

OPENSTACK NETWORKING



Who am I?

What are we going to talk about?

What are we going to talk about?

OpenStack overview

What are we going to talk about?

OpenStack overview

Focus on networking stack

What are we going to talk about?

OpenStack overview

Focus on networking stack

Public Cloud instance access to internet

What are we going to talk about?

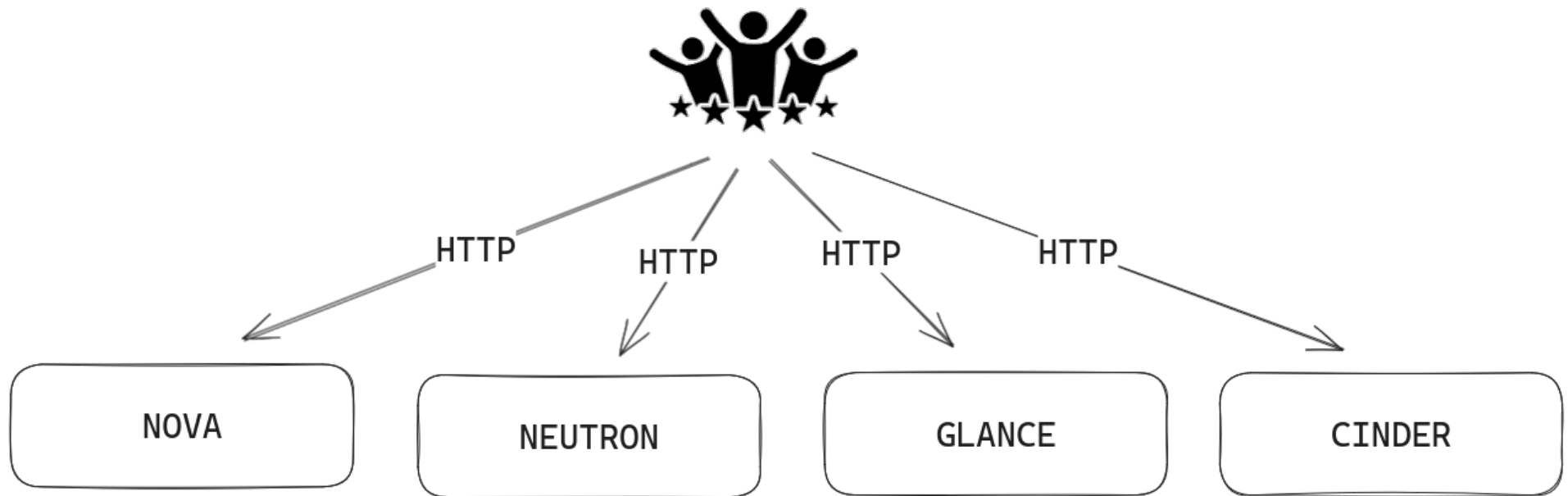
OpenStack overview

Focus on networking stack

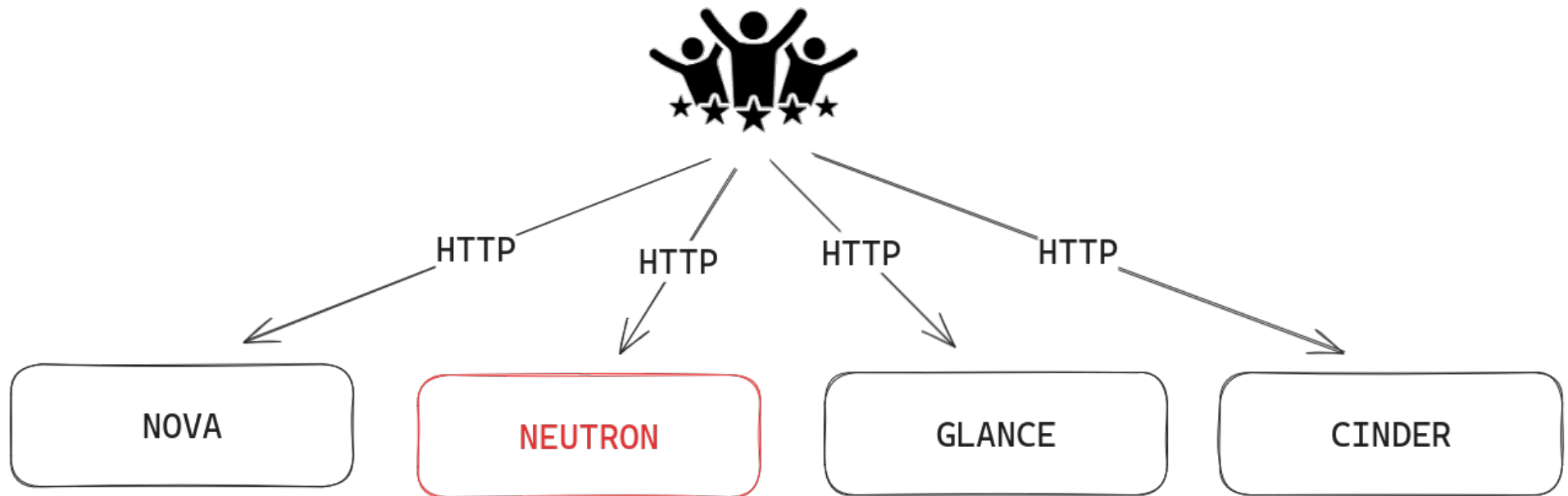
Public Cloud instance access to internet

Public Cloud instance private network

OPENSTACK OVERVIEW



OPENSTACK OVERVIEW





the amazing networking stack

NEUTRON

NETWORKING STACK

NEUTRON

NETWORKING STACK

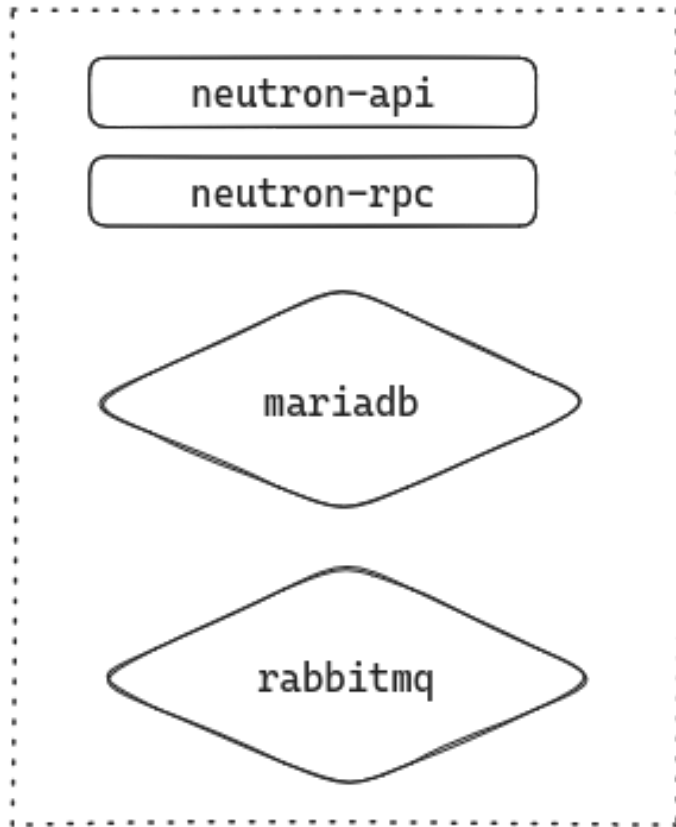
NEUTRON

neutron-api

neutron-rpc

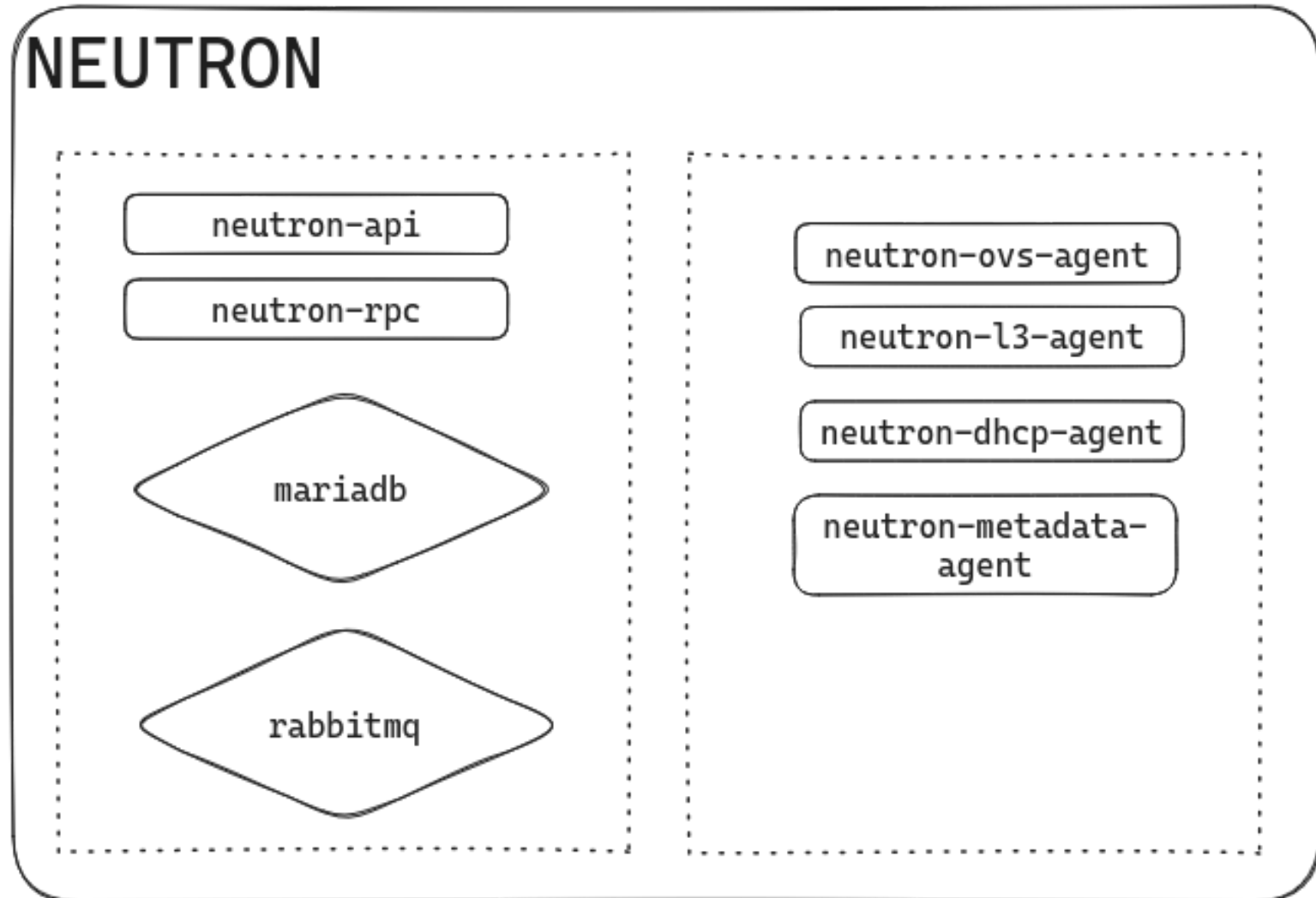
NETWORKING STACK

NEUTRON



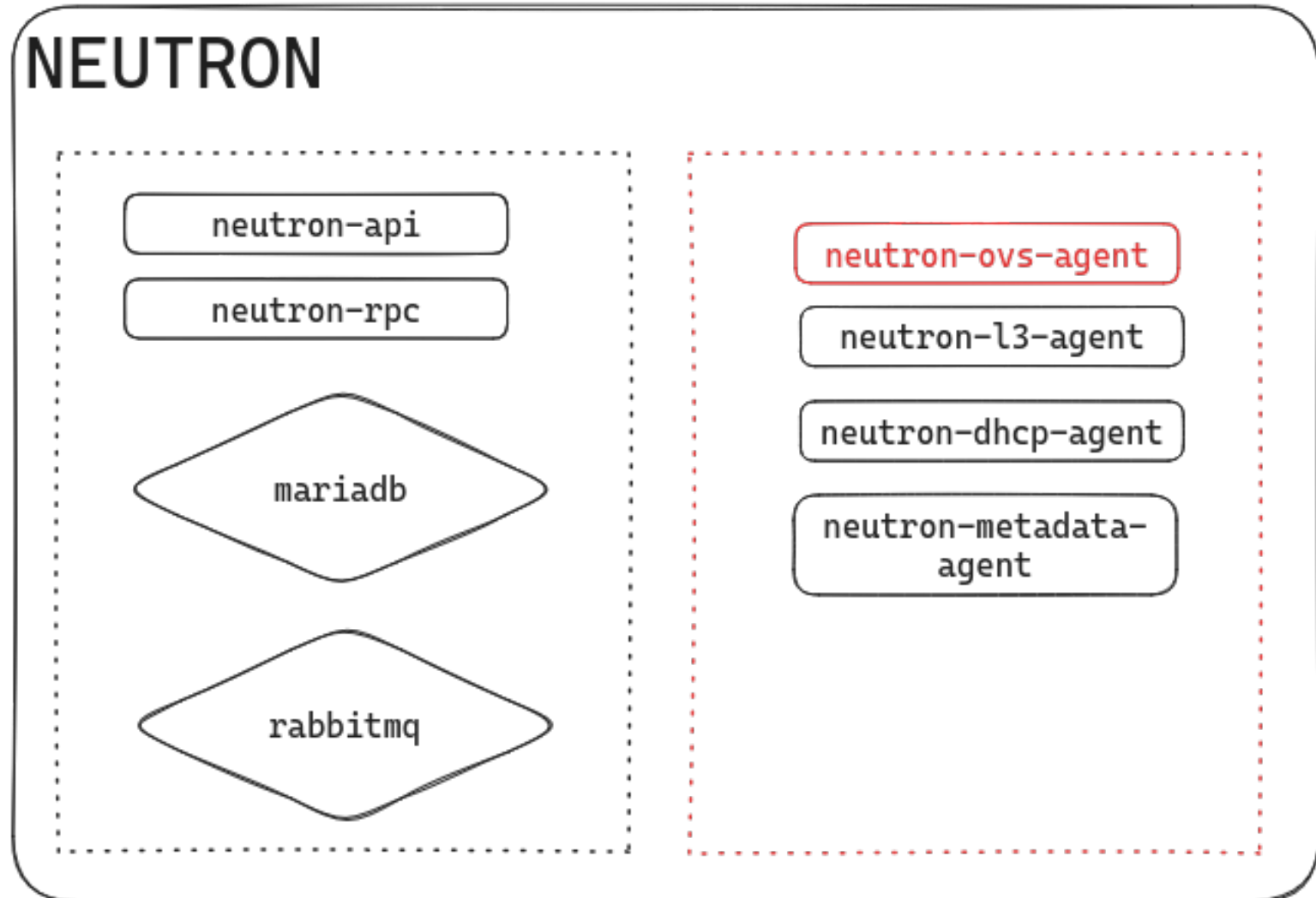
NETWORKING STACK

NEUTRON



NETWORKING STACK

NEUTRON



Neutron OpenVSwitch Agents

Neutron OpenVSwitch Agents

Upstream: neutron-ovs-agent

Neutron OpenVSwitch Agents

Upstream: neutron-ovs-agent

OVH:

