

## 2<sup>ND</sup> NFV PLUGTESTS KICK-OFF

Silvia Almagia, ETSI CTI

2nd October 2017

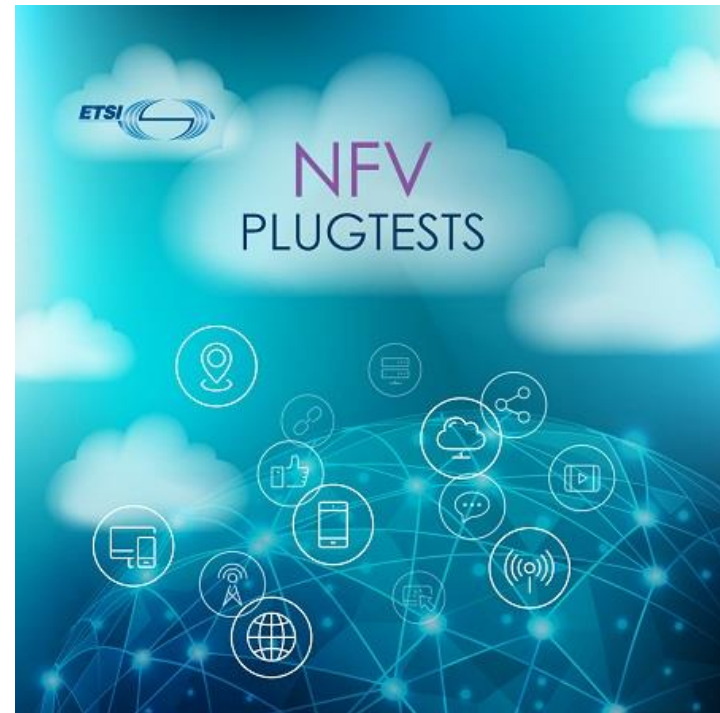
# NFV PLUGTESTS TEAM

- CTI Technical Experts:
  - Silvia Almagia, [silvia.almagia@etsi.org](mailto:silvia.almagia@etsi.org)
  - Michele Carignani, [michele.carignani@etsi.org](mailto:michele.carignani@etsi.org)
- Event coordinator:
  - Aurelie Sfez, [aurelie.sfez@etsi.org](mailto:aurelie.sfez@etsi.org)
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# 2<sup>ND</sup> NFV PLUGTESTS

- 15-19 January 2018, ETSI, Sophia Antipolis, FRANCE
  - Registration is [OPEN](#) (until 18<sup>th</sup> October 2017)
  - Participation free and open to any organisation bringing an **implementation to test or to support the testing**
  - Remote integration & pre-testing from October 2017
- ETSI OSM, Open Baton, OpenStack and OPNFV confirmed as supporting open source communities
  - Initial discussions with ONAP
- Co-located with 1<sup>st</sup> ETSI OSM Hackfest



- Coordinated multi-party **interoperability Test Sessions**
  - VNFs, MANO, VIM, NFVI.. as many combinations as possible
- Building on the learnings of the [1<sup>st</sup> NFV Plugtests](#)
  - NS & VNF on-boarding, instantiation, scaling, update, termination
- Considering new aspects, such as:
  - fault and performance management, network path, multi-site, enhanced platform awareness,..
  - a parallel track for NFV APIs validation
- Final scope and test plan will be shaped with input from:
  - participants (you!)
  - supporting open source communities,
  - ETSI NFV



