

# Welcome to the World of Standards



## ETSI ISG NFV: WORK PROGRAM RELEASE 2 AND RELEASE 3 UPDATES

ETSI ISG NFV

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The logo for the NFV World Congress. It features the letters 'NFV' in a large, bold, white sans-serif font. Below it, the words 'WORLD CONGRESS' are written in a smaller, bold, white sans-serif font. The background is a green grid of interconnected nodes and lines, suggesting a network or data structure.

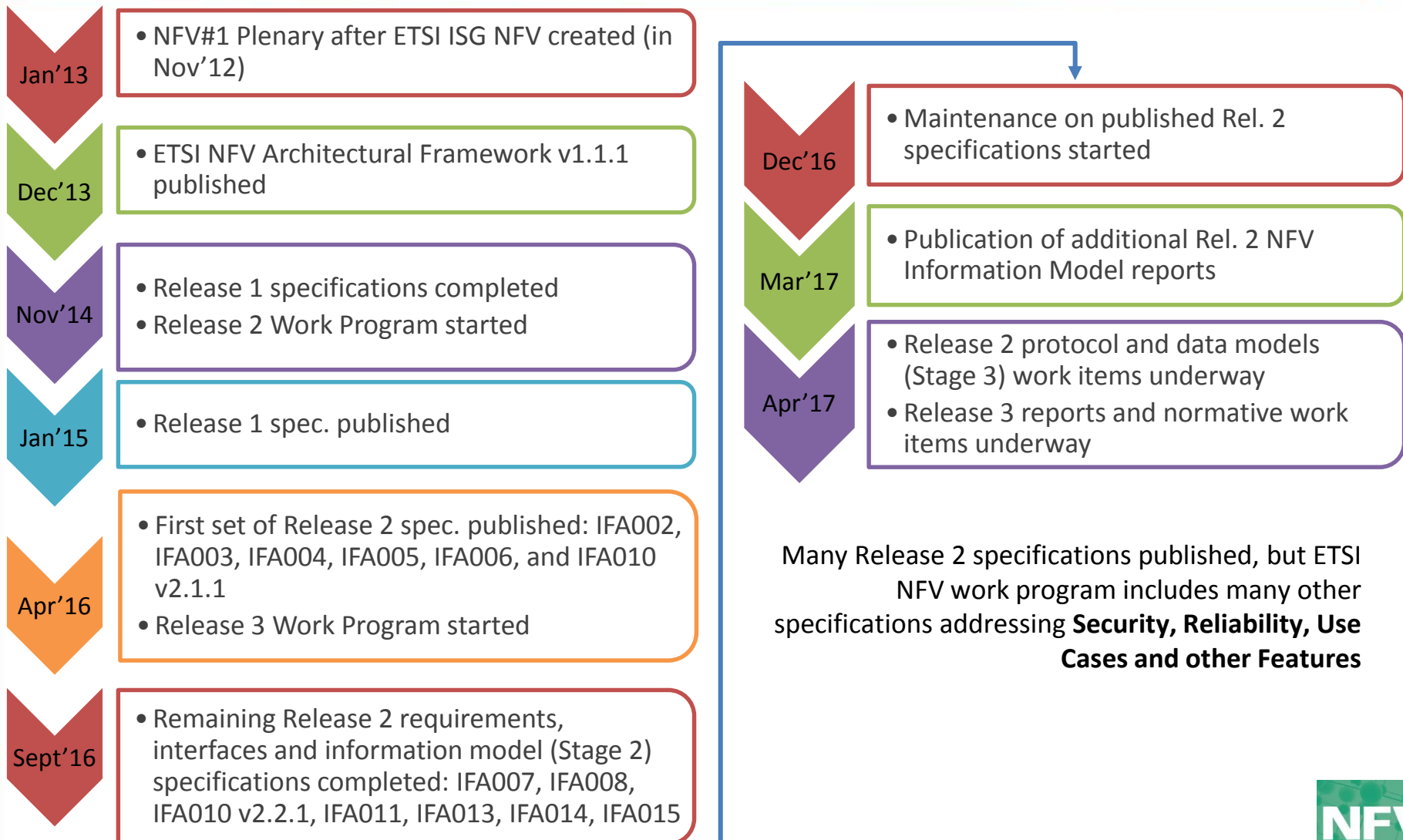
**NFV**  
**WORLD  
CONGRESS**

- PART 1: ETSI ISG NFV Overview
  - ETSI NFV key milestones
  - NFV Release highlights
  
- PART 2: NFV Release 2
  
- PART 3: NFV Release 3 (and 2) ongoing work



## PART 1: ETSI ISG NFV OVERVIEW

# ETSI NFV key milestones



Many Release 2 specifications published, but ETSI NFV work program includes many other specifications addressing **Security, Reliability, Use Cases and other Features**

## Release 1

- Focused on the **feasibility of NFV**.
- Delivered the baseline studies and specifications.
- Set **the NFV Architecture**:
  - Infrastructure (NFVI),
