

Hardware Troubleshoot Guide for VCS/Expressway



Document ID: 118564

Contributed by Ishan Sambhi, Cisco TAC Engineer.

Nov 04, 2014

Contents

Introduction

Hardware Failures

- Ethernet Port Failures

- Fan Failures

- Disk Failures

Introduction

This document describes how to troubleshoot Ethernet port, fan, and disk failures on the Video Communication Server (VCS).

Hardware Failures

Ethernet Port Failures

There are four Ethernet ports on the VCS hardware. Log in as root and enter the *ifconfig -a* command. All four ports should be displayed.

```
~ # ifconfig -a
eth0      Link encap:Ethernet  HWaddr 00:10:F3:18:2F:AE
          inet addr:10.104.214.202  Bcast:10.104.214.255  Mask:255.255.255.192
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:7726332  errors:0  dropped:0  overruns:0  frame:0
          TX packets:7436734  errors:0  dropped:0  overruns:0  carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1329156143 (1267.5 Mb)  TX bytes:3590189626 (3423.8 Mb)
          Interrupt:18  Memory:fdae0000-fdb00000

eth1      Link encap:Ethernet  HWaddr 00:10:F3:18:2F:AF
          inet addr:192.168.0.100  Bcast:192.168.0.255  Mask:255.255.255.0
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0  errors:0  dropped:0  overruns:0  frame:0
          TX packets:0  errors:0  dropped:0  overruns:0  carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 b)  TX bytes:0 (0.0 b)
          Interrupt:19  Memory:fd8e0000-fd900000

eth2      Link encap:Ethernet  HWaddr 00:10:F3:18:2F:B0
          BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0  errors:0  dropped:0  overruns:0  frame:0
          TX packets:0  errors:0  dropped:0  overruns:0  carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 b)  TX bytes:0 (0.0 b)
          Interrupt:16  Memory:fd6e0000-fd700000

eth3      Link encap:Ethernet  HWaddr 00:10:F3:18:2F:B1
```

```

BROADCAST MULTICAST MTU:1500 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)
Interrupt:17 Memory:fd4e0000-fd500000

ip6tnl0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
NOARP MTU:1452 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)

lo Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0
inet6 addr: ::1/128 Scope:Host
UP LOOPBACK RUNNING MTU:16436 Metric:1
RX packets:30151925 errors:0 dropped:0 overruns:0 frame:0
TX packets:30151925 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:30219125820 (28819.2 Mb) TX bytes:30219125820 (28819.2 Mb)

sit0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
NOARP MTU:1480 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)

~ #

```

If all four ports are not displayed, then there is a problem with the VCS and it needs to be replaced as a Network Interface Controller (NIC) has failed.

A VCS Virtual Machine (VM) has three NIC ports instead of four. Hence, when you troubleshoot NIC failures on a VCS VM, the *ifconfig -a* command should display three Ethernet ports. Log in as root and enter the *ifconfig -a* command.

```

~ # ifconfig -a
eth0 Link encap:Ethernet HWaddr 00:10:F3:18:2F:AE
inet addr:10.104.214.202 Bcast:10.104.214.255 Mask:255.255.255.192
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:7726332 errors:0 dropped:0 overruns:0 frame:0
TX packets:7436734 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:1329156143 (1267.5 Mb) TX bytes:3590189626 (3423.8 Mb)
Interrupt:18 Memory:fdae0000-fdb00000

eth1 Link encap:Ethernet HWaddr 00:10:F3:18:2F:AF
inet addr:192.168.0.100 Bcast:192.168.0.255 Mask:255.255.255.0
UP BROADCAST MULTICAST MTU:1500 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)
Interrupt:19 Memory:fd8e0000-fd900000

eth2 Link encap:Ethernet HWaddr 00:10:F3:18:2F:B0
BROADCAST MULTICAST MTU:1500 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)
Interrupt:16 Memory:fd6e0000-fd700000

```

```

ip6tnl0  Link encap:UNSPEC  HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
NOARP  MTU:1452  Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:0 (0.0 b)  TX bytes:0 (0.0 b)

lo      Link encap:Local Loopback
inet addr:127.0.0.1  Mask:255.0.0.0
inet6 addr: ::1/128 Scope:Host
UP LOOPBACK RUNNING  MTU:16384  Metric:1
RX packets:30151925 errors:0 dropped:0 overruns:0 frame:0
TX packets:30151925 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:30219125820 (28819.2 Mb)  TX bytes:30219125820 (28819.2 Mb)

sit0    Link encap:UNSPEC  HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
NOARP  MTU:1480  Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:0 (0.0 b)  TX bytes:0 (0.0 b)

```

~ #

Fan Failures

VCS Release 7 reports fan failures if two or more fans have failed. However, the VCS might still work fine. An RMA can be processed if the temperature on the VCS is too high.

