IP Prefix Advertisement in EVPN

draft-rabadan-l2vpn-evpn-prefix-advertisement-01

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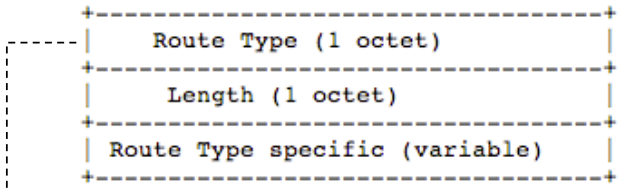
The prefix-advertisement route (route-type 5)



Route-types:

1- Ethernet A-D route

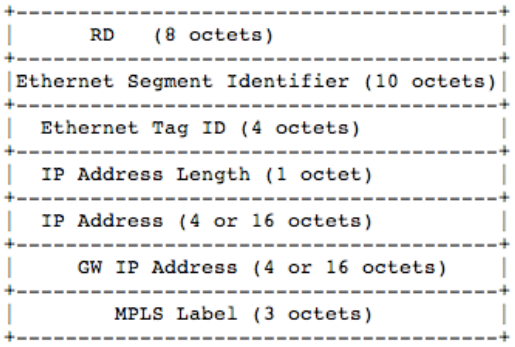
2- MAC-advertisement route

3- Inclusive Multicast route

4- Ethernet Segment route

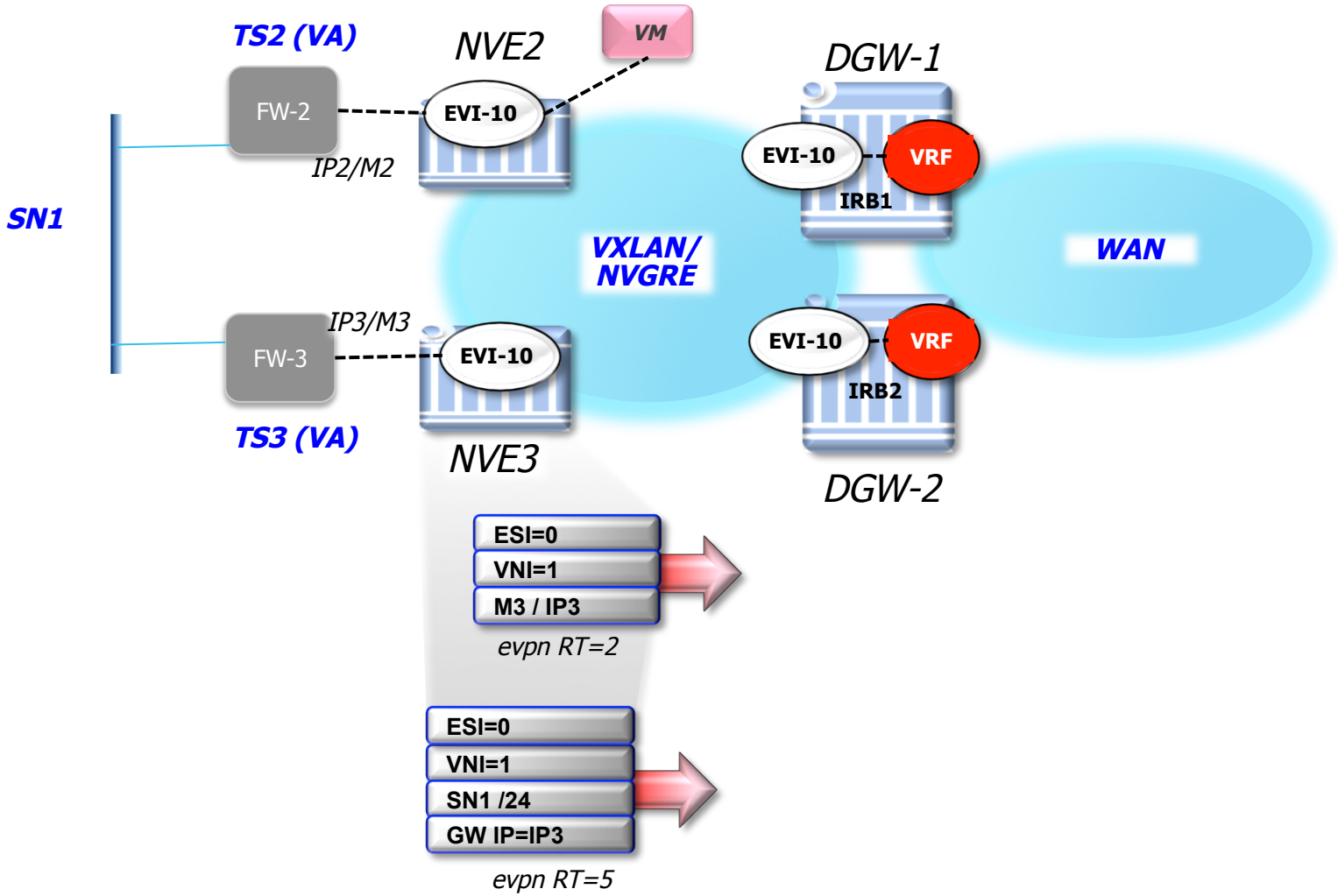
5- IP Prefix route (OPTIONAL)

