

PCEP Extension for WSON Routing and Wavelength Assignment draft-ietf-pce-wson-rwa-ext-03.txt

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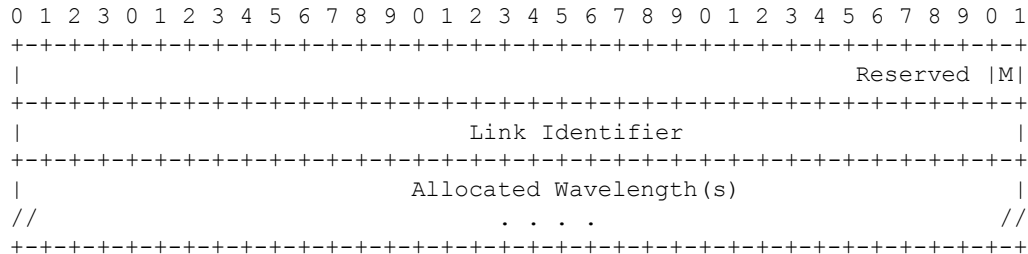
Changes from previous versions

- 4.2 Wavelength Selection TLV introduced to align with the encoding in WSON Signaling draft, **<draft-ietf-ccamp-wson-signaling-12>** instead of using flags in the WA object.
- 4.2.1. Link Identifier Entry for IPV4/IPV6:
 - Deleted “Attributes” field (not clear on the usage)
- 4.2.2 Wavelength Restriction Field
 - Added more explanation text
- 4.3 Signal processing capability restrictions
 - Client Signal information TLV is added as endpoint- restriction in the END-POINTS type Generalized endpoint:
 - signal-compatibility-restriction ::= <Optical Interface Class List>
<*Client Signal*>

Continued

- 5. Encoding of a RWA Path Reply is supplied:

Wavelength Allocation TLV Encoding:



- o M (Mode): 1 bit . 0 - - indicates the allocation is under Explicit Label Control. .
1 - - indicates the allocation is expressed in Label Sets.
- o Link Identifier (variable): Identifies the interface to which assignment wavelength(s) is applied.
- o Assigned Wavelength(s) (variable): Indicates the assigned wavelength(s) to the link identifier.

This TLV is encoded as an attributes TLV, per [RFC5420], which is carried in the ERO LSP Attribute Subobjects per [RFC7570].

IANA

- **New PCEP Object**

A new PCEP Object is defined to carry wavelength assignment related constraints. IANA is to allocate the following from "PCEP Objects" sub-registry (<http://www.iana.org/assignments/pcep/pcep.xhtml#pcep-objects>):

Object Class

Value	Name	Object Type	Reference
TBD	WA	1: Wavelength-Assignment	[This.I-D]

- **Five New PCEP TLVs** introduced ("PCEP TLV Type Indicators" subregistry <http://www.iana.org/assignments/pcep/pcep.xhtml#pcep-tlv-type-indicators>)
 - **Wavelength Selection TLV**
 - **Wavelength Restriction Constraint TLV**
 - **Wavelength Allocation TLV**
 - **Optical Interface Class List TLV**
 - **Client Signal TLV**

- **8.7. New No-Path Reasons**

As described in Section 5.2., a new bit flag are defined to be carried in the Flags field in the NO-PATH-VECTOR TLV carried in the NO-PATH Object. This flag, when set, indicates that no feasible route was found that meets all the RWA constraints (e.g., wavelength restriction, signal compatibility, etc.) associated with a RWA path computation request. IANA is to allocate this new bit flag from the "PCEP NO-PATH-VECTOR TLV Flag Field" subregistry (<http://www.iana.org/assignments/pcep/pcep.xhtml#no-path-vector-tlv>).

Bit	Description	Reference
TBD	No RWA constraints met	[This.I-D]

- **8.8. New Error-Types and Error-Values**

As described in Section 5.1, new PCEP error codes are defined for WSON RWA errors. IANA is to allocate from the "PCEP-ERROR Object Error Types and Values" sub-registry (<http://www.iana.org/assignments/pcep/pcep.xhtml#pcep-error-object>).

Error-Type	Meaning	Error-Value	Reference
TDB	WSON RWA Error	1: Insufficient Memory 2: RWA computation Not supported	[This.I-D] [This.I-D]

Current Status & Next Steps

- Draft has resolved all pending technical issues and is stable.
- Next step is to move to WG LC.