ASR 5000/5500 Series que pesquisa defeitos problemas relacionados da porta/NPU

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Introdução

Este artigo apresenta ideias em como pesquisar defeitos os vários problemas relacionados as Plataformas ASR 5000 e 5500 da porta que incluem as edições relativas à unidade de processamento da rede (NPU), e toca em um bit em edições da agregação do link (RETARDAÇÃO) também. Estas técnicas não são astronáutica e são sabidas de fato na maior parte por coordenadores, mas frequentemente uns ou vários podem ser saltados sobre no processo de Troubleshooting simplesmente devido ao descuido na precipitação com as etapas para a definição potencial. O artigo parte primeiramente com os exames médicos completos relativos porta. Então apresenta todas as aproximações em algum tipo da ordem metódica. Finalmente oferece uma série de exemplos reais que vão Troubleshooting da porta do além do básico para aquelas que querem escavar profundamente.

Comandos de Troubleshooting

mostre a história da armadilha SNMP

Procure testes padrões de **PortLinkUp** e de **PortLinkDown**. Considere:
- como frequentemente está acontecendo e durante quando o período
- portas múltiplas ou apenas uma porta ou algum outro teste padrão
- trabalho de manutenção de que os técnicos podem ou não podem estar cientes

tabela toda do show port

- indica se os links são para cima ou para baixo
- Agregação do link (RETARDAÇÃO) - confirme portas estão no estado correto, ou + (distribuição/active) ou ~ (concordado/apoio). Outros estados * ou - investigações adicionais da necessidade.

informação de show port

- vária informação tal como o estado do link, o modo de porta, as configurações de porta, os ajustes da agregação do link (RETARDAÇÃO), o módulo de SFP, etc.

mostre o diag do cartão

- informação de diagnóstico básica, geralmente não isso útil

mostre o [verbose] stats agrupamento tático

- segue toda a atividade PSC/DPC/SMC/MIO (switchovers, migrações, paradas programadas, etc.) desde a inicialização

tabela da utilização do show port

- é a taxa de transferência o que é esperado para o Time Of Day
- Portas do trajeto (ECMP) e da RETARDAÇÃO dos custos iguais as multi devem transmitir razoavelmente uniformemente

- A largura de banda RX está sob o controle da outra extremidade

mostre a tabela da utilização da porta lógica

- divide a utilização de porta pelo ID de VLAN

- se os números são pequenos comparados à tabela da utilização de porta, implica os pacotes que não fazem a ao NPU da porta

a ligação de dados do show port opõe-se <slot/port >

- contagens de pacote de informação nas portas física eles mesmos dos relatórios
- verifique os vários contadores de falha para ver se alguns estão incrementando e em que taxa

- Importante: este é um daqueles poucos comandos que é recolhido DUAS VEZES em um SSD que possa ser muito valioso para pesquisar defeitos aumentos do contagem de pacote de informação relativamente em um período de tempo curto

o npu do show port opõe o [vlan <vlan>] <slot/port>

- todas as portas são conectadas ao resto do sistema através da unidade do processador de rede (NPU), qualquer um situado no cartão conectado dos serviços de pacote de informação (PSC, ASR 5000) (se o PSC diretamente está conectado ou traçado através dos cartões da barra transversal da Redundância (RCC)) ou no entrada/saída do Gerenciamento (MIO) (ASR 5500) em que a porta é ficada situada igualmente.
- verifique os vários contadores de falha para ver se alguns estão incrementando e em que taxa

- para a aplicação da RETARDAÇÃO, os contadores são relatados para a porta mestra que captura os totais através de todas as portas no grupo da RETARDAÇÃO, e tão não há nenhuma maneira de saber que porta está causando as falhas. Nesse argumento, para ASR 5000, do “os stats do npu show port debugam contagens de falha dos relatórios dos all_pacs” no PSC # nível que ajuda esperançosamente o ponto ao cartão do culpado.

- As edições foram consideradas onde o aumento em contadores do faliure deste comando é causado pelo falhas na placa de linha, onde do “os contadores da ligação de dados show port” não mostram a edição.

- não todas as edições NPU são travadas com este comando. Há o outro suporte técnico somente NPU comanda (isto é os stats do npu da mostra debugam all_pacs, all_pacs do sf stats do npu da mostra, etc.) as edições deixando cair desse pacote da captação que não são cobertas aqui.

- Importante: este é um daqueles poucos comandos que é recolhido DUAS VEZES em um SSD que possa ser muito valioso para pesquisar defeitos aumentos do contagem de pacote de informação relativamente em um período de tempo curto

mostre logs

- procure todas as entradas relativas às portas que incluem o npu das facilidades, o npuctrl, etc.

transceptor do show port (ASR 5500 somente)

- procure os níveis de luz consistentes através de todas as portas

Ações da remediação

Entre cada um das seguintes etapas, verifique a saída dos comandos acima, como aplicável, detectar toda a melhoria e/ou mudá-la no comportamento. Se a edição é esporádica, um período de espera apropriado pode ser necessário antes de declarar o sucesso/falha.

Esta não é pretendida ser uma lista dura e rápida que tenha que ser executada na ordem ou mesmo completamente. Há variáveis demais que jogam um papel em pesquisar defeitos tais edições e assim que este é pretendido ser um guia de modo que no menos, o troubleshooter tenha o acesso a todas as opções potenciais. Aqueles com experiência de muitos anos são provavelmente familiares com as algumas destas aproximações porque se aplicam a outras Plataformas, mas uma lista de verificação do lembrete é sempre uma boa ideia, e aquelas sem conhecimento da plataforma não podem ser familiares com os alguns das aproximações e/ou dos comandos específicos da plataforma disponíveis.

Recorde: cada encenação é diferente e os passos de Troubleshooting revelarão a informação nova que ditará as etapas futuras que diferirão entre encenações. Este é apenas um guia.

As etapas consideradas e a ordem tomada variarão segundo a severidade da edição, do impacto potencial do subscritor, e do sentimento do cliente.

Switchover à porta redundante ou à RETARDAÇÃO
- Necessidade de considerar o fato de que a porta que está sendo pesquisada defeitos agora está segurando o tráfego OU não está segurando o tráfego
- ASR5000: as placas de linha sem redução são conectadas agora a um PSC diferente (NPU), quando a placa de linha metade-feita sob medida continuará a ser conectada ao mesmo PSC
- comutar sobre não muda a expedição de cabogramas, e tão mais provavelmente fazendo assim não fará a diferença em uma porta que salta a encenação, mas no o mais menos, se a edição estava na porta ativa, o impacto será minimizado desde que é seja agora uma porta em standby

Conexões de cabo da troca com porta redundante
- segundo que cabo é puxado primeiramente, a porta ativa final poderia ser uma ou outra porta, assim que a porta pode precisar de ser comutado para trás para obter de volta à disposição começando
- se o problema permanece com a porta incomodada, a seguir olhe mais proximamente nessa porta no ASR
- se o problema comuta à outra porta, a seguir olhe mais proximamente na conexão dessa porta na ponta oposta

Limpe fibras

- se a porta que está sendo limpada é ativa, a seguir precisa de ser comutada de volta após à limpeza
- as fibras da limpeza foram definidamente uma atividade que resolvesse frequentemente edições

Substitua elementos no trajeto, incluindo o cabo do Ethernet/fibra/painel de correção/interconecte-os/bata-os

- se a porta que está sendo limpada é ativa, a seguir deverá ser comutada de volta após à limpeza
- pôde ser surpreendente encontrar como frequentemente esta etapa resolve edições

Substituição pluggable do form fatora pequeno (SFP) no um ou outro/ambos os lados da conexão
- os SFP podem ser pedidos separadamente
- Verifique para ver se há SFP não utilizados para propósitos testando

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ASR 5000 somente:

Repartição da placa de linha
A placa de linha assenta
- Assentar realizará um superset da repartição e é uma tentativa do mais intrusivo e valor

Migração PSC

- O PSC conectado à placa de linha que hospeda a porta do problema (mapeamentos do cartão da mostra/tabela cartão todos da mostra))
Repartição PSC
O PSC assenta
- Uma migração PSC conduzirá ao PSC que está sendo restaurado mas não é o equivalente de

uma repartição
- Similarmente uma restauração PSC é mais intrusivo do que uma repartição PSC
- Um PSC assenta realizará um superset da repartição PSC em uma etapa
- Em todo o acima, se a edição é resolved, uma migração para fazer o active PSC outra vez seria necessária para confirmar se a edição é inteiramente resolved (supor a atividade PSC resolveu a porta que salta). Note que segundo o layout de placa e a configuração de placa começando (isto é é a placa de linha que tem a edição fisicamente atrás do PSC conectado? , etc.), comutando o PSC de volta ao active pode ou não pode conduzir ao mesmo mapeamento da placa de linha do <-> PSC que era o caso antes da atividade.

Switchover do cartão do gerenciamento de sistema (SMC)
Repartição SMC
O SMC assenta

ASR 5500 somente:

Switchover MIO
- isto é diferente do que apenas uma porta ou um switchover da RETARDAÇÃO. Todas as portas ativa no MIO que está sendo comutado sobre tornar-se-ão à espera. Se a porta do problema é já ativa no MIO à espera, a seguir o switchover MIO não muda o status de porta mas é ainda uma etapa válida

---

Reload do chassi
- embora improvável, é sempre possível que há algum tipo da anomalia que pode somente ser resolvido com um reload

Substituição de hardware no switch adjacente

Substituição de hardware em ASR 5x00 (PSC, LC, MIO, SMC ou RCC)

A remediação pisa referência de comandos:

o cartão migra do <x> ao <y> – Migração PSC/DPC
  - Quando levantar a alavanca for uma outra maneira, não faça isso E puxe então os resultados do cartão ou de uma parada programada do cartão

switch de placa do <x> ao <y> – Switchover SMC/MIO/LC/RCC

interruptor da porta ao <x> – Switchover da porta da NON-RETARDAÇÃO

interruptor da porta da link-agregação ao <x> – Switchover da RETARDAÇÃO
  - X deve ser a porta mestra da RETARDAÇÃO ou o par do mestre segundo o sentido

repartição X do cartão
  - a reinicialização de placa é uma outra opção mas a repartição é recomendada

Scenarios de Troubleshooting do exemplo

O nó inter à espera da recuperação da sessão do chassi PGW (ICSR) está recebendo o volume alto do tráfego do zimbro MX-960

