

Bonding – Aggregating more than one physical NICs to one logical

The Situation

Two Gibraltar Firewalls should be connected on two interfaces each side. We have two separate lines that should connect those two firewalls. To get the best throughput and to increase availability we aggregate the two interfaces on each side to one logical interface. The packets should be sent “Round Robin”; alternately the packets should go to both interfaces. If one line fails the other one should manage all the traffic.

The Preconditions

Example configuration: Two Gibraltar firewalls with two unused network interface cards on each side. Leased lines between the two offices where the two firewalls are situated. Gibraltar software version 2.6.1.

The Solution

Create a bonding interface on both sides aggregating the two (or more) physical interfaces to one logical interface called bond0. The example configuration below aggregates the interfaces eth2 and eth3 to the logical bonding interface bond0. The configuration must be done on both Gibraltar firewalls (of course IP address and MAC address must be different).

/etc/network/interfaces:

```
auto bond0
iface bond0 inet scripted
    method scripted
    address 10.1.100.63/24
    pre-up ip link set eth2 down; ip link set eth2 address
00:11:22:33:44:50; ip link set eth2 up
    pre-up ip link set eth3 down; ip link set eth3 address
00:11:22:33:44:50; ip link set eth3 up
    up /usr/sbin/ifenslave bond0 eth2 eth3
    down /usr/sbin/ifenslave -d bond0 eth2 eth3
```

/etc/modutils/gibraltar-local:

```
alias bond0 bonding
options bonding mode=0 miimon=100
```

Run command `update-modules`.

Run command `/etc/init.d/networking restart`.