



SOFTFIRE

Software Defined Networks and Network Function Virtualization Testbed within FIRE+

Grant Agreement N° 687860

SoftFIRE Second Hackathon (Guidelines and Rules for Participation)



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1 About SoftFIRE

SoftFIRE integrates European independent testbeds that are made available with a set of basic functionalities related to Network Function Virtualization and Software Defined Networking. The project is aiming at assessing three major characteristics that an NFV/SDN platform should support: interoperability with various functional elements, programmability of the offered functions and security of the entire framework. The federated infrastructure is devoted to experimentation / development of services and applications. Services and applications are chosen in a competitive way by means of Open Calls. The SoftFIRE Project will support three waves of Open Calls. The different waves will benefit from the incremental empowerment and consolidation of the single testbeds and the federated one. At the end of each wave, there will be an open and public event, a Hackathon, during which experimenters and a wide audience of practitioners and interested people can experiment on the platform.

More information about SoftFIRE can be found here: www.softfire.eu

2 Second Hackathon Objectives

SoftFIRE Consortium invites interested parties in participating to the Second Hackathon that will give participants the possibility to put hands on the Federated Testbed for two days.

Objectives of the Hackathon: The combination of Network Function Virtualization and Software Defined Networking is considered as an important step towards the implementation of software architecture for the future 5G Network.

In this context, the SoftFIRE project has put together a programmable infrastructure operating over several interworking testbeds. In addition, the project has enriched this infrastructure with powerful virtualization and distributed processing functionalities offered by OpenStack and Open Baton. To these functions, the SoftFIRE infrastructure has added basic SDN functions and some security feature that can ease the programming of compelling services and applications on top of the platform.

The objective of the Hackathon is to use the SoftFIRE platform either to extend its NFV and SDN functions or to create advanced and innovative applications by exploiting the available features. The participants to the Hackathon can choose one (or both) objectives in order to develop and demonstrate new functions, services, and/or applications.

While new functions will refer to the extensions to the platform itself, services and applications should demonstrate the possibility to develop new concepts and related business opportunities within one of the many 5G applications domains. SoftFIRE will be particularly interested in applications and services addressing, automotive, Internet of Things, gaming, big data, e-health, multimedia media streaming or any other application domain relevant for 5G. The teams should focus on functions, services and applications that could demonstrate the ability of the NFV/SDN platform to provide new services and application within future networks and in particular 5G.

To summarize: the theme of the Hackathon is: **development of compelling applications, services, functions for the new 5G environment through a secure NFV/SDN platform.**



Before the event, the SoftFIRE project will organize Open Days during which interested participants will have access to the platform and can familiarize themselves with it, understanding its current functionalities. More detailed information can be found in section 4.3.

For further communication please check the [website](#).

Participants are suggested to read this document carefully as well as the information on the website and in the [Handbook](#) provided at the SoftFIRE website. Applicants can send an email to event@softfire.eu in case they need to clarify any issues with the Open Call/SoftFIRE team.

Participants are requested to register and submit a simple form with personal information and to explain why they are interested in the SoftFIRE Hackathon. Selected participants will be granted access to the SoftFIRE federated testbed, during the timeframe stated in section 3, and will receive support from the SoftFIRE team according to the rules and constraints specified in the [Handbook](#).

3 Second Hackathon Information

The Second Hackathon will be held in Berlin on November 7th-8th 2017. It is held in conjunction with the 8th FUSECO Forum (see <https://www.fokus.fraunhofer.de/fuseco-forum-2017>), which will be organised during the Berlin 5G week (see: <http://www.berlin5gweek.org/>). The Hackathon event is taking place prior to the Forum to allow participants who are interested in the FUSECO Forum to attend.

During the Hackathon, all participants will have access to the platform during the same timeframe. For this reason – due to the technical nature of the platform – the number of participants who can be accepted may be limited by the SoftFIRE project. Participants are encouraged to register in advance. Every team is composed of 2-4 people including the Team Leader. The SoftFIRE project invites all possible participants to be acquainted with the platform by means of the Open Days and/or by setting up a local test version of the platform.

Duration of the event: to all accepted participants, access to the platform will be granted for two days: from 09:00 CET (local time) to the end of the first business day (about 18.00 CET), and from 9:00 to 13:00 (i.e. end of the Hackathon development activities). Starting from 13.00, each participating team will have around 20 minutes to demonstrate their results to the jury by means of a running demo and optionally some slides and presentation. The platform will be completely closed outside these hours.

The SoftFIRE team reserves the right to restrict (or close) access any moment (see chapter 8) to individual participants or the entire Hackathon.

Type of participants: all active teams and individuals in the domain of NFV/SDN and 5G research who want to familiarize with the SoftFIRE federated testbed.

Registration deadline: participants have to register no later than **October 27th, 2017 at 17.00 CET (Brussels time)**.

Notification of Acceptance: the SoftFIRE team will send a Notification of Acceptance to the participant within a week after its registration. The acceptance process is described in more detail in chapter 5. A notification of receipt of the application will be sent immediately.

