while working with bonding:

[root@TESTSERVER ~]# lsmod|grep -i bond >>> To check if bonding module is loaded/installed

bonding 141566 0

[root@usnencpl105 ~]#

[root@ TESTSERVER ~]# cat /sys/class/net/bonding\_masters >>>>> To check which all bonding are configured on Server

bond0 bond1 bond2

[root@ TESTSERVER ~]# cat /etc/sysconfig/network-scripts/ifcfg-bond1 >>>> Config file for bonding

DEVICE=bond1

TYPE=bond

BOOTPROTO=none

ONBOOT=yes

NM\_CONTROLLED=no

USERCTL=no

PEERDNS=no

IPADDR=10.79.118.63

NETMASK=255.255.240.0

BONDING\_OPTS="mode=1 miimon=100" >>>>>> This value “mode=X”define type of bonding (type of fault tolerance). value 1 is for active-backup ( one nic will active at time) and value 0 means round robin ( packets are sent/receive one by one on both nics)

[root@ TESTSERVER ~]# cat /sys/class/net/bond1/bonding/mode >>> to check current mode of a bond interface

active-backup 1

[root@ TESTSERVER ~]# cat /sys/class/net/bonding\_masters >>>> what all bonds are configured on server

bond0 bond1 bond2

[root@ TESTSERVER ~]# cat /proc/net/bonding/bond1 >>>>> Current running status of a bond interface ( status from kernel)

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

Bonding Mode: fault-tolerance (active-backup)

Primary Slave: None

Currently Active Slave: eno53

MII Status: up

MII Polling Interval (ms): 100

Up Delay (ms): 0

Down Delay (ms): 0

Slave Interface: eno53

MII Status: up

Speed: 10000 Mbps

Duplex: full

Link Failure Count: 1

Permanent HW addr: 9c:dc:71:d1:86:12

Slave queue ID: 0

Slave Interface: eno54

MII Status: up

Speed: 10000 Mbps

Duplex: full

Link Failure Count: 1

Permanent HW addr: 9c:dc:71:d1:86:1a

Slave queue ID: 0

[root@ TESTSERVER ~]# cat /etc/sysconfig/network-scripts/ifcfg-eno53 >>>> file configuration for nic used in bonding (slave interfaces)

DEVICE=eno53

TYPE=Ethernet

UUID=ad985884-8ffa-4684-bd87-44eae3be437f

ONBOOT=yes

PEERDNS=no

BOOTPROTO=none

NM\_CONTROLLED=no

USERCTL=no

SLAVE=yes

MASTER=bond1

ETHTOOL\_OPTS="-G ${DEVICE} rx 4078"

[root@ TESTSERVER ~]# cat /etc/sysconfig/network-scripts/ifcfg-eno54 >>>> file configuration for nic used in bonding (slave interfaces)

DEVICE=eno54

TYPE=Ethernet

UUID=a85f9492-d864-4479-8b89-f7ee50d5f9b3

ONBOOT=yes

PEERDNS=no

BOOTPROTO=none

NM\_CONTROLLED=no

USERCTL=no

SLAVE=yes

MASTER=bond1

ETHTOOL\_OPTS="-G ${DEVICE} rx 4078"

[root@ TESTSERVER ~]#

[root@ TESTSERVER ~]# ip link show|grep -i bond1 >>>>> check bond and its slave interface link status with OS command

6: eno53: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc mq master bond1 state UP mode DEFAULT qlen 1000

7: eno54: <BROADCAST,MULTICAST,SLAVE,UP,LOWER\_UP> mtu 1500 qdisc mq master bond1 state UP mode DEFAULT qlen 1000

17: bond1: <BROADCAST,MULTICAST,MASTER,UP,LOWER\_UP> mtu 1500 qdisc noqueue state UP mode DEFAULT qlen 1000

[root@ TESTSERVER ~]#

[root@ TESTSERVER ~]# ethtool eno53 >>>> To check link mode and link status on physical layer of an NIC interface

Settings for eno53:

Supported ports: [ FIBRE ]

Supported link modes: 1000baseKX/Full

10000baseKR/Full

Supported pause frame use: Symmetric Receive-only

Supports auto-negotiation: Yes

Advertised link modes: 1000baseKX/Full

10000baseKR/Full

Advertised pause frame use: Symmetric Receive-only

Advertised auto-negotiation: Yes

Link partner advertised link modes: 1000baseKX/Full

10000baseKR/Full

Link partner advertised pause frame use: Symmetric

Link partner advertised auto-negotiation: Yes

Speed: 10000Mb/s

Duplex: Full

Port: FIBRE

PHYAD: 1

Transceiver: internal

Auto-negotiation: on

Supports Wake-on: g

Wake-on: g

Current message level: 0x00000000 (0)

Link detected: yes

[root@ TESTSERVER ~]# journalctl -u NetworkManager --since today >>>>> check from journals in rhel7 for network related error for particular day/time