Este exemplo mostra as portas ativas da RETARDAÇÃO que recebem o tráfego significativo pensaram mesmo que o chassi é apoio do protocolo de redundância do serviço (SRP) neste caso a produção for quase nada. O valor dos seguintes dois comandos usados na junção é que as portas estão mostrando o tráfego significativo que está sendo recebido mas o NPU está mostrando o sem tráfego. Isto implica o tráfego está sendo deixado cair antes de alcançar o NPU, possivelmente certo nas portas elas mesmas. Do “a ligação de dados show port opõe-se” e do “o corraborate dos contadores do npu show port” isto desde que os contadores NPU estão aumentando mal quando os contadores da ligação de dados aumentarem rapidamente.

```
[local]PGW-ICSR> show port utilization table
Sunday July 26 00:13:32 UTC 2015
                                ------ Average Port Utilization (in mbps) ------
Port   Type                       Current            5min             15min
                                  Rx       Tx       Rx        Tx       Rx      Tx
----- ------------------------  ------- -------  ------- -------  ------- -------
 5/1  1000 Ethernet             0       0        0       0        0       0
 5/10 10G Ethernet              0       0        0       0        0       0
 5/11 10G Ethernet              0       0        0       0        0       0
 5/15 10G Ethernet              0       0        0       0        0       0
 5/16 10G Ethernet              0       0        0       0        0       0
 5/28 10G Ethernet              105     13       105     13       105     13
 5/29 10G Ethernet              0       0        0       0        0       0
 6/1  1000 Ethernet             0       0        0       0        0       0
 6/10 10G Ethernet              4214    0        4121    0        3993    0
 6/11 10G Ethernet              4089    0        4103    0        3995    0
 6/15 10G Ethernet              4166    0        4172    0        3996    0
 6/16 10G Ethernet              4163    0        4174    0        3997    0
 6/28 10G Ethernet              0       0        0       0        0       0
 6/29 10G Ethernet              1       0        1       0        1       0

[local]PGW-ICSR> show logical-port utilization table
Sunday July 26 00:13:45 UTC 2015
                    ------ Average Port Utilization (in mbps) ------
Slot/Port vlan        Current          5min            15min
                     Rx       Tx        Rx       Tx        Rx       Tx
--------------   -------- --------  -------- --------  -------- --------
 5/10     2427   0        0         0        0         0        0
 5/10     2407   0        0         0        0         0        0
 5/10     2011   0        0         0        0         0        0
 5/10     2405   0        0         0        0         0        0
 5/10     2015   0        0         0        0         0        0
 5/10     2455   0        0         0        0         0        0
 6/10     2427   0        0         0        0         0        0
 6/10     2407   0        0         0        0         0        0
 6/10     2011   0        0         0        0         0        0
 6/10     2405   0        0         0        0         0        0
 6/10     2015   0        0         0        0         0        0
 6/10     2455   0        0         0        0         0        0
 6/29     31     0        0         0        0         0        0

[local]PGW-ICSR> clear port npu counters all
Saturday July 25 01:44:38 UTC 2015
[local]PGW-ICSR> clear port data count all
```

```
Saturday July 25 01:44:43 UTC 2015


[local]PGW-ICSR> show port data counters 6/10
Saturday July 25 01:45:30 UTC 2015
rt npu counteCounters for port 6/10:
Line Card 10 Gigabit Ethernet Port
Rx Counter                        Data  |  Tx Counter                        Data
----------------------  -------------- + ----------------------  -------------
RX Bytes                   20310895783 | TX Bytes                           9746
RX Unicast frames             25564965 | TX Unicast frames                    41
RX Multicast frames                 85 | TX Multicast frames                  48
RX Broadcast frames                  0 | TX Broadcast frames                   0
RX Size 64 frames               338598 | TX Size 64 frames                     9
RX Size   65 ..  127 fr         6881254 | TX Size   65 ..  127 fr              32
RX Size  128 ..  255 fr         4151284 | TX Size  128 ..  255 fr              48
RX Size  256 ..  511 fr          761933 | TX Size  256 ..  511 fr               0
RX Size  512 .. 1023 fr          599377 | TX Size  512 .. 1023 fr               0
RX Size 1024 .. 1518 fr        12678554 | TX Size 1024 .. 1518 fr               0
RX Size 1519 .. 1522 fr          154050 | TX Size 1519 .. 1522 fr               0

[local]PGW-ICSR> show port npu counters 6/10
Saturday July 25 01:45:31 UTC 2015
Counters for port 6/10
       Counter             Rx Frames  Rx Bytes  Tx Frames           Tx Bytes
---------------------- -------------------- ---------- --------------------
Unicast                         147        11716      150                12234
Multicast                       870        73376      416                51584
Broadcast                         4          240        0                    0
IPv4 unicast                     66         4436       66                 4550
IPv4 non-unicast                238        15232        0                    0
IPv6 unicast                     83         7400       84                 7684
IPv6 non-unicast                632         8144        0                    0
Fragments received                0            0      n/a                  n/a
Packets reassembled               0            0      n/a                  n/a
Fragments to kernel               0            0      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                  97         8240      n/a                  n/a
Not IPv4                        399        36472      n/a                  n/a
Bad IPv4 header                   0            0      n/a                  n/a
```

Pacotes ausentes entre a ligação de dados e os contadores do npu

Este exemplo para ASR 5000 mostra a saída que compara contadores da ligação de dados e do npu. Neste caso, o Multicast e os pacotes de transmissão combinam entre comandos, mas a contagem RX para o npu é menos do que para a ligação de dados. O comando da “stats do npu mostra debuga” pode possivelmente esclarecer a diferença, mas não em todos os casos, como está o caso aqui onde nenhuns dos contadores desse comando podem esclarecer as diferenças.

```
[local]DO-HSGW> clear port npu counters all
Thursday August 06 02:05:51 UTC 2015

[local]DO-HSGW> clear port datalink counters all
Thursday August 06 02:05:52 UTC 2015

[local]DO-HSGW> show npu stats debug all-pacs clear
Thursday August 06 02:05:52 UTC 2015
```

```
[local]DO-HSGW> show card table
Thursday August 06 02:18:59 UTC 2015
Slot         Card Type                                Oper State     SPOF  Attach
-----------  ---------------------------------------  -------------  ----  ------
5: PSC       Packet Services Card 3                   Active         No    21 37


[local]DO-HSGW> show port npu count 21/1
Thursday August 06 02:13:52 UTC 2015
Counters for port 21/1
sCounter                   Rx Frames       Rx Bytes      Tx Frames        Tx Bytes
-------------------- ------------ -------------- ------------ ---------------
Unicast 2502           289800          1726          308932
Multicast 1091         92000             0               0
Broadcast 1231            79781             0               0
IPv4 unicast                2400          283272          1624          304240
IPv4 non-unicast             534           34176             0               0
IPv6 unicast                   0               0             0               0
IPv6 non-unicast             539           52982             0               0
Fragments received             0               0           n/a             n/a
Packets reassembled            0               0           n/a             n/a
Fragments to kernel            0               0           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               50            7850           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           1834          117376           102            4692
Size   65 ..  127           1385          113948            36            2520
Size  128 ..  255           1589          225633          1191          170710
Size  256 ..  511             16            4624           397          131010
Size  512 .. 1023              0               0             0               0
Size 1024 .. 2047              0               0             0               0
Size 2048 .. 4095              0               0             0               0
Size 4096 .. 4500              0               0             0               0
Size > 4500                    0               0             0               0

[local]DO-HSGW> show port data counters 21/1
Thursday August 06 02:13:52 UTC 2015
```

```
how npu Counters for port 21/1:
Line Card  Gigabit Ethernet Port
Rx Counter                        Data  |  Tx Counter                        Data
----------------------  -------------- + ----------------------  -------------
RX Unicast frames 5555 | TX Unicast frames                1726
RX Multicast frames 1091 | TX Multicast frames                0
RX Broadcast frames 1233 | TX Broadcast frames                0
RX Size   64 frames                   0 | TX Size   64 frames                102
RX Size   65 ..  127 fr            4219 | TX Size   65 ..  127 fr             36
RX Size  128 ..  255 fr            1681 | TX Size  128 ..  255 fr           1191
RX Size  256 ..  511 fr              49 | TX Size  256 ..  511 fr            397
RX Size  512 .. 1023 fr            1828 | TX Size  512 .. 1023 fr              0
RX Size 1024 .. 1518 fr              18 | TX Size 1024 .. 1518 fr              0
RX Size > 1518 frames                84 | TX Size > 1518 frames                0
RX Bytes OK                     1934599 | TX Bytes OK                     317264
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 FIFO CORR ECC ERR                  0 | TX FIFO CORR ECC ERR                 0
RX FIFO UNREC ECC ERR                 0 | TX FIFO UNREC ECC ERR                0
RX Disc frames                        0 | TX Disc frames                       0
RX Disc bytes                         0 | TX Disc bytes                        0
RX ERR frames                         0 | TX ERR frames                       0
----------------------  -------------- + ----------------------  -------------


[local]DO-HSGW> show npu stats debug slot 5
Thursday August 06 02:13:53 UTC 2015
NPU debug stats for slot 5
Total number of NPU debug stat counters: 267

WARN: ---------------------------------
                    lc-rx-drop (id: 234)              50

INFO: ---------------------------------
                 csix-idle-cnt (id:  29)        36268853
              npu-resent-fc-msg (id:  45)             951
               npu-tx-fc-cframe (id:  46)           44701
                  npu-rx-sf-xon (id:  60)           13316
       cp2npu-unk-mac-drop-cnt (id: 153)          177255
              ipv6-unk-nexthdr (id: 155)             262
                 rx-cp-sft-pkt (id: 164)           33439
                rx-sf0-sft-pkt (id: 165)           33439
                rx-sf1-sft-pkt (id: 166)           33439
            lc-rx-arp-slowpath (id: 316)              70
   flow-notfound-done-slowpath (id: 325)            1233
       flow-lkup-done-slowpath (id: 326)            3473
```

Pausa da ligação de dados TX e RX OVF em ASR 5000

A pausa TX indica que esta porta alcançou alguma carga de pico em algum momento do tempo e enviou um frame de pausa ao interruptor do par, de modo que o interruptor do par possa graciosamente reduzir o tráfego para esta porta. Contudo, parece que o interruptor do par não está permitido com controle de fluxo e daqui há alguns contadores na placa de linha que indica

algumas gotas do excesso na porta.

Mesmo se a utilização de porta média não está alcançando o valor de pico (como o 6 GBPS), a porta pode receber um ponto repentino do tráfego que possa conduzir à PAUSA TX. Daqui, é aconselhável ter o controle de fluxo permitido no interruptor do par sempre só no caso.

```
show port datalink counters

Counters for port 21/1: Line Card 10 Gigabit Ethernet Port Rx Counter Data | Tx Counter Data ---
-------------------- ------------- + ---------------------- ------------- RX Unicast frames
11562820841545 | TX Unicast frames 8643405785924 RX Multicast frames 401729121 | TX Multicast
frames 0 RX Broadcast frames 16900986 | TX Broadcast frames 0 RX Size 64 frames 2562649224215 |
TX Size 64 frames 5324800463761 RX Size 65 .. 127 fr 1827916995441 | TX Size 65 .. 127 fr
1921108746736 RX Size 128 .. 255 fr 527160156402 | TX Size 128 .. 255 fr 377388275894 RX Size
256 .. 511 fr 384674712910 | TX Size 256 .. 511 fr 285180922294 RX Size 512 .. 1023 fr
335734722295 | TX Size 512 .. 1023 fr 248088896685 RX Size 1024 .. 1518 fr 5894848662488 | TX
Size 1024 .. 1518 fr 486837840991 RX Size > 1518 frames 29836364100 | TX Size > 1518 frames 0 RX
Bytes OK 9248285853715092 | TX Bytes OK 1491301613652484 RX Bytes BAD 5358 | TX Bytes BAD 0 RX
SHORT OK 0 | TX PAUSE 639563
RX SHORT CRC                          0 | TX ERR                                0
RX OVF 12768 |
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       11555373252519 | TX SPI FRAME COUNT       8637801817136
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                          26 |
RX JABBER COUNT                      0 |
```

Um comando muito de baixo nível (o suporte técnico somente, pode ser recuperado do SSD) é da **"o entalhe X da congestão dos dados mostra".** Neste exemplo note o congestionamento alto no entalhe 5 (padrão conectado a XCLC 21/1) no NPU à relação do Switch Fabric (SF). Especificamente, um contagem elevada da Mensagem do controle de fluxo do Switch Fabric ao NPU, junto com um alto número de quedas de pacote de informação que o mesmo sentido confirma a edição.

