Trouble Shooting AIX Networking

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 Harware 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 -I
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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