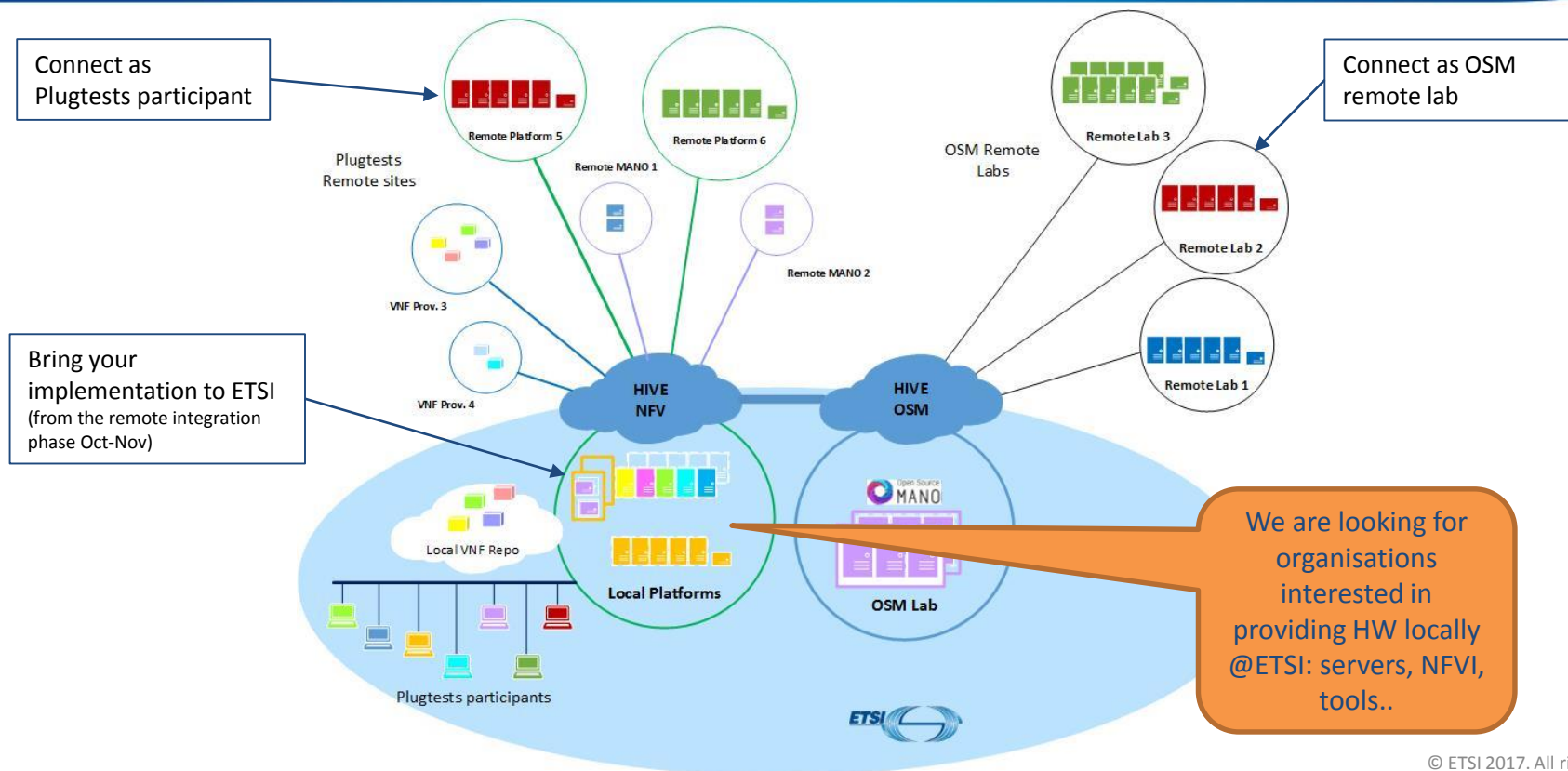
# THE “PROGRAMME” CONCEPT



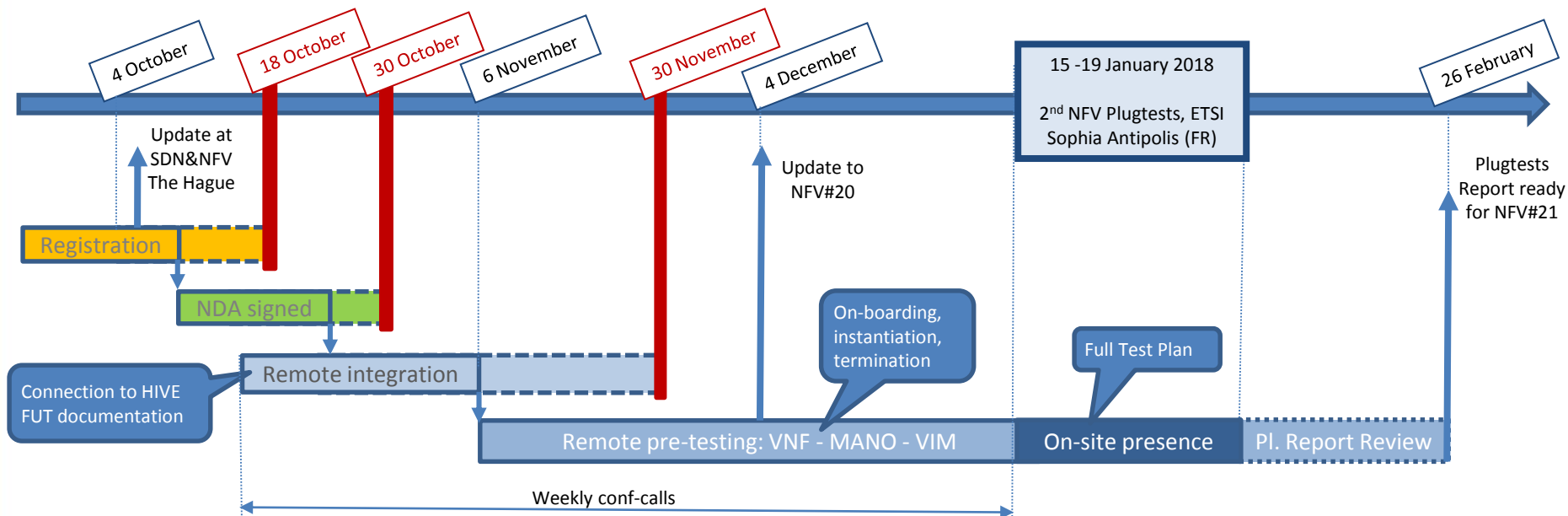
- Continuous program to support future Plugtests events and NFV Testing activities
- Rationalise Plugtests preparation & participation overhead
  - Technical: Connect to Plugtests HIVE once, keep it up in between Plugtests
  - Admin: Sign 1 NDA once, then just register to specific Plugtests events
- Many practical Benefits:
  - Permanent access to testing partners
  - Allow for remote testing any time (before & after Plugtests events)
  - Allow for other types of testing (PoCs, experimentation, validation)
  - Allow for local infrastructure & tools hosting @ETSI



# HIVE – SEVERAL OPTIONS



# PARTICIPATION TIMELINE



- Registration at <http://www.etsi.org/nfvplugtests2> before 4th / 18th October
- NDA sent to participants upon registration
- Access to Plugtests resources is provided as soon as NDA signed, and remote integration can start

# PARTICIPATION TIMELINE

- 4<sup>th</sup> October
  - Registration deadline to be mentioned as Plugtests participants at [SDN NFV world congress](#) – The Hague (9<sup>th</sup> October)
  - NFV-PLUGTESTS mailing list purge
- 16<sup>th</sup> October
  - Remote integration starts (requires NDA signed): connection to HIVE, local deployment, FUT documentation, descriptors, ...
  - Start of weekly conf-calls
- **18th October**
  - Registration closes
- **30<sup>th</sup> October**
  - Deadline for NDA signature
- 6<sup>th</sup> November
  - Remote pre-testing starts among connected/available VNFs, MANOs, VIMs (on-boarding, instantiation, termination ..)
- **30<sup>th</sup> November**
  - Deadline for remote integration / local deployment : all participants connected to HIVE (remotely or locally from ETSI)
- **15 -19 January**
  - On-site presence (min 1 engineer/ FUT)
- 26<sup>th</sup> February
  - 2<sup>nd</sup> NFV Plugtests Report release



# REMOTE INTEGRATION: FUT DOCUMENTATION

Functions Under Test - 1st-NFV...

https://wiki.plugtests.net/1st-NFV-Plugtests/index.php/Functions\_Under\_Test

MANO [edit]

- Use [this form](#) to enter IFS/TQ responses for a new MANO (once the responses entered, they will be automatically added to the table below)
- Use the [edit link](#) in the IFS/TQ responses table below to **edit your responses**
- Use your dedicated [WIKI page](#) below to host **additional information**, docs, diagrams, links, etc...