Neutron OpenVSwitch Agents

Upstream: neutron-ovs-agent

OVH:

- neutron-vrack-agent

Neutron OpenVSwitch Agents

Upstream: neutron-ovs-agent

OVH:

- neutron-vrack-agent
- neutron-bgp-agent

Neutron OpenVSwitch Agents

Upstream: neutron-ovs-agent

OVH:

- neutron-vrack-agent

- neutron-bgp-agent



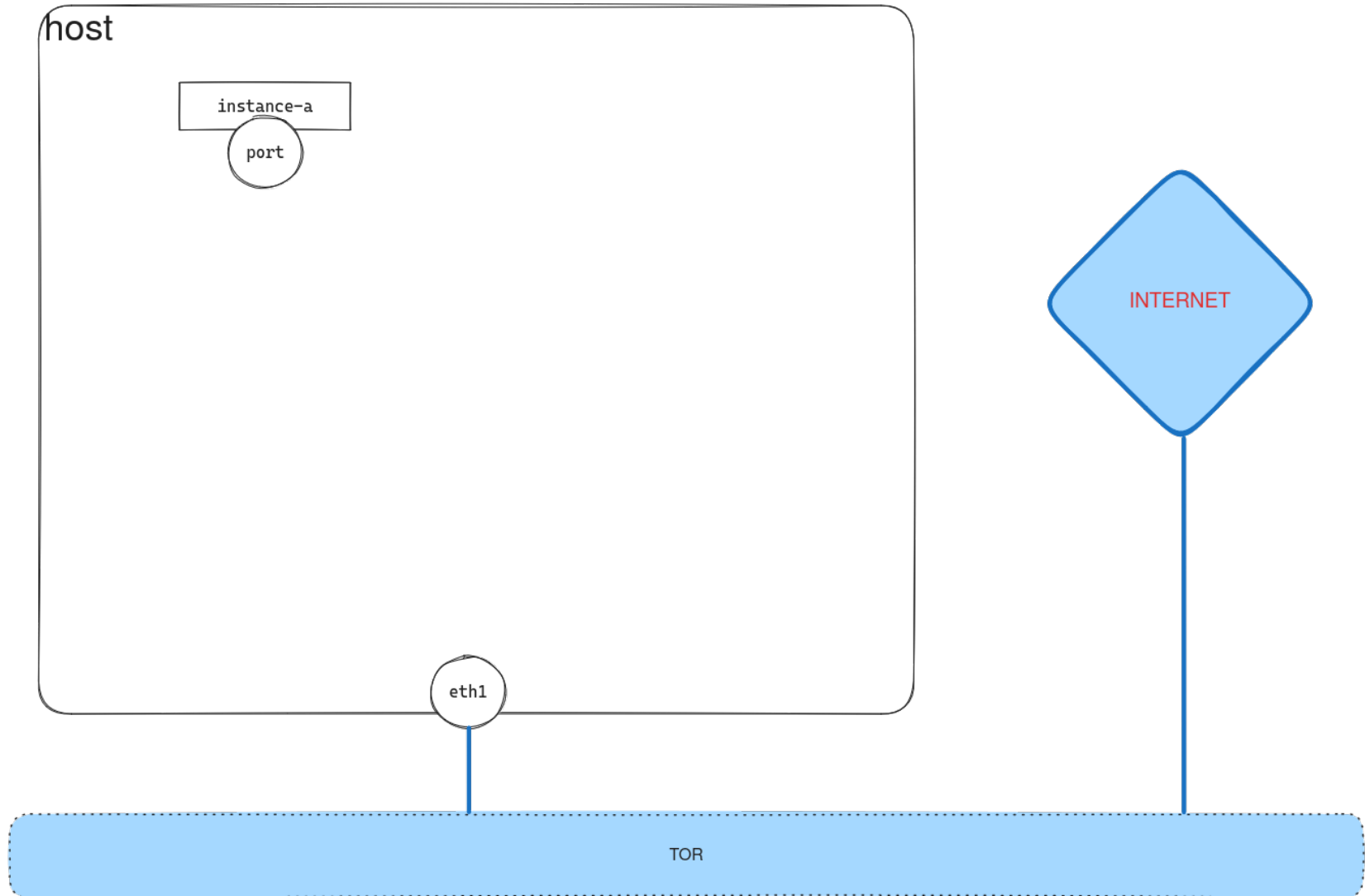
Unable to connect to the Internet

More

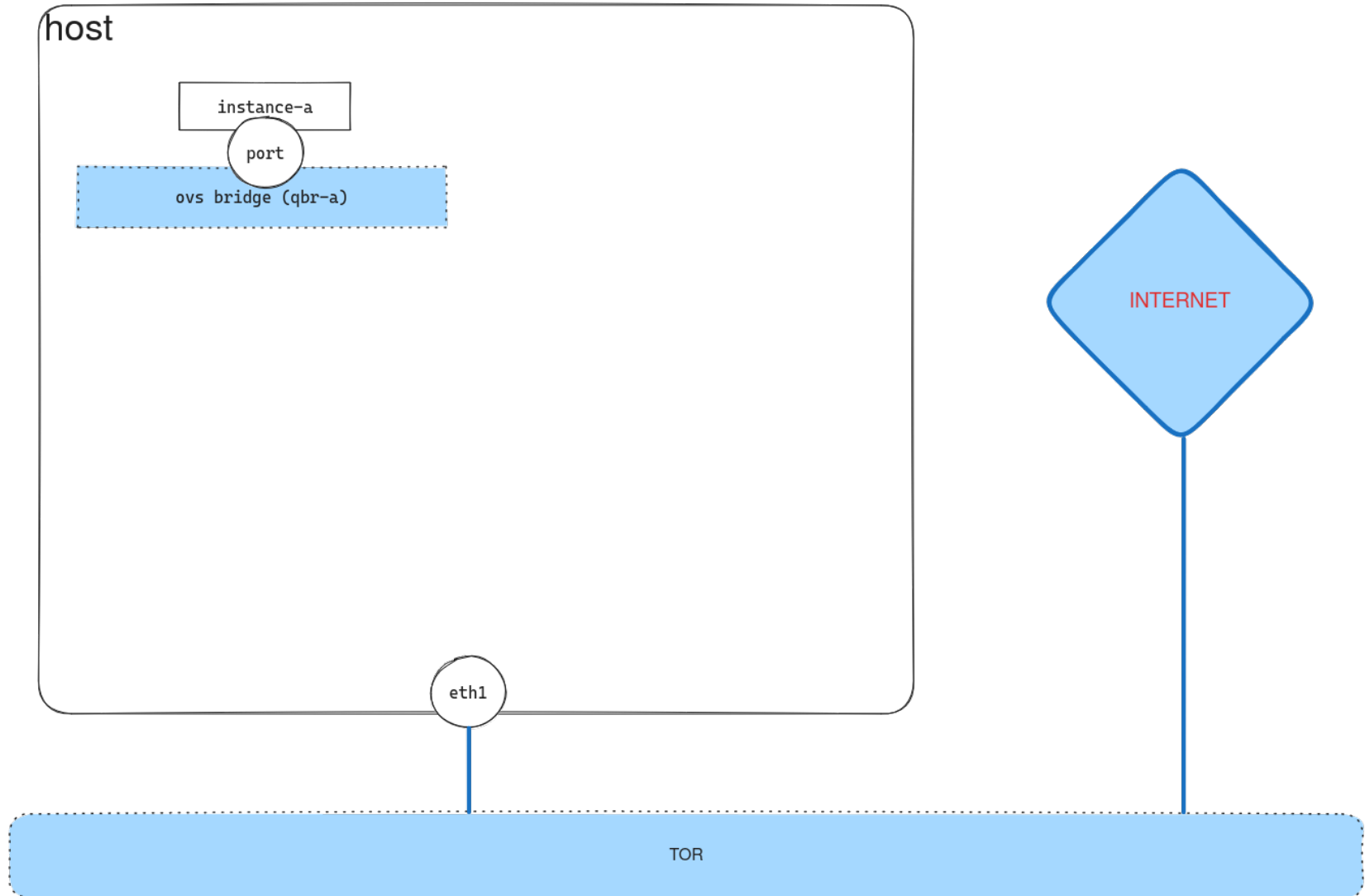
How to access internet from an instance?