Route-type 5 specific content

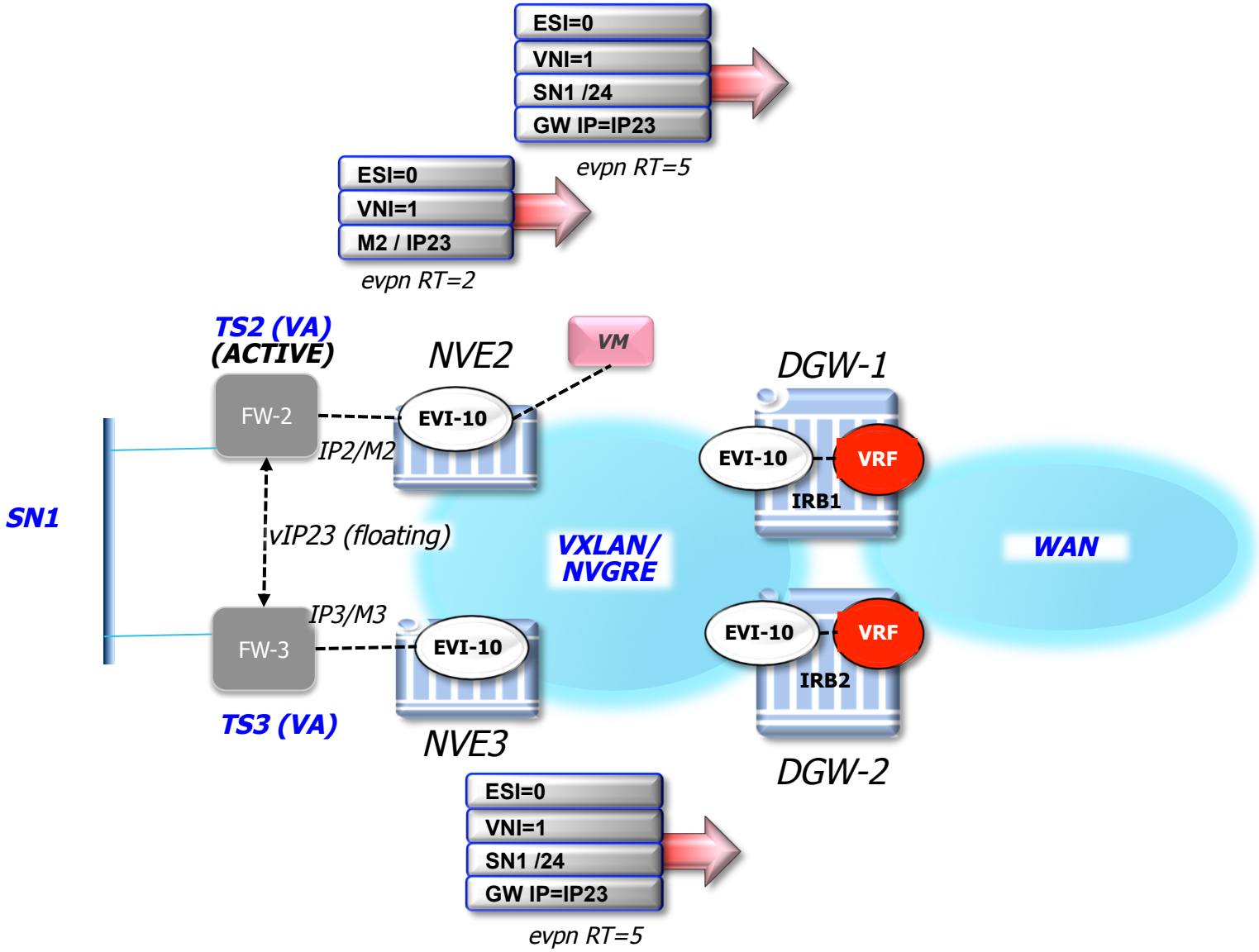


- RT 2 (MAC-advertisement) used for advertising MACs and MAC-IP for ARP resolution)
  - Also used for MAC Mobility
- RT 5 (IP-prefix) used to advertise Prefixes independently of the mac-advertisement routes
- Possible Prefix next-hops in the overlay topology
  - ESI, IRB IP address, Floating IP address

