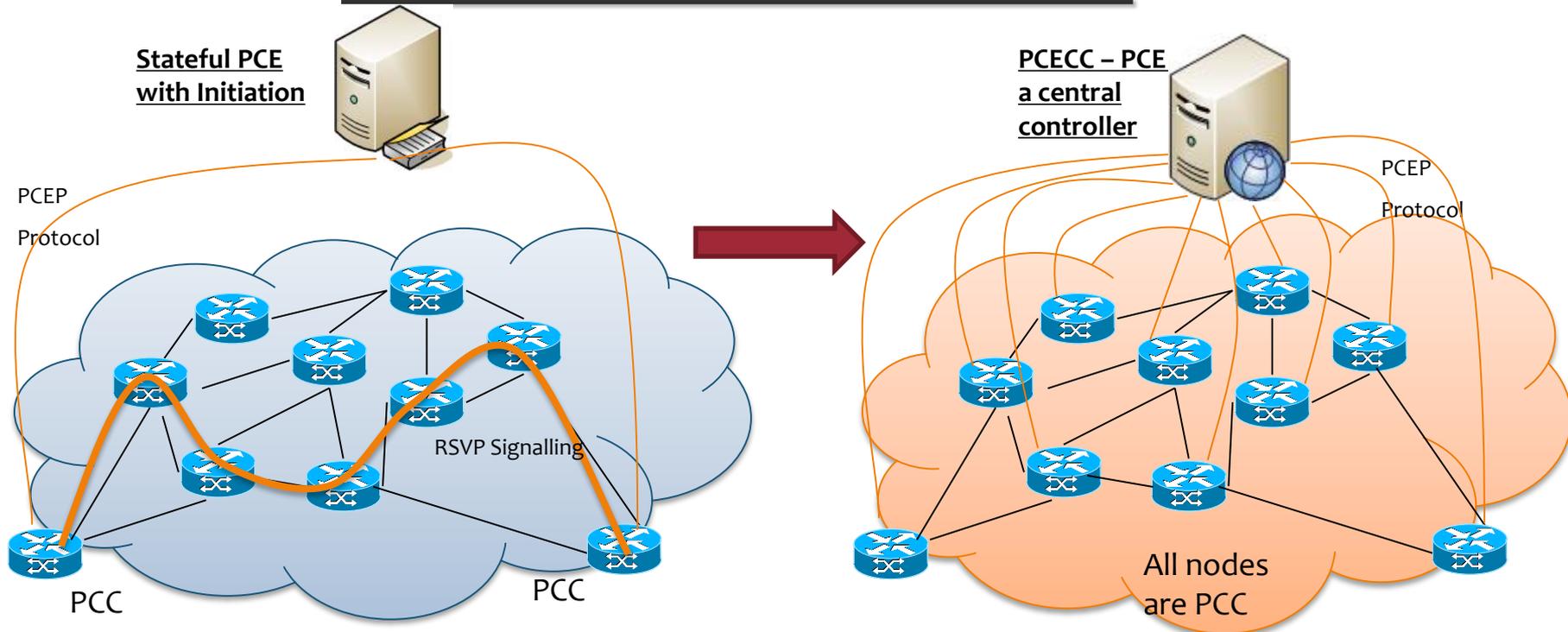


Our experience with –
“Extending PCE to act as a Central
Controller (PCECC)”.

Dhruv Dhody – Huawei

Stateful PCE to PCECC!



PCECC with SR.

Use of PCEP for Label (SR-SID) Distribution

Use Node label
for Best Effort SR-
BE LSP

Use Label Stack of
Node and
Adjacency for
Traffic Engineered
SR-TE LSP.