Access table

IFS & TQ answers : MANO

IFS	TQ	Answers	Comments
IFS_NFV_MANO_1	MANO supports deploying NSs (with a minimum of one VNF and a single VLD)	Yes	Yes
IFS_NFV_MANO_2	MANO supports NSs with multiple VNFs	Yes	Yes
IFS_NFV_MANO_3	MANO supports deployment of several NS respectively in different VIMs (each NS is controlled by a VIM)	Yes	Yes
IFS_NFV_MANO_4	MANO supports operations on VNF	Yes	Yes
IFS_NFV_MANO_5	MANO supports operations on NS	Yes	Yes
IFS_NFV_MANO_6	MANO supports NSs with multiple VNFs	Yes	Yes
IFS_NFV_MANO_7	MANO supports requests for VNFs (from the VNF or from the NS)	Yes	Yes
IFS_NFV_MANO_8	MANO supports new instances of VNFs	Yes	Yes
IFS_NFV_MANO_9	MANO supports new VNFs to be instantiated	No	Yes
IFS_NFV_MANO_10	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_11	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_12	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_13	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_14	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_15	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_16	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_17	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_18	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_19	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_20	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_21	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_22	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_23	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_24	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_25	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_26	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_27	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_28	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_29	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_30	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_31	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_32	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_33	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_34	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_35	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_36	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_37	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_38	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_39	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_40	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_41	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_42	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_43	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_44	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_45	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_46	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_47	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_48	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_49	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_50	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_51	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_52	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_53	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_54	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_55	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_56	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_57	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_58	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_59	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_60	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_61	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_62	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_63	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_64	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_65	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_66	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_67	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_68	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_69	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_70	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_71	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_72	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_73	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_74	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_75	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_76	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_77	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_78	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_79	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_80	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_81	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_82	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_83	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_84	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_85	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_86	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_87	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_88	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_89	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_90	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_91	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_92	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_93	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_94	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_95	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_96	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_97	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_98	MANO supports VNFs from VIMs	No	Yes
IFS_NFV_MANO_99	MANO supports VNFs to be instantiated	No	Yes
IFS_NFV_MANO_100	MANO supports VNFs from VIMs	No	Yes

Form IFS & TQ for MANO ...

https://docs.google.com/fo

[IFS\_NFV\_MANO\_1] MANO supports deploying NSs (with a minimum of one VNF and a single VLD)

☐ Yes

☐ No

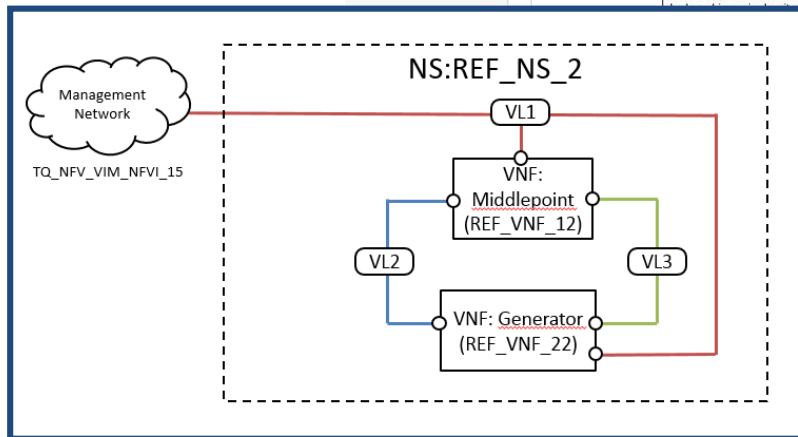
☐ Other...

[IFS\_NFV\_MANO\_2] MANO supports NSs with multiple

☐ Yes

☐ No

☐ Other...



