

# Trouble Shooting AIX

## Networking

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### TroubleShooting AIX

#### System Reporting wrong oslevel:

#### Network

##### 1. Check the number of network interfaces and their status:

```
# lsdev -CH | grep en
ent0 available 10-68 3Com 3C905-TX-IBM fast Etherlink XL NIC
ent1 defined 10-80 IBM PCI Ethernet Adapter (22100020)
inet0 available Internet Network Extension
en0 available Standard Ethernet Network Interface
en1 defined Standard Ethernet Network Interface
```

In this example, there are two network interfaces, ent0 and ent1. ent0 is a fast, 100MB card while ent1 is a 10MB card. ent0's status is "available" meaning that is presently active; on the other hand, ent1's status is "defined" which means that it could be activated but is not at this time.

## 2. Use the netstat command:

```
# netstat -in
Name Mtu Network Address Ipkts Ierrs Opkts Oerrs Coll
lo0 16896 link#1      587 0 695 0 0
lo0 16896 127 127.0.0.1 587 0 695 0 0
lo0 16896 ::1        587 0 695 0 0
en0 1500 link#6 2.60.8c.f2.1d.f6 6455 0 1112 0 0
en0 1500 216.131.202. 216.131.202.172 6455 0 1112 0 0
```

Check that the first three lines are lo0, also, confirm that en0 is the active interface, record the IP number.

## 3. Investigate the attributes of the active interface:

```
# lsattr -El en0
mtu      1500 Max IP Packet Size for this device    TRUE
remmtu   576 Max IP Packet Size for remote networks  TRUE
netaddr  216.131.202.172 Internet address TRUE
state    up Current Interface Status TRUE
netmask  255.255.255.0 Subnet mask TRUE
security none Security level TRUE
authority Authorized Users TRUE
broadcast Broadcast Address TRUE
netaddr6 N/A TRUE
alias6 N/A TRUE
prefixlen N/A TRUE
alias4 N/A TRUE
```

## 4. Determine the routing information:

```
#netstat -rn
Routing tables
Destination Gateway Flags Refs Use If PTMU Exp Groups
Route tree for Protocol Family 2 (internet) :
default 216.131.202.10 UG 1 397 en0 - -
127/8 127.0.0.1 U 4 265 lo0 - -
216.131.202/24 216.131.202.172 U 3 35419 en0 - -
```

Check that the router's IP number is the correct one and that the U and G flags are set.

## 5. Use the arp command to check on address resolution:

```
# arp -an
? (216.131.202.191) at 8:0:20:92:a1:c6 (ethernet)
? (216.131.202.171) at 0:10:83:27:ba:7f (ethernet)
```

6. Check transmit and receive stats:

```
# enstat -d ent0 | more
```

ETHERNET STATISTICS (ent0) :

Device Type: 3Com 3C905-TX-IBM Fats Etherlink XL

NIC Hardware address: 02:60:8c:f2:1d:f6

Elapsed Time: 0 days 2 hours 5 minutes 48 seconds

Transmit Statistics: Recieve Statistics:

```
-----  
Packets: 38269 Packets: 25841
```

```
Bytes: 45846710 Bytes: 5512839
```

```
Interrupts: 38269 Interrupts: 25651
```

```
Transmit Errors: 0 Receive Errors: 0
```

```
Packets Dropped: 0 Packets Dropped: 0
```

If there are no packets sent or received, there is probably a cable problem.

7. Look at the duplex and speed setting on the card:

```
# smit chgenet [choose en0]
```

Ethernet Adapter ent0

Media Type 100BaseTX

TX to RX Queue Partition Ratio 3:5

Driver TX Waiting Queue Size 32

Driver RX waiting Queue Size 32

Full Duplex? yes

Use alternate address? no

Alternate Ethernet Address 0x

TX Start Threshold - Fragmented 512

Apply change to DATABASE only no

If the card is not set as above, it is recommended that it should. To change the above settings:

a. Telnet to server's console

b. Detach the card:

```
# ifconfig en0 detach
```

c. Reconfigure it:

```
# smit chgenet
```

d. Bring it up:

```
# chdev -l en0 -a state=up
```

e. Reset tcpip:

```
# smit tcpip
```

8. Try to listen to the port:

```
# tcpdump -i en0 -l
```

```
18:34:20.333473494 ple-dns-01.peoplesoft.com.domain >st-ibm07.peoplesoft.com
```

If you don't see any output, then probably the cable that connects to the catalyst or the catalyst port itself could be defective.

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