

Extensions to the Path Computation Element Communication Protocol for Enhanced Errors and Notifications

PCE WG, IETF104, Prague

draft-ietf-pce-enhanced-errors-05

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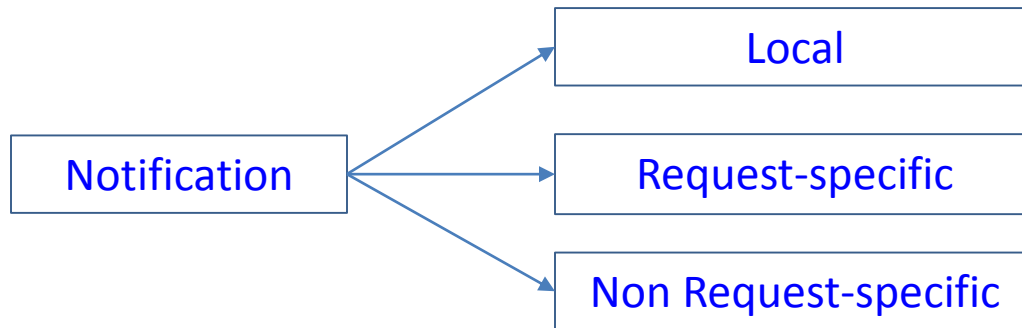
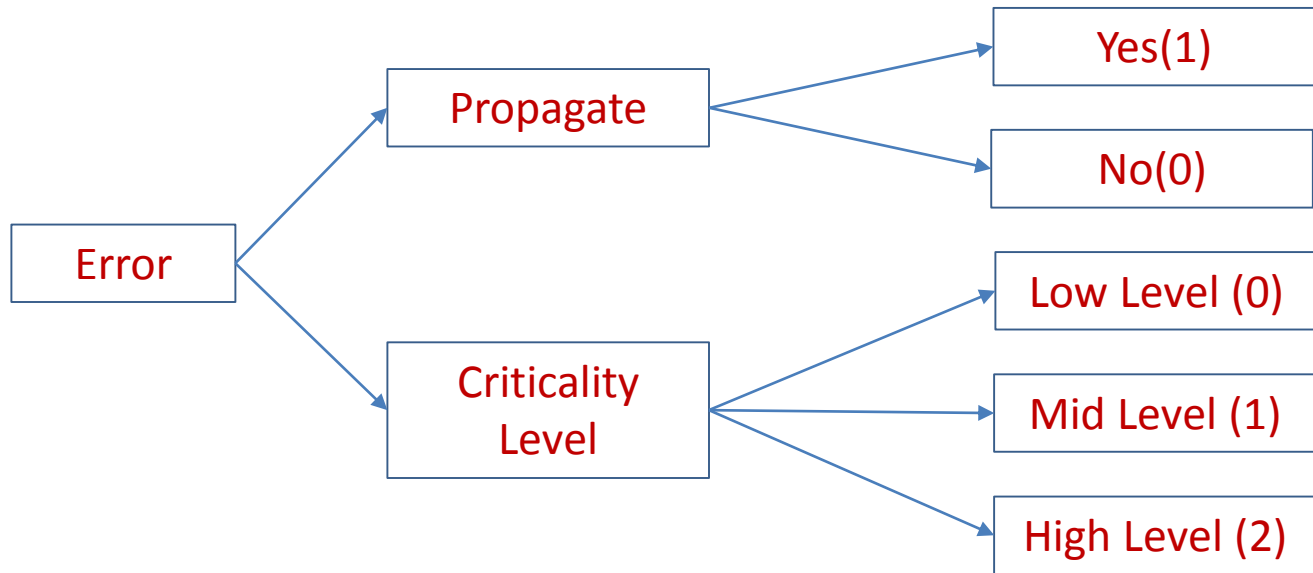
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Background

- Why we need this work?
 - Error Code in RFC5440 should be updated between PCEs;
- Who will need this work?
 - Multiple-PCE scenarios, including multi-layer, multi-domain and H-PCE;
- What happened to this work?
 - Started in 2010 and adopted in 2012;
 - Reactivated in recent years, with less attention;

Content - Behavior



Content – Handling Rule

Error-Type	Propagation	Criticality Level
1 – Establish fail	No(0)	High(2)
2,3,4 –not support capability/unknown object	Yes(1)	High(2)
5 – Policy Violation	Yes(1)	Mid(1)
6 – Mandatory object missing	Yes(1)	Mid(1)
7 – Synchronized PC request missing	Yes(1)	Mid(1)
8 – Unknown Request Reference	No(0)	Low(0)
9 – attempt second PCEP	No(0)	Low(0)
10 – invalid object	Yes(1)	Low(0)
11 - Unrecognized EXRS subobject	On demand	Low(0)
12 - Diffserv-aware TE error	On demand	On demand
13 - BRPC procedure completion failure	Yes(1)	On demand
15 - Global Concurrent Optimization Error	On demand	Mid(1)

Content – Handling Rule Contd

Error-Type	Propagation	Criticality Level
16 - P2MP Capability Error	On demand	Mid(1)
17 - P2MP END-POINTS Error	On demand	On demand
18 - P2MP Fragmentation Error	On demand	Low(0) or Mid(1)
19 - Invalid Operation	Yes(1)	High(2)
20 - LSP State Synchronization Error	Yes(1)	High(2)
21 - Invalid traffic engineering path setup type	Yes(1)	High(2)
23 - Bad parameter value	Yes(1)	Low(0) or Mid(1)
24 - LSP instantiation error	Yes(1)	Low(0) or Mid(1)
25 - PCEP StartTLS failure	On demand	High(2)
26 - Association Error	On demand	Low(0) or Mid(1)

We had a quick check on existing draft...

- The following drafts have description on error handling;
 - draft-ietf-pce-association-group;
 - draft-ietf-pce-association-bidir;
 - draft-ietf-pce-flexible-grid;
 - draft-ietf-pce-hierarchy-extensions;
 - ...
- The following drafts don't have description on error handling;
 - draft-ietf-pce-stateful-hpce;
 - draft-dhody-pce-stateful-pce-interdomain;
 - draft-xiong-pce-multilayer-lsp-association;
- It is expected for every 'multiple PCE draft (in standard track)' to have a description session indicating whether new error types are needed to be extended;

Discussion and Next Step

- It is certainly an important work;
- It may not be an urgent work...
 - But a inter-PCE publication may have dependency;
- Closing...
 - Current error handling types & notifications are stable;
 - Request for WG attention, reference, review and LC;