Troubleshooting ASR 5000 y fallas de hardware de las 5500 Series ASR

Contenido

Introducción

Este documento describe el procedimiento para resolver problemas los problemas en el linecards de las 5000 Series y de las 5500 Series del router de los servicios de la agregación de Cisco (ASR). Este procedimiento resalta algunos de los comandos y las palabras claves, obtenidas del archivo SSD (detalle del soporte de la demostración) generaron en el chasis ASR 5000 o ASR 5500. La salida de cada comando proporciona los síntomas de una placa defectuosa y de las ayudas para establecer claramente el problema. El objetivo aquí no es abordar los problemas específicos en un linecard determinado, pues hay diversos problemas de hardware numerosos. Por otra parte, las situaciones individuales pudieron variar lo suficiente que hace cualquier guía de Troubleshooting generalizado problemático.

Procedimiento

1. Ingrese el comando **excepcional de la alarma de la demostración**.La salida de este comando visualiza la placa defectuosa. Esta información se puede encontrar en el SSD.`******** show alarm outstanding *******`
```
Sev Object Event
--- ------- ------------------------------------------------------------------------------
------
CR Card 7 Card Failure Detected on card 7 Device CPU_0 failure reason
CARD_BOOT_TIMEOUT_EXPIRED
```
2. Ingrese el **comando verbose del historial del desvío SNMP de la demostración**.Generan al dependiente sobre el problema, los desvíos en la falla de hardware que ocurrió. Esta información es parte del SSD.`******** show snmp trap history verbose *******`
```
Timestamp Trap Information
----------------------- ----------------------------------------------------
Tue Jan 28 08:24:18 2014 Internal trap notification 9 (CardBootFailed) card 7 type Packet
Services Card
```
3. Ingrese el **comando error llano de los registros de la demostración**.Generan al dependiente sobre el problema, los registros en la falla de hardware que ocurrió. Esta información se puede encontrar en el SSD.`******** show logs level error *******`
```
2014-Jan-28+08:39:35.669 [hat 3018 critical] [8/0/4429 <hatsystem:0> atsystem_fail.c:1192]
[hardware internal system syslog] Card Failure Detected on card 7 Device CPU_0
failure reason CARD_BOOT_TIMEOUT_EXPIRED
```
4. Ingrese el comando del **hardware de la placa de la demostración**.La salida del comando tiene información de la versión en el indicador luminoso LED amarillo de la placa muestra

gravedad menor. Esta información se incluye en el SSD.******** show card hardware *******

```
Card 7:
Card Type : Packet Services Card (R01)
Description : PSC
Starent Part Number : 530-02-0030 09
Starent Serial Num : PLB43074818
Switch Fabric Modes : control plane, switch fabric
(Version Information Unavailable) <--- Missing information due to card not accessible
```

5. Ingrese el **comando diag del indicador luminoso LED amarillo de la placa muestra gravedad menor de la demostración**.La salida del comando incluye el error de la corriente y del último del indicador luminoso LED amarillo de la placa muestra gravedad menor así como si el indicador luminoso LED amarillo de la placa muestra gravedad menor es usable. Esta información se incluye en el SSD.******** show card diag *******

```
Card 7:
Counters:
Successful Warm Boots : 2
(last at Friday March 02 15:02:37 EST 2012)
Successful Cold Boots : 21
(last at Monday December 16 14:09:24 EST 2013)
Total Boot Attempts : 0
In Service Date : Fri Jan 20 15:26:25 2012 (Estimated)
Status:
IDEEPROM Magic Number : Good
Boot Mode : Normal
Card Diagnostics : Pass
Current Failure : Failure: Device=CPU_0, Reason=CARD_BOOT_TIMEOUT_EXPIRED,
(0x03001000)
(last at Tuesday January 28 08:39:35 EST 2014)
Last Failure : Failure: Device=CPU_0, Reason=CARD_BOOT_TIMEOUT_EXPIRED,
(0x03001000)
(last at Tuesday January 28 08:39:35 EST 2014)
Card Usable : No (Current Failure)
Current Environment:
Temperature: Card : 23 C (limit 101 C)
Temperature: CPU0 : 23 C (limit 101 C)
Temperature: CPU1 : 25 C (limit 101 C)
Temperature: LM93 : 25 C (limit 101 C)
Voltage: 3.3V STANDBY : 3.285 V (min 3.130 V, max 3.458 V)
```

6. Ingrese el comando de los **recursos de la tarea de la demostración**.La salida del comando no visualiza ninguna información sobre la placa defectuosa. Esta información se puede encontrar en el SSD.******** show task resources *******

```
task cputime memory files sessions
cpu facility inst used allc used alloc used allc used allc S status
---------------------- --------- ------------ --------- ------------ ------
6/1 rmmgr 61 3.6% 10% 4.5M 23.0M 15 500 -- -- - good
6/1 npumgr 6 1.5% 100% 81.4M 278.0M 26 1000 -- -- - good
6/1 sitreap 6100841 0.0% 5.0% 0.1M 15.0M 4 100 -- -- - good
6/1 msgd 6100839 0.8% 7.0% 0.8M 15.0M 6 500 -- -- - good
6/1 nscontrol 6123706 0.2% 5.0% 1.4M 15.0M 9 500 -- -- - good
<<<<<<<<<7/1 missing due to card 7 not running >>>>>>>>>
8/0 sitmain 80 0.0% 15% 10.9M 16.0M 14 1000 -- -- - good
8/0 sitparent 80 0.1% 20% 10.5M 14.0M 11 500 -- -- - good
8/0 evlogd 0 0.1% 95% 12.4M 70.0M 16 4000 -- -- - good
8/0 drvctrl 0 2.7% 15% 14.7M 20.0M 19 500 -- -- - good
8/0 hatsystem 0 0.4% 10% 10.2M 15.0M 13 500 -- -- - good
8/0 hatcpu 80 0.1% 10% 10.1M 15.0M 12 500 -- -- - good
```

