

Updated Rules for PCEP Object Ordering

draft-dhody-pce-pcep-object-order-00

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Some History

- The issue with RBNF and strict object ordering in PCEP keeps popping up!
- Errata - 6627
 - ordering between the LSP & CLASSTYPE objects in PCReq message
- Errata - 3672
 - Metric objects in the SVEC list
- See also draft-cmfg-pce-pcep-grammar-02
- And then John suggested this approach on the mailing list!

Motivation

- The mandatory object ordering requirement in [RFC5440] is shown to result in exponential complexity in terms of what each new PCEP extension needs to cope with in terms of reconciling all previously-published RFCs, and all concurrently work in progress internet drafts.
- This requirement does not lend itself for extensibility of PCEP.

Update to RFC 5440

- [Section 6](#) of [[RFC5440](#)] states:
 - An implementation MUST form the PCEP messages using the object ordering specified in this document.
- This text is updated to read as follows:
 - An implementation SHOULD form the PCEP messages using the object ordering specified in this and subsequent documents when an ordering can be unambiguously determined; an implementation MUST be prepared to receive a PCEP message with objects in any order.
- This update does not aim to take away the object ordering completely.
 - It is expected that the PCEP speaker will follow the object order as specified unless there are valid reasons to ignore and the receiver is able to unambiguously understand the object meaning irrespective of the order.

Compatibility

- The messages generated by an implementation of this document when received by a legacy implementation with a strict interpretation of object ordering MAY lead to error handling.
 - It is interesting to note that the [RFC5440] does not define an Error-Type and Error-value corresponding to this error condition.
- Many implementations follow future proof techniques and are liberal in parsing the received PCEP messages.

Next Steps

- Is this the right approach to this problem?
- TODO - Scan all PCEP extensions to see if any other text needs to be updated related to object ordering.

Thanks!

Questions?