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G.8011/Y.1307

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DIGITAL SYSTEMS AND NETWORKS

Packet over Transport aspects – Ethernet over Transport
aspects

SERIES Y: GLOBAL INFORMATION
INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS,
NEXT-GENERATION NETWORKS, INTERNET OF
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Internet protocol aspects – Transport

Ethernet service characteristics

Recommendation ITU-T G.8011/Y.1307



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INTERNATIONAL TELEPHONE CONNECTIONS AND CIRCUITS	G.100–G.199
GENERAL CHARACTERISTICS COMMON TO ALL ANALOGUE CARRIER-TRANSMISSION SYSTEMS	G.200–G.299
INDIVIDUAL CHARACTERISTICS OF INTERNATIONAL CARRIER TELEPHONE SYSTEMS ON METALLIC LINES	G.300–G.399
GENERAL CHARACTERISTICS OF INTERNATIONAL CARRIER TELEPHONE SYSTEMS ON RADIO-RELAY OR SATELLITE LINKS AND INTERCONNECTION WITH METALLIC LINES	G.400–G.449
COORDINATION OF RADIOTELEPHONY AND LINE TELEPHONY	G.450–G.499
TRANSMISSION MEDIA AND OPTICAL SYSTEMS CHARACTERISTICS	G.600–G.699
DIGITAL TERMINAL EQUIPMENTS	G.700–G.799
DIGITAL NETWORKS	G.800–G.899
DIGITAL SECTIONS AND DIGITAL LINE SYSTEM	G.900–G.999
MULTIMEDIA QUALITY OF SERVICE AND PERFORMANCE – GENERIC AND USER-RELATED ASPECTS	G.1000–G.1999
TRANSMISSION MEDIA CHARACTERISTICS	G.6000–G.6999
DATA OVER TRANSPORT – GENERIC ASPECTS	G.7000–G.7999
PACKET OVER TRANSPORT ASPECTS	G.8000–G.8999
Ethernet over Transport aspects	G.8000–G.8099
MPLS over Transport aspects	G.8100–G.8199
Synchronization, quality and availability targets	G.8200–G.8299
Service Management	G.8600–G.8699
ACCESS NETWORKS	G.9000–G.9999

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T G.8011/Y.1307

Ethernet service characteristics

Summary

Recommendation ITU-T G.8011/Y.1307 describes a framework for defining network-oriented characteristics of Ethernet services based on Metro Ethernet Forum (MEF) specifications. The framework is supported by the modelling of Ethernet layer networks described by ITU-T and MEF. The service definition, service attributes and operation, administration and maintenance (OAM) introduced in this framework are used to create numerous specific Ethernet services.

This Recommendation supersedes Recommendations ITU-T G.8011.1/Y.1307.1 (2013), ITU-T G.8011.2/Y.1307.2 (2013), ITU-T G.8011.3/Y.1307.3 (2013), ITU-T G.8011.4/Y.1307.4 (2013) and ITU-T G.8011.5/Y.1307.5 (2013).

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Ethernet, Ethernet connection, Ethernet service, framework, network-to-network interface, user-to-network interface.

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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As of the date of approval of this Recommendation, ITU had received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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Table of Contents

	Page
1 Scope.....	1
2 References.....	1
3 Definitions	2
3.1 Terms defined elsewhere	2
3.2 Terms defined in this Recommendation.....	2
4 Abbreviations and acronyms	2
5 Conventions	4
6 Summary of Carrier Ethernet.....	4
6.1 Description of MEF Carrier Ethernet service.....	5
6.2 Description of MEF Carrier Ethernet service attributes.....	6
6.3 Description of MEF Carrier Ethernet service architecture.....	7
6.4 Description of MEF Carrier Ethernet OAM.....	8
6.5 Description of MEF OVC service	8
Appendix I – Summary of MEF specifications	9
I.1 Architecture documents.....	10
I.2 Service attribute documents	10
I.3 Service definition documents	11
I.4 OAM documents	12
Appendix II – Summary of changes from ITU-T G.8011/Y.1307 (2012).....	13
II.1 ITU-T G.8011/Y.1307 comparison	13
II.2 ITU-T G.8011.x/Y.1307.x comparison	14
Bibliography.....	16

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Recommendation ITU-T G.8011/Y.1307

Ethernet service characteristics

1 Scope

This Recommendation defines a framework to describe Ethernet services based on Metro Ethernet Forum (MEF) specifications. The framework consists of a set of service definitions, service attributes and operation, administration and maintenance (OAM) for each Ethernet virtual connection (EVC), operator virtual connection (OVC), Ethernet connection (EC), Ethernet user-to-network interface (UNI) and Ethernet external network-to-network interface (ENNI). The resulting services that can be defined do not refer to a particular network technology implementation and are supported by ITU-T and MEF Ethernet layer architecture models.