The VCS has five fans, but only reports the status of three fans at time. One fan failure could actually be three failed fans as well.

Log in as root and enter the *sensors* command in order to check the temperature on the VCS.

```

~ # sensors
acpitz-virtual-0
Adapter: Virtual device

it8712.7-isa-0290
Adapter: ISA adapter
VCore:      +1.17 V (min = +0.83 V, max = +1.39 V)
DDR 1.8V:   +1.78 V (min = +1.62 V, max = +1.98 V)
VCC 3.3V:   +3.31 V (min = +3.14 V, max = +3.47 V)
VCC 5V:     +5.00 V (min = +4.76 V, max = +5.24 V)
+12V:      +12.22 V (min = +9.60 V, max = +14.40 V)
VCC 1.5V:   +1.49 V (min = +1.42 V, max = +1.57 V)
VBat:      +3.28 V (min = +2.99 V)
Fan 1:      0 RPM (min = 3516 RPM, div = 8)  ALARM
Fan 2:     10546 RPM (min = 3516 RPM, div = 8)
Fan 3:     10546 RPM (min = 3516 RPM, div = 8)
Sys Temp1:  +29.0 C (high = +58.0 C)          sensor = thermistor
Sys Temp2:  +31.0 C (high = +58.0 C)          sensor = thermistor
CPU Temp:   +28.0 C (high = +58.0 C)          sensor = thermal diode

coretemp-isa-0000
Adapter: ISA adapter
Core 0:     +43.0 C (high = +74.0 C, crit = +100.0 C)

coretemp-isa-0001
Adapter: ISA adapter
Core 1:     +42.0 C (high = +74.0 C, crit = +100.0 C)

```

~ #

As long the temperature looks good, you do not need to RMA the VCS.

Disk Failures

There are two types of disks on the VCS:

- SDA – This is the primary disk on the VCS. Failure of this disk causes the VCS to not boot at all. If this fails, the VCS will not load the image at all.
- SDB – This is the secondary disk. Failure of this disk might cause problems on the VCS.

Log in as root and enter the *smartctl* command in order to determine if the test passed (SDB is fine). A result other than PASSED is bad.

```
?~ # smartctl --all /dev/sdb
?smartctl 7.40 2013-12-03 r3189 [x86_64-pc-linux-gnu] (local build)
?Copyright (C) 2002-10 by Bruce Allen, http://smartmontools.sourceforge.net
?
?=== START OF INFORMATION SECTION ===
?Model Family:      Seagate Barracuda 7200.12 family
?Device Model:      ST3250318AS
?Serial Number:     5A347D45
?Firmware Version:  CC38
?User Capacity:     250,059,350,016 bytes
?Device is:         In smartctl database [for details use: -P show]
?ATA Version is:    8
?ATA Standard is:   ATA-8-ACS revision 4
?Local Time is:     Fri Dec 04 01:38:51 2013 GMT
?SMART support is: Available - device has SMART capability.
?SMART support is: Enabled
?
?=== START OF READ SMART DATA SECTION ===
?SMART overall-health self-assessment test result: PASSED
```

You can enter the *ls -l /dev/sd** command in order to display the SDB also.

```
?ls -l /dev/sd*
?brw-rw---- 1 root root 8, 0 2013-12-04 01:25 /dev/sda
?brw-rw---- 1 root root 8, 1 2013-12-04 01:25 /dev/sda1
?brw-rw---- 1 root root 8, 2 2013-12-04 01:25 /dev/sda2
?brw-rw---- 1 root root 8, 3 2013-12-04 01:25 /dev/sda3
?brw-rw---- 1 root root 8, 5 2013-12-04 01:25 /dev/sda5
?brw-rw---- 1 root root 8, 6 2013-12-04 01:25 /dev/sda6
?brw-rw---- 1 root root 8, 7 2013-12-04 01:25 /dev/sda7
?brw-rw---- 1 root root 8, 8 2013-12-04 01:25 /dev/sda8
?brw-rw---- 1 root root 8, 16 2013-12-04 01:25 /dev/sdb
?brw-rw---- 1 root root 8, 17 2013-12-04 01:25 /dev/sdb1
?brw-rw---- 1 root root 8, 18 2013-12-04 01:25 /dev/sdb2
```

The SDB needs to be mounted. Enter the *df | grep sdb* command in order to display whether the SDB is mounted or not.

```
?~ # df | grep sdb
?/dev/sdb2          320471385    3781378 324252763    1% /mnt/harddisk
?~ #
```