# REMOTE INTEGRATION: REQUEST HIVE CONNECTION

**HIVE**

*Hub for Interoperability and Validation at ETSI*  
**Site-to-Site remote access**

Email:   
Password:   
**LOGIN**

**Dashboard**

Company	ID	Status	GRE	Subnet or IP	Ping test
Mahindra Comviva	22	✗		🔒	172.21.132.1
EANTC AG	23	✗	✓	🔒	172.21.133.1
Netrounds	24	✗	✓	🔒	172.21.134.1
Fraunhofer FOKUS	25	✗	✓	🔒	172.21.135.1
Adva	26	✗		🔒	172.21.136.5
Sandvine	27	✗	✓	🔒	172.21.137.1
Sonus Networks	28	✗	✓	🔒	172.21.138.222
HPE	29	✗	✓	🔒	172.21.139.1
Keynetic Technologies	30	✗	✓	🔒	172.21.140.106
Ericsson	35	✗	✓	🔒	172.21.145.1
Fortinet	36	🚫	✓	🔒	172.21.146.1
A10Networks	37	✗	✓	🔒	172.21.147.1
Palo Alto Networks	38	✗		🔒	172.21.148.1
F5 Networks	21	✗	✓	🔒	172.21.131.1

**HIVE**  
*Hub for Interoperability and Validation at ETSI*  
**Site-to-Site remote access**

**VPN Request**

**Business Information**

Event\*: 10 - NPV

**Contacts**

Company name\*:  City/Country where VPN tunnel is set\*:

Password\*:  Confirm Password\*:   
Warning: This password will be shared by the three contacts listed below.

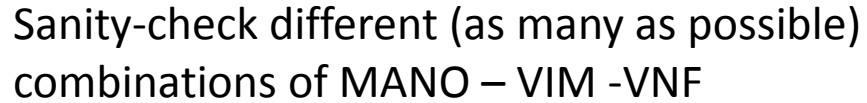
Requestor\*:  First name  Last name  Email  Phone

IT Contact\*:

Other Contact:

**Service Data**

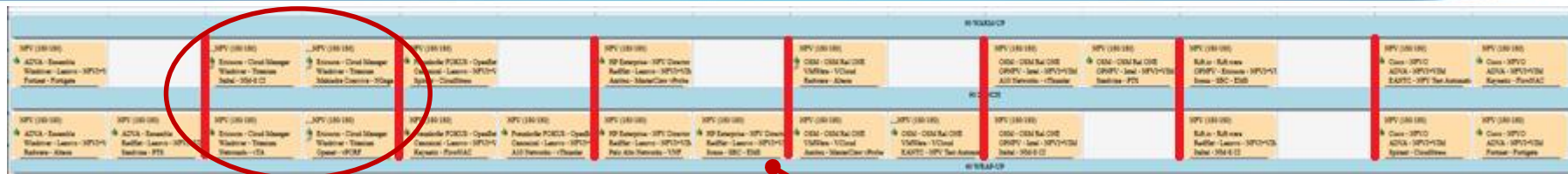
Linux Strongswan (IPsec/IKEv2) Logon to Spain



- [illegible]

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# ONSITE - DAILY TEST SESSIONS



Evening wrap-up meetings

Several Parallel Test Sessions



# TEST SESSION REPORTS

**PLUGTESTS**  
INTEROP EVENTS

ETSI Test Reporting Tool

**ETSI**  
World Class Standards

Settings Reports Statistics Session Plan

Silvia Almagia (Manager) Event timezone (Europe/N NFW1 logout

Add free report Export all reports: 0

id	status	date	duration	area	config	participants	commands
2038	👍	2017-01-25 14:30	180	Track 1	NFV	ADVA - Ensemble RedHat - Lenovo - NFVI+VIM Auribus - MasterClaw vProbe	📄 📊 📄
2039	👍	2017-01-25 10:00	180	Track 2	NFV	Ericsson - Cloud Manager Windriver - Titanium Intel - NM-S CI	📄 📊 📄
2041	👍	2017-01-25 10:00	180	New Area	NFV	OSM - OSM Rel ONE Windriver - Lenovo - NFVI+VIM Keynetic - FlowNAC	📄 📊 📄
2042	👍	Freestyle			NFV	Riftio - Riftware OPNFV - Ericsson - NFVI+VIM Spirent - CloudStress	📄 📊 📄
2045	👍	2017-01-25 10:00					
2046	👍	2017-01-25 10:00					
2047	👍	Freestyle					
2048	👍	2017-01-25 10:00					
2049	👍	2017-01-25 10:00					
2051	👍	2017-01-25 10:00					
2052	👍	2017-01-25 10:00					
2053	👍	Freestyle					
2054	👍	2017-01-25 14:30	180	Track 2	NFV	RedHat - Lenovo - NFVI+VIM FS - vADC Ericsson - Cloud Manager Windriver - Titanium Openet - vPCRF	📄 📊 📄
2056	👍	Freestyle			NFV	Cisco - NFVO RedHat - Lenovo - NFVI+VIM Spirent - CloudStress	📄 📊 📄

