

Oracle Communications Network Service Orchestration Solution



Accelerate your migration to Network Function Virtualization *today* with the Oracle Communications Network Service Orchestration solution. This solution orchestrates and optimizes virtualized network services throughout their lifecycle by streamlining service composition, service instantiation and termination and enabling elastic scaling of the services in response to demand.

NETWORK SERVICE AGILITY

KEY FEATURES

- Visually compose and rapidly on-board network service templates
- Instantiate and manage lifecycle of network services
- Scale network services elastically across multiple VNFs
- Integrate with external systems using RESTful APIs
- Pre-integrated with Oracle Communications Application Orchestrator

KEY BUSINESS BENEFITS

- Rapidly introduce new network services for consumer and enterprise customers
- Flexibly deploy and scale network services in response to demand
- Integrate with 3rd party VNF Managers and Virtual Infrastructure Managers using open interfaces
- Deploy as key component within Oracle's Intelligent Orchestration Framework
- Seamlessly extend Oracle Communications OSS solutions to support virtual networks

Overview

Network Function Virtualization (NFV) enables service providers to rapidly deploy and scale network services, each containing multiple interconnected network functions, in a virtualized manner on industry-standard hardware platforms. Beyond managing the lifecycle of discrete and potentially complex virtual network functions (VNFs), there is a requirement to design and introduce new network services, instantiate and terminate these network services within the network, manage their elastic scaling at run-time and optimize their use of the underlying resource infrastructure driven by performance, reliability and cost factors.

The Oracle Communications Network Service Orchestration solution empowers service providers to rapidly compose, on-board and elastically scale such network services spanning multiple VNFs in multi-vendor hybrid or virtualized network environments.

Architecture

The Oracle Communications Network Service Orchestration solution fulfills and considerably expands upon the role of the NFV Orchestrator as defined by the European Telecommunications Standards Institute (ETSI) NFV Industry Standards Group, the primary standards body guiding NFV development.

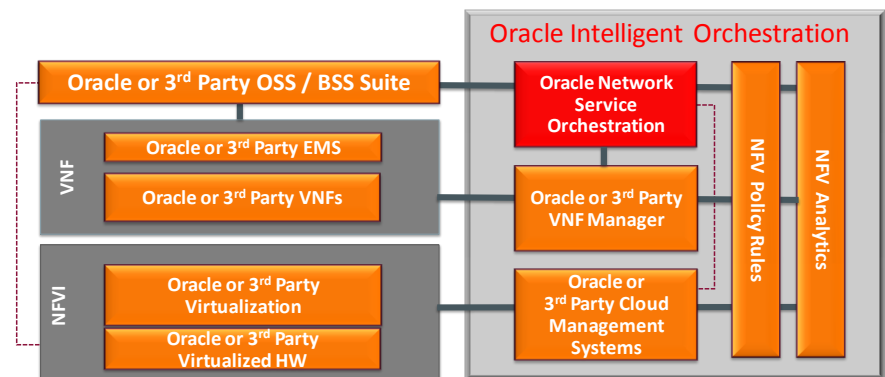


Figure 1. Solution context within the ETSI NFV architecture.

The Oracle Communications Network Service Orchestration solution advances the Oracle Communications Intelligent Orchestration Framework, an industry-defining approach to NFV that orchestrates services, applications and network elements with guidance from policy management and insights from real-time analytics.

Specifically, the Oracle Communications Network Service Orchestration solution enables service providers to:

ORACLE COMMUNICATIONS NETWORK SERVICE ORCHESTRATION SOLUTION

Accelerates network service agility with the rapid introduction, elastic scaling and lifecycle management of network services containing multiple virtualized network functions

RELATED PRODUCTS

Supports intelligent network and service orchestration integrated into key operational processes:

- Oracle Communications Application Orchestrator
- Oracle Communications Rapid Service Design and Order Delivery
- Oracle Communications Network Resource Management

- Visually compose and rapidly on-board network service templates.
- Design and instantiate network services and their constituent, interconnected VNFs. The example below illustrates such a network service for the virtual CPE (vCPE) scenario.

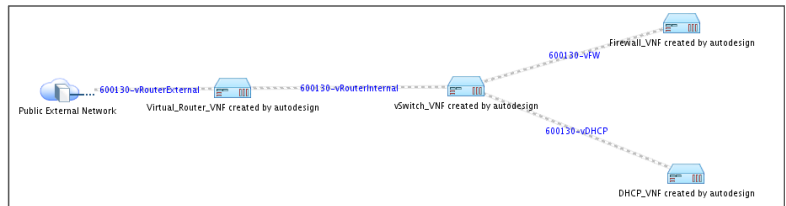


Figure 2. Example of a vCPE network service and interconnected VNFs.

