

Pseudowire Communities

[draft-pkwok-pwe3-pw-communities-02](#)

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History and Updates

- Presented version-01 in IETF-81. Published version-02 after addressing comments.
- Extended the scope of PW Communities Concept and Applicability.
- Generalized definition and encoding PW Communities for extendibility.

Objectives (Recap)

- Generic method to simplify provisioning of Dynamic Pseudowires.
- Aid in policy administration during dynamic multi-segment pseudowire (Dyn MS-PW) set-up across various S-PEs with minimal overhead.

Problem Statement (Recap)

- Dyn MS-PW spans across multiple administrative domains. For security reasons strict access control is required at S-PEs. One way is to define policies at S-PEs based on SAII/TAII but adds complexity, administrative overheads, configuration mistakes.
- Dyn MS-PW requires each S-PE to choose a unidirectional PSN tunnel to bind to a PW. T-PEs may require to signal the preference of PSN tunnels at S-PEs. Signaling each of the various types of PSN tunnel selection criteria adds significant burden to LDP messaging procedures.

Problem Statement (New)

- T-PE or S-PE needs to select PW next-hop from ECMP next-hops. Hashing rules can be based on AGI/SAII/TAII but imposes limits to addressing schemes in order to get proper load balancing. Operators need a predictable way for load balancing MS-PW across ECMP which is independent of MS-PW addressing schemes.

Solution (Updated)

- A “PW Communities” is defined as a LDP TLV that contains a list of PW Community Sub-TLVs.
- Each PW Community Sub-TLV has specific processing rules based on its type.

PW Template Community Type

- Very generic method and any complex rules can be mapped to specific PW Template Community.
- Can be considered as “Template” so that PW set-up decisions can be based on set of rules identified locally by Template ID.
- Can have various PW Template Types.

PW Color Community Type

- Can be considered as “Coloring” of PW that may be used by T-PE or S-PE to select PW next-hop from ECMP next-hops.
- Can have various PW Color Types.
- Concept is different from “PW Grouping ID” . It is not necessary that PW Grouping and PW Color Community be correlated.

Next Steps

- Request discussions/feedbacks in mailing list.
- WG Status?