BGP

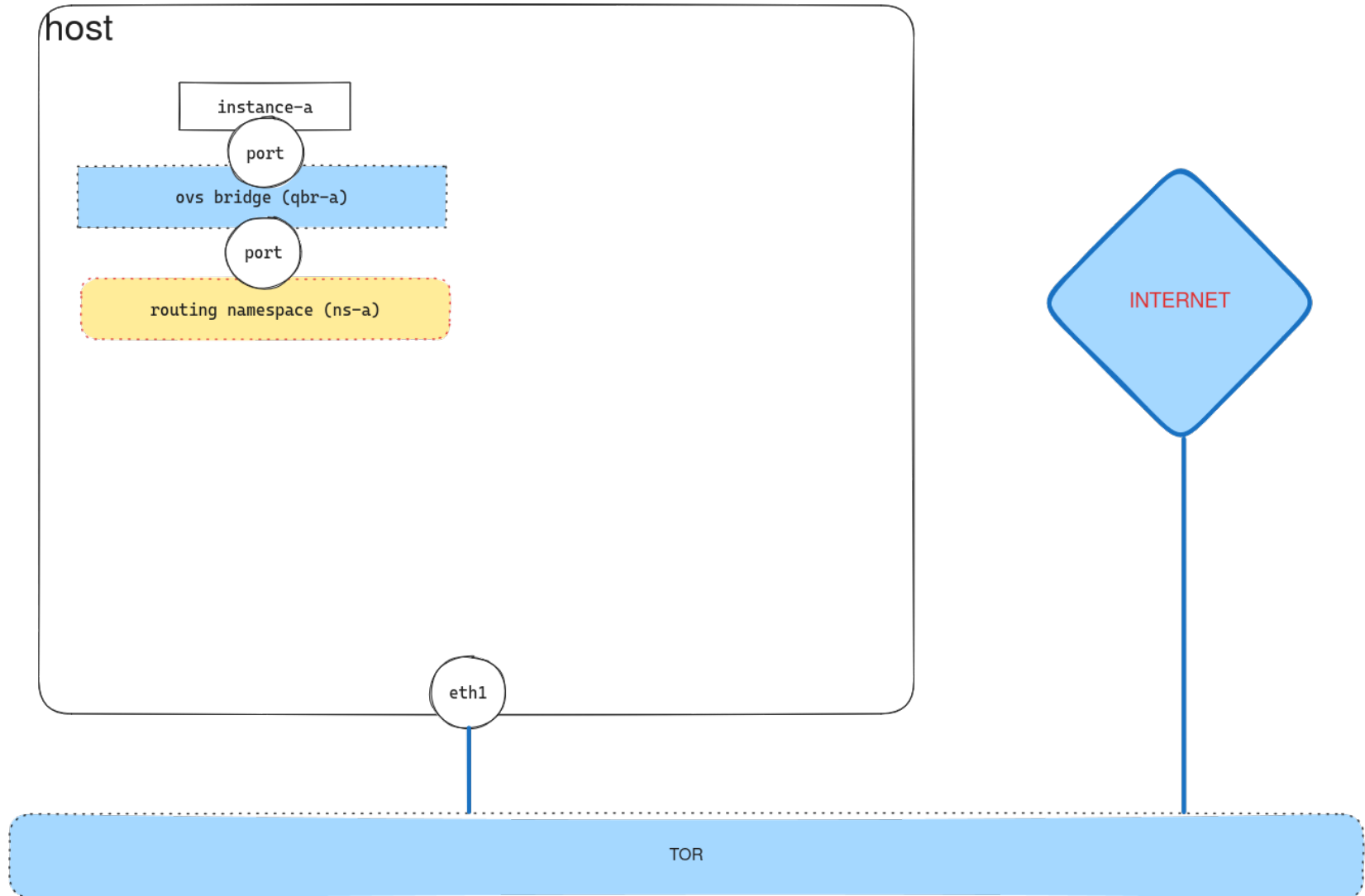
BGP agent



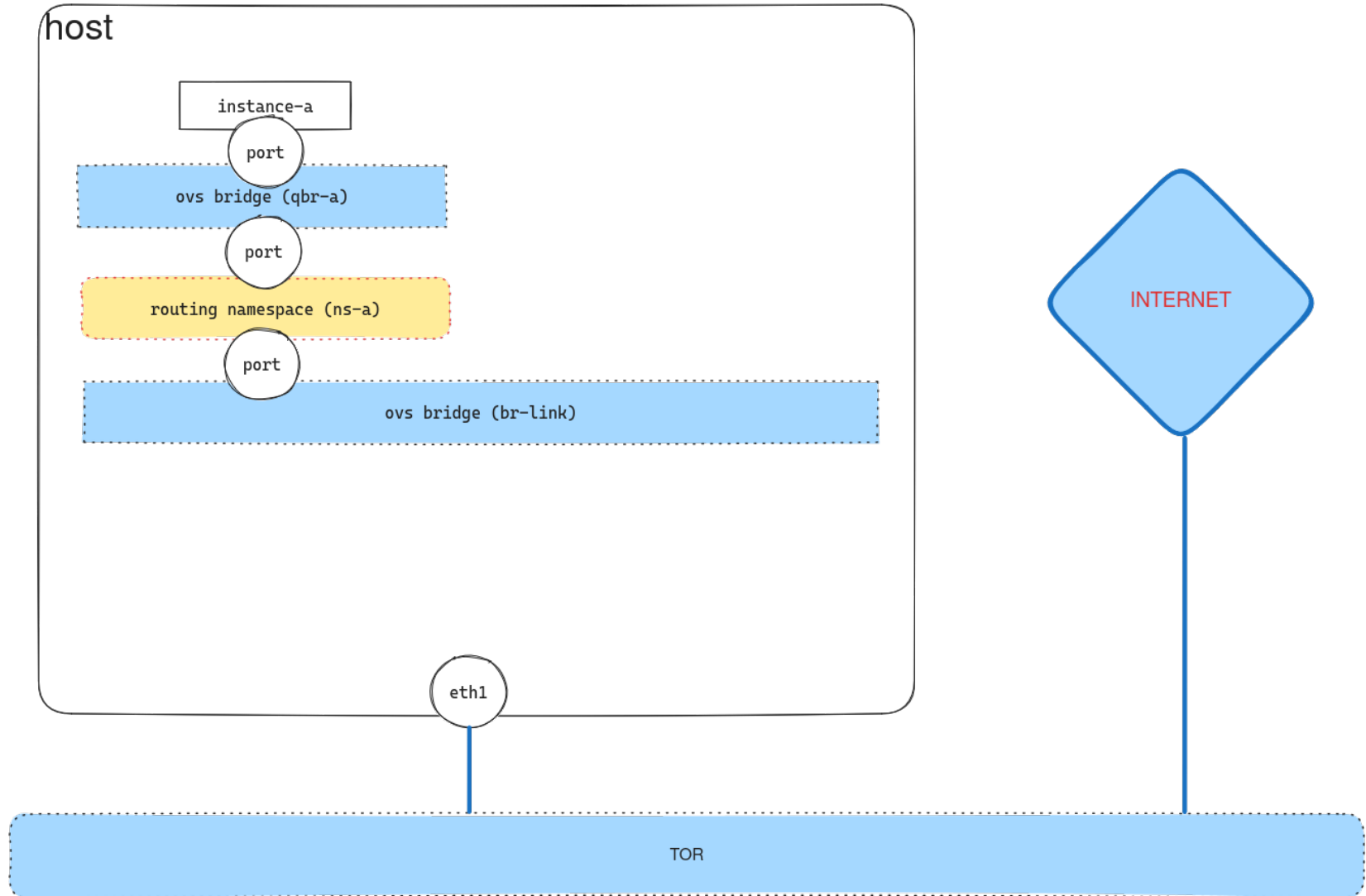
BGP agent



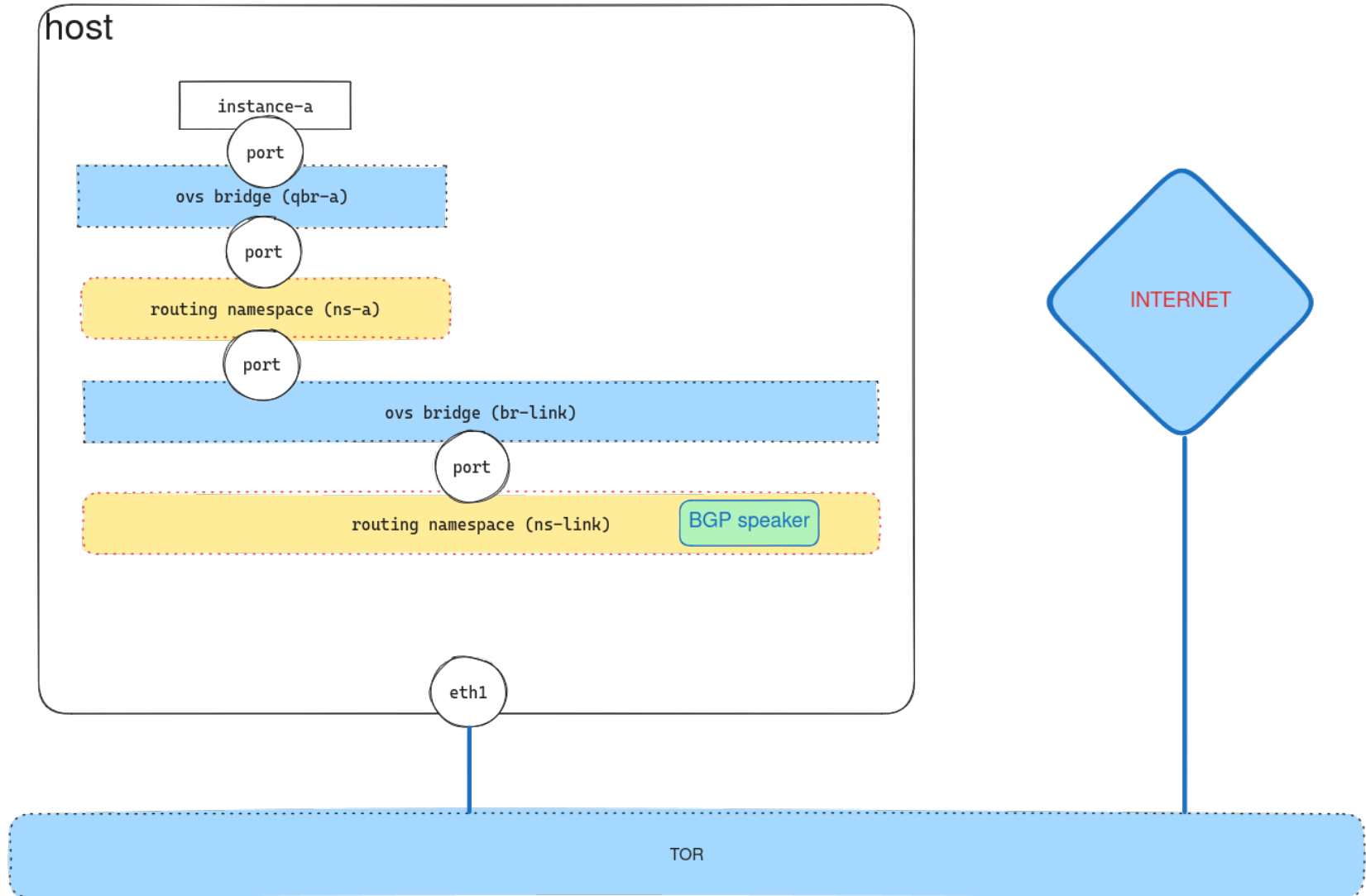
BGP agent



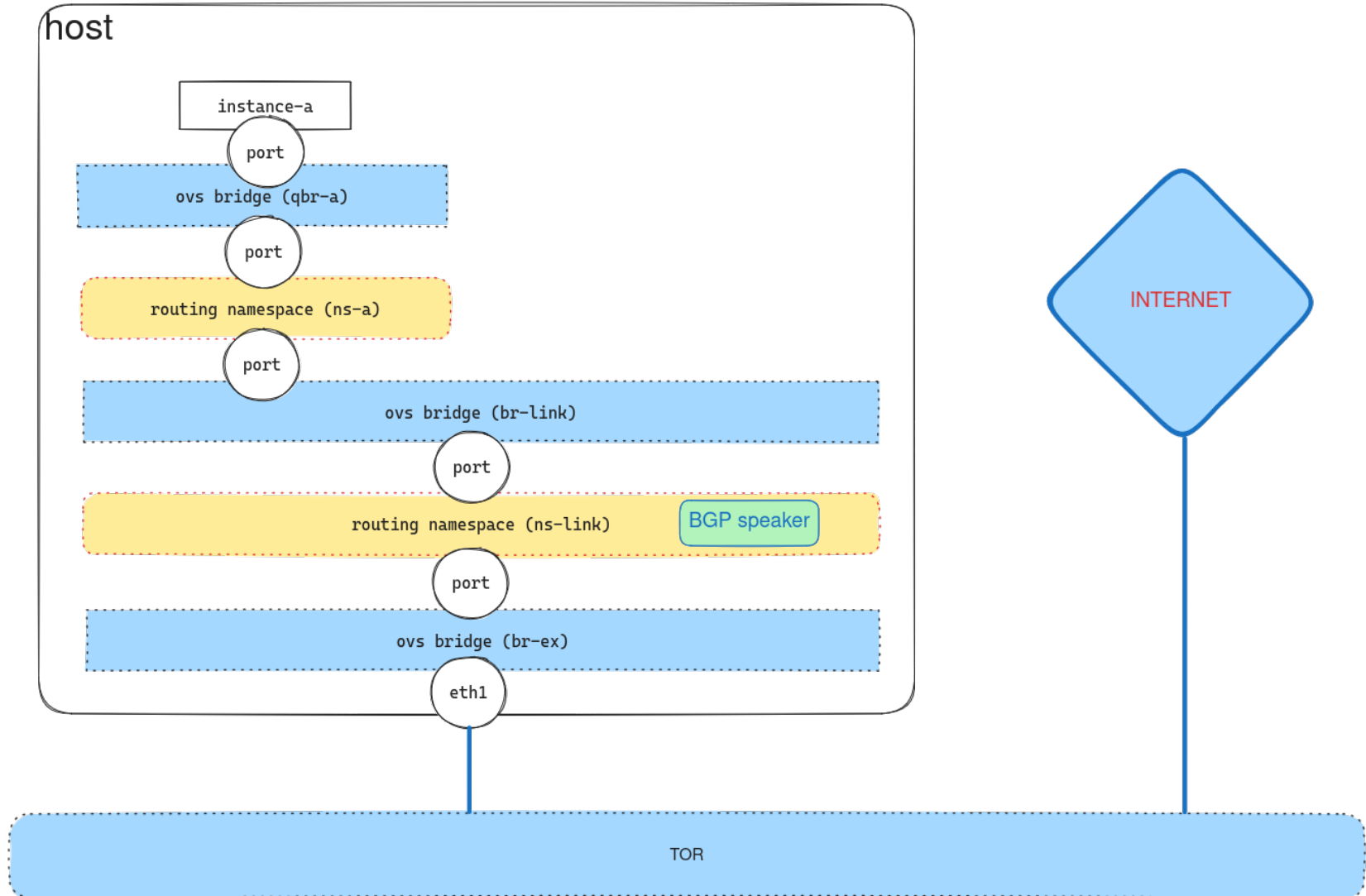
BGP agent



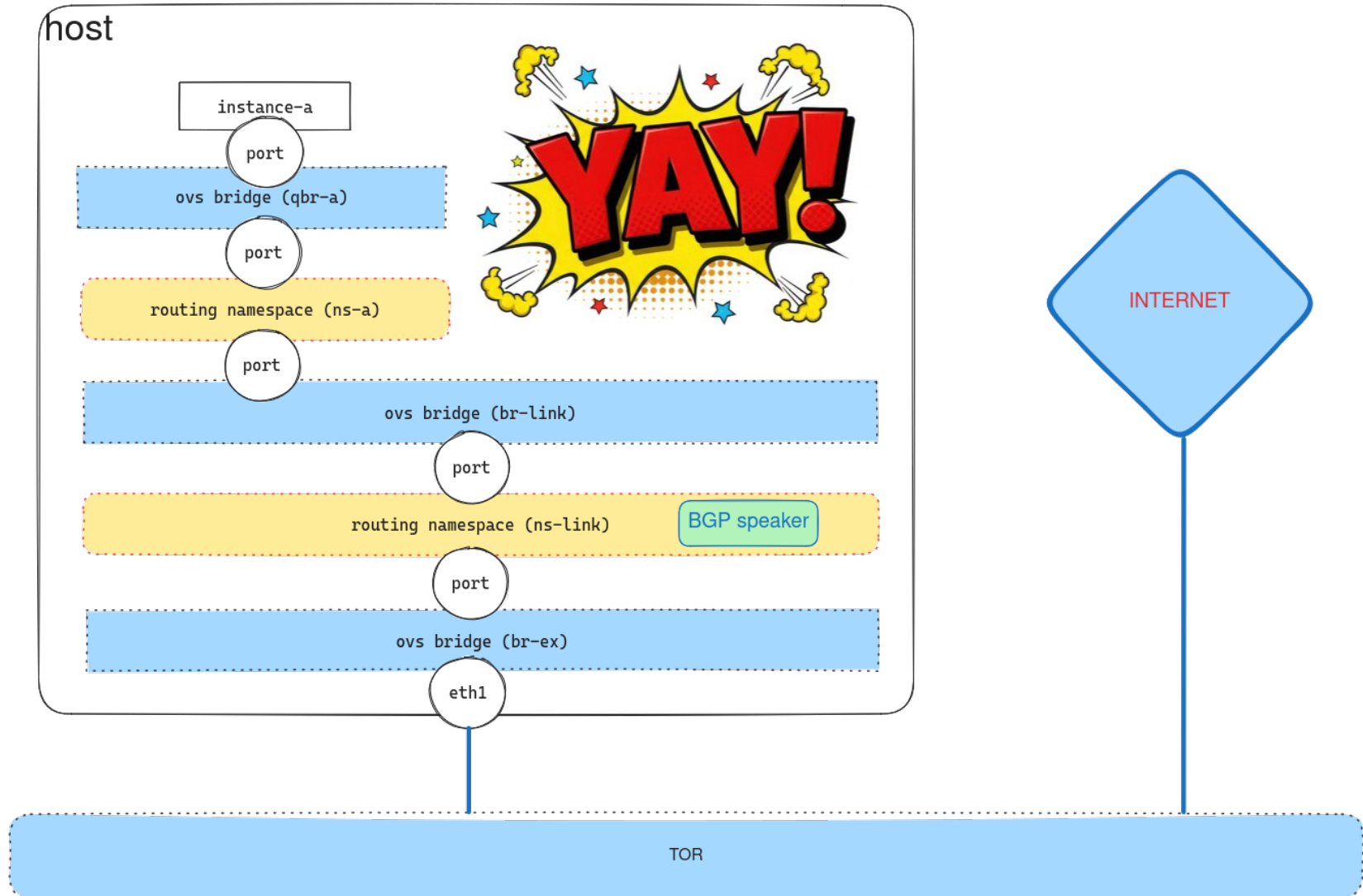
BGP agent



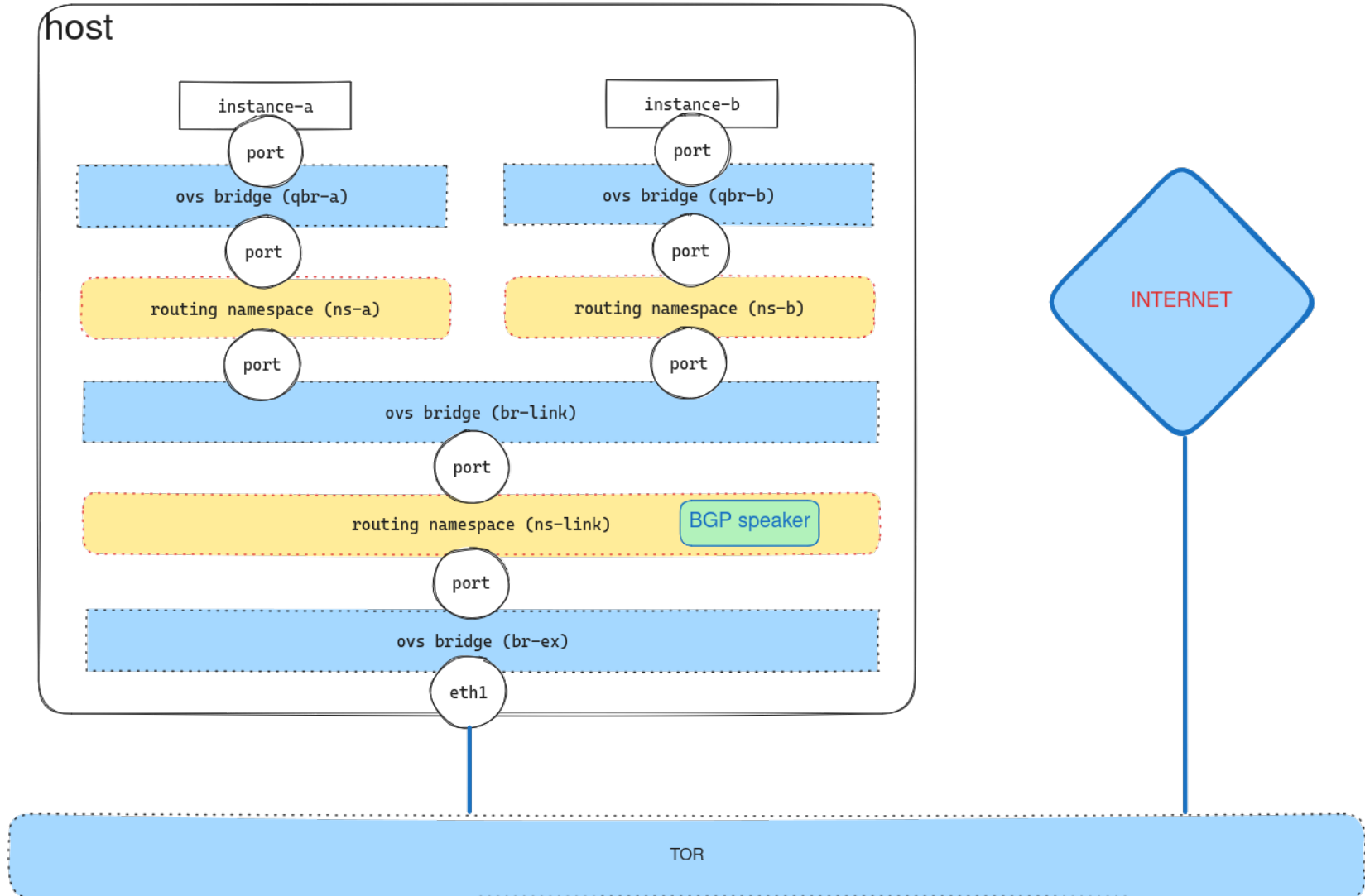
BGP agent



BGP agent



BGP agent



mutt/laptop1034493dev/laptop1034493/usr/bin/zsh[mosh] 9000-dev/admin1.gl_debiancloudgit: ~ /usr/bin/zsh /usr/bin/zshdebian@testarnaud5: ~ [mosh] waw1/admin-bm2.glo_[mosh] labeu /usr/bin/zshops genie-cli

[9000-dev]0*- 1*nova 2*snat 3*neutron 4*rab 5*9000.dev-> admin1.global.dev.cloud.ovh.net [08:27:5

[08:27][DEV][stein][amorin][root@nova4.9000.dev.cloud.ovh.net ~]

