ETSI

🐦 #NFVplugtests
#MECplugtests

NFV&MEC
IOP PLUGTESTS 2021
Kick-off call

ETSI Plugtests Team   5th July 2021

Plugtests Team

ETSI Team

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TAP

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Registration update (deadline July 15th)

- Accenture
- Adlink Technologies
- Canonical
- Cisco
- CNIT
- Litmus IS

- FSCOM
- Huawei
- Nextworks
- NTT Corporation
- Palo Alto Networks
- STC

- TATA Elxsi
- T-Mobile
- Ulak Haberlesme
- Vulk Coop
- Wind River
- xFlow Research

Supporting Open Source Communities:

Register at https://www.etsi.org/events/1935-nfv-mec-iop-plugtests-2021

NFV & MEC IOP Plugtests Scope

Multivendor Interoperability

⩗ NFV Interop

⩗ MEC & MEC-in-NFV Interop

During the Pre-Testing phase

⩗ NFV API Conformance

⩗ MEC API Conformance

Additional tracks

⩗ NFV Automated Interop (based on NFV-SOL016)

⩗ CNCF CNF Testing

⩗ Or-Or Interop (based on NFV-SOL011)

⩗ Multi-vendor NS & 5G demos (5G core, network slicing..)

Call for participation

- Virtual, Physical and Containerized Network Functions

- Management and Orchestration solutions: NFVO, VNFM

- Network Function Virtualisation Infrastructure and Virtual Infrastructure Managers

- Hardware and Labs

- MEC Platforms, Platform Managers and Orchestrators (MEO, MEAO, MEPM, MEPM-V)

- MEC Applications

- Operations and Business Support Systems: OSS, BSS, Slice Managers
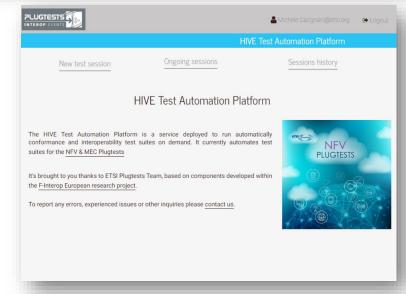
- Test Tools and simulators implementing NFV or MEC APIs.

Main Plugtests Enablers : HIVE & TAP

HIVE: Hub for Interoperability and Validation at ETSI

⋁   Interconnecting participants and solutions

TAP : Test Automation Platform

⋁   Enabling participants to run automated API Conformance Test Suites autonomously
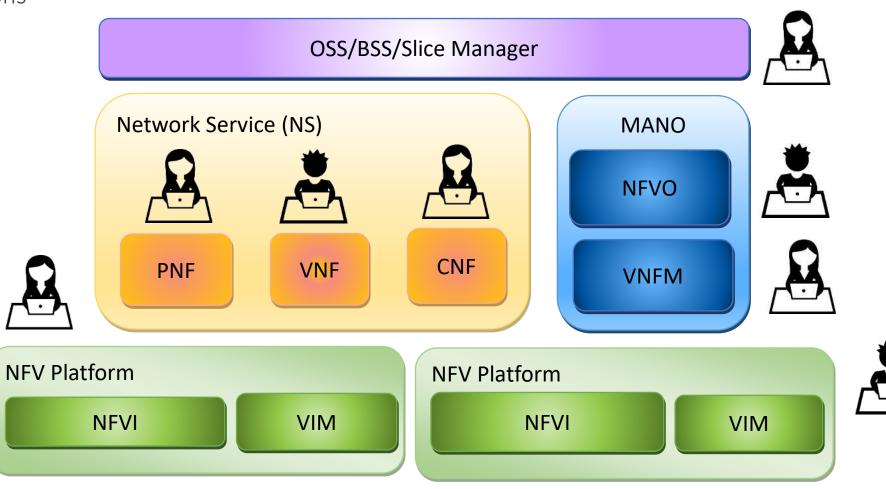
Scope – NFV Interop testing