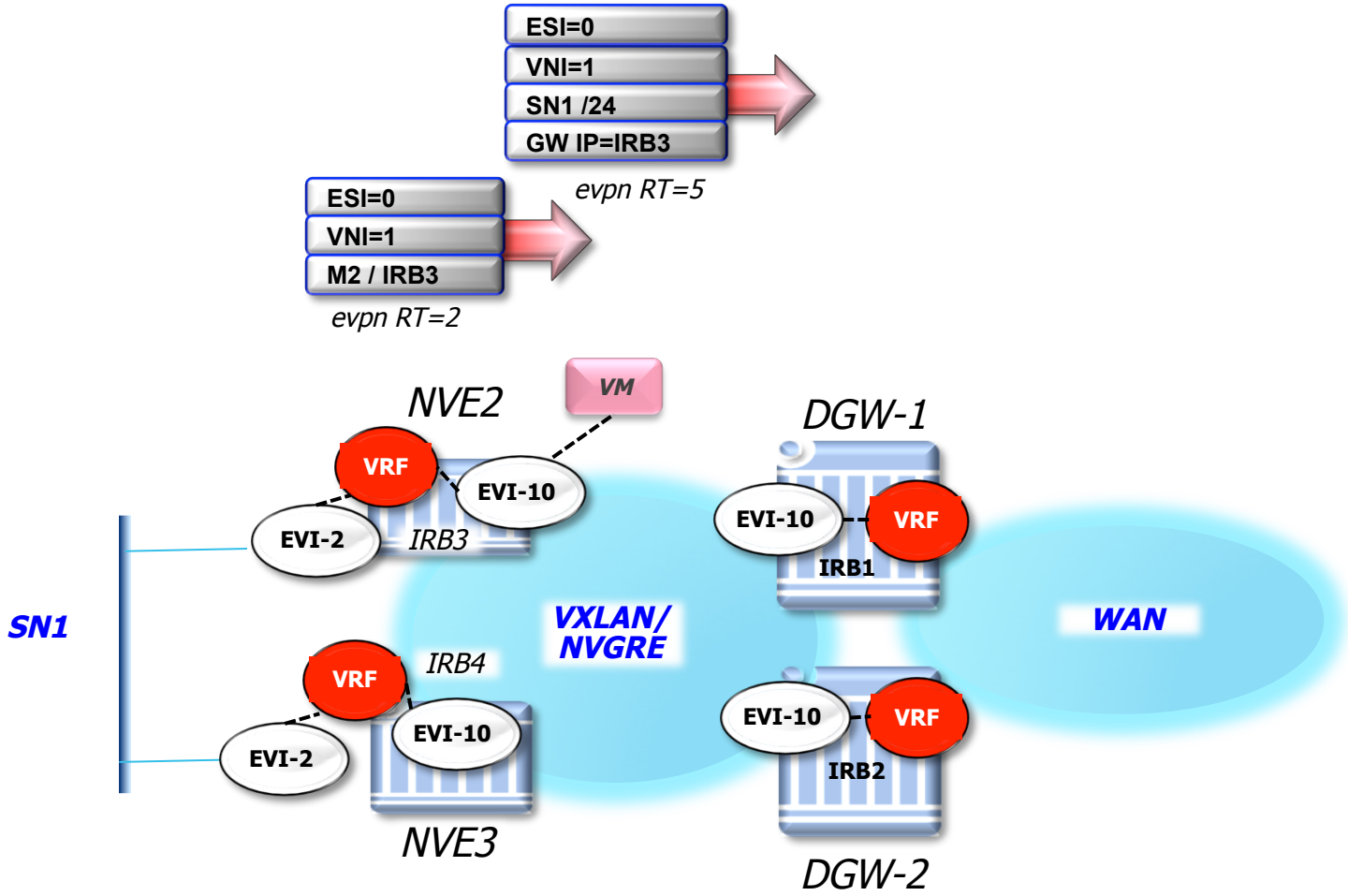
Use-case #1: TS IP address next-hop use-case



