



FEC 6



FED4FIRE
FEDERATION FOR FIRE PLUS

FEC6 REPORT

The Fed4FIRE+ Engineering Conference

15-17 October 2019 - Athens, Greece

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INTRODUCTION

The 6th Fed4FIRE+ Engineering Conference welcomed researchers, academics, and experts from industry, SMEs and start-ups, in Athens, Greece, from 15 to 17 October, 2019.



This edition of the FEC had three lively panel sessions with top notch experts on **Wireless and Mobile clouds and mobile edge computing (MEC)** in addition to two workshops open to students and participants, an interactive session dedicated to the outcomes and lessons-learned from experiments run using the federated testbeds and networking with researchers and innovators coming from all over Europe.

*Alberto Estevez Caldos, Universidad de Vigo, Spain said
"just a few clicks and you have an experiment ready".*



CONFERENCE HIGHLIGHTS

PRESENTATIONS FROM THE THREE PANELS

Dr. Sergios Soursos, *Master Research Engineer at Intracom SA Telecom Solutions, Greece* presented the '**IoT in the 5G and MEC era**'. His presentation, after an overview of the IoT and 5G landscape, focused on the research activities at European Level within the IoT European Platform, the 5GPPP and also the convergence of IoT towards 5G.

[\(Dr. Soursos' presentation is available here\)](#)

Dr. Panagiotis Papadimitriou, *Assistant Professor at the Applied Informatics Department of the University of Macedonia, Greece* presented the '**MESON project: Cross-Slice Communication at the Network Edge**' whose goal is to design and prototype implementation of an enhanced management and orchestration (MANO) framework, able to foster the establishment of cross-slice/tenant interactions and also facilitate the secure and optimized communication between next-generation services, across network slice borders.

[\(Dr. Papadimitriou's presentation is available here\)](#)

Dr. Enric Pages Montanera, *ATOS Spain, Next Generation Cloud Lab* presented the '**SWARM Computing, realisation of Computing Continuum**'. This speech covered three aspects: the Computing Continuum vision, the associated technologies and trends and the Open Research Challenges in Edge and Cloud towards Swarm computing communication between next-generation services, across network slice borders.

[\(Dr. Pages' presentation is available here\)](#)



DEMO SESSION

The 6th Federation Engineering Conference in Athens had a demo session where people who had used Fed4FIRE+ described their projects and experiences using Fed4FIRE+ to access different testbeds. The key messages about the benefits of Fed4FIRE+ Federated testbeds were:

“The Fed4FIRE+ Jfed tool that sets up experiments is easy to use, and once you have learned to use it, you can access all the testbeds within Fed4FIRE+.”

“I would run more experiments beyond their original experiment, now that they have found out it is so easy.”

“Having a wide variety of testbeds available from in one place: the Fed4FIRE+ portal is very useful.”



“The resources provided by the testbeds can be expensive, we, as an SME, cannot justify buying them, so being able to use the expensive resources on a temporary basis, free of charge, is great.”

“The independence and integrity of the testbeds is great for both academic and commercial work – there can be no claim that results using the testbeds can be biased by the tester.”

“Free use of testbed resources of charge just with a registration without a fee.”



BEST DEMO AWARD

The prize of the best demo was awarded to “[SODA: 6TiSCH Open Data Action2](#)” developed by the University of Montenegro.

SODA concerns a low-power networking technology called 6TiSCH which aims to automate the testing process on Fed4FIRE testbeds in industry relevant test scenarios and to provide reference performance datasets of 6TiSCH using those automation tools.



The second prize was awarded to “[Lucy: IoT & 5G Smart City detector platform](#)” developed by IronRobots.com, Germany

LUCY is an IoT & 5G Smart City detector platform for locating things in the city and currently it focuses on finding lost dogs. Dogs are provided with a pin equipped with a Bluetooth Low Energy to be attached on the collar of the dog.

LUCY tested on Fed4FIRE+ how frequently the BLE scans and mobile data communication should be performed in order to be able to detect missing dogs efficiently, but at the same time not increase the battery usage of smartphones significantly.



STUDENT WORKSHOPS

The FEC6 student workshop gave the opportunity for students to learn how to design and execute experiments utilizing Fed4FiRE+ facilities and tools. The workshop, attended by 28 students from different universities in Athens, took place on Wednesday 16 October, and was divided into the following sessions:

Introduction to F4F testbeds and tools: This experiment showcased the capabilities of the FED4FIRE+ infrastructure through a simple networking setup; the students leased three wireless nodes from the iLab.t testbed, set one of them as a Wireless Access Point, connect the other two on the corresponding WLAN and make them communicate with each other.