**Test groups:**  
NFV  
Setup & Instantiation  
Scale  
Scale VNF  
Update  
Terminate & Teardown

Test ID	Summary	Result	Comment
TD_NFV_SETUP_ONBOARD_VNF_PKG_001	To on-board a VNF Package	OK NO NA	
TD_NFV_SETUP_ONBOARD_NSD_001	To onboard a NSD	OK NO NA	
TD_NFV_NS_LCM_INSTANTIATE_001	To verify that an NS can be successfully instantiated	OK NO NA	VNF required networking configuration (bump-in-time VNF)

Detailed results only accessible to those organisations involved in the Test Session

# OVERALL RESULTS (AGGREGATED DATA)

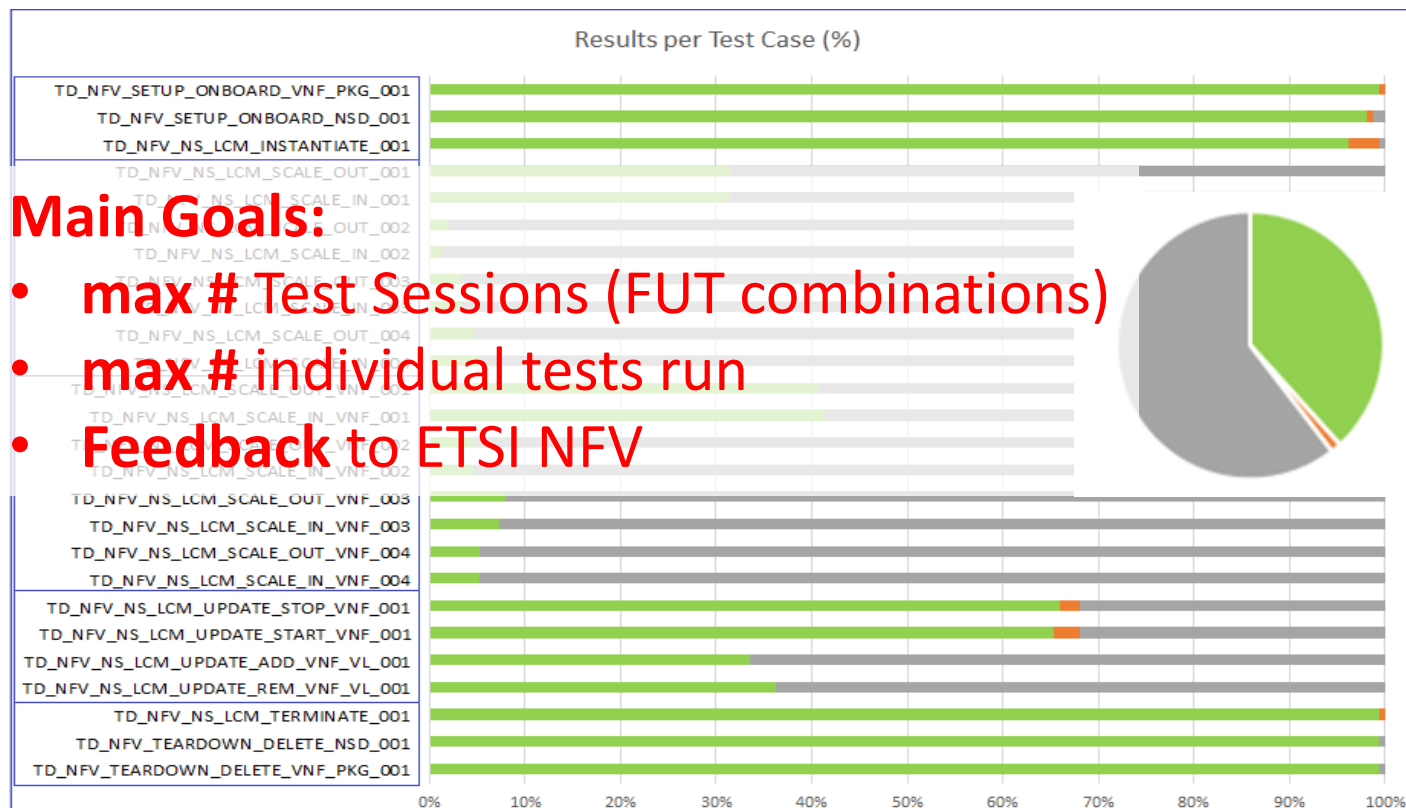
On-boarding &  
Instantiation

Scale (+/- VNF i)

Scale VNF (+/- VNFC i)

NS Update

Terminate & Teardown





# SOME REMINDERS

- ETSI does not certify or endorse companies or products participating to Plugtests