  - Virtualized network functions (VNF),
  - Integration of the VNFs into Network Services (NS), and
  - NFV Management and Orchestration (NFV-MANO) aspects at different layers.

## Release 2

- Focuses on **interoperability of NFV solutions**.
- Details requirements and specification of interfaces and descriptors.
- Realizes the interoperability of solutions based on the NFV Architecture, detailing
  - **VNF Package and VNF and NS Descriptors**,
  - **Acceleration**,
  - **Internal and external NFV-MANO interfaces**.

## Release 3

- Focuses on **feature enriching the NFV Architectural Framework**, readying NFV for deployment.
- Features such as:
  - Charging and billing,
  - Licensing,
  - Policy framework,
  - Multi-site,
  - Cloud-native support,
  - Etc.
- Details new requirements and specification of interfaces and descriptors.



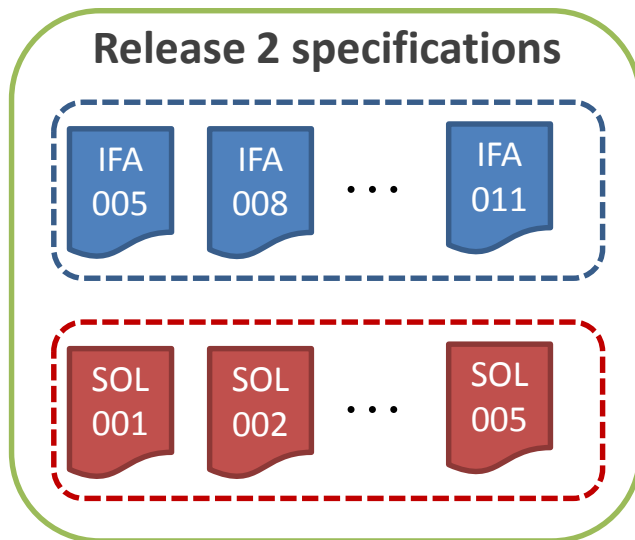


## PART 2: NFV RELEASE 2

# A note about ETSI NFV IFA and SOL specifications



- Release 2 are comprised of specifications delivered by different ETSI NFV working groups:
  - SOLutions (SOL) working group.
  - Interfaces and Architecture (IFA) working group.



