Applicability of Stateful PCE

PCE WG, IETF 86th, Orlando, USA
draft-zhang-pce-stateful-pce-app-03.txt

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Agenda

• Document goals
• Summary of changes
• Next steps
Document goals

• Goals
  – Describe how a stateful PCE can be used to solve specific problems
  – Describe how a stateful PCE can be deployed

• Non-goals
  – No new extensions
  – No requirements
  – No implementation guidelines, pros/cons discussions on implementation options
Summary of changes

• Merged applicability section of draft-ietf-pce-stateful-pce into this draft and added new authors: Ed. Crabbe (Google), Ina Minei (Juniper), Jan Medved (Cisco), Robert Varga (Pantheon Technologies LLC)
  ✓ Xian Zhang and Ina Minei as editors

• Reached a consensus to focus the draft on:
  ✓ Providing general considerations on stateful PCE deployments
  ✓ Applicability of stateful PCE through a rich set of use cases (covering both MPLS-TE and GMPLS)
Summary of changes

General considerations:

• Brief explanation of:
  ✓ Multi-PCE deployment
  ✓ LSP state synchronization
  ✓ PCE survivability

• Issues raised up in Version 02 are considered useful but left out
Summary of changes

Use Cases:

• Optimization of LSP placement
  ✓ Throughput Max. and Bin Packing
  ✓ Deadlock
  ✓ Minimum Perturbation
  ✓ Predictability

[Note]: Currently also available in draft-ietf-pce-stateful-pce, will be moved after this draft becomes a WG document.

• Smart Bandwidth Adjustment
• Bandwidth Scheduling
Summary of changes

Use Cases (cont.):

• Recovery
  ✓ Protection
  ✓ Restoration
  ✓ SRLG Diversity

• Maintenance of Virtual Network Topology

• LSP Re-optimization

• Resource Defragmentation

• Impairment-Aware Routing and Wavelength Assignment
Next steps

• Welcome feedback on this document
• WG Adoption?