

# SDN Solution and Impact on NFVI

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# Background

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## **Simplify network configuration and accelerate service onboard**

- Simplify the configuration of EOR, TOR, CE in DC, and use Layer 3 communication between devices to solve the flooding problem of traditional Layer 2 networking
- Adopt VXLAN encapsulation and simplify VLAN configuration
- Using SDN controller to configure all NFVI and service network can reduce the workload and error rate of manual configuration
- The service gateway is moved to vSwitch or TOR, reducing the number of BFD sessions on centralized gateway and improving network scalability

## **Centralized management of network equipment to realize network intelligent operation and maintenance**

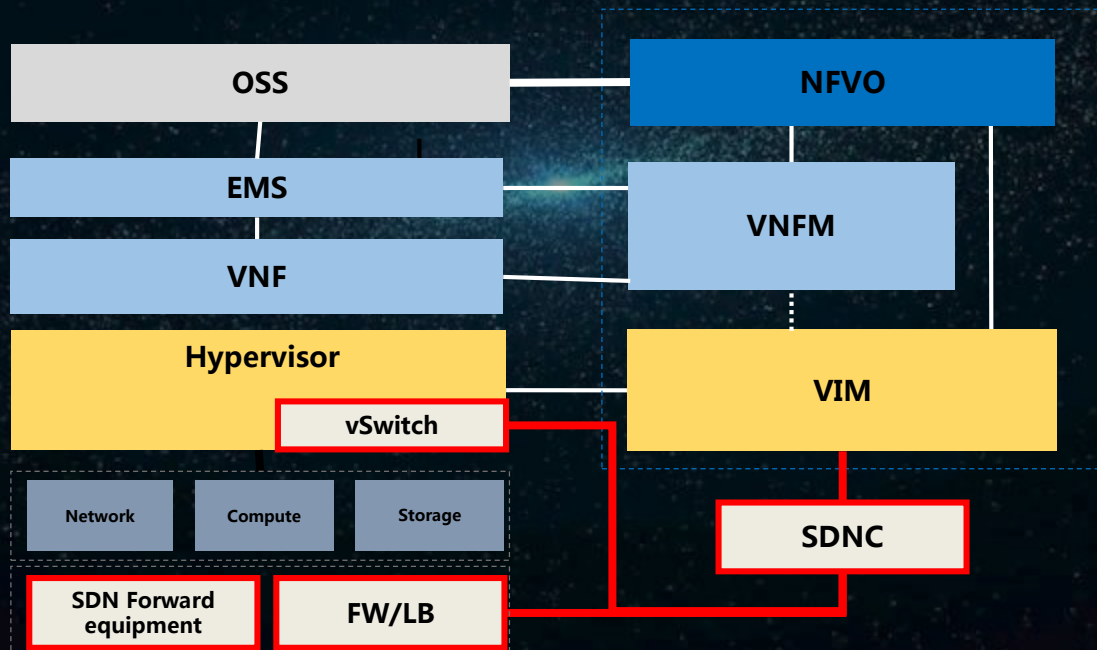
- Using SDN controller as well as MANO can automatically configure network forwarding devices in the resource pool in the process of VNF lifecycle
- The controller can provide APIs for topology management and traffic visualization for centralized and intelligent operation and maintenance
- Introduce IBN to achieve network self-healing in the future

