

Boosting IoT Interoperability F-Interop 2nd Open Call

7th September – 20th December 2017



The Problem

- **Interoperability requires tests, validation and certification**
 - Conformance
 - Test against reference implementations
 - Interoperability
 - Test against other vendors implementations
 - Performance
 - How can protocols be improved?

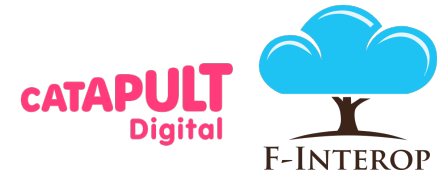


Barriers for SMEs

- **SMEs are driven by time-to-market**
 - But lack of interoperability might reduce the size of this market
- **Standards development is driven by large organizations**
 - Tests require physical meetings, complex logistics and high costs
 - Plugfest/Test houses
 - Managing confidentiality of information
- **Certification process might result long and costly**



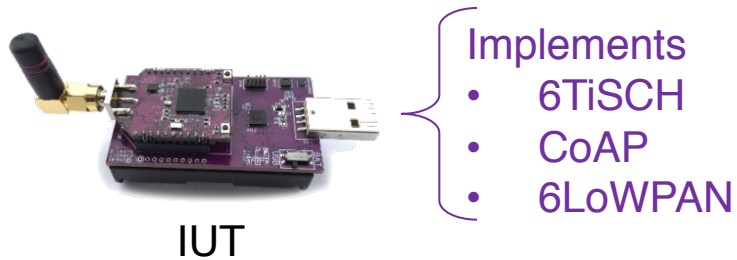
F-Interop Project



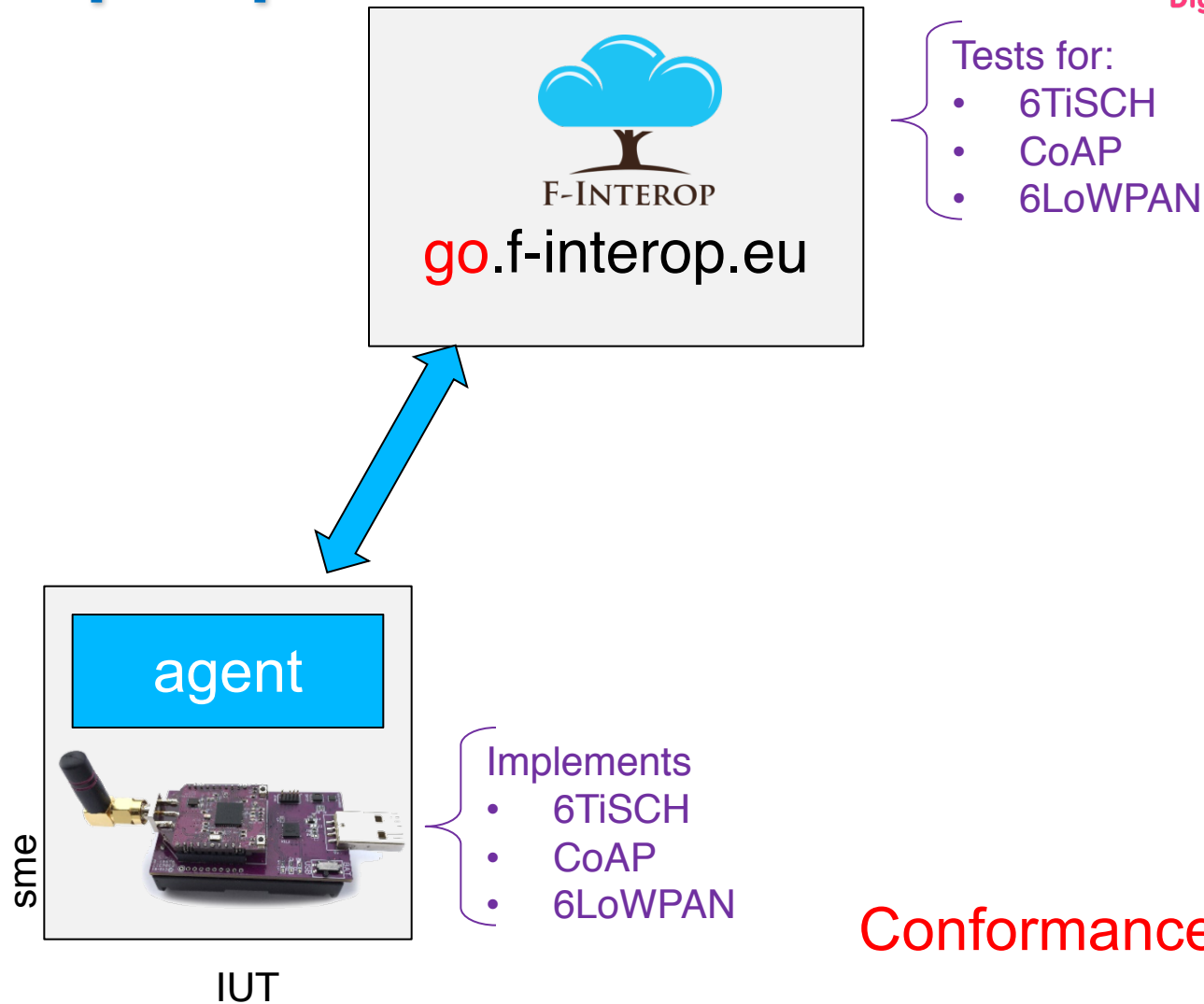
- **EU H2020 F-Interop project** is developing **online remote interoperability** and **performance test tools** for emerging IoT-related technologies
- **The benefits:**
 - Make interoperability testing and certification accessible to SMEs
 - Speed up creation of interoperable IoT solutions without sacrificing time to market
- **The approach:**
 - Using internal core resources
 - Leveraging on open calls funding



