Technical Advisory Council (TAC) Meeting

16 July 2024



Meeting information

- → Meeting to begin at 5:00 pm Central European Summer Time
- → Join the meeting at the link in your calendar in <u>LFX Individual Dashboard</u>
- → Any problems with connectivity, you can contact John Mertic from the Linux Foundation at +1 234-738-4571
- → Previous TAC Meeting notes, deck, and recording, at https://wiki.lfenergy.org/display/HOME/Technical+Advisory+Council#TechnicalAdvisoryCouncil-MeetingMinutes



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Linux Foundation 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.

Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at linuxfoundation.org/antitrust-policy. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.



Agenda

All Times in Central European Time Zone

- 5:00 pm 5:20 pm Opening and General Updates
 - TAC member updates and project review date reminders
 - General updates
 - Project Security Focus updates
 - o TAC Evolution Plan Update
 - Other Updates
- 5:20 pm 5:40 pm Arras Annual Review
- 5:40 pm 6:00 pm OperatorFabric Annual Review
- 6:00 pm 6:15 pm Marketing/PR/Events updates
- 6:15 pm 6:30 pm Closing and Next Meeting



Opening and General Updates

5:00 pm - 5:20 pm



TAC Voting Members

You can update your headshot/title at openprofile.dev.



Antonello Monti Chair

Professor **RWTH Aachen** University



Anne Tilloy

Project manager RTE (Reseau de **Transport** dElectricite)



Art Pope

Member of Technical Staff Google LLC

PO Field Device

Platforms

Alliander



Boris DOLLEY Director of OSPO and Sustainable IT

Strategy RTE (Reseau de Transport dElectricite)





Travis Sikes Senior Data

Scientist Recurve



Bryce Bartmann Chief Digital Technology Advisor Open Source Office Shell International

Exploration & Production, Inc.



Lead Alliander



Yixing Xu

Microsoft Corporation



LF Energy Hosted Project Leads

Project	Project Lead(s)		
PowSyBI	Anne Tilloy, RTE		
OperatorFabric	Frederic DIDIER, RTE		
OpenEEmeter	Travis Sikes, Recurve		
GXF	Maarten Mulder, Alliander		
	Antonello Monti, RWTH Aachen University (TAC		
	Representative) & Fito Galeano, RWTH Aachen		
SOGNO	University		
	Pascal Wilbrink Alliander & Sander Jansen,		
CoMPAS	Alliander (TAC Representative)		
FledgePOWER	Akli Rahmoun, RTE		
Hyphae	Asimenia Korompili, RWTH Aachen University		
openLEADR	Stan Janssen, OpenADR		
SEAPATH	Éloi Bail, Savoir-faire Linux		
Grid Capacity Map	Harald Klomp, Vattenfall		
Shapeshifter	Robben Riksen, Alliander		
OpenSTEF	Frank Kreuwel, Alliander		

Project	Project Lead(s)	
EVerest	Marco Möller, PIONIX	
OpenGEH	Nicolas Bernhardi, Energet	
FlexMeasures	Nicolas Höning, Seita Energy Flexibility B.V.	
Arras	David Chassin, SLAC	
Dynawo	Marco Chiaramello, Benoît Jeanson, RTE	
OpenFIDO David Chassin, SLAC		
Power Grid Model	Tony Xiang, Alliander	
Real Time Data Ingestion Platform (RTDIP)	Bryce Bartmann, Shell	
TROLIE	Christopher Atkins, MISO Energy	
Battery Data Alliance	Gabe Hege, AMPLabs	
GRIP (Grid Resilience and Intelligence Platform)	Alyona Teybar, MASc	



Project & Working Group Leads

Project	Project Lead(s)
CitrineOS	Thana Paris, S44
covXtreme	Sachin Bhakar, Shell
Synthetic Energy Data	Gus Chadney, Centre for Net Zero
OpenSCD	Sander Jansen, Alliander
NODE Collective	DeAndrea Salvador
InterConnect SIF (Semantic Interoperability Framework)	Milenko Tosic, VizLore Labs
OneNet Framework	

Working Group	Work Group Lead(s)
Al Working Group	Alexandre Pariost, The Linux Foundation
Archimate Working Group	Jonas van den Bogaard, Alliander
DSAS (Digital Substation Automation Systems)	Ben van 't ende
ORES (Open Renewable Energy Systems)	Chris Xie, Futurewei



