Overlay Networks - Path Computation Approaches
draft-bardalai-ccamp-overlay-path-comp-02

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Problem Statement

➢ Overlay networks don't have visibility to server network topology to perform E2E TE path computation

➢ Existing solutions are signaling based

  ➢ RFC 4208 – server/core node selects the path

  ➢ RFC 4874 – additional constraints in signaling

➢ Existing solutions do not specify how the overlay network node (CE) determines the route/path to the destination

Applicable use cases

- Use Case #1:
  - Layer transition at server network edge

- Use Case#2:
  - Layer transition within server network

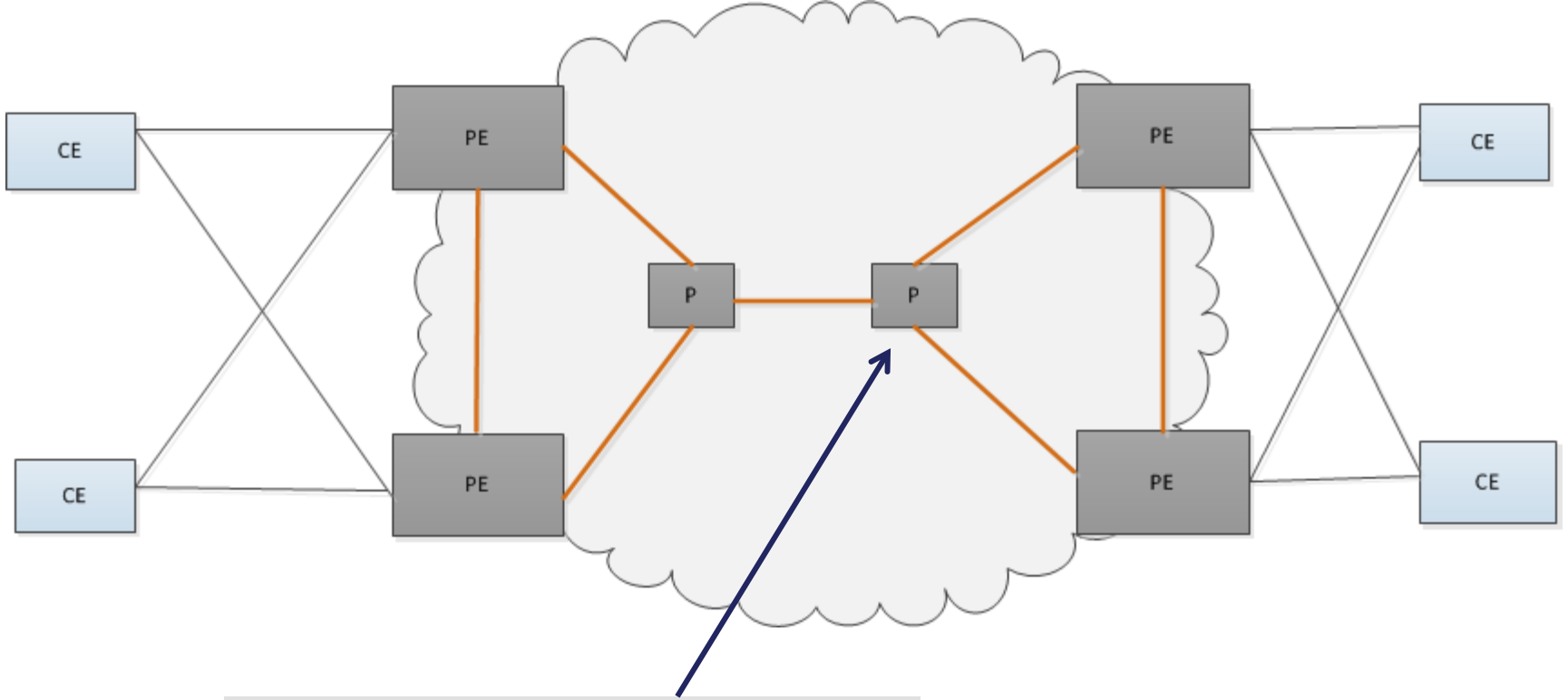# UC#1:Layer transition at server network edge (PE)
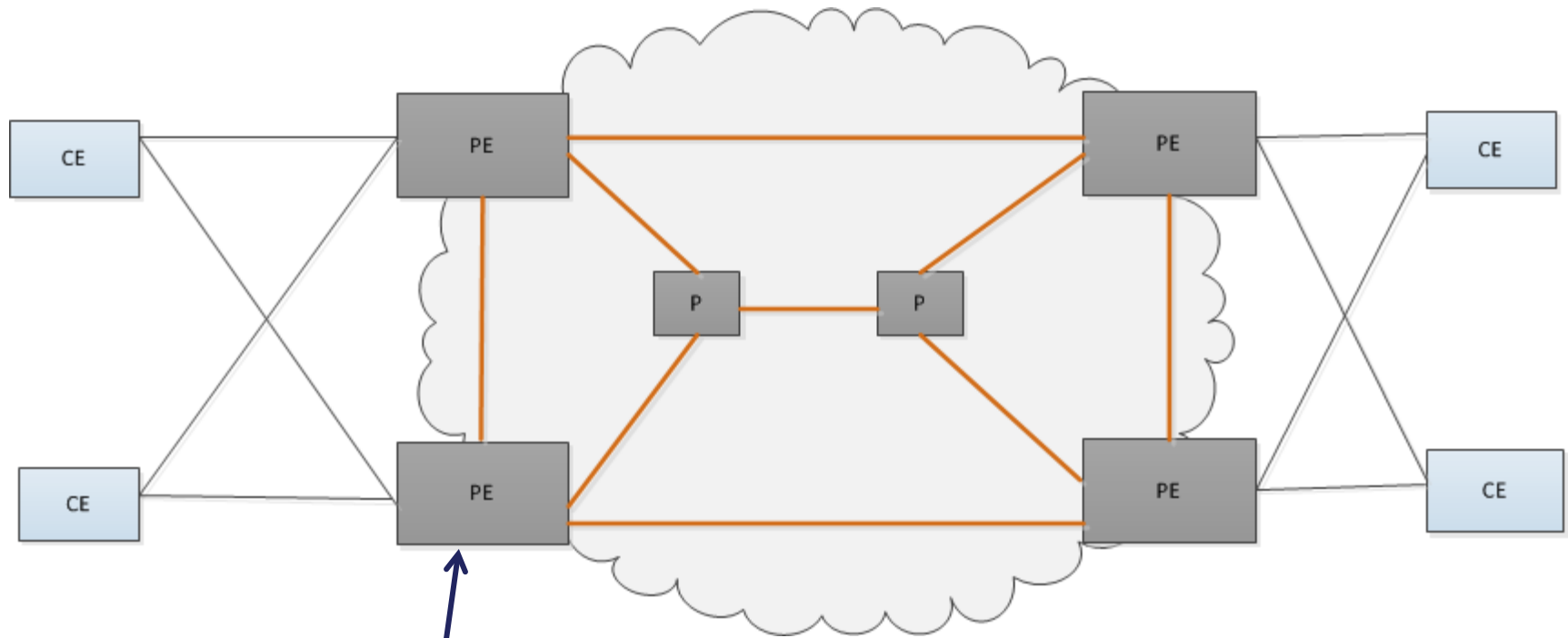
Layer transition at server edge node (PE)

CEs do not know which PE to select to get across provider network

UC#2:Layer transition within server network (P)

Layer transition in a core node (P)

CEs do not know which PE to select to get across provider network

So, the requirements

1. Need virtual / abstract topology to represent and contain the server network, irrespective of where the layer transition occurs.

   – This allows the CE nodes to select route or path to the destination.

2. Need to be able to establish the virtual /abstract topology that meets the constraints set by the customer network requirements.

What is covered in the draft

Path computation approaches using existing methods:

1. PCE approach (RFC 4655)
2. Virtual topology approach
3. Hybrid approach
   – virtual topology and PCE combined

Comments?

Thank You