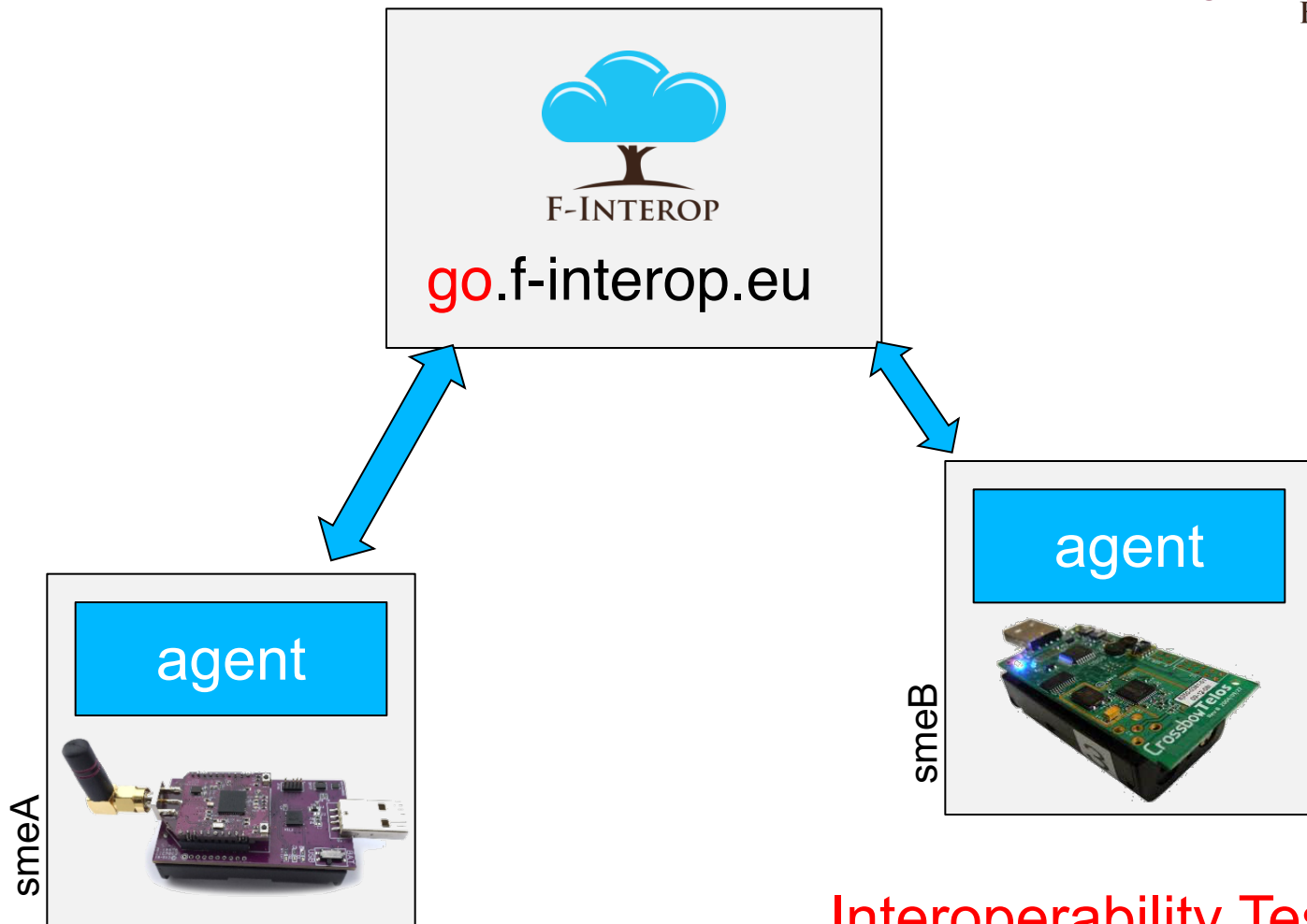
F-Interop in practice



F-Interop in practice



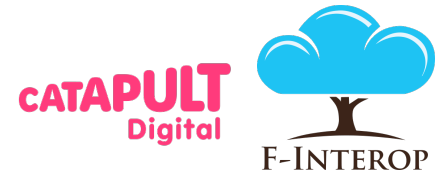
F-Interop in practice



Interoperability Testing



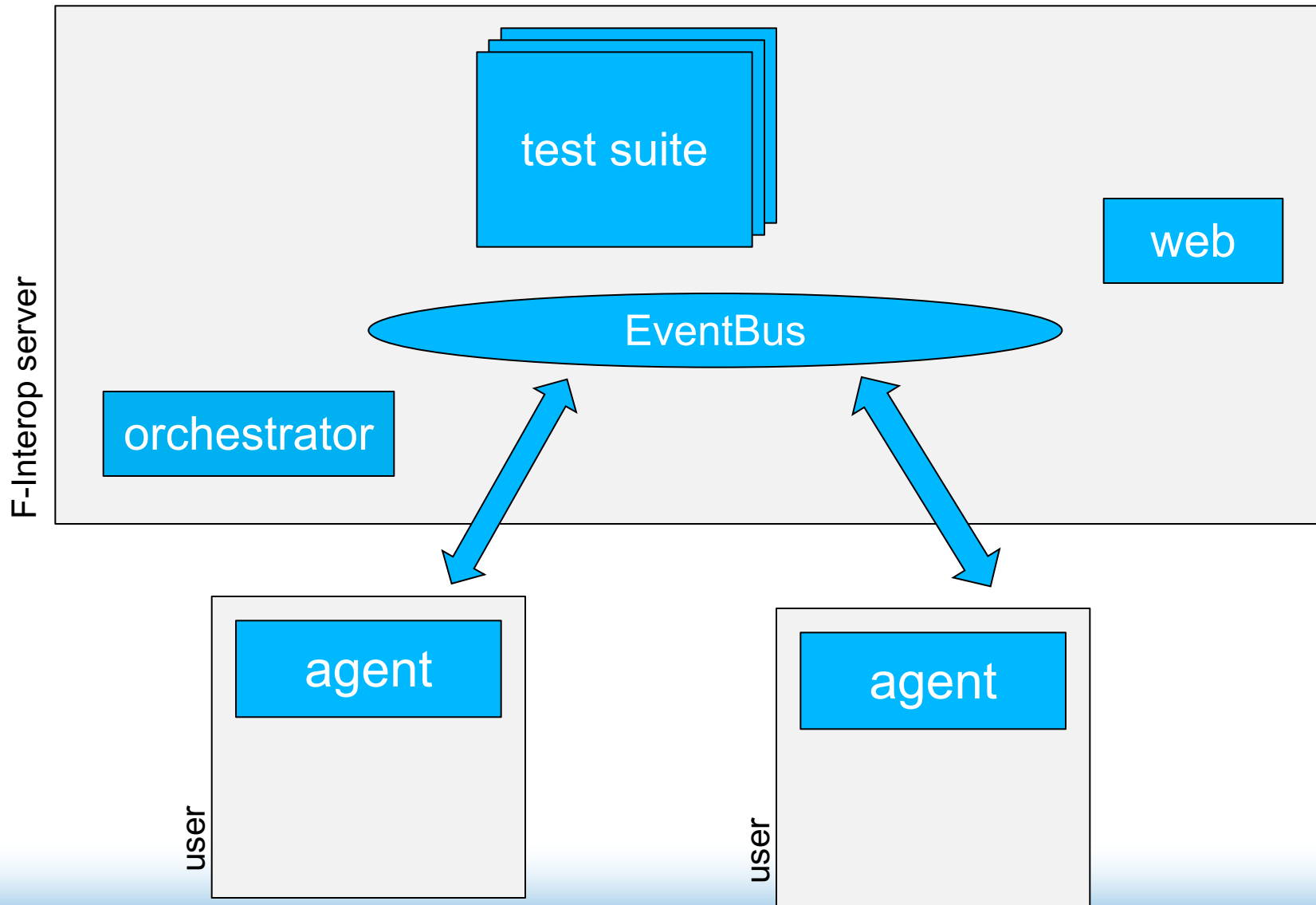
What the F-interop platform offers



- **Test Suites composed of:**
 - Test Description (TD)
 - Describe the test scenario, any language
 - Test Script (TS)
 - Set of actions to implement the scenario
 - Exchange of information between IUTs (interoperability) and IUT and test system (conformance)
 - Test Analysis (TA)
 - Analyze, compare messages, generate verdict (pass or fail)
- **Availability of devices**
 - Testbed federation and community building