- Manage network service and VNF scaling. The graphic below illustrates the behavior of the network service, in this case a gaming service, in a scaling scenario in which additional gaming server VMs are required to manage the processing load.

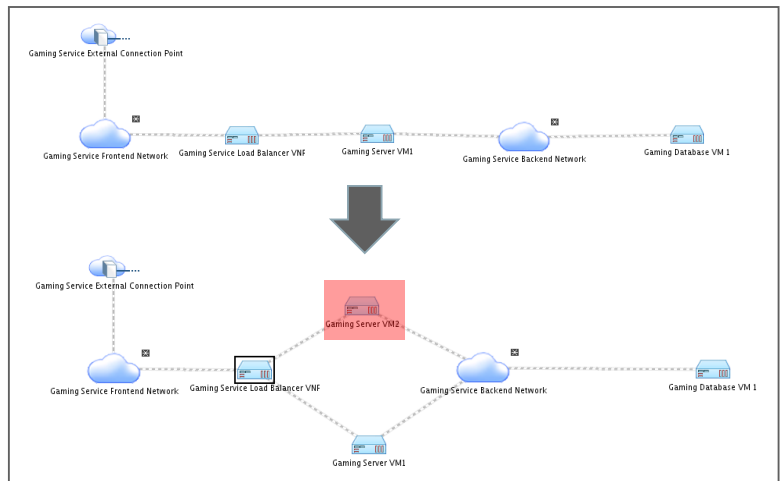


Figure 3. On demand elastic scaling example for a gaming network service.

As part of Oracle Communications Intelligent Orchestration Framework, the analysis of network performance and associated analytics may be fed into a policy engine to evaluate and, if necessary, trigger scaling actions for specific network services. Upon receipt of such actions, the Oracle Communications Network Service Orchestration solution automatically reconfigures the network to enable true elastic scaling of the network service.

- Integrate with complementary components within a broader solution footprint using RESTful APIs (Web Services) for automated operation.

NETWORK ORCHESTRATION

Network and Service Orchestration

For NFV orchestration, the Oracle Communications Network Service Orchestration solution coordinates the management of:

- Network Service lifecycles – such network services may be comprised of interconnected VNFs from Oracle Communications and / or 3rd parties.
- VNF lifecycles in coordination with VNF Managers (VNFMs) including the Oracle Communications Application Orchestrator and / or 3rd party VNFMs.
- Network Function Virtualization Infrastructure (NFVI) resources in conjunction with Virtual Infrastructure Managers (VIMs) including Oracle OpenStack and / or 3rd party VIMs.

SERVICE ORCHESTRATION

For service orchestration, the Oracle Communications Network Service Orchestration solution has inherent understanding of the semantics of the network service. This enables it to appropriately configure the network whenever the instantiation, scaling or termination of a network service requires changes to the network topology or the provisioning of service or network context data.

SEAMLESS SUPPORT OF HYBRID AND VIRTUALIZED NETWORK SERVICES

Operational Agility

The Oracle Communications Network Service Orchestration solution may be deployed as an extension to Oracle Communications OSS solutions to support the seamless introduction of virtual network functions alongside physical network functions and the fulfillment of end customer services on the hybrid infrastructure. This is enabled by clear abstraction of responsibilities and a federated design approach between the OSS and network service orchestration which leverages robust foundational components of Oracle Communications Operations Support Systems (OSS).

FEDERATED DESIGN APPROACH ACROSS OSS AND ORCHESTRATION

This operational agility is essential if service providers are to realize the business benefits promised by NFV.

Rapid Path to NFV

The Oracle Communications Network Service Orchestration solution helps accelerate the evolution to NFV in multiple ways:

NETWORK SERVICE AGILITY

- Together as part of the hybrid or virtualized network solution (VNFs, EMSs, VNFMs), provided by Oracle and / or 3rd parties, to support the orchestration of network services and integrate with upstream OSS and operations.
- As an extension to existing OSS applications (Oracle and / or 3rd party) to support the introduction of virtual network functions & hybrid operations.





OPERATIONAL AGILITY



CONTACT US

For more information about Oracle Communications Network Service Orchestration solution, please contact us at comms-oss_ww@oracle.com.

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Hardware and Software, Engineered to Work Together

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