UNICA NEXT
Telefónica Telco Cloud Program
First release of the program (UNICA) has been successfully deployed in all Telefonica Operations, with 58 DataCenters and multiple network services in production.
## UNICA NEXT Principles

<table>
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<th>Category</th>
<th>Description</th>
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| Network & IT      | Virtualization of all Telefónica applications (both network and IT vApps)  
  • Network functions, VNFs, have specific latency and networking requirements                                                                                             |
| VM & Containers   | Support virtualization in traditional and advanced modes  
  • Modern applications (e.g.: 5G components) are designed following a modular architecture based on containers in order to avoid dependency on specific operating systems, …., but these apps will coexist for some time with traditional virtualization based on virtual machine |
| Hybrid Cloud      | Support deployment in public and private clouds  
  • Deployment of network functions will be done on a layered basis (central / regional / local) where some may be deployed in public clouds for different cost and technical efficiency reasons but others may not                                             |
| + EDGE            | Support EDGE  
  • Applications that are part of the so-called EDGE have strict latency and networking requirements that may not be possible to deploy on public cloud and may even impose specific hardware requirements (e.g.: use of specific processors for video gaming apps) |
Telco Cloud architecture can be Split in three layers …

- **Orchestration**
  Entity in charge of running the activation flows required to load the software defining a network function or an IT system in a virtualized environment as well as scale it as needed.

- **Virtualization Management (VIM + SDNC)**
  Entity in charge of configuring the hardware required in order to optimize the execution of virtualised network functions and IT systems.

- **Hardware**
  HW (processors, memory, ...) where the software is loaded in order to run a virtualised network function or IT system.

… that interact with other systems within the Telco Operator.
Unica-NEXT architecture

Workloads
- VNFs
- CNFs
- IT VMs
- IT Containers

Orchestration
- Vendor A
- Vendor B
- Vendor C

Virtualization Management
- Vendor F
- Vendor G
- Vendor H

SDNC
- Vendor M
- Vendor N
- Vendor O

Hardware
- Vendor X
- Vendor Y
- Vendor Z

Common Functions
- Performance Monitoring, Alarms, Backup, CI/CD, etc.
In UNICA-NEXT, we are defining a limited number of reference combinations (flavours) for its architecture. This includes common functions such as Performance Monitoring, Alarms, Backup, CI/CD, etc., and virtualization management, orchestration, and hardware from specific vendors. The diagram illustrates different vendor combinations for each flavour type.
Adding OSM as the main option in the Orchestration layer within UNICA NEXT guarantees to be ready for 5G and Zero Touch Automation.
Open Source MANO is at the core of UNICA NEXT, an **Open Source Project** led by Service Providers that is creating a common reference framework in the industry for orchestration.

From 23 organizations to 138 in four years, **SIZE MATTERS** to create a de facto standard.
The role of OSM within UNICA NEXT

**OSS/BSS**

Making that Open Source MANO becomes a de facto standard is key to change the rules of the game

Traditionally Service Providers need to integrate all the aspects for managing the life-cycle of the Network Elements they acquire into the OSS.
The role of OSM within UNICA NEXT

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OSM Information Model allows to model and embed in code the whole Life-cycle of the Network Function, and avoid traditional integration efforts to adapt our OSS.
The role of OSM within UNICA NEXT

UNICA NEXT provides Network as a Service (NaaS) in the form of Network Services and Slices whose complete lifecycle can be easily automated and controlled from OSS/BSS.

With OSM Service Providers can concentrate their integration efforts in designing advanced Network Services and Network Slices instead of struggling with the integration of Network Elements.

Network Services and Network Slices composed of multi-vendor Network Functions.
The role of OSM within UNICA NEXT

UNICA NEXT can deploy Network Services and Slices composed of multiple Network Functions across different Infrastructure and Transport technologies.
UNICA NEXT can take benefit from the Common UNICA Services that have been added so far to allow a complete Performance Management / Fault Management control.
Global program for Telefónica Telco Cloud

Enables virtualization of both, network functions and IT systems, in Telefónica

First UNICA NEXT DCs in production planned for 2020H2