LF Edge TAC
Technical Advisory Council

21 October 2020

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Meeting Details

› October 21, 2020 (@ 7:00am PDT)
› Meeting Info:
  › Join Zoom Meeting
  › https://zoom.us/j/286673048?pwd=REJlT1E2RmU3T3lpL0YrMzFHVVVsdz09
  ›
  › 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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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	

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Project/Member	Representative	Named Alternate	Project/Member	Representative	Named Alternate
Radisys	Adnan Saleem	Prakash Siva	**Akraino**	Tina Tsou	Oleg Berzin
Red Hat	Frank Zdarsky	Thomas Nadeau	**EdgeX Foundry**	Henry Lau	
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. Shared Community Lab [10 minutes]
2. Home Edge Annual Review [20 minutes]
3. 2021 Planning [25 minutes]
4. Upcoming Events / Next Meeting [5 minutes]

Shared Community Lab
Peter Pouliot, Ampere Computing / Akraino CI, Blueprint
Validation Lab Sub-Committee Chair

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Akraino/LF-Edge Shared Lab Overview

› The Community Lab provides hardware resources to the Akraino and LF Edge development communities through the support of the Linux Foundation and donation from participants.

› Lab hardware is divided into multiple pods with a pod consisting of 1 or more servers and networking fabrics.

› A pod is intended to be a self-contained unit, where the pod user can make changes to the networking configuration or enable SDN control of the network / switch.

Community Lab - Available Pods

Pod Name	Hardware Description
Ampere Pod 1	•3x: Arm®v8 based Ampere HR330A
Ampere Pod 2	•3x: Arm®v8 based Ampere HR330A
Ampere Pod 3	•3x: Arm®v8 based Ampere HR350A
Intel Pod 1	•4x: Intel LWF2208IR540605 (Compute) •2x: Intel LWF2208IR540606 (Storage)
ThunderX2 Pod #1	•3x: Arm®v8 based Gigabyte R281-T91 •1x: Arm®v8 based Ampere HR330A
ThunderX2 Pod #2	•3x: Arm®v8 based Gigabyte R281-T91 •1x: Arm®v8 based Ampere HR330A

Community Lab - General Request Process

› Approved Akraino blueprints and projects may present request for the purchase of additional hardware for deployment in the community lab.
› These requests should be made by the PTL, on behave of their project team.
› The requests must clearly identify the project and the purpose or need for the hardware in the context of the project.
› Request should not be made only to augment the quantity or availability of "lab time," as those needs should be considered by the CI Sub-Committee, in a more general context.
› Requests shall be made to the CI Subcommittee, in writing (i.e. power point), and shall be submitted at least 1 week (5 business days) prior to review / discussion.
› https://wiki.akraino.org/display/AK/Lab+Topology+Template+for+BluePrints

Community Lab - Akraino CI Subcommittee Change Request Review

› The CI Subcommittee shall review all proposed hardware request during a normally scheduled teleconference meeting.
› It is strongly recommended the contributor attend this meeting to present their request "in-person."
› The Ci Subcommittee shall review the request and determine the request justifies a hardware purchase for the lab.
› Note, this process will take into account any known budget availability and constraints, as planned by LF Edge for the current year.
› If approved by the subcommittee, the CI Subcommittee chair shall make a recommendation for approval by the TSC
› Once approved by the TSC, the community lab will proceed with the hardware purchase, per the procedures and agreements in place with LF Edge.

Community Lab - Hardware Donations

› Any Akraino member may make a hardware donation to the lab at any time.
  › Members are encouraged to notify the CI Subcommittee about their donation.
› Non-members may make hardware donations to the lab, pending the approval by the CI Subcommittee.
  › This approval is solely to ensure the lab and any additional support costs are approved by the project at large.

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Community Lab Dashboard

› Reservations for Pod access can be made in the community lab dashboard.
› Before getting started with the community lab you must log in to the dashboard with your Linux Foundation Jira ID (working to support LFID).
› The community lab dashboard URL : http://akraino-lab.iol.unh.edu/
› More Information:
› https://wiki.akraino.org/display/AK/Shared+Community+Lab

Community Lab Contacts

› ci@lists.akraino.org - CI Subcommittee mailing list
› Peter Pouliot – CI Subcommittee chair - ppouliot@amperecomputing.com
› Eric Ball – LF release manager - support.linuxfoundation.org
› Lincoln Lavoie - primary contact UNH IOL - lylavoie@iol.unh.edu
› akraino-lab@iol.uh.edu – General Lab Contact List

Home Edge Annual Review
Suresh LC, Samsung Electronics

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Annual Review: Home Edge

1. Project Annual Reviews - Overview/Process: https://wiki.lfedge.org/display/LE/Project+Annual+Reviews
2. Home Edge Self-assessment: https://wiki.lfedge.org/display/LE/Home+Edge+-+Stage+2+-+2020+Oct+21
3. Other Projects with reviews coming up:

   a.