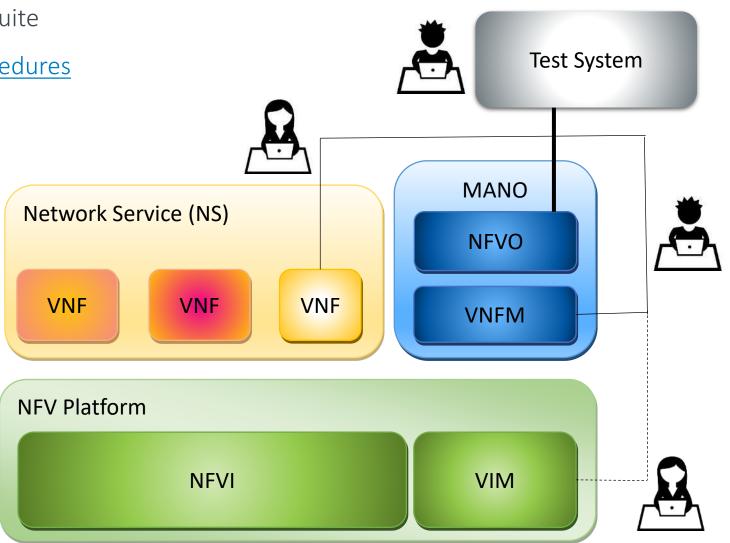- Based on [NFV- TST007 Guidelines for NFV Interoperability Testing](#)

- Several configurations

ETSI GR NFV-TST 007 V2.6.1 (2020-01)

GROUP REPORT

Network Functions Virtualisation (NFV) Release 2;
Testing;
Guidelines on Interoperability Testing for MANO

OSS/BSS/Slice Manager

Network Service (NS)

PNF | VNF | CNF

MANO

NFVO

VNFM

NFV Platform

NFVI | VIM

NFV Platform

NFVI | VIM

Scope – NFV Automated Interop Testing

- New experimental Robot Framework Test Suite

- Based on [NFV- SOL016 MANO Stage 3 Procedures](#)
  - VNF package on-boarding
  - NS instantiation
  - NS termination
  - NS scale VNF
  - NS update (external VNF connectivity)

- Triggers and checks based on NFV-SOL005, SOL003, SOL002

Test System

Network Service (NS)

VNF   VNF   VNF

MANO

NFVO

VNFM

NFV Platform

NFVI   VIM
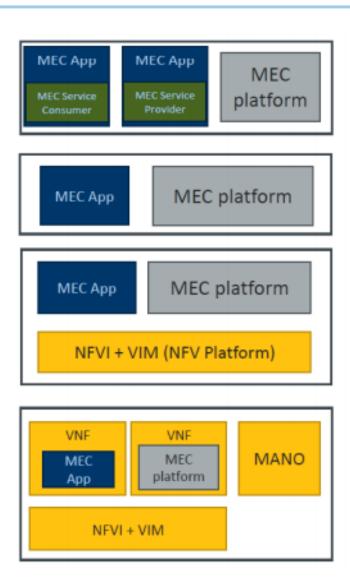
Scope – MEC Interop Testing

- Multi vendor Test Sessions

- **Several configurations, testing for both MEC Standalone and MEC-in-NFV solutions**

- Building on the MEC IOP Test Plan from the NFV&MEC Plugtests (2020)
  - MEC Application Lifecycle
  - Traffic rules management and enforcement
  - MEC Services and MEC APIs
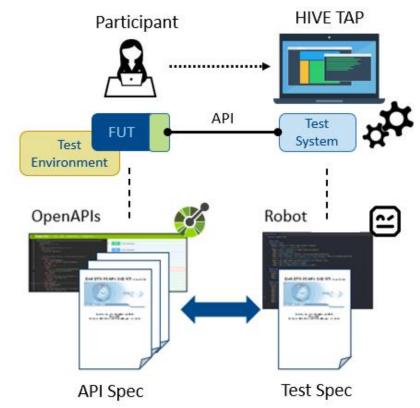
Pre-testing – NFV & MEC API Conformance Testing

API Specifications

- NFV-SOL002, NFV-SOL003, NFV-SOL005 v2.4.1, v2.6.1, v2.7.1, v2.8.1 (dev), v3.3.1
- NFV-SOL009, NFV-SOL011, NFV-SOL012 v3.3.1
- MEC010-2, MEC011, MEC012, MEC013, MEC021, MEC029 v2.1.1
- MEC014, MEC015 v2.1.1, MEC016 v2.2.1

