

V02- DCS Opened Node Validation - Test Router Failover

To use the WHOI Ethernet BER software:

1) Attach 1 server containing the software one to the shore side and one to the sea side. The present setup mentioned in this doc assumes that the LANFORGE is connected to both the sea and shore routers. If you configure down all shore connections the lanforge can be used as the subsea test server:

ifconfig ethx down where x is the number of the ethernet port (0-7) connected to the shore

2) Insure that each server has a route to the other.

from subsea (lanforge):

route add -host 10.91.128.58 eth3

ping 10.91.128.58

from shore (marsdcs)

ping 10.1.11.101

UDP TEST:

3) Start the ethernet receive software on the shore side:

/home/stevel/NetworkBER/pr -p1234 -S -D

4) Start the ethernet transmit software on the subsea side:

/home/stevel/NetworkBER/pw -h10.91.128.58 -p1234 -B52000 -r200 -s -P0

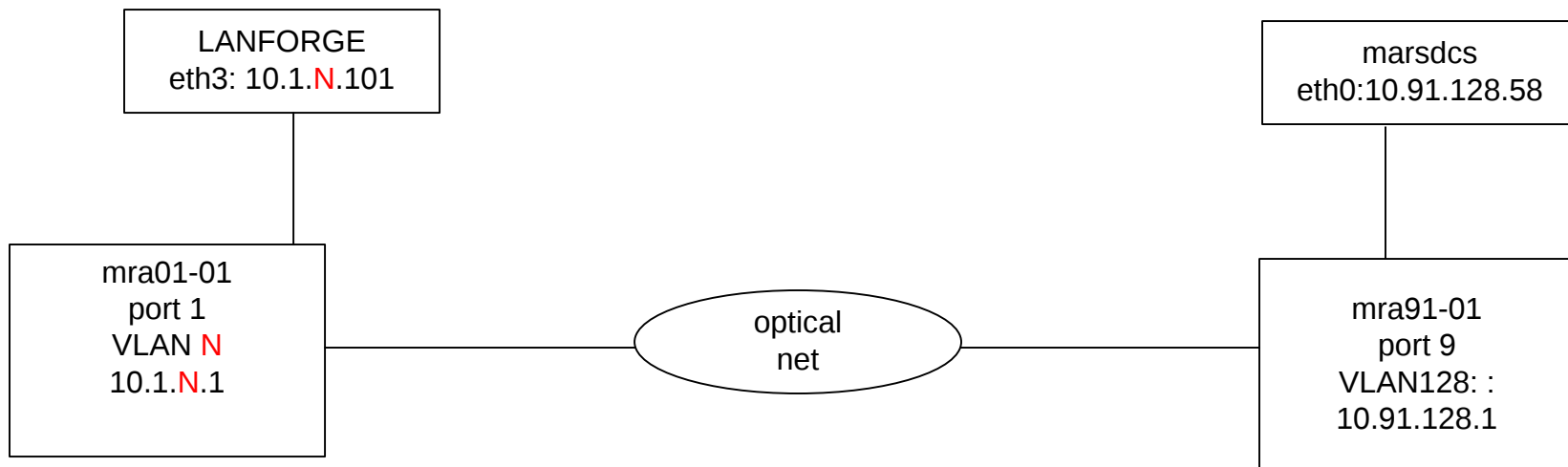
TCP TEST:

3) Start the ethernet receive software on the shore side:

/home/stevel/NetworkBER/pr -p1234 -S -B52000 -D -ttcp

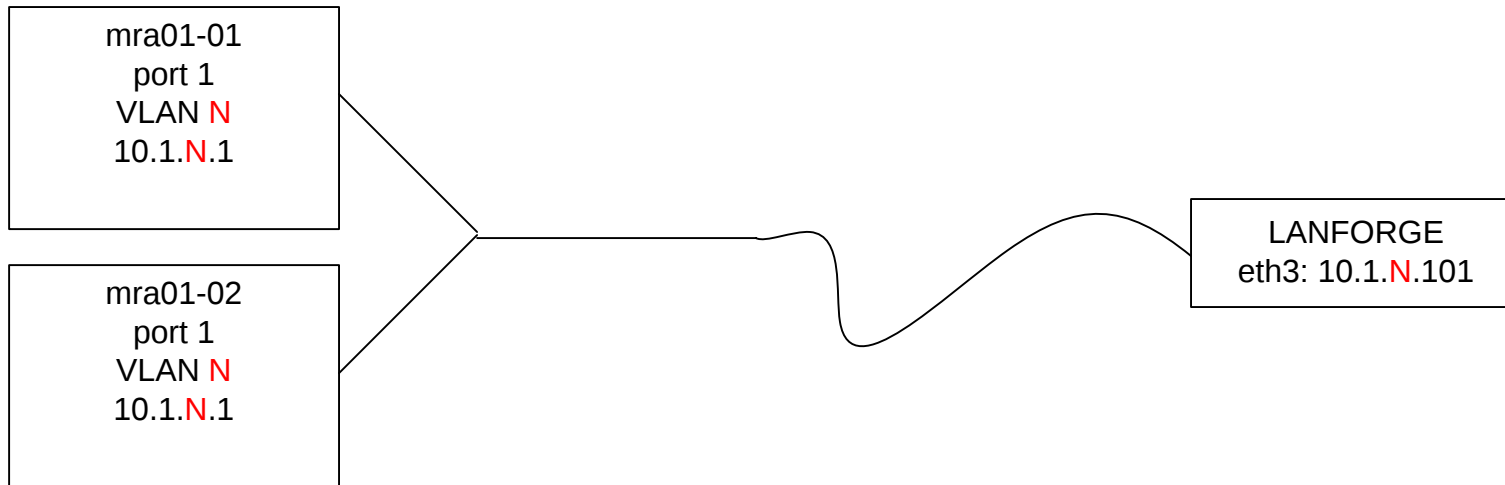
4) Start the ethernet transmit software on the subsea side:

/home/stevel/NetworkBER/pw -h10.91.128.58 -p1234 -B52000 -r200 -s -P0 -ttcp



NOTES for BER Test

- > The servers are connected as shown.
- > On the shore all traffic coming from the sea is routed to mra91-01 via VLAN128 at 10.91.128.1
- > On the subsea you must be careful of the VLANs. Each SCIENCE port **N** is mapped to VLAN **N** at 10.1.**N**.1
- > If you move the lanforge to science port **N**, you MUST change the address of the lanforge port eth3 to the new address at 10.1.**N**.101
- > Always make sure that you can ping 10.91.128.58 from the lanforge
- > Always make sure that you can ping 10.1.N.101 from marsdcs
- > If you can't do this you have a configuration problem



Two Router ports are Y cabled to each science port. The router mra01-01 port should be “up” at power up and the mra01-02 should be “administratively down”

The commands that follow will help to check and control this

SHOW THE PORT STATUS on mra01
it should be up

```
mra01-01>sh ip in g1/0/1
GigabitEthernet1/0/1 is up, line protocol is up
  Inbound  access list is not set
```

SHOW THE PORT STATUS on mra02
it should be down

```
mra01-01>sh ip in g2/0/1
GigabitEthernet2/0/1 is down, line protocol is down
  Inbound  access list is not set
```

TO TURN THE PORT on mra01 ON

```
conf t
in g1/0/1
shut
no shut
exit
```

TO TURN THE PORT on mra02 OFF

```
conf t
in g2/0/1
shut
exit
```