7. Ingrese el comando de la **tabla CPU de la demostración**.La salida del comando no visualiza ninguna información sobre la placa defectuosa. Esta información es parte del SSD.********

```
show cpu table *******
--------Load-------- ------CPU-Usage----- ---------Memory--------
```

```
cpu state now 5min 15min now 5min 15min now 5min 15min total
---- ----- ------ ------ ------ ------ ------ ------ ----- ----- ----- -----
1/0 Actve 0.02 0.02 0.05 0.6% 0.5% 0.5% 842M 842M 842M 16.0G
1/1 Actve 2.39 2.48 2.59 11.7% 7.9% 7.9% 138M 137M 137M 512M
2/0 Actve 0.02 0.07 0.11 0.5% 0.5% 0.5% 887M 885M 885M 16.0G
2/1 Actve 2.83 2.78 2.66 10.4% 7.9% 8.0% 138M 137M 137M 512M
3/0 Actve 0.02 0.06 0.11 0.4% 0.4% 0.4% 824M 823M 823M 16.0G
3/1 Actve 3.71 2.96 2.80 13.4% 8.0% 7.8% 139M 137M 137M 512M
4/0 Actve 0.03 0.10 0.13 0.5% 0.5% 0.5% 845M 845M 845M 16.0G
4/1 Actve 2.34 2.55 2.61 11.8% 7.7% 7.7% 138M 137M 137M 512M
5/0 Actve 0.14 0.11 0.13 0.6% 0.5% 0.5% 887M 886M 885M 16.0G
5/1 Actve 2.49 2.84 2.75 12.7% 8.4% 7.9% 138M 137M 137M 512M
6/0 Actve 0.18 0.16 0.14 0.5% 0.4% 0.4% 824M 823M 822M 16.0G
6/1 Actve 2.85 2.78 2.74 12.5% 8.0% 8.0% 138M 137M 137M 512M
<<<<<<<< 7/1 missing due to card 7 not running >>>>>>>>>>
8/0 Actve 0.20 0.09 0.12 18.9% 6.4% 5.2% 1045M 1011M 1009M 4096M
9/0 Sndby 0.02 0.03 0.08 2.0% 0.7% 0.7% 605M 604M 604M 4096M
```

8. Ingrese el **comando all de la tabla de indicador luminoso LED amarillo de la placa muestra gravedad menor de la demostración**.La salida del comando indica que el indicador luminoso LED amarillo de la placa muestra gravedad menor es offline. Esta información es parte del SSD.

```
******** show card table all *******
Slot Card Type Oper State SPOF Attach
----------- ------------------------------ ------------ ---- ------
1: PSC Packet Services Card Active Yes 17 -
2: PSC Packet Services Card A Active Yes 18 -
3: PSC Packet Services Card A Active Yes 19 -
4: PSC Packet Services Card A Active Yes 20 -
5: PSC Packet Services Card A Active Yes 21 -
6: PSC Packet Services Card A Active Yes 22 -
7: PSC Packet Services Card Offline - - -
8: SMC System Management Card Active No 24 25
9: SMC System Management Card Standby Yes - -
10: PSC None - - - -
11: PSC None - - - -
12: PSC None - - - -
13: PSC None - - - -
14: PSC None - - - -
15: PSC None - - - -
16: PSC None - - - -
17: LC 10 Gig Ethernet Line Card Active Yes 1
18: LC 10 Gig Ethernet Line Card Active Yes 2
19: LC 10 Gig Ethernet Line Card Active Yes 3
20: LC 10 Gig Ethernet Line Card Active Yes 4
21: LC 1000 Ethernet Line Card Standby - 5
22: LC 1000 Ethernet Line Card Standby - 6
23: LC None - - -
24: SPIO Switch Processor I/O Card Active No 8
25: SPIO Switch Processor I/O Card Standby - 8
26: LC None - - -
27: LC None - - -
28: LC None - - -
29: LC None - - -
30: LC None - - -
31: LC None - - -
32: LC None - - -
33: LC None - - -
34: LC None - - -
35: LC None - - -
36: LC None - - -
37: LC None - - -
38: LC None - - -
39: LC None - - -
```

```
40: RCC Redundancy Crossbar Card Standby -
41: RCC Redundancy Crossbar Card Standby -
42: LC None - - -
43: LC None - - -
44: LC None - - -
45: LC None - - -
46: LC None - - -
47: LC None - - -
48: LC None
```

9. Ingrese el comando de la **versión de hardware de la demostración**.La salida del comando no visualiza “ningún dato disponible” pues el indicador luminoso LED amarillo de la placa muestra gravedad menor es offline. Esta información es parte del SSD.`******** show hardware version *******`

```
Slot Type SSCB PSR PSR2 BIOS A BIOS B DT DT2
---- ---- ------- --- ---- -------- -------- ------- --------
1: PSC 1.6 2 - 9.2.13 7.8.14 3.16 --
2: PSCA 1.6 - 0 1.1.10 1.0.14 -- 3.20
3: PSCA 1.6 - 0 1.1.10 1.0.14 -- 3.20
4: PSCA 1.6 - 0 1.1.10 1.0.20 -- 3.20
5: PSCA 1.6 - 0 1.1.10 1.0.14 -- 3.20
6: PSCA 1.6 - 0 1.1.10 1.0.14 -- 3.20
7: PSC (no data available)
10: None -- - - -- -- -- --
11: None -- - - -- -- -- --
12: None -- - - -- -- -- --
13: None -- - - -- -- -- --
14: None -- - - -- -- -- --
15: None -- - - -- -- -- --
16: None -- - - -- -- -- --
```

10. Ingrese el comando de los **eventos del npuctrl de la demostración**.La salida del comando visualiza el estatus de las placas defectuosas como off-liné, iniciando (si en el loop), y así sucesivamente. Esta información es parte del SSD.`******** show npuctrl events *******`

```
[41]@01-28-2014 08:26:15.892 e/i=0/0 evt=exporter-done transition=await-exporter->normal
spc=no
inst| npumgr-sta| card-state| card-inser inst|npumgr-sta| card-state| card-inser
1| normal| standby| yes 2| normal| standby| yes
3| normal| standby| yes 4| normal| standby| yes
5| export-db| standby| yes 6| import-db| initializi| yes
7| absent| booting| no 8| normal| active| no
9| normal| standby| yes 10| absent| empty| no
11| absent| empty| no 12| absent| empty| no
13| absent| empty| no 14| absent| empty| no
15| absent| empty| no 16| absent| empty| no

[42]@01-28-2014 08:54:08.041 e/i=6/1 evt=start-recovery transition=normal->await-importer-
ack spc=no
inst| npumgr-sta| card-state| card-inser inst|npumgr-sta| card-state| card-inser
1| power-up| initializi| no 2| normal| active| yes
3| normal| active| yes 4| normal| active| yes
5| normal| active| yes 6| normal| active| yes
7| absent| offline| no 8| normal| active| no
9| normal| standby| yes 10| absent| empty| no
11| absent| empty| no 12| absent| empty| no
13| absent| empty| no 14| absent| empty| no
15| absent| empty| no 16| absent| empty| no
```

