

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 3000 DSL customers and 1000 colocation customers. 500 colocation customers are connected on each switch. Also, you provide e-mail, www, proxy, usenet, VoIP and DNS services to them. There is no significant growth expected in the number of customers or expansion planned for your network.

Step 1: Assign the /48 per POP

Step 2: Decide the size of the assignments per device

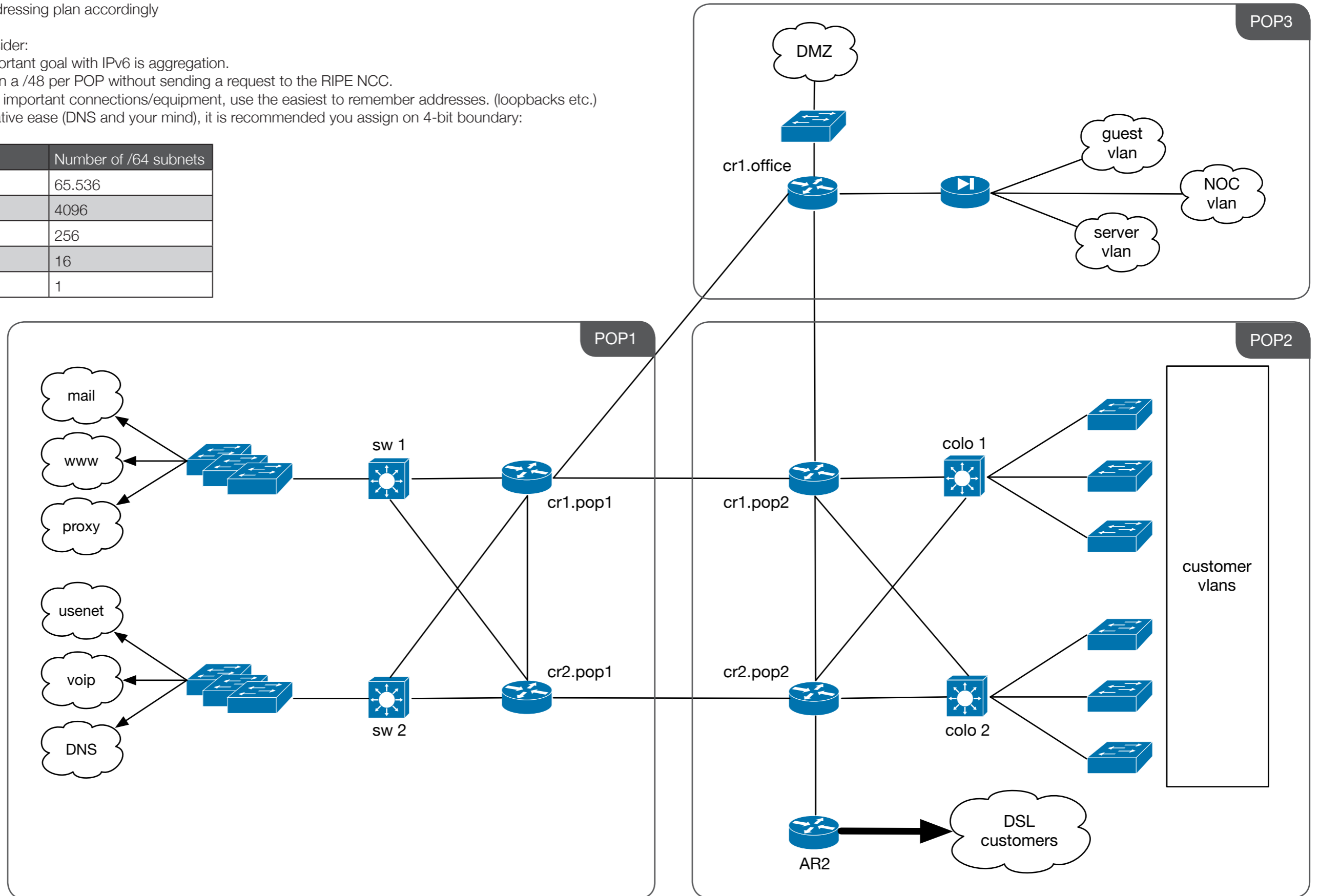
Step 3: Decide the size of the customer assignments