  - We provide the framework, the means, the methodology, the procedures, the test plan...
  - Actual testing is run collaboratively by participants
- NFV Plugtests are a tool to validate ETSI NFV work and gather consolidated feedback from implementers
- The [1<sup>st</sup> NFV Plugtests Test Plan](#) was contributed to ETSI NFV-TST007 (about to be published)
- Recommended reading for new Plugtests participants:
  - [1<sup>st</sup> NFV Plugtests Report](#)

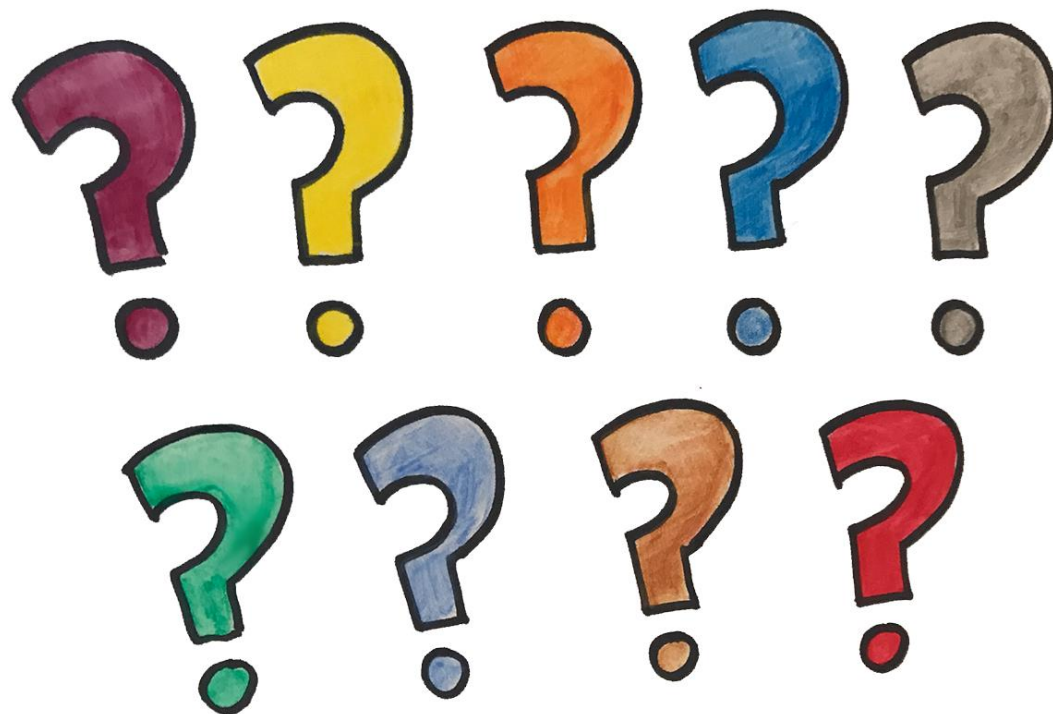
ETSI Plugtests Report

V1.0.0 (2017-03)

1<sup>st</sup> ETSI NFV Plugtests  
Madrid, Spain  
23rd January – 3<sup>rd</sup> February



# QUESTIONS?



**Silvia Almagia**  
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[plugtests@etsi.org](mailto:plugtests@etsi.org)

**Thank you!**