NFV&MEC Plugtests 2020 Kick-off call

Deep dive on MEC Track

#NFVplugtests  #MECplugtests

ETSI Plugtests Team

Sophia Antipolis, 24th Feb 2020
Plugtests Team

ETSI Team

CTI Technical Experts:

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IT, HIVE:

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+ Technical support team under construction
Registration update

Participants and observers:

✔ Benu Networks  ✔ EdgeGap
✔ Canonical  ✔ Ericsson
✔ Cisco  ✔ Fortinet
✔ Deutsche Telekom  ✔ Huawei
✔ EANTC  ✔ Intel
✔ Keysight Technologies
✔ Mobileum
✔ Nextworks
✔ Palo Alto Networks
✔ Red Hat
✔ RIFT
✔ STC
✔ Telenity
✔ Ubiquube
✔ University of Patras
✔ Whitestack
✔ Wind River

Supporting Open Source Communities:

Register at https://www.etsi.org/nfvmecplugtests
NFV & MEC Plugtests Scope

- NFV Interop
- NFV Interop – Cloud Native Track
- NFV Automated Interop
- NFV API Conformance

- MEC & MEC-in-NFV Interop
- MEC API Conformance

Deep dive!
Scope - MEC Interop Testing

- Test for both MEC-in-NFV and MEC Standalone solutions
- Test Plan overview:
  - MEC Application Lifecycle
  - Traffic rules management and enforcement
  - MEC Services and MEC APIs
- Building on Test Plan MEC IOP V1.0.0 from the 4th NFV Plugtests (2019)
Deployment view defined for MEC Track in 2019

Central Office

- MEC Applications
- OS + Hypervisor
- COTS Hardware

Device

Test APP

Plugtests Network

Access network

Edge Site

- MEC Applications
- OS + Hypervisor
- COTS Hardware

Traffic generator
Scope – MEC Interop Testing – MEC Reference Arch

Operations Support System

Multi-access edge orchestrator

MEC platform manager

MEC service

Service registry

Traffic rules control

DNS handling

MEC platform

MEC app

MEC app

MEC app

Data plane

Virtualisation infrastructure

MEC host

MEC platform element mgmt

MEC app rules & reqts mgmt

MEC app lifecycle mgmt

Virtualisation infrastructure manager

Specified reference points

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Scope – MEC Interop Testing – MEC in NFV Reference Arch
### Base specifications – what’s new?

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Latest Published</th>
<th>Latest Draft</th>
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<tbody>
<tr>
<td>MEC 001</td>
<td>Terminology</td>
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<td>Use Cases and Requirements</td>
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<td>2.1.2 (2020-02)</td>
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<td>2.1.3 (2019-09)</td>
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<td>System, host and platform management</td>
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<td>Application lifecycle, rules and requirements management</td>
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<td>Edge Platform Application Enablement</td>
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<td>MEC 012</td>
<td>Radio Network Information API</td>
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<tr>
<td>MEC 013</td>
<td>Location API</td>
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<td>Deployment of Mobile Edge Computing in an NFV environment</td>
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<td>MEC 025</td>
<td>MEC Testing Framework</td>
<td>2.1.1 (2019-06)</td>
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<tr>
<td>MEC 032-3</td>
<td>API Conformance Test Specification;Abstract Test Suite (ATS)</td>
<td>NA</td>
<td>0.0.3 (2019-11)</td>
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</tbody>
</table>

New versions since PLU #4
Base specifications – what is new (cont.)

- **MEC App descriptor information model**
  - MEC 010-2, clause 6.2.1

- **Resources of application lifecycle management on Mm1**
  - MEC 010-2, clause 7.4

- **MEC application support API**
  - MEC 011, clause 7

- **MEC RNIS or Location service**
  - MEC 012, MEC 013
  - Or others if requested
Scope – MEC Interop Testing reference architecture

Examples of Test Configurations

Generic Interoperability Test architecture, ETSI GR MEC-DEC 025
MEC API Conformance Testing

• Individual Test Sessions (self-service) => Participants operate their FUT and the Test System

• Test Plan:
  • MEC DEC 032 – MEC API Conformance Specs
  • Robot Framework Test Suites

• Plugtests Team makes available on-line
  • the Test System: MEC API Client & notification end point

• Participants provide:
  • the FUT: MEC 011, 012, 013, ... API Server
  • the Test Environment

• A MEC API testing briefing will be scheduled during the preparation phase
NFV&MEC Plugtests 2020 - Timeline

- **Registration**
  - Register at [https://www.etsi.org/nfvmecplugtests](https://www.etsi.org/nfvmecplugtests)

- **Remote Integration & Pre-testing**

- **Remote Test Sessions**

- **On-site Interop & API Test Sessions**
  - ETSI Sophia Antipolis

- **Plugtests Report**

- **Regular conf-calls**

**Timeline**
- **15 Dec 2020**
- **10 Feb 2020**
- **17-21 Feb 2020**
- **15 March 2020**
- **11-15 May 2020**
- **15-19 June 2020**
  - NFV#29
  - NFV#30
- **14-18 Sept 2020**
  - NFV#31
Registration

