International Telecommunication Union

ITU-T G.8101/Y.1355

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TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

SERIES G: TRANSMISSION SYSTEMS AND MEDIA, DIGITAL SYSTEMS AND NETWORKS

Packet over Transport aspects – MPLS over Transport aspects

SERIES Y: GLOBAL INFORMATION INFRASTRUCTURE, INTERNET PROTOCOL ASPECTS AND NEXT-GENERATION NETWORKS

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Terms and definitions for transport MPLS

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ITU-T Recommendation G.8101/Y.1355

Terms and definitions for transport MPLS

Summary

This Recommendation is an initial compilation of terms and abbreviations used in MPLS over Transport Recommendations listed in the References clause 2.

Source

ITU-T Recommendation G.8101/Y.1355 was approved on 14 December 2006 by ITU-T Study Group 15 (2005-2008) under the ITU-T Recommendation A.8 procedure.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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.

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

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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ITU-T Recommendation G.8101/Y.1355

Terms and definitions for transport MPLS

1 Scope

This Recommendation contains a complete listing of the Definitions and Abbreviations used in the Recommendations associated with Transport MPLS (T-MPLS) found listed in clause 2 below.

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 Recommendation G.805 (2000), *Generic functional architecture of transport networks*.

– ITU-T Recommendation G.806 (2006), *Characteristics of transport equipment – Description methodology and generic functionality*.

– ITU-T Recommendation G.809 (2003), *Functional architecture of connectionless layer networks*.

– ITU-T Recommendation G.8110/Y.1370 (2005), *MPLS layer network architecture*.

– ITU-T Recommendation G.8112/Y.1371 (2006), *Interfaces for the Transport MPLS (T-MPLS) hierarchy*.

– ITU-T Recommendation G.8121/Y.1381 (2006), *Characteristics of Transport MPLS equipment functional blocks*.

– ITU-T Recommendation Y.1711 (2004), *Operation & Maintenance mechanism for MPLS networks*.

– ITU-T Recommendation Y.1720 (2006), *Protection switching for MPLS networks*.

– ITU-T Recommendation Y.1731 (2006), *OAM functions and mechanisms for Ethernet based networks*.

NOTE – There is a limitation of the applicability of the architecture specified by ITU-T Rec. G.805. It is not applicable to LDP-based multipoint-to-point LSP and the case where PHP is in effect with the egress not supporting MPLS data plane.

3 Definitions

Transport MPLS (T-MPLS) Recommendations uses the following terms defined in ITU-T Rec. G.805:

3.1 access point

3.2 adapted information

3.3 characteristic information

3.4 client/server relationship

3.5 connection

3.6 connection point

3.7 defect

3.8 failure

3.9 forward direction

3.10 layer network

3.11 link

3.12 link connection

3.13 matrix

3.14 network

3.15 network connection

3.16 network operator

3.17 port

3.18 reference point

3.19 service provider

3.20 subnetwork

3.21 subnetwork connection

3.22 termination connection point

3.23 trail

3.24 trail termination

3.25 trail termination point

3.26 transport

3.27 transport entity

3.28 transport processing function

3.29 unidirectional connection

3.30 unidirectional trail

3.31 Z layer

Transport MPLS (T-MPLS) Recommendations uses the following term defined in ITU-T Rec. G.806:

3.32 defect

Transport MPLS (T-MPLS) Recommendations uses the following terms defined in ITU-T Rec. G.809:

3.33 access point

3.34 adaptation

3.35 adapted information

3.36 characteristic information

3.37 client/server relationship

3.38 connectionless trail

3.39 flow

3.40 flow domain

3.41 flow domain flow

3.42 flow point

3.43 flow point pool

3.44 flow point pool link

3.45 flow termination

3.46 flow termination sink

3.47 flow termination source

3.48 layer network

3.49 link flow

3.50 network

3.51 network flow

3.52 port

3.53 reference point

3.54 termination flow point

3.55 termination flow point pool

3.56 traffic unit

3.57 transport

3.58 transport entity

Transport MPLS (T-MPLS) Recommendations uses the following term defined in ITU-T Rec. G.8010/Y.1306:

3.59 point-to-point Ethernet connection

Transport MPLS (T-MPLS) Recommendations uses the following terms defined in ITU-T Rec. Y.1711:

3.60 backward direction

3.61 defect

3.62 client/server (relationship between layer networks)

3.63 failure

3.64 forward direction

3.65 user-plane

Transport MPLS (T-MPLS) Recommendations uses the following terms defined in ITU-T Rec. Y.1720:

3.66 1+1 protection

3.67 1:1 protection

3.68 bidirectional protection switching

3.69 bridge

3.70 defect

3.71 extra traffic

3.72 failure

3.73 forced switch for working LSP

3.74 hold-off time

3.75 manual switch

3.76 MPLS protection domain

3.77 non-revertive protection switching

3.78 no request

3.79 packet 1+1 protection

3.80 path switch LSR

3.81 path merge LSR

3.82 protection LSP

3.83 protection switching

3.84 rerouting

3.85 revertive protection switching

3.86 selector

3.87 shared mesh protection

3.88 Shared Risk Group (SRG)

3.89 sink of the protection domain

3.90 source of the protection domain

3.91 unidirectional protection switching

3.92 wait to restore

3.93 wait to restore timer

3.94 working LSP

Transport MPLS (T-MPLS) Recommendations uses the following terms defined in ITU-T Rec. Y.1731:

3.95 in-service OAM

3.96 proactive OAM

This Recommendation defines the following terms for use in Transport MPLS (T-MPLS) Recommendations:

3.97 most significant bit to least significant bit: Presentation of the bits in binary order; from left to right 2^n 2^{n-1} 2^{n-2} .. 2^1 2^0.

3.98 network bit order: Presentation of the bits in the order those are transmitted, bits on the left are transmitted before bits shown on the right.

3.99 TMH-NNI: An NNI for the transfer of T-MPLS_CI traffic unit over a transport layer network referred to in T-MPLS Recommendations.

4 Abbreviations

This Recommendation uses the following abbreviations:

CI	Characteristic Information
CP	Connection Point
EXP	Experimental Use
IPv4	Internet Protocol, version 4
IPv6	Internet Protocol, version 6
LSP	Label Switched Path
LSR	Label Switching Router
MPLS	Multi-Protocol Label Switching
NNI	Network-Network Interface
OAM	1) Operation and Maintenance; 2) Operation, Administration and Maintenance
T-MPLS	Transport MPLS
TMH	Transport MPLS Hierarchy

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