

Native IPv6 across IPv4-only CPEs (6rdE)

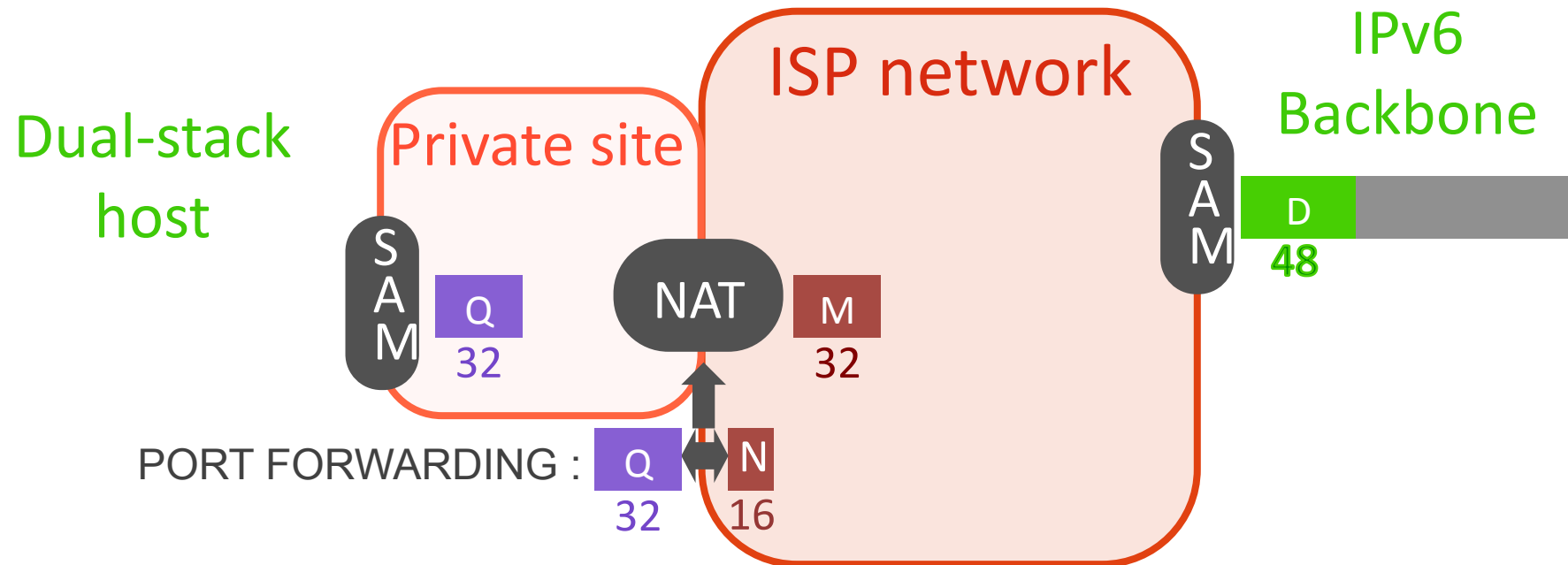
**Part of
draft-despres-softwire-sam-00**

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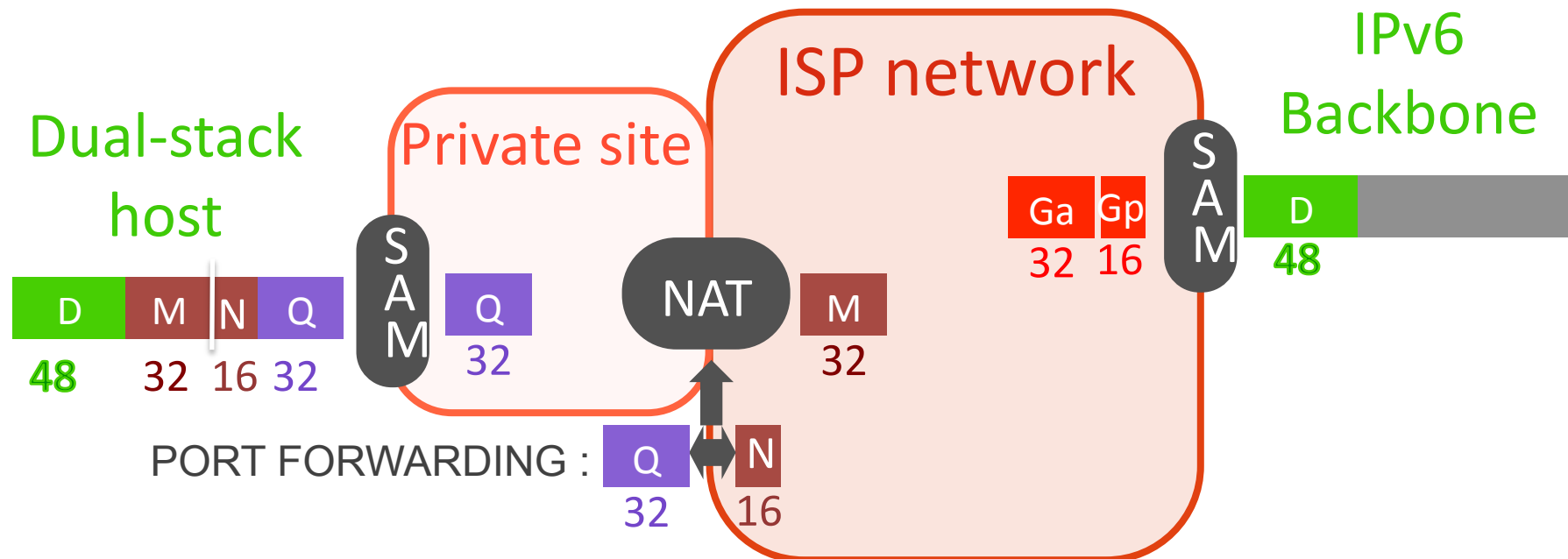
The 6rdE Scenario

