HORIZON 2020
Information and Communication Technologies
Integrating experiments and facilities in FIRE+

Second Open Call Announcement

Grant Agreement number: 687884

Project acronym: F-Interop

Project title: FIRE+ online interoperability and performance test tools to support emerging technologies from research to standardization and market launch
The standards and innovations accelerating tool

Type of action: Research and Innovation Action (RIA)

Project website address: www.finterop.eu

1 Project summary

F-Interop is a Horizon 2020 European Research project, which proposes to extend the European Future Internet research infrastructure (FIRE+) with online and remote conformance, interoperability and performance test tools supporting emerging technologies from research to standardization and to market launch. The outcome will be a set of tools enabling:

- Standardization communities to save time and resources, to be more inclusive with partners who cannot afford travelling to attend physical *interoperability* events, and to accelerate standardization processes;
- SMEs and companies to develop standards-based interoperable products with a shorter time-to-market and significantly lowered engineering and financial overhead.

F-Interop intends to advance existing FIRE+ testbeds in order to become an accelerator for new standards and innovations activities. It will achieve so by federating the following FIRE+ testbed facilities into the F-Interop cloud-based testing architecture. The testbeds cover the full spectrum of networked devices:

- **Fed4FIRE** (http://www.fed4fire.eu/testbeds/) federates 24 FIRE+ testbeds, bringing together cloud, IoT, wireless, wireless mobile, LTE, cognitive radio, 5G, openflow, SDN, NFV and network emulation technologies.
- **OneLab** (https://onelab.eu/) federates testbeds for the future Internet, including IoT, cognitive radio, wireless and overlay network technologies
- **IoT lab** (http://www.iotlab.eu/) federates crowd sourcing and crowd sensing testbeds, including smart campus, smart building and smart office testbed.

By doing so, F-Interop aims to address the following objectives:

- Integrate and extend several FIRE+ testbeds federations with a shared "Testbed as a Service", bringing together a federation of over 32 testbeds and 4755 nodes in a common reference architecture for online test and standardization support;
- Extend FIRE+ through research and development of online testing tools for the IoT, including: interoperability, conformance and performance tests;
- Support IoT standardization and enable closer cooperation with the industry, providing engagement with emerging IoT standards and standardization bodies as well as developing new online certification and labeling mechanisms.

To achieve such objectives F-Interop i**ncludes the coordinators of the 3 targeted FIRE+ testbeds** (Fed4Fire, OneLab, IoT lab), while at the same time its members bring **expertise from complementary research projects and have strong links with standardization bodies** (ETSI, IETF, IEEE, ITU, etc.) and international forums (IoT Forum, IPv6 Forum, etc.).

More information is available on F-Interop website: www.f-interop.eu

2 Objectives for inviting new third parties

The F-Interop project offers a number of innovations that will move existing FIRE+ testbeds beyond the state of the art for interoperability testing. It is therefore critically important that these innovations are tested and validated in terms of their added value and user acceptance. It is also important that the project make every effort to ensure the F-Interop platform is adopted and commercially exploited by a wide range of SMEs and large enterprises. In order to achieve this, the project allocated a dedicated budget to support a number of measures in order to select SMEs and web entrepreneurs to develop innovative applications based on the F-Interop framework, as well as to support complementary activities.

The F-Interop Second Open Call is designed to include projects that test and validate the F-Interop tools and platform, and provide a written report on potential improvements

In addition to the tool and test development projects described above, the second open call will also select two SMEs to conduct plugtest events with the purpose of outreaching even more members of the interoperability and standards development communities and to benchmark the effectiveness of the developed online and remote tools.

More explicitly, the financial support to third parties in the F-Interop second open call will target R&D for two categories of projects:

C. **SME F-Interop assessment reports:** Aim of this kind of projects is to generate and provide feedback on usability study for the current implementation of F-Interop platform and related tools. F-Interop will allocate up to ten (10) small grants of €10k each to SMEs for testing the F-Interop platform and provide a written report on potential improvements. Funding will cover testing on the F-Interop platform and preparation of a report. The outcome of this kind of experiments is a report detailing potential improvements to the F-Interop platform. Clear explanation of the methodology followed in order to provide the above identified usability study should be provided in the proposal template. Focus of the feasibility study should include but not limited to: understanding the simplicity of use and effectiveness of the proposed tools, while simplifying access to conformance, interoperability and performance online tests, and replicating the experience of physical tests session. A description of the report requirements and expected content, and a set of detailed questions will be provided by F-Interop.

D. **Plugtest Events:** Aim of this kind of projects is to outreach a larger number of communities with F-Interop platform and to collect feedback. F-Interop will select up to two (2) third parties to conduct up to three (3) remote, online plugtest events each. The objective of these events will be to involve interop communities to adopt and provide feedback on F-Interop tools for technical and/or syntactical Interoperability tests. €10k will be awarded to the third parties selected to run an event and another €10k will be allocated to the consortium partner that supports this plugtest event. Funding will cover the planning, promotion and delivery of each event, the follow-up with a survey and preparation of a report detailing the results of the entire interop tests conducted during the plugtest. Clear explanation of advancement and benefit of organizing remote plugfest events with respect to physical ones should be provided in Section 1 (Impact) of the proposal template. Examples of target communities should include but are not limited ITU, IETF, W3C, ETSI, IEEE. The call will consider the formal support of SDOs as a key factor of success.