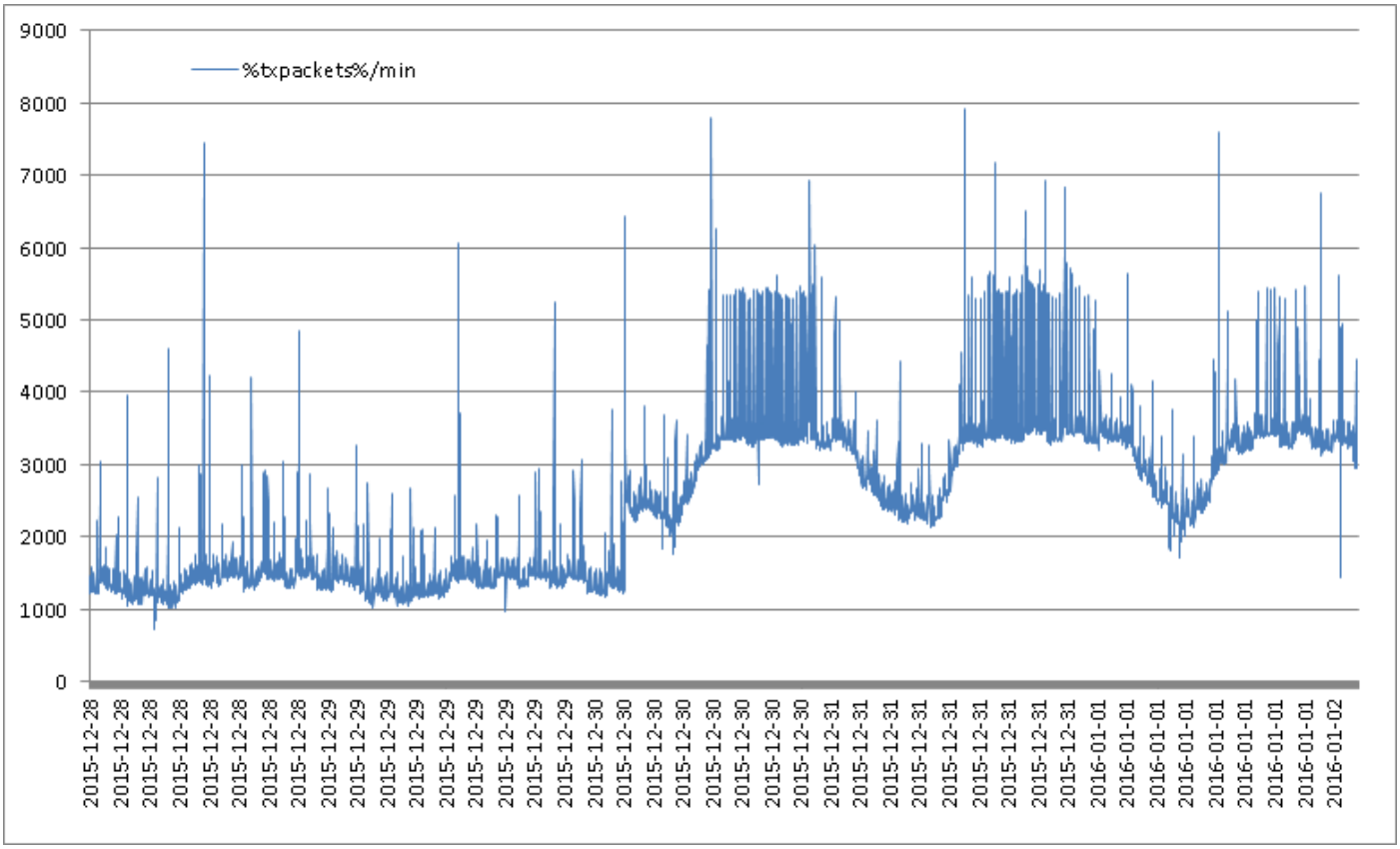
```
 ******** Data-path congestion information for slot 5 ********

NPU Percentage of Frames Dropped:
Subsystem    |  5 Sec  |  5 Min  |  15 Min |  Total Frames and Drops
-------------|---------|---------|---------|----------------------------
   LC Top rx |   0.00% |   0.00% |   0.00% |  Frames:        715193480189
             |         |         |         |   Drops:                   0
   LC Top tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
   LC Bot rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
   LC Bot tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
  LC RCC1 rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
```

```
  LC RCC1 tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
  LC RCC2 rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
  LC RCC2 tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
      CPU rx |   0.00% |   0.00% |   0.00% |  Frames:        121566003797
             |         |         |         |   Drops:                   0
      CPU tx |   0.00% |   0.00% |   0.00% |  Frames:         59870967969
             |         |         |         |   Drops:           35226625
     SF A rx |   0.00% |   0.00% |   0.00% |  Frames:           224008179
             |         |         |         |   Drops:                   0
 SF A tx | 0.01% | 0.00% | 0.00% | Frames: 378241304254 | | | | Drops: 274645028
     SF B rx |   0.00% |   0.00% |   0.00% |  Frames:           656009419
             |         |         |         |   Drops:                   0
 SF B tx | 0.00% | 0.00% | 0.00% | Frames: 392219947264 | | | | Drops: 320394097
      EDC rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
      EDC tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
 NPU Received Flow Control Events:
Event           |    5 Sec    |    5 Min    |    15 Min   |  Total Event Count
----------------|-------------|-------------|-------------|--------------------
 rx-sf-xoff | 21668 | 843417 | 2358340 | 828378025 rx-sf-xon | 21811 | 851786 | 2383440 |
873518866
     rx-lc-xoff |           0 |           0 |           0 |                   0
      rx-lc-xon |           0 |           0 |           0 |                   0
     rx-cp-xoff |          53 |        5021 |       15176 |            17316366
      rx-cp-xon |          53 |        5021 |       15176 |            17316366
    rx-edc-xoff |           0 |           0 |           0 |                   0
     rx-edc-xon |           0 |           0 |           0 |                   0
```

TX crescente ERR devido às configurações de porta combinadas mal na porta de gerenciamento ASR 5500

Neste exemplo, os bilhetes começaram ser abertos provendo um aumento em contadores TX ERR na porta 5/1, a porta de gerenciamento em ASR 5500. Em um local, “não se observou” porque um problema até depois um ESPANADOR foi executado que executasse a criação e a geração de arquivos de registro do evento, uma característica do serviço de carregamento Enhance. Nenhuma correlação poderia ser feita entre a aplicação dessa característica e de um aumento repentino nestas falhas, exceto notar que havia igualmente um aumento repentino na taxa de transferência para a porta de gerenciamento, que deve somente levar o tráfego de gerenciamento em 12/30 quando a mudança foi feita. Os txpackets variáveis do esquema PORTSch1 são representados graficamente aqui que mostram o aumento:



Uma auditoria da rede mostrou que a edição estava acontecendo em muitos Nós, por exemplo é aqui apenas um snippet pequeno da auditoria:

```
 ******** Data-path congestion information for slot 5 ********

NPU Percentage of Frames Dropped:
Subsystem    |  5 Sec  |  5 Min  |  15 Min |  Total Frames and Drops
-------------|---------|---------|---------|----------------------------
   LC Top rx |   0.00% |   0.00% |   0.00% |  Frames:        715193480189
             |         |         |         |   Drops:                   0
   LC Top tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
   LC Bot rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
   LC Bot tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
  LC RCC1 rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
  LC RCC1 tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
  LC RCC2 rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
  LC RCC2 tx |   0.00% |   0.00% |   0.00% |  Frames:                   0
             |         |         |         |   Drops:                   0
      CPU rx |   0.00% |   0.00% |   0.00% |  Frames:        121566003797
             |         |         |         |   Drops:                   0
      CPU tx |   0.00% |   0.00% |   0.00% |  Frames:         59870967969
             |         |         |         |   Drops:           35226625
     SF A rx |   0.00% |   0.00% |   0.00% |  Frames:           224008179
             |         |         |         |   Drops:                   0
 SF A tx | 0.01% | 0.00% | 0.00% | Frames: 378241304254 | | | | Drops: 274645028
     SF B rx |   0.00% |   0.00% |   0.00% |  Frames:           656009419
             |         |         |         |   Drops:                   0
 SF B tx | 0.00% | 0.00% | 0.00% | Frames: 392219947264 | | | | Drops: 320394097
      EDC rx |   0.00% |   0.00% |   0.00% |  Frames:                   0
```

```
            |         |         |         |   Drops:                    0
      EDC tx |   0.00% |   0.00% |   0.00% |  Frames:                    0
            |         |         |         |   Drops:                    0
 NPU Received Flow Control Events:
Event           |    5 Sec    |    5 Min    |    15 Min   |  Total Event Count
----------------|-------------|-------------|-------------|-------------------
 rx-sf-xoff | 21668 | 843417 | 2358340 | 828378025 rx-sf-xon | 21811 | 851786 | 2383440 |
873518866
     rx-lc-xoff |           0 |           0 |           0 |                   0
      rx-lc-xon |           0 |           0 |           0 |                   0
     rx-cp-xoff |          53 |        5021 |       15176 |            17316366
      rx-cp-xon |          53 |        5021 |       15176 |            17316366
    rx-edc-xoff |           0 |           0 |           0 |                   0
     rx-edc-xon |           0 |           0 |           0 |                   0
```

Indo para trás a SSDs velho (desde que somente os contadores básicos estão sendo seguidos por Bulkstats), pode-se ver que o erro estava acontecendo lentamente até 12/30, mas por outro lado depois que a execução do ESPANADOR, o erro estava acontecendo em uma taxa muito mais alta:

```
Thursday November 19 13:41:44 UTC 2015
Counters for port 5/1:
Line Card  Gigabit Ethernet Port
Rx Counter                      Data  |  Tx Counter                      Data
----------------------  -------------- + ----------------------  -------------
RX SHORT CRC                       0 | TX ERR                        5927969

Monday November 30 13:35:45 UTC 2015
Counters for port 5/1:
Line Card  Gigabit Ethernet Port
Rx Counter                      Data  |  Tx Counter                      Data
----------------------  -------------- + ----------------------  -------------
RX SHORT CRC                       0 | TX ERR                        6116249

Tuesday December 01 13:39:26 UTC 2015
Counters for port 5/1:
Line Card  Gigabit Ethernet Port
Rx Counter                      Data  |  Tx Counter                      Data
----------------------  -------------- + ----------------------  -------------
RX SHORT CRC                       0 | TX ERR                        6130958


Counters cleared ...


[local]ASR5500-PGW> show port datalink counters 5/1
Monday January 04 02:41:29 UTC 2016
Counters for port 5/1:
Line Card  Gigabit Ethernet Port
Rx Counter                      Data  |  Tx Counter                      Data
----------------------  -------------- + ----------------------  -------------
RX Unicast frames             171008921 | TX Unicast frames            221976127
RX SHORT CRC                       0 | TX ERR                        5852770

 ******** show port datalink counters *******

Tuesday January 05 13:38:51 UTC 201
Rx Counter                      Data  |  Tx Counter                      Data
----------------------  -------------- + ----------------------  -------------
RX Unicast frames             216450269 | TX Unicast frames           8080952673
RX SHORT CRC                       0 | TX ERR                       11497275
```

```
 ******** show port info *******
Tuesday January 05 13:33:07 UTC 2016
Port: 5/1
 Port Type               : 1000 Ethernet
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Link State              : Up
  Link Duplex             : Half
  Link Speed              : 100 Mb

Issue fixed ...


Wednesday January 06 14:29:28 UTC 2016
Counters for port 5/1:
Line Card  Gigabit Ethernet Port
Rx Counter                        Data  |  Tx Counter                        Data
----------------------  -------------- + ----------------------  -------------
RX SHORT CRC                         0 | TX ERR                              0

[local]PGW> show port info 5/1
Wednesday January 06 12:58:50 UTC 2016
Port: 5/1
 Port Type               : 1000 Ethernet
 Role                    : Management Port
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Link State              : Up
  Link Duplex             : Full
  Link Speed              : 1000 Mb
```

A edição despejou ser uma má combinação nas configurações de porta entre o ASR 5500 e o interruptor novo a que conecta, o nexo 7000. O reparo era ajustar portas no ambas as extremidades para negociar automaticamente. O ASR 5500 foi ajustado já ao automóvel, quando o nexo foi ajustado manualmente a completamente - duplex. O reparo:

ASR 5500 (already set to this)

```
  port ethernet 5/1
    medium speed 1000 duplex full
    no shutdown
    bind interface 5/1-MGMT local
  #exit
```

Nexus 7K (needed to be set to this)

```
interface Ethernet152/1/11
  description MGMT-PORT-5/01
  switchport
  switchport access vlan 10
  spanning-tree port type edge
  no snmp trap link-status
  no shutdown
```

Despeja que a edição estava ocorrendo durante todo o tempo mas esteve observada nunca porque o único indicador era o contador TX ERR que não é algo que pode ser medido com todo o relatório automatizado desde que não há nenhuma variável do bulkstat para qualquer coisa além dos contadores de porta básicos (pacotes do Tx/Rx/bytes, etc.). Mas a edição foi agravada severamente quando o ESPANADOR foi executado e desde que os pacotes do Tx/Rx são capturados por Bulkstats e são KPI medido pelo cliente, ele foi observada então.

Assim a pergunta seguinte era que causado o aumento repentino no tráfego? O exame da mudança mostra o seguinte ajuste chamado **"através do local-contexto",** que especifica usando a porta local do contexto (5/1 ou 6/1) para o tráfego novo do evento em vez da porta 5/29 no contexto ECS onde o tráfego existente do registro de faturamento do registro de dados de evento (EDR) sempre (e continuado ser) foi mandado a porta existente 5/29 nesse contexto. Este não era um achado óbvio desde que esse ajuste é usado raramente em toda a configuração do cliente.

```
context ECS
   interface 5/29-ECS
     ip address 10.192.102.75 255.255.255.0
   #exit

session-event-module
      file name evt-repo rotation volume 40000000 rotation time 120 storage-limit 500000000
exclude-checksum-record time-stamp rotated-format compression gzip
      event transfer-mode push primary encrypted-url  +A19y2j...  via local-context module-only

    edr-module active-charging-service
      file name FDR70 rotation volume 40000000 rotation time 300 storage-limit 500000000 headers
reset-indicator edr-format-name trap-on-file-delete charging-service-name omit compression gzip
file-sequence-number rulebase-seq-num
      cdr use-harddisk
      cdr remove-file-after-transfer
      cdr transfer-mode push primary encrypted-url  +A0d2...
```

Quadros e colisões ruins crescentes de Tx na porta de gerenciamento devido à metade - duplex

A relação 24/1 e 25/1 que compõem a relação 24/1-MGMT está experimentando "quadros ruins", "colisões TX" e "colisões atrasada TX".