11. Ingrese el comando de la **temperatura de la demostración**.La salida del comando visualiza la temperatura solamente de algunos componentes de la placa defectuosa. Esta información es parte del SSD.`******** show temperature *******`

```
Note:
Cards 6 and 7 are identical PSC cards but more components of good card are
shown than that of failed card.
```

```
Card 6: 29/101 C (LM94 )
58/115 C (NPU )
43/101 C (NPU PCB )
44/101 C (DT )
30/101 C (Midplane)
41/101 C (CPU-N1 )
43/110 C (IOH )
30/100 C (DDR-N1C0)
31/100 C (DDR-N1C1)
Card 7: 23/101 C (CPU0 )
25/101 C (CPU1 )
25/101 C (LM93 )
```

12. Ingrese el **comando list de la caída de la demostración**.La salida del comando visualiza una caída que ocurrió en la placa defectuosa. Busque la palabra clave “Error de hardware” en los detalles de la caída. Esta información es parte del SSD.`******** show crash list *******`

```
== ==== ======= ========== ========== ================
# Time Process Card/CPU/ SW HW_SER_NUM
PID VERSION SMC / Crash Card
== ==== ======= ========== ========== ================

1 2014-Feb-20+03:26:14 kernel 02/0/NA 14.0(NA) SAD1726000V/SAD17010035
2 2014-Feb-20+09:24:38 kernel 02/0/NA 14.0(NA) SAD1726000V/SAD17010035


********** CRASH #01 **********
2.6.38-staros-v3-hw-64 #1 SMP PREEMPT Fri May 24 16:25:55 EDT 2013 1 0
SAD17010035 50083
.0 MMIO=90800000 MSI-X=32..63
<4>[ 4.542816] > Module image device Init
<4>[ 4.546668] --> Found components:
<6>[ 4.821670] Refined TSC clocksource calibration: 2000.071 MHz.
<6>[ 4.827687] Switching to clocksource tsc
<4>[ 4.833859] 0,28,29,30,31,37,38,39,40,63,67,69
<6>[ 4.838984] Starfile Build Number: 50083
------- truncated --------
<7>[ 38.972206] dt_fpga 0000:01:00.0: restoring config space at offset 0x3
(was 0x0, writing 0x8)
<7>[ 38.972214] dt_fpga 0000:01:00.0: restoring config space at offset 0x1
(was 0x100000, writing 0x100547)
<6>[ 38.972269] DT reset complete after 0 retries
<6>[ 42.565842] DT is now online
<4>[ 157.055594] svc: failed to register lockdv1 RPC service (errno 97).
<6>[2128512.375560] [Hardware Error]: Machine check events logged
<6>[2193364.461636] [Hardware Error]: Machine check events logged
<0>[2196785.508632] [Hardware Error]: CPU 6: Machine Check Exception: 4
Bank 8: be0000000001009f
<0>[2196785.516865] [Hardware Error]: TSC fa3eb2f263a8b ADDR 106fefd5c0
MISC 1da0600000046343
<0>[2196785.524998] [Hardware Error]: PROCESSOR 0:206c2 TIME 1392846844
SOCKET 1 APIC 20
<0>[2196785.532533] [Hardware Error]: CPU 19: Machine Check Exception: 4
Bank 8: be0000000001009f
<0>[2196785.540840] [Hardware Error]: TSC fa3eb2f2640b7 ADDR 106fefd5c0
MISC 1da0600000046343
<0>[2196785.548976] [Hardware Error]: PROCESSOR 0:206c2 TIME 1392846844
SOCKET 1 APIC 23
----- truncated -------
<0>[2196785.756359] [Hardware Error]: TSC fa3eb2f271a7d ADDR 106fefd5c0
MISC 1da0600000046343
<0>[2196785.764488] [Hardware Error]: PROCESSOR 0:206c2 TIME 1392846844
SOCKET 1 APIC 32
```

```
<0>[2196785.772020] [Hardware Error]: CPU 18: Machine Check Exception: 4
Bank 8: be0000000001009f
<0>[2196785.780335] [Hardware Error]: TSC fa3eb2f263a95 ADDR 106fefd5c0
MISC 1da0600000046343
<0>[2196785.788464] [Hardware Error]: PROCESSOR 0:206c2 TIME 1392846844
SOCKET 1 APIC 21
<0>[2196785.795991] [Hardware Error]: Machine check: Processor context
corrupt
<0>[2196785.802660] Kernel panic - not syncing: Fatal machine check on
current CPU
<4>[2196785.809681] Pid: 0, comm: kworker/0:1 Tainted: P M
2.6.38-staros-v3-hw-64 #1
<4>[2196785.817648] Call Trace:
<4>[2196785.820265] <#MC> [<ffffffff8104d444>] ? panic+0xd4/0x210
<4>[2196785.826025] [<ffffffff8104e6ac>] ? printk+0x6c/0x70
<4>[2196785.831148] [<ffffffff810726c4>] ? __atomic_notifier_call_chain+0x54/0x70
<4>[2196785.838162] [<ffffffff810726f6>] ? atomic_notifier_call_chain+0x16/0x20
<4>[2196785.845008] [<ffffffff81016da8>] ? mce_panic+0x208/0x210
<4>[2196785.850564] [<ffffffff810176d4>] ? do_machine_check+0x604/0x890
<4>[2196785.856723] [<ffffffff815a8dbb>] ? machine_check+0x1b/0x20
<4>[2196785.862449] [<ffffffff8129fbaf>] ? intel_idle+0x9f/0x130
<4>[2196785.867993] <<EOE>> [<ffffffff81072e83>] ? pm_qos_request+0x43/0x80
<4>[2196785.874605] [<ffffffff8145e64f>] ? cpuidle_idle_call+0xbf/0x2f0
<4>[2196785.880763] [<ffffffff81001506>] ? cpu_idle+0x56/0xa0
<4>[2196785.886059] [<ffffffff818edcd4>] ? start_secondary+0x1b4/0x230
<4>[2196785.892442] Logging crash to boot flash...
```

