IETF 90 BnB

IPV6 SEGMENT ROUTING AND SERVICE FUNCTION CHAINING

Objectives

- Demonstrate multiple, independent IPv6 Segment Routing (SR) implementations
  - Routers and hosts
  - Based on draft-previdi-6man-segment-routing-header
- Illustrate interoperability between independent implementations
- Illustrate interoperability with non-IPv6 SR capable routers and hosts
- Illustrate how SR can be used to traffic engineer or steer IPv6 flows
  - SPF versus path with optimized MTU

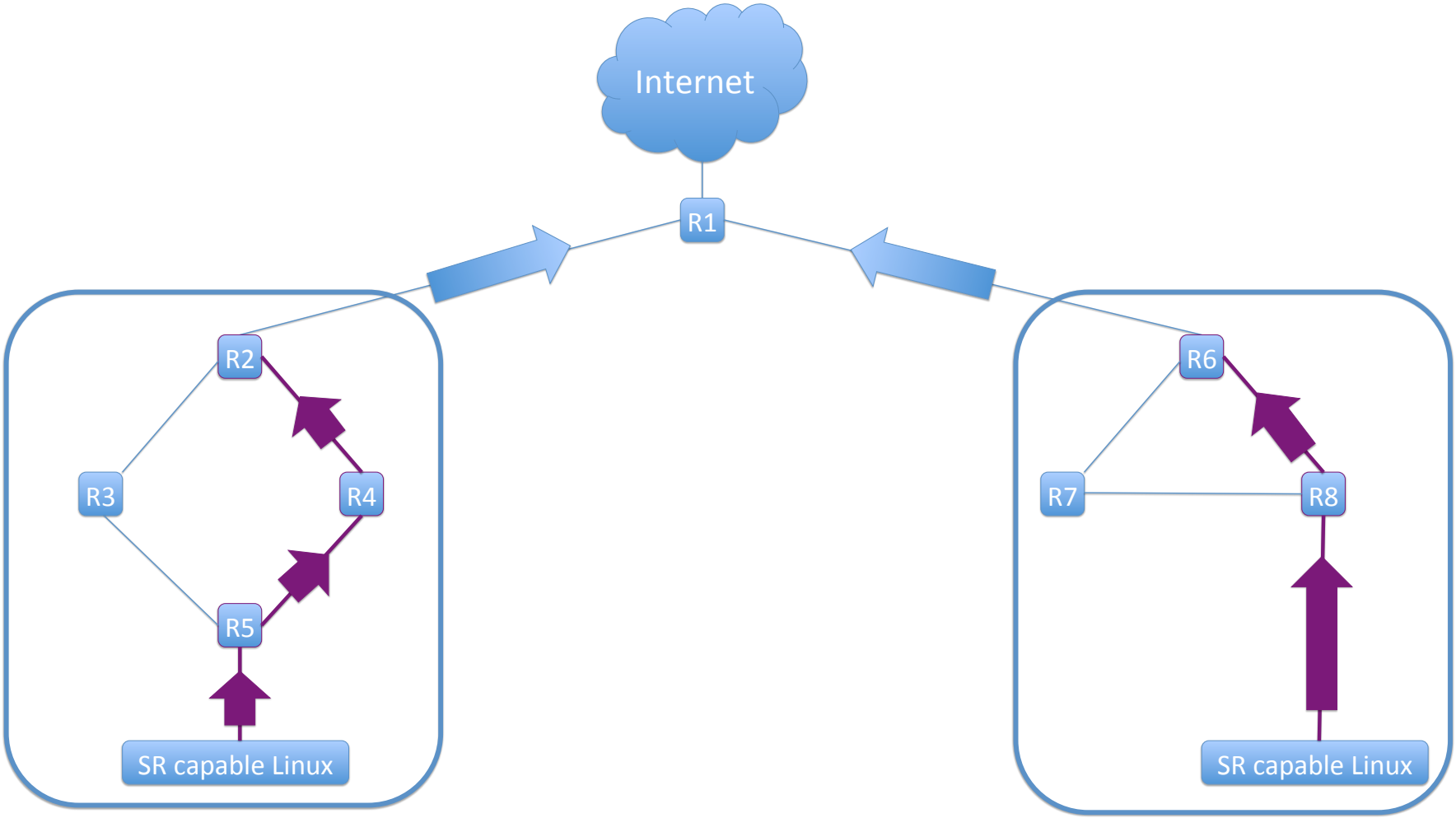
Stretch Goals

- IPv6 SR implementations query a controller to fetch segment IDs
  - getSRHByDestinationAddress()
  - getDefaultSRH()
- Utilize NETCONF/YANG as mechanism to dynamically retrieve SRHs
- Couple SRH with SFC

