

Exercise description:

You are a small colocation and broadband provider and you are an LIR. You received a /32 allocation:

2001:DB8::/32

You currently have 2 Point-to-Point customers and 500 colocation customers. 250 colocation customers are connected on each switch. Also, you provide e-mail, www, proxy, usenet, VoIP and DNS services to them.

Step 1: Assign the /48 per POP

Step 2: Decide the size of the assignments per device

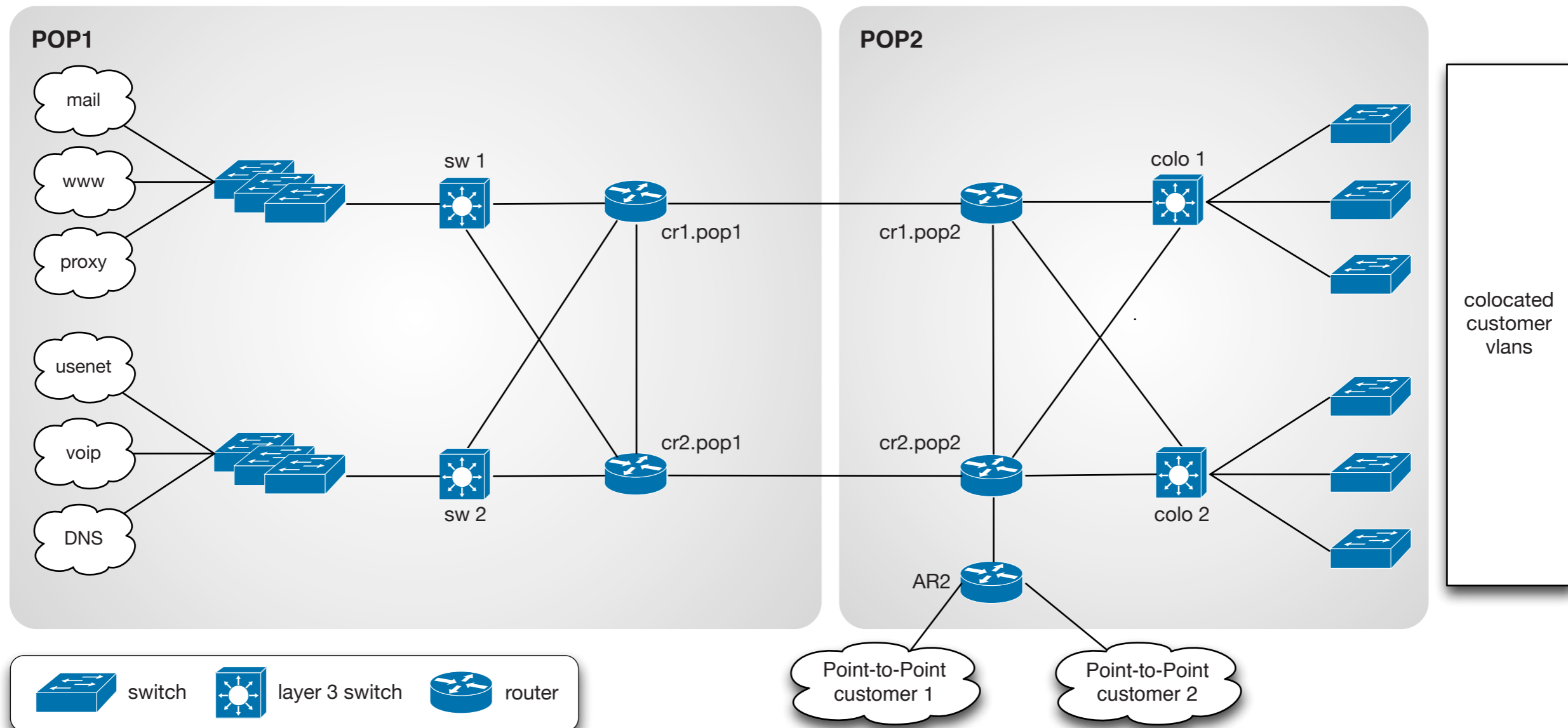
Step 3: Decide the size of the customer assignments

