

NOTA DE PRENSA

PRESS RELEASE

TELEFÓNICA NFV REFERENCE LAB RELEASES OpenMANO NFV ORCHESTRATION STACK

- **Currently, OpenMANO provides a highly functional framework pioneering the first open source NFV Orchestration and Management stack**
- **The orchestration stack provided to the community has been a key component of Telefónica's NFV Reference Lab for over a year, and will keep its continuous functional evolution now in the open community**

Madrid, March 26, 2015 – Telefónica has released its OpenMANO NFV orchestration stack to open source community of developers through GitHub portal.

OpenMANO is an open source project that provides a practical realization of the Management and Orchestration reference architecture (NFV MANO), currently under ETSI's NFV ISG standardization. Today, the stack has become a key component in Telefónica's NFV Reference Lab, being a ground-breaking module for easy creation and deployment of complex network scenarios, successfully validated with the more than 30 VNFs involved in the lab during the past year.

Telefónica NFV Reference Lab aims to help the ecosystem of partners and network equipment vendors to easily test and develop virtualized network functions with a real vendor-neutral orchestration environment that also provides advanced orchestration capabilities to assure high and predictable performance for the most advanced VNFs. Its aim is to promote interoperability and foster a more open ecosystem so that telecommunications providers are able to adapt and expand their network services more easily. With OpenMANO, Telefónica drives this adoption through the release of open source code, thus encouraging industry and software developers to explore new NFV possibilities and all this from a well- designed and tiered architecture proposal, thoroughly validated in realistic conditions.

OpenMANO provides three software modules:

- **Openmano (the key component):** reference implementation of an NFV-O (Network Functions Virtualisation Orchestrator), which allows the creation of complex virtual network scenarios. It interfaces with an NFV VIM through its API and offers a northbound interface, based on REST (openmano API), where NFV services are offered, including the creation and deletion of Network Services or VNFs.
- **Openvim:** reference implementation of an NFV VIM (Virtualised Infrastructure Manager), with support for high and predictable performance. It interfaces with the compute nodes in the NFV Infrastructure and an openflow controller to provide computing and networking capabilities and deploy virtual machines. It offers an OpenStack-like northbound interface (openvim API), where enhanced cloud services are offered including the creation, deletion and management of images, flavours, instances and networks. This implementation follows ETSI's NFV-PER001 recommendations.

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- **Openmano-gui:** web GUI to interact with openmano API in a graphical and user-friendly manner. A command line interface is also provided for the most advanced users.

OpenMANO is available under Apache 2 License at <https://github.com/nfvlibs/openmano>.

About Telefónica

Telefónica is one of the largest telecommunications companies in the world in terms of market capitalisation and number of customers. With its best in class mobile, fixed and broadband networks, and innovative portfolio of digital solutions, Telefónica is transforming itself into a 'Digital Telco', a company that will be even better placed to meet the needs of its customers and capture new revenue growth.

The company has a significant presence in 21 countries and a customer base of 341 million accesses around the world. Telefónica has a strong presence in Spain, Europe and Latin America, where the company focuses an important part of its growth strategy.

Telefónica is a 100% listed company, with more than 1.5 million direct shareholders. Its share capital currently comprises 4,657,204,330 ordinary shares traded on the Spanish Stock Market and on those in London, New York, Lima, and Buenos Aires.