PCE can also be
used for Label
management

PCECC Modes

Basic

Forwarding similar to RSVP-TE without RSVP-TE signaling

Use of local label along the LSP path

PCECC allocates local label and downloads to LSR

Rest processing similar to stateful PCE

SR-BE

Forwarding similar to LDP without LDP/IGP-SR signaling

Use of SR Node label (global) to distribute label map

PCECC allocates global label and distribute them

Each LSR rely on local IGP for the next hop

SR-TE

Forwarding similar to IGP-SR-TE

Use of SR node and Adj label allocated and distributed by PCECC

Rest processing similar to stateful PCE with SR

PCECC - Basic

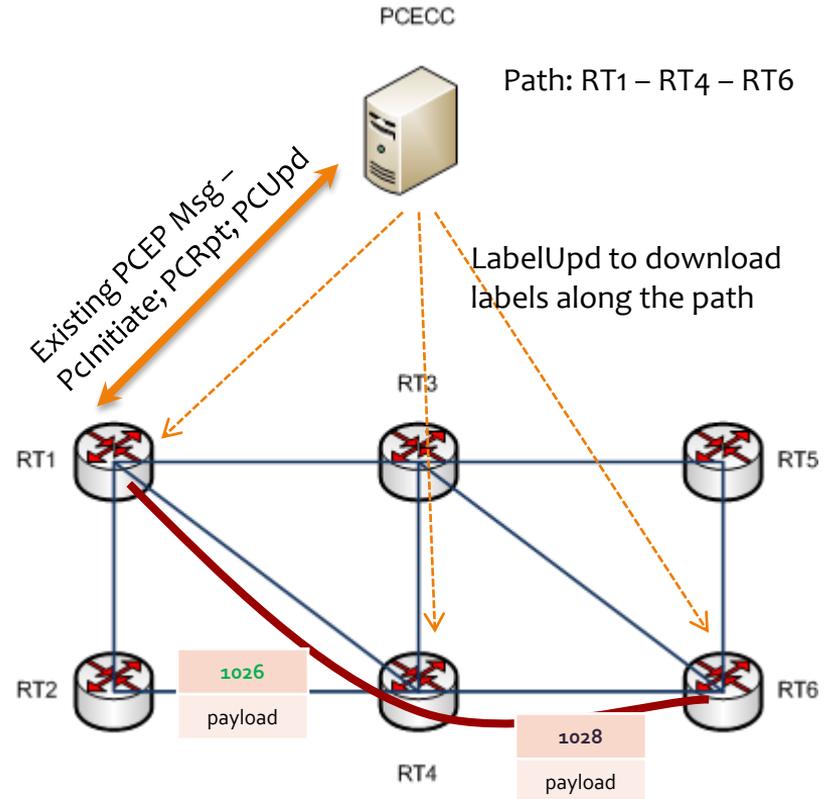
1. Request PCECC to initiate LSP

2. PCECC computes the path and allocates label along the path for each node