Project Review Cycle

2024 Reviews				
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date
OperatorFabric	Early Adoption	April 30, 2019	July 25, 2023	July 16, 2024
Arras	Sandbox	July 12, 2022	July 25, 2023	July 16, 2024
TROLIE	Incubation	September 5, 2023		August 27, 2024
Battery Data Alliance	Incubation	September 5, 2023		August 27, 2024
GXF	Early Adoption	February 4, 2020	September 26, 2023	September 24, 2024
Grid Capacity Map	Incubation	April 27, 2021	October 17, 2023	October 4, 2024
OpenEEmeter	Incubation	June 4, 2019	October 17, 2023	October 4, 2024

2024 Reviews					
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date	
OpenSTEF	Incubation	September 21, 2021	October 25, 2022	November 5, 2024	
FlexMeasures	Incubation	November 2, 2021	November 28, 2023	November 19, 2024	
PowSyBI	Early Adoption	April 30, 2019	November 28, 2023	November 9, 2024	
CitrineOS	Sandbox	November 28, 2023		November 19, 2024	
SEAPATH	Early Adoption	October 6, 2020	December 19, 2023	December 10, 2024	
covXtreme	Sandbox	December 19, 2023		December 10, 2024	

Working Groups				
Group	Current Level	Initially Accepted	Last Review Date	Next Review Date
Archimate Working Group	Active	October 4, 2022	November 28, 2023	October 29, 2024
Al Working Group	Working Group	January 25, 2022		TBD
ORES (Open Renewal Energy Systems)	Working Group	March 12, 2024		March 25, 2025
Digital Substation Automation Systems (DSAS)	Working Group	April 2, 2024		April 15, 2025

Project Review Cycle

2025 Reviews					
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date	
EVerest	Early Adoption	October 12, 2021	January 9, 2024	January 7, 2025	
Synthetic Energy Data	Sandbox	January 9, 2024		January 7, 2025	
OpenSynth	Sandbox	January 9, 2024		January 7, 2025	
Dynawo	Sandbox	December 6, 2022	January 30, 2024	January 21, 2025	
OpenFIDO	Sandbox	January 17, 2023	January 30, 2024	January 21, 2025	
RTDIP	Sandbox	October 25, 2022	January 9, 2024	January 28, 2025	
OpenSCD	Sandbox	January 25, 2024		January 28, 2025	
Hyphae	Incubation	December 8, 2020	February 20, 2024	February 11, 2025	
Power Grid Model	Sandbox	February 7, 2023	February 20, 2024	February 11, 2025	
SOGNO	Early Adoption	October 27, 2020	March 21, 2023	March 25, 2025	
NODE Collective	Sandbox	April 2, 2024		March 25, 2025	
InterConnect SIF (Semantic Interoperability Framework)	Sandbox			April 15, 2025	
Shapeshifter	Incubation	April 6, 2021	May 14, 2024	May 6, 2025	
OneNet Framework	Incubation	May 14, 2024		May 6, 2025	
OpenGEH	Sandbox	October 12, 2021	June 4, 2024	May 27, 2025	
FledgePOWER	Incubation	February 11, 2021	June 4, 2024	May 27, 2025	
CoMPAS	Incubation	May 5, 2020	June 25, 2024	June 25, 2024	

Projects in LF Onboarding

• Scope3E



TAC Evolution Plan update

- All new projects will go through new onboarding process
 - Main change LF onboarding before presentation to the TAC
- Migrating from <u>wiki.lfenergy.org</u> to <u>tac.lfenergy.org</u> for TAC materials
- Kicking off SIGs
 - EV Charging next meeting Aug 28th
 - DSAS waiting for leadership change to finish
 - Grid Operations kickoff in August
 - Grid Simulation and Modeling kickoff next Wednesday
 - Data Standards and Tooling next to get stood up



Grid Operations

- OperatorFabric
- Grid eXchange Fabric (GXF)
- SOGNO
- Shapeshifter
- Real Time Data Ingestion

 Platform (PTDID)
 - Platform (RTDIP)
- FledgePOWER*
- FlexMeasures

EV Charging

- CitrineOS
- EVerest

Digital Substations

- CoMPAS
- OpenSCD
- SEAPATH
- FledgePOWER*

* denotes project appearing in multiple categories

Inactive

- Hyphae
- OpenGEH
- Open Sustainable Technology
- openLEADR

Grid Simulation and Modeling

- Dynawo
- Power Grid Model
- PowSyBl
- Arras
- OpenSTEF
- Grid Resilience and Intelligence Platform (GRIP)
- covXtreme
- Grid Capacity Map

Data Standards and Tooling

- Carbon Data Specification (CDS)
 WG1: Customer Data*
- Carbon Data Specification (CDS)
 WG2: Power Systems Data
- TROLIE
- Battery Data Alliance
- NODE Collective
- Super Advanced Meter (SAM)
- OpenEEMeter
- OpenSynth



Project Security Focus updates

- Ensure all projects up to date with OpenSSF Best Practices Badge per their maturity level
- Implement OpenSSF Scorecard for all projects to measure security posture.
- Review license scans and remedy open issues
- Security Audits for all 'Early Adoption' stage projects



Early Adoption Projects

Must have a badge at the silver level.