I

Mon Jun 1 .. 27:57 CEST

/var/log/nova/nova-compute.log:: openstack_log:: LOG

|2025-06-16 09:49:38.022 174104 INFO nova.virt.libvirt.imagecache [req-a3758a00-5871-4dc1-bdae-4265f93f82a0 - - - -] Active base file

s: /home/instances/_base/d0edff8169c50e7fb243498f572ae12de50b2f7a

Last message: 38 minutes ago; Files: 1; Error rate: 0.00/min; Time span: 300h28m28s

L5,117 100% 0 hits 219,868 Not Shown ? :View Help

0:00 / 3:11

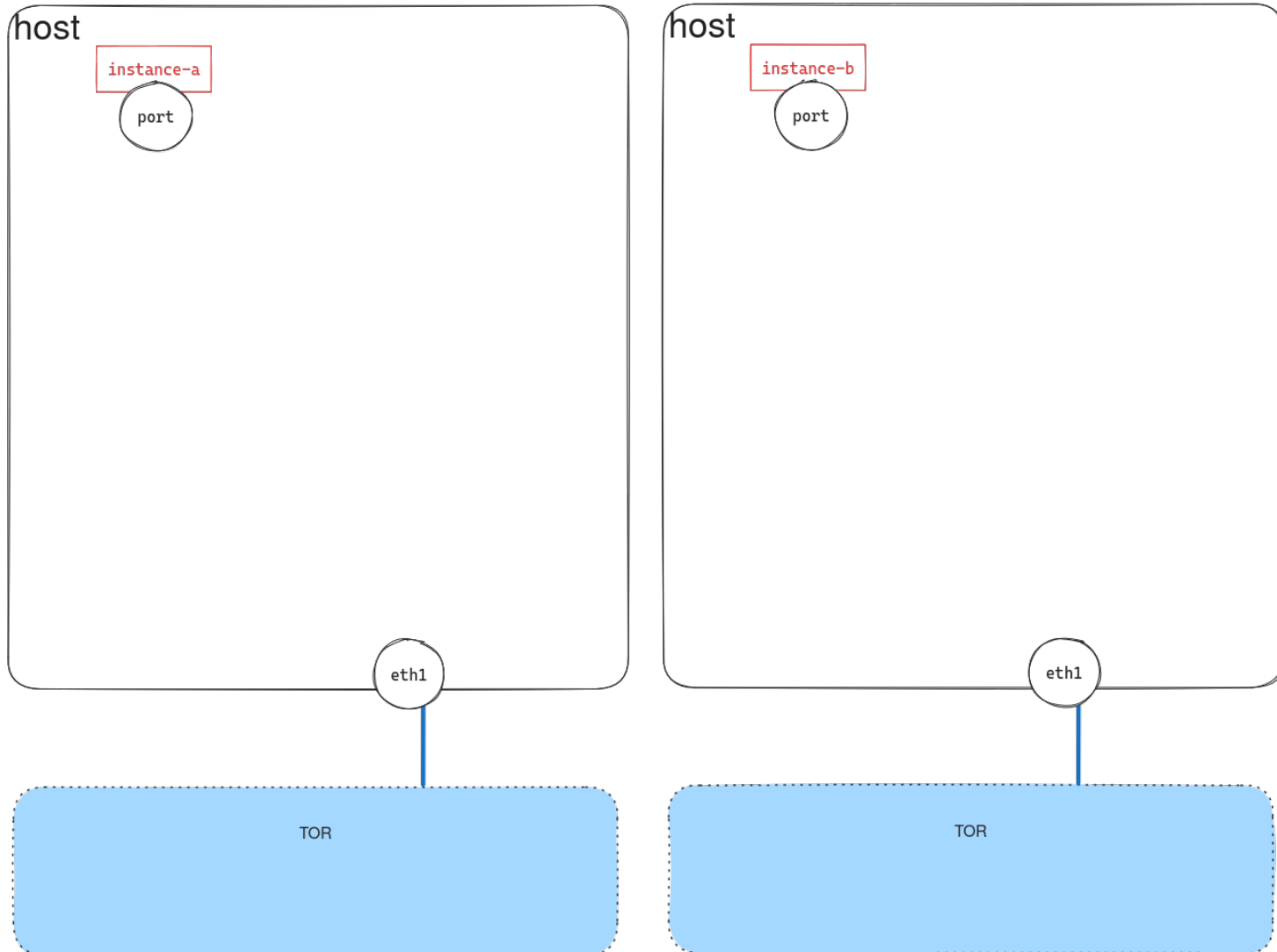
ad 1Pv5 [W: down] | E: 192.168.1.100 (10000 Mbit/s) | FULL 87.27% | 12.6 GiB | 1.61 | 11.1 GiB | 2.1 GiB | 2025-06-16 10:27:55 EN #1



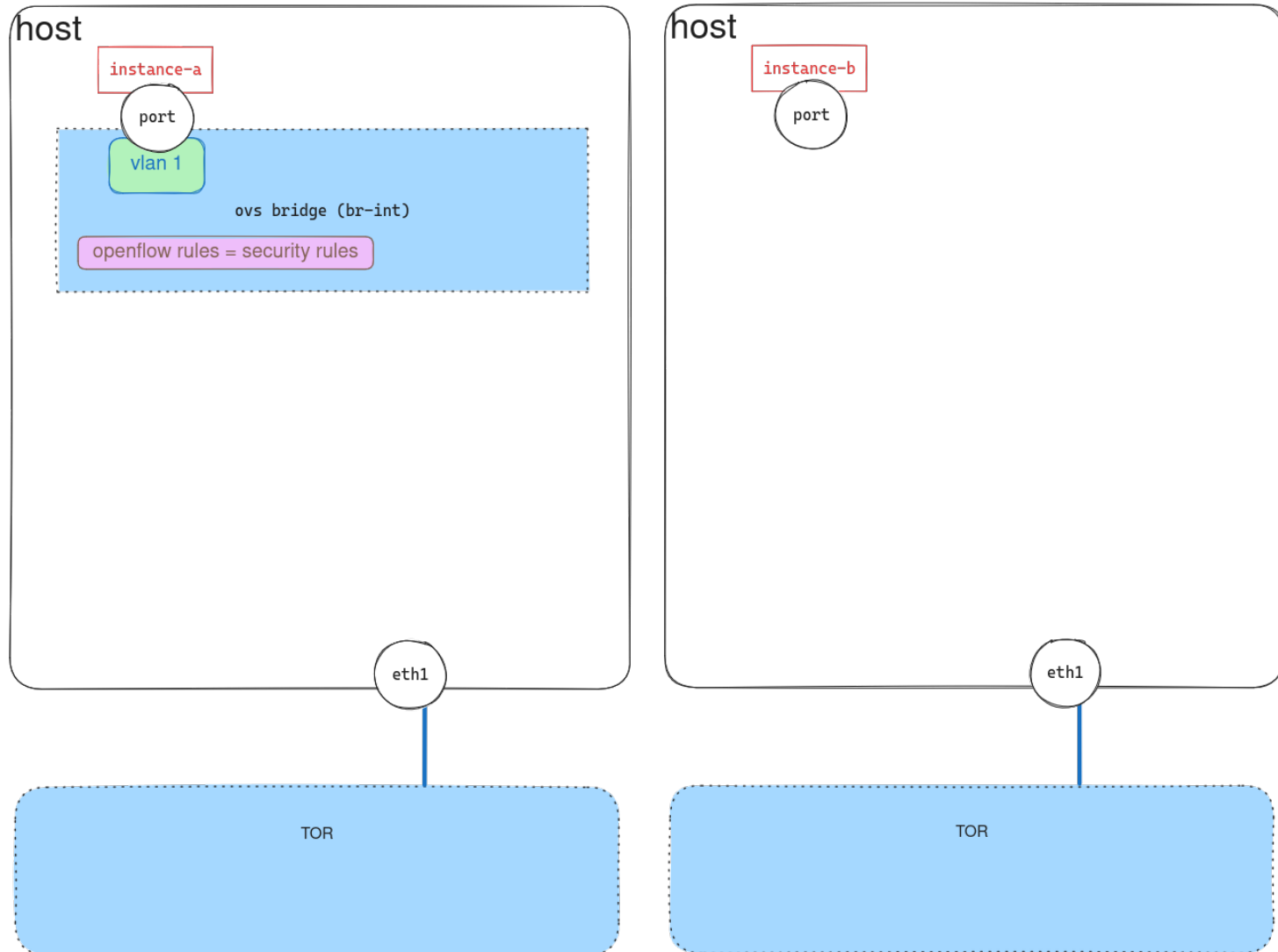
What if I want a private network?