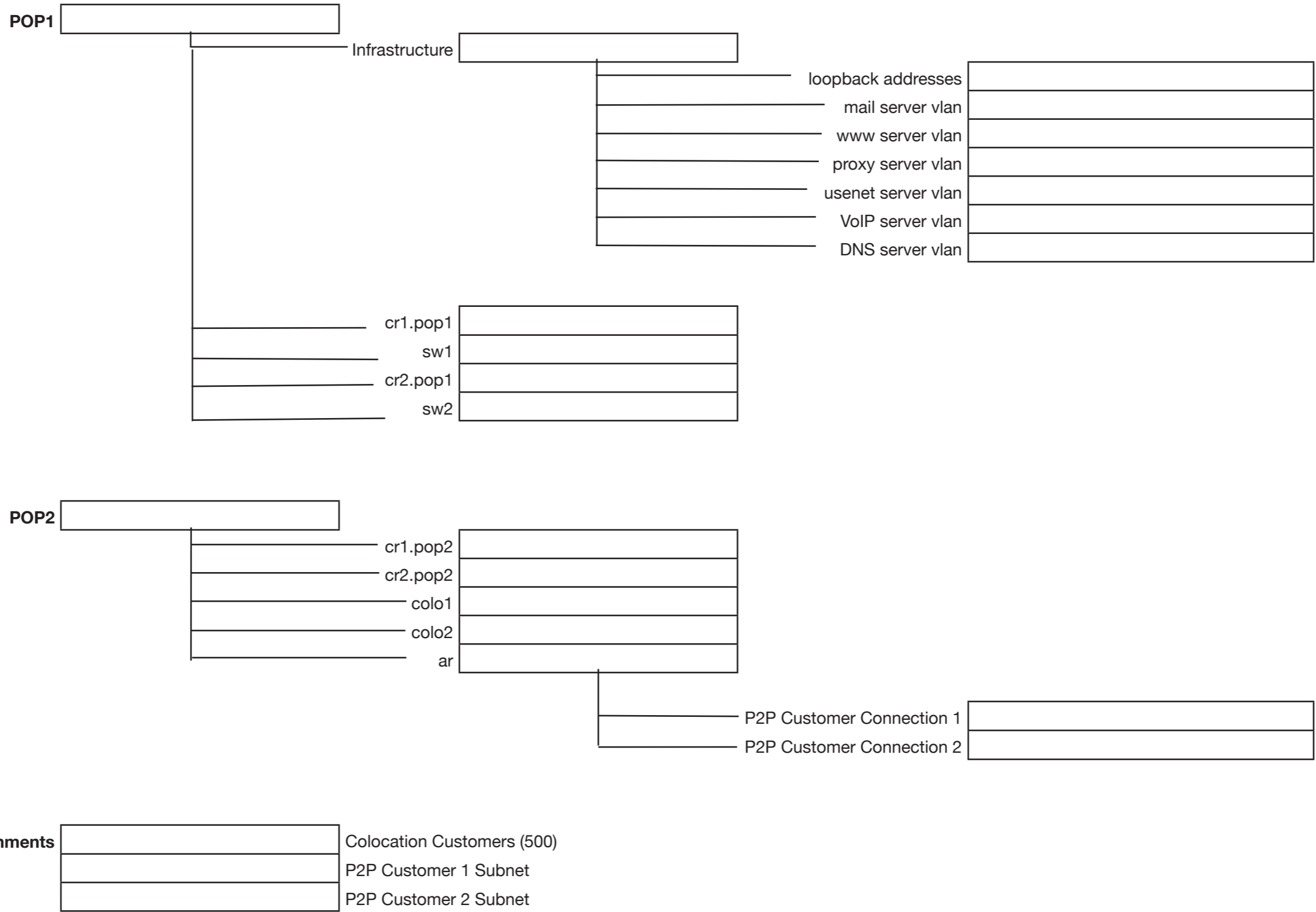
Step 4: Fill in the addressing plan accordingly