Incubation Projects

Must have a badge at the passing level.



openssf best practices passing



openssf best practices passing





penssf best practices passing



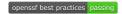






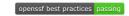










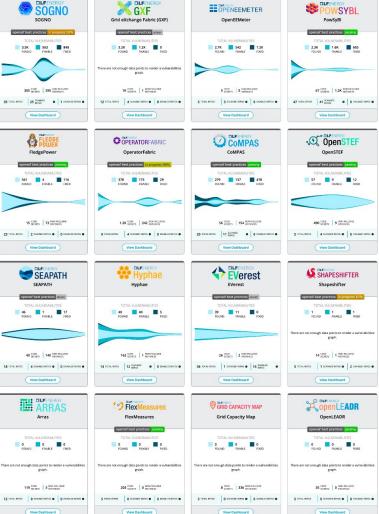


Current OpenSSF Best Practices Badge status (3 projects out of compliance)

ACTION: Projects in red boxes need review (source https://tac.lfenergy.org/projects_with_bestpractices)



ACTION: John to review and debug issues.



OLFENERGY

All current projects accepted before 12/1 had license scans done at the end of December

ACTION: Review latest license scans sent from Jeff Shapiro and address open issues



Jeff Shapiro < jshapiro@linuxfoundation.org>

LF Energy - SEAPATH License Scan and Findings - Dec 2023

To: SEAPATH-TSC <SEAPATH-TSC@lists.lfenergy.org> Cc: & 1 more

December 29, 2023, 10:19 PM

Hi Team.

Here are the results from the December 2023 license scan of the SEAPATH project. The scan was performed using the Linux Foundation Fossology server. Licenses and copyrights were examined.

The key findings (if any) and license summary can be found in the HTML report, the list of files in the spreadsheet, and also find the SPDX file listed below:

NOTE: I recommend that SPDX license identifiers be added to ALL source file headers. [see https://spdx.dev/learn/handling-license-info for examples]

NOTE: There are high priority key findings, please address these as soon as possible:

Finding #1

Priority: High

These files have an Apache-2.0 notice, but they also contain a comment indicating that they contain code from a thirdparty GPL v2 project.

The GPL v2 license is generally understood as prohibiting GPL v2 code from being incorporated into another work under a different license. The GPL v2 code from the upstream project should likely be removed and rewritten without using that project's code. 4 files

Finding #2

Priority: High

These files indicate that they contain content (or refer to a 3rd party dependency) under a version of the LGPL, typically seen as a weak copyleft license. Although LGPL content can be used in compatible ways with Apache-2.0 projects, its code should not be intermingled with code that needs to remain Apache-2.0, and it imposes some requirements that users of an Apache-2.0 project may not expect. The project may want to remove these files and replace them with permissively-licensed alternatives if that is feasible.

4 files

Finding #3

Priority: High

These recipes appear to contain some patches and code files that are under GPL-2.0, a strong copyleft license which is typically seen as incompatible with Apache-2.0 in many instances.

This may be okay, to the extent that the recipe is patching a GPL-2.0 project. However, for the patches / files that are GPL-2.0, will these be interacting with the project's Apache-2.0 code?

14 files

Finding #4 Priority: High

These flies are under a GPL license which may conflict withj your project license, especially if they are source code that is integrated with other code. Unless they are 100% separate and stand-alone, they need to be removed from your repo.

12 flies

REPORTS:

Ifenergy/seapath, code pulled 2023-12-23

- report: https://lfscanning.org/reports/lfenergy/seapath-2023-12-23-1eed5565-a64d-4d91-a21f-645536f1a512.html
 xlsx: https://lfscanning.org/reports/lfenergy/seapath-2023-12-23-1eed5565-a64d-4d91-a21f-645536f1a512.xlsx
- spdx: https://github.com/lfscanning/spdx-lfenergy/tree/master/seapath/2023-12/seapath-2023-12-23.spdx

Please feel free to contact me with any questions about the scan results. Be sure to reply to me directly as I may not get an email sent directly to the distribution list.

Thanks, Jeff

Security Audits through Open Source Technology Improvement Fund.

