



# ISG NFV

## Network Functions Virtualisation

NFV: Defining the Future of Networks Through Software and Virtualisation

### Overview

ETSI NFV establishes industry standards for virtualising network functions (VNF/CNF) and running them on commodity off-the-shelf (COTS) servers.

This enables operators and vendors to build an open ecosystem where components can be independently developed and operated.

### NFV in the network transformation landscape: Value Provided by ETSI NFV

CATEGORY	DETAILS
<b>Architecture</b>	Unified framework covering infrastructure, VNF, MANO, and services
<b>Flexibility</b>	Supports distributed resources across central DCs, edge clouds, customer premises, etc.
<b>Automation</b>	Lifecycle management via independently developed MANO systems
<b>Interoperability</b>	Dynamic service chaining in multi-vendor, multi-virtualisation environments

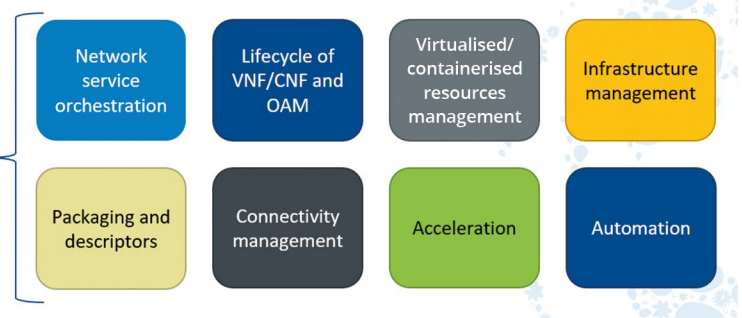
### ETSI NFV Work Areas

The ETSI NFV ISG defines standards and specifications for telecom network virtualisation across both functional and non-functional domains.

Functional Areas: Cover all layers from infrastructure to network services.

Non-Functional Areas: Address security, reliability, and performance considerations.

Functional areas



## NFV Release 5 – Maximising Operational Efficiency

FOCUS AREAS	KEY ACHIEVEMENTS
<b>Container Integration</b>	Enhanced CNF management and networking based on Kubernetes
<b>VNF Management</b>	Automated configuration and closing gaps with open-source solutions
<b>5G/vRAN Support</b>	Standardisation and deployment models for virtualised RAN
<b>Green NFV</b>	Initiatives for energy efficiency and sustainability
<b>Multi-Tenancy</b>	Capabilities for secure shared environments
<b>Security Enhancements</b>	Improvements across infrastructure and orchestration layers
<b>Physical Infrastructure</b>	Better management of hardware resources
<b>Flexible Deployment</b>	Versatile models for VNF rollout

ETSI NFV Release 5 focuses on boosting efficiency in modern telecom environments, with strong support for 5G ecosystems and automation.

## NFV Release 6: Evolving Toward Advanced Telco Cloud Architectures - *Pioneering the Convergence of Compute, Network, and Emerging Paradigms*

Building on previous releases, Release 6 advances NFV to support next-gen telco clouds, integrating new technologies for ultra-low latency, AI-driven operations, and seamless convergence.

### Key Studies in Release 6

- New infrastructure resources and communication technologies for NFV
- Latency optimisation and low-latency service support
- Exploration of new application virtualisation methods
- Convergence of computing and network functions
- Model-as-a-Service (MaaS) integration
- Architectural support for NFV evolution

### Normative Work:

AREA	SPECIFICATIONS
<b>Telco Cloud Architecture</b>	Defining end-to-end architecture for cloud-native telecom networks
<b>Requirements</b>	Functional/non-functional specs, including interfaces and APIs
<b>Application Descriptors</b>	Standardised descriptors for Telco Cloud apps
<b>Interoperability Interfaces</b>	Ensuring seamless integration across vendors and platforms

Release 6 emphasises the Telco Cloud Architecture, enabling operators to deploy agile, scalable networks that integrate with emerging paradigms like edge computing and AI. This positions ETSI NFV as the foundation for 6G and beyond.

## NFV Release 7:

Release 7 is intended to focus on “data management in NFV” (GR NFV-EVE 028) as well as “agentic AI applications” (GR NFV-EVE029, 030 and 031).

### Contact ETSI NFV

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### About ETSI

ETSI is one of only three bodies officially recognised by the European Union as a European Standards Organisation (ESO). It is an independent, not-for-profit body dedicated to ICT standardisation. With over 900 member organisations from more than 60 countries across five continents, ETSI offers an open and inclusive environment for members representing large and small private companies, research institutions, academia, governments, and public organisations. ETSI supports the timely development, ratification, and testing of globally applicable standards for ICT-enabled systems, applications, and services across all sectors of industry and society.