13. Ingrese el **comando card de la consola del debug**.Este SSD de la parte de visualiza los detalles del Error de hardware en la placa defectuosa. Esta información se puede encontrar en el SSD.`******** debug console card 2 cpu 0 tail 4000 only *******`

```
1392847108.339 card 2-cpu0: <4>[ 162.266071] svc: failed to register lockdv1 RPC
service (errno 97).
1392847187.138 card 2-cpu0: <4>[ 241.063929] mce_notify_irq: 1 callbacks suppressed
1392847187.138 card 2-cpu0: <6>[ 241.068719] [Hardware Error]: Machine check events
logged
1392852796.521 card 2-cpu0: <6>[ 5850.625815] [Hardware Error]: Machine check events
logged
1392860403.004 card 2-cpu0: <6>[13457.344535] [Hardware Error]: Machine check events
logged
1392867612.569 card 2-cpu0: <0>[20667.120164] [Hardware Error]: CPU 9: Machine Check
Exception: 4 Bank 8: be0000000001009f
1392867612.569 card 2-cpu0: <0>[20667.128234] [Hardware Error]: TSC 25c13cfe4d7c ADDR
1045a9d5c0 MISC 1da0600000041281
1392867612.569 card 2-cpu0: <0>[20667.136123] [Hardware Error]: PROCESSOR 0:206c2
TIME 1392867612 SOCKET 1 APIC 30
1392867612.669 card 2-cpu0: <0>[20667.143504] [Hardware Error]: CPU 18: Machine Check
Exception: 4 Bank 8: be0000000001009f
---- truncated -----
1392867612.770 card 2-cpu0: <0>[20667.315270] [Hardware Error]: TSC 25c13d0097e4 ADDR
1045a9d5c0 MISC 1da0600000041281
1392867612.770 card 2-cpu0: <0>[20667.323160] [Hardware Error]: PROCESSOR 0:206c2
TIME 1392867612 SOCKET 1 APIC 24
1392867612.770 card 2-cpu0: <0>[20667.330533] [Hardware Error]: CPU 11: Machine
Check Exception: 4 Bank 8: be0000000001009f
1392867612.870 card 2-cpu0: <0>[20667.338688] [Hardware Error]: TSC 25c13d0099f6 ADDR
1045a9d5c0 MISC 1da0600000041281
1392867612.870 card 2-cpu0: <0>[20667.346574] [Hardware Error]: PROCESSOR 0:206c2 TIME
1392867612 SOCKET 1 APIC 34
1392867612.870 card 2-cpu0: <0>[20667.353947] [Hardware Error]: CPU 23: Machine Check
Exception: 4 Bank 8: be0000000001009f
1392867612.870 card 2-cpu0: <0>[20667.362100] [Hardware Error]: TSC 25c13d0099ec ADDR
1045a9d5c0 MISC 1da0600000041281
1392867612.870 card 2-cpu0: <0>[20667.369992] [Hardware Error]: PROCESSOR 0:206c2 TIME
```

```
1392867612 SOCKET 1 APIC 35
1392867612.870 card 2-cpu0: <0>[20667.377359] [Hardware Error]: CPU 21: Machine Check
Exception: 4 Bank 8: be0000000001009f
1392867612.870 card 2-cpu0: <0>[20667.385506] [Hardware Error]: TSC 25c13cfe4d68 ADDR
1045a9d5c0 MISC 1da0600000041281
1392867612.870 card 2-cpu0: <0>[20667.393395] [Hardware Error]: PROCESSOR 0:206c2 TIME
1392867612 SOCKET 1 APIC 31
1392867612.870 card 2-cpu0: <0>[20667.400765] [Hardware Error]: Machine check:
Processor context corrupt
1392867612.870 card 2-cpu0: <0>[20667.407275] Kernel panic - not syncing: Fatal
machine check on current CPU
1392867612.870 card 2-cpu0: <4>[20667.414136] Pid: 0, comm: kworker/0:1 Tainted:
P M 2.6.38-staros-v3-hw-64 #1
1392867612.870 card 2-cpu0: <4>[20667.421945] Call Trace:
1392867612.870 card 2-cpu0: <4>[20667.424399] <#MC> [<ffffffff8104d444>]
? panic+0xd4/0x210
1392867612.870 card 2-cpu0: <4>[20667.430005] [<ffffffff8104e6ac>]
? printk+0x6c/0x70
1392867612.870 card 2-cpu0: <4>[20667.434966] [<ffffffff810726c4>]
? __atomic_notifier_call_chain+0x54/0x70
*1392867660.394 card 2-cpu0:
1392867660.394 card 2-cpu0:
1392867660.394 card 2-cpu0: CFE version 2.2.9 (34401) for BOXER_FROM_FLASH
(32bit,SP,LE,X86)
1392867660.394 card 2-cpu0: Build Date: Wed Jun 30 10:38:21 EDT 2010
(builds@releng7)
1392867660.394 card 2-cpu0: Copyright (C) 2001-2010 Starent Networks Corporation.
1392867660.394 card 2-cpu0:
1392867660.394 card 2-cpu0: Initializing Arena.
1392867660.394 card 2-cpu0: Initializing PCI. [normal]
1392867660.394 card 2-cpu0: Initializing Devices.
1392867660.394 card 2-cpu0: Ophir 82571 Ethernet controller 0x10608086
(Serdes) on 2/0/0
1392867660.394 card 2-cpu0: WARNING: Memory size 49152 MB for cpu0 not
matching with
value 65536 MB in IDEEPROM
1392867660.394 card 2-cpu0:
1392867660.394 card 2-cpu0: CPU type 0x0: 2000MHz
1392867660.394 card 2-cpu0: Total memory: 0xC00000000 bytes (49152MB)
1392867660.394 card 2-cpu0: Total memory used by CFE:
1392867660.394 card 2-cpu0: realmode: 0x00080000 -
0x00087140 (28992 bytes)
1392867660.394 card 2-cpu0: protectedmode: 0x0C800000 -
0x0CC86A6C (4745836 bytes)
1392867660.394 card 2-cpu0: Done board_final_init...
1392867660.394 card 2-cpu0: Booting CFE ROM...
1392867660.394 card 2-cpu0: PID: ASR5K-PSC-64G-K9 , VID: V02, SN: SAD17010035
1392867660.394 card 2-cpu0:
1392867660.394 card 2-cpu0: ERROR: Memory size 49152 MB for cpu0 not matching
with value 65536 MB in IDEEPROM
1392867660.394 card 2-cpu0:
1392867660.394 card 2-cpu0: ERROR: Bus 254 CPU 1 Chan 1 DIMM 0 NotPresent
1392867660.394 card 2-cpu0: Calling managementplane_init()
1392867660.394 card 2-cpu0: Calling managementplane_init() complete
1392867660.394 card 2-cpu0: Calling InitDPManagementPlaneEthernet()
1392867660.399 card 2-cpu0: Calling InitDPManagementPlaneEthernet() complete
1392867660.404 card 2-cpu0: CRITICAL: BIOS Failed to properly Size System
Memory aborting boot
1392867660.405 card 2-cpu0:
1392867660.410 card 2-cpu0: 2/0:cli> Boot Failure Detected. Press Ctrl-C for cli
```