Dos detalhes do apoio da mostra::

```
 ******** show port datalink counters *******

Friday January 03 14:14:59 UTC 2014

Counters for port 25/1:
SPIO 10/100/1000 Ethernet port
Rx Counter                        Data  |  Tx Counter                        Data
----------------------  -------------- + ----------------------  -------------
RX Bytes                    12808872101 | TX Bytes                    20451927433
RX BAD frames                         0 | TX BAD frames 1403971
RX Runt frames                        0 | TX Runt frames                        0
RX Oversize frames                    0 | TX Oversize frames                    0
RX Good frames                 95621882 | TX Good frames                39395979
RX Multicast frames             6686008 | TX Collisions 1501475
RX Broadcast frames            56656415 | TX Excessive collis                   0
RX Code ERROR                         0 | TX Late Collisions 1403968
RX CRC ERROR                          0 | TX CRC ERROR                          0
RX length ERROR                       0 | TX ABORT                              3
RX Align ERROR                        0 |
----------------------  -------------- + ----------------------  -------------
```

Do sistema um pouco mais tarde, observe o aumento em quadros e em colisões/colisões atrasada ruins:

```
[local]DO-HSGW> show port datalink counters 25/1
Friday January 03 14:26:04 UTC 2014
Counters for port 25/1:
SPIO 10/100/1000 Ethernet port
Rx Counter                        Data  |  Tx Counter                        Data
----------------------  -------------- + ----------------------  -------------
RX Bytes                    12809750383 | TX Bytes                    20456667635
RX BAD frames                         0 | TX BAD frames 1404930
RX Runt frames                        0 | TX Runt frames                        0
RX Oversize frames                    0 | TX Oversize frames                    0
RX Good frames                 95628788 | TX Good frames                 39400838
RX Multicast frames             6686366 | TX Collisions 1502503
RX Broadcast frames            56659440 | TX Excessive collis                   0
RX Code ERROR                         0 | TX Late Collisions 1404927
RX CRC ERROR                          0 | TX CRC ERROR                          0
RX length ERROR                       0 | TX ABORT                              3
RX Align ERROR                        0 |
----------------------  -------------- + ----------------------  -------------
```

Isto é geralmente indicativo de um mau combinação da configuração em uma ou outra extremidade da interface Ethernet. Ambas as portas de gerenciamento negociaram como a **metade - duplex**:

```
[local]DO-HSGW> show port info 24/1
Friday January 03 14:33:19 UTC 2014
Port: 24/1
  Port Type               : 1000 Ethernet Dual Media
  Role                    : Management Port
  Description             : (None Set)
  Controlled By Card      : 8 (System Management Card)
  Redundancy Mode         : Port Mode
  Framing Mode            : Unspecified
  Redundant With          : 25/1
  Preferred Port          : Non-Revertive
  Physical ifIndex        : 402718720
  Administrative State    : Enabled
  Configured Duplex       : Auto
  Configured Speed        : Auto
  Media Selection         : RJ45
  MAC Address             : 00-05-47-02-5D-EE
  Link State              : Up
  Link Duplex             : Half
  Link Speed              : 100 Mb
  Link Aggregation Group  : None
  Logical ifIndex         : 402718721
  Operational State       : Down, Standby
  SFP Module              : Present (1000BASE-SX, M5, M610G SFP+Cu)
```

A outra extremidade do link, o Cisco catalyst 6500, foi ajustada para apressar = 100 e duplex = completamente. Para fixar a edição, duro-código o ASR 5000 igualmente para estar completo - duplex:

```
[local]DO-HSGW> show port info 24/1
Friday January 03 14:33:19 UTC 2014
Port: 24/1
  Port Type               : 1000 Ethernet Dual Media
  Role                    : Management Port
  Description             : (None Set)
  Controlled By Card      : 8 (System Management Card)
  Redundancy Mode         : Port Mode
  Framing Mode            : Unspecified
  Redundant With          : 25/1
  Preferred Port          : Non-Revertive
  Physical ifIndex        : 402718720
  Administrative State    : Enabled
  Configured Duplex       : Auto
  Configured Speed        : Auto
  Media Selection         : RJ45
  MAC Address             : 00-05-47-02-5D-EE
  Link State              : Up
  Link Duplex             : Half
  Link Speed              : 100 Mb
  Link Aggregation Group  : None
  Logical ifIndex         : 402718721
  Operational State       : Down, Standby
  SFP Module              : Present (1000BASE-SX, M5, M610G SFP+Cu)
```

Ou alternativamente, ajuste ambos os lados para ser autonegociação.

Mas ter um toma partido como o automóvel e o outro lado porque completamente poderia conduzir ao estabelecimento metade-frente e verso.

Switchover inesperado da RETARDAÇÃO - Edição da porta 23/1 da RETARDAÇÃO

O seguinte foi observado onde a porta 23/1 na RETARDAÇÃO foi colada no estado negociado RETARDAÇÃO após um switchover inesperado da RETARDAÇÃO:

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
```

```
30/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type               : 10G Ethernet
 Role                    : Service Port
 Description             : Ingress-Egress Line Card
 Controlled By Card      : 7 (Packet Services Card 3)
 Redundancy Mode         : Port Mode
 Framing Mode            : Unspecified
 Redundant With          : Not Redundant
 Preferred Port          : Non-Revertive
 Physical ifIndex        : 385941504
 Administrative State    : Enabled
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Configured Flow Control : Enabled
 MAC Address             : 00-05-47-02-A6-96
 Link State              : Up
 Link Duplex             : Full
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Os contadores da ligação de dados não mostraram nenhuma edições::

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
```

1204 (**LAGGroupDown**) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 **23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1**
26/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1
27/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
28/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1
29/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
30/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type   : 10G Ethernet
 Role   : Service Port
 Description   : Ingress-Egress Line Card
 Controlled By Card   : 7 (Packet Services Card 3)
 Redundancy Mode   : Port Mode
 Framing Mode   : Unspecified
 Redundant With   : Not Redundant
 Preferred Port   : Non-Revertive
 Physical ifIndex   : 385941504
 Administrative State   : Enabled
 Configured Duplex   : Auto
 Configured Speed   : Auto
 Configured Flow Control : Enabled
 MAC Address   : 00-05-47-02-A6-96
 Link State   : Up
 Link Duplex   : Full
 Link Speed   : 10 Gb
 Flow Control   : Enabled
 Link Aggregation Group : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State : Agreed with LACP peer
 Link Aggregation Actor : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex   : 385941505
 Operational State   : Up, Active
 SFP Module   : Present (10G Base SR)

[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date   : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics   : Pass
   Current Failure   : None
   Last Failure   : None
   Card Usable   : Yes
 Current Environment:
   Temperature: Card   : 48 C (limit 90 C)
   Temperature: LM87   : 49 C (limit 85 C)

```
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Os contadores NPU eram APROVADOS igualmente. Está aqui a porta 23/1 opõe alguns segundos depois e nada ruim está incrementando:

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type              : 10G Ethernet
 Role                   : Service Port
 Description            : Ingress-Egress Line Card
 Controlled By Card     : 7 (Packet Services Card 3)
 Redundancy Mode        : Port Mode
 Framing Mode           : Unspecified
 Redundant With         : Not Redundant
 Preferred Port         : Non-Revertive
 Physical ifIndex       : 385941504
 Administrative State   : Enabled
 Configured Duplex      : Auto
 Configured Speed       : Auto
 Configured Flow Control : Enabled
 MAC Address            : 00-05-47-02-A6-96
 Link State             : Up
 Link Duplex            : Full
 Link Speed             : 10 Gb
 Flow Control           : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
```

```
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Mas o comando command da “evento do suporte técnico da retardação mostra” mostrou eventos contínuos na porta 23/1. Esta é a melhor maneira de ver a edição relatada.

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type               : 10G Ethernet
 Role                    : Service Port
 Description             : Ingress-Egress Line Card
 Controlled By Card      : 7 (Packet Services Card 3)
 Redundancy Mode         : Port Mode
 Framing Mode            : Unspecified
 Redundant With          : Not Redundant
```

```
 Preferred Port          : Non-Revertive
 Physical ifIndex        : 385941504
 Administrative State    : Enabled
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Configured Flow Control : Enabled
 MAC Address             : 00-05-47-02-A6-96
 Link State              : Up
 Link Duplex             : Full
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

A janela de manutenção seguinte, Cisco contactou e uma migração PSC foi feita para pôr os mapeamentos do cartão de volta ao mapeamento padrão (de modo que o PSC é traçado à placa de linha fisicamente atrás dele: 7 + 16 = 23), como uma migração era precedente feito a contactar Cisco.

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1
```

```
[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type               : 10G Ethernet
 Role                    : Service Port
 Description             : Ingress-Egress Line Card
 Controlled By Card      : 7 (Packet Services Card 3)
 Redundancy Mode         : Port Mode
 Framing Mode            : Unspecified
 Redundant With          : Not Redundant
 Preferred Port          : Non-Revertive
 Physical ifIndex        : 385941504
 Administrative State    : Enabled
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Configured Flow Control : Enabled
 MAC Address             : 00-05-47-02-A6-96
 Link State              : Up
 Link Duplex             : Full
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Uma repartição da placa de linha 23 foi executada:

2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (**LAGGroupUp**) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (**LAGGroupDown**) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 **23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1**
26/1 Srvc 10G Ethernet   Enabled Up   Up   Active   None LA+ 19/1
27/1 Srvc 10G Ethernet   Enabled Up   Up   Active   None LA~ 19/1
28/1 Srvc 10G Ethernet   Enabled Up   Up   Active   None LA+ 19/1
29/1 Srvc 10G Ethernet   Enabled Up   Up   Active   None LA~ 19/1
30/1 Srvc 10G Ethernet   Enabled Up   Up   Active   None LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type   : 10G Ethernet
 Role   : Service Port
 Description   : Ingress-Egress Line Card
 Controlled By Card   : 7 (Packet Services Card 3)
 Redundancy Mode   : Port Mode
 Framing Mode   : Unspecified
 Redundant With   : Not Redundant
 Preferred Port   : Non-Revertive
 Physical ifIndex   : 385941504
 Administrative State   : Enabled
 Configured Duplex   : Auto
 Configured Speed   : Auto
 Configured Flow Control : Enabled
 MAC Address   : 00-05-47-02-A6-96
 Link State   : Up
 Link Duplex   : Full
 Link Speed   : 10 Gb
 Flow Control   : Enabled
 Link Aggregation Group : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State : Agreed with LACP peer
 Link Aggregation Actor : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex   : 385941505
 Operational State   : Up, Active
 SFP Module   : Present (10G Base SR)

[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date   : Tue Aug 24 06:58:31 2010 (Estimated)

```
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

A porta está agora em um bom estado:

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet              Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type              : 10G Ethernet
 Role                   : Service Port
 Description            : Ingress-Egress Line Card
 Controlled By Card     : 7 (Packet Services Card 3)
 Redundancy Mode        : Port Mode
 Framing Mode           : Unspecified
 Redundant With         : Not Redundant
 Preferred Port         : Non-Revertive
 Physical ifIndex       : 385941504
 Administrative State   : Enabled
 Configured Duplex      : Auto
 Configured Speed       : Auto
 Configured Flow Control : Enabled
 MAC Address            : 00-05-47-02-A6-96
 Link State             : Up
 Link Duplex            : Full
 Link Speed             : 10 Gb
 Flow Control           : Enabled
```

```
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Mas o lado do zimbro ainda tinha erros (nenhuma saída mostrada aqui).

A edição permaneceu não resolvida no lado do zimbro.

A fibra foi movida então de 23/1 para 17/1 e o erro ficou com 23/1 e moveu-se para uma porta diferente no lado do zimbro.

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
```

```
[local]PDSN> show port info 23/1

Port: 23/1
 Port Type               : 10G Ethernet
 Role                    : Service Port
 Description             : Ingress-Egress Line Card
 Controlled By Card      : 7 (Packet Services Card 3)
 Redundancy Mode         : Port Mode
 Framing Mode            : Unspecified
 Redundant With          : Not Redundant
 Preferred Port          : Non-Revertive
 Physical ifIndex        : 385941504
 Administrative State    : Enabled
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Configured Flow Control : Enabled
 MAC Address             : 00-05-47-02-A6-96
 Link State              : Up
 Link Duplex             : Full
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

As fibras foram movidas de volta à localização original e a edição era ainda com porta 23/1 (este é todo da perspectiva do zimbro porque como mencionado acima, a edição era considerada já não no ASR 5000 após ter reiniciado a placa de linha 23).

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
```