**Hackathon venue:**

Location	Address
EIT Digital Berlin Node	Ernst-Reuter-Platz 7 10587 Berlin (Germany), Berlin, Germany

4 How to attend the Hackathon

Participants need to fill in the registration form at <https://www.softfire.eu/events/second-hackathon/> before the deadline stated in section 3.

At the end of the registration period, Team Leaders of the selected teams will receive instructions on how to access to the SoftFIRE Federated Platform (as well as logistic information).

If a participant receives a notification of acceptance, your participation of the Hackathon is mandatory.

4.1 Registration Form

Participants are solely responsible for completing all required fields in the registration form according to the following instructions. The Team Leader will be the contact point between the SoftFIRE team organising the Hackathon and his team:

Field name	Field description
First Name / Last Name	Name and surname of the Team Leader
Company/Organization	Company/ Organization of the Team Leader
E-mail	E-mail address of the Team Leader
Phone no.	Mobile phone number of the Team Leader
Number of participants	Number of people in the team (including the Team Leader)
First Name /Last Name	Name and Surname of every person in the team
Company/Organization	Company/ Organization of every person in the team other than the Team Leader
Reason of interest in participating	The team has to specify the reason why they are interested in the SoftFIRE project and in participating to the Hackathon.



Brief description of the team background and references	Components of the team have to write useful information in order to specify their roles inside their company/organization. They can also write here names of their responsible (e.g. their referent Professor, if students/researchers)
Comments	In this field the team can write any information that they consider useful for the organization of the event or if special requirements are needed.

4.2 Eligibility criteria

Participants must be eligible for participation in the EC H2020 projects:

https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2016-2017/annexes/h2020-wp1617-annex-a-countries-rules_en.pdf

SoftFIRE consortium members cannot participate in the Hackathon.

Financial funding for Third Parties during the whole duration of a project is limited to 60k according to the rules in H2020 that apply also in case of the SoftFIRE project:

http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2016_2017/annexes/h2020-wp1617-annex-k-fs3p_en.pdf

The SoftFIRE team reserves the right to refuse participants at its discretion (e.g. unverifiable companies/organizations).

4.3 Learning how to use the platform

SoftFIRE consortium would like to underline the necessity for each team to be ready to work on our platform in the very short timeframe available for this Hackathon.

For this reason, the SoftFIRE project will organise – before this Hackathon – some special events, named as Open Days: we suggest to attend remotely those events to begin to explore the whole platform and all functionalities offered.

During the Open Day, the attendees will have the opportunity to work – in a dedicated environment – on the latest release of the SoftFIRE platform with all available functionalities, supported by our technical team, gaining free access to the platform.

Also, to better support all interested participants who want to explore the platform on their own, SoftFIRE consortium will record and share Tutorials, videos to explain how to use the several managers developed during the last year.

In addition, we also suggest to go through all our available [documentation](#) and [how-to](#) guide to set-up locally on your machine / environment the latest release of the SoftFIRE Middleware to get familiar with.

More info about all those events can be found [here](#).



5 Acceptance Process

The admittance to the Hackathon is on a “First Come First Serve” basis.

An email will be sent to the Team Leader confirming the acceptance or non-acceptance to the Hackathon. Not selected but eligible teams will be put on a waiting list and receive a related notification. In case a selected team withdraws its planned participation, the team leader of the first team on the waiting list will be notified by email.

A registered team can cancel its registration sending an email to event@softfire.eu.

6 Prizes and rewards

A prize of € 7.000 will be given to the Winner team(s) of the Hackathon.

A Jury composed by the SoftFIRE partners and external juror(s) will judge the work produced by the participants. Criteria for judgement are explained in section 6.1.

The winner(s) will be announced at the end of the event, on November 8th 2017.

For the winner(s) of the Hackathon following articles of the H2020 Model Grant Agreement http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf apply:

No. 22, 23, 35, 36, 38 and 46.

6.1 Guidelines for the Hackathon and judgement criteria

A set of guidelines will be given to the participants before the event. These guidelines must be observed. Non-compliance will result in cancellation of participation at the Hackathon.

According to the theme of the Hackathon, participants will be requested to implement and demo applications, services or functionalities using as many as possible functionalities and APIs offered by the SoftFIRE platform. In order to be eligible to win the prize, each team should make use of two or more of the SoftFIRE Middleware Managers in order to show how Virtualization, Connectivity, Security or Monitoring functions are used. It is suggested to use at least one NFV resource for testing the solution.

Participant can decide to implement on the platform:

- Applications, i.e., software programs designed to perform a set of coordinated functions, tasks, or activities for the benefit of the users. It is recommended to use virtualized functionalities possible distributed nodes;
- Services, i.e., software programs designed to provide reusable functions for the benefits of users or the SoftFIRE system itself.
- Functions, i.e., software programs that extend the set of functionalities offered by the platform itself and make it more interoperable, more programmable or more secure.

