Prime Guide to LF Edge For Current and New Members

Getting Started Guide
We are creating a common framework for hardware and software standards and best practices critical to sustaining current and future generations of IoT and edge devices.
LF Edge References

Key Contacts
Arpit Joshipura, Executive Sponsor
ajoshipura@linuxfoundation.org
Mike Woster, Membership
mwoster@linuxfoundation.org
Aaron Williams, Developer Advocate
aaron@lfedge.org
Brett Preston, Sr. Program Manager
bpreston@linuxfoundation.org
Jill Lovato / Maemalynn Meanor, PR and Marketing
pr@lfedge.org
Eric Ball, IT Operations
helpdesk@lfedge.org

Key Resources
Web Site  https://www.lfedge.org/
Wiki  https://wiki.lfedge.org/
Mail Lists  https://lists.lfedge.org/
Slack  https://slack.lfedge.org/
Technical Advisory Council (TAC):
https://wiki.lfedge.org/pages/viewpage.action?pageId=1671298
Outreach Committee/Marketing:
https://lists.lfedge.org/g/outreach-committee
LF Edge Elected Leadership

**Governing Board**
- Chair: Melissa Evers-Hood, Intel
- Treasurer: Tom Nadeau, Red Hat
- General Member Representatives:
  - Cole Crawford, Vapor IO
  - Jim Xu, Zenlayer
  - Rob Hirschfeld, RackN

**Technical Advisory Council (TAC)**
- Chair: Jim St. Leger, Intel

**Outreach / Marketing Committee**
- Chair: Balaji Ethirajulu, Ericsson
LF Edge Project Leadership

Akraino Edge Stack
  › TSC Chair / TAC Voting Member: Kandan Kathirvel, AT&T

Baetyl
  › TSC Chair: Leding Li, Baidu

EdgeX Foundry
  › TSC Chair: Jim White, IOTech
  › TAC Voting Member: Henry Lau, HP Inc.

EVE
  › TSC Chair: Erik Nordmark, ZEDEDA

Fledge
  › TSC Chair: Mark Riddoch, Dianomic

Home Edge
  › TSC Chair: Myeonggi Jeong (MJ), Samsung

Open Horizon
  › Acting TSC Chair: Joe Pearson, IBM

State of the Edge
  › TSC Chair: Matthew Trifiro, Vapor IO
Introducing LF Edge
How do devices and applications map to the edge?

- **Edge**: 82% of operators plan VNF execution on uCPE at customer sites.
- **Partially Edge**: 85% of operators plan VNF execution in DC Near CO.
- **Not Edge**: 70% of operators plan VNF execution in DC Not Near CO.

**Use Cases & Blueprints**
- IoT G/W
- Agriculture
- Industry
- O&G
- Retail
- Vertical

**Interoperability framework**

**Logical Hardware**
- uCPE

**Logical Software**
- IoT G/W
- Enterprise & IoT
- Mobile Devices

**Physical Location**
- 0-25 Km: Device Edge
- 25-100 Km: Infrastructure Edge
- 100s - 1000s Km: Centralized Data Center

**Features**
- Long-Haul Fiber / BGP Routes
- Part of Edge Infrastructure
- Smart CO VNFs, vEPC, MEC, vCPE, AI/ML, Data Ingest, CDN+, Cloud Edge Nodes

**Verticals**
- Vertical
- Vertical
- Vertical
- Vertical
- Vertical
**LF Anchor projects for Edge**

Akraino and EdgeX Foundry are complementary open source projects addressing Telecom, Enterprise and IOT edge

- **Partial Edge**: 85% of operators plan VNF execution in Data Center Near CO
- **Not Edge**: 70% of operators plan VNF execution in Data Center Not Near CO

**LF Anchor projects for Edge**

- **Akraino**
  - Interoperability framework
  - Use Cases & Blueprints
- **EdgeX Foundry**
  - IOT
  - MEC, distributed RAN, vRAN
  - BBU, FMC, vCPE, AI/ML, IoT