1205 (**LAGGroupUp**) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (**LAGGroupDown**) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 **23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1**
26/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1
27/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
28/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1
29/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
30/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type   : 10G Ethernet
 Role   : Service Port
 Description   : Ingress-Egress Line Card
 Controlled By Card   : 7 (Packet Services Card 3)
 Redundancy Mode   : Port Mode
 Framing Mode   : Unspecified
 Redundant With   : Not Redundant
 Preferred Port   : Non-Revertive
 Physical ifIndex   : 385941504
 Administrative State   : Enabled
 Configured Duplex   : Auto
 Configured Speed   : Auto
 Configured Flow Control : Enabled
 MAC Address   : 00-05-47-02-A6-96
 Link State   : Up
 Link Duplex   : Full
 Link Speed   : 10 Gb
 Flow Control   : Enabled
 Link Aggregation Group : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State : Agreed with LACP peer
 Link Aggregation Actor : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex   : 385941505
 Operational State   : Up, Active
 SFP Module   : Present (10G Base SR)

[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date   : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics   : Pass
   Current Failure   : None
   Last Failure   : None
   Card Usable   : Yes

```
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Trocar os SFP entre 23/1 e 17/1 não mudou qualquer coisa.

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type              : 10G Ethernet
 Role                   : Service Port
 Description            : Ingress-Egress Line Card
 Controlled By Card     : 7 (Packet Services Card 3)
 Redundancy Mode        : Port Mode
 Framing Mode           : Unspecified
 Redundant With         : Not Redundant
 Preferred Port         : Non-Revertive
 Physical ifIndex       : 385941504
 Administrative State   : Enabled
 Configured Duplex      : Auto
 Configured Speed       : Auto
 Configured Flow Control : Enabled
 MAC Address            : 00-05-47-02-A6-96
 Link State             : Up
 Link Duplex            : Full
 Link Speed             : 10 Gb
 Flow Control           : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
```

```
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Assentar da placa de linha 23/1 cancelou a edição no lado do zimbro.

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type              : 10G Ethernet
 Role                   : Service Port
 Description            : Ingress-Egress Line Card
 Controlled By Card     : 7 (Packet Services Card 3)
 Redundancy Mode        : Port Mode
 Framing Mode           : Unspecified
 Redundant With         : Not Redundant
 Preferred Port         : Non-Revertive
```

```
 Physical ifIndex        : 385941504
 Administrative State    : Enabled
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Configured Flow Control : Enabled
 MAC Address             : 00-05-47-02-A6-96
 Link State              : Up
 Link Duplex             : Full
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Os erros de porta inexplicados no roteador do zimbro espreitaram com porta 27/1 XGLC (o impacto do subscritor)

Este exemplo seguinte, teve muitos dos mesmos passos de Troubleshooting aplicados e vale o estudo. Partiu com alguns logs de advertência do resmgr 14537 desconhecidos que estão sendo relatados junto com um salto da porta 25/1, mas evoluídos em uma edição da porta 27/1 e em umas falhas na configuração de chamada aumentadas.

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
```

from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

```
[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type               : 10G Ethernet
 Role                    : Service Port
 Description             : Ingress-Egress Line Card
 Controlled By Card      : 7 (Packet Services Card 3)
 Redundancy Mode         : Port Mode
 Framing Mode            : Unspecified
 Redundant With          : Not Redundant
 Preferred Port          : Non-Revertive
 Physical ifIndex        : 385941504
 Administrative State    : Enabled
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Configured Flow Control : Enabled
 MAC Address             : 00-05-47-02-A6-96
 Link State              : Up
 Link Duplex             : Full
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
```

```
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

A utilização de porta era desigual na porta 27/1:

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type              : 10G Ethernet
 Role                   : Service Port
 Description            : Ingress-Egress Line Card
 Controlled By Card     : 7 (Packet Services Card 3)
 Redundancy Mode        : Port Mode
 Framing Mode           : Unspecified
 Redundant With         : Not Redundant
 Preferred Port         : Non-Revertive
 Physical ifIndex       : 385941504
 Administrative State   : Enabled
 Configured Duplex      : Auto
 Configured Speed       : Auto
 Configured Flow Control : Enabled
 MAC Address            : 00-05-47-02-A6-96
 Link State             : Up
 Link Duplex            : Full
 Link Speed             : 10 Gb
 Flow Control           : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex        : 385941505
 Operational State      : Up, Active
 SFP Module             : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
```

```
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

No lado do zimbro MX-960 da relação PDSN na pergunta, os erros de entrada estavam aumentando firmemente:

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1

[local]PDSN> show port info 23/1

Port: 23/1
 Port Type              : 10G Ethernet
 Role                   : Service Port
 Description            : Ingress-Egress Line Card
 Controlled By Card     : 7 (Packet Services Card 3)
 Redundancy Mode        : Port Mode
 Framing Mode           : Unspecified
 Redundant With         : Not Redundant
 Preferred Port         : Non-Revertive
 Physical ifIndex       : 385941504
 Administrative State   : Enabled
 Configured Duplex      : Auto
 Configured Speed       : Auto
 Configured Flow Control : Enabled
 MAC Address            : 00-05-47-02-A6-96
 Link State             : Up
 Link Duplex            : Full
```

```
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

As portas no PDSN foram limpadas e em consequência havia um switchover da RETARDAÇÃO e o desequilíbrio da porta foi afastado (uniforme numerado) nas portas recentemente ativas junto com os erros na parada lateral do zimbro. Os erros considerados Previsously da RACHADURA e LCP relativos às configurações de chamada IP Móvéis igualmente pararam.

```
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1205 (LAGGroupUp) card:19, port:1, partner:(007F,64-87-88-66-F7-C0,0016)
2015-May-15+16:47:40.410 [snmp 22002 info] [1/0/13147 <lagmgr:0>
trap_api.c:2387] [software internal system syslog] Internal trap notification
1204 (LAGGroupDown) card:19, port:1, partner:(007F,64-87-88-67-87-C0,0016)

2015-May-15+16:47:40.410 [lagmgr 179050 warning] [1/0/13147 <lagmgr:0>
lagmgr_state.c:1314] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner
from (007F,64-87-88-67-87-C0,0016) on 17/1, 19/1, 23/1, 27/1, 29/1
to (007F,64-87-88-66-F7-C0,0016) on 18/1, 20/1, 26/1, 28/1, 30/1

[local]PDSN> show port table | grep LA 17/1 Srvc 10G Ethernet Enabled Up Up Active None LA~ 19/1
18/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 19/1 Srvc 10G Ethernet Enabled - Up -
None LA~ 19/1 20/1 Srvc 10G Ethernet Enabled Up Up Active None LA+ 19/1 23/1 Srvc 10G Ethernet
Enabled Up Up Active None LA* 19/1
26/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
27/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
28/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
29/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA~ 19/1
30/1  Srvc 10G Ethernet             Enabled  Up   Up   Active   None  LA+ 19/1
```

```
[local]PDSN> show port info 23/1

Port: 23/1
 Port Type               : 10G Ethernet
 Role                    : Service Port
 Description             : Ingress-Egress Line Card
 Controlled By Card      : 7 (Packet Services Card 3)
 Redundancy Mode         : Port Mode
 Framing Mode            : Unspecified
 Redundant With          : Not Redundant
 Preferred Port          : Non-Revertive
 Physical ifIndex        : 385941504
 Administrative State    : Enabled
 Configured Duplex       : Auto
 Configured Speed        : Auto
 Configured Flow Control : Enabled
 MAC Address             : 00-05-47-02-A6-96
 Link State              : Up
 Link Duplex             : Full
 Link Speed              : 10 Gb
 Flow Control            : Enabled
 Link Aggregation Group  : 50 (global, member)
 Link Aggregation LACP   : Active, Short, Auto
 Link Aggregation Master : 19/1
 Link Aggregation State  : Agreed with LACP peer
 Link Aggregation Actor  : (8000,00-05-47-02-B1-97,001A,8000,1701)
 Link Aggregation Peer   : (007F,64-87-88-67-87-C0,0016,007F,0013)
 Logical ifIndex         : 385941505
 Operational State       : Up, Active
 SFP Module              : Present (10G Base SR)


[local]PDSN>show card diag 23

Card 23:
 Counters:
   In Service Date       : Tue Aug 24 06:58:31 2010 (Estimated)
 Status:
   IDEEPROM Magic Number : Good
   Card Diagnostics      : Pass
   Current Failure       : None
   Last Failure          : None
   Card Usable           : Yes
 Current Environment:
   Temperature: Card     : 48 C (limit 90 C)
   Temperature: LM87     : 49 C (limit 85 C)
   Temperature: PHY      : 48 C (limit 90 C)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 1.2V         : 1.205 V (min 1.140 V, max 1.260 V)
   Voltage: 2.5V         : 2.522 V (min 2.375 V, max 2.625 V)
   Voltage: 3.3V         : 3.285 V (min 3.135 V, max 3.465 V)
   Voltage: 1.8V         : 1.805 V (min 1.710 V, max 1.890 V)
```

Após ter restaurado as estatísticas de porta e o failing a RETARDAÇÃO de volta às portas impares, os erros de entrada no zimbro começou a aumentar outra vez. Desde que o trajeto tinha sido limpado já decidiu-se contornear completamente o trajeto existente inteiro, substituindo ambos os SFP (porta 0/1/2 no zimbro e porta 27/1 no PDSN) e executando uma fibra diretamente entre os Nós. Uma vez que o tráfego foi retornado à RETARDAÇÃO impar os erros de entrada continuados a incrementar exatamente como tinha sido testemunhado com o trajeto existente. A utilização de porta igualmente foi para trás a desequilibrado na porta 27.

show interfaces xe-0/1/2 extensive | grep Error

BPDU Error: None, MAC-REWRITE Error: None, Loopback: None,
Input errors:
Errors: 2898, Drops: 0, Framing errors: 114, Runts: 0, Policed discards: 0,
L3 incompletes: 2784, L2 channel errors: 0, L2 mismatch timeouts: 0,
FIFO errors: 0, Resource errors: 0

Porque os SFP e a fibra eram completamente novos e o trajeto era um tiro reto entre os Nós, pareceria os erros de entrada está começando a montante das fibras, possivelmente no PDSN XCLC 27. O tráfego de volta às portas uniformes não foi parado o impacto pelo momento antes de decidir em próximas etapas. O zimbro confirmou os pacotes IPv4/IPv6 ruins da porta 27 ASR.

Em uma janela de manutenção mais atrasada, as fibras foram trocadas entre as portas 23 e 27:

show interfaces xe-0/1/2 extensive | grep Error
BPDU Error: None, MAC-REWRITE Error: None, Loopback: None,
Input errors:
Errors: 2898, Drops: 0, Framing errors: 114, Runts: 0, Policed discards: 0,
L3 incompletes: 2784, L2 channel errors: 0, L2 mismatch timeouts: 0,
FIFO errors: 0, Resource errors: 0

E após o switchover da RETARDAÇÃO uma porta 27 continuou a enviar erros e desequilíbrio da porta.

