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GROUP SPECIFICATION

Network Functions Virtualisation (NFV) Release 5; Security; Isolation and trust domain specification

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1 Scope

The present document defines the requirements and solutions for the NFV System to enhance network functions and services isolation between tenants.

For this aim, the present document includes in particular:

- Analysis of the threat models.
- Trust domain separation (multi-tenant NFVI, traffic and resource separation, tenant-dependant resource management and access control).
- Memory protection and access control (protection against memory introspection, confidentiality of sensitive data and credentials).
- Hypervisor trust partitioning.
- The Virtualization Container (e.g. Virtual Machine and OS container) Escape protection (e.g. protection against VNF compromising its local host OS, taking control of the hypervisor and then gaining access to private and sensitive data of co-resident Virtualization Containers).
- Associated key management system for all above items.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

[1] ETSI GS NFV-SOL 004: "Network Functions Virtualisation (NFV) Release 5; Protocols and Data Models; VNF Package and PNFD Archive specification".

[2] IETF RFC 9334: "Remote ATtestation procedureS (RATS) Architecture".

[3] OASIS KMIP: "Key Management Interoperability Protocol Specification Version 2.1".

[4] ETSI GS NFV-SEC 021: "Network Functions Virtualisation (NFV); Security; VNF Package Security Specification".

2.2 Informative references

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