Our modular architecture



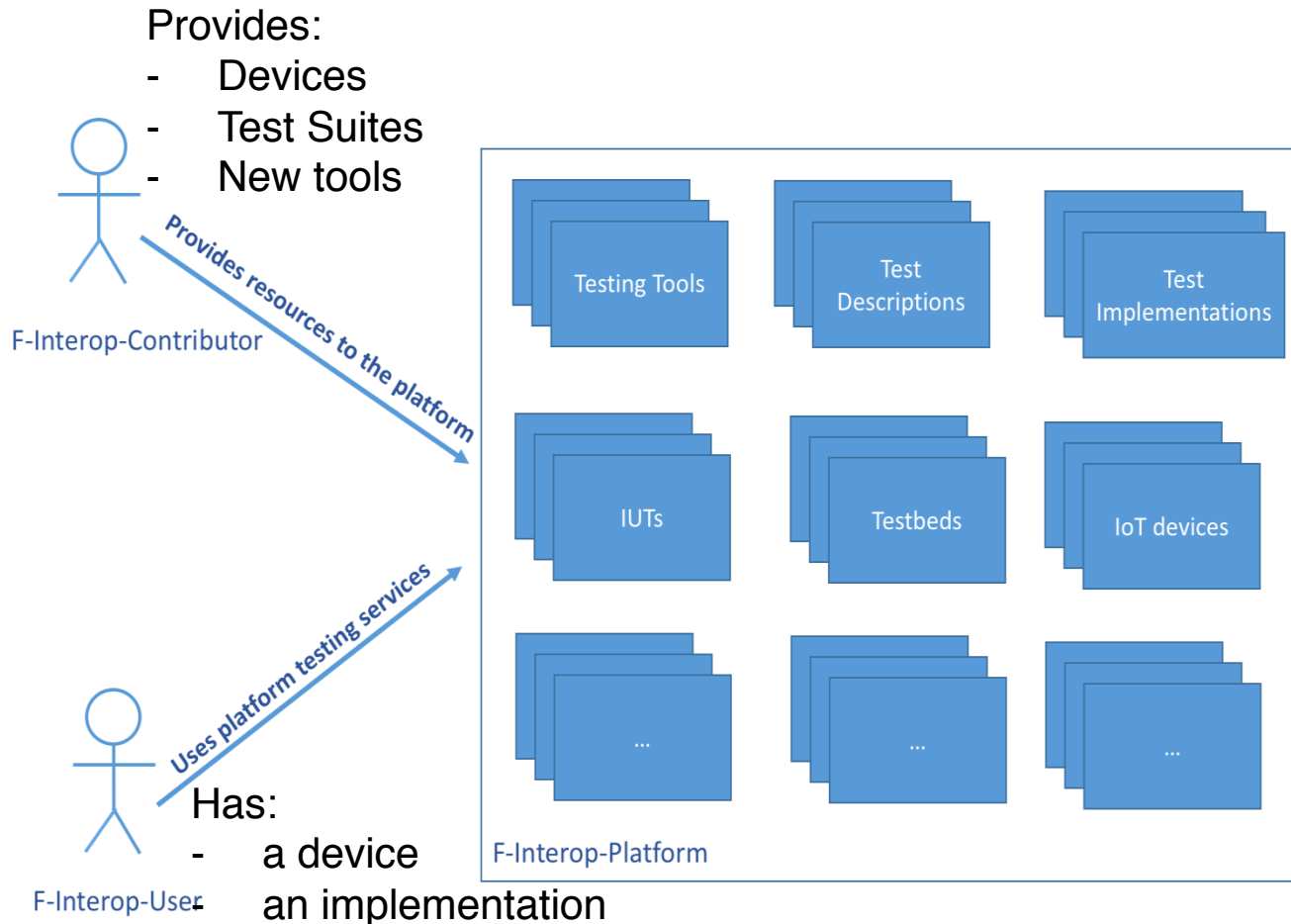
Available tools

- **Test Suites (supported protocols and tools):**
 - Core platform:
 - 6TiSCH: implementation for OpenWSN, Contiki-NG, RIOT, TinyOS
 - CoAP: Californium and Coapthon (server side); tinyDTLS + libcoap, <http://coap.technology/impls.html> (client side)
 - OneM2M: EclipseOM2M and Ocean; oneM2M MCA and MCC interfaces
 - First Open Call extension (under development):
 - LPWAN
 - LWM2M
 - 6LoWPAN
 - Secure Join, OSCOAP, EDHOC
 - Semantic interoperability tools
- **Performance tools**
 - Privacy analyser
 - Performance impairment generator

API documentation at: <http://doc.f-interop.eu/>



F-Interop ecosystem



Most of existing projects focus on technical development, and might lack Contributors; ecosystem development is **priority** for F-Interop



Supported Activities & Budget

2nd Call Categories	Grants	Award
SME devices F-Interop tests and report	10	€10 000
Plugtests	2	€10 000

- **SME devices Interop tests** to test F-Interop platform
- **Plugtests** to conduct up to 2 remote online plugtest events



Submitting a proposal

	SME reports	Plugtests
Eligibility	SMEs only	All but SDOs preferred
Proposal type	Lightweight - max 10 pages	Lightweight - max 10 pages
Available grants	10 for 10K Euro each	2 for 10K Euro each

- **Category C:**
 - Testing the platform functionalities and provide feedback (*How far is the platform from real scenarios? Plugtest or test house model?*)
 - Feedback is on the platform, not on the tested device/protocols