```
Mon May 11 05:37:20 2015 Internal trap notification 1204 (LAGGroupDown) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016) Mon May 11 05:37:20 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) [local]NWBLWICZPN2 DO-PDSN> show port utilization
table
Monday May 11 05:40:06 UTC 2015
------ Average Port Utilization (in mbps) ------
Port Type Current 5min 15min
Rx Txx Rx Tx Rx Tx
----- ---------------------- ------- ------- ------- ------- ------- ----
19/1 10G Ethernet 357 386 137 138 45 46
20/1 10G Ethernet 0 0 178 168 314 301
23/1 10G Ethernet 346 349 173 185 57 61
26/1 10G Ethernet 0 0 197 189 324 316
27/1 10G Ethernet 404 1921 147 701 49 233
28/1  10G Ethernet              0       0        207     226      299     318

Mon May 11 05:40:42 2015 Internal trap notification 39 (AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:42:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:49:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:50:04 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:52:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:53:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:54:29 2015 Internal trap notification 1204
(LAGGroupDown) card:19,
```

```
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) Mon May 11 05:54:29 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016)
```

As fibras foram trocadas para trás:

```
Mon May 11 05:37:20 2015 Internal trap notification 1204 (LAGGroupDown) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016) Mon May 11 05:37:20 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) [local]NWBLWICZPN2 DO-PDSN> show port utilization
table
Monday May 11 05:40:06 UTC 2015
------ Average Port Utilization (in mbps) ------
Port Type Current 5min 15min
Rx Txx Rx Tx Rx Tx
----- ---------------------- ------- ------- ------- ------- ------- ----
19/1 10G Ethernet 357 386 137 138 45 46
20/1 10G Ethernet 0 0 178 168 314 301
23/1 10G Ethernet 346 349 173 185 57 61
26/1 10G Ethernet 0 0 197 189 324 316
27/1 10G Ethernet 404 1921 147 701 49 233
28/1  10G Ethernet              0       0        207     226      299     318

Mon May 11 05:40:42 2015 Internal trap notification 39 (AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:42:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:49:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:50:04 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:52:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:53:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:54:29 2015 Internal trap notification 1204
(LAGGroupDown) card:19,

port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) Mon May 11 05:54:29 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016)
```

XCLC 27 foi assentado:

```
Mon May 11 05:37:20 2015 Internal trap notification 1204 (LAGGroupDown) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016) Mon May 11 05:37:20 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) [local]NWBLWICZPN2 DO-PDSN> show port utilization
table
Monday May 11 05:40:06 UTC 2015
------ Average Port Utilization (in mbps) ------
Port Type Current 5min 15min
Rx Txx Rx Tx Rx Tx
```

```
----- ---------------------- ------- ------- ------- ------- ------- ----
19/1 10G Ethernet 357 386 137 138 45 46
20/1 10G Ethernet 0 0 178 168 314 301
23/1 10G Ethernet 346 349 173 185 57 61
26/1 10G Ethernet 0 0 197 189 324 316
27/1 10G Ethernet 404 1921 147 701 49 233
28/1  10G Ethernet              0       0        207     226      299     318

Mon May 11 05:40:42 2015 Internal trap notification 39 (AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:42:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:49:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:50:04 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:52:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:53:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:54:29 2015 Internal trap notification 1204
(LAGGroupDown) card:19,

port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) Mon May 11 05:54:29 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016)
```

A RETARDAÇÃO foi feita a active outra vez e a edição foi considerada ainda.

```
Mon May 11 05:37:20 2015 Internal trap notification 1204 (LAGGroupDown) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016) Mon May 11 05:37:20 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) [local]NWBLWICZPN2 DO-PDSN> show port utilization
table
Monday May 11 05:40:06 UTC 2015
------ Average Port Utilization (in mbps) ------
Port Type Current 5min 15min
Rx Txx Rx Tx Rx Tx
----- ---------------------- ------- ------- ------- ------- ------- ----
19/1 10G Ethernet 357 386 137 138 45 46
20/1 10G Ethernet 0 0 178 168 314 301
23/1 10G Ethernet 346 349 173 185 57 61
26/1 10G Ethernet 0 0 197 189 324 316
27/1 10G Ethernet 404 1921 147 701 49 233
28/1  10G Ethernet              0       0        207     226      299     318

Mon May 11 05:40:42 2015 Internal trap notification 39 (AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:42:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:49:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:50:04 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:52:42 2015 Internal trap notification 39
```

```
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:53:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:54:29 2015 Internal trap notification 1204
(LAGGroupDown) card:19,

port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) Mon May 11 05:54:29 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016)
```

Uma migração PSC de PSC 11 (reside atrás da placa de linha 27) a 16 cancela a edição como o Switches da RETARDAÇÃO às portas uniformes (esperadas).

```
Mon May 11 05:37:20 2015 Internal trap notification 1204 (LAGGroupDown) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016) Mon May 11 05:37:20 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) [local]NWBLWICZPN2 DO-PDSN> show port utilization
table
Monday May 11 05:40:06 UTC 2015
------ Average Port Utilization (in mbps) ------
Port Type Current 5min 15min
Rx Txx Rx Tx Rx Tx
----- ---------------------- ------- ------- ------- ------- ------- ----
19/1 10G Ethernet 357 386 137 138 45 46
20/1 10G Ethernet 0 0 178 168 314 301
23/1 10G Ethernet 346 349 173 185 57 61
26/1 10G Ethernet 0 0 197 189 324 316
27/1 10G Ethernet 404 1921 147 701 49 233
28/1  10G Ethernet              0       0        207     226      299     318

Mon May 11 05:40:42 2015 Internal trap notification 39 (AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:05 2015 Internal trap notification 40
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(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:42:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:49:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:50:04 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:52:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:53:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:54:29 2015 Internal trap notification 1204
(LAGGroupDown) card:19,

port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) Mon May 11 05:54:29 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016)
```

O PSC 11 foi assentado e recarregado então (os últimos devem ser desnecessários)

```
Mon May 11 05:37:20 2015 Internal trap notification 1204 (LAGGroupDown) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016) Mon May 11 05:37:20 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
```

```
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) [local]NWBLWICZPN2 DO-PDSN> show port utilization
table
Monday May 11 05:40:06 UTC 2015
------ Average Port Utilization (in mbps) ------
Port Type Current 5min 15min
Rx Txx Rx Tx Rx Tx
----- ---------------------- ------- ------- ------- ------- ------- ----
19/1 10G Ethernet 357 386 137 138 45 46
20/1 10G Ethernet 0 0 178 168 314 301
23/1 10G Ethernet 346 349 173 185 57 61
26/1 10G Ethernet 0 0 197 189 324 316
27/1 10G Ethernet 404 1921 147 701 49 233
28/1  10G Ethernet              0       0        207     226      299     318

Mon May 11 05:40:42 2015 Internal trap notification 39 (AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:42:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:49:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:50:04 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:52:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:53:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:54:29 2015 Internal trap notification 1204
(LAGGroupDown) card:19,

port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) Mon May 11 05:54:29 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016)
```

A migração foi feita de volta a PSC 11 e a edição começou outra vez. O problema tinha sido isolado convenientemente a PSC 11 conectado a XGLC 27.

```
Mon May 11 05:37:20 2015 Internal trap notification 1204 (LAGGroupDown) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016) Mon May 11 05:37:20 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) [local]NWBLWICZPN2 DO-PDSN> show port utilization
table
Monday May 11 05:40:06 UTC 2015
------ Average Port Utilization (in mbps) ------
Port Type Current 5min 15min
Rx Txx Rx Tx Rx Tx
----- ---------------------- ------- ------- ------- ------- ------- ----
19/1 10G Ethernet 357 386 137 138 45 46
20/1 10G Ethernet 0 0 178 168 314 301
23/1 10G Ethernet 346 349 173 185 57 61
26/1 10G Ethernet 0 0 197 189 324 316
27/1 10G Ethernet 404 1921 147 701 49 233
28/1  10G Ethernet              0       0        207     226      299     318

Mon May 11 05:40:42 2015 Internal trap notification 39 (AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:41:42 2015 Internal trap notification 39
```

```
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:42:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:49:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:50:04 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:52:42 2015 Internal trap notification 39
(AAAAuthSvrUnreachable)
server 1 ip address 209.165.200.225 Mon May 11 05:53:05 2015 Internal trap notification 40
(AAAAuthSvrReachable)
server 1 ip address 209.165.200.225 Mon May 11 05:54:29 2015 Internal trap notification 1204
(LAGGroupDown) card:19,

port:1, partner:(007F,2C-21-72-1A-B7-C0,0016) Mon May 11 05:54:29 2015 Internal trap
notification 1205 (LAGGroupUp) card:19,
port:1, partner:(007F,2C-21-72-5E-57-C0,0016)
```

Uma migração foi feita de volta a PSC 16 para cancelar pelo momento a edição até uma substituição RMA:

```
Mon May 11 06:56:07 2015 Internal trap notification 1256 (MigrateStart) from
card 11 to card 16 Mon May 11 06:56:43 2015 Internal trap notification 1024 (PortDown) card 27
port
1 port type 10G Ethernet Mon May 11 06:56:43 2015 Internal trap notification 55 (CardActive)
card 27 type
10 Gig Ethernet Line Card Mon May 11 06:56:44 2015 Internal trap notification 55 (CardActive)
card 16 type
Packet Services Card 3 Mon May 11 06:56:44 2015 Internal trap notification 55 (CardActive) card
40 type
Redundancy Crossbar Card Mon May 11 06:56:44 2015 Internal trap notification 55 (CardActive)
card 41 type
Redundancy Crossbar Card Mon May 11 06:56:44 2015 Internal trap notification 60 (CardDown) card
11 type
Packet Services Card 3 Mon May 11 06:56:44 2015 Internal trap notification 1257
(MigrateComplete) from
card 11 to card 16 Mon May 11 06:56:44 2015 Internal trap notification 1025 (PortUp) card 27
port 1
port type 10G Ethernet Mon May 11 06:57:58 2015 Internal trap notification 5 (CardUp) card 11
type
Packet Services Card 3 [local]PDSN> show rct stats Monday May 11 07:08:26 UTC 2015 RCT stats
Details (Last 4 Actions) Action Type From To Start Time Duration ----------------- --------- ---
- ---- ----------------------- ----------
Migration Planned 11 16 2015-May-11+06:26:04.373 36.453 sec Shutdown N/A 11 0 2015-May-
11+06:39:48.153 0.223 sec Migration Planned 16 11 2015-May-11+06:51:55.785 41.630 sec Migration
Planned 11 16 2015-May-11+06:56:08.452 35.037 sec RCT stats Summary ----------------- Migrations
= 3, Average time = 37.707 sec Switchovers = 0 [local]PDSN> show card mappings Monday May 11
07:10:22 UTC 2015 Slot Mapping Slot ---------------------------------- -------------- ---------
----------------- 17 None - 18 None - 19 10 Gig Ethernet Line Card <-- direct --> 3 Packet
Services Card 3 20 10 Gig Ethernet Line Card <-- direct --> 4 Packet Services Card 3 21 1000
Ethernet Line Card <-- direct --> 5 Packet Services Card 3 22 None - 23 10 Gig Ethernet Line
Card <-- direct --> 7 Packet Services Card 3 24 Switch Processor I/O Card <------------> 8
System Management Card 25 Switch Processor I/O Card <------------> 8 System Management Card 26
10 Gig Ethernet Line Card <-- direct --> 10 Packet Services Card 3 27 10 Gig Ethernet Line Card
<--- RCCs ---> 16 Packet Services Card 3
28 10 Gig Ethernet Line Card         <-- direct -->  12 Packet Services Card 3
```

Mas o RMA ainda não resolveu a edição.

```
Mon May 11 06:56:07 2015 Internal trap notification 1256 (MigrateStart) from
card 11 to card 16 Mon May 11 06:56:43 2015 Internal trap notification 1024 (PortDown) card 27
port
1 port type 10G Ethernet Mon May 11 06:56:43 2015 Internal trap notification 55 (CardActive)
card 27 type
10 Gig Ethernet Line Card Mon May 11 06:56:44 2015 Internal trap notification 55 (CardActive)
card 16 type
Packet Services Card 3 Mon May 11 06:56:44 2015 Internal trap notification 55 (CardActive) card
40 type
Redundancy Crossbar Card Mon May 11 06:56:44 2015 Internal trap notification 55 (CardActive)
card 41 type
Redundancy Crossbar Card Mon May 11 06:56:44 2015 Internal trap notification 60 (CardDown) card
11 type
Packet Services Card 3 Mon May 11 06:56:44 2015 Internal trap notification 1257
(MigrateComplete) from
card 11 to card 16 Mon May 11 06:56:44 2015 Internal trap notification 1025 (PortUp) card 27
port 1
port type 10G Ethernet Mon May 11 06:57:58 2015 Internal trap notification 5 (CardUp) card 11
type
Packet Services Card 3 [local]PDSN> show rct stats Monday May 11 07:08:26 UTC 2015 RCT stats
Details (Last 4 Actions) Action Type From To Start Time Duration ----------------- --------- ---
- ---- ----------------------- ----------
Migration Planned 11 16 2015-May-11+06:26:04.373 36.453 sec Shutdown N/A 11 0 2015-May-
11+06:39:48.153 0.223 sec Migration Planned 16 11 2015-May-11+06:51:55.785 41.630 sec Migration
Planned 11 16 2015-May-11+06:56:08.452 35.037 sec RCT stats Summary ----------------- Migrations
= 3, Average time = 37.707 sec Switchovers = 0 [local]PDSN> show card mappings Monday May 11
07:10:22 UTC 2015 Slot Mapping Slot ---------------------------------- -------------- ---------
----------------- 17 None - 18 None - 19 10 Gig Ethernet Line Card <-- direct --> 3 Packet
Services Card 3 20 10 Gig Ethernet Line Card <-- direct --> 4 Packet Services Card 3 21 1000
Ethernet Line Card <-- direct --> 5 Packet Services Card 3 22 None - 23 10 Gig Ethernet Line
Card <-- direct --> 7 Packet Services Card 3 24 Switch Processor I/O Card <------------> 8
System Management Card 25 Switch Processor I/O Card <------------> 8 System Management Card 26
10 Gig Ethernet Line Card <-- direct --> 10 Packet Services Card 3 27 10 Gig Ethernet Line Card
<--- RCCs ---> 16 Packet Services Card 3
28 10 Gig Ethernet Line Card         <-- direct -->  12 Packet Services Card 3
```

Exigiu um reload do chassi resolver finalmente a edição. Nenhuma causa de raiz era nunca determinada. Mas, o ponto aqui é os passos de Troubleshooting tomados para tentar resolver a edição trabalhada finalmente com um reload. Às vezes os resultados não são o que são esperadas originalmente com base nos passos de Troubleshooting tomados. Pensou-se que o RMA estava indo certamente resolver finalmente a edição mas não fez. Todavia as etapas apropriadas para eliminar culpados potenciais foram tomadas.

A RETARDAÇÃO que o switchover não colou devido falhou XGLC

Um switchover da RETARDAÇÃO impar às portas uniformes (19, 23, 27 => 20, 26, 28) não reteria e comutaria dentro de um minuto. Isso podia implicar um problema com as umas ou várias das portas da RETARDAÇÃO que não podem manter a conexão. Note a diminuição na utilização de porta, mas o conjunto de dados é limitado devido ao curto período de tempo onde as portas uniformes ficariam ativas:

```
[XGWout]XGW# show port util table
Thursday April 26 07:17:31 UTC 2012
                                ------ Average Port Utilization (in mbps) ------
Port   Type                       Current           5min             15min
```

```
                                Rx      Tx      Rx       Tx       Rx     Tx
----- ------------------------  ------- -------  ------- -------  ------- -------
19/1  10G Ethernet              895     907      906     931      939     983
20/1  10G Ethernet              0       0        20      14       6       4
21/1  1000 Ethernet             0       0        0       3        0       3
22/1  1000 Ethernet             3       46       3       46       3       47
23/1  10G Ethernet              948     946      883     917      918     956
26/1  10G Ethernet              0       0        16      11       5       3
27/1  10G Ethernet              949     950      989     934      1029    955
28/1  10G Ethernet              0       0        4       14       1       4

[XGWout]XGW# link-aggregation port switch to 20/1
Thursday April 26 07:20:20 UTC 2012
Are you sure? [Yes|No]: yes
Thursday April 26 07:20:22 UTC 2012

2012-Apr-26+07:20:22.826 [lagmgr 179050 warning] [1/0/2337 <lagmgr:0>
lagmgr_state.c:1163] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner from (007F,00-26-88-8E-
4F-F0,0034) to (007F,00-26-88-A7-FF-F0,0034)

Apr 26 07:21:28 kslxmsce2.msc.vzwnet.com evlogd: [local-60sec28.393]
[lagmgr 179050 warning] [1/0/2337 <lagmgr:0> lagmgr_state.c:1163]
[software internal system critical-info syslog] LAG group 50 (global)
with master port 19/1 has changed partner from
(007F,00-26-88-A7-FF-F0,0034) to (007F,00-26-88-8E-4F-F0,0034) [XGWout]XGW# show port util table
Thursday April 26 07:20:46 UTC 2012 ------ Average Port Utilization (in mbps) ------ Port Type
Current 5min 15min Rx Tx Rx Tx Rx Tx ----- ------------------------ ------- ------- ------- ----
--- ------- ------- 19/1 10G Ethernet 0 0 896 917 927 965 20/1 10G Ethernet 678 526 45 33 15 11
21/1 1000 Ethernet 0 0 0 3 0 3 22/1 1000 Ethernet 3 45 3 46 3 46 23/1 10G Ethernet 0 0 881 898
903 943 26/1 10G Ethernet 627 442 16 11 5 3 27/1 10G Ethernet 0 0 874 850 980 914 28/1 10G
Ethernet 138 436 15 47 5 15 [XGWout]XGW# show port util table Thursday April 26 07:24:58 UTC
2012 ------ Average Port Utilization (in mbps) ------ Port Type Current 5min 15min Rx Tx Rx Tx
Rx Tx ----- ------------------------ ------- ------- ------- ------- ------- ------- 19/1 10G
Ethernet 847 911 742 719 860 874 20/1 10G Ethernet 0 0 137 104 52 39 21/1 1000 Ethernet 0 0 0 4
0 4 22/1 1000 Ethernet 3 48 3 47 3 47 23/1 10G Ethernet 840 804 710 718 837 862 26/1 10G
Ethernet 0 0 133 95 50 35 27/1 10G Ethernet 833 814 671 697 883 856 28/1 10G Ethernet 0 0 33 92
12 35
```

A fim pesquisar defeitos mais, uma das portas da RETARDAÇÃO (27/1) foi desabilitado, forçando o switchover da RETARDAÇÃO para permanecer no lugar e não parte traseira do interruptor (o sistema switchover a menos que as portas comutará sobre para ter uma alta capacidade do que as portas atualmente ativos). Como pode ser visto abaixo, a utilização de porta vai para baixo significativamente nas portas UNIFORMES. Quando a porta 27/1 re-é permitida, a RETARDAÇÃO comuta de volta às portas impares sem intervenção devido às portas UNIFORMES que têm mais capacidade.

```
[XGWout]XGW# show port util table
Thursday April 26 07:17:31 UTC 2012
                                ------ Average Port Utilization (in mbps) ------
Port   Type                       Current           5min             15min
                                Rx      Tx      Rx       Tx       Rx     Tx
----- ------------------------  ------- -------  ------- -------  ------- -------
19/1  10G Ethernet              895     907      906     931      939     983
20/1  10G Ethernet              0       0        20      14       6       4
21/1  1000 Ethernet             0       0        0       3        0       3
22/1  1000 Ethernet             3       46       3       46       3       47
23/1  10G Ethernet              948     946      883     917      918     956
26/1  10G Ethernet              0       0        16      11       5       3
27/1  10G Ethernet              949     950      989     934      1029    955
28/1  10G Ethernet              0       0        4       14       1       4
```

```
[XGWout]XGW# link-aggregation port switch to 20/1
Thursday April 26 07:20:20 UTC 2012
Are you sure? [Yes|No]: yes
Thursday April 26 07:20:22 UTC 2012

2012-Apr-26+07:20:22.826 [lagmgr 179050 warning] [1/0/2337 <lagmgr:0>
lagmgr_state.c:1163] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner from (007F,00-26-88-8E-
4F-F0,0034) to (007F,00-26-88-A7-FF-F0,0034)

Apr 26 07:21:28 kslxmsce2.msc.vzwnet.com evlogd: [local-60sec28.393]
[lagmgr 179050 warning] [1/0/2337 <lagmgr:0> lagmgr_state.c:1163]
[software internal system critical-info syslog] LAG group 50 (global)
with master port 19/1 has changed partner from
(007F,00-26-88-A7-FF-F0,0034) to (007F,00-26-88-8E-4F-F0,0034) [XGWout]XGW# show port util table
Thursday April 26 07:20:46 UTC 2012 ------ Average Port Utilization (in mbps) ------ Port Type
Current 5min 15min Rx Tx Rx Tx Rx Tx ----- ----------------------- ------- ------- ------- ----
--- ------- ------- 19/1 10G Ethernet 0 0 896 917 927 965 20/1 10G Ethernet 678 526 45 33 15 11
21/1 1000 Ethernet 0 0 0 3 0 3 22/1 1000 Ethernet 3 45 3 46 3 46 23/1 10G Ethernet 0 0 881 898
903 943 26/1 10G Ethernet 627 442 16 11 5 3 27/1 10G Ethernet 0 0 874 850 980 914 28/1 10G
Ethernet 138 436 15 47 5 15 [XGWout]XGW# show port util table Thursday April 26 07:24:58 UTC
2012 ------ Average Port Utilization (in mbps) ------ Port Type Current 5min 15min Rx Tx Rx Tx
Rx Tx ----- ----------------------- ------- ------- ------- ------- ------- ------- 19/1 10G
Ethernet 847 911 742 719 860 874 20/1 10G Ethernet 0 0 137 104 52 39 21/1 1000 Ethernet 0 0 0 4
0 4 22/1 1000 Ethernet 3 48 3 47 3 47 23/1 10G Ethernet 840 804 710 718 837 862 26/1 10G
Ethernet 0 0 133 95 50 35 27/1 10G Ethernet 833 814 671 697 883 856 28/1 10G Ethernet 0 0 33 92
12 35
```

Não é excedente óbvio que movem o problema existem, e a utilização de Tx não é aquela desigual.

do “a mostra dos contadores do npu show port” claramente um problema com contador de erros “encabeçamento ruim do IPv4” que aumenta em uma taxa alta (e nela não deve acontecer de todo), mas devido a este ser uma aplicação da RETARDAÇÃO, com base na implementação atual, todos os contadores é cummulative para todas as portas da RETARDAÇÃO em um grupo da RETARDAÇÃO, e assim que não pode ser determinada que a porta está tendo o problema - poderia ser alguns delas. (os stats para todas as portas combinadas são encontrados sob a porta mestra, neste caso 19/1 - os stats em todas as portas individuais da RETARDAÇÃO do grupo da RETARDAÇÃO não têm NENHUM significado e devem ser ignorados).

Mas, stats das captações NPU dos all_pacs do comando do suporte técnico da “os stats do npu mostra debugam” em uma base PSC, e o seguinte mostra que o problema “está associado claramente com” o PSC 12 e seu (padrão) XGLC conectado 28:

```
******** show npu stats debug all_pacs *******
Thursday April 26 09:01:41 UTC 2012
      Line 524176:   debug-pkt-drop-invalid-iphdr         3601919
      Line 524245:   debug-pkt-drop-invalid-iphdr             265
      Line 524303:   debug-pkt-drop-invalid-iphdr             141
      Line 524407:   debug-pkt-drop-invalid-iphdr         3468928
      Line 524471:   debug-pkt-drop-invalid-iphdr             216
      Line 524529:   debug-pkt-drop-invalid-iphdr         3701708
      Line 524595:   debug-pkt-drop-invalid-iphdr         6501414 <= NPU debug
stats for slot 12 ******** show port npu counters ******* Thursday April 26 09:01:40 UTC 2012
Counters for port 19/1 Counter Rx Frames Rx Bytes Tx Frames Tx Bytes -------------------- ------
------- -------------- ------------- --------------- Bad IPv4 header 6493067  2820637429
n/a             n/a


******** show npu stats debug all_pacs *******
```

```
Thursday April 26 09:03:36 UTC 2012
      Line 985303:   debug-pkt-drop-invalid-iphdr         3601919
      Line 985372:   debug-pkt-drop-invalid-iphdr             292
      Line 985430:   debug-pkt-drop-invalid-iphdr             141
      Line 985534:   debug-pkt-drop-invalid-iphdr         3468928
      Line 985598:   debug-pkt-drop-invalid-iphdr             226
      Line 985656:   debug-pkt-drop-invalid-iphdr         3701708
      Line 985722:   debug-pkt-drop-invalid-iphdr         7190387 <= NPU debug
stats for slot 12 (INCREASING) ******** show port npu counters ******* Thursday April 26
09:03:35 UTC 2012 Counters for port 19/1 Counter Rx Frames Rx Bytes Tx Frames Tx Bytes ---------
----------- ------------ -------------- ------------ -------------- Bad IPv4 header 7182088
3089244876           n/a            n/a
```

A pergunta ainda transforma-se o que o cartão está causando realmente a esta edição, o PSC 12 conectado a XGLC 28, ou a XGLC 28 próprio?

Os problemas NPU seriam resolvidos tipicamente com uma migração PSC do PSC 12 conectado a XGLC 28, implicando uma edição com o PSC. Quando isto foi tentado em uma janela de manutenção mais atrasada, não resolveu a edição, como fizeram uma restauração da placa de linha assim como uma restauração do npumgr.

Estão aqui as saídas de Troubleshooting da restauração do npumgr, XGLC 28 restauradas, e a migração 12 16 PSC, os últimos de que resultados em PSC 16 que está sendo conectado a XGLC 28 e eliminam assim PSC 12 que é a edição. As verificações para o aumento debugar-Pacote-gota-inválido-iphdr foram feitas entre cada um das etapas para confirmar que a edição não era resolved. A parada programada de uma das portas da RETARDAÇÃO (27/1) foi feita para forçar um swtichover da RETARDAÇÃO para permanecer comutado sobre para finalidades do levantamento de dados, e um nenhum fechado permitido a RETARDAÇÃO comutar para trás quando testes feitos.