Descriptor Specifications

- NFV-SOL001, NFV-SOL006 v2.7.1, v3.3.1

Test Specifications

- NFV-TST010 v2.4.1, v2.6.1, v2.7.1, v3.3.1
- MEC-DEC032 v2.1.1
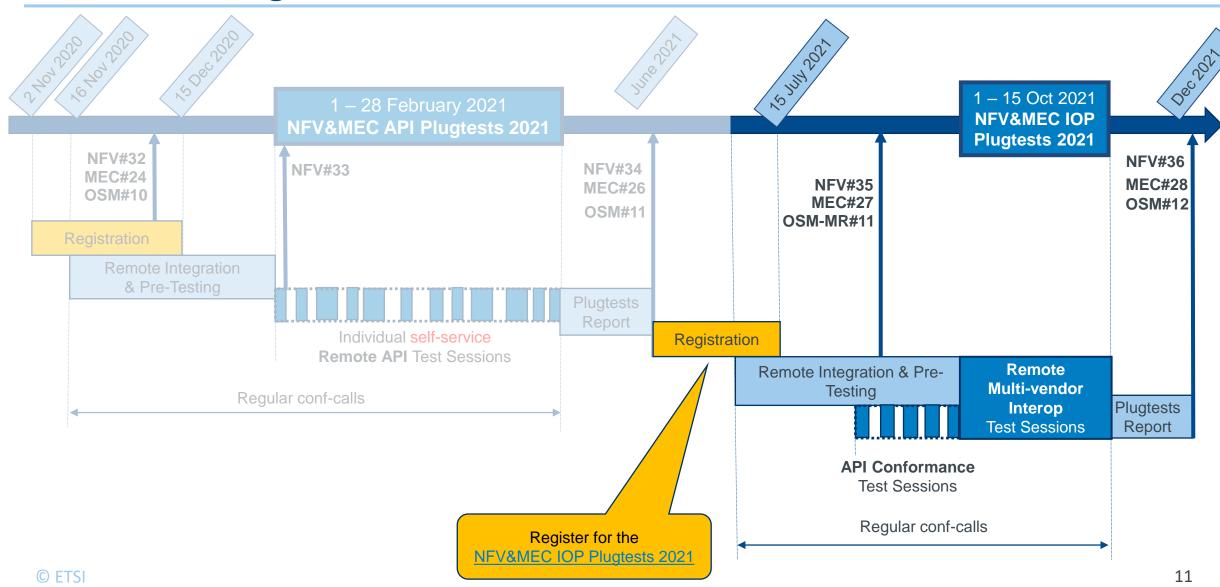
Robot Framework, Test Suites available in the ETSI Forge

- NFV TST010 Robot Test Suite
- MEC DEC032 Robot Test Suite

NFV&MEC Plugtests – 2021 Timeline

2 Nov 2020

16 Nov 2020

15 Dec 2020

June 2021

15 July 2021

Dec 2021

**1 – 28 February 2021
NFV&MEC API Plugtests 2021**

**1 – 15 Oct 2021
NFV&MEC IOP
Plugtests 2021**

NFV#32
MEC#24
OSM#10

NFV#33

NFV#34
MEC#26
OSM#11

**NFV#35
MEC#27
OSM-MR#11**

**NFV#36
MEC#28
OSM#12**

Registration

Remote Integration
& Pre-Testing

Plugtests
Report

Individual self-service
Remote API Test Sessions

Registration

Remote Integration & Pre-Testing

**Remote
Multi-vendor
Interop
Test Sessions**

Plugtests
Report

Regular conf-calls

API Conformance
Test Sessions

Register for the
NFV&MEC IOP Plugtests 2021

Regular conf-calls

Registration – deadline July 15th

- At https://www.etsi.org/events/1935-nfv-mec-iop-plugtests-2021

    - As many delegates as needed

- Only Operators and Academia can register as observers

    - Vendors are expected to provide components or tools for the Test Sessions and have an active participation

- Once registered

    - The NFV Plugtests Programme NDA needs to be signed

        - For new participants in the Programme only

        - Same as for previous events, regular participants don't need sign again

    - You tell us how you plan to participate (component, tool…)

