

draft-dhody-pce-stateful-pce-optional-00

**Extension For Stateful PCE to allow
Optional Processing of PCEP Objects**

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USAGE EXAMPLE

The requirement was discussed in the WG mailing list where the relaxing of constraints would be useful to indicate in the context of Stateful PCE.

Metric Object

- Mark a Path delay variation bound metric as optional limiting constraint
- Indicate if the object was ignored or processed

Association Object

- Diversity
 - Mark the disjoint association as optional so that this constraint can be dropped by PCE if the disjoint path for the LSP cannot be found

EXTENSION

Capability Advertisement

Handling of P flag

- PCRpt
- PCUpd
- PCInitiate

Handling of I flag

- PCUpd
- PCRpt

Unknown Objects

CAPABILITY

PCEP Speaker indicates its ability to support handling of P/I flag in Stateful PCEP messages.



A new flag in STATEFUL-PCE-CAPABILITY TLV

R (RELAX) bit – If set to 1, can send/receive PCEP objects with handling of P/I flags

Both peers needs to set the flag

P (PROCESSING-RULE) FLAG

PCRpt

- PCC to specify to PCE if the object must be taken into account by the PCE (during path computation or re-optimization) or is just optional.
- When the P flag is set, the object **MUST** be taken into account by the PCE. Conversely, when the P flag is cleared, the object is optional and the PCE is free to ignore it.

PCUpd / PCInitiate

- PCE to specify to PCC whether the object must be taken into account by the PCC (during path setup) or is just optional.
- When the P flag is set, the object **MUST** be taken into account by the PCC. Conversely, when the P flag is cleared, the object is optional and the PCC is free to ignore it.

Mandatory Object always set P flag

I (IGNORE) FLAG

PCUpd

- PCE to indicate to PCC whether or not an optional object was processed.

PCRpt

- PCC to indicate to PCE whether or not an optional object was processed in response to an PCUpd/PCInitiate.

PCInitiate

- I flag has no meaning in this message.

UNKNOWN OBJECTS

- Handling of unknown objects based on the setting of P flag (similar to RFC 5440)
 - If a PCEP speaker does not understand an object with the P flag set or understands the object but decides to ignore the object, the entire stateful PCEP message **MUST** be rejected and the PCE **MUST** send a PCErr message with Error-Type="Unknown Object" or "Not supported Object".
 - In case the P flag is not set, the PCEP speaker is free to ignore the object and continue with the message processing as defined.
- RFC 8231 defined LSP Error Code TLV to be carried in PCRpt message in the LSP object to convey error information. This document does not change that procedure.

SUMMARY & NEXT STEPS

- Useful Problem to Solve?
- Is this the Right Approach?
- Comments?

THANKS!