**Validated Blueprint**

- Vertical
- Retail
- O&G
- Industry
- Agriculture
- Vertical
- Vertical
- Vertical
- Vertical
- Vertical
- Vertical
- Vertical
- Vertical

**Data Center Near CO [Regional DC]**

**Data Center Not Near CO [Central DC]**
Scope of LF Edge

Interoperability between IoT devices and applications

Application Interoperability

OS

Hypervisor

Device Provisioning

Infrastructure

Application and network provisioning and orchestration

Device Edge

Gateways

Telco Radio Edge or Enterprise Edge

Telco/Cloud Edge

API coordination for intelligent orchestration of IoT edge workloads

The Linux Foundation

Edge Computing Glossary
LF Edge Framework

- **Applications**
- **Infrastructure**

**LOCATIONS**
- Dedicated, Operated
- Shared, XaaS

**Distributed Devices and Systems**
- MCU-based devices
- Embedded compute
- Smartphones, PCs, ruggedized IoT gateways and servers in accessible to semi-secure areas
- Servers in secure on-prem data centers, MDCs

**Buildings / Factories / Smart Homes**
- Constrained Device Edge
- Smart Device Edge
- On-Prem Data Center Edge

**Last Mile Networks**
- Access Networks
- Aggregation Hubs/COs
- Regional Data Centers
- Servers in traditional cloud data centers

**Regional Edge**
- Server-based compute at Telco Network and Edge Exchange Sites
- Server-based compute at Regional Telco and Direct Peering Sites

**Centralized Data Centers**
- Servers in traditional cloud data centers

**Service Provider Edge**
- Shared, XaaS

**Stage 1:** At Large Projects
- Baetyl, Fledge, Open Horizon

**Stage 2:** Growth Projects
- EVE, Home Edge, State of the Edge

**Stage 3:** Impact Projects
- Akraino Edge Stack, EdgeX Foundry

**Research and Reports**
- Use Case Blueprints
- Access Edge

**User Edge**
- Dedicated, Operated

**Stage 3: Impact Projects**
**Open Source LF Edge**

**IIoT Today**
Vertical data silos & platform lock-in
Data/edge sovereignty & control issues
Hardware-defined & unmanaged edge

**IIoT with LF Edge**
Open IoT data architecture, no lock-in
Data & edge belong to the enterprise
Software-defined & ubiquitous edge
LF Edge – New umbrella for Edge Projects

STAGE 3: IMPACT PROJECTS

Aims to create an open source software stack that supports high-availability cloud services optimized for edge computing systems and applications.

Highly flexible open source software framework that facilitates interoperability between heterogeneous devices and applications at the IoT Edge, along with a consistent foundation for security and manageability regardless of use case.
LF Edge – New umbrella for Edge Projects

STAGE 2: GROWTH PROJECTS

EVE

An open abstraction engine that simplifies the development, orchestration and security of cloud-native applications on distributed edge hardware. Supporting containers, VMs and unikernels, EVE provides a flexible foundation for Industrial and Enterprise IoT edge deployments with choice of hardware, applications and clouds.

HOME EDGE

Interoperable, flexible, and scalable edge computing services platform with a set of APIs that can also run with libraries and runtimes.

STATE OF THE EDGE

State of the Edge is an open source research and publishing project with an explicit goal of producing original research on edge computing, without vendor bias. The State of the Edge seeks to accelerate the edge computing industry by developing free, shareable research that can be used by all.
LF Edge – New umbrella for Edge Projects

STAGE 1: AT LARGE PROJECTS

**Fledge**

Fledge is an open source framework and community for the Industrial Edge. Architected for rapid integration of any IIoT device, sensor or machine all using a common set of application, management and security REST APIs with existing industrial "brown field" systems and clouds.

**Baetyl**

Baetyl offers a general-purpose platform for edge computing that manipulates different types of hardware facilities and device capabilities into a standardized container runtime environment and API, enabling efficient management of application, service, and data flow through a remote console both on cloud and on prem.