14. Ingrese el **comando all de la demostración LED**.El funcionamiento/los LED indicadores de error debe ser todo verdes y el LED espera debe ser todo verde también.`[local]st40-1# show leds all`

```
Slot 02: Run/Fail: Green | Active: Green | Standby: Off
Slot 04: Run/Fail: Green | Active: Green | Standby: Off
Slot 06: Run/Fail: Green | Active: Green | Standby: Off
Slot 08: Run/Fail: Green | Active: Green | Standby: Off
Status: Green | Service: Amber |
Slot 09: Run/Fail: Green | Active: Off | Standby: Green
Status: Green | Service: Amber |
Slot 11: Run/Fail: Green | Active: Off | Standby: Green
Slot 13: Run/Fail: Green | Active: Green | Standby: Off
Slot 15: Run/Fail: Green | Active: Off | Standby: Green
Slot 18: Run/Fail: Red | Active: Off | Standby: Off <<hardware failure
Slot 22: Run/Fail: Green | Active: Green | Standby: Off
Slot 24: Run/Fail: Green | Active: Green | Standby: Off
Slot 25: Run/Fail: Green | Active: Off | Standby: Green
Slot 27: Run/Fail: Green | Active: Off | Standby: Off
Slot 34: Run/Fail: Green | Active: Off | Standby: Green
Slot 38: Run/Fail: Green | Active: Off | Standby: Green
Slot 40: Run/Fail: Green | Active: Off | Standby: Green
Slot 41: Run/Fail: Green | Active: Off | Standby: Green
```

15. Ingrese el **comando all de la tabla de puertos de la demostración**.La salida del comando visualiza el estatus del linecards y de sus puertos activos. Esta información es parte del SSD.**Chasis ASR 5000**

```
******** show port table all *******
Port  Type                      Admin     Oper Link State              Redundant
----- ------------------------  --------  ---- ---- ----------------  ---------
22/1  10/100 Ethernet           Enabled   -    Up   -                    38/1
     Untagged                  Enabled   Down -    Active      -
     Tagged VLAN    11         Enabled   Up   -    Active      -
     Tagged VLAN    12         Enabled   Up   -    Active      -
     Tagged VLAN    13         Enabled   Up   -    Active      -
     Tagged VLAN    15         Enabled   Up   -    Active      -
     Tagged VLAN    16         Enabled   Up   -    Active      -
     Tagged VLAN    14         Enabled   Up   -    Active      -
     Tagged VLAN    17         Enabled   Up   -    Active      -
22/2  10/100 Ethernet           Disabled  Down Up   Standby             38/2
22/3  10/100 Ethernet           Disabled  Down Down Standby             38/3
22/4  10/100 Ethernet           Disabled  Down Down Standby             38/4
22/5  10/100 Ethernet           Disabled  Down Down Standby             38/5
22/6  10/100 Ethernet           Disabled  Down Down Standby             38/6
22/7  10/100 Ethernet           Disabled  Down Down Standby             38/7
22/8  10/100 Ethernet           Enabled   Down Down Active              38/8
24/1  1000 Ethernet Dual Media  Enabled   Up   Up   Active              25/1
24/2  1000 Ethernet Dual Media  Disabled  Down Down Active              25/2
24/3  RS232 Serial Console      Enabled   Up   Up   Active              25/3
24/4  BITS T1/E1 Timing         Disabled  Down Down Active              25/4
25/1  1000 Ethernet Dual Media  Enabled   Down Up   Standby             24/1
25/2  1000 Ethernet Dual Media  Disabled  Down Down Standby             24/2
25/3  RS232 Serial Console      Enabled   Down Up   Standby             24/3
25/4  BITS T1/E1 Timing         Disabled  Down Down Standby             24/4
34/1  1000 Ethernet             Enabled   Down Down Active              None
34/2  1000 Ethernet             Disabled  Down Down Active              None
34/3  1000 Ethernet             Disabled  Down Down Active              None
34/4  1000 Ethernet             Disabled  Down Down Active              None
38/1  10/100 Ethernet           Enabled   -    Down -                   22/1
     Untagged                  Enabled   Down -    Standby     -
     Tagged VLAN    11         Enabled   Down -    Standby     -
     Tagged VLAN    12         Enabled   Down -    Standby     -
     Tagged VLAN    13         Enabled   Down -    Standby     -
     Tagged VLAN    15         Enabled   Down -    Standby     -
     Tagged VLAN    16         Enabled   Down -    Standby     -
     Tagged VLAN    14         Enabled   Down -    Standby     -
     Tagged VLAN    17         Enabled   Down -    Standby     -
38/2  10/100 Ethernet           Disabled  Down Down Active              22/2
38/3  10/100 Ethernet           Disabled  Down Down Active              22/3
```

```
38/4  10/100 Ethernet           Disabled  Down Down Active              22/4
38/5  10/100 Ethernet           Disabled  Down Down Active              22/5
38/6  10/100 Ethernet           Disabled  Down Down Active              22/6
38/7  10/100 Ethernet           Disabled  Down Down Active              22/7
38/8  10/100 Ethernet           Enabled   Down Down Standby             22/8
```