VRACK

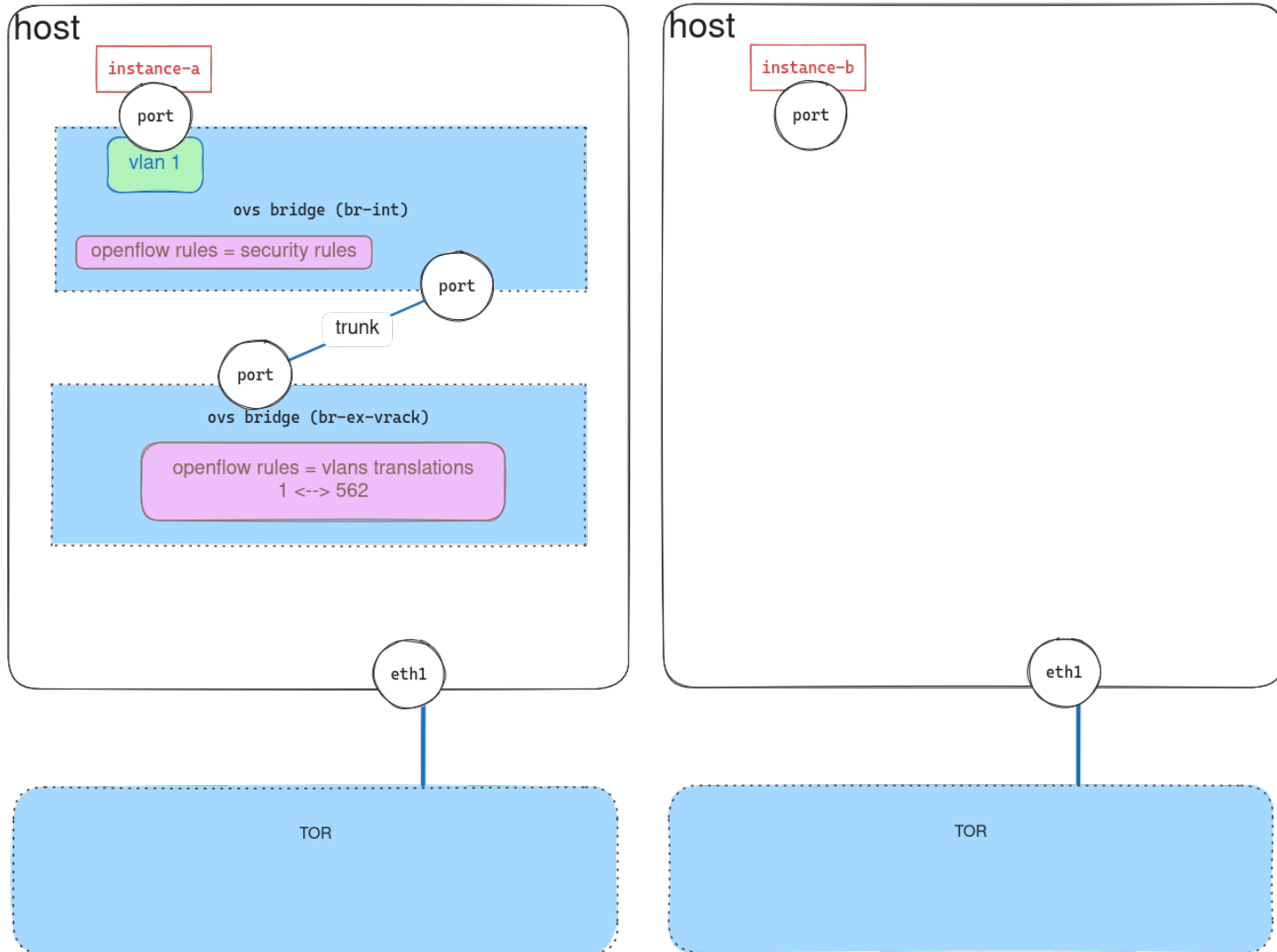
VRACK agent



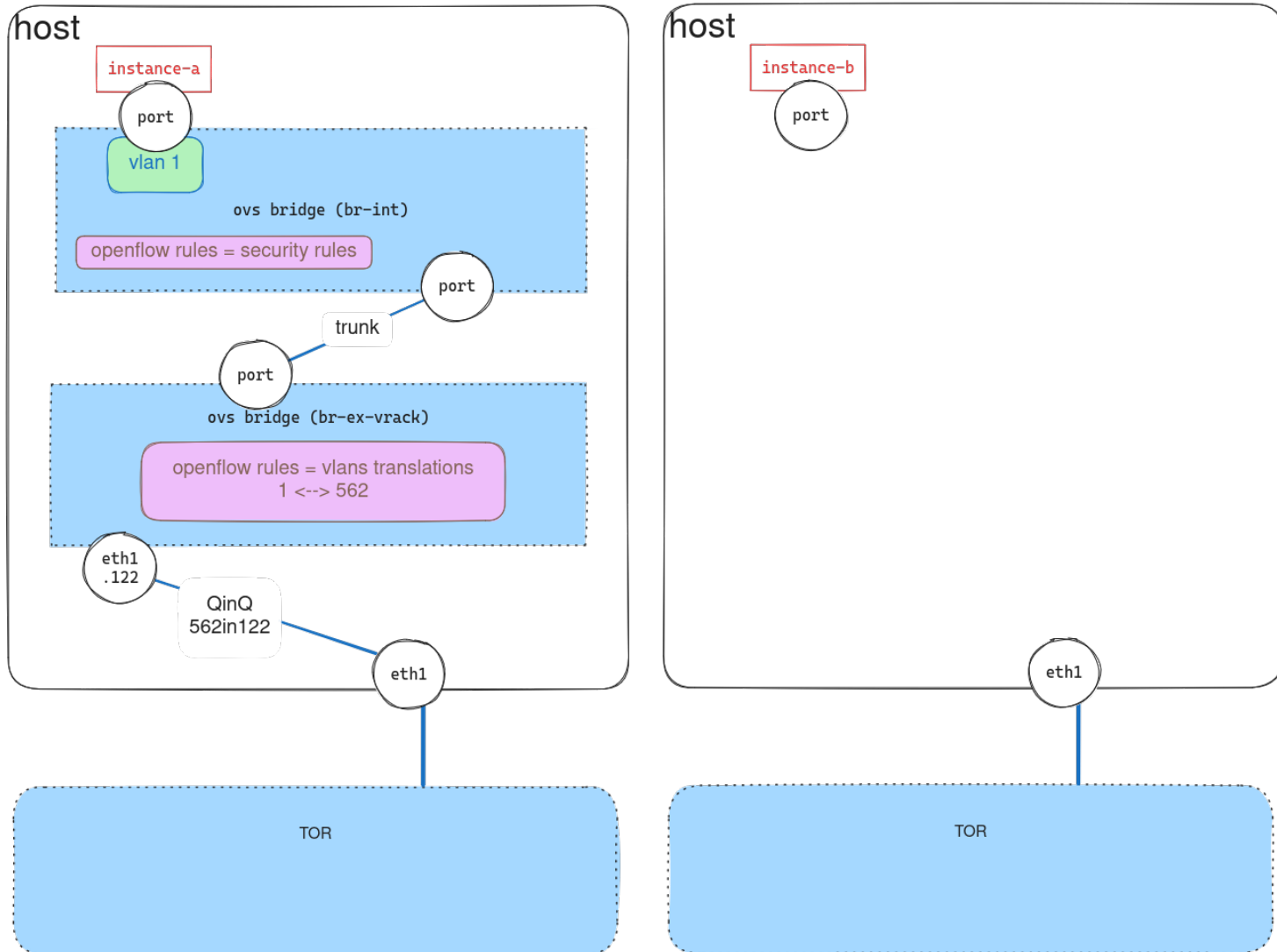
VRACK agent



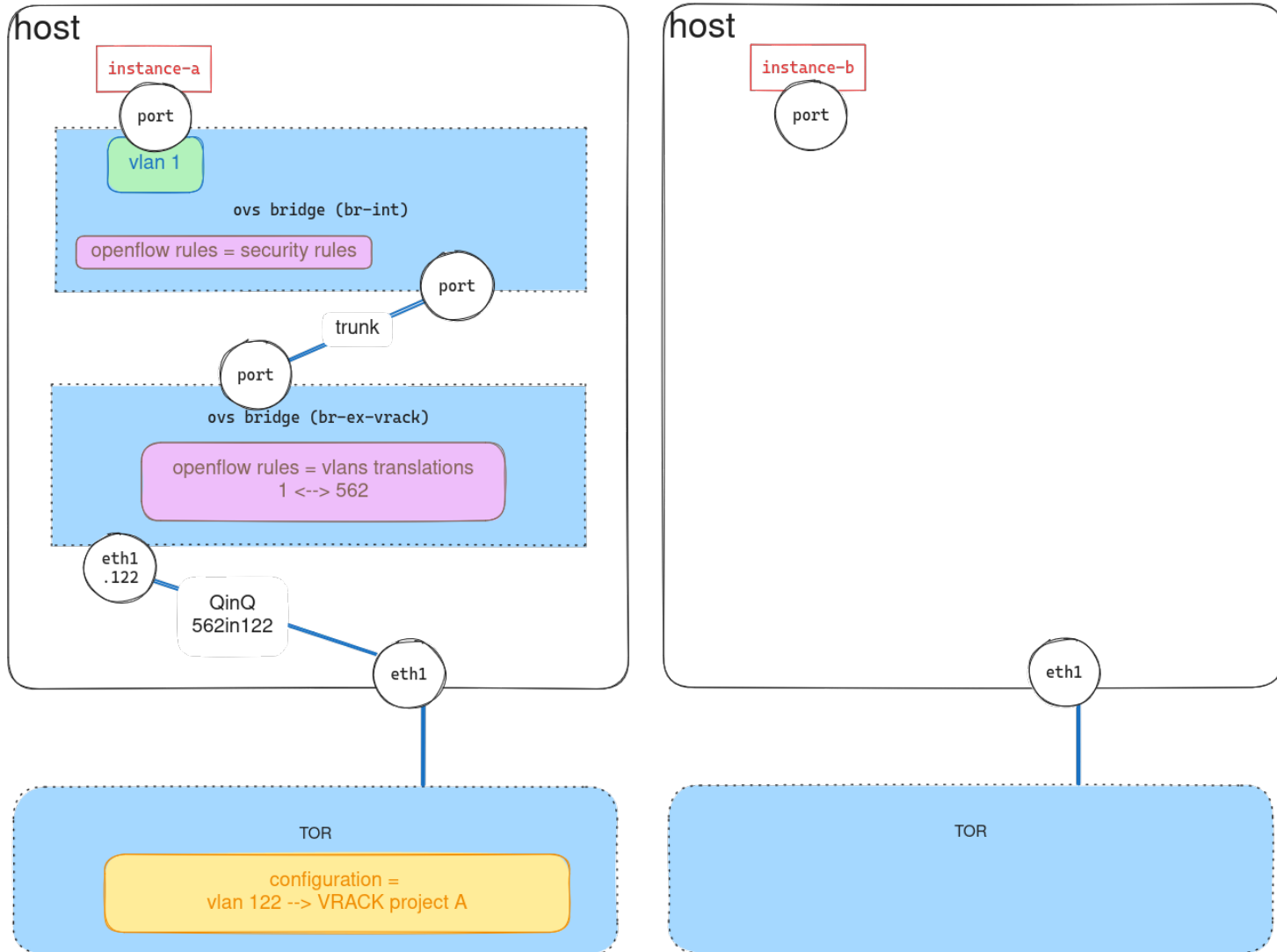
VRACK agent



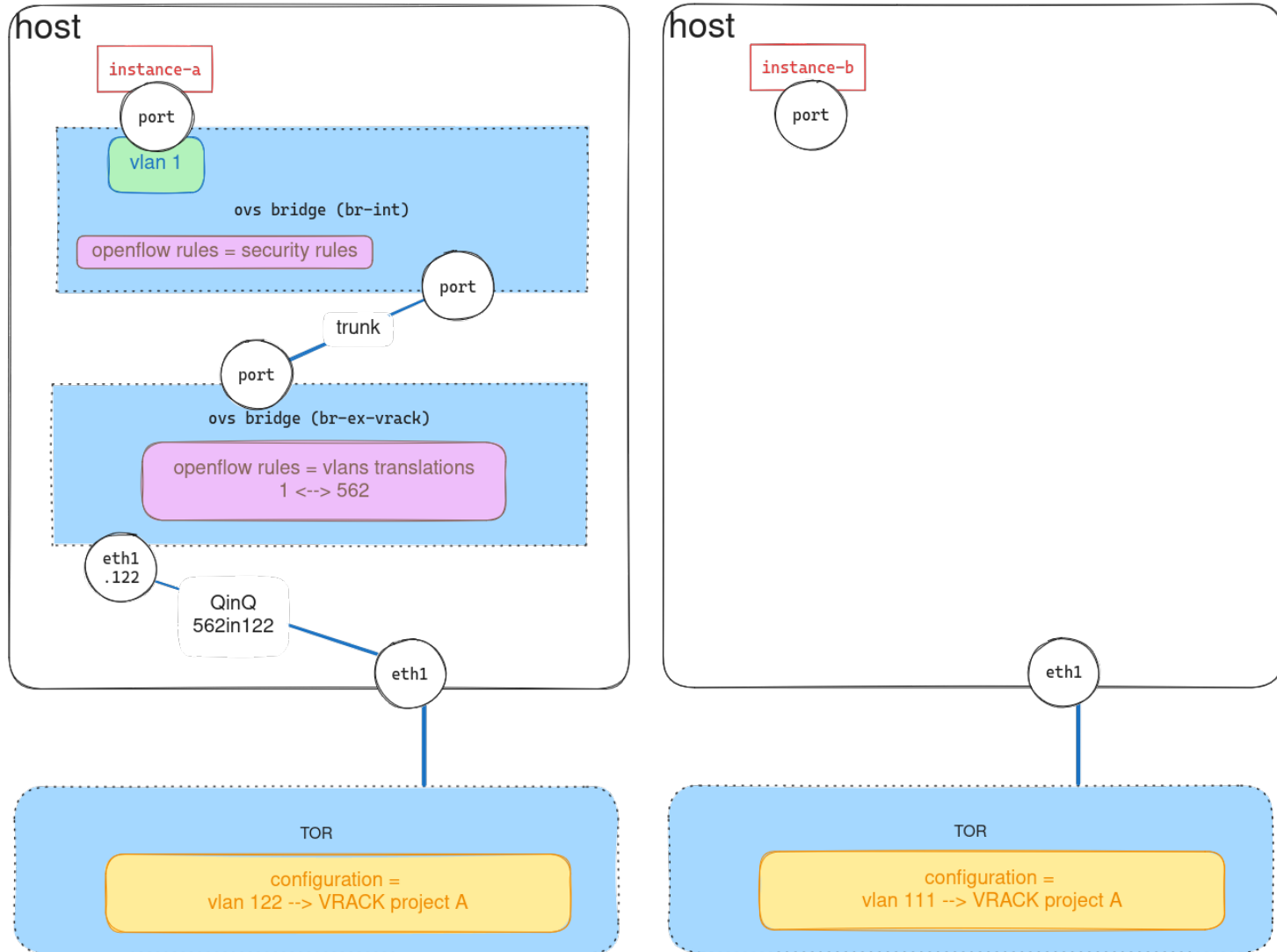
VRACK agent



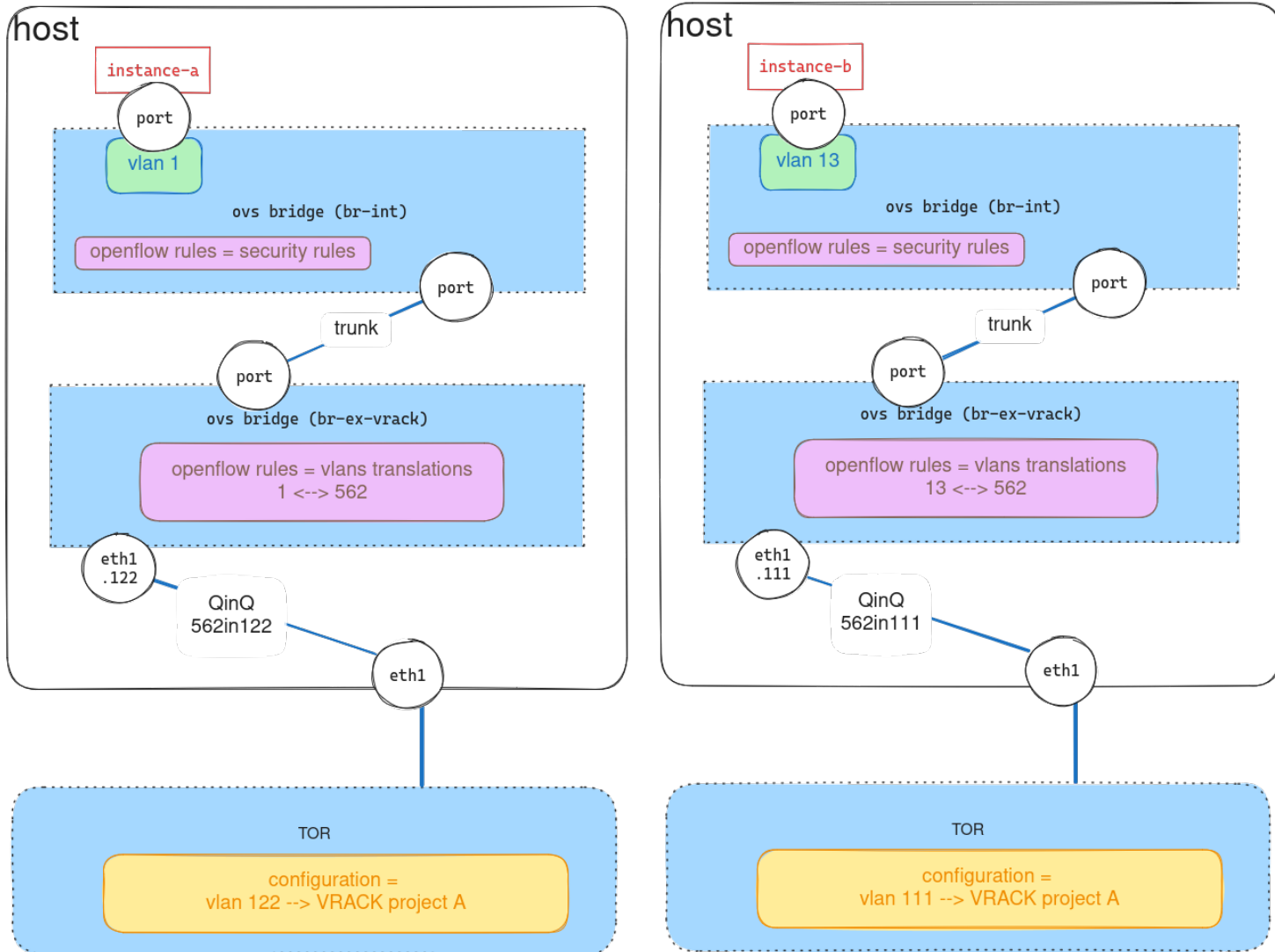
VRACK agent



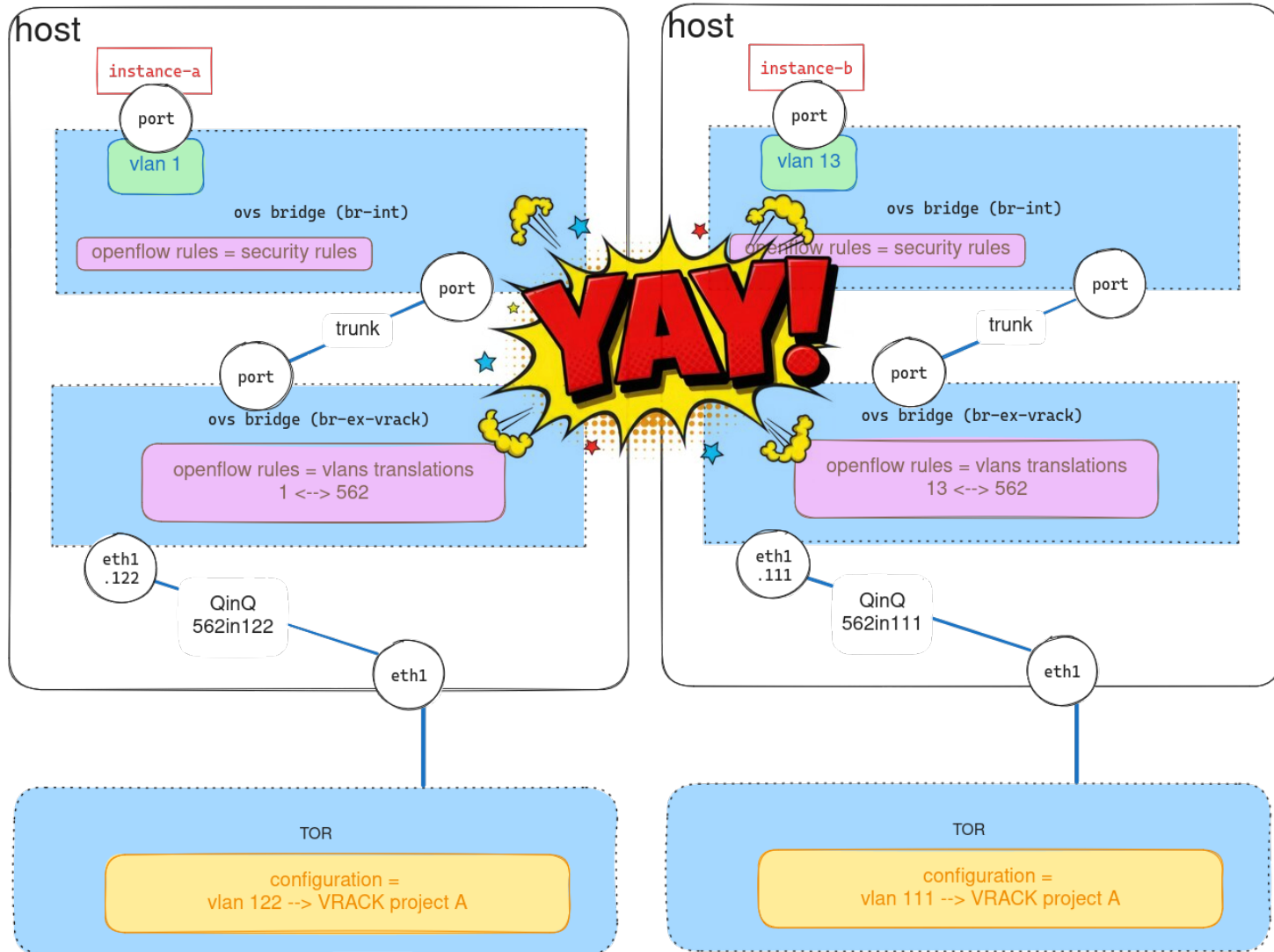
VRACK agent



VRACK agent



VRACK agent