**Open Horizon**

Open Horizon is a platform for managing the service software lifecycle of containerized workloads and related machine learning assets. It enables management of applications deployed to distributed webscale fleets of edge computing nodes and devices without requiring on-premise administrators.
Bringing It All Together – LF Open Source Edge
With Complementary Standards, Ref Arch and Ref Implementations
Deployment ready Open Source Edge - use cases

- Telco Edge Blueprints (Radio Edge Cloud, Network Cloud) + Vertical Edge Application Blueprints (Connected Vehicle; AR Classroom) + Enterprise Edge Cloud Automation Blueprints (ICN, KNI Provider Access Edge), Private LTE
- Building Automation, Industrial process control, Smart Cities - Water, Retail
- IIoT - Predictive Mtce & condition based monitoring - Turbines, Transformers, pumps. Tensorflow ML/AI for Edge Apps
- IIoT: DevOps at Scale for on-prem devices with partial connectivity
- SMB/ROBO
- Anomaly detection, Surveillance

Use Cases

- Hosted Private Cloud
- Core & Cloud
- Device Edge
- Infrastructure Edge
- Enterprise
- Telco Cloud
- Data Center
- Interconnect
- Carrier Interconnect
- Carrier Access
- Internet / Web
Automating Cloud, Network & IOT/Edge Services

Services

- Cloud Services
- Residential Services
- Enterprise Services
- IOT/Edge/Al Services

Software & Automation

- Cloud Automation
- Telecom Network Automation
- Edge Automation

Infrastructure

- Enterprise
  - Software Defined Data Centers (SDDC)

- Data Centers
- Carrier Network
- Cloud Network

Public/ Hybrid
- Cloud Service Providers
- Cloud Hosting
- Private Cloud Providers
- Web Service Providers
Premier Members

[Logos of various companies]
LF Edge: Key Takeaways

1. Harmonizing Open Source Edge Communities across IOT, Enterprise, Cloud & Telecom

2. Keeping LF Edge Open & Interoperable with
   › Hardware, Silicon, Cloud, OS, Protocol independence
   › Bringing the best of telecom, cloud and enterprise – location, latency & mobility
   › In collaboration with Consortiums/SDO (IIC, AECC, OEC, ETSI)

3. Hosted by the Linux Foundation similar to other Open Source Communities like CNCF (Kubernetes), LF Networking (ONAP) and many more.
LF Edge Governance

Board Committees (As Needed)
- Audit & Finance
- End User Advisory Group
- Compliance & Verification

Technical Advisory Council (TAC)
- Akraino TSC
- EdgeX TSC
- Home Edge TSC
- Project EVE TSC
- etc

Developer Communities

LF Edge Governing Board
- Strategy & Priorities
- Budget
- Marketing Strategy & Events
- Legal & overall governance

External Focus (SDO/OSS)
- Vertical Solutions focus (eg O&G, Retail, Industrial/Manuf, Home, Telecom, etc)
- Cross-project collaboration
- New Project Induction
- Developer Voice to GB

Outreach Committee
- WG project x
- WG project y

- Annual Marketing Plan
- PR
- Events
- Content/Web
- Branding
- Market Development
LF Edge Membership Structure, broad base – lower dues

**Summary**
1. Premier Member, Annual cost for LF Edge $50,000 (similar to Akraino)
2. Simplified EdgeX general category to match LF levels
3. Dues for existing projects will be credited towards LF Edge or any LF projects.

<table>
<thead>
<tr>
<th>Level</th>
<th>Not Yet LF Member</th>
<th>Already LF Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premier</td>
<td>$70,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>General</td>
<td>$45,000 (USD) 5,000 and above</td>
<td>$25,000 (USD) 5,000 and above</td>
</tr>
<tr>
<td></td>
<td>$30,000 (USD) From 500 to 4,999</td>
<td>$15,000 (USD) From 500 to 4,999</td>
</tr>
<tr>
<td></td>
<td>$20,000 (USD) From 100 to 499</td>
<td>$10,000 (USD) From 100 to 499</td>
</tr>
<tr>
<td></td>
<td>$7,500 (USD) Up to 99</td>
<td>$2,500 (USD) Up to 99</td>
</tr>
</tbody>
</table>