Chasis ASR 5500

```
******** show port table all *******
Port Role Type Admin Oper Link State Pair Redundant
----- ---- ----------------------- -------- ---- ---- ------- ----- ---------
5/1 Mgmt 1000 Ethernet Enabled Up Up Active 6/1 L2 Link
5/2 Mgmt 1000 Ethernet Disabled Down Down Active 6/2 L2 Link
5/3 Mgmt RS232 Serial Console Enabled Down Unkn Standby 6/3 L2 Link
5/10 Srvc 10G Ethernet Enabled - Up - 6/10 LA+ 5/10
Untagged Enabled Up - Active - -
Tagged VLAN 101 Enabled Up - Active - -
Tagged VLAN 102 Enabled Up - Active - -
Tagged VLAN 104 Enabled Up - Active - -
Tagged VLAN 105 Enabled Up - Active - -
Tagged VLAN 103 Enabled Up - Active - -
5/11 Srvc 10G Ethernet Enabled Up Up Active 6/11 LA+ 5/10
5/12 Srvc 10G Ethernet Disabled Down Down Active 6/12 L2 Link
5/13 Srvc 10G Ethernet Disabled Down Down Active 6/13 L2 Link
5/14 Srvc 10G Ethernet Disabled Down Down Active 6/14 L2 Link
5/15 Srvc 10G Ethernet Enabled Up Up Active 6/15 LA+ 5/10
5/16 Srvc 10G Ethernet Enabled Up Up Active 6/16 LA+ 5/10
5/17 Srvc 10G Ethernet Disabled Down Down Active 6/17 L2 Link
5/18 Srvc 10G Ethernet Disabled Down Down Active 6/18 L2 Link
5/19 Srvc 10G Ethernet Disabled Down Down Active 6/19 L2 Link
5/20 Srvc 10G Ethernet Enabled Up Up Active 6/20 LA+ 5/10
5/21 Srvc 10G Ethernet Enabled Up Up Active 6/21 LA+ 5/10
5/22 Srvc 10G Ethernet Disabled Down Down Active 6/22 L2 Link
5/23 Srvc 10G Ethernet Disabled Down Down Active 6/23 L2 Link
5/24 Srvc 10G Ethernet Disabled Down Down Active 6/24 L2 Link
5/25 Srvc 10G Ethernet Enabled Up Up Active 6/25 LA+ 5/10
5/26 Srvc 10G Ethernet Enabled Up Up Active 6/26 LA+ 5/10
5/27 Srvc 10G Ethernet Disabled Down Down Active 6/27 L2 Link
5/28 Srvc 10G Ethernet Disabled Down Down Active 6/28 L2 Link
5/29 Srvc 10G Ethernet Disabled Down Down Active 6/29 L2 Link
6/1 Mgmt 1000 Ethernet Enabled Down Up Standby 5/1 L2 Link
6/2 Mgmt 1000 Ethernet Disabled Down Down Standby 5/2 L2 Link
6/3 Mgmt RS232 Serial Console Enabled Down Unkn Standby 5/3 L2 Link
6/10 Srvc 10G Ethernet Enabled - Up - 5/10 LA! 5/10
Untagged Enabled Up - Active - -
Tagged VLAN 101 Enabled Up - Active - -
Tagged VLAN 102 Enabled Up - Active - -
Tagged VLAN 104 Enabled Up - Active - -
Tagged VLAN 105 Enabled Up - Active - -
Tagged VLAN 103 Enabled Up - Active - -
6/11 Srvc 10G Ethernet Enabled Up Up Active 5/11 LA! 5/10
6/12 Srvc 10G Ethernet Disabled Down Down Standby 5/12 L2 Link
6/13 Srvc 10G Ethernet Disabled Down Down Standby 5/13 L2 Link
6/14 Srvc 10G Ethernet Disabled Down Down Standby 5/14 L2 Link
6/15 Srvc 10G Ethernet Enabled Up Up Active 5/15 LA! 5/10
6/16 Srvc 10G Ethernet Enabled Up Up Active 5/16 LA! 5/10
6/17 Srvc 10G Ethernet Disabled Down Down Standby 5/17 L2 Link
6/18 Srvc 10G Ethernet Disabled Down Down Standby 5/18 L2 Link
6/19 Srvc 10G Ethernet Disabled Down Down Standby 5/19 L2 Link
6/20 Srvc 10G Ethernet Enabled Up Up Active 5/20 LA! 5/10
6/21 Srvc 10G Ethernet Enabled Up Up Active 5/21 LA! 5/10
6/22 Srvc 10G Ethernet Disabled Down Down Standby 5/22 L2 Link
6/23 Srvc 10G Ethernet Disabled Down Down Standby 5/23 L2 Link
6/24 Srvc 10G Ethernet Disabled Down Down Standby 5/24 L2 Link
6/25 Srvc 10G Ethernet Enabled Up Up Active 5/25 LA! 5/10
6/26 Srvc 10G Ethernet Enabled Up Up Active 5/26 LA! 5/10
```

```
6/27 Srvc 10G Ethernet Disabled Down Down Standby 5/27 L2 Link
6/28 Srvc 10G Ethernet Disabled Down Down Standby 5/28 L2 Link
6/29 Srvc 10G Ethernet Disabled Down Down Standby 5/29 L2 Link
```

