

PCEP extensions for a BGP/MPLS IP-VPN

draft-kumaki-murai-pce-pcep-extension-l3vpn-10.txt

K. Kumaki

KDDI Corporation

T. Murai

Furukawa Network Solution Corp.

D. Dhody

Huawei Technology

P. Jiang

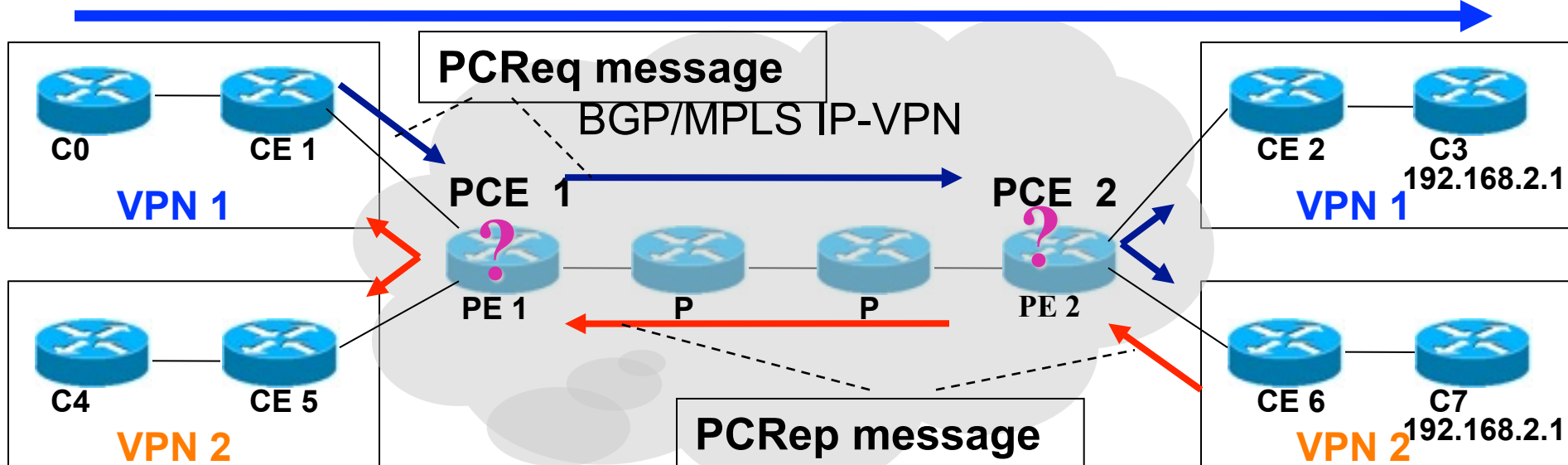
KDDI Corporation

T. Miyasaka

KDDI Corporation

Motivation

VPN 1: MPLS TE LSPs

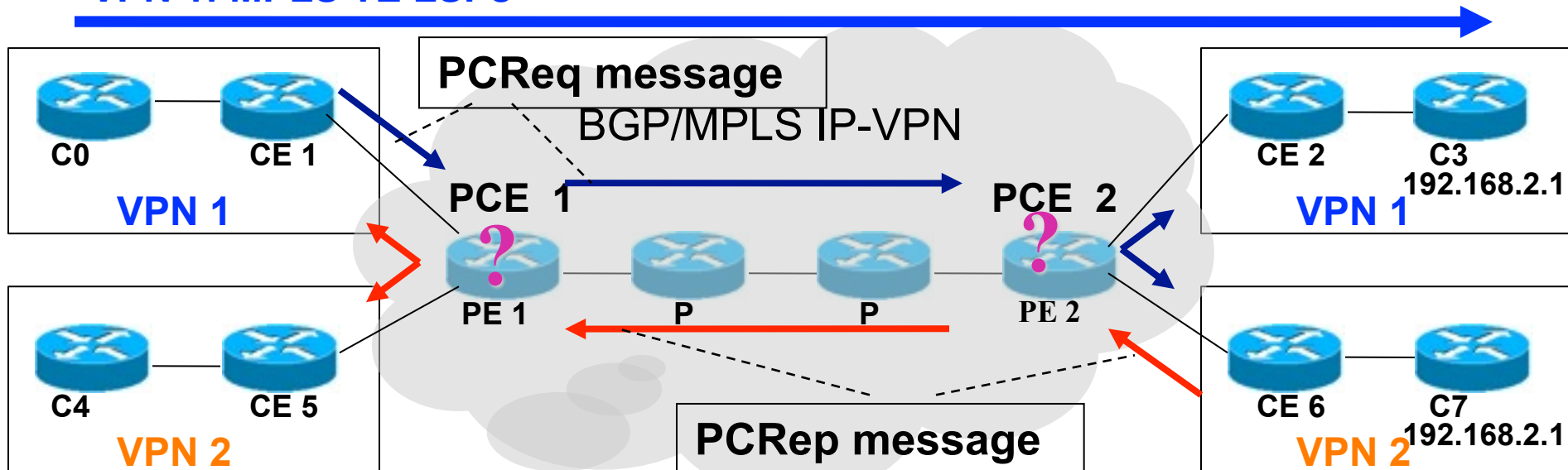


VPN 2: MPLS TE LSPs

- A VPN customer desires their MPLS TE LSPs for interconnectivity between BGP/MPLS IP-VPN sites.
- The PCE architecture is the most suitable to calculate MPLS TE LSPs between BGP/MPLS IP-VPN sites.