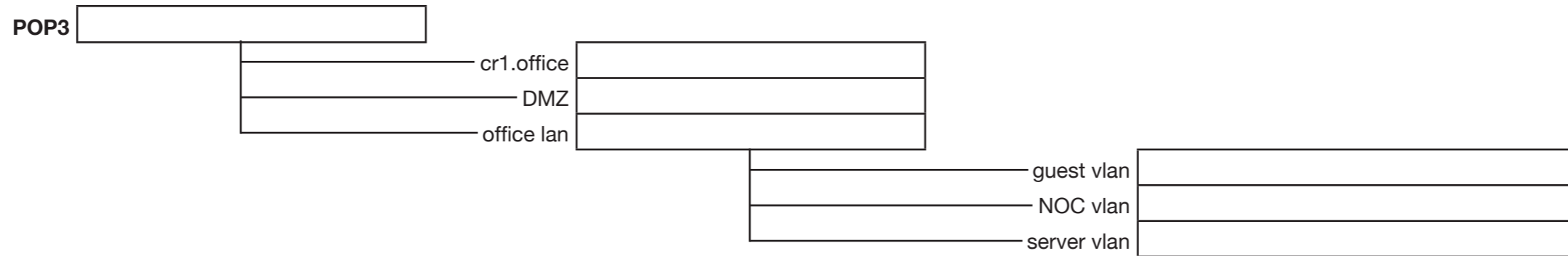
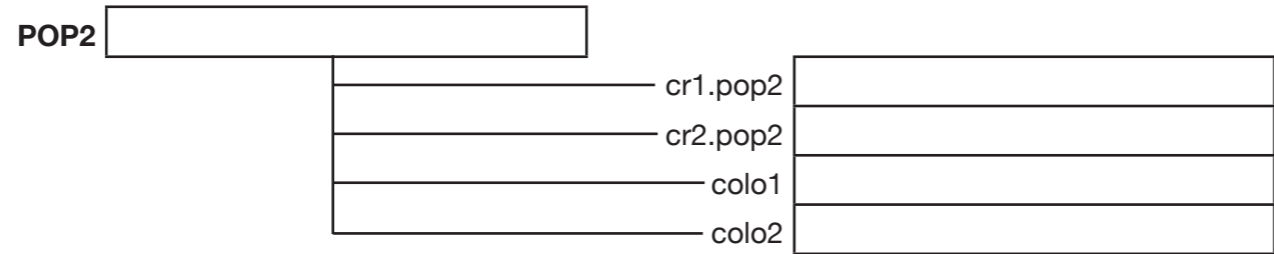
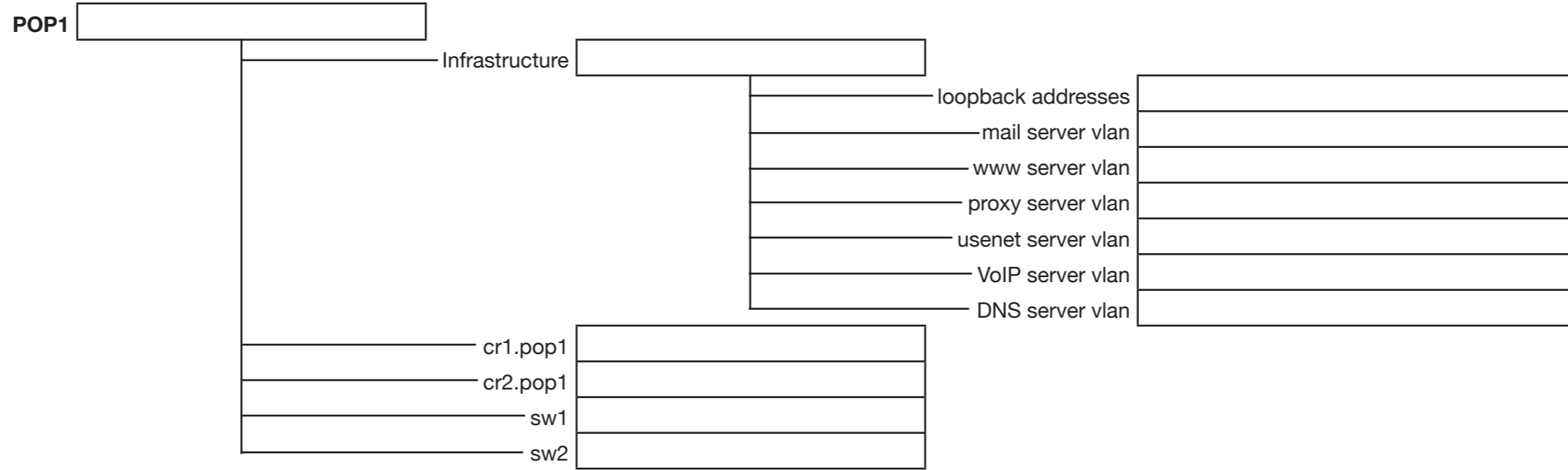
Step 4: Fill in the addressing plan accordingly

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

	DSL Customers (3000)
	Colocation Customers (1000)