Framework for Abstraction and Control of Transport Networks
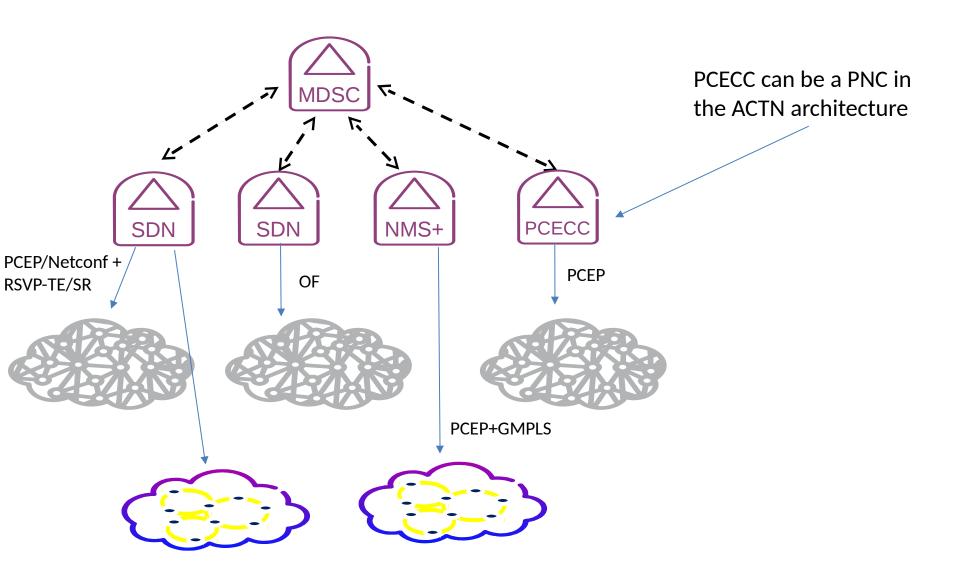
Daniele Ceccarelli (Ericsson)
Young Lee (Huawei)
Daniel King (Lancaster-University)
Sergio Belotti (Nokia)
Luyuan Fang (Microsoft)
Dhruv Dhody (Huawei)
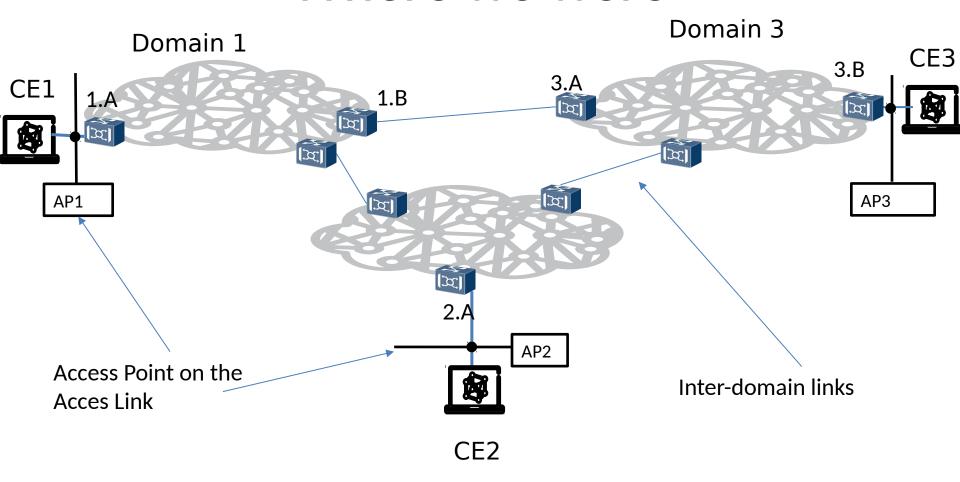Diego Lopez (Telefonica)
Gert Grammel (Juniper)

Draft-status

- Recently adopted as WG ID (-00)
- New co-author: Gert Grammel
- New terminology added to explain existing concepts
  - E.g. PNC domain
- New use case covered
  - Border node
- Still to be addressed
  - Inter-domain link management

Relationship with PCECC

MDSC

SDN

SDN

NMS+

PCECC

PCECC can be a PNC in the ACTN architecture

PCEP/Netconf + RSVP-TE/SR

OF

PCEP

PCEP+GMPLS

Where we were

Domain 1

Domain 3

CE1

CE3

1.A

1.B

3.A

3.B

AP1

AP3

2.A

AP2

CE2

Access Point on the
Acces Link

Inter-domain links

Where we are

Domain 1

Domain 3

CE1

CE3

1.A

1.B

3.A

3.B

AP1

AP3

2.A

AP2

Inter-domain links as well as Border nodes
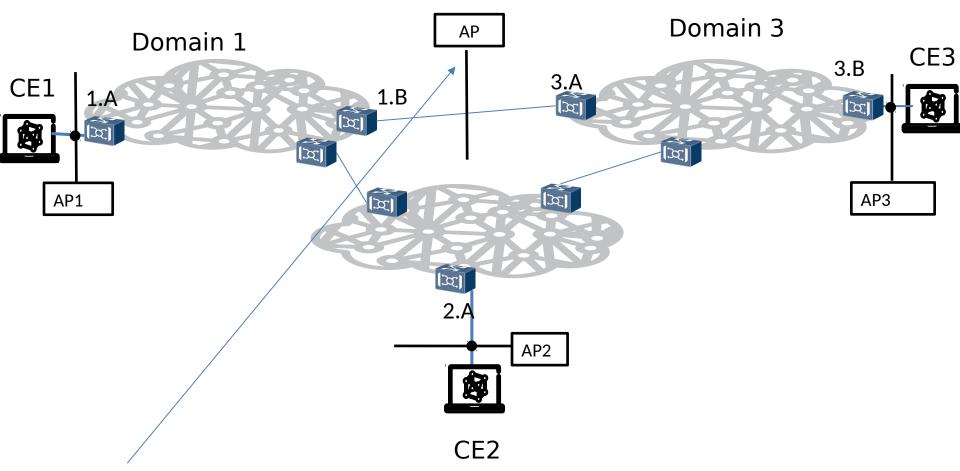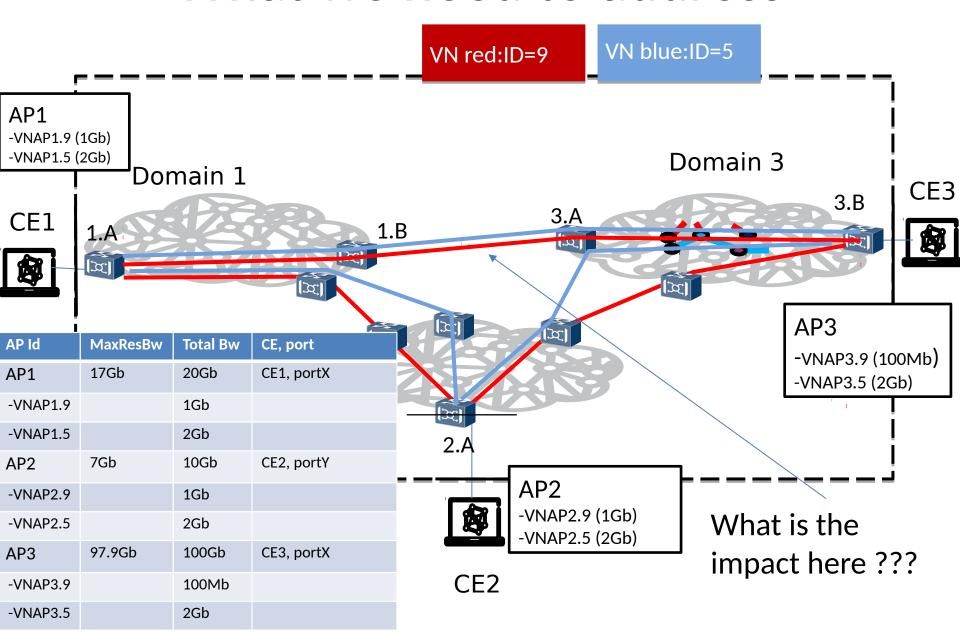
CE2

What we need to address

- Something similar to the AP defined on the inter domain links
- Is it the same as the AP or different?
- Does this need to be different between homogenous domains (same technology) or different characteristics are needed when it joins different technological domains?

What we need to address

VN red:ID=9

VN blue:ID=5

AP1
-VNAP1.9 (1Gb)
-VNAP1.5 (2Gb)

Domain 1

Domain 3

CE3

CE1

1.A

1.B

3.A

3.B

AP3
-VNAP3.9 (100Mb)
-VNAP3.5 (2Gb)

AP2
-VNAP2.9 (1Gb)
-VNAP2.5 (2Gb)

2.A

CE2

What is the impact here ???

AP Id	MaxResBw	Total Bw	CE, port
AP1	17Gb	20Gb	CE1, portX
-VNAP1.9		1Gb	
-VNAP1.5		2Gb	
AP2	7Gb	10Gb	CE2, portY
-VNAP2.9		1Gb	
-VNAP2.5		2Gb	
AP3	97.9Gb	100Gb	CE3, portX
-VNAP3.9		100Mb	
-VNAP3.5		2Gb	

Next Steps

- Discuss this open issues on the ML
- Define AP and VNAP concepts for inter domain links
- AP configuration and/or discovery
- Cover security session