Service orchestration over wireless networks using Open Source MANO: In this tutorial, the Open Source MANO framework was used to deploy services in the NITOS testbed. As traditionally NITOS is a wireless testbed, an extended version of the framework allowing the experimenters to specify the wireless networks (WiFi, mmWave and LTE) that were used to interconnect the services that they choose to deploy. The NITOS nodes were used as the compute infrastructure and host the Virtual Network Functions (VNFs). During the tutorial, each experimenter got access over three nodes of the testbed, one used as the controller to deploy VNFs (hosting the Open Source MANO installation and the Virtual Infrastructure Manager) and two compute nodes for hosting the VNFs.

Both these sessions were focused on providing a hands-on experience to the participants.

Most of the students were not familiar with the topic and the tools presented in this tutorial, even though they managed to complete it and achieve the goals that we have defined for this tutorial. The students proved to be highly interested with the tutorial and they asked questions throughout the tutorial asking for extra information about the capabilities of these tools and if they are able to utilize these tools for their semester projects or thesis.

We considered the feedback received from the participants really positive as at the end of the session, all of them were familiar with using the Fed4FIRE+ tools in order to design and execute experiments on their own.



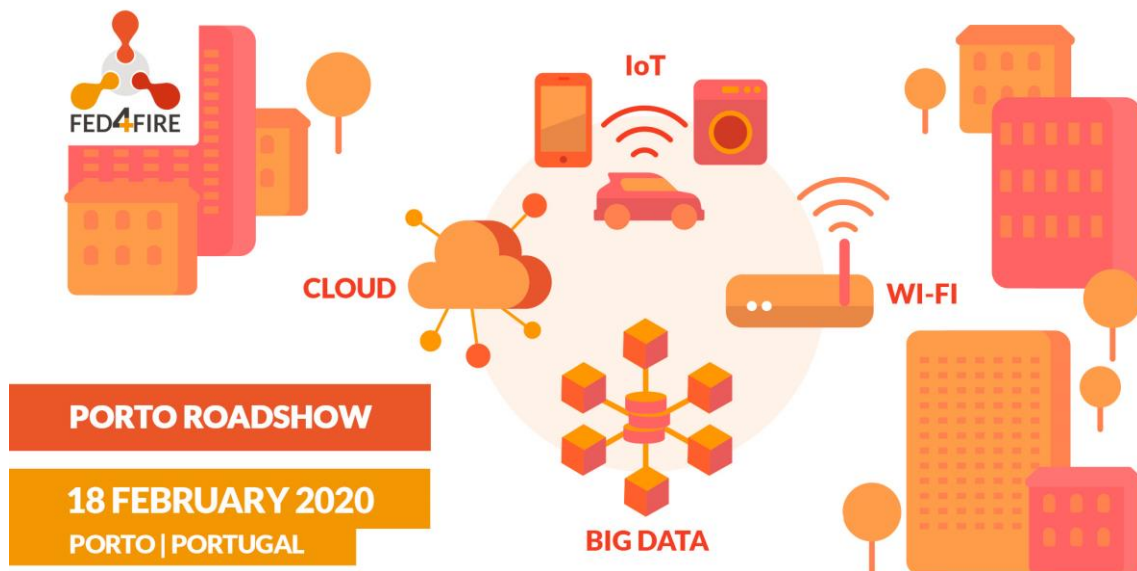
BOOK YOUR AGENDA

1ST FED4FIRE+ ROADSHOW

The next event organized by Fed4FIRE+ will be the Roadshow, to be held in Porto, Portugal on 18 February where testbeds, testimonials from participation to Fed4FIRE+ open calls and tutorials will be on the agenda.

Access to facilities is free and open, supporting a wide variety of research and innovation communities and initiatives in Europe, including big data, cloud computing, wireless networks, wired networks, IoT, 5G and more. For more information, visit fed4fire.eu/roadshow.

Do not miss this event, it will be free of charge. Only a registration will be required.



7TH FED4FIRE+ ENGINEERING CONFERENCE (FEC) - FEC7

Come and explore the largest federation of experimentation and testing facilities in the domain of NGI (Next Generation Internet) at the upcoming **7th Fed4FIRE+ Engineering Conference (FEC)**. FEC7 will take place from **23-27 March, 2020 in Poznan, Poland**. The workshop will be held over three days. It has a special focus on “**Cloud and Big Data**” in addition to technical presentations, tutorials, demos and information on the Fed4FIRE+ Open Calls.

For more information, visit the fec7.fed4fire.eu

If you'd like to stay up to date about next happenings and the Open Calls on the Fed4FIRE+ follow us on [Twitter @Fed4Fire](https://twitter.com/Fed4Fire) and, if you did not yet, subscribe to our newsletter: <https://www.fed4fire.eu/newsletter/>