mutt/laptop1034493 dev/laptop1034493 /usr/bin/zsh [mosh] 9000-dev/admin1.gl_ debiancloudgit: ~ /usr/bin/zsh /usr/bin/zsh debian@testarnaud5: ~ [mosh] waw1/admin-bm2.glo_ [mosh] labeu /usr/bin/zsh ops genie-cli

[9000-dev]0*- 1*nova 2*- 3*- 4*neutron 5*rab 6*9000.dev-> admin1.global.dev.cloud.ovh.net [21:30:3

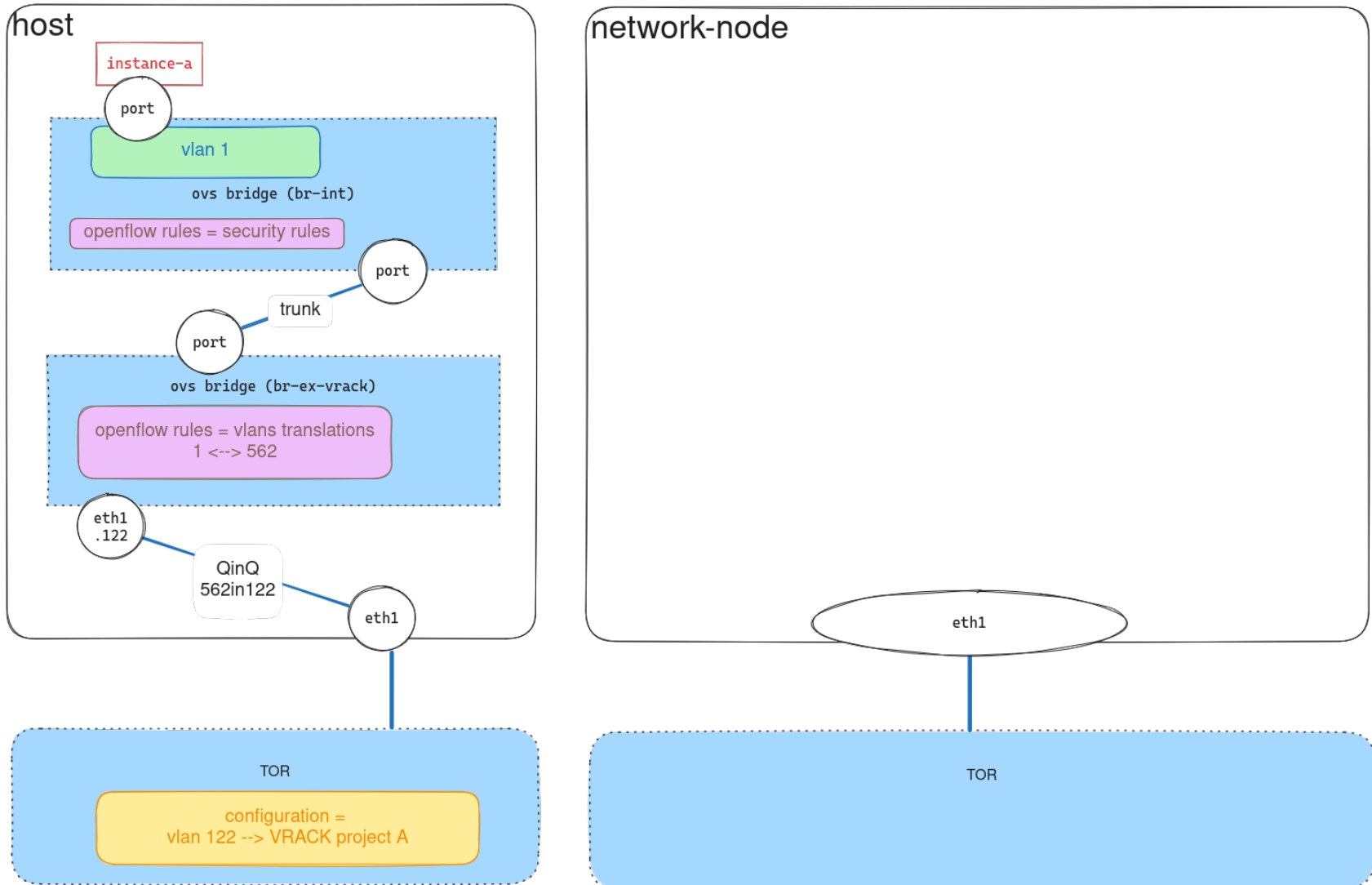
[21:27][DEV][stein][amorin][root@nova4.9000.dev.cloud.ovh.net ~] █