The usage of distributed and virtualized functionalities is strongly encouraged in order to demonstrate the usefulness of the SoftFIRE federated platform.



Applications, Services or Functions should be implemented in such a way to be demoed. Demos need to clearly show the core intended functionalities and they should be proved by means of a running instance to the Jury.

Every team will be asked to briefly present and demonstrate the effectiveness of their solution in a way that will be explained in the guidelines distributed at the beginning of the Hackathon .

Each proposed solution will be judged on an individual level by the different judges using the criteria indicated in the following figure:

Criteria	Creativity and Innovation	Integration in SoftFIRE	Technical Difficulty
Evaluation Meter	0 - 10	0 - 10	0 - 10
Weight	0.35	0.30	0.35
P r o p e r t i e s	Clarity and quality of the demo	Minimal requirement to use at least two SoftFIRE Middleware Managers	Overall technical difficulty of the addressed functionalities
	Appropriateness of technical and methodological approach (interoperability, programmability and security)	Potential integration / inclusion in SoftFire as a built-in functionalities	Implementability on the SoftFIRE infrastructure
	Originality and innovative value of the proposed demo		
	Appealing Solutions for 5G Networks		

Figure – Hackathon evaluation criteria

For each demo, jurors will assess the value of the Demo by means of votes in the range between 0 and 10 for each criterion. Each vote will be multiplied for its relative weight. The overall score achieved by the team will be the sum of the individual scores given by the judges for each of the criteria.

The team with the highest score will be the winner of the Hackathon.

In case two (or more) teams will obtain the same score, the prize will be equally divided into all the winning teams.

6.2 IPR

All intellectual property created at the event is owned solely by the participants and their team. Further plans may be discussed between the partners and the teams after the Hackathon.

The participants grant the SoftFIRE consortium partners access to the results, for the pursuance of the objectives of the Project and the exploitation of the Project results in accordance with the GA.



Participants shall respect the intellectual property rights, including copyright, and abide by data protection legislation, that apply to software and data available or part of the Federated Testbed.

7 Support to Experimenters

7.1 Hackathon Helpdesk

For further information on the Hackathon, contact: event@softfire.eu.

For more general information, please refer to info@softfire.eu.

7.2 Useful Documents

- SoftFIRE Second Hackathon (this document).
- SoftFIRE Handbook here.

Please refer to <https://www.softfire.eu/events/second-hackathon/> for the complete documentation.

7.3 Federated Testbed Availability

Access to the testbed will be granted on November 7 – 8 during this timeframe:

Working hours: 9:00 to 18:00. CET on November 7th

9:00 to 13:00 on November 8th plus demos and presentations in the afternoon of the 8th. After Demos, the Jury will discuss the results and the winner will be announced

Outside this timeframe, access to the platform will not be allowed.

Please check your local time correspondence (<http://www.worldtimebuddy.com/>).

Technical support for UoS testbed will be granted from 10:00 to 18:00 CET.



8 Constraints and Limitations during the Hackathon

The SoftFIRE infrastructure is composed by loosely integrated platforms under different administrative domains. In addition, the different platforms are running for experimental purposes and they are not yet considered a mass production tool. This means that bugs and issues in the platform behaviour can and will occur. Actually, the scope of this Hackathon is also to support the tune up and the assessment of the platform as a whole.

The SoftFIRE platform is continuously evolving and it has a set of functionalities that is constantly growing and updated by the project. Changes are described and documented in SoftFIRE software wiki (<https://docs.softfire.eu>). Nevertheless, SoftFIRE is, by no means, to be considered a production platform, however the SoftFIRE developer team is always available to help participants and is ready to fix any kind of issues reported by the users.

For this reason and to improve the performance of each participant, SoftFIRE partners will organize several *under the hood* events before this Hackathon to provide indications to participants on how to program the Federated Testbed (see relevant information in Chapter 4.3 and [here](#)).

Service level agreement (SLA) agreements do not apply during the Hackathon. The event is focused on testing and exploring SoftFIRE and participants to the Hackathon are not asked to run production applications on the infrastructure Platform during the trial.

The SoftFIRE project reserves the right to discontinue at any time the service or stop the activities of a team in the Hackathon activities if the use is not consistent with the purpose of SDN/NFV and/or violates any aspects of infrastructure security or shall maliciously conflict with any on-going activities of other Hackathon participants.

During the Hackathon, the SoftFIRE project will put in place a team that will support participants in their work on the platform. It is not offered as a professional service and its operations will be on the basis of best effort. The entire infrastructure is α -test platform. Possible downtime could occur without notice or due to overload caused by parallel experiments.

Depending on the number of participants, the project will also issue limits and constraints on the allocation of available resources. These limitations depend on the total capabilities of the federated platform as well as the number of participants. Typical limitations could be related to the max number of VMs to be instantiated, the number of physical resources usable or the max memory usable per participant team. Other limitations could apply, or be notified during the course of the Hackathon.

Additional information for the Hackathon participants will be updated in the SoftFIRE portal at <http://www.softfire.eu>



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