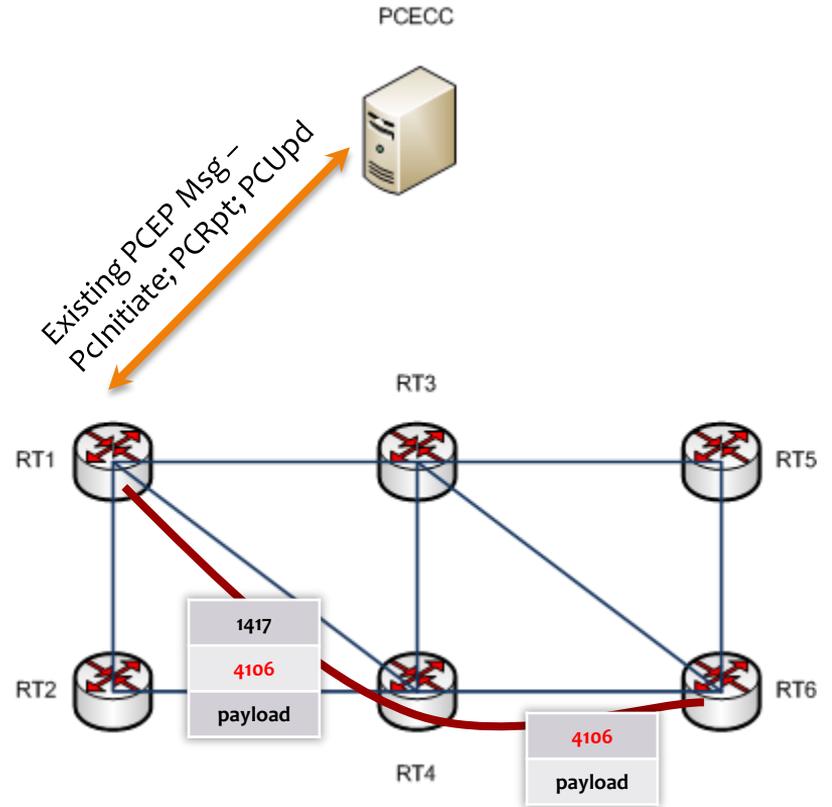
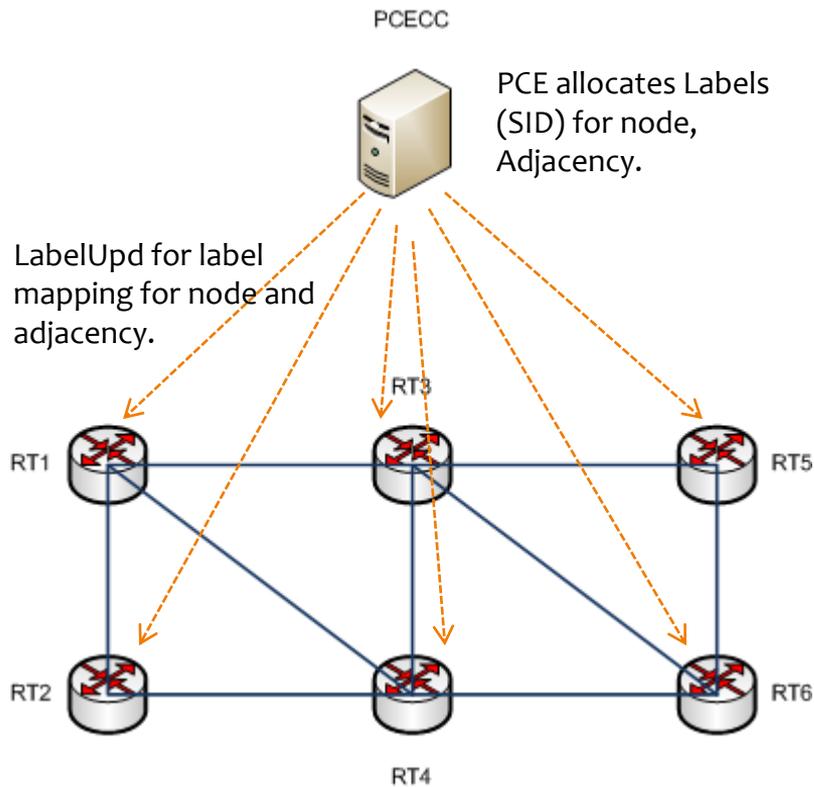
3. PCE sends PCInitiate message to the ingress and Ingress sends PCRpt message back

4. PCECC sends PCLabelUpd to each node along the path with label information to download

5. PCECC sends PCUpd to the ingress and PCC sends PCRpt back with status-up.



PCECC - SR



Related Drafts

Experimental I-D. - PCEP Procedures and Protocol Extensions for Using PCE as a Central Controller (PCECC) of LSPs

<http://www.ietf.org/id/draft-zhao-pce-pcep-extension-for-pce-controller-01.txt>

I-D. - The Use Cases for Using PCE as the Central Controller(PCECC) of LSPs.

<https://tools.ietf.org/id/draft-zhao-pce-central-controller-user-cases-01.txt>

Thanks!