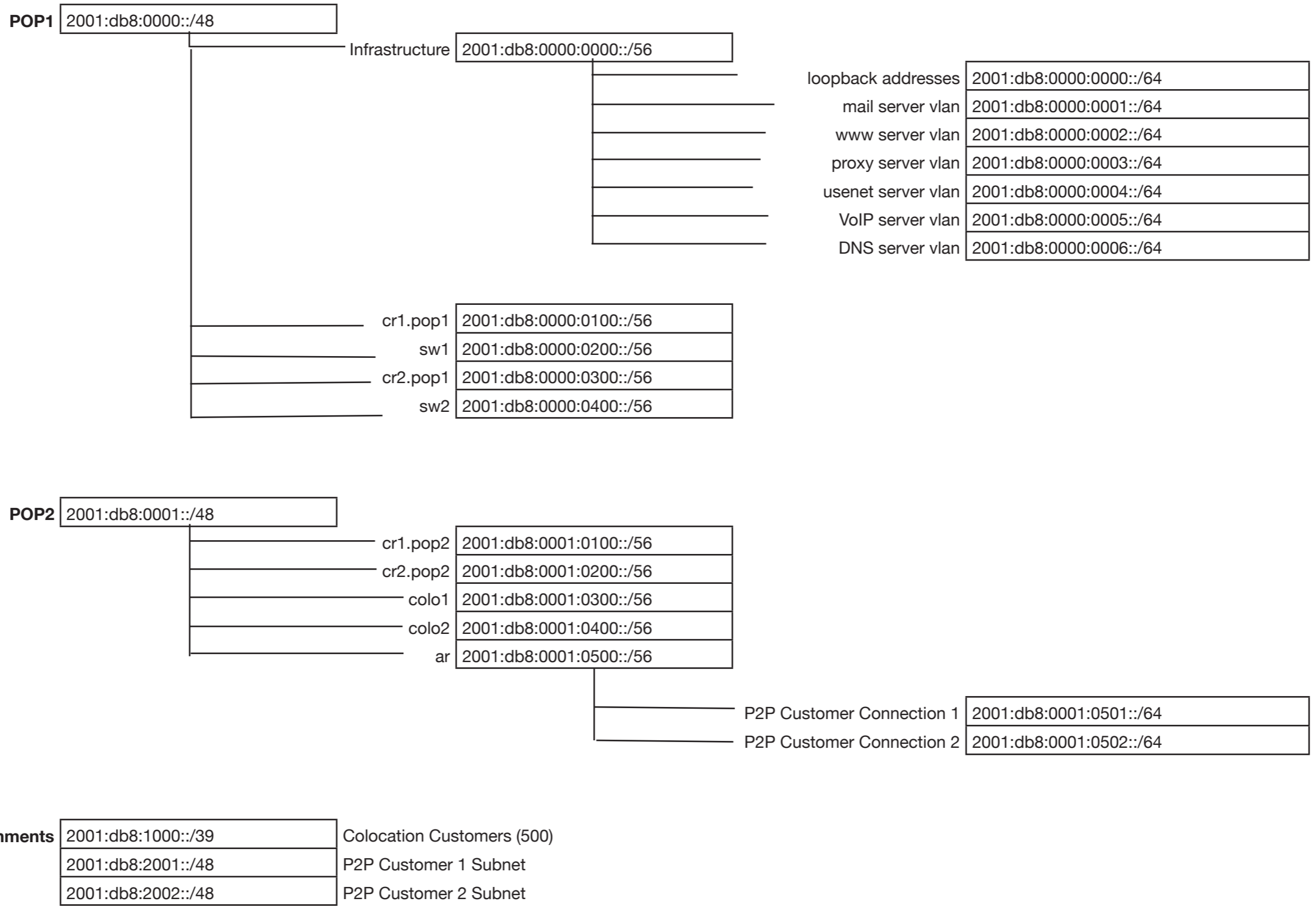
Some things to consider:

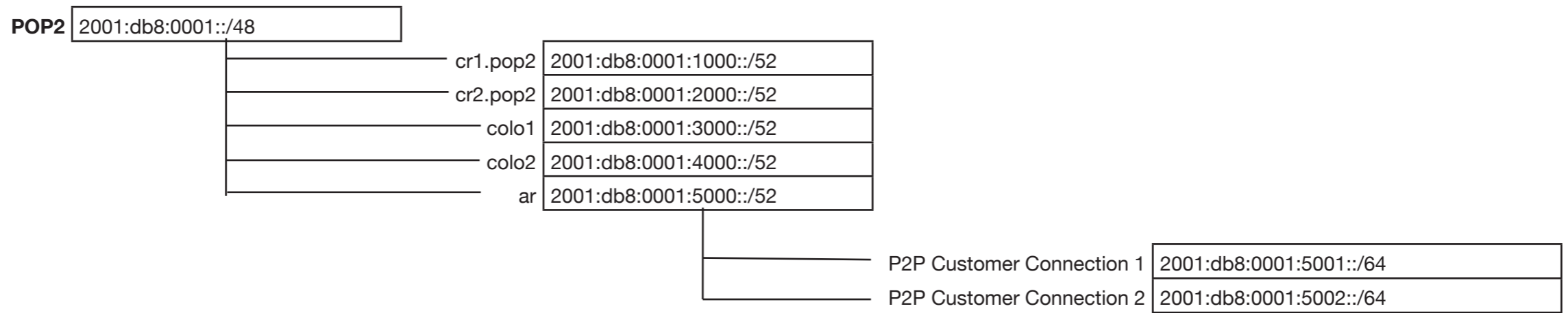
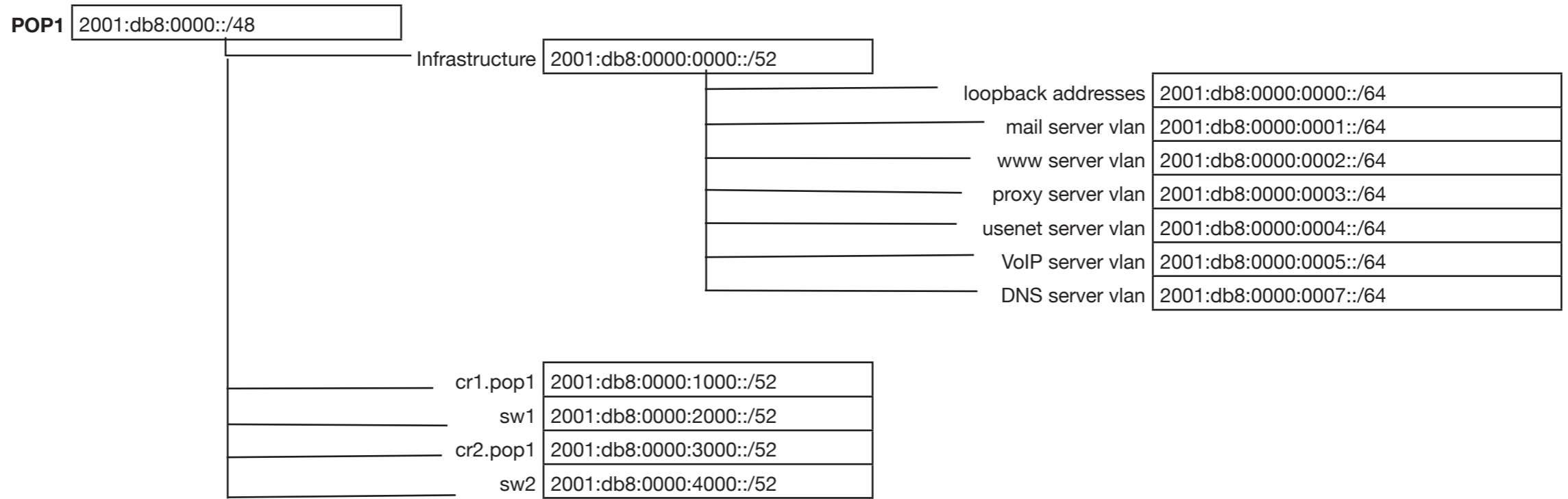
- The most important goal with IPv6 is aggregation.
- You can assign a /48 per POP without sending a request to the RIPE NCC.
- For your most important connections/equipment, use the easiest to remember addresses. (loopbacks etc.)
- For administrative ease (DNS and your mind), it is recommended you assign on 4-bit boundary

Prefix	Number of /64 subnets
/48	65.536
/52	4096
/56	256
/60	16
/64	1









Customer Assignments	2001:db8:1000::/39	Colocation Customers (500)
	2001:db8:2001::/48	P2P Customer 1 Subnet
	2001:db8:2002::/48	P2P Customer 2 Subnet