

26th - 28th
MARCH
2021

Hack the fog! **HACKATHON**

València (Spain) and fully online

CHALLENGE

Context

Fog computing has emerged as a new way for managing and processing data collected by IoT sensors; and especially for **smart-city environments** this architecture has proved to bring many benefits in terms of improved analysis efficiency and enhanced data security.

At [La Marina de València](#) (which is a mooring dock for pleasure boats as well as a recreational and cultural hub located close to València's beach and commercial port) a **batch of IoT sensors has been recently installed** for collecting a variety of data including water and air

quality measures, weather, height of the sea waves inside the harbour, people and car counters entering and exiting the area, etc. A **brand-new fog computing platform is also installed to process these data in real time immediately after being generated.**

The Challenge

The Challenge of **Hack the Fog!** is to design and prototype innovative fog computing applications based on data collected through these sensors installed at La Marina de València.

WHAT

CHALLENGE

Expected results

We expect developed applications to address one of the following topics (here defined in a very broad manner):

- Improve the experience of boat owners who park their boat at La Marina: quality of life for people who live in their boat, navigation assistance, etc.
- Improve the experience of people who come to La Marina to visit, enjoy the area, attend a sports or cultural event, eat at the restaurants, etc.
- Improve the way La Marina can monitor its own management of the area.



WHAT

—○ WE ARE LOOKING FOR...

Participants can apply **as a pre-formed team of 3-5** persons, or **as individuals** who will be grouped into teams during the hackathon. It will be possible to attend either **on site or remotely**.

Participants may have a wide range of backgrounds:

- MSc and PhD students in Information Technology and Computer Sciences
- Junior developers and entrepreneurs
- Graphical interface design
- Business and marketing
- Etc.

Each team should **appoint a team leader** and it should include at least **two** members with the following technical skills:

- Basic knowledge of programming and software development in any programming language. The hackathon will be organized based on the [NodeRed](#) graphical programming environment
- Knowledge of accessing and working with remote servers using [SSH](#), including for in-person participants
- Basic knowledge about the [MQTT](#) publish-subscribe protocol would be a plus
- Basic knowledge of [Docker](#) and [Kubernetes](#) would be a plus

WHO

—○ ORGANIZERS

Hack the Fog! is **organized in the context of [FogGuru](#)**, a *European Industrial Doctorate* project which aims to train the next generation of European Fog computing experts.

FogGuru brings together leading academic institutions (University of Rennes 1 in France and the Technical University of Berlin in Germany), high-tech SMEs (Elastisys from Sweden and U-Hopper from Italy), complemented by EIT Digital Rennes and the València smart city living lab Las Naves in València, Spain.

On behalf of the FogGuru project, [Las Naves](#) organizes **this hackathon and offers an opportunity to students, developers and entrepreneurs to learn how to develop fog computing applications** to process the available data at La Marina de València, and invent innovative applications using the existing fog computing infrastructure at La Marina.

LAS NAVES

MENTORS

The Hackathon participants will be mentored by “The Gurus”, PhD students from the FogGuru project who designed and developed the complete fog computing infrastructure at the basis of the hackathon. They will provide support to the participants during the hackathon and ensure that its main goals are accomplished.



**Li
Wu**



**Mulugeta
Ayalew Tamiru**



**Davaadorj
Battulga**



**Mozhdeh
Farhadi**

GURUS

PRIZE

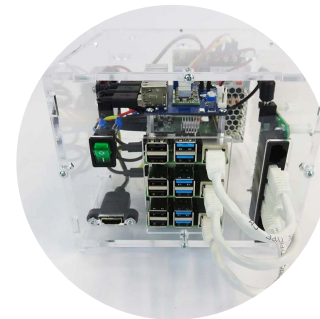
All participants will receive a participation certificate. The winners will be selected by a specific jury composed of the experts from the University of Rennes 1, U-Hopper, Las Naves and La Marina.



Second price: “PicoCluster 5”
cluster of 5 Raspberry Pis



First price: “PicoCluster 10”
cluster of 10 Raspberry Pis



Third price: “PicoCluster 3”
cluster of 3 Raspberry Pis

AGENDA

Friday 26th, 18:00 - 20:00: Kick-off meeting: welcome and introduction by the organizers

Time	Saturday 27th
9:00 - 09:30	Introduction on Platform & Sensors
9:30 - 10:30	Introduction on Project Development and Pitching ideas
10:30 - 11:00	Break
11:00 - 12:00	Hands-on session to play with the sensor data, node-red, deployment tools
12:00 - 12:30	Teams introduction
12:30 - late at night	Let's work! Hacking until tomorrow!

Time	Sunday 28th
08:00 - 15:00	Continued hacking
15:00 - 17:00	Presentation delivery and pitching
17:00 - 17:30	Jury discussion
17:30	Awarding and closing



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and fully online**

WHEN&WHERE

APPLICATION PROCESS

Pre-event for participants to meet each other and exchange ideas: 1-2 hours, fully online, one week before the event.

01 Feb - 07 Mar

07 Mar - 12 Mar

12 Mar



open call



selection of participants



notification of participants

Apply as a team!

Apply as single individual!

HOW

www.fogguru.eu

hackathon@fogguru.eu



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