Default

SSH Server

management

Dataplane

Routing Coordinator

VPP

external

internal

IMP | Core

Internet

Lab N3248TE-ON

VLAN 25

Single-Stack
IPv6 to IPv4 Server

Private IPv4
Client via NAT

23.177.24.8/31
2602:f90e::100/127

23.177.24.9/31
2602:f90e::101/127

external

ip route add 10.10.83.0/24 via 192.168.1.2 memif1/0
ip route add 23.177.104.96/29 via 192.168.1.6 memif2/0
ip route add 0.0.0.0/0 via 10.10.82.1 vppnat

IMP | Headend/MDU

IPv6 Prefix: fdce:9f00:0263::/64

Default

SSH Server

Containers
br0

DHCP

DNS

...

169.254.1.9/31   tap

bridge

169.254.1.8/31   tap

NAT: 23.177.24.104/29

VPP NAT64

64:ff9b::/96

Future Requirement

bridge

::104/127   tap

169.254.1.7/31

memif

169.254.1.6/31

NAT: 23.177.24.96/29

VPP NAT

169.254.1.5/31

memif

169.254.1.4/31

det44 plugin enable
set interface det44 inside memif1/0 outside memif2/0
det44 add in 10.10.83.0/24 out 23.177.104.96/29

set acl-plugin acl deny src 10.10.83.0/24 dst 10.10.0.0/16, deny src 10.10.83.0/24 dst
38.77.195.48/29, permit src 10.10.83.0/24
abf policy add id 0 acl 0 via 192.168.1.5 memif2/0
abf attach ip4 policy 0 internal

Dataplane

Routing Coordinator

VPP Core

veth

veth

management

internal

192.168.20.1/24
2602:f90e:1000::ffff:ffff:ffff:fffe/64

2602:f90e:1000::/64

VLAN 30

Lab N3248TE-ON

Notes
- FRR support for PREF64 is nascent: https://github.com/FRRouting/frr/pull/11224
- We could build our own version and merge that code if we needed to
- Moving to BIRD is also an option: https://gitlab.nic.cz/labs/bird/-/blob/master/doc/bird.sgml#L5241
- Further note: it's not normal that the IMP would be providing the router advertisements