Project	Accepted	Last Reviewed	Next Review Due	Maturity Level
Akraino	1/24/19	12/3/19	12/3/20	Stage 3 - Impact
Baetyl	8/5/19	8/5/19	9/12/20	Stage 1 - At Large
EdgeX Foundry	1/24/19	8/26/20	9/26/21	Stage 3 - Impact
EVE	1/24/19	5/21/19	9/12/20	Stage 2 - Growth
Fledge	6/27/19	7/19/20	7/19/21	Stage 2 - Growth
Home Edge	1/24/19	5/21/19	9/12/20 (scheduled 10/21/20)	Stage 2 - Growth
Open Horizon	4/9/20	4/9/20	4/9/21	Stage 1 - At Large
Secure Device Onboard	6/4/20	6/4/20	6/4/21	Stage 1 - At Large
State of the Edge	1/24/19	5/21/19	9/12/20 (scheduled 11/4/20)	Stage 2 - Growth

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Home Edge Annual Review Summary

› Annual Review Wiki Page: https://wiki.lfedge.org/display/LE/Home+Edge+-+Stage+2+-+2020+Oct+21

› The project continues to meet LF Edge stage 1 and 2 acceptance criteria
  › We have always tried our best to meet the criteria as put down by the LF Edge.
  › Have identified functionalities(modules) to make the platform complete. Have clearly identified the goals for the year and have been working on them
  › Areas for improvement: connect with blueprints on Smart Home and Akraino

› Project Highlights
  › 2 Successful on time release within year of launch to open source community
  › Demonstration of the platform capability within year of launch at global events like IOT SWC(2019)
  › Forthcoming release of Home Edge - Coconut (Fall 2020)
  › Smooth TSC election and monthly active TSC chairs with inputs from participants
  › Collaboration with EdgeX already in progress. Items in pipeline : Open Horizon and Project Eve
  › Adoption of CII best practices badge to adhere to better process in secure software development
  › Continuous website(wiki) improvements in terms of project goals, roadmap and deliverables
  › Product adoption formulas being worked out to bring the platform into use by vendors

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(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

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

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

1. **Architecture (Tech > LF Edge) - Output: TBD (*White paper?*)**
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For discussion October 21 in preparation for Board meeting on October 27-28.

Out of Scope for the TAC (for now)

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

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Upcoming Events

Upcoming External Events

› [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

› 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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LF Edge Webinar Series

› Akraino Edge Stack
  › Held Thursday, April 2 - [Your Path to Edge Computing with Akraino Edge Stack](#)
  › On-demand recording available at: [https://zoom.us/webinar/register/WN_Zjdo4-5fTOSIqH7pL8iHrQ](#)
› EdgeX Foundry
  › Held Thursday, April 23 - [EdgeX Foundry 101: Intro, Roadmap and Use Cases](#)
  › On-demand recording available at: [https://zoom.us/webinar/register/4515850788014/WN_xCd6YPjEOrCwLiFhBWPKug](#)
› Project EVE
  › Held Friday, May 29 - [Building the "Android of the IoT Edge"](#)
  › On-demand recording available at: [https://zoom.us/webinar/register/6415888722675/WN_35oZJ3hrOE69snMaiIUTPg](#)
› 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, OSIsoft, FLIR and Dianomic use Fledge to implement Industrial 4.0](#)
  › Recording available at: [https://www.youtube.com/watch?v=6JXNv3AJWog](#)
› 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-MmP1Rl6Vkzn3ULpiAA](#)
› Home Edge
  › Held Thursday, October 15 - [Home Edge: How Your Home Devices Get Deployed in An Edge Computing Services Ecosystem](#)
  › On-demand recording available at: [https://zoom.us/webinar/register/WN_uSlgb-R5O4etkDhxoSXISQ](#)

› More to follow…

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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

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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/

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Next Meeting

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Next Meeting

› Next Meeting: Wednesday, November 4 @ 7am PST
  › Project Annual Review - State of the Edge
    › State of the Edge - November 4
    › Baetyl - ? (due 9/12/20)
    › EVE - ? (due 9/12/20)
    › Akraino - ? (due 12/3/20)
  › Board Meeting Recap / TAC
  › EdgeX Challenge Recap
  › Other Topics?

Thank You

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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
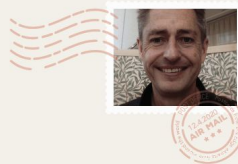4. Welcome feedback in the TAC as well

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 - Postcards from the Edge

Add Your Voice: info@stateoftheedge.com

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 service that can deliver outsized value and demand premium.

Geoff Hollingworth
CMO, MobiledgeX

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

Who Will Build and Pay for the Edge ?

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Monica Paolini
Principal at Senza Fili

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State of the Edge - 2021 Report

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.

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