PCEP extension for associating Policies and LSPs

draft-dhody-pce-association-policy-00

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Introduction

A simple mechanism to associate policies to a group of LSPs via an extension to PCEP

This has been discussed before in various forms -

- draft-sivabalan-pce-policy-identifier; draft-alvarez-pce-path-profiles; draft-dhody-pce-association-attr

With this draft, we have converged on “association” based approach to Policy.

Policy

- Requirement - associate a set of LSPs with policy, *without the need to know the details of such policies*
  - which simplifies network operations
  - avoids frequent software upgrades
  - ability to introduce new policies faster
- Policy as an opaque identifier
- During path computation to decide how the path selection process should be constrained, that is, which constraints, diversities, optimization criterion, and constraint relaxation strategies should be applied.
- After setup for traffic steering, path monitoring, optimizations etc.
- Applicable to stateful and stateless.

PCEP Extension

- [I-D.ietf-pce-association-group] describes a generic mechanism to create an association between LSPs
- LSPs are associated with other LSPs by adding them to a common association group using ASSOCIATION object
- A new Association Type is defined for Policy Association Group (PAG)
  - VENDOR-INFORMATION-TLV could be optionally included for arbitrary vendor specific behavioural information.
- {Association Type = Policy, Association ID, Association Source} can uniquely identify a Policy

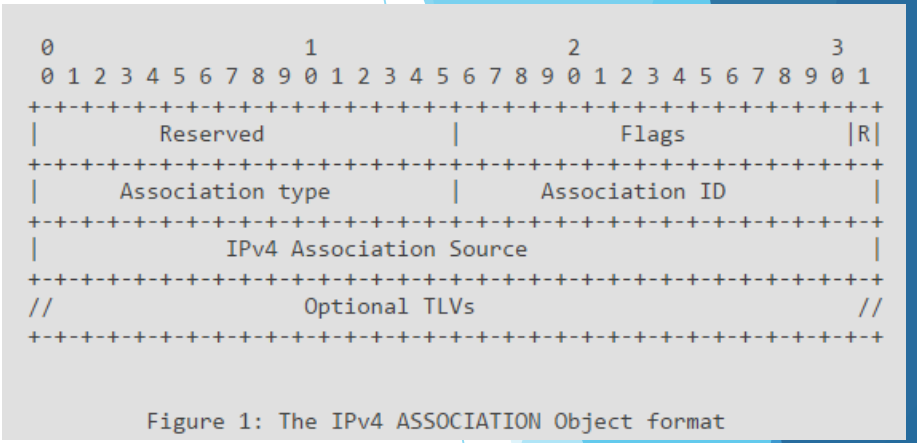


Figure 1: The IPv4 ASSOCIATION Object format

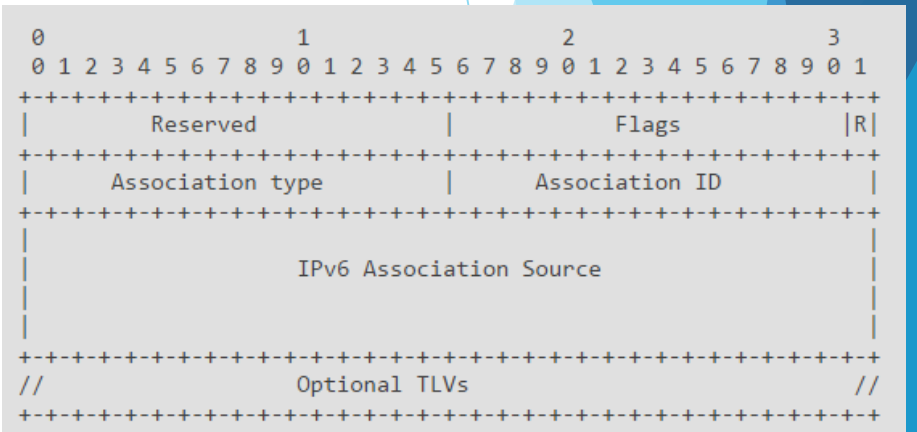
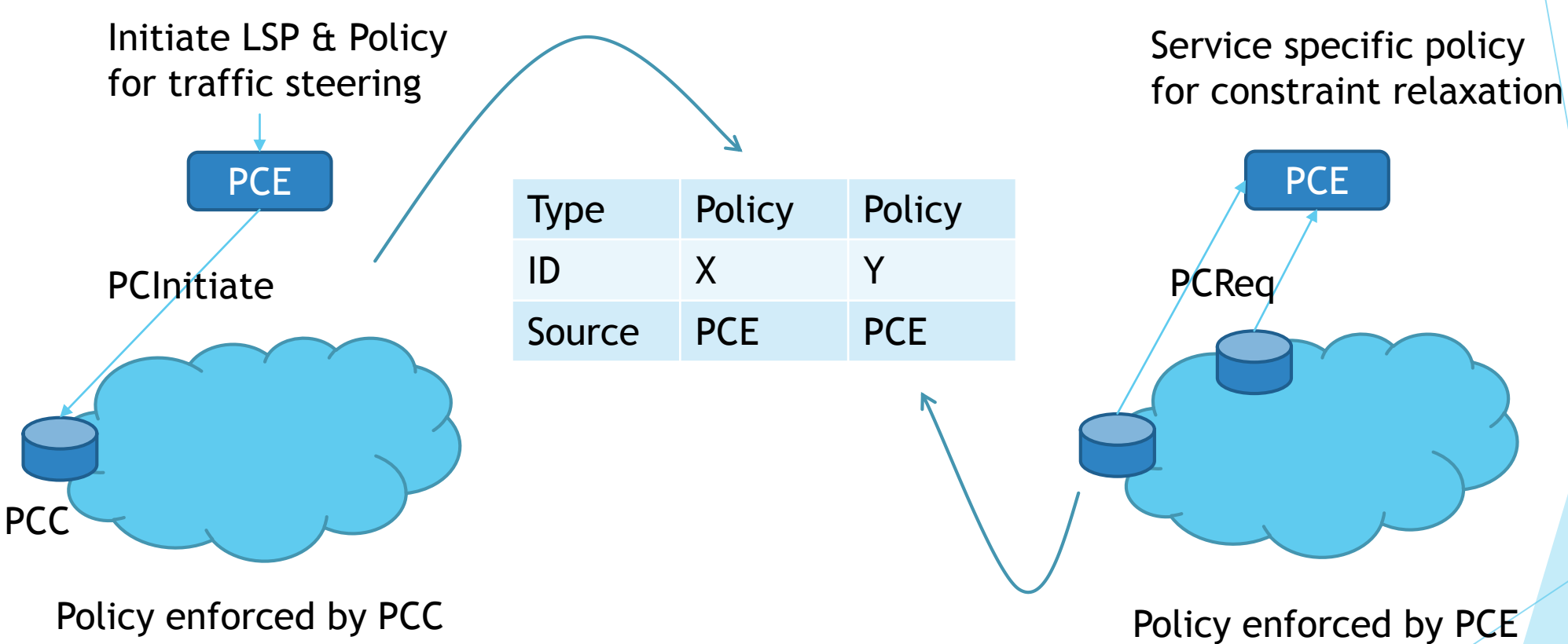


Figure 2: The IPv6 ASSOCIATION Object format

Policy in PCEP



Type	Policy	Policy
ID	X	Y
Source	PCE	PCE

Next Step

- This is a useful feature required by operators.
- Reusing generic association object leads to a simple extension.
- Implementations are in pipeline. Work with Association authors for early code point allocation.
- Comments?
- Candidate for WG adoption?

Thanks!