**fail\_over\_mac**

Specifies whether active-backup mode should set all slaves to

the same MAC address at enslavement (the traditional

behavior), or, when enabled, perform special handling of the

bond's MAC address in accordance with the selected policy.

Possible values are:

1. **none or 0**

**(bond0, slave2개의 mac 동일하게 움직임)**

This setting disables fail\_over\_mac, and causes

bonding to set all slaves of an active-backup bond to

the same MAC address at enslavement time. This is the

default.

[root@localhost network-scripts]# cat ifcfg-bond0

BOOTPROTO=none

DEVICE=bond0

ONBOOT=yes

USERCTL=no

**BONDING\_OPTS="mode=1 miimon=100"**

[root@localhost network-scripts]# ip a

2: eno16777736: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast master bond0 state UP qlen 1000

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

3: eno33554984: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast master bond0 state UP qlen 1000

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

6: bond0: <BROADCAST,MULTICAST,MASTER,UP,LOWER\_UP> mtu 1500 qdisc noqueue state UP

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

inet6 fe80::20c:29ff:fe33:ba04/64 scope link

valid\_lft forever preferred\_lft forever

[root@localhost network-scripts]# cat /proc/net/bonding/bond0

Ethernet Channel Bonding Driver: v3.7.1 (April 27, 2011)

**Bonding Mode: fault-tolerance (active-backup)**

Primary Slave: None

Currently Active Slave: eno16777736

MII Status: up

MII Polling Interval (ms): 100

Up Delay (ms): 0

Down Delay (ms): 0

Slave Interface: eno16777736

MII Status: up

Speed: 1000 Mbps

Duplex: full

Link Failure Count: 0

Permanent HW addr: 00:0c:29:33:ba:04

Slave queue ID: 0

Slave Interface: eno33554984

MII Status: up

Speed: 1000 Mbps

Duplex: full

Link Failure Count: 0

Permanent HW addr: 00:0c:29:33:ba:0e

Slave queue ID: 0

1. **active or 1**

**(bond0은 active slave의 mac과 동일하게 움직임)**

The "active" fail\_over\_mac policy indicates that the

MAC address of the bond should always be the MAC

address of the currently active slave. The MAC

address of the slaves is not changed; instead, the MAC

address of the bond changes during a failover.

This policy is useful for devices that cannot ever

alter their MAC address, or for devices that refuse

incoming broadcasts with their own source MAC (which

interferes with the ARP monitor).

The down side of this policy is that every device on

the network must be updated via gratuitous ARP,

vs. just updating a switch or set of switches (which

often takes place for any traffic, not just ARP

traffic, if the switch snoops incoming traffic to

update its tables) for the traditional method. If the

gratuitous ARP is lost, communication may be

disrupted.

When this policy is used in conjunction with the mii

monitor, devices which assert link up prior to being

able to actually transmit and receive are particularly

susceptible to loss of the gratuitous ARP, and an

appropriate updelay setting may be required.

2: eno16777736: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast master bond0 state UP qlen 1000

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

3: eno33554984: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast master bond0 state UP qlen 1000

link/ether 00:0c:29:33:ba:0e brd ff:ff:ff:ff:ff:ff

\_fast state DOWN qlen 500

link/ether 52:54:00:28:e5:20 brd ff:ff:ff:ff:ff:ff

6: bond0: <BROADCAST,MULTICAST,MASTER,UP,LOWER\_UP> mtu 1500 qdisc noqueue state UP

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

inet6 fe80::20c:29ff:fe33:ba04/64 scope link

valid\_lft forever preferred\_lft forever

[root@localhost network-scripts]# cat /proc/net/bonding/bond0

Ethernet Channel Bonding Driver: v3.7.1 (April 27, 2011)

**Bonding Mode: fault-tolerance (active-backup) (fail\_over\_mac active)**

Primary Slave: None

Currently Active Slave: eno16777736

MII Status: up

MII Polling Interval (ms): 100

Up Delay (ms): 0

Down Delay (ms): 0

Slave Interface: eno16777736

MII Status: up

Speed: 1000 Mbps

Duplex: full

Link Failure Count: 0

Permanent HW addr: 00:0c:29:33:ba:04

Slave queue ID: 0

Slave Interface: eno33554984

MII Status: up

Speed: 1000 Mbps

Duplex: full

Link Failure Count: 0

Permanent HW addr: 00:0c:29:33:ba:0e

Slave queue ID: 0

1. **follow or 2**

**( 첫번째 slave의 mac을 bond0이 가져감)**

The "follow" fail\_over\_mac policy causes the MAC

address of the bond to be selected normally (normally

the MAC address of the first slave added to the bond).

However, the second and subsequent slaves are not set

to this MAC address while they are in a backup role; a

slave is programmed with the bond's MAC address at

failover time (and the formerly active slave receives

the newly active slave's MAC address).

This policy is useful for multiport devices that

either become confused or incur a performance penalty

when multiple ports are programmed with the same MAC

address.

[root@localhost network-scripts]# ip a

2: eno16777736: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast master bond0 state UP qlen 1000

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

3: eno33554984: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast master bond0 state UP qlen 1000

link/ether 00:0c:29:33:ba:0e brd ff:ff:ff:ff:ff:ff

6: bond0: <BROADCAST,MULTICAST,MASTER,UP,LOWER\_UP> mtu 1500 qdisc noqueue state UP

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

inet6 fe80::20c:29ff:fe33:ba04/64 scope link

valid\_lft forever preferred\_lft forever

[root@localhost network-scripts]# cat /proc/net/bonding/bond0

Ethernet Channel Bonding Driver: v3.7.1 (April 27, 2011)

**Bonding Mode: fault-tolerance (active-backup) (fail\_over\_mac follow)**

Primary Slave: None

Currently Active Slave: eno16777736

MII Status: up

MII Polling Interval (ms): 100

Up Delay (ms): 0

Down Delay (ms): 0

Slave Interface: eno16777736

MII Status: up

Speed: 1000 Mbps

Duplex: full

Link Failure Count: 0

Permanent HW addr: 00:0c:29:33:ba:04

Slave queue ID: 0

Slave Interface: eno33554984

MII Status: up

Speed: 1000 Mbps

Duplex: full

Link Failure Count: 0

Permanent HW addr: 00:0c:29:33:ba:0e

Slave queue ID: 0

**[root@localhost network-scripts]# ifdown eno1677773(첫번째 인퍼에시를 죽여도 첫번째 slave의 mac을 bond0이 가져감)**

2: eno16777736: <BROADCAST,MULTICAST> mtu 1500 qdisc pfifo\_fast state DOWN qlen 1000

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

3: eno33554984: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc pfifo\_fast master bond0 state UP qlen 1000

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

6: bond0: <BROADCAST,MULTICAST,MASTER,UP,LOWER\_UP> mtu 1500 qdisc noqueue state UP

link/ether 00:0c:29:33:ba:04 brd ff:ff:ff:ff:ff:ff

inet6 fe80::20c:29ff:fe33:ba04/64 scope link

valid\_lft forever preferred\_lft forever