

OpenEMS Hosting Internship Stipend

Project Overview

Energy IoT Open Source is offering two internship stipends of \$1000 each to complete the following time-sensitive project in 6 weeks following Agile sprint methodology. Project is fully remote and supported by a Zulip collaboration channel and GitHub Issues. Sprint planning and review meetings will be scheduled CET PM time.

1. Host the latest stable version of OpenEMS Backend on AWS cloud leveraging containers and VMs.
2. Host the latest stable version of OpenEMS Edge on OpenPLC adjusting the stack to fit the 2 GB constraint of the device.
3. Secure edge to cloud access via OpenVPN
4. Deploy and Integrate Odoo with the minimal set of plug-ins to support OpenEMS integration and project management.
5. Automate the complete end-to-end solution deployment leveraging containers, terraform, and shell scripts.
6. Publish documentation about how to use OpenEMS and add a new OpenEMS edge on Energy IoT Open Source Bookstack.

[ADD Diagram, link to GitHub Issue]

Objectives

The object of the project is to update and replicate the OpenEMS demo available on GitPod. It will become the first end-to-end demo that allows a micro-grid project to track both progress and integration with onsite micro-grid assets that are supported by OpenEMS. The successful deployment will be field tested in Uganda. The goal is to accelerate any community micro-grid by allowing them to plan their project using Odoo, manage their on-site assets using OpenEMS edge on OpenPLC or similar hardened IoT device, and monitor it locally or remotely via OpenEMS UI.

The quality of the deployment should meet the criteria for a QA environment accessible over https at <https://openems.eiot.energy>.

It should provide the full functionality of Open EMS limited to a maximum of 5 sites and a subset of micro-grid assets (at least one meter, one inverter, and one battery, and no more than 12 per

site):

- Secure login
- Data backup and Restore
- User documentation
- No level 1 and 2 defects
- Hosted on us-east1

Deliverables

- All code should be checked in GitHub following OpenSSF best practices
- Successful deployment and configuration of the end-to-end solution with OpenEMS simulators of an meter, inverter, and a battery storage.
- Run-rate monthly budget for hosting on AWS

Required Open Source Knowledge

- OpenEMS Edge
- Open EMS Backend
- Odoo
- Odoo OpenEMS Plugin
- OpenVPN
- OpenPLC Firmware
- Required Hardware Knowledge
- OpenPLC
- MeshEMS Gateway
- Completed Linux Foundation class on OpenSSF
- Completed Linux Foundation class on Open Source Contributions
- Volunteer contributions to energy related projects for more than a year: OpenEMS, Hyphae, OpenLeADR, MPM, or Odoo, OpenPLC.
- Docker
- Zulip
- GitHub
- Ona (formally, GitPod)
- Linux

Required Cloud Knowledge

The project will be hosted on AWS. AWS Cloud Architect Certificate or equivalent prior experience with the following:

- AWS Identity Access Management
- DNS Management
- Route 53
- VPC
- EC2
- ECS
- RDS
- EKS
- Docker
- Cloud Formation
- Terraform
- Elastic Cache
- Cloud Watch
- Cloud Trail

Selection Criteria

All requirements met.

Individual interview for the top 5 candidates by Arila Barnes via Google Meet (CET time only)

Group interview for the top 3 candidates by Energy IoT Open Source team via Google Meet (CET time only)

In case of a tie, preference given to applicants from Africa and volunteers of Energy IoT Open Source.

If more than 2 people qualify, Energy IoT Open Source reserves the right to add additional stipends or allow the candidates to contribute to other planned projects in 2026.

Recipients agree to be featured on Energy IoT Open Source social media sites (web, LinkedIn, YouTube) and agree their work to be shared under [Apache 2.0 License](#)

Timeline (midnight, CET time)

October 5th, 2025 -Opportunity posted on Energy IoT Open Source website and Zulip community

October 10th, 2025 - Application intake closed for review. Please complete [assessment form](#) and required documentation prior to this date.

October 12th, 2025 - Interviews with top 5 candidates, must be available 13:00 - 18:00 CET time zone.

October 17th, 2025 - Recipients notified

October 19th, 2025 - Sprint Starts

November 23rd , 2025 - Fit-n-Finish Sprint Starts

November 30th, 2025 - Press release of the available deployment

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