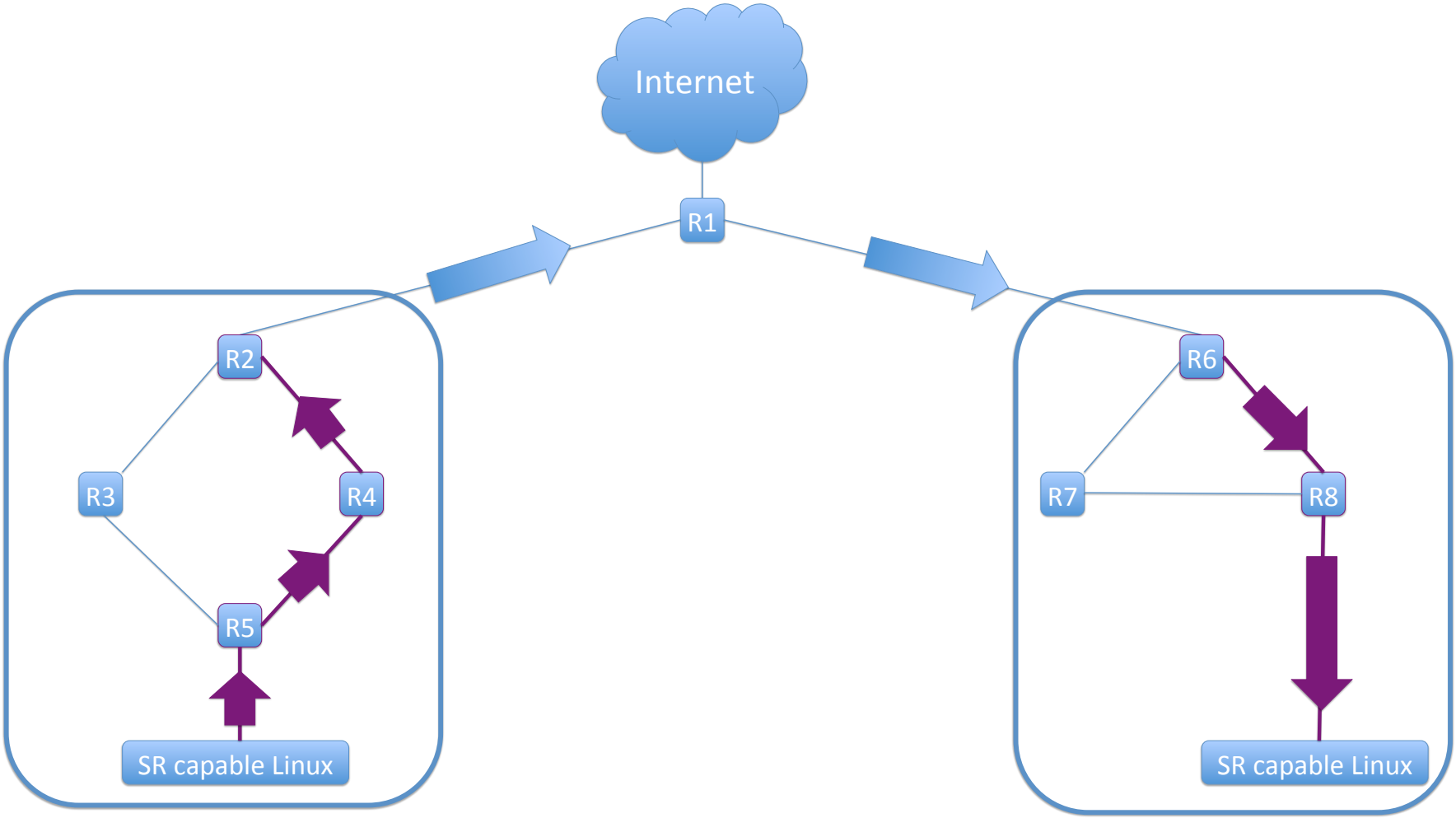
Participants

- Cisco VPP and IPv6 SR support
- SR capable home networking
  - Includes HNCP enabled by cable eRouter (HIPnet)
- Comcast IPv6 SR implementation running on Arista
- Cisco/Ecole Polytechnique IPv6 SR Distributed Cached Video Delivery use case
- University of Belgium Linux IPv6 SR implementation
- TENATIVE
  - Brocade controller for IPv6 SRH via NETCONF/YANG