Problem Statement

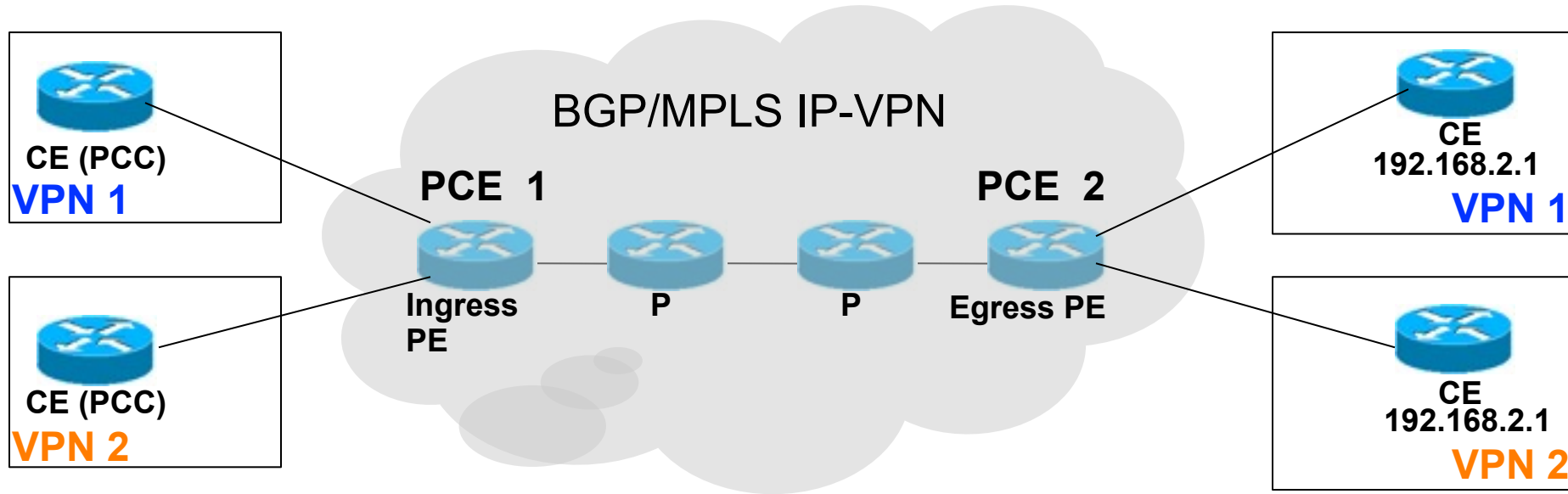
VPN 1: MPLS TE LSPs



VPN 2: MPLS TE LSPs

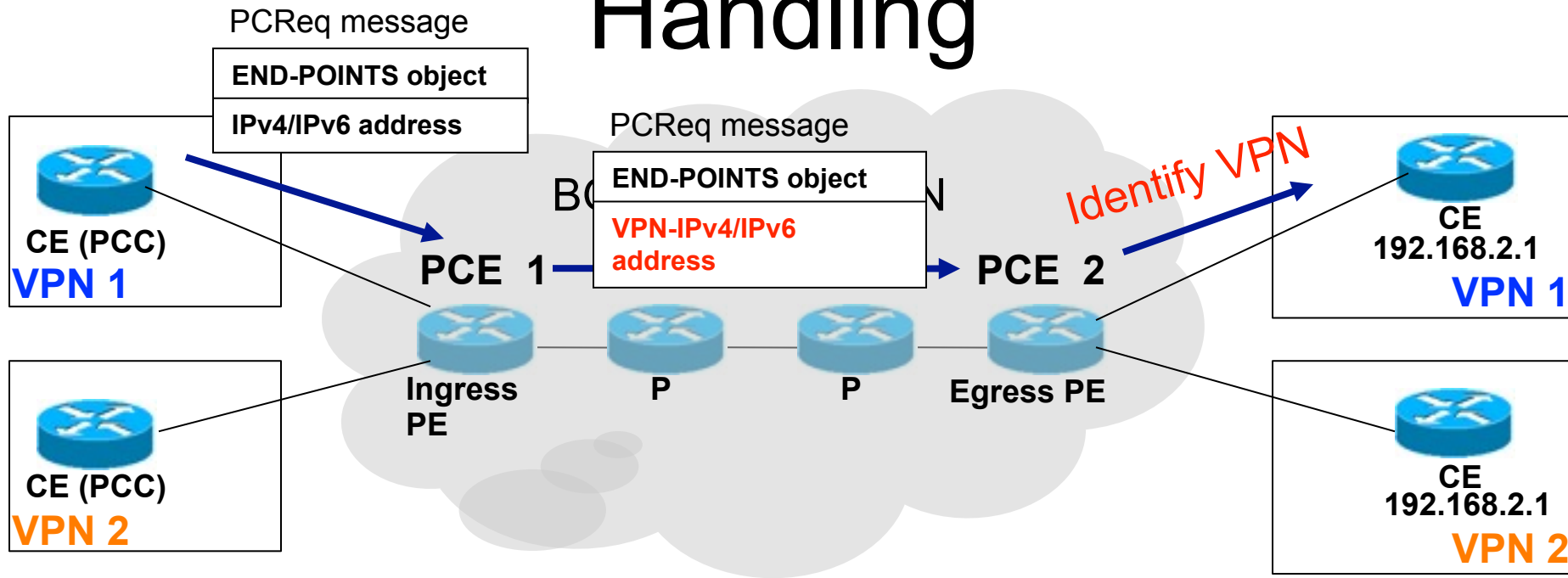
- The PCE2 can't distinguish PCReq messages between the VPN1 and the VPN2 when it sends them to the same destination.
- The PCE 2 can't calculate an appropriate TE LSP between CEs per a VPN.
- The PCE1 can't distinguish PCRep messages between the VPN1 and the VPN2 when it sends them to the same destination.
- The PCE1 can't reply the PCRep messages corresponding to the PCReq messages from PCC/PCE.