**IFA specifications:** stage 2 level requirements, architecture, interfaces and information model.

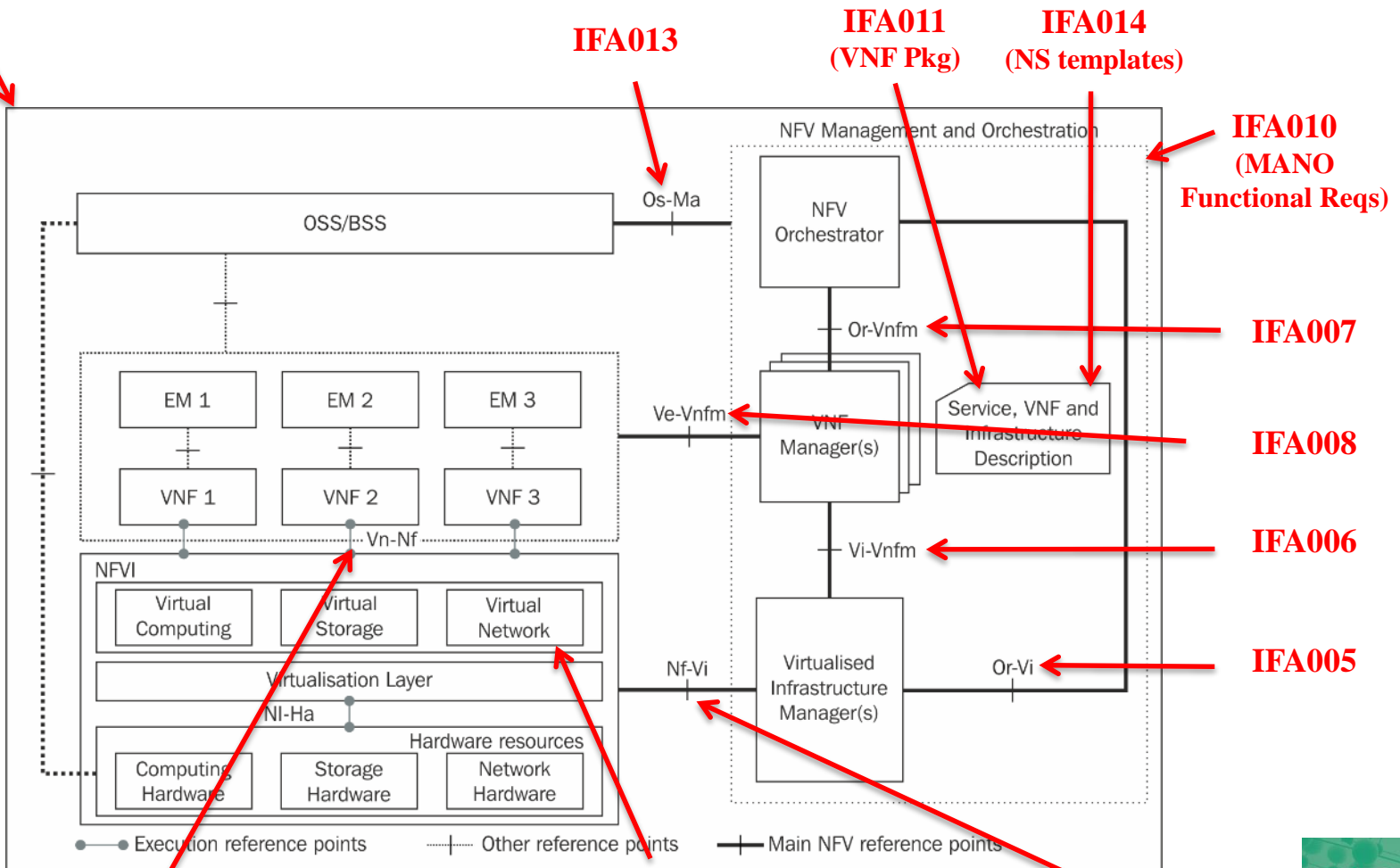


**SOL specifications:** stage 3 level protocols, API and data models.

**IFA015**  
(NFV  
Information  
Model Report)

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- IFA016 (Papyrus Guidelines),
- IFA017 (UML Modeling Guidelines),
- IFA024 (NFV Information Model External Touchpoints)