 - Tested device and protocol is just a trigger for platform functionalities
- **Category D:**
 - Organise a testing event, with a number of participants using the platform
 - Help with the platform exploitation by engaging communities of first adopters



Who we are looking for?

- **Category C:**

- SMEs, test houses, academia or research organizations with experience in developing or testing IoT technologies
- Have participated to plugfest or have a supported protocol to test

- **Category D:**

- Organizations with link on relevant communities, standardization bodies (SDOs, such as ETSI, IETF, W3C, ITU, IEEE), test houses, etc
- Able to gather enough traction for participation to online plugfests



Important Dates

Sep, 7th

Dec, 20th

Jan, 29th

March, 30th

July, 30th

... 2017

... 2018

Formally launch 2nd Open
Call & open the
application process

Conduct
evaluations &
select 3rd parties

...

Continuous
reporting &
feedback

Commence
testing &
Plugtest
events

Close the
application process

Projects
kick off

Open Call
Starts

Results
announcement

Project
Completion



Find out more

- **Website:**

<http://www.f-interop.eu/index.php/open-call2>

<http://www.f-interop.eu/index.php/open-call/open-call-faqs>

<http://www.f-interop.eu/index.php/tools-experiments>

- **Email:**

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michele.nati@digicatapult.org.uk

- **Blog post:** <https://www.digitalcatapultcentre.org.uk/f-interop-open-call-lessons-learnt/>

- **API documentation:** <http://doc.f-interop.eu/>





Thank you