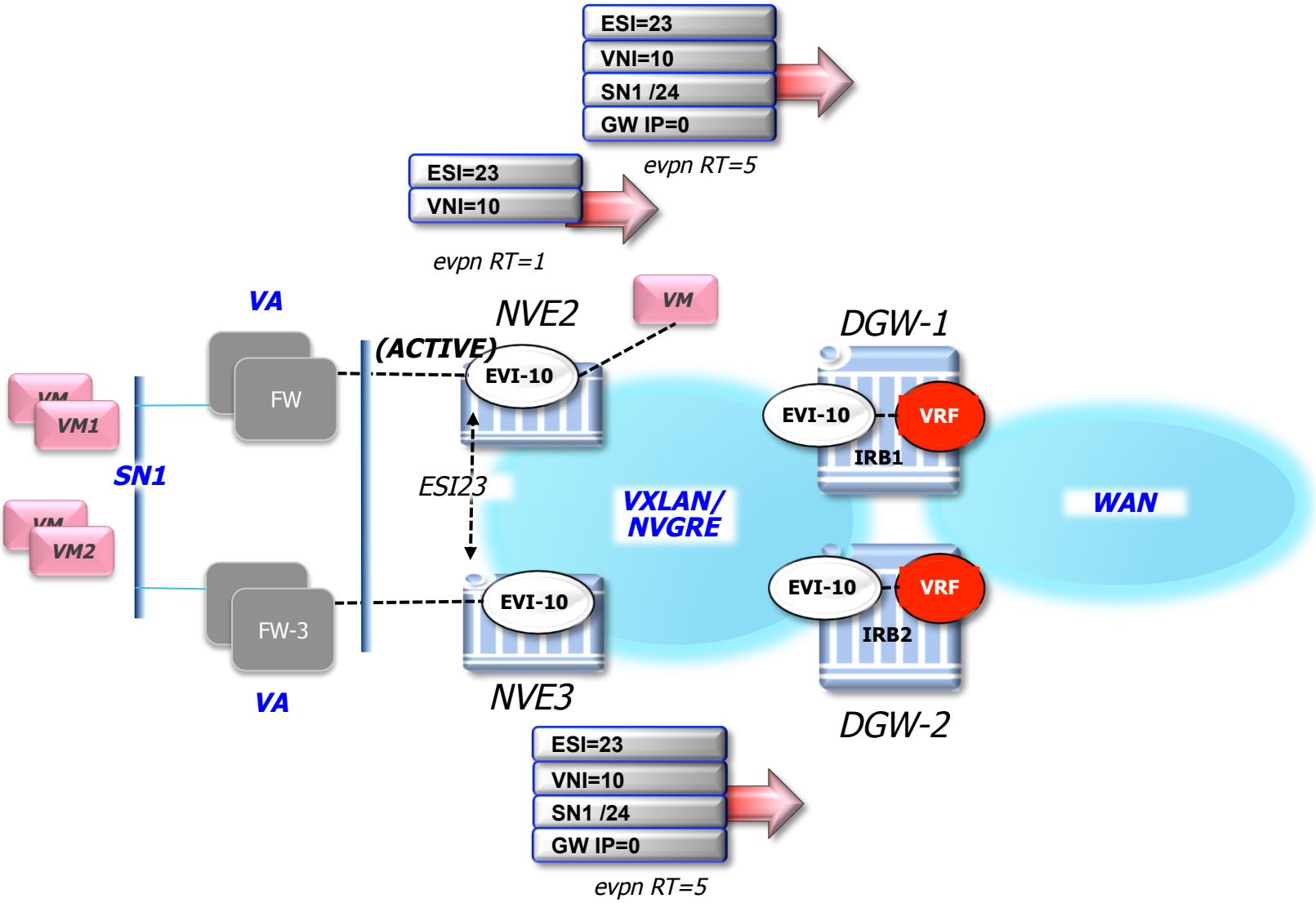
Use-case #2: floating IP address use-case



Use-case #3: IRB IP next-hop use-case



Use-case #4: “bump-in-the-wire” use-case (new)



The prefix-advertisement route benefits

- Clean identification of a prefix
- NVEs running EVPN but not supporting the OPTIONAL prefix-advertisement route can easily identify it an ignore it without processing the route
- No MAC information is compared by BGP when selecting routes
- Flexible overlay next-hop (IRB, floating IP, ESI) addressing different end-point types
- Decouples prefix-advertisement from mac mobility procedures
- Supports VA resiliency procedures

Next steps

- Feedback from WG