## **Support application innovation in the future**

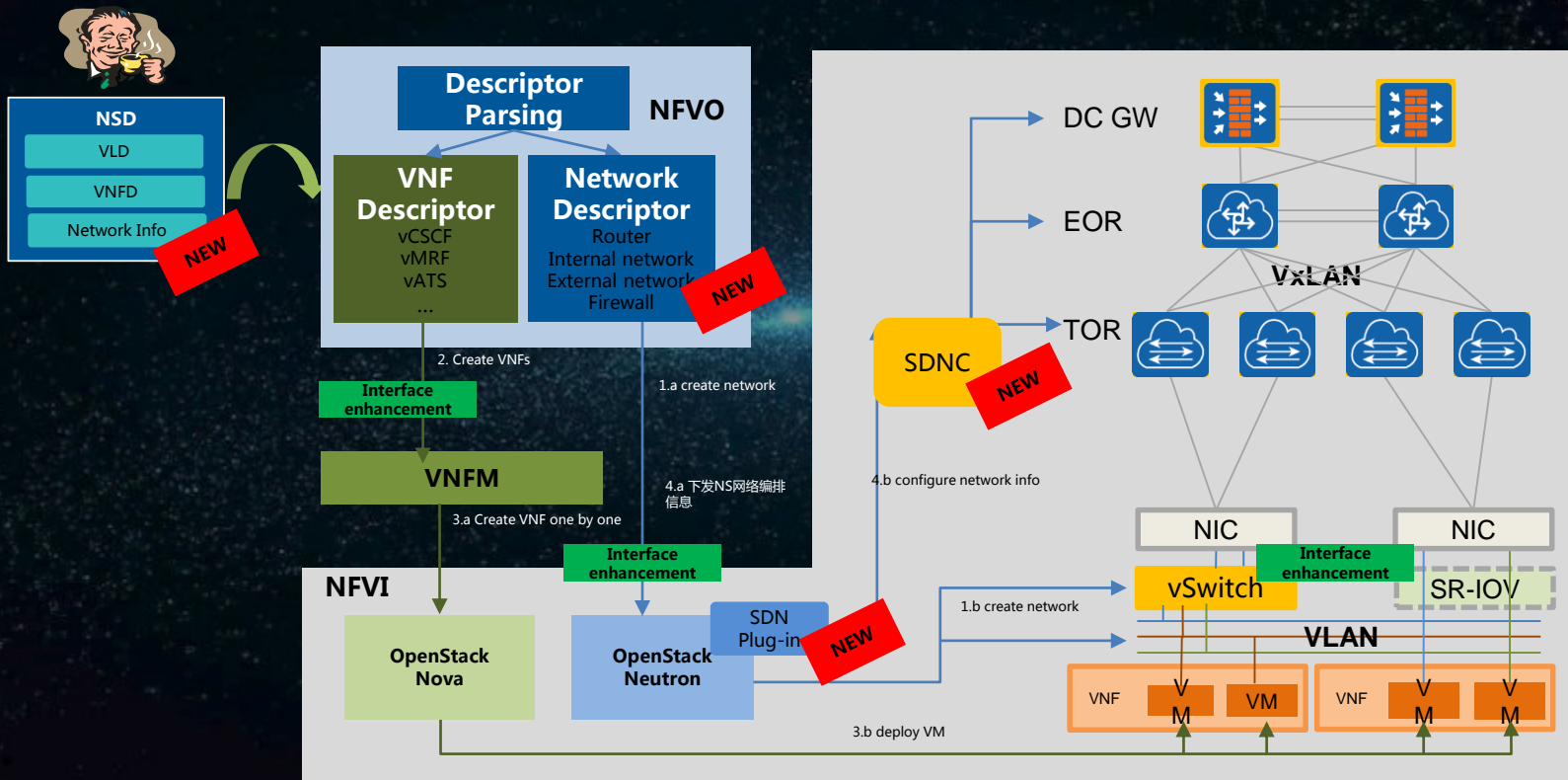
- 5G network slice end-to-end automation and strategy dynamic configuration
- Cloud-based VAS application and business chain

# Architecture

Based on the existing ETSI NFV architecture, VIM is used as a key component for the integration of NFV and SDN to refine.



# LCM Solution





# Impact on NFVI

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## ➤ SDN Plug-in:

VIM supports the installation of SDN plug-in to take over the function of Neutron components, and connects to the SDN controller

## ➤ Function enhancement:

(1) support the creation of VXLAN type networks, vSwitch as SDN access point supports being managed by the controller;

(2) Compute node scale under SDN

## ➤ Northbound interface enhancement

cooperate with upper-layer network orchestration process, expand VIM northbound interface to accomplish traffic mirroring (TAPaaS), network instance deployment, and route configuration

**THANKS!**

# CNTT Networking Focus Group

- › All interested members of the CNTT community are encouraged to contribute to the work of the CNTT Networking Focus Group
- › Please assign to the team in: <https://github.com/orgs/cntt-n/teams/net-fg/members> and start contributing
- › Or, talk to us if you need more information

## For NFG:

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