**IFA002**  
(Acceleration)

**IFA003**  
(Acceleration)

**IFA004**  
(Acceleration)





# Release 2 published documents (for reference)



ID	Title
IFA 002 v2.1.1	Acceleration Technologies: VNF Interfaces Specification
IFA 003 v2.1.1	Acceleration Technologies; vSwitch Benchmarking and Acceleration Specification
IFA 004 v2.1.1	Acceleration Technologies; Management aspects Specification
IFA 005 v2.1.1	MANO; Or-Vi reference point - Interface and Information Model Specification
IFA 006 v2.1.1	MANO; Vi-Vnfm reference point - Interface and Information Model Specification
IFA 007 v2.1.1	MANO; Or-Vnfm reference point - Interface and Information Model Specification
IFA 008 v2.1.1	MANO; Ve-Vnfm reference point - Interface and Information Model Specification
IFA 010 v2.2.1	MANO; Functional requirements specification
IFA 011 v2.1.1	MANO; VNF Packaging Specification
IFA 013 v2.1.1	MANO; Os-Ma-Nfvo reference point - Interface and Information Model Specification
IFA 014 v2.1.1	MANO; Network Service Templates Specification
IFA 015 v2.1.2	MANO; Report on NFV Information Model
IFA 016 v2.1.1	IM; Papyrus Guidelines
IFA 017 v2.1.1	IM; UML Modeling Guidelines
IFA 024 v2.1.1	IM; Report on External Touchpoints related to NFV Information Model

[Link to documents \(search tool\)](#)

# Release 2 ongoing Stage 3 work



**IFA015**  
(NFV  
Information  
Model Report)

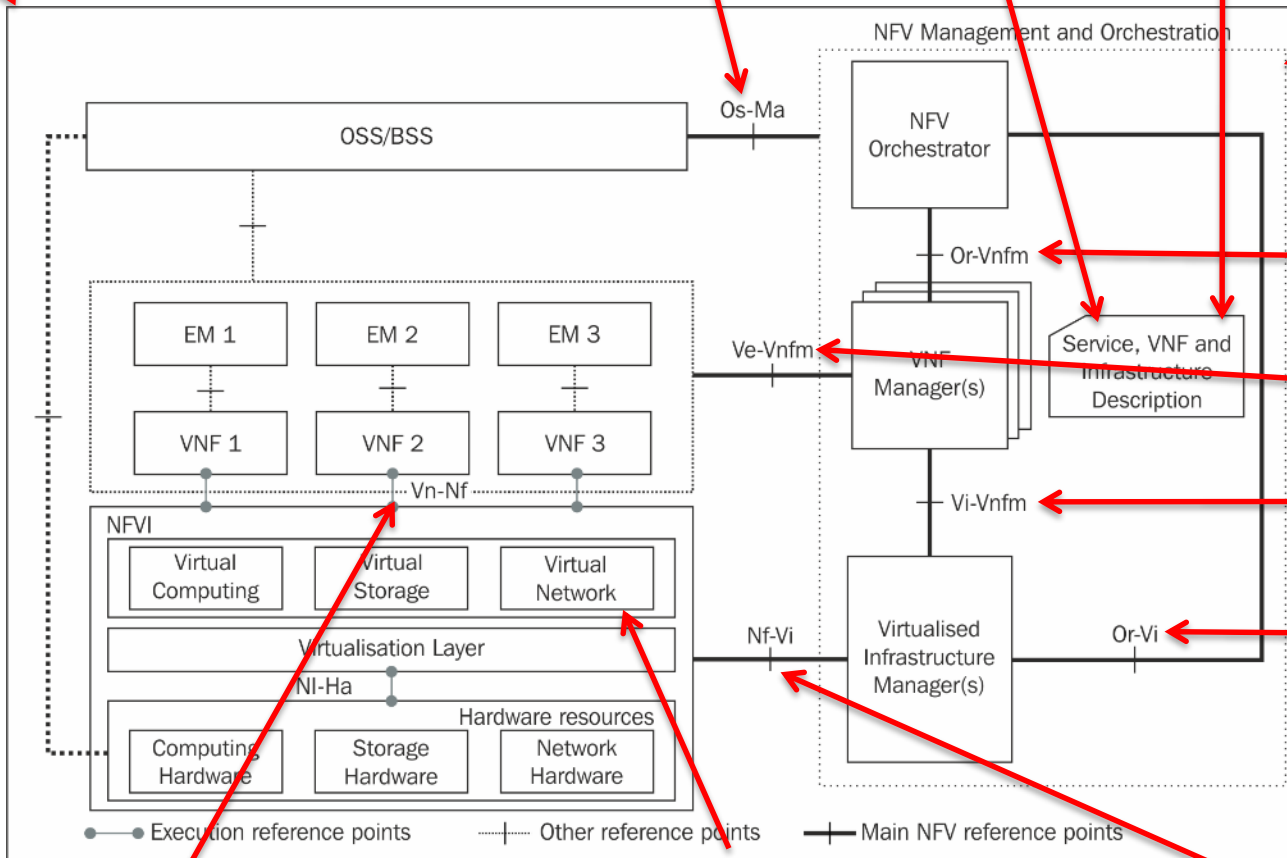
(\*) Release 2  
Stage 3 work  
items in "green"