```
[local]XGW# show port util table
Saturday April 28 05:03:49 UTC 2012
                                ------ Average Port Utilization (in mbps) ------
Port   Type                       Current           5min             15min
                                  Rx      Tx      Rx       Tx       Rx     Tx
----- ------------------------  ------- -------  ------- -------  ------- -------
19/1  10G Ethernet              2311    2395     2384    2415     2384    2402
20/1  10G Ethernet              0       0        0       0        0       0
21/1  1000 Ethernet            0       9        0       9        0       9
22/1  1000 Ethernet            4       70       4       77       4       73
23/1  10G Ethernet              2230    2224     2222    2293     2202    2268
26/1  10G Ethernet              0       0        0       0        0       0
27/1  10G Ethernet              2496    2433     2505    2427     2440    2381
28/1  10G Ethernet              0       0        0       0        0       0

[local]XGW(config)# port ether 27/1
Saturday April 28 05:04:44 UTC 2012
[local]XGW(config-port-27/1)# shutdown
Saturday April 28 05:04:50 UTC 2012

Sat Apr 28 05:04:50 2012 Internal trap notification 35 (PortLinkDown) card 27
port 1 ifindex 453050368 Sat Apr 28 05:04:50 2012 Internal trap notification 1024 (PortDown)
card 27 port
1 ifindex 453050368port type 10G Ethernet Sat Apr 28 05:04:50 2012 Internal trap notification 93
(CardStandby) card 27 [local]XGW# show port table all Saturday April 28 05:04:59 UTC 2012 Port
Type Admin Oper Link State Redundant ----- ----------------------- -------- ---- ---- ---------
------- ----------- 19/1 10G Ethernet Enabled - Up - None ~19/1 Untagged Enabled Up - Active -
20/1 10G Ethernet Enabled Up Up Active None +19/1 [local]XGW# show port util table Saturday
April 28 05:05:42 UTC 2012 ------ Average Port Utilization (in mbps) ------ Port Type Current
5min 15min Rx Tx Rx Tx Rx Tx ----- ----------------------- ------- ------- ------- ------- ----
```

--- ------- 19/1 10G Ethernet 0 0 2150 2182 2311 2333 20/1 10G Ethernet 1488 1064 0 0 0 0 21/1
1000 Ethernet 0 0 0 9 0 10 22/1 1000 Ethernet 4 70 4 72 4 73 23/1 10G Ethernet 0 0 2163 2225
2182 2251 26/1 10G Ethernet 1353 989 94 68 31 22 28/1 10G Ethernet 372 1042 14 41 4 13
[local]XGW# show npu stats debug all-pacs Saturday April 28 05:07:28 UTC 2012 NPU debug stats
for slot 12 debug-pkt-drop-invalid-iphdr 10786357 [local]XGW# show npu stats debug all-pacs
Saturday April 28 05:07:47 UTC 2012 NPU debug stats for slot 12 debug-pkt-drop-invalid-iphdr
10966718 [local]XGW# task kill facility npumgr instance 12 Saturday April 28 05:33:18 UTC 2012
Sat Apr 28 05:33:18 2012 Internal trap notification 73 (ManagerFailure) facility
npumgr instance 12 card 12 cpu 1 Sat Apr 28 05:33:18 2012 Internal trap notification 150
(TaskFailed) facility
npumgr instance 12 on card 12 cpu 1 Sat Apr 28 05:33:26 2012 Internal trap notification 35
(PortLinkDown) card 28
port 1 ifindex 469827585 Sat Apr 28 05:33:26 2012 Internal trap notification 1024 (PortDown)
card 28 port
1 ifindex 469827585port type 10G Ethernet Sat Apr 28 05:33:26 2012 Internal trap notification 36
(PortLinkUp) card 28 port
1 ifindex 469827585 Sat Apr 28 05:33:26 2012 Internal trap notification 1025 (PortUp) card 28
port 1
ifindex 469827585port type 10G Ethernet [local]XGW# show port util table Saturday April 28
05:34:24 UTC 2012 ------ Average Port Utilization (in mbps) ------ Port Type Current 5min 15min
Rx Tx Rx Tx Rx Tx ----- ----------------------- ------- ------- ------- ------- ------- -------
19/1 10G Ethernet 0 0 0 0 0 0 20/1 10G Ethernet 894 723 837 661 935 728 21/1 1000 Ethernet 0 36
0 7 0 7 22/1 1000 Ethernet 4 127 4 78 4 79 23/1 10G Ethernet 0 0 0 0 0 0 26/1 10G Ethernet 906
647 780 571 865 644 28/1 10G Ethernet 356 649 0 0 0 0 [local]XGW# show npu stats debug slot 12
Saturday April 28 05:35:16 UTC 2012 NPU debug stats for slot 12 debug-pkt-drop-invalid-iphdr
540273 [local]XGW# show npu stats debug slot 12 Saturday April 28 05:35:38 UTC 2012 NPU debug
stats for slot 12 debug-pkt-drop-invalid-iphdr 692665 Sat Apr 28 05:38:49 2012 Internal trap
notification 35 (PortLinkDown) card 28
port 1 ifindex 469827584 Sat Apr 28 05:38:49 2012 Internal trap notification 1024 (PortDown)
card 28 port
1 ifindex 469827584port type 10G Ethernet Sat Apr 28 05:38:49 2012 Internal trap notification 35
(PortLinkDown) card 28
port 1 ifindex 469827585 Sat Apr 28 05:38:49 2012 Internal trap notification 60 (CardDown) card
28 Sat Apr 28 05:38:51 2012 Internal trap notification 5 (CardUp) card 28 Sat Apr 28 05:38:51
2012 Internal trap notification 4 (CardRebootRequest) card 28 Sat Apr 28 05:38:51 2012 Internal
trap notification 84 (ServiceLossLC) Slots 28
and 44 has configured for card type 10 Gig Ethernet Line Card, but neither active Sat Apr 28
05:38:53 2012 Internal trap notification 55 (CardActive) card 28 Sat Apr 28 05:38:53 2012
Internal trap notification 1111 (ServiceLossLCClear)
Slots 28 and 44 has configured for card type 10 Gig Et hernet Line Card, one of them is active
now Sat Apr 28 05:38:53 2012 Internal trap notification 93 (CardStandby) card 28 Sat Apr 28
05:38:55 2012 Internal trap notification 36 (PortLinkUp) card 28 port
1 ifindex 469827584 Sat Apr 28 05:38:55 2012 Internal trap notification 1025 (PortUp) card 28
port 1
ifindex 469827584port type 10G Ethernet Sat Apr 28 05:38:55 2012 Internal trap notification 55
(CardActive) card 28 Sat Apr 28 05:38:55 2012 Internal trap notification 36 (PortLinkUp) card 28
port
1 ifindex 469827585 Sat Apr 28 05:38:55 2012 Internal trap notification 1025 (PortUp) card 28
port 1
ifindex 469827585port type 10G Ethernet [local]XGW# show port util table Saturday April 28
05:39:47 UTC 2012 ------ Average Port Utilization (in mbps) ------ Port Type Current 5min 15min
Rx Tx Rx Tx Rx Tx ----- ----------------------- ------- ------- ------- ------- ------- -------
19/1 10G Ethernet 0 0 0 0 0 0 20/1 10G Ethernet 236 174 688 544 816 637 21/1 1000 Ethernet 0 17
0 7 0 7 22/1 1000 Ethernet 3 29 3 69 4 75 23/1 10G Ethernet 0 0 0 0 0 0 26/1 10G Ethernet 201
156 779 568 810 597 28/1 10G Ethernet 114 181 0 0 0 0 [local]XGW# show npu stats debug slot 12
Saturday April 28 05:40:04 UTC 2012 NPU debug stats for slot 12 debug-pkt-drop-invalid-iphdr
2219078 [local]XGW# show npu stats debug slot 12 Saturday April 28 05:40:15 UTC 2012 NPU debug
stats for slot 12 debug-pkt-drop-invalid-iphdr 2289375 [local]XGW# show port util table Saturday
April 28 05:41:08 UTC 2012 ------ Average Port Utilization (in mbps) ------ Port Type Current
5min 15min Rx Tx Rx Tx Rx Tx ----- ----------------------- ------- ------- ------- ------- ----
--- ------- 19/1 10G Ethernet 0 0 0 0 0 0 20/1 10G Ethernet 769 545 682 528 804 625 21/1 1000
Ethernet 0 0 0 6 0 6 22/1 1000 Ethernet 3 70 3 63 4 73 23/1 10G Ethernet 0 0 0 0 0 0 26/1 10G
Ethernet 723 560 634 480 760 561 28/1 10G Ethernet 317 585 81 141 27 47 [local]XGW# show npu
stat debug slot 12 clear Saturday April 28 05:41:59 UTC 2012 NPU debug stats for slot 12 debug-

```
pkt-drop-invalid-iphdr 2980554 [local]XGW# show npu stat debug slot 12 clear Saturday April 28
05:42:10 UTC 2012 debug-pkt-drop-invalid-iphdr 60103 Sat Apr 28 05:42:43 2012 Internal trap
notification 16 (PACMigrateStart) from
card 12 to card 16 Sat Apr 28 05:43:55 2012 Internal trap notification 17 (PACMigrateComplete)
from
card 12 to card 16 Sat Apr 28 05:44:45 2012 Internal trap notification 5 (CardUp) card 12 Sat
Apr 28 05:44:45 2012 Internal trap notification 93 (CardStandby) card 12 [local]XGW# show npu
stat debug slot 16 clear Saturday April 28 05:44:35 UTC 2012 NPU debug stats for slot 16 debug-
pkt-drop-invalid-iphdr 14650 [local]XGW# show npu stat debug slot 16 clear Saturday April 28
05:45:48 UTC 2012 NPU debug stats for slot 16 debug-pkt-drop-invalid-iphdr 70940 Sat Apr 28
05:45:20 2012 Internal trap notification 126 (SRPSwitchoverInitiated) vpn SRP ipaddr
10.209.74.164 Sat Apr 28 05:45:21 2012 Internal trap notification 121 (SRPStandby) vpn SRP
ipaddr 10.209.74.164 rtmod 2 [local]XGW(config)# port ether 27/1 Saturday April 28 05:52:27 UTC
2012 [local]XGW(config-port-27/1)# no shut Saturday April 28 05:52:35 UTC 2012 Sat Apr 28
05:52:35 2012 Internal trap notification 36 (PortLinkUp) card 27 port
1 ifindex 453050368 Sat Apr 28 05:52:35 2012 Internal trap notification 1025 (PortUp) card 27
port 1
ifindex 453050368port type 10G Ethernet Sat Apr 28 05:52:35 2012 Internal trap notification 55
(CardActive) card 27 Sat Apr 28 05:52:35 2012 Internal trap notification 36 (PortLinkUp) card 27
port
1 ifindex 453050369 Sat Apr 28 05:52:35 2012 Internal trap notification 1025 (PortUp) card 27
port 1
ifindex 453050369port type 10G Ethernet [local]XGW# link-aggregation port switch to 19/1
Saturday April 28 05:56:39 UTC 2012 Are you sure? [Yes|No]: yes Saturday April 28 05:56:42 UTC
2012

Sat Apr 28 07:09:46 2012 Internal trap notification 120 (SRPActive)  vpn SRP
ipaddr 10.209.74.164 rtmod 2

[local]XGW# show card table
Saturday April 28 06:06:09 UTC 2012
Slot         Card Type                       Oper State     SPOF  Attach
-----------  ------------------------------  -------------  ----  ------
 1: PSC      Packet Services Card 2          Active         No      -  -
 2: PSC      Packet Services Card 2          Active         No      -  -
 3: PSC      Packet Services Card 2          Active         No     19  -
 4: PSC      Packet Services Card 2          Active         No     20  -
 5: PSC      Packet Services Card 2          Active         No     21 37
 6: PSC      Packet Services Card 2          Active         No     22 38
 7: PSC      Packet Services Card 2          Active         No     23  -
 8: SMC      System Management Card          Active         No     24 25
 9: SMC      System Management Card          Standby        -       -  -
10: PSC      Packet Services Card 2          Active         No     26  -
11: PSC      Packet Services Card 2          Active         No     27  -
12: PSC      Packet Services Card 2          Standby        -       -  -
13: PSC      Packet Services Card 2          Active         No      -  -
14: PSC      Packet Services Card 2          Active