16. Ingrese el comando del **[<slot->/<port->] de los contadores de la transmisión de datos del puerto de la demostración**.La salida del comando visualiza las estadísticas de un puerto. La información pudo variar al dependiente sobre el tipo de puerto. Observe que las estadísticas mostradas aquí pudieron dar solamente la información parcial. Usted necesita hacer la investigación adicional antes de que usted haga una conclusión en el puerto sospechado. Esta información no es parte del SSD.`Counters for port 5/15:`

```
Line Card 10 Gigabit Ethernet Port

Rx Counter Data | Tx Counter Data

---------------------- ------------- + ---------------------- -------------

RX Bytes 929593433281710 | TX Bytes 980010533492940

RX Unicast frames 2622395473 | TX Unicast frames 1156468032

RX Multicast frames 6819022 | TX Multicast frames 6883788

RX Broadcast frames 0 | TX Broadcast frames 0

RX Size 64 frames 1072853571 | TX Size 64 frames 2180897214

RX Size 65 .. 127 fr 4229387075 | TX Size 65 .. 127 fr 3889237141

RX Size 128 .. 255 fr 2650809484 | TX Size 128 .. 255 fr 711064618

RX Size 256 .. 511 fr 1361009593 | TX Size 256 .. 511 fr 2349224327

RX Size 512 .. 1023 fr 3559787799 | TX Size 512 .. 1023 fr 1444113684

RX Size 1024 .. 1518 fr 448089039 | TX Size 1024 .. 1518 fr 474195217

RX Size 1519 .. 1522 fr 2185019476 | TX Size 1519 .. 1522 fr 2999521504

RX OverSize frames 0 | TX OverSize frames 0

RX UnderSize frames 0 | TX UnderSize frames 0

RX ExceedMaxSize frames 0

RX Fragment frames 69829 | TX Fragment frames 0

RX Jabber frames 7090511 | TX Jabber frames 0

RX Control frames 0 | TX Control frames 882

RX Pause frames 0 | TX Pause frames 882

RX FCS Error frames 828050684 | TX FCS Error frames 0

RX Length Error frames 0 | TX Length Error frames 0

RX Code Error frames 38410621

RX ExMaxSize Err frames 1362770

---------------------- ------------- + ---------------------- -------------
```

[local]ASR5K-1# **show port datalink counters 17/1**

Counters for port 17/1:

Line Card 10 Gigabit Ethernet Port

Rx Counter Data | Tx Counter Data

---------- ---------- + ---------- ----------

RX Unicast frames 19873 | TX Unicast frames 0

RX Multicast frames 19873 | TX Multicast frames 0

RX Broadcast frames 0 | TX Broadcast frames 0

RX Size 64 frames 0 | TX Size 64 frames 0

RX Size 65 .. 127 fr 0 | TX Size 65 .. 127 fr 0

RX Size 128 .. 255 fr 0 | TX Size 128 .. 255 fr 0

RX Size 256 .. 511 fr 19873 | TX Size 256 .. 511 fr 0

RX Size 512 .. 1023 fr 0 | TX Size 512 .. 1023 fr 0

RX Size 1024 .. 1518 fr 0 | TX Size 1024 .. 1518 fr 0

RX Size > 1518 frames 0 | TX Size > 1518 frames 0

RX Bytes OK 8326787 | TX Bytes OK 0

RX Bytes BAD 0 | TX Bytes BAD 0

RX SHORT OK 0 | TX PAUSE 0

RX SHORT CRC 0 | TX ERR 0

RX OVF 0 |

RX NORM CRC 0 |

RX LONG OK 0 |

RX LONG CRC 0 |

RX PAUSE 0 |

RX FALS CRS 0 |

RX SYM ERR 0 |

RX SPI FRAME COUNT 19873 | TX SPI FRAME COUNT 0

RX SPI LEN ERR 0 | TX SPI LEN ERR 0

RX SPI DIP 2 ERR 0 | TX SPI DIP 4 ERR 0

RX SPI STATUS OOF ERR 0 | TX SPI DATA OOF ERR 0

RX FIFO OVERFLOW 0 | TX FIFO FULL DROP 0

RX PAUSE COUNT 0 | TX DIP 4 PACKET DROP 0

SPI EOP/ABORT 0 |

RX FRAGMENTS COUNT 0 |

RX MAC ERR 0 |

RX JABBER COUNT 0 |

[local]st40-1# **show port datalink counters 22/2**

Counters for port 22/2:

Line Card Fast Ethernet Port

Rx Counter Data | Tx Counter Data

RX Unicast frames 13773 | TX Unicast frames 0

RX Multicast frames 126510 | TX Multicast frames 0

RX Broadcast frames 54954 | TX Broadcast frames 0

RX Size 64 frames 109874 | TX Size 64 frames 0

RX Size 65 .. 127 fr 81230 | TX Size 65 .. 127 fr 0

RX Size 128 .. 255 fr 2384 | TX Size 128 .. 255 fr 0

RX Size 256 .. 511 fr 1670 | TX Size 256 .. 511 fr 0

RX Size 512 .. 1023 fr 79 | TX Size 512 .. 1023 fr 0

RX Size 1024 .. 1518 fr 0 | TX Size 1024 .. 1518 fr 0

RX Size > 1518 frames 0 | TX Size > 1518 frames 0

RX Bytes OK 13824764 | TX Bytes OK 0

RX Bytes BAD 0 | TX Bytes BAD 0

RX OVF 0 | TX DEFER 0

RX SHORT OK 0 | TX COL 0

RX SHORT CRC 0 | TX SCOL 0

RX NO SFD 0 | TX MCOL 0

RX NORM CRC 0 | TX XCOL 0

RX NORM ALI 0 | TX LCOL 0

```
RX LONG OK 0 | TX PAUSE 0

RX LONG CRC 0 | TX ERR 0

RX PAUSE 0 |

RX FALS CRS 0 |

RX SYM ERR 0 |

---------------------- ------------- + ---------------------- -------------
```

```
[local]st40-1# show port datalink counters 24/1

Counters for port 24/1:

SPIO 10/100/1000 Ethernet port

Rx Counter Data | Tx Counter Data

---------------------- ------------- + ---------------------- -------------

RX Bytes 148501169 | TX Bytes 138116037

RX BAD frames 0 | TX BAD frames 0

RX Runt frames 0 | TX Runt frames 0

RX Oversize frames 0 | TX Oversize frames 0

RX Good frames 1590640 | TX Good frames 1258465

RX Multicast frames 4393 | TX Collisions 0

RX Broadcast frames 365063 | TX Excessive collis 0

RX Code ERROR 0 | TX Late Collisions 0

RX CRC ERROR 0 | TX CRC ERROR 0

RX length ERROR 0 | TX ABORT 0

RX Align ERROR 0 |

---------------------- ------------- + ---------------------- -------------
```

```
# show port datalink counters 5/15

Counters for port 5/15:

Line Card 10 Gigabit Ethernet Port

Rx Counter Data | Tx Counter Data

---------------------- ------------- + ---------------------- -------------

RX OverSize frames 0 |
```

```
RX Bytes OK 1558209913 | TX Bytes OK 840628

RX Bytes BAD 0 | TX Bytes BAD 0

RX SHORT OK 0 | TX PAUSE 0

RX SHORT CRC 0 | TX ERR 0

RX OVF 0 |

RX NORM CRC 0 |

RX LONG OK 0 |

RX LONG CRC 82233 |

RX PAUSE 0 |

RX FALS CRS 0 |

RX SYM ERR 0 |

---------------------- ------------- + ---------------------- -------------
```

17. Ingrese el comando de los **contadores del npu del puerto de la demostración**.La salida del comando visualiza las estadísticas de un puerto. Las estadísticas muestran que el puerto 31/1 no envía tantos datos como recibe. El SSD proporciona dos estadísticas separadas en los momentos diferentes 15 minutos. Usted puede utilizar las dos estadísticas para determinar el delta.

```
******** show port npu counters *******
Thursday April 30 15:07:06 UTC 2015
Counters for port 31/1
Counter Rx Frames Rx Bytes Tx Frames Tx Bytes
-------------------- ------------ -------------- ------------ --------------
Unicast 1088589 494910442 86 4368 <<<<<
Multicast 2730 246420 330 35496
Broadcast 10393 665152 6365 292790
IPv4 unicast 1088506 494905130 4 596
IPv4 non-unicast 656 82768 326 35112
IPv6 unicast 0 0 0 0
IPv6 non-unicast 0 0 4 384
Fragments received 258066 198717886 n/a n/a
Packets reassembled 129021 193781884 n/a n/a
Fragments to kernel 24 33204 n/a n/a
HW error 0 0 n/a n/a
Port non-operational 0 0 0 0
SRC MAC is multicast 0 0 n/a n/a
Unknown VLAN tag 0 0 n/a n/a
Other protocols 2074 163652 n/a n/a
Not IPv4 0 0 n/a n/a
Bad IPv4 header 0 0 n/a n/a
IPv4 MRU exceeded 0 0 n/a n/a
TCP tiny fragment 0 0 0 0
No ACL match 0 0 0 0
Filtered by ACL 0 0 0 0
TTL expired 0 0 n/a n/a
Flow lookup twice 0 0 n/a n/a
Unknown IPv4 class 0 0 n/a n/a
Too short: IP 0 0 n/a n/a
Too short: ICMP 0 0 0 0
Too short: IGMP 0 0 0 0
Too short: TCP 0 0 0 0
Too short: UDP 0 0 0 0
Too short: IPIP 0 0 n/a n/a
```

```
Too short: GRE 0 0 n/a n/a
Too short: GRE key 0 0 n/a n/a
Don't frag discards n/a n/a 0 0
Fragment packets n/a n/a 0 0
Fragment fragments n/a n/a 0 0
IPv4VlanMap dropped 0 0 n/a n/a
IPSec NATT keep alive 0 0 n/a n/a
MPLS Flow not found 0 0 n/a n/a
MPLS unicast 0 0 0 0
Size < 17 0 0 0 0
Size 17 .. 64 28449 1820528 6450 296712
Size 65 .. 127 549857 46030525 320 33820
Size 128 .. 255 191483 32170025 10 1796
Size 256 .. 511 38611 14091567 1 326
Size 512 .. 1023 30308 20922553 0 0
Size 1024 .. 2047 263006 380787195 0 0
Size 2048 .. 4095 0 0 0 0
Size 4096 .. 4500 0 0 0 0
Size > 4500 0 0 0 0



******** show port npu counters *******
Thursday April 30 15:22:53 UTC 2015

Counters for port 31/1
Counter Rx Frames Rx Bytes Tx Frames Tx Bytes
-------------------- ------------- --------------- ------------- ---------------
Unicast 1458664 690686035 104 5196 <<<<<
Multicast 3566 321706 429 46150
Broadcast 14078 900992 8295 381570
IPv4 unicast 1458563 690679571 4 596
IPv4 non-unicast 859 108182 425 45766
IPv6 unicast 0 0 0 0
IPv6 non-unicast 0 0 4 384
Fragments received 363014 279522687 n/a n/a
Packets reassembled 181494 272589787 n/a n/a
Fragments to kernel 26 36128 n/a n/a
HW error 0 0 n/a n/a
Port non-operational 0 0 0 0
SRC MAC is multicast 0 0 n/a n/a
Unknown VLAN tag 0 0 n/a n/a
Other protocols 2707 213524 n/a n/a
Not IPv4 0 0 n/a n/a
Bad IPv4 header 0 0 n/a n/a
IPv4 MRU exceeded 0 0 n/a n/a
TCP tiny fragment 0 0 0 0
No ACL match 0 0 0 0
Filtered by ACL 0 0 0 0
TTL expired 0 0 n/a n/a
Flow lookup twice 0 0 n/a n/a
Unknown IPv4 class 0 0 n/a n/a
Too short: IP 0 0 n/a n/a
Too short: ICMP 0 0 0 0
Too short: IGMP 0 0 0 0
Too short: TCP 0 0 0 0
Too short: UDP 0 0 0 0
Too short: IPIP 0 0 n/a n/a
Too short: GRE 0 0 n/a n/a
Too short: GRE key 0 0 n/a n/a
Don't frag discards n/a n/a 0 0
Fragment packets n/a n/a 0 0
Fragment fragments n/a n/a 0 0
IPv4VlanMap dropped 0 0 n/a n/a
```

IPSec NATT keep alive 0 0 n/a n/a
MPLS Flow not found 0 0 n/a n/a
MPLS unicast 0 0 0 0
Size < 17 0 0 0 0
Size 17 .. 64 36271 2321072 8398 386320
Size 65 .. 127 726857 60769944 416 44008
Size 128 .. 255 247902 41688950 13 2262
Size 256 .. 511 52061 19029750 1 326
Size 512 .. 1023 39817 27526320 0 0
Size 1024 .. 2047 373400 540572697 0 0
Size 2048 .. 4095 0 0 0 0
Size 4096 .. 4500 0 0 0 0
Size > 4500 0 0 0 0