- An ISP network is IPv4 capable
- Some of its customers have IPv4-only CPEs (NAT44s)
- This ISP supports 6rdE (1 or N stateless border relays)
- Some hosts behind these NAT44s support 6rdE
- These hosts have native IPv6 addresses
- IPv6 Packets are tunnelled through optimized routes

Example of 6rdE scenario

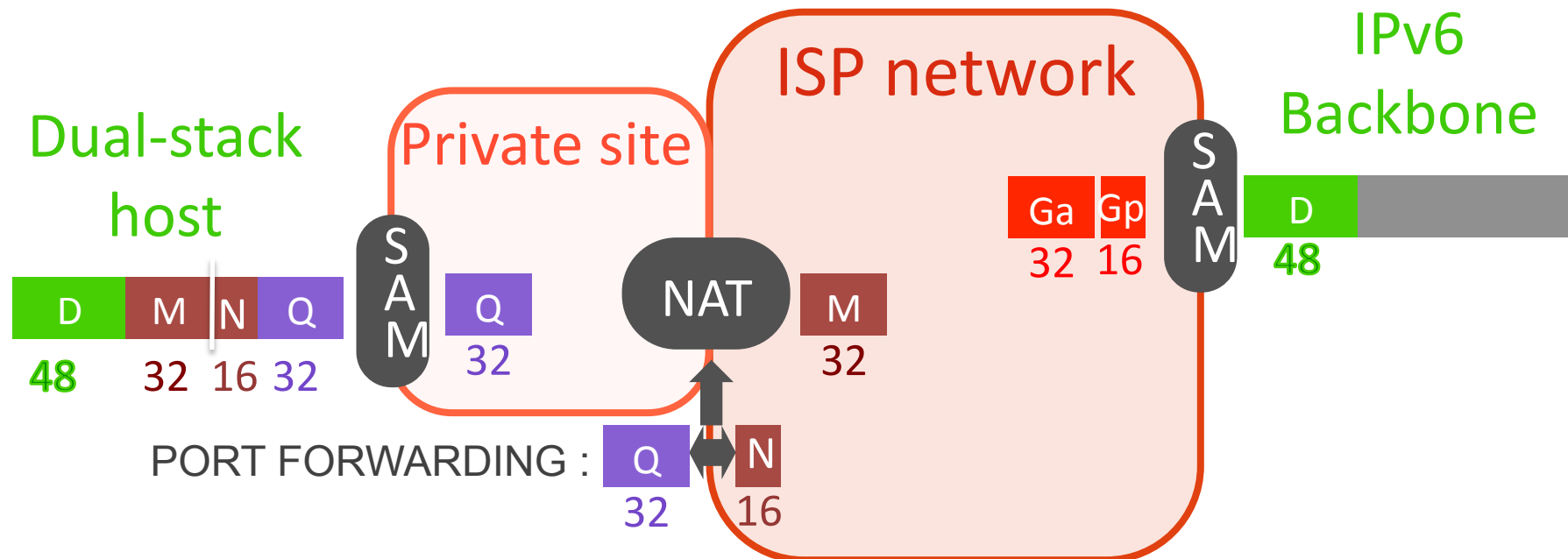


Example of 6rdE scenario



- The host has to know its **M** and **N**
- It obtains **D** among the SAM parameters of the ISP
- It derives its IPv6 address from its Q with **D**, **M**, **N**

Example of 6rdE scenario



Encapsulation family (IPv4 or IPv4+P) & encapsulation Destination are derived from Q and from two mapping-rules :

- Intra-site tunnels {match D.M ; skip 16 ; copy 32}
- Extra-site tunnels { match D; copy 48 ; else Ga.Gp}

Parameter acquisition by hosts

- From a parameter server at a well-known address + port ?
- From the DNS ?
- By some other means ?

=> More thoughts needed (keep it simple)

What next ?

- Comments on the draft welcome
- Telecom Bretagne SAM experiment
Scenario of section 3.4 (not 6rdE)
- A presentation in Softwire at IETF 78
- ...