LF Edge membership also requires companies to corporate members of The Linux Foundation (similar to Akraino and EdgeX Foundry). A discount of $5,000 to $20,000 is available for existing Linux Foundation members who join LF Edge.
LF Edge Membership – the benefits

**Premier**

**Influence Strategic Direction of LF Edge & its projects (as a Voting GB member)**
- Budget Influence/approval, how and where the project spends money.
- Direct Influence on messaging, developer events, training
- Influence the marketing, messaging, and positioning to best represent the project for your uses
- Marketing Committee Voting Seat

**Direct Interaction with Leadership – within LF and across peers**
- Premium access to the project ED/VP to understand business goals
- Premium access to the Operations staff. IT, Marketing, Operations, Leadership
- Participate in any Cross project strategy discussions on harmonization and future direction of Edge
- LF Leadership support to Keynote member events, participate in outreach (eg roadshows, events, conference meet ups etc.)

**Technical and Roadmap Direction Influence (through the technical community)**
- TAC (Technical Advisory Council) voting seat
  - Find like-minded companies/developers to build a coalition to get an idea accepted and prioritized by the community
  - Aid the developers in actions they can take to improve their standing, position, and influence in the community, etc.

**Brand Momentum – ability to show Leadership in Open Source which drives end user adoption and talent.**
- Open Source Brand Affinity, prove to your customers that you are a leader in the project, hire talented software engineers

**General**

**Learning and Engaging to create the largest Open Source Edge shared technology roadmap**
- Work together across company lines and industries
- Participate in elected board seat process

**Marketing & Thought Leadership**
- Logo on the website once your membership has been announced. LF will support with quotes on Press releases related to the project
- Marketing Committee comprised of a representative from each Member company. General Members may appoint a representative as an observer of the Marketing Committee meetings on a non-voting basis. The objective of this Committee is shaping the marketing direction for edge. The Linux Foundation will do the heavy lifting, so this is more to oversee and shape the discussion/direction with the other Members for the Marketing efforts. This person can also funnel all Marketing information back to your organization so that the key stakeholders are in the loop.
- Participate in our hosted projects and attend our events, meetups, and roadshows

**Technical Steering Committee & Technical Community**
- TSC meetings are open to the public and we encourage all members of the technical community to participate in the discussion moving forward.
Get Involved in the LF Edge Technical Communities

› Participation in LF Edge Projects is open to all

› Getting involved in the technical communities is the best way to learn about the projects

   › **Step 1:** Get a Linux Foundation ID Here: https://identity.linuxfoundation.org/

   › **Step 2:** Visit LF Edge Wiki (https://wiki.lfedge.org/)

   › **Step 3:** Join workflows for the projects and working groups, subscribe to mailing lists, ask questions, contribute!

Way to participate:

› Attend project meetings
› Attend developer events
› Join approved projects
› Propose a project
› Write documentation
› Contribute use cases

› Analyze requirements
› Define tests / processes
› Review and submit code patches
› Build upstream relationships
› Contribute upstream code

› Provide feedback through VSFG
› Host and staff a community lab
› Answer questions
› Give a talk / training
› Create a demo
› Evangelize LFE and its projects
Join Us!

Contact Mike Woster, mwoster@linuxfoundation.org

LF Edge, bringing Edge initiatives together

IOT+Telecom+Cloud+Enterprise
LF Edge Projects
Akraino Edge Stack

Brief Description
Akraino Edge Stack aims to create an open source software stack that supports high-availability cloud services optimized for edge computing systems and applications.

