research Working Group has been meeting since August
 - › Subscribe to mail list/calendar at <https://lists.lfedge.org/g/stateoftheedge-wg-research>
- › 2021 Report will be published in December
- › The report will focus on four areas, led by four researchers:
 - › State of Critical Infrastructure (Philbert Shih / Structure Research)
 - › State of Hardware (Simon Bisson)
 - › State of Networks (Phil Marshall / Tolaga)
 - › State of Software (Mary Branscombe)
- › We will also see an update to our 2020 bottoms-up model
- › Postcards from the Edge

State of the Edge - 2021 Report - Postcards from the Edge

And Now, The Time Has Come: 5G and the Edge

We're at a watershed moment in the evolution 5G, the "put-up or shut-up" moment when operators are assessing the commercial value to justify their investment in a 5G buildout. This is what always happens in the marketing and investment dance of a new cellular generation.

Recent research concludes that the full value of 5G is still being discovered, with select operators like [SK Telecom](#) aggressively exploring edge services that can deliver outsized value and demand a premium.



Geoff Hollingworth
CMO, MobileEdgeX

Add Your Voice: info@stateoftheedge.com

Who Will Build and Pay for the Edge ?



Monica Paolini
Principal at Senza Fili

The Data Layer Challenge at the Rapidly Evolving Edge

In the early days of the cloud, visionaries predicted that enterprise infrastructure would quickly migrate to few large cloud providers. Unfortunately, the early cloud hype got ahead of reality—because public cloud faces a huge issue it can't solve on its own: latency. The edge is developing quickly, but the initial emphasis has been on providing compute capabilities, with little thought given to storage.



Ellen Rubin
CEO, Clear Sky Data

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State of the Edge - 2021 Report

LF Edge Project Asks

1. Designate a Liaison

- a. It would be ideal if the each Project could assign a volunteer to be the primary liaison with State of the Edge. This would not require much work, just a conduit for info and coordination. Intro to me directly via email.

2. Align with the Glossary

- a. Now that LF Edge has adopted clear terminology at the top level, we want to work towards aligning the project publications and documentation. Ideally, each Project would formally adopt the [Open Glossary of Edge Computing](#) and ask all its writers and contributors to use it as a style guide.

3. Landscape.

- a. There are probably many LF Edge contributing and supporting companies who have not yet been added to the [LF Edge Landscape](#). I can help with this process, but I need .SVG logos. This is free advertising so it should be easy to incent folks.

4. Postcards from the Edge

- a. Like last year, the 2021 State of the Edge will include outside contributions of 500-1000 words. These need to be educational and not advertorial, but the author and their company will get credit. We will publish an abstract in the 2021 report and run the full essay on the blog.

5. Project Update for State of the Edge

- a. We plan to include a 2-3 paragraph "state of" for each of the LF Edge projects. Please assign somebody to this. We will want to see drafts in early November.

6. Consider fielding and editor

- a. If a Project/Member wishes to have input on the 2021 State of the Edge report, the best way is to find someone willing to be a section editor. This requires reading and commenting on at least one chapter of the 2021 guide, and this will need to be done under fairly tight deadline in November.

2021 Planning

(for reference) LF Edge TAC - Focus Areas for 2020

Target areas identified for the TAC to direct focus, beyond PLD/Project Review

- 1. Architecture (Tech > LF Edge) - Output: TBD (White paper?)**
2. APIs Document, Align and Publish
3. SDO/Consortiums expansion
- 4. Forcing function - Use Case or Deployment > Demo across all projects**
5. Technical overlap/unification
6. Cross Project Collaboration
7. IT Efficiencies

Out of Scope for the TAC (for now)

1. Vertical Solutions (End User / SIG Program)
 - a. At Board/SPC level

LF Edge TAC - Focus Areas for 2021 (what to emphasize / deemphasize?)

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1. Vertical Solutions (End User / SIG Program)
 - a. At Board/SPC level

For initial discussion
October 7. Continue
discussion on October 21
in preparation for Board
meeting on October
27-28.

LF Edge Virtual Tech Event



LF Edge Virtual Tech Event

- › Similar to the [Virtual Technical Event](#) scheduled for LFN in October
- › Is there interest in the LF Edge Community to organize something similar/scaled down version?
- › Would need volunteers from the TAC and Outreach Committees to “lead” as well as volunteers to shape a Planning Committee
- › Consider November timeframe
 - › Avoid November 9 - 13 (EdgeX Planning Conference - *virtual*)
 - › Other event to note is November 17-20 (KubeCon/CloudNativeCon - *virtual*)
- › Thoughts? Open Discussion...