Type of new third parties

Eligible third parties to the F-Interop second open call includes the following:

- Single European mid-caps, SMEs and Micro SMEs as defined in EU law: EU recommendation 2003/361,
- Web entrepreneurs and individual sole-traders;
- European secondary and higher education establishments, research institutes and other not-for-profit research organisations;
- Standards bodies such as ETSI, IETF, ITU, IEEE and W3C, BSI.

Each of these must be established in a EU Member State, in an Associated Country or in a country that contributes substantially to the financing of F-Interop research project. To avoid conflicts of interest, applications will not be accepted from persons or organisations who are partners in the F-Interop consortium or who are formally linked in any way to partners of the consortium. All applicants will be required to declare that they know of no such potential conflicts of interest that would prevent them from applying. Because successful applicants will not be required to join the F-Interop consortium, there will be no request for applicants to exhibit possession of a PIC number.

The following categories of third parties are envisioned to participate in the application process:

- *Platform users (aka F-Interop users):* these are the SMEs that are expect, if awarded, to use existing tools provided by the F-Interop platform in order to run tests and provide reports on the platform usability and user acceptance;
- *Plugtest event managers:* these are the entities that, if awarded, will organize, promote and run plugfest events by engaging new and relevant interoperability communities. Value added by additional involved communities should be clarified.
- *Existing project partners (aka F-interop platform providers):* these are original F-Interop partners that will receive support when a category D project is awarded, to support Plugfest activities when required by Plugtest managers.

In consideration of the funding available and the objectives of the second call, we encourage focused proposals submitted by a single institution.

3 Task of new third parties

New third parties will be requested joining the technical activities and quantitatively assessing and documenting their results into deliverables. In addition new third parties are expected to contribute to F-Interop dissemination and engagement activities and are strongly encouraged to contribute to F-Interop open data and open source repositories. For details regarding the dissemination and engagement activities guidelines, please refer to Section 12 of the Guide for Applicants.

Furthermore, in order to maximise impact, sub-projects posing the basis for strong results' exploitation, and which can significantly empower F-Interop infrastructures, will be strongly encouraged.

Submission of a number of good quality proposals, including proposals generated by Eastern Europe countries is particularly welcomed.

4 Obligations of new third parties

New third parties will be requested to sign the standard contract to protect IPR and identify responsibilities. Proposed solutions must comply with the F-Interop architecture and interfaces, as well as with additional technical requirements for integration with F-Interop tools and testbeds available as part of the F-Interop Second Open Call technical documentation.

5 Application process

Proposals for selection as additional third parties in the F-Interop project are submitted in a single stage, through the preparation of a complete proposal application, prepared according to the guidelines and the templates provided in the Guide for Applicants.

Proposal should be submitted by accessing the only form available at: http://www.finterop.eu/index.php/open-call according to the procedure described in the Guide for Applicants.

Submission deadline: the application process will open on September 14th, 2017 and will close on December 20th, 2017, 17:00 CET time.

Expected duration of participation in F-Interop project: Acceptance notification will be sent on January 29th, 2018 and selected projects are expected to start in March 2018 and to run until July 2018.

The expected duration of selected projects is up to four months. In particular, the different type of projects selected will have the following maximum expected duration:
- **Category C:** around 4 Months;
- **Category D:** around 3 Months;

Call budget: total budget allocated for the series of open calls is €700K, of which €610K will support 19 projects (and a minimum of 19 expected third parties external institutions), while €90K will be used to assist consortium partners to deliver technical support for new tools integration and plugtests organisation. Of this, for the Second Open Call, €140K budget is available. €120K will support 12 projects, while €20 will be used to assist consortium partners to deliver technical support for plugtest organisation.

Details about the maximum contribution recommended for each of the two project types encompassed by the second open call are as following:
- **Category C:** 10K per third parties; 10 in total;
- **Category D:** 10K per third parties; 2 for the Second Open Call.

Language in which the proposal should be submitted: English

Web address for further information (full call text/guidelines): http://www.f-interop.eu/index.php/open-call

Email address for further information: marie.baldauf-lenschen@digicatapult.org.uk (helpdesk support will be active between September 14th, 2017 and December 22nd, 2017)

Criteria:

Several criteria will be taken into account for the pre-selection. For both categories proposals submitted by teams showing a good gender balance are welcomed.

For Category C the evaluation will be based in particular on expertise of the applicant, size of the company, and the number of the tools considered in the testing phase.

For Category D the evaluation will be based in particular on the potential number of users/participants mobilised for the plugfest events, and the number of functionalities tested.

Moreover, the final selection will take into account complementary criteria such as geographic distribution among the selected projects within each category, and potential impact for standardization communities.