**SOL004**  
(VNF Packaging)  
**IFA011**  
(VNF Pkg)

**SOL001 (VNF and NS  
Descriptors)**  
**IFA014**  
(NS templates)

**SOL005 IFA013**

- + **IFA016**  
(Papyrus  
Guidelines),
- **IFA017**  
(UML  
Modeling  
Guidelines),
- **IFA024 (NFV  
Information  
Model  
External  
Touchpoints)**



**IFA010**  
(MANO  
Functional Reqs)

**IFA007**  
**SOL003**

**IFA008**  
**SOL002**

**IFA006**

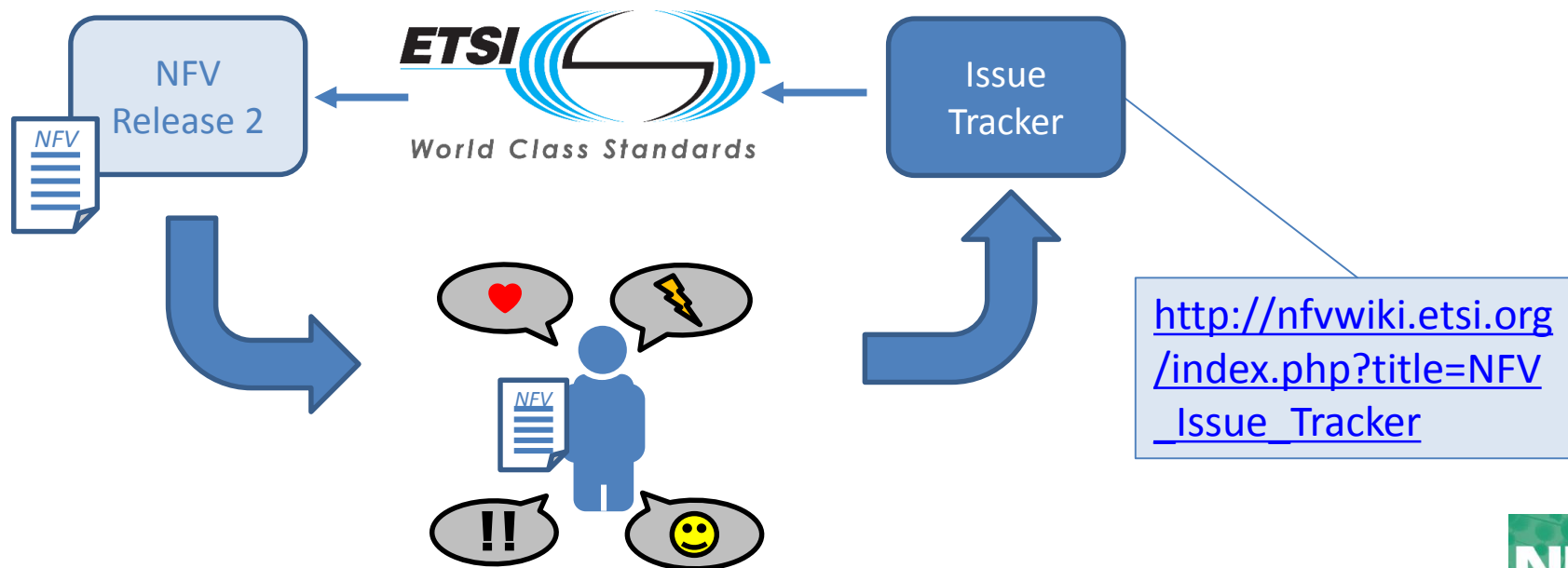
**IFA005**

**IFA002**  
(Acceleration)

**IFA003**  
(Acceleration)

**IFA004**  
(Acceleration) **NFV WORLD CONGRESS**

- More information about Release 2 features:
  - [https://docbox.etsi.org/ISG/NFV/Open/Other/NFV\(16\)000274r5\\_NFV\\_Release\\_2\\_Description\\_v11.pdf](https://docbox.etsi.org/ISG/NFV/Open/Other/NFV(16)000274r5_NFV_Release_2_Description_v11.pdf)
- Ongoing work (drafts) publicly available here:
  - <https://docbox.etsi.org/ISG/NFV/Open/Drafts/>





## PART 3: RELEASE 3 (AND 2) ONGOING WORK

# From Release 2 to Release 3





# Ongoing Release 2 and 3 work



Area/topic	Work Item(s)
End-to-end multi-site services management	IFA022
Additional aspects on MANO, such as: MANO management, end-to-end processes, multi-admin domain, etc.	IFA021, EVE009, IFA028
Cloud-native and PaaS enhancements	EVE011, IFA029
Acceleration technologies	IFA018, IFA019
Charging, billing & accounting	EVE008
License management	EVE010
Security analysis and management	SEC013, SEC014, SEC015, IFA026