Handling



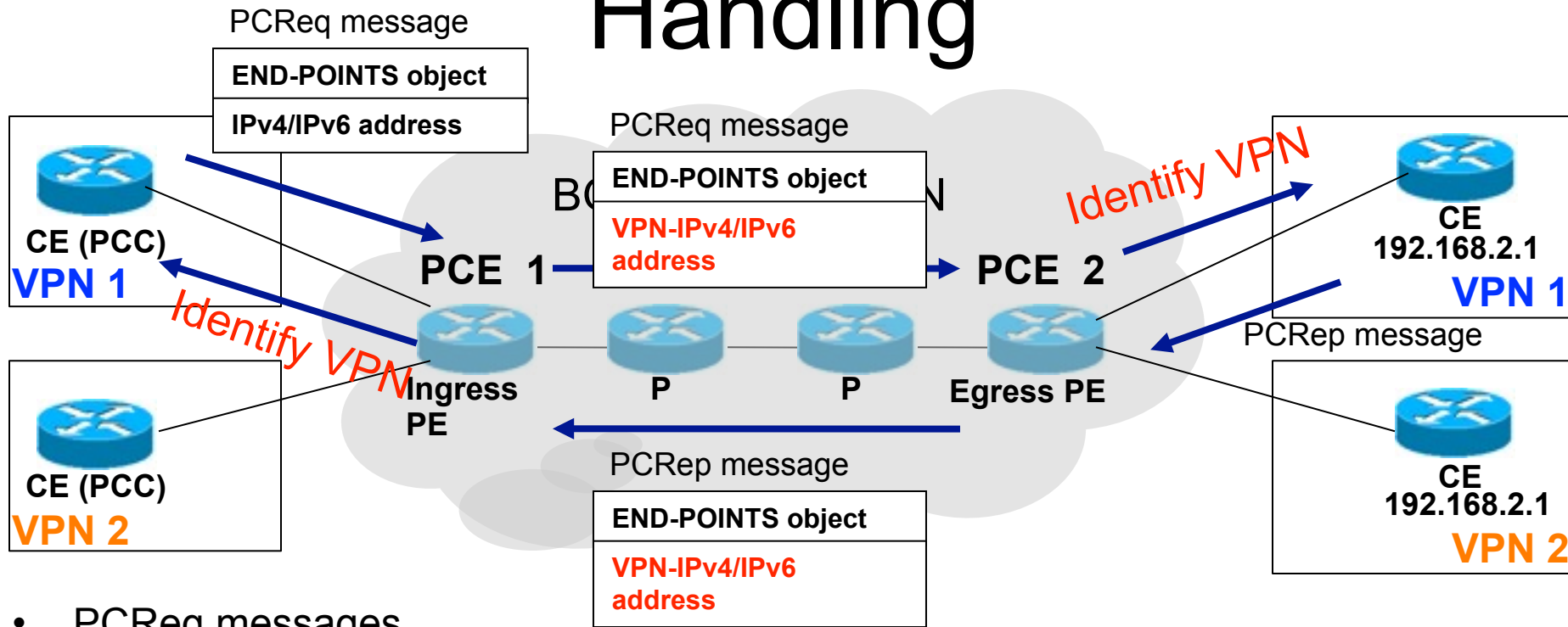
- PCReq messages
 - An ingress PE (PCE1) puts VPN-IPv4/IPv6 address in the END-POINTS object and send the PCReq message to an egress PE.
 - An egress PE (PCE2) Identifies a VPN from the VPN-IPv4/IPv6 address in the END-POINTS object.
- PCRep messages
 - An egress PE(PCE2) can look up the new END-POINTS object associated with the PCReq message and puts VPN-IPv4/IPv6 address in the END-POINTS object and send the PCRep message to an egress PE.
 - An ingress PE (PCE1) Identifies a VPN from the VPN-IPv4/IPv6 address in the END-POINTS object.

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Handling



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- PCRep messages
 - An egress PE(PCE2) can look up the new END-POINTS object associated with the PCReq message and puts VPN-IPv4/IPv6 address in the END-POINTS object and send the PCRep message to an egress PE.
 - An ingress PE (PCE1) Identifies a VPN from the VPN-IPv4/IPv6 address in the END-POINTS object.

Recent Update

- draft-kumaki-murai-l3vpn-rsvp-te-06
 - RSVP signaling extension for MPLS-TE LSPs between BGP/MPLS IP-VPN customer sites
 - in IESG State: Waiting for AD Go-Ahear
- New co-author
 - D. Dhody(Huawei) joined as co-author

Next Steps

- Need more comments and feedback from WG
- Request WG to accept this I-D as a WG document