Upcoming Events

Upcoming External Events

- › [Edge Computing World](#): 12-15 October, 2020 - Virtual
 - › [LF Edge End User Kickoff Event #2](#) - October 20 (8am - 11am PT)
 - › [Open Source Summit Europe](#): 26-29 October, 2020 - Virtual
 - › [KubeCon/CloudNativeCon North America](#): 17-20 November, 2020 - Virtual
 - › [Open Source Summit Japan](#): 2-4 December, 2020 - Virtual
 - › [IoT Solutions World Congress](#): 11-13 May, 2021 - Barcelona, Spain
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- › 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

- › Home Edge
 - › Scheduled for Thursday, October 15
 - › Registration information coming soon!

- › 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_Zjdo4-5fTOSlqH7pl8iHrO
- › 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_xCd6YPjEOrcwLiFhBWPkug
- › 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_35oZl3hrOE69snMailUTPg
- › White Paper
 - › Held Thursday, July 9 - [Demystifying the Edge with the new LF Edge Taxonomy and Framework](#)
 - › On-demand recording available at: https://zoom.us/webinar/register/WN_icv5h6wFTcuw9O0xvMpgLw
- › Fledge
 - › Held Thursday, August 13 - [How Google, OSIssoft, FLIR and Dianomic use Fledge to implement Industrial 4.0](#)
 - › On-demand recording available at: <https://www.youtube.com/watch?v=6lXNv3AIWog>
- › State of the Edge
 - › Held Thursday, September 17 - [State of the Edge: Exploring the Intersection of IoT, AI, 5G and Edge Computing](#)
 - › On-demand recording available at: https://zoom.us/webinar/register/8115959695936/WN_4rt-MmP1RI6Vkn3ULpiAA
- › More to follow...

Upcoming Project Events

- › [EdgeX Challenge Shanghai 2020](#)
 - › Launch Date: July 3rd, 2020 / End Date: October, 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.

Upcoming Project Events

- › [EdgeX Foundry Ireland Release / Fall 2020 - Release Planning Conference - Virtual](#)
 - › Dates: 9 - 13, November, 2020
 - › Agenda: <https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=52330532>
 - › Registration is Open:
<https://events.linuxfoundation.org/edgex-foundry-ireland-release-planning-conference-fall/>
 - › Subscribe to <https://lists.edgexfoundry.org/g/EdgeX-TSC> for the latest information

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

Linux Foundation edX and Training Courses

- › Business Considerations for Edge Computing:
<https://www.edx.org/course/business-considerations-for-edge-computing>
- › Getting Started with EdgeX Foundry (LFD213):
<https://training.linuxfoundation.org/training/getting-started-with-edgex-foundry-lfd213/>

Next Meeting

Next Meeting

- › Next Meeting: Wednesday, October 21 @ 7am PDT
 - › 2021 TAC Priorities
 - › Community Lab
 - › Project Annual Review - Home Edge
 - › Home Edge - October 21
 - › Baetyl - ? (due 9/12/20)
 - › EVE - ? (due 9/12/20)
 - › State of the Edge - November 4

Thank You

Resources

Project Resources: Getting Started Checklist

1. <https://wiki.lfedge.org/display/LE/Technical+Project+Getting+Started+Checklist>
2. Best Practices Guide for new, and existing, LF Edge Projects to define/refine/enhance their Project Management
3. Will be sent to Project TSC Leads for additional input / examples
4. Welcome feedback in the TAC as well

LF Edge TAC Projects / PLD Update - Pipeline

Note: Projects listed below have indicated some level of interest since Project Launch.

- › Coaty (Siemens) (*invited August 21, 2019; targeting Q1*)
- › Flogo (Tibco)
- › Open19 (via Vapor.io)
- › Wormhole (OSS name Flowgate)
- › Rafay (Rafay Systems)
- › Project Sandstar (Anka Labs, Inc.)
- › Synse (Vapor.io)
- › Cisco IoT/Agribusiness OS Project (Cisco)
- › infinimesh (infinimesh)

Pushed to Next Meeting