Priority Focus for 'Early Adoption' projects In progress:

- SEAPATH nearing completion
- OperatorFabric nearing completion
- PowSyBL holding till Q3
- EVerest kickoff in Q3

TODO:

- GXF
- SOGNO

Next focus is on Incubation projects.

ACTION: Remaining 'Early Adoption' projects get lined up for scans; identify any 'Incubation' projects next.





The Open Source Technology Improvement Fund is a corporate non-profit dedicated to **securing open source apps** that we all depend on. Securing software isn't easy, and we know what it takes to succeed. By facilitating security audits and reviews, OSTIF makes it easy for projects to significantly improve security.

Other updates

- LFX Meeting Management Transition 16 projects transition, 4 to go (#39)
 - FledgePOWER
 - Grid Capacity Map
 - Grid eXchange Fabric
 - OpenEEmeter
- Access to Github Actions large runners (<u>#146</u>) waiting for GitHub to get back to us
- Arila Barnes to take over OpenLEADR maintainership (#24)
- Add 'lfeoperations' as owner on PyPi accounts (#172)



Arras Annual Review

5:20 pm - 5:40 pm



Annual Review for Arras Energy

David P. Chassin, SLAC National Accelerator Laboratory Stanford University, Menlo Park, California 25 July 2023





Arras Energy is a commercial-grade release of HiPAS GridLAB-D.

HiPAS GridLAB-D was developed by the California Energy Commission to make the US Department of Energy's agent-based electricity delivery system simulator available to utilities for emerging use-cases such as hosting capacity analysis, extreme event resilience, deep electrification, and modern tariff design.





Sandbox project review criteria

To be considered for the Incubation Stage, the project must meet the following requirements:

- ✓ Have an open and documented technical governance, including:
 - ✓ A LICENSE file in every code repository, with the license chosen an OSI-approved license.
 - ✓ A README file welcoming new community members to the project and explaining why the project is useful and how to get started.
 - ✓ A CONTRIBUTING file explaining to other developers and your community of users how to contribute to the project. The file should explain what types of contributions are needed and how the process works.
 - ✓ A CODEOWNERS or COMMITTERS file to define individuals or teams that are responsible for code in a repository; document current project owners and current and emeritus committers.
 - ✓ A CODE_OF_CONDUCT file that sets the ground rules for participants' behavior associated and helps to facilitate a friendly, welcoming environment. By default projects should leverage the <u>Linux Foundation Code of Conduct</u> unless an alternate Code of Conduct is approved prior.
 - ✓ A RELEASE file that provides documentation on the release methodology, cadence, criteria, etc.
 - ✓ A GOVERNANCE file that documents the project's technical governance.
 - ✓ A SUPPORT file to let users and developers know about ways to get help with your project.
- ✓ Complete and approve the Technical Charter and agree to transfer any relevant trademarks to The Linux Foundation or its affiliate, LF Projects, LLC, and to assist in filing for any relevant unregistered ones.

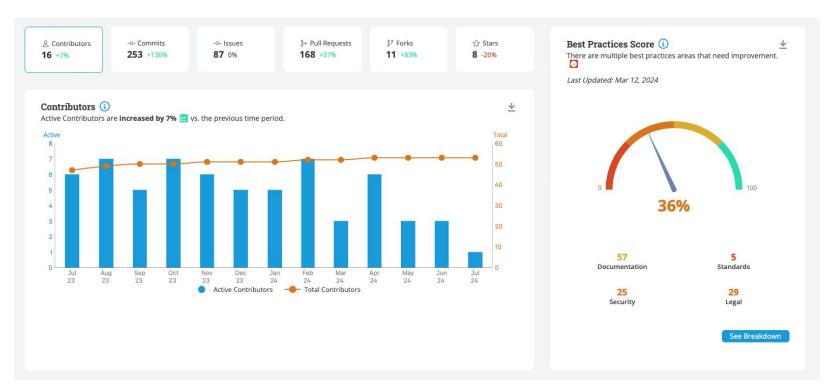


Sandbox project review criteria (continued)

- Have achieved and maintained an OpenSSF Best Practices Badge at the 'Passing' level.
- ✓ Have had a successful license scan with any critical issues remedied.
- Have a defined project mission and scope
- The project's functional architecture is built out in the <u>LF Energy ArchiMate tool</u>.
- o An overview of the project's architecture and features defined.
- The project roadmap defined, which should address the following questions.
 - ✓ What use cases are possible now?
 - What does the next year look like in terms of additional features and use cases covered?
- Community and contributor growth assessment
 - ✓ The current number of contributors and committers, and the number of different organizations contributing to the project.
 - ✓ Demonstrate a sustained flow of commits / merged contributions
 - A credible plan for developing a thriving user community, in particular expanding the number of committers and contributors?
 - An outline of the plan for the project to complete the requirements for the Early Adoption stage
- Receive the affirmative majority vote of the TAC.



