INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION STANDARDIZATION SECTOR

STUDY PERIOD 2017-2020

SG13-TD257R1-WP2

STUDY GROUP 13

Original: English

Question(s): 19/13 Geneva, 16-27 July 2018

TD

Source: Ministry of Communications (India), Orange Polska S.A.

Title: A.1 Justification for new work item - "Cloud Computing – End-to-end fault and performance management framework of virtual network services in inter-cloud"

Purpose: Proposal

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Keywords: inter-cloud; fault; performance; management; virtual network service

Abstract: This contribution proposes A.1. Justification form for proposed new work item related to "Cloud Computing – End-to-end fault and performance management framework of virtual network services in inter-cloud", after C-540-WP2

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A.1 justification for proposed draft new Recommendation Y.e2efapm

Question:	19/13	**Proposed new ITU-T Recommendation**	Geneve, Switzerland, July 2018	
Reference and title:	ITU-T "Cloud Computing – End-to-end fault and performance management framework of virtual network services in inter-cloud." (Y.e2efapm)			
Base text:	C-540-WP2		**Timing:**	3Q2020
Editor(s):	Sridhar Sapparapu, diri.tec@nic.in, TEC DOT Yan Lei, Datang Software Technologies CO.,LTD. yanlei03@datang.com		**Approval process:**	AAP

Scope (defines the intent or object of the Recommendation and the aspects covered, thereby indicating the limits of its applicability):

This Recommendation specifies an end-to-end fault and performance management framework and relevant use cases of virtual network services in inter-cloud computing. The scope of this Recommendation includes:

- overview of end-to-end fault and performance management of virtual network services;
- functional requirements of end-to-end fault and performance management of virtual network services;
- use cases relevant to end-to-end fault and performance management of virtual network services;

Summary (provides a brief overview of the purpose and contents of the Recommendation, thus permitting readers to judge its usefulness for their work):

This recommendation provides end-to-end fault and performance management framework of virtual network services in inter-cloud computing and relevant use cases. In particular, the aspects of faults detection and localization of affected area in inter-cloud environments is presented.

Relations to ITU-T Recommendations or to other standards (approved or under development):

- **Relationship with ITU-T X.733**

  This Recommendation defines a Systems Management Function that may be used by an application process in a centralized or decentralized management environment to interact for the purpose of systems management, as defined by CCITT Rec. X.700 | ISO/IEC 7498-4. This Recommendation defines a function which consists of generic definitions, services and functional units. However, criticality of the alarms are not mentioned.

- **Relationship with ITU-T Y.3502**

  This Recommendation specifies the cloud computing reference architecture (CCRA). The reference architecture includes the cloud computing roles, cloud computing activities, and the cloud computing functional components and their relationships. Recommendation Y.3502 mainly describes the roles and activities of the cloud computing reference architecture. However, aspects of fault and performance management are not mentioned.

- **Relationship with ITU-T Y.3510**

  This Recommendation provides requirements for cloud computing infrastructure; these include the essential capabilities for processing, storage and networking resources, as well as the capabilities of resource abstraction and control. However, aspects of fault and performance management are not mentioned.

- **Relationship with ITU-T Y.3520**

  This Recommendation provides a framework for end to end resource management in cloud computing which includes: general concepts of resource management for end to end cloud computing resource management; a vision for adoption of resource management for cloud computing in a telecommunication-rich environment; multi-cloud, end to end management of cloud computing resources and services, e.g., management of any hardware and software used in support of the delivery of cloud services. However, aspects of fault and performance management are not mentioned.

- **Relationship with ITU-T Y.3522**

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Deleted: This document provides a framework and requirements for:¶
- NFVIaaS, ¶
- VNFaaS,¶
- Virtual Network Services (VNS) in multi TSP domains over multi CSP Clouds¶
- End to End Fault and Performance Management of Multi Cloud Virtual Network Services
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Deleted: This Recommendation describes the deployment of telecommunication network services over multiple clouds using NFVIaaS and/or VNFaaS to provide VNSs. It proposes the paradigm of end-to-end fault and performance detection and localization in multi-cloud based virtual network services as a means to achieve carrier grade reliability and availability. The framework and ...
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This Recommendation specifies the functional requirements of end-to-end cloud service lifecycle management. This Recommendation comprises the following: cloud service lifecycle metadata; cloud service lifecycle management framework; cloud service lifecycle management stages; relationship with cloud computing reference architecture; functional requirements and typical use cases of cloud service lifecycle management. However, aspects of fault and performance management are not mentioned.

Liaisons with other study groups or with other standards bodies:

ITU-T SG2, ETSI ISG NFV

Supporting members that are committing to contributing actively to the work item:

(1) Telecom Engineering Centre, Department of Telecommunications, Ministry of Communications, Government of India; (2) Orange Polska S.A.; (3) DaTang Telecommunication Technology & Industry Holding Co. Ltd (China); (4) MIIT China;

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