[23:28][DEV][stein][amorin][root@host306412.9000.dev.cloud.ovh.net ~]

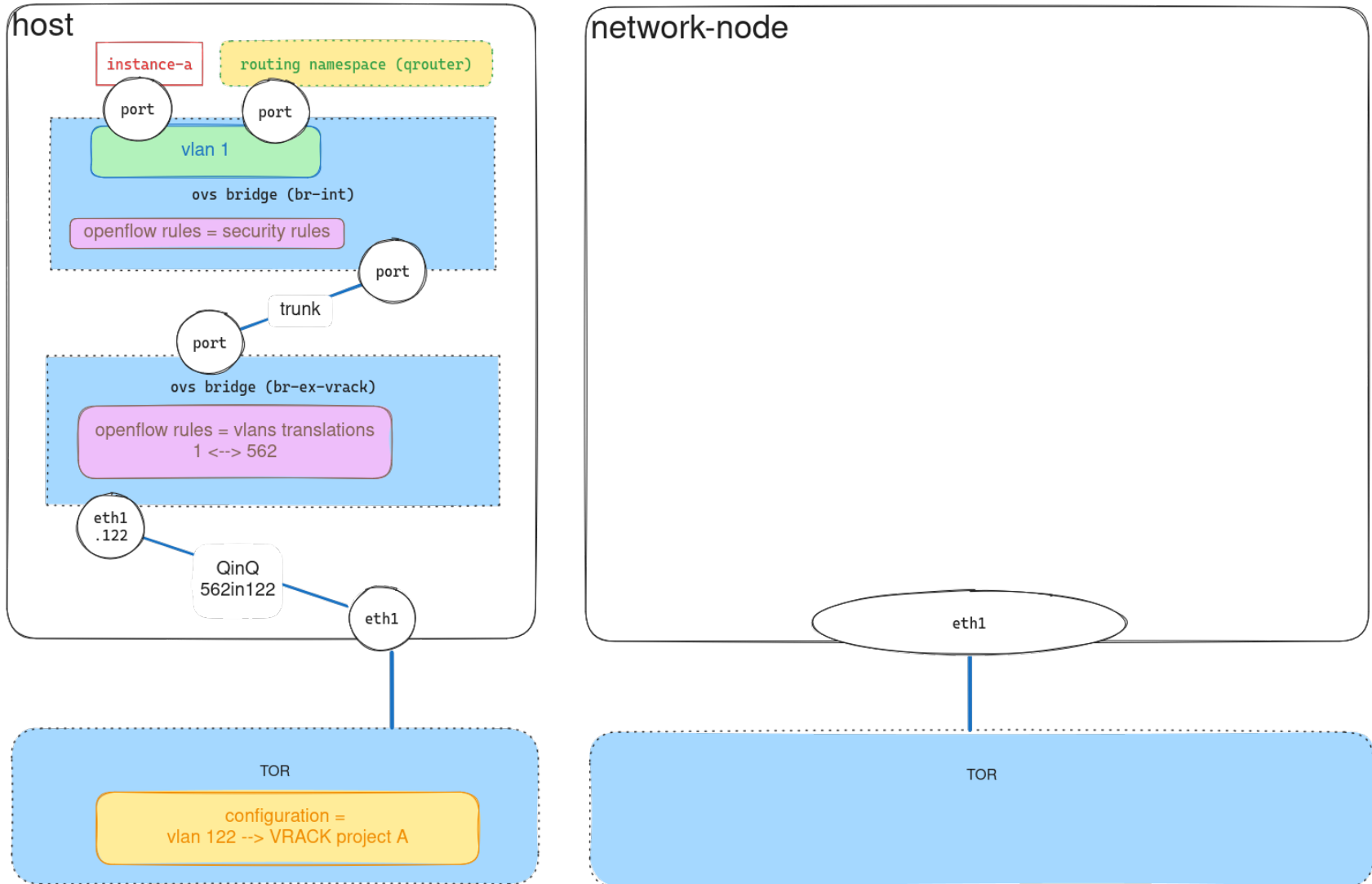
What if I want internet?

ROUTERS

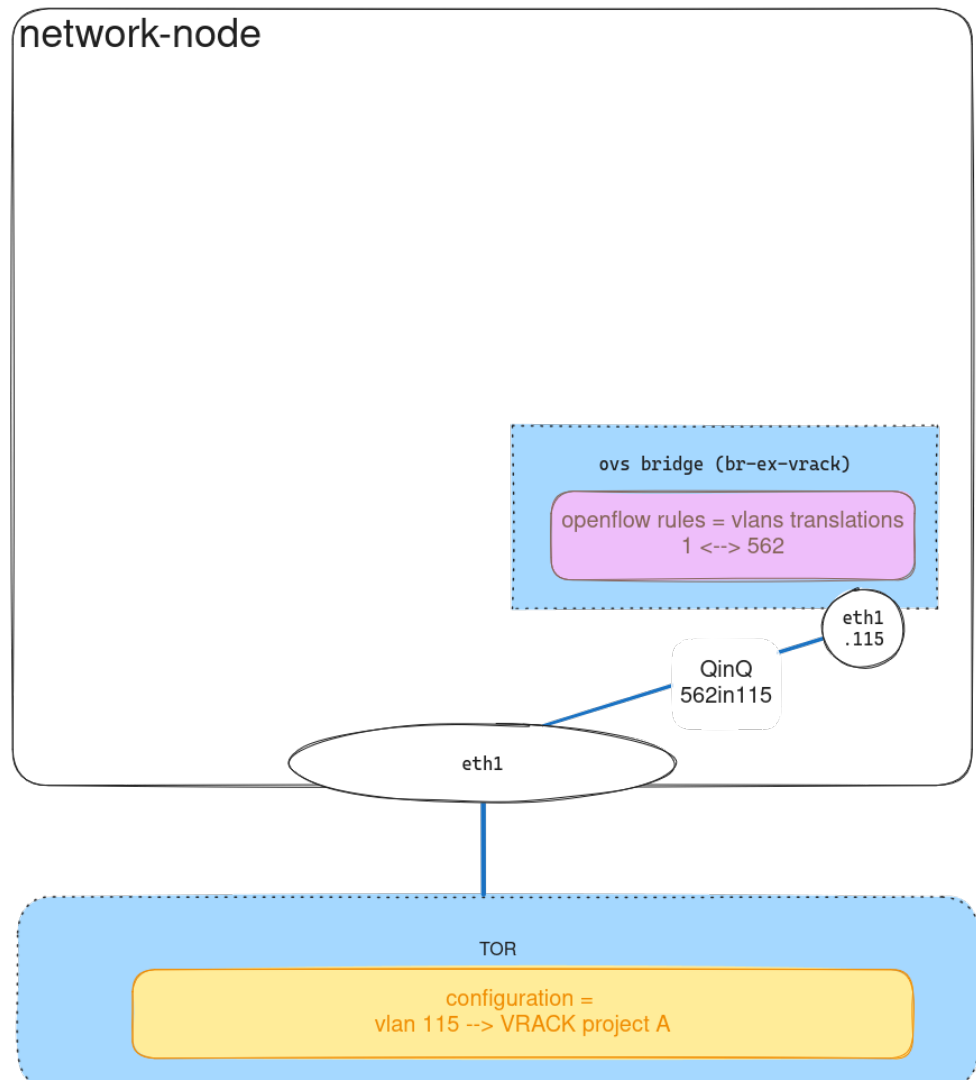
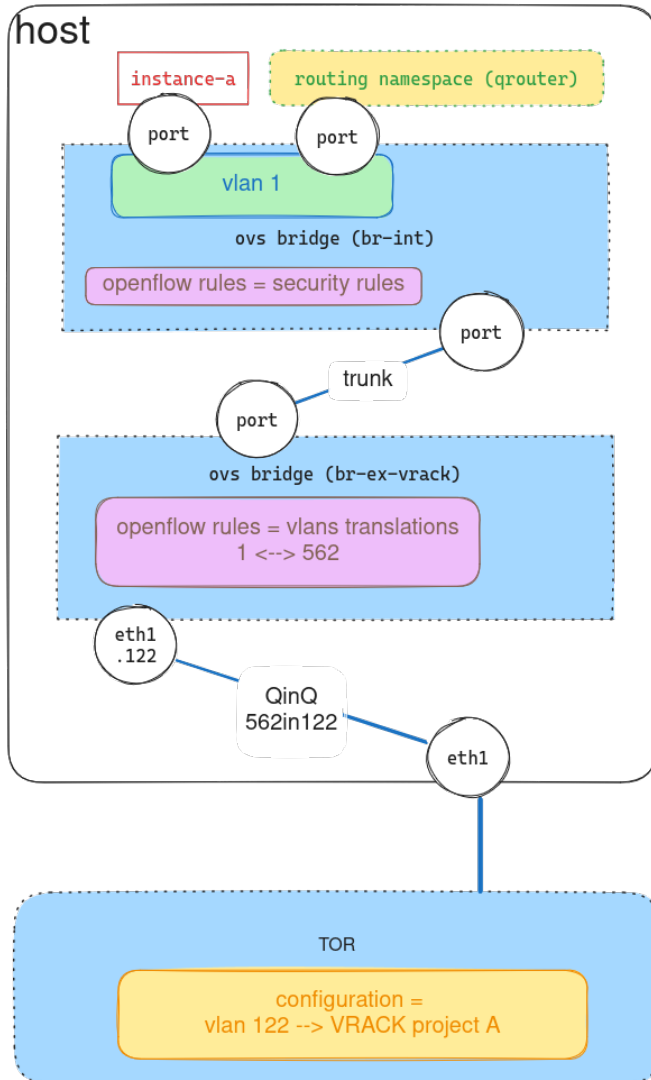
L3 agent