Contributed by
AT&T in February 2018

Key Contacts
Kandan Kathirvel, AT&T, TSC Chair, TAC Voting Member
Tina Tsou, Arm, TSC Vice-Chair

Key Links
Website: https://www.lfedge.org/projects/akraino
Wiki: https://wiki.akraino.org/
Gerrit: https://gerrit.akraino.org/r/#/q/status:open
Documentation: https://wiki.akraino.org/display/AK/Documentation
Mail Lists: https://lists.akraino.org/g/main
Slack: https://slack.lfedge.org/
(#akraino / #akraino-blueprints / #akraino-devprojects / #akraino-help / #akraino-tsc)
Technical Steering Committee (TSC)
Blueprints
https://wiki.akraino.org/pages/viewpage.action?pageId=1147243
Calendar
https://wiki.akraino.org/pages/viewpage.action?pageId=6128052
Baetyl

Brief Description

Baetyl (pronounced “Beetle”) offers a general-purpose platform for edge computing that manipulates different types of hardware facilities and device capabilities into a standardized container runtime environment and API, enabling efficient management of application, service, and data flow through a remote console both on cloud and on prem. Baetyl also equips the edge operating system with the appropriate toolchain support, reduces the difficulty of developing edge calculations with a set of built-in services and APIs, and provides a graphical IDE in the future.

Contributed by

Baidu in August 2019

Key Contacts

Leding Li, Baidu, TSC Chair

Key Links

Website  https://baetyl.io/
Wiki  https://github.com/baetyl/baetyl/wiki
GitHub  https://github.com/baetyl/baetyl
Documentation  https://baetyl.io/en/docs/overview/What-is-Baetyl
Mail Lists  https://lists.lfedge.org/g/main/subgroups
Slack  https://slack.lfedge.org/ (#baetyl / #baetyl-tsc)
WeChat  https://baetyl.cdn.bcebos.com/Wechat/Wechat-Baetyl.png
Technical Steering Committee (TSC)  https://github.com/baetyl/baetyl/wiki/Technical-Steering-Committee-(TSC)
EdgeX Foundry

Brief Description
EdgeX, your data liberated! Highly flexible open source software framework that facilitates interoperability between heterogeneous devices and applications at the IoT Edge, along with a consistent foundation for security and manageability regardless of use case.

Contributed by
Dell in April 2017

Key Contacts
Jim White, IOTech, TSC Chair
Henry Lau, HP Inc., TAC Voting Member

Key Links
Website  https://www.lfedge.org/projects/edgexfoundry/
Wiki  https://wiki.edgexfoundry.org/
GitHub  https://github.com/edgexfoundry
Documentation  https://docs.edgexfoundry.org/
Mail Lists  https://lists.edgexfoundry.org/g/main/subgroups
Slack  https://slack.edgexfoundry.org/
Getting Started Guide  https://docs.edgexfoundry.org/Ch-GettingStarted.html
Calendar  https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=21824127
Project EVE

Brief Description
An open abstraction engine that simplifies the development, orchestration and security of cloud-native applications on distributed edge hardware. Supporting containers, VMs and unikernels, EVE provides a flexible foundation for Industrial and Enterprise IoT edge deployments with choice of hardware, applications and clouds.

Contributed by
ZEDEDA in January 2019

Key Contacts
Erik Nordmark, ZEDEDA, TSC Chair

Key Links
Website  https://www.lfedge.org/projects/eve/
Wiki     https://wiki.lfedge.org/display/EVE/Project+EVE
GitHub   https://github.com/lf-edge/eve
Documentation https://github.com/lf-edge/eve/tree/master/docs
Mail Lists https://lists.lfedge.org/g/eve-tsc
Slack     https://slack.lfedge.org/ (#eve / #eve-help)
Technical Steering Committee (TSC)
https://wiki.lfedge.org/display/EVE/TSC-Project+EVE+Technical+Steering+Committee
Fledge

Brief Description
Fledge is an open source framework and community for the Industrial Edge. Architected for rapid integration of any IIoT device, sensor or machine all using a common set of application, management and security REST APIs with existing industrial "brown field" systems and clouds.

Contributed by
Dianomic and OSIsoft in September 2019

Key Contacts
Mark Riddoch, Dianomic, TSC Chair

Key Links
Website  https://www.lfedge.org/projects/fledge/
Wiki  https://wiki.lfedge.org/display/FLEDGE/Fledge+Home
GitHub  https://github.com/fledge-iot
Documentation  https://fledge-iot.readthedocs.io/
Mail Lists  https://lists.lfedge.org/g/fledge
            https://lists.lfedge.org/g/fledge-tsc
Slack  https://slack.lfedge.org/
            (#fledge / #fledge-help / #fledge-tsc)
Technical Steering Committee (TSC)
https://wiki.lfedge.org/pages/viewpage.action?pageId=10389276
Home Edge

Brief Description
Interoperable, flexible, and scalable edge computing services platform with a set of APIs that can also run with libraries and runtimes.

