RSVP-TE Extension for Beyond 100G Signal Types in G.709 Optical Transport Networks (OTNs)
draft-ali-ccamp-odu-cn-signal-type-00.txt

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Abstract

RFCs 4328 and 7139 provide signaling extensions in Resource ReserVation Protocol - Traffic Engineering (RSVP-TE) to control the full set of Optical Transport Network (OTN) features. However, these specifications do not cover the additional Optical channel Data Unit (ODU) containers defined in G.709/Y.1331 for ODUC1, ODUC2, ODUC3, ODUC4, ODUC5, ODUC6, ODUC7, ODUC8 and ODUC9. This document defines new Signal Types for these additional containers.

Conventions used in this document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

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1. Introduction

[RFC7139] updates the portions of text related to the Optical channel Data Unit (ODU) described in [RFC4328] to provide extensions to Resource ReserVation Protocol - Traffic Engineering (RSVP-TE) to support control for [G.709-v3] in the OTN-TDM SENDER_TSPEC and OTN-TDM FLOWSPEC objects. However, it does not specify Signal Types for the beyond 100G ODUCn containers defined in [G.709/Y.1331]. This document provides RSVP-TE signaling extensions to support ODUC1, ODUC2, ODUC3, ODUC4, ODUC5, ODUC6, ODUC7, ODUC8 and ODUC9 Signal Types.

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2. RSVP-TE extension for Beyond 100G Signal Types

[RFC7139] defines the format of Traffic Parameters in OTN-TDM SENDER_TSPEC and OTN-TDM FLOWSPEC objects. These traffic parameters have a Signal Type field. This document defines the Signal Types for ODUC1, ODUC2, ODUC3, ODUC4, ODUC5, ODUC6, ODUC7, ODUC8 and ODUC9, as defined in the IANA Considerations section. They are allocated via the Specification Required policy added to the subregistry by [RFC7892].

3. Security Considerations

This document does not introduce any additional security issues beyond those identified in [RFC7139].

4. IANA Considerations

IANA maintains the "Generalized Multi-Protocol Label Switching (GMPLS) Signaling Parameters" registry that contains the "OTN Signal Type" subregistry.

This document request IANA to add the following signal types in the subregistry via the Specification Required policy [RFC5226]:

<table>
<thead>
<tr>
<th>Value</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBA1</td>
<td>ODUC1</td>
</tr>
<tr>
<td>TBA2</td>
<td>ODUC2</td>
</tr>
<tr>
<td>TBA3</td>
<td>ODUC3</td>
</tr>
<tr>
<td>TBA4</td>
<td>ODUC4</td>
</tr>
<tr>
<td>TBA5</td>
<td>ODUC5</td>
</tr>
<tr>
<td>TBA6</td>
<td>ODUC6</td>
</tr>
<tr>
<td>TBA7</td>
<td>ODUC7</td>
</tr>
<tr>
<td>TBA8</td>
<td>ODUC8</td>
</tr>
<tr>
<td>TBA9</td>
<td>ODUC9</td>
</tr>
</tbody>
</table>

Value          Type   (Description)
-----          ----   (---)
TBA1           ODUC1  (100Gbps OTN [G.709/Y.1331])
TBA2           ODUC2  (200Gbps OTN [G.709/Y.1331])
TBA3           ODUC3  (300Gbps OTN [G.709/Y.1331])
TBA4           ODUC4  (400Gbps OTN [G.709/Y.1331])
TBA5           ODUC5  (500Gbps OTN [G.709/Y.1331])
TBA6           ODUC6  (600Gbps OTN [G.709/Y.1331])
TBA7           ODUC7  (700Gbps OTN [G.709/Y.1331])
TBA8           ODUC8  (800Gbps OTN [G.709/Y.1331])
TBA9           ODUC9  (900Gbps OTN [G.709/Y.1331])

These Signal Types are carried in the Traffic Parameters in OTN-TDM SENDER_TSPEC and OTN-TDM FLOWSPEC objects [RFC7139].

5. References

5.1. Normative References
5.2. Informative References


Authors’ Addresses

Zafar Ali
Cisco Systems
Email: zali@cisco.com

Manoj Kumar
Cisco System
Email: manojk2@cisco.com

Akshaya Nadahalli
Cisco Systems
anadahal@cisco.com

Antonello Bonfanti
Cisco Systems
abonfant@cisco.com

Expires April 2017