Project activity





Organizations contributing and/or using in production

























Key Achievements in the past year

- ★ Cleared out backlog of PRs
- ★ Website for https://www.arras.energy/
- ★ New project to evaluate resilience use-case at Southern California Edison
- ★ Amazon-developed expert chatbot (https://gridchat.gridlabd.us/)
- ★ Maintenance releases and enhancements 4.3.2 4.3.9
- ★ Key component for new LF Energy project GRIP



Areas the project could use help on

- Advice on how to grow and thrive in LF ecosystem
- Address utility security concerns regarding OSS



Feedback on working with LF Energy

- Guidance/consensus on response to OSS security concerns
- Coordinating with other OSS projects is difficult
 - Especially for projects in different stages of maturation
- Team is very helpful with these issues
 - O Special thanks to John, Dan, Alex, and Yarille



OperatorFabric Annual Review

5:40 pm - 6:00 pm



Marketing/PR/Events Updates

6:00 pm - 6:15 pm



Marketing and PR Updates

- Webinars
 - Digital Substations webinar with Welotec scheduled for 25 July
 - CitrineOS webinar to take place in late August date TBD
- Content
 - o <u>RTE/FledgePOWER case study</u> published 17 June
 - Open source for vertical industries white paper released 27 June
- Other
 - AWS Imagine Grant application submitted
 - <u>Bezos Earth Fund AI for Climate and Nature Grand Challenge</u> applications due
 30 July we can submit multiple applications if you have a project you wish to include
- Use this <u>form</u> to submit any comms/marketing support requests



Events

- <u>LF Energy Summit 2024</u> 5-6 Sept, Marriott Grand Place Brussels
 - Agenda was announced 12 June
 - Discount pricing ends 25 Aug please promote using this <u>marketing kit</u>
 - o 102 registrations received to date
 - Sponsorship prospectus please consider sponsoring and reach out to Alex with questions or to discuss options
 - Space for project meetups please request space by 19 July using <u>this</u> <u>form</u>
- <u>Event tracker</u> please review and add any additional opportunities



Upcoming Event CFPs

North America

- <u>National Clean Energy Week September 23-27, 2024, Washington, DC Rolling submission</u> <u>deadline</u>
- Accelerate 2050 November 6-8, 2024, Los Angeles Rolling submission deadline
- <u>CIGRE National Conference GRID OF THE FUTURE November 11-14, 2024, Raleigh, NC Paper submission deadline is August 5</u>
- <u>Linux Foundation Member Summit November 19-21, 2024, Napa, CA Submissions due</u>
 <u>August 30</u>
- EPRI AI and Digital Transformation Electric Power Summit January 7-9, 2025, Palo Alto, CA -Submissions due September 6

Europe

- Enlit Europe October 22-24, 2024, Milan Rolling submission deadline
- <u>Climate Tech Show November 27-28, 2024, London Rolling submission deadline</u>



Closing and Next Meeting

6:15 pm - 6:30 pm



Next TAC Meeting

The next meeting of the LF Energy TAC is scheduled for 6 August 2024 at 8:00 am US Pacific Time/11:00 am US Eastern Time/5:00 pm Central European Time. Agenda will include:

- General Updates
- Marketing/PR/Events update

To add agenda items, go to https://github.com/lf-energy/tac/issues/new/choose. You can review the TAC Agenda at https://github.com/orgs/lf-energy/projects/2/views/1



APPENDIX

Marketing and PR Updates



Governing Board CONFIDENTIAL

Recent Media Coverage

- TFIR Hydro-Québec joins LF Energy
- TFIR Code quality and security are crucial for open source projects | Nico Rikken, Alliander
- TFIR Open source foundations to accelerate the energy transition | Alex Thornton – LF Energy
- <u>TFIR LF Energy's SEAPATH project aims to drive the next generation of energy</u> management
- TFIR What are the unique challenges in the energy sector?
- EnergyCentral How French Transmission System Operator, RTE, Leverages Open Source to Build Next-Gen Substation Monitoring and Controls
- TFIR LF Energy's role to accelerate decarbonization in the energy sector
- <u>EC&M Open-Source Platform EVerest to Advance Electric Vehicle Charging Interoperability</u>
- <u>Electronic Design</u> This Week in PowerBites: Open-Source EV Charging, Solid-State Circuit Protection
- TFIR Open source drives technical transformation of vertical industries: Linux Foundation Report
- Solar Builder Solving public EV charging issues with open-source software



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