Reliability and availability considerations	REL007, REL008
Devops and CI/CD	TST006
Testing	TST004, TST007
Policy management	IFA023
Metrics	TST008, IFA027 (Release 2)

# Release 3 related published documents (for reference)



ID	Title
EVE 007 v3.1.1	Evolution and Ecosystem; NFV Hardware Interoperability Requirements
SEC 012 v3.1.1	Security; System architecture specification for execution of sensitive NFV components
SEC 013 v3.1.1	Security; Security Management and Monitoring Specification
TST 005 v3.1.1	Continuous Development and Integration; Report on use cases and recommendations for VNF Snapshot

- More information about Release 3 features:
  - [https://docbox.etsi.org/ISG/NFV/Open/Other/NFV\(16\)000229r6\\_NFV\\_Release\\_3\\_Definition\\_v050.pdf](https://docbox.etsi.org/ISG/NFV/Open/Other/NFV(16)000229r6_NFV_Release_3_Definition_v050.pdf)

[Link to documents \(search tool\)](#)



## More information:

NFV Technology Page (information)

<http://www.etsi.org/nfv>

NFV Portal (working area)

<http://portal.etsi.org/nfv>

NFV Proofs of Concept (information)

<http://www.etsi.org/nfv-poc>

NFV Plugtest (information & registration)

<http://www.etsi.org/nfvplugtest>

Open Area:

Drafts <http://docbox.etsi.org/ISG/NFV/Open/Drafts/>

Issue tracker [http://nfvwiki.etsi.org/index.php?title=NFV\\_Issue\\_Tracker](http://nfvwiki.etsi.org/index.php?title=NFV_Issue_Tracker)

ANY  
QUESTIONS  
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