Contributed by
Samsung Electronics in June 2019

Key Contacts
Myeonggi Jeong (MJ), Samsung, TSC Chair

Key Links
Website  https://www.lfedge.org/projects/homeedge/
Wiki  https://wiki.lfedge.org/display/HOME/Home+Edge+Project
GitHub  https://github.com/lf-edge/edge-home-orchestration-go
Mail Lists  https://lists.lfedge.org/g/homeedge-tsc
Slack  https://slack.lfedge.org/ (#homeedge / #homeedge-tsc)
Technical Steering Committee (TSC)
https://wiki.lfedge.org/pages/viewpage.action?pageId=1671336
Open Horizon

Brief Description
Open Horizon is a platform for managing the service software lifecycle of containerized workloads and related machine learning assets. It enables management of applications deployed to distributed webscale fleets of edge computing nodes and devices without requiring on-premise administrators.

Contributed by
IBM in April 2020

Key Contacts
Joe Pearson, IBM, Acting TSC Chair

Key Links
Website  https://www.lfedge.org/projects/openhorizon/
Wiki     Coming Soon
GitHub   https://github.com/open-horizon
Mail Lists https://lists.lfedge.org/g/open-horizon  https://lists.lfedge.org/g/open-horizon-tsc
Slack    https://slack.lfedge.org/  (#open-horizon / #open-horizon-help / #open-horizon-tsc)
State of the Edge

Brief Description

State of the Edge is an open source research and publishing project with an explicit goal of producing original research on edge computing, without vendor bias. The State of the Edge seeks to accelerate the edge computing industry by developing free, shareable research that can be used by all.

Contributed by

Vapor IO and Packet
  - Glossary - June 2018
  - SOTE - April 2020

Key Contacts

Matthew Trifiro, Vapor IO, TSC Chair

Key Links

Website  https://www.lfedge.org/projects/stateoftheedge/
Wiki     https://wiki.lfedge.org/display/GLOSSARY/State+of+the+Edge
GitHub   https://github.com/State-of-the-Edge
Mail Lists  https://lists.lfedge.org/g/stateoftheedge
            https://lists.lfedge.org/g/glossary-tsc
            https://lists.lfedge.org/g/glossary-wg-landscape
Slack    https://slack.lfedge.org/
          (#glossary / #glossary-landscape / #glossary-taxonomy / #glossary-tsc)
Landscape https://landscape.lfedge.org/
State of the Edge Reports https://www.stateoftheedge.com/reports/
Getting Involved with LF Edge Projects and Committees
<table>
<thead>
<tr>
<th>Ways to Get Involved with the LF Edge Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participate in the development efforts:</strong></td>
</tr>
<tr>
<td>Review and submit code patches, report bugs, request new features, etc.</td>
</tr>
<tr>
<td><strong>Attend developer events for LF Edge projects</strong></td>
</tr>
<tr>
<td><strong>Contribute to documentation</strong></td>
</tr>
<tr>
<td><strong>Provide your testing and deployment feedback via appropriate project channels</strong></td>
</tr>
<tr>
<td><strong>Join the projects' mailing lists and participate in the discussions</strong></td>
</tr>
<tr>
<td><strong>Start a local User Group Meetup</strong></td>
</tr>
<tr>
<td><strong>Join the LF Edge Technical Advisory Council (TAC) calls and subscribe to the TAC mailing list</strong></td>
</tr>
<tr>
<td><strong>Contribute to the Open Glossary of Edge Computing</strong></td>
</tr>
</tbody>
</table>
### Ways to Engage with LF Edge Marketing and PR