-- Logs begin at Thu 2017-07-13 08:55:45 EDT, end at Fri 2017-09-01 16:40:01 EDT. --

Sep 01 09:07:35 usnencpl105.nmcorp.nissan.biz NetworkManager[1167]: <info> (eno53): link disconnected

Sep 01 09:07:36 usnencpl105.nmcorp.nissan.biz NetworkManager[1167]: <info> (eno54): link disconnected

Sep 01 09:07:36 usnencpl105.nmcorp.nissan.biz NetworkManager[1167]: <info> (bond1): link disconnected

Sep 01 16:15:53 usnencpl105.nmcorp.nissan.biz NetworkManager[1167]: <info> (eno53): link connected

Sep 01 16:15:53 usnencpl105.nmcorp.nissan.biz NetworkManager[1167]: <info> (bond1): link connected

Sep 01 16:15:54 usnencpl105.nmcorp.nissan.biz NetworkManager[1167]: <info> (eno54): link connected

[root@ TESTSERVER ~]# dmesg|egrep "NIC|NIC Link is Down|NIC Link is Up" >>>>>> check from dmesgs if any new hardware detected/failed here for NICs only

[ 18.147710] bnx2x 0000:06:00.0 eno49: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 18.554838] bnx2x 0000:06:00.0 eno49: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 19.070673] bnx2x 0000:06:00.1 eno50: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 19.478685] bnx2x 0000:06:00.1 eno50: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 23.791684] bnx2x 0000:06:00.4 eno53: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 24.200021] bnx2x 0000:06:00.4 eno53: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 24.747035] bnx2x 0000:06:00.5 eno54: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 25.143006] bnx2x 0000:06:00.5 eno54: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 28.878042] bnx2x 0000:06:00.6 eno55: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 29.290561] bnx2x 0000:06:00.6 eno55: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 29.850006] bnx2x 0000:06:00.7 eno56: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 30.260178] bnx2x 0000:06:00.7 eno56: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[ 33.687139] bnx2x 0000:09:00.2 ens1f2: NIC Link is Up, 8000 Mbps full duplex, Flow control: ON - receive & transmit

[ 34.656829] bnx2x 0000:09:00.3 ens1f3: NIC Link is Up, 8000 Mbps full duplex, Flow control: ON - receive & transmit

[ 35.509111] bnx2x 0000:06:00.2 eno51: Added CNIC device

[ 35.519159] bnx2x 0000:06:00.3 eno52: Added CNIC device

[ 35.529109] bnx2x 0000:09:00.2 ens1f2: Added CNIC device

[ 35.539059] bnx2x 0000:09:00.3 ens1f3: Added CNIC device

[4302471.942275] bnx2x 0000:06:00.4 eno53: NIC Link is Down

[4302471.964260] bnx2x 0000:06:00.5 eno54: NIC Link is Down

[4328170.054770] bnx2x 0000:06:00.4 eno53: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[4328171.066775] bnx2x 0000:06:00.5 eno54: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

[root@ TESTSERVER ~]# cat /var/log/messages|egrep "link|up|done" >>>>> check messages file for link down up

Sep 1 09:07:35 usnencpl105 NetworkManager[1167]: <info> (eno53): link disconnected

Sep 1 09:07:35 usnencpl105 kernel: bond1: link status definitely down for interface eno53, disabling it

Sep 1 09:07:35 usnencpl105 kernel: bond1: link status definitely down for interface eno54, disabling it

Sep 1 09:07:36 usnencpl105 NetworkManager[1167]: <info> (eno54): link disconnected

Sep 1 09:07:36 usnencpl105 NetworkManager[1167]: <info> (bond1): link disconnected

Sep 1 14:32:22 usnencpl105 systemd: Starting Cleanup of Temporary Directories...

Sep 1 14:32:22 usnencpl105 systemd: Started Cleanup of Temporary Directories.

Sep 1 16:15:53 usnencpl105 kernel: bnx2x 0000:06:00.4 eno53: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

Sep 1 16:15:53 usnencpl105 NetworkManager[1167]: <info> (eno53): link connected

Sep 1 16:15:53 usnencpl105 NetworkManager[1167]: <info> (bond1): link connected

Sep 1 16:15:53 usnencpl105 kernel: bond1: link status definitely up for interface eno53, 10000 Mbps full duplex

Sep 1 16:15:53 usnencpl105 kernel: bond1: first active interface up!

Sep 1 16:15:54 usnencpl105 NetworkManager[1167]: <info> (eno54): link connected

Sep 1 16:15:54 usnencpl105 kernel: bnx2x 0000:06:00.5 eno54: NIC Link is Up, 10000 Mbps full duplex, Flow control: ON - receive & transmit

Sep 1 16:15:54 usnencpl105 kernel: bond1: link status definitely up for interface eno54, 10000 Mbps full duplex

[root@ TESTSERVER ~]#

Devinder Singh