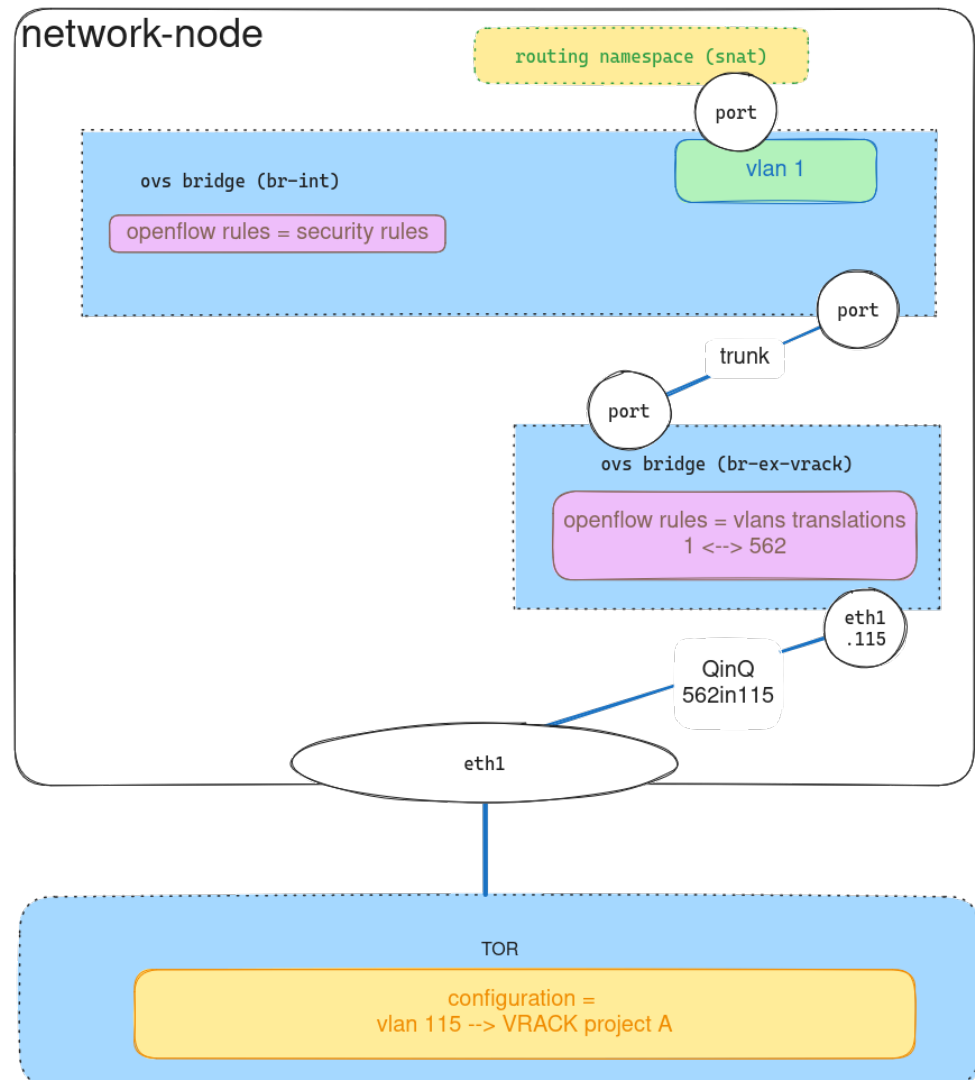
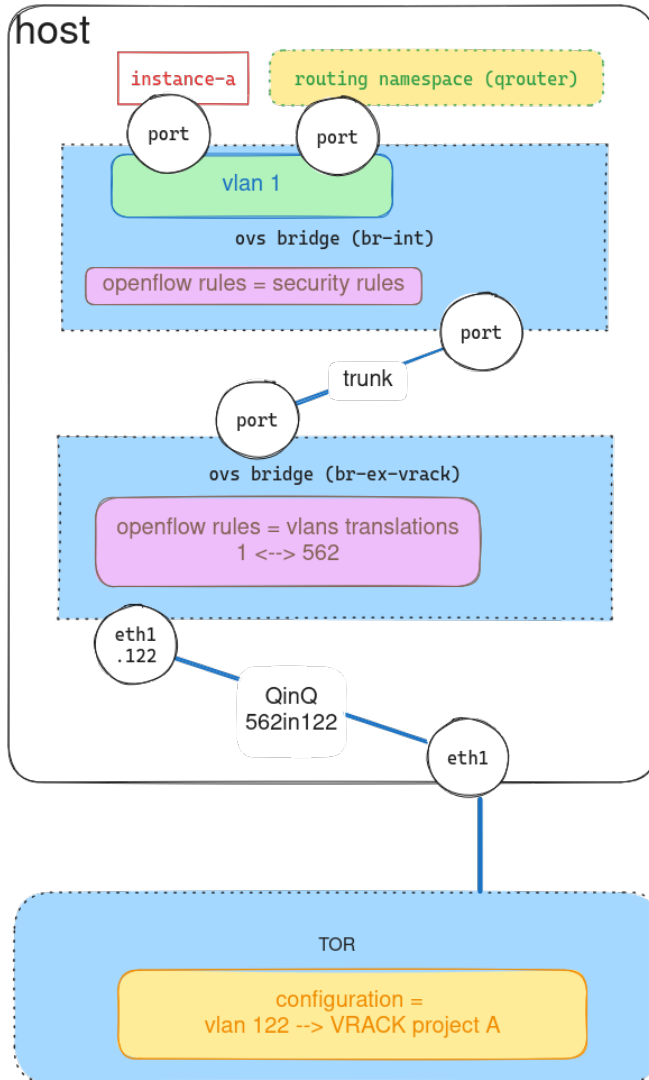
L3 agent



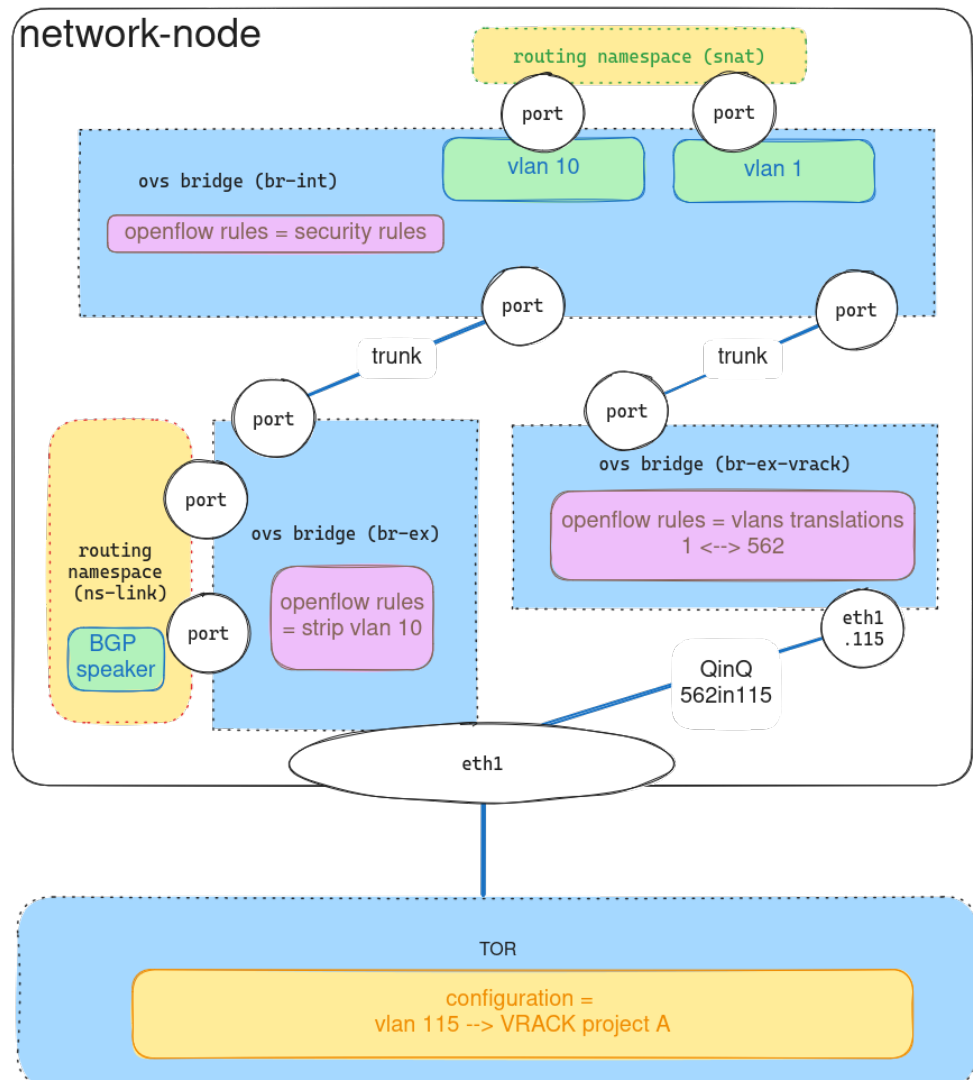
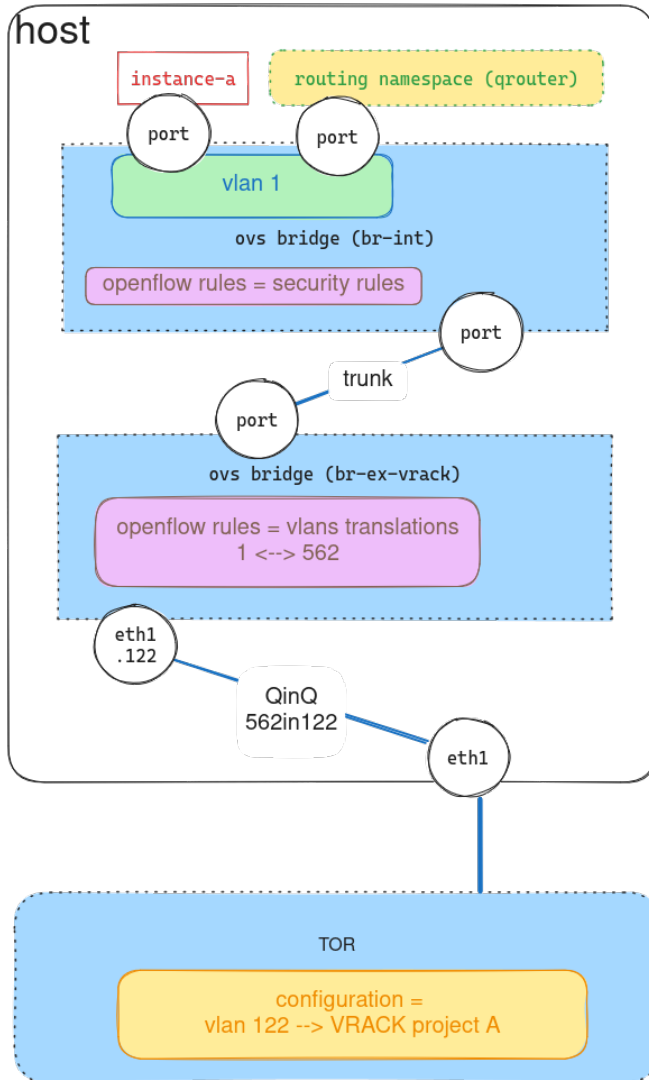
L3 agent



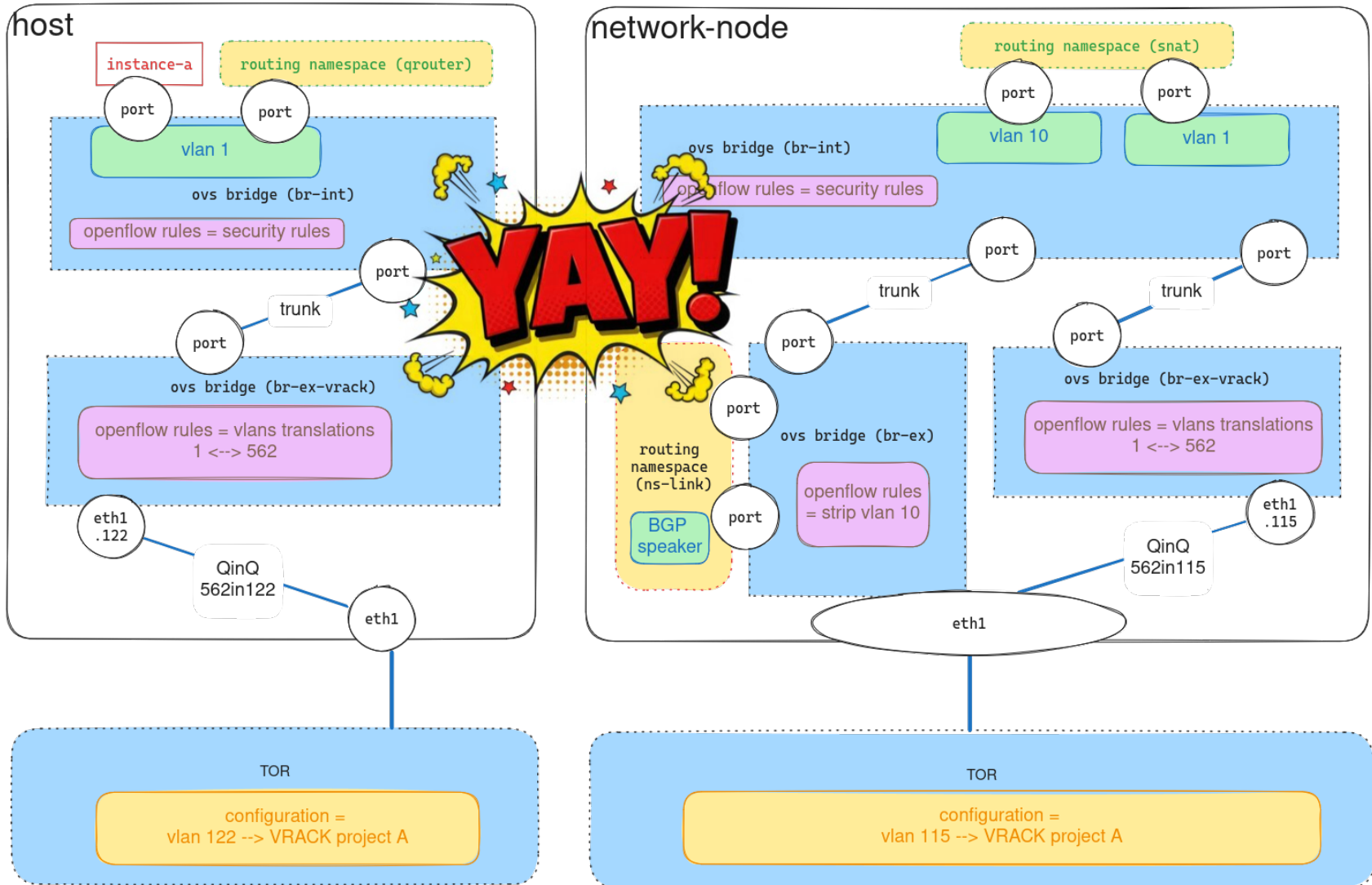
L3 agent



L3 agent



L3 agent



mutt/laptop1034493 dev/laptop1034493 /usr/bin/zsh [mosh] 9000-dev/admin1.gl_ debiancloudgit: ~ /usr/bin/zsh /usr/bin/zsh debian@testarnaud5: ~ [mosh] waw1/admin-bm2.glo_ [mosh] labeu /usr/bin/zsh opsgenie-cli

[9000-dev]0*- 1*nova 2*snat 3*neutron 4*rab 5*9000.dev-> admin1.global.dev.cloud.ovh.net [10:04:4

[10:04][DEV][stein][amorin][root@nova4.9000.dev.cloud.ovh.net ~] █

I

debian@testvrack:~\$



0:00 / 4:28



But also...

But also...

DHCP

But also...

DHCP

DNS

But also...

DHCP

DNS

Floating IPs

But also...

DHCP

DNS

Floating IPs

Load Balancers

But also...

DHCP

DNS

Floating IPs

Load Balancers

etc.

A green truck is visible on the left side of the frame, moving along a road. The background is a blurred landscape with green hills and a clear sky. The word "QUESTIONS?" is overlaid in the center of the image.

QUESTIONS?