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 G.8001] | Recommendation ITU-T G.8001/Y.1354 (2016), <i>Terms and definitions for Ethernet frames over transport</i> . |
| [ITU-T G.8010] | Recommendation ITU-T G.8010/Y.1306 (2004), <i>Architecture of Ethernet layer networks</i> . |
| [ITU-T G.8013-2015] | Recommendation ITU-T G.8013/Y.1731 (2015), <i>Operations, administration and maintenance (OAM) functions and mechanisms for Ethernet-based networks</i> . |
| [IEEE 802.1Q] | IEEE 802.1Q (2014), <i>IEEE Standard for Local and metropolitan area networks – Bridges and Bridged Networks</i> . |
| [IEEE 802.1AX] | IEEE 802.1AX (2014), <i>IEEE Standard for Local and metropolitan area networks – Link Aggregation</i> . |
| [IEEE 802.3] | IEEE 802.3 (2015), <i>IEEE Standard for Ethernet</i> . |
| [MEF 6.2] | MEF 6.2 (2014), <i>EVC Ethernet Services Definitions Phase 3</i> . |
| [MEF 10.3] | MEF 10.3 (2013), <i>Ethernet Services Attributes Phase 3</i> . |
| [MEF 10.3.1] | MEF 10.3.1 (2015), <i>Composite Performance Metric (CPM) Amendment to MEF 10.3</i> . |
| [MEF 10.3.2] | MEF 10.3.2 (2015), <i>UNI Resiliency Enhancement Amendment to MEF 10.3</i> . |
| [MEF 12.2] | MEF 12.2 (2014), <i>Carrier Ethernet Network Architecture Framework Part 2: Ethernet Services Layer</i> . |
| [MEF 13] | MEF 13 (2005), <i>User Network Interface (UNI) Type 1 Implementation Agreement</i> . |
| [MEF 20] | MEF 20 (2008), <i>User Network Interface (UNI) Type 2 Implementation Agreement</i> . |

[MEF 22.2]	MEF 22.2 (2016), <i>Mobile Backhaul Phase 3 Implementation Agreement</i> .
[MEF 23.2]	MEF 23.2 (2016), <i>Carrier Ethernet Class of Service Phase 3 Implementation Agreement</i> .
[MEF 26.2]	MEF 26.2 (2016), <i>External Network Network Interface (ENNI) and Operator Service Attributes</i> .
[MEF 30.1]	MEF 30.1 (2013), <i>Service OAM Fault Management Implementation Agreement: Phase 2</i> , plus Amendment MEF 30.1.1 (2014), <i>Correction to Requirement</i> .
[MEF 33]	MEF 33 (2012), <i>Ethernet Access Services Definition</i> .
[MEF 35.1]	MEF 35.1 (2015), <i>Service OAM Performance Monitoring Implementation Agreement</i> .
[MEF 43]	MEF 43 (2014), <i>Virtual NID (vNID) Functionality for E-Access Services</i> .
[MEF 45]	MEF 45 (2014), <i>Multi-CEN L2CP</i> .
[MEF 47]	MEF 47 (2014), <i>Carrier Ethernet Services for Cloud implementation Agreement</i> .
[MEF 51]	MEF 51 (2015), <i>OVC Services Definitions</i> .

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

- 3.1.1 customer:** [ITU-T G.8001]
- 3.1.2 Ethernet service:** [ITU-T G.8001]
- 3.1.3 Ethernet virtual connection (EVC):** [MEF 10.3]
- 3.1.4 external NNI (ENNI):** [MEF 26.2]
- 3.1.5 network-to-network interface (NNI):** [ITU-T G.8001]
- 3.1.6 operator virtual connection (OVC):** [MEF 26.2]
- 3.1.7 service frame:** [MEF 10.3]
- 3.1.8 user-to-network interface (UNI):** [ITU-T G.8001]

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

AP	Access Provider
APP	Application
CE	Carrier Ethernet
CEN	Carrier Ethernet Network
CoS	Class of Service
E-Access	Ethernet Access