<table>
<thead>
<tr>
<th>Co-promotion of project related updates, releases, and news via LF Edge social media accounts</th>
<th>Attend Outreach Committee meetings and participate in LF Edge driven marketing and outreach activities</th>
<th>Publish use cases, case studies, white papers, and deployment insights</th>
<th>Marketing and PR support for demos at meetups and events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host vendor neutral content via LF Edge blog site</td>
<td>Get support for artwork, web site, content creation, etc., related to LF Edge and its projects</td>
<td>Be featured in the LF Edge Member Spotlight series</td>
<td>Coordination at events – speaking proposals, booth attendance, demos, etc.</td>
</tr>
<tr>
<td>Volunteer for planning initiatives such as developing annual marketing plan, preparing for major event, etc.</td>
<td>Identify LF Edge speaking opportunities in your region and help secure speakers from the LF Edge community</td>
<td>Help secure user stories about LF Edge based deployments.</td>
<td>Participate on the LF Edge Speakers Bureau</td>
</tr>
</tbody>
</table>
## Ways to Get Involved with the TAC

<table>
<thead>
<tr>
<th>Support TAC leadership in inviting speakers</th>
<th>Attend TAC Bi-weekly calls, participate in the discussion, volunteer</th>
<th>Share success stories, opportunities and challenges with the broader technical community to seek input from peers</th>
<th>Identify opportunities for collaboration on common interests and initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support technical leadership for harmonization efforts with other open source communities within and beyond LF Edge</td>
<td>Support TAC in hosting and sponsors intra-project and inter-project in-person developer events for LF Edge projects</td>
<td>Support TAC in evaluating new projects for inclusion in LF Edge</td>
<td>Support TAC Chair who works with the Governing Board to highlight the Projects’ collective opportunities and any resource needs</td>
</tr>
</tbody>
</table>
Display Your LF Edge Membership Badge

These badges are available (svg and png) from the LF Edge GitHub: https://github.com/lf-edge/artwork

Members can display membership badges on booth collateral and on their website.
LF Edge Members showcased on LF Edge and Linux Foundation websites, as well as the new LF Edge Landscape.
Join the LF Edge Speakers Bureau (Member Benefit)

The LF Edge Speakers Bureau connects speakers who are LF Edge ambassadors who are willing to speak at events on the topics they are proficient in with event managers, meetup organizers and company conferences. Event organizers work directly with the LF Edge PR and Marketing team to secure speakers for their global events.

LF Edge Members: Sign up to be a Speaker today!

› Step 1: Fill out form
  › If you have trouble accessing the form above, email pr@lfedge.org for assistance
› Step 2: Send your photo to pr@lfedge.org
Enhance Your Open Source Knowledge

Free Courses
› A Beginner’s Guide to Open Source Software Development
› Compliance Basics for Developers
› Fundamentals of Professional Open Source Management

Paid Courses
› Introduction to Open Source Development, Git, and Linux
› DevOps for Network Engineers
Upcoming External Events

› **Open Source Summit North America**: 29 June - 2 July, 2020 - Virtual
  › LF Edge and projects will be featured in several sessions
› **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.”
› **LF Edge Mini-Summit**: 2 July, 2020 - Virtual
› **Open Source Summit Japan**: 15-16 September, 2020 - Tokyo, Japan
  › CFP Closes July 11: [https://events.linuxfoundation.org/open-source-summit-japan/program/cfp/](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/](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](https://lists.lfedge.org/g/outreach-committee)

Full list of LF events available at: [https://events.linuxfoundation.org/](https://events.linuxfoundation.org/)
Additional LF Edge events available at: [https://www.lfedge.org/events/](https://www.lfedge.org/events/)
LF Edge Webinar Series

› Demystifying the Edge with the new LF Edge Taxonomy and Framework
  › Scheduled for July 9
  › Register today at: https://zoom.us/webinar/register/WN_icv5h6wFTcuw9O0xyMpgIw

› 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_Zjdo4-5fTQSlqH7pL8iHrQ

› 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_xCd6YPjEQRcwLiFhBWPkg

› 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_35oZj3hrQE69snMailUTpG

› More to follow...
Upcoming Project Events

- **EdgeX Challenge Shanghai 2020**
  - Launch Date: July 3rd, 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.

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