✔️ At https://www.etsi.org/nfvmecplugtests
  ✔️ Min 1 person on-site (ETSI, Sophia Antipolis) 15-19 June – 2 or more recommended
  ✔️ Only people that will be on-site need to register

✔️ 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
  ✔️ You will receive a QR code
    ✔️ You will need it for on-site check-in
  ✔️ The NFV Plugtests Programme NDA needs to be signed
    ✔️ Same as for previous events, no need to re-sign
  ✔️ The team gets access to the NFV-PLUGETSTS Wiki, Slack and subscribed to the NFV_Plugtests Mailing list
    ✔️ As many people in remote support as needed => just ask to Plugtests@etsi.org
Remote integration

✔ Regular calls, Mondays 3-4 pm CET

- February 10th – Kick-off
- February 24th – Deep dive on MEC
- March 16th
- April 6th
- April 20th
- May 4th
- May 11th
- May 18th
- May 25th
- June 8th

✔ Main goals

✔ Get your implementation / lab connected to HIVE

✔ Hub for Interoperability and Validation at ETSI, instructions in the WIKI

✔ It is also possible to ship equipment to ETSI

✔ Get familiar with test specifications and ask questions

✔ Get your Function Under Test documented on the wiki

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Remote (Pre-)Testing

✔ Regular calls, Mondays 3-4 pm CET
  • February 10th – Kick-off
  • February 24th – Deep dive on MEC
  • March 16th
  • April 6th
  • April 20th
  • May 4th
  • May 11th
  • May 18th
  • May 25th
  • June 8th

✔ Main goals
  ✔ Start (pre-)testing with 3rd parties remotely
  ✔ Prepare, validate and share descriptors, packages …
  ✔ Start running conformance tests remotely

✔ Start as soon as remote integration completed => be proactive!
  ✔ Contact 3rd parties on Slack, book pre-testing session, and ask questions!!
On-site testing @ ETSI 15-19 June 2020

**NFV&MEC Plugtests 2020**

Sophia Antipolis, France
Free of charge
15-19 June 2020

**Venue & Travel**

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<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tr>
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<td>Test Sessions</td>
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<td>13:00-14:00</td>
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<td>16:30-18:30</td>
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<td>WRAP UP</td>
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<td>18:30-19:00</td>
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<td>Networking</td>
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<td>dinner buses leave @ 18:30</td>
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Guidelines for Comms

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

- PRs, blog posts, social media...
- Note: If you are to mention other participants, please make sure they are OK with it
- The event is being photographed and video 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
Back up slides
Scope 1 – Interop testing

✔️ Based on NFV-TST007 Guidelines for NFV Interoperability Testing v2.6.1

✔️ Several configurations
Scope 2 – Interop testing – Cloud Native track

✔️ Based on NFV-TST007 Guidelines for NFV Interoperability Testing v2.6.1

✔️ Start with simpler configurations
Scope 3 – Automated Interop Testing

- New experimental Robot Framework Test Suite
- Based on NFV- SOL016 MANO Stage 3 Procedures (WIP)
  - VNF package on-boarding
  - NS instantiation
  - NS termination
  - NS scale VNF
  - NS update (external VNF connectivity)
- Triggers and final checks based on SOL005
  - Additional checks (SOL002, SOL003) TBD
Scope 4 – NFV API Conformance Testing

- Individual Test Sessions (self-service) => Participants operate their FUT and the Test System

- Test Plan:
  - NFV TST010 – NFV API Conformance Specs
  - Robot Framework Test Suites
  - Targeting several SOL versions (2.4.1, 2.6.1, 3.3.1)

- Plugtests Team makes available on-line
  - the Test System: NFV API Client & notification end point
  - the Test Environment: NFVI and VIM.

- Participants provide:
  - the FUT: NFV SOL002/SOL003/SOL005/SOL009/SOL011... API Server
  - the Test Environment (optionally)

- An API testing briefing will be scheduled during the preparation phase
MEC & NFV Gap (MEC 17)

- Mv1: reference point between MEAO and NFVO
- Mv2: reference point between MEPM-V and VNFM (MEC App LCM)
- Mv3: reference point between VNFM (MEC App LCM) and VNF (MEC App)
Changes required (summary)

**Mv1:**
- Adapt MEAO to follow Os-Ma-nfvo for Mv1 (to NFVO)
- Adapt MEAO to follow Os-Ma-nfvo for Mm1 (to OSS)

**Mv2:**
- Adapt MEPM to follow Ve-Vnfm-em for Mv2 (to VNFM)
- Adapt MEAO to follow Os-Ma-nfvo for Mm1 (to OSS)

**Mv3:**
- Not needed yet. Still TBD.
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<td>Test Session Schedule</td>
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<tr>
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Test Session Reports

- trt.plugtests.net
- Instructions in the WIKI