Platform for Online Interoperability and Performance Test

F-Interop aims to extend FIRE+ testbeds with online interoperability and performance test tools to support emerging technologies from research to standardization and market launch, helping to accelerate innovation.

F-Interop is a **three years European Horizon 2020 research and innovation project**. It is researching and developing online **interoperability** and **performance** test tools supporting emerging **IoT-related technologies** from **standardizatio**n to **market**.

F-Interop ambitions are the following:

- **Supporting** researchers communities, SMEs involved in developing new products, and standardization processes, through a close collaboration with standards development organizations, including ETSI, oneM2M, IETF and W3C;
- **Integrating** and **extending** several European testbeds federating them with a shared "Testbed as a Service" platform interconnecting over **32 testbeds** (Fed4FIRE, OneLab, IoT Lab) and **4755 nodes**;
- **Researching** and **developing** online testing tools for the Internet of Things, including interoperability and conformance tests, scalability tests, Quality of Service (QoS) and Quality of Experience (QoE) tests, and Energy efficiency tests;
- **Developing online certification and labelling mechanisms** in order to enable an easier participation of researchers and industry in the standardization process.

Through an **Open call** process F-Interop aims to facilitate SMEs and developers communities to use and enrich the developed testing platform with additional modules and extensions.

F-Interop Live Demos

F-Interop is still in its initial phase. We selected two demos to showcase the services that will be provided by F-Interop.

CoAP passive validation

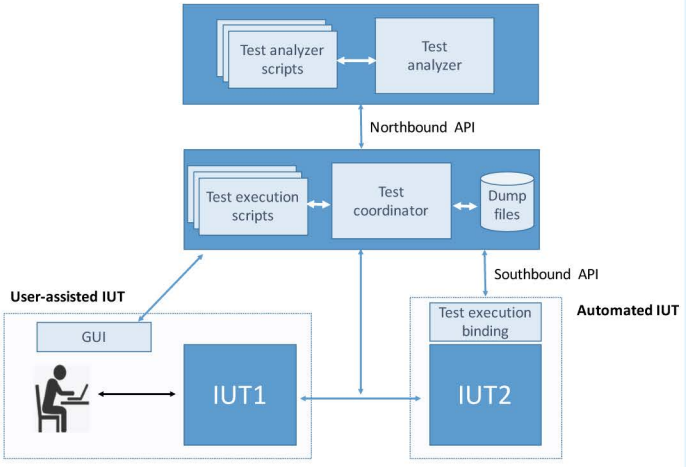
Interoperability testing is a process of verification. Its purpose is to verify that two implementations work together according to implemented standard(s) while providing the end-to-end service to the user. Interoperability testing is crucial to the successful development and deployment of new technology, but can be time consuming.

Remote interoperability testing reduces time and effort. One of the barriers to interoperability testing is the effort required to execute the verification process between two parties. F-Interop aims to alleviate the effort by offering an on-line validation service.

Validation of CoAP interoperability:

CoAP (RFC 7252) is one of the main transport protocols for constrained nodes. This demo showcases a validation of interoperability between two CoAP implementations:

- An implementation is provided by a user of the F-Interop platform
- An automated implementation is driven by F-Interop without human interaction
- The user selects the tests and is guided through the process
- At the end of the execution, the user receives an evaluation marking for each test case



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