

Draft new Recommendation ITU-T Y.NGNe-CEE

Capability exposure enhancement in next generation network evolution(NGNe)

Summary

This Recommendation aims to specify the capability exposure enhancement in next generation network evolution(NGNe), such as the exposure of heterogeneous connection control capability, the exposure of simulation verification capability, the exposure of orchestration and scheduling capability, and the exposure of intelligent operation capability, etc.

This recommendation covers the following issues:

- Overview of capability exposure enhancement.
- Requirements of capability exposure enhancement.
- Framework of capability exposure enhancement.

Keywords

Capability exposure enhancement; NGNe

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1 Scope

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2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T Y.2324] Recommendation ITU-T Y.2324 (2019), *Functional architecture of orchestration in next generation network evolution (NGNe)*.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

[TBD]

3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

[TBD]

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

[TBD]

5 Conventions

In this Recommendation:

The keywords "is required to" indicate a requirement which must be strictly followed and from which no deviation is permitted, if conformance to this Recommendation is to be claimed.

The keywords "is recommended" indicate a requirement which is recommended but which is not absolutely required. Thus, this requirement need not be present to claim conformance.

The keywords "can optionally" indicate an optional requirement which is permissible, without implying any sense of being recommended. This term is not intended to imply that the vendor's implementation must provide the option, and the feature can be optionally enabled by the network operator/service provider. Rather, it means the vendor may optionally provide the feature and still claim conformance with this Recommendation.

6 Overview of capability exposure enhancement

With the development of next generation network evolution(NGNe), in order to provide value applications based on network stickiness and improve user experience, it is necessary to further open the network management capability to make the network operators, application service providers and users develop in a win-win way.

Recommendation ITU-T Y.2324 provides the general functional architecture of the orchestration in NGNe, and specifies the capability openness functional entity (COFE) which opens the capabilities of orchestration in NGNe. The capability exposure needs to be enhanced in NGNe to support more capability exposure according to dynamic and complex users needs, such as the exposure of heterogeneous connection control capability, the exposure of simulation verification capability, the exposure of orchestration and scheduling capability, and the exposure of intelligent operation capability, etc.

7 Requirements of capability exposure enhancement

7.1 General aspects of capability exposure

[Editor's Note] This subclause will describe general aspects of capability exposure.

7.2 Heterogeneous connection control capability

[Editor's Note] This subclause will describe requirements of heterogeneous connection control capability exposure.

7.3 Intent-based orchestration and scheduling capability

[Editor's Note] This subclause will describe requirements of the exposure of orchestration and scheduling capability.

7.4 Intelligent operation capability

[Editor's Note] This subclause will describe requirements of intelligent operation capability exposure.

8 Framework of capability exposure enhancement

[Editor's Note] This clause will describe framework of capability exposure enhancement in NGNe.

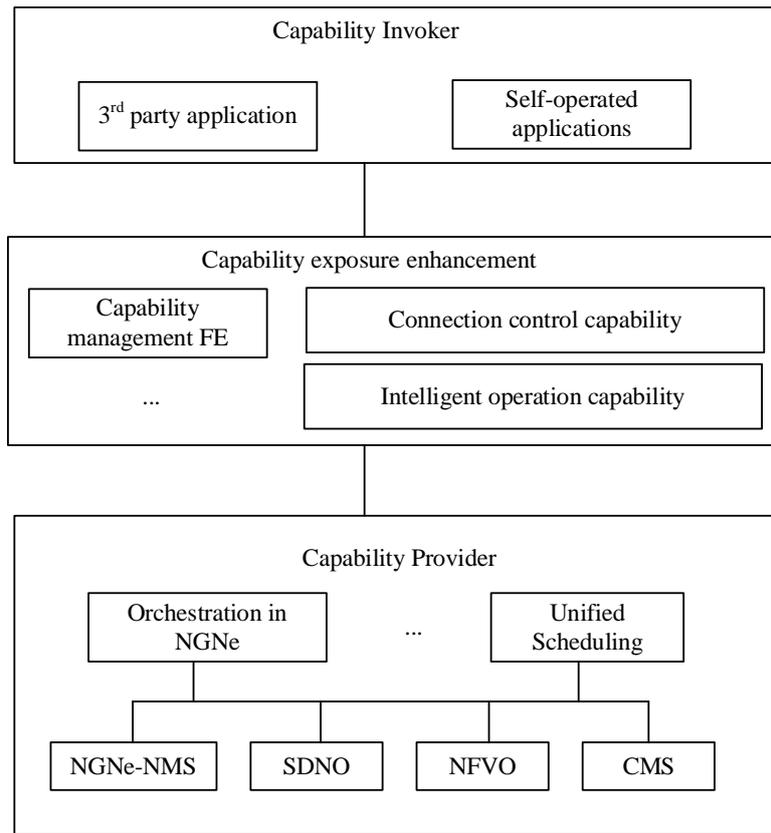


Figure 8-1 Framework of capability exposure enhancement in NGNe

Capability provider opens the capabilities to 3rd party application and self-operated applications by capability exposure enhancement using APIs and SDKs.

The exposed capabilities include four types capabilities, heterogeneous connection control capability, simulation verification capability, orchestration and scheduling capability, and intelligent operation capability.

The heterogeneous connection control capability means unified abstraction and control for multi-heterogeneous resources, real-time connection and control capabilities(e.g topology management, path management, traffic management, network analysis, real-time private line).

The simulation verification capability means resource visibility and policy verification(e.g. construction and simulation of service and network).

The orchestration and scheduling capability supports rapid design and provisioning capabilities for services(e.g. visual design, unified scheduling of multiple resources).

The intelligent operation capability supports operation and maintenance with AI-assisted analysis(e.g quality condition analysis, dynamic SLA adjustment, self-repair, and self optimization)

Bibliography

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