    - You get access to the NFV-PLUGETSTS Wiki, Slack and NFV_PLUGTESTS Mailing list

Remote integration & Pre-testing

◊ Regular preparation calls, Mondays 3-4 pm CET
- July 5th – Open Kick-off call (today!)
- July 19th
- August 2nd
- August 23rd
- September 6th
- September 13th
- September 20th
- September 27th

◊ Main goals

◊ Get your implementation / lab connected to HIVE (Instructions in the WIKI)

◊ Get familiar with test specifications and ask questions

◊ Get your Function Under Test documented on the wiki

◊ Prepare, validate and share descriptors, packages …

◊ Start (pre-)testing with 3rd parties

◊ Run API Conformance on TAP
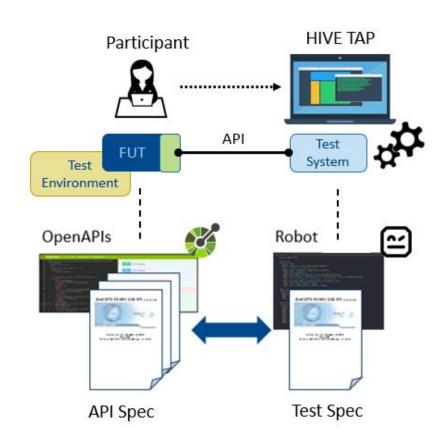
Pre-testing: start as soon as ready, be proactive!
Contact 3rd parties on Slack, book pre-testing session, and ask questions!!

© ETSI

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How API Conformance Test Sessions are run
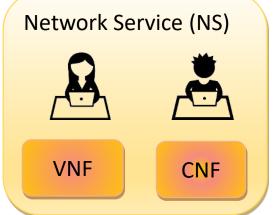
- During remote integration phase

    - Participants get HIVE (VPN) and TAP access

    - All FUTs are deployed and expose their APIs on HIVE, so that TAP can connect to them

- During the pre-testing phase (September), participants can test **any API anytime**:

    - Connect to Slack to interact with their team, partners, observers and Plugtests team, launch video call if needed

    - Open a session on TAP

    - Enter configuration information and run the tests for the selected API

    - Validate or discard results

- Participants, Observers and Plugtests Team **meet regularly** to sync, discuss and gather feedback

    - Issues on Specs, APIs, Test Specs, ..

    - Practical issues on TAP or other tools / arrangements

- At the end of the event, ETSI freezes results and builds **statistics with overall aggregated data** that is be published in the **Plugtests Report**

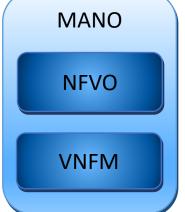   - Detailed results belong to each participating organisation.

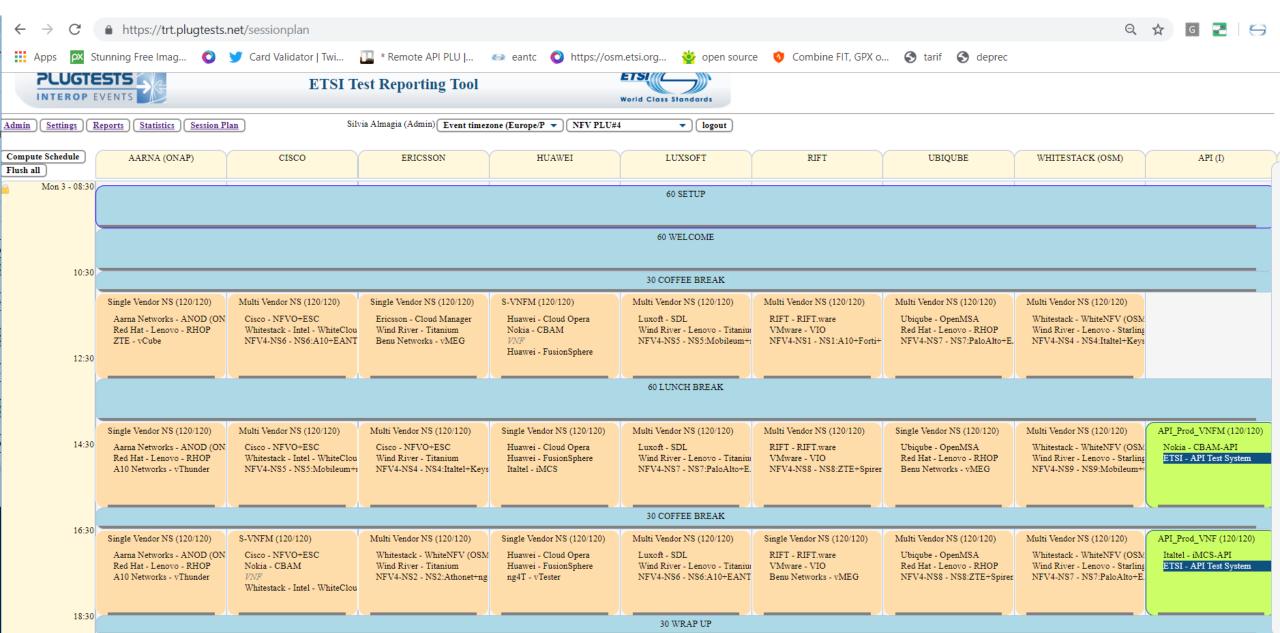# How IOP Test Sessions are run

- Before Plugtests start
  - Participants make their implementations available in HIVE
    - Connect their lab, deploy in a 3rd party lab, or
    - Upload images to NF Repository / Docker Registry
  - ETSI publishes an IOP Test Schedule proposal
    - Featuring different combinations of FUTs
- During the Plugtests, participants follow the IOP Test Schedule:
  - Connect to Slack to interact with other teams and observers, launch a video call
  - Run IOP testing collaboratively according to the Test Plan
  - Enter and validate results in the TRT
- Participants, Observers and Plugtests Team **meet daily** to sync, discuss and gather feedback
  - Issues on Specs, Test Specs, ..
  - Practical issues / arrangements for the Test Sessions
- At the end of the event, ETSI freezes results and builds **statistics with overall aggregated data** that is be published in the **Plugtests Report**
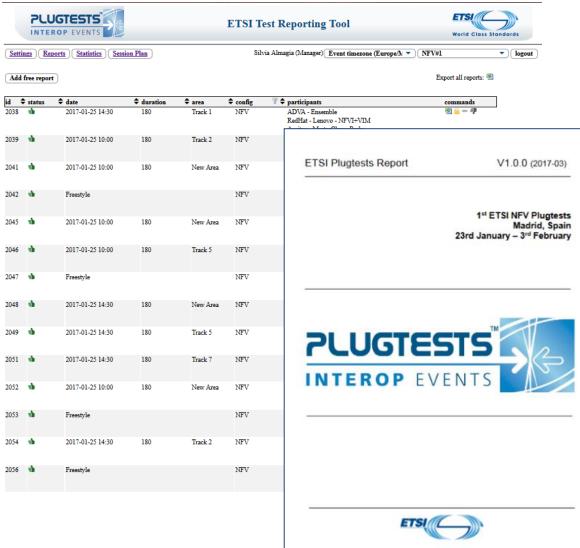 - Detailed results belong to each participating organisation.

IOP Test Session Schedule

IOP Test Session Reports

- trt.plugtests.net
- Instructions in the WIKI

Guidelines for Comms

You are invited to communicate on your **participation** to Plugtests:

#NFVplugtests
#MECplugtests

- PRs, blog posts, social media...

- Note: If you are to mention other participants, please make sure they are OK with it

- The event might be recorded only for ETSI use and related promotional purposes. By attending our event, you are hereby made aware that you may be photographed and/or video recorded and that your consent is presumed.

Some guidelines when communicating on Plugtests **Results**:

- Please wait for the Plugtests Report to be published before communicating on Plugtests Results

- You can communicate on your own company's (/project) results

- Do not mention other companies results if you do not have a written agreement with them

- Do not compare to other participants, i.e: "we are the first", "the only ones", etc....

ETSI acknowledges participation, but does not endorse or certify companies, products or results

- In case of doubt, check the RoE and NDA, or ask ETSI

Questions?

Thank you ☺

plugtests@etsi.org