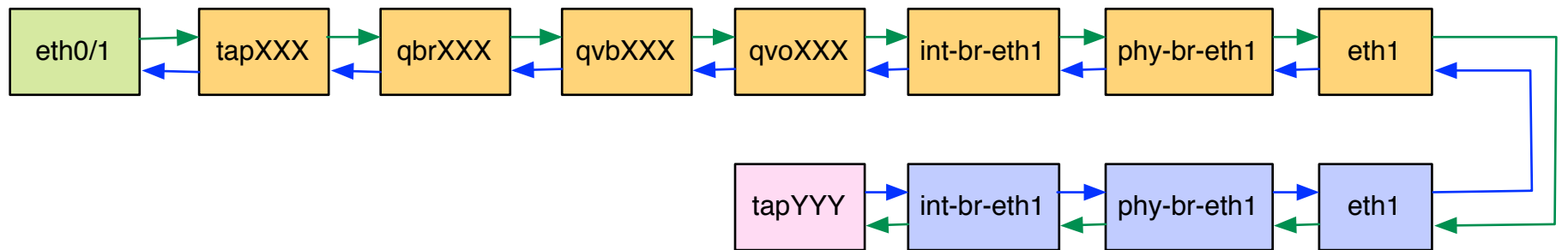


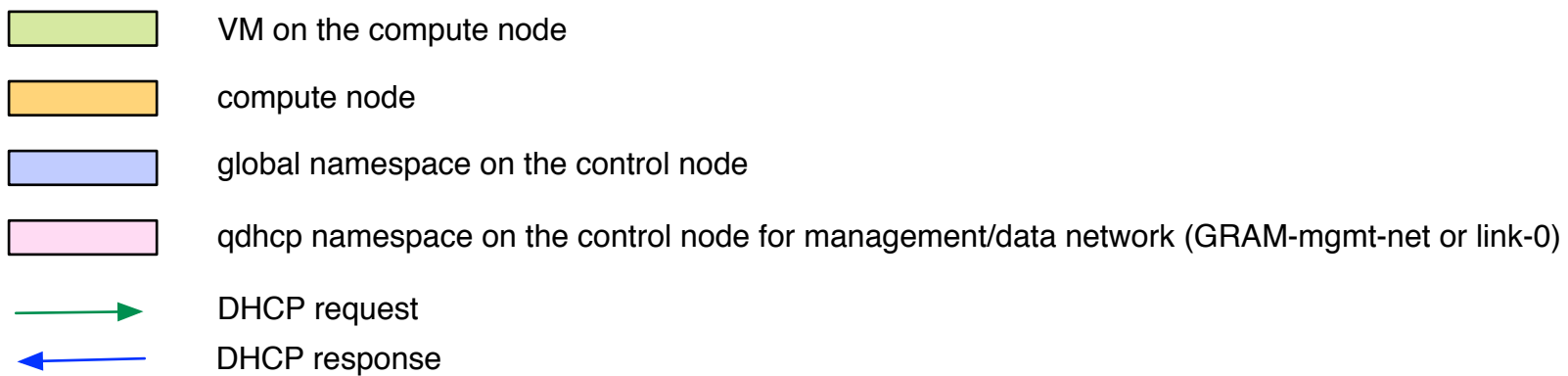
How to troubleshoot DHCP issues on the VM

The DHCP request and response packets will take the following path. I generally start watching packets at the tapXXX interface and follow the path to determine where the packets are getting stuck.



XXX = First 11 characters of the UUID of the quantum port for the management/data interface on the VM

YYY = First 11 characters of the UUID of the quantum port for the DHCP interface on the management/data network



Assuming eth1 is the management network and eth2 is the data network. Replace eth1 with eth2 in the above diagram for troubleshooting the data network.

To determine XXX:

1. Get the IP address assigned from the GRAM-mgmt-net or link-0 network to the VM

```
gram@bbn-cam-ctrl-1:~$ nova list --all-tenants | grep expl-host1
| a03735ed-0ac2-4370-8d47-861781c0fb2e | expl-host1 | ACTIVE | link-0=10.0.20.4; GRAM-mgmt-net=192.168.10.4 |
```

2. Find the quantum port for this interface

```
gram@bbn-cam-ctrl-1:~$ quantum port-list | grep 192.168.10.4
| 664cbeb0-1e19-4f48-9cea-b402c4c7f0e4 |          | fa:16:3e:f3:52:4b | {"subnet_id": "7f424e13-7b01-48be-8fbb-c3bf00b0699c", "ip_address": "192.168.10.4"} |
```

3. Use the first 11 characters of the UUID for this port

```
664cbeb0-1e
```

To determine the qdhcp namespace ID for the management/data network:

1. Get the UUID for the management/data network (e.g. GRAM-mgmt-net)

```
gram@bbn-cam-ctrl-1:~$ quantum net-list | grep GRAM
| 627bd384-5374-46fe-8ea9-3436b98b7ce7 | GRAM-mgmt-net | 7f424e13-7b01-48be-8fbb-c3bf00b0699c 192.168.10.0/24 |
```

2. Add qdhcp- to the beginning of this UUID

```
qdhcp-627bd384-5374-46fe-8ea9-3436b98b7ce7
```

To determine YYY:

1. Find the tap interface listed in the qdhcp namespace for the management/data network (see above)

```
gram@bbn-cam-ctrl-1:~$ sudo ip netns exec qdhcp-627bd384-5374-46fe-8ea9-3436b98b7ce7 ifconfig | grep tap
tapffe71421-44 Link encap:Ethernet HWaddr fa:16:3e:40:e1:3a
```

2. Use the 11 characters after "tap" for this interface

```
ffe71421-44
```

To see packets on the compute node:

```
sudo tcpdump -i <interface name> -e
```

To see packets in the global namespace on the control node:

```
sudo tcpdump -i <interface name> -e
```

To see packets in the qdhcp namespace on the control node:

```
sudo ip netns exec <namespace ID> tcpdump -i tapYYY -e
```