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**RAPPORTEUR GROUP MEETING – C****Source:** India**Title:** Y.e2efapm-reqts - Proposal for addition of functional requirements related to end-to-end fault and performance management of virtual network services under the clause 7**Purpose:** Proposal

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Email:[yanlei03@datang.com](mailto:yanlei03@datang.com)**Keywords:** Fault, performance, alarm generation, correlation, correction, root cause**Abstract:** This contribution proposes to add functional requirements related to end-to-end fault and performance management of virtual network services under the clause 7 of Draft Recommendation Y. e2efapm-reqts.**1. Proposal**

This contribution proposes to add functional requirements related to end-to-end fault and performance management of virtual network services under the clause 7 of Draft Recommendation Y. e2efapm-reqts.

## **7. Functional requirements for end-to-end fault and performance management of virtual network services**

[Contributor's note] This clause will provides functional requirements related to end-to-end fault and performance management of virtual network services based on ones derived from use cases.

### **7.1 Fault management in resource layer**

The resource layer is required to include the fault management as sub-functional component, which carries out the alarm generation, correlation, reporting, monitoring and correction. The correlation is recommended to be done based on the trained machine learning models.

### **7.2 Fault management in service layer**

The service layer is required to include the fault management as sub-functional component, which carries out the alarm generation, correlation, reporting, monitoring and correction. The correlation is recommended to be done based on the trained machine learning models.

### **7.3 Fault management in access layer**

The access layer is required to include the fault management as sub-functional component, which carries out the alarm generation, correlation, reporting, monitoring and correction. The correlation is recommended to be done based on the trained machine learning models.

### **7.4 Fault management in OSS layer**

The OSS multi-layer is required to include access management component which interfaces with Access layer.

### **7.5 Root Cause Analysis**

The access problem management, the service problem management and the resource fault management modules are required to interface with fault localization and root cause analysis component within the OSS. The correlation of faults among these three layers is recommended to be done based on the trained machine learning models.

### **7.6 Machine learning and analytics**

The impending faults are recommended to be predicted based on the shallow machine learning and/or deep learning methods.

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