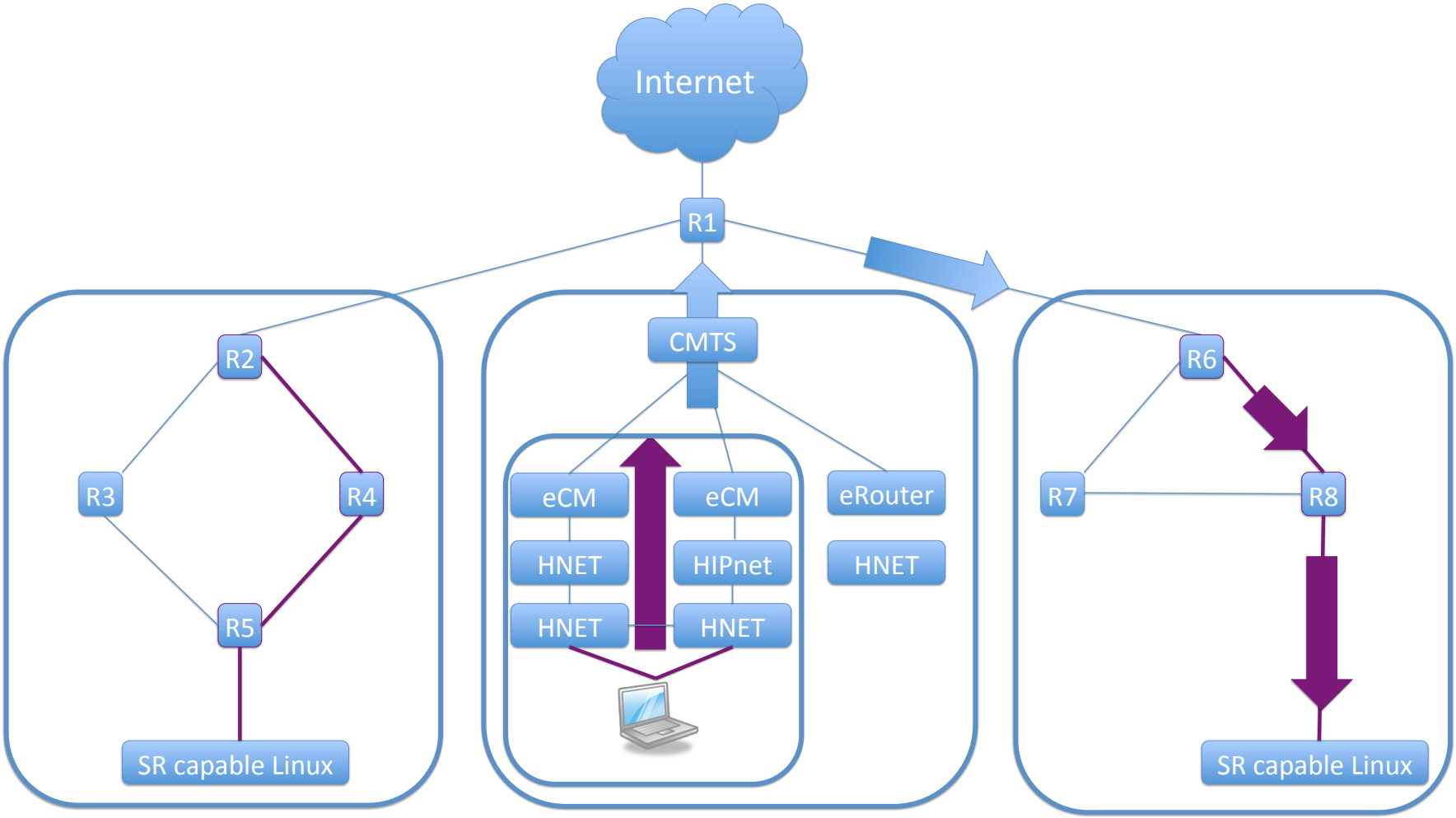
Autonomous SR



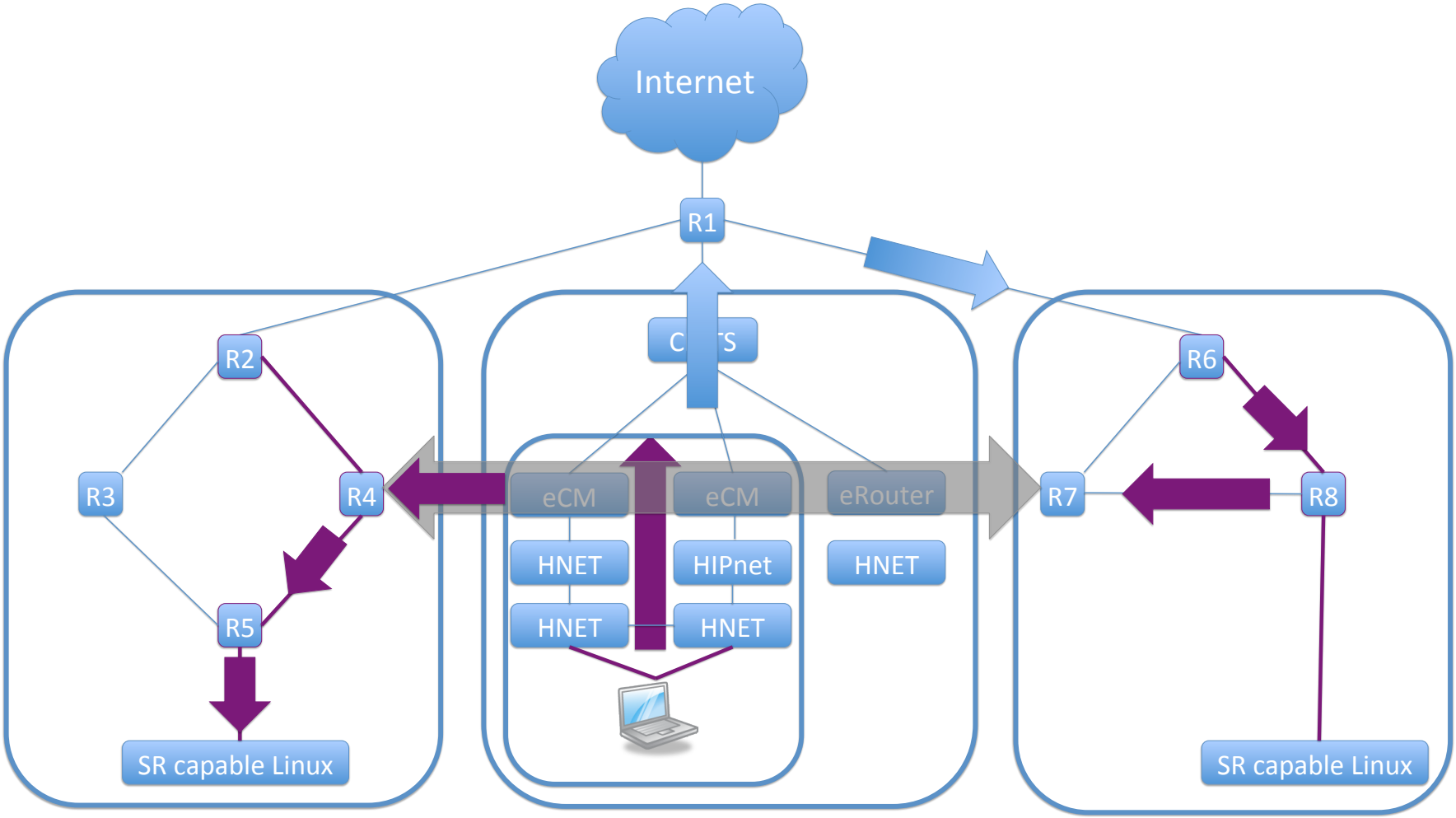
SR to SR


Internet
R1
R2
R3
R4
R5
SR capable Linux
R6
R7
R8
SR capable Linux

Home SR


Internet
R1
CMTS
R2
R3
R4
R5
SR capable Linux
eCM
eCM
eRouter
HNET
HIPnet
HNET
HNET
HNET
R6
R7
R8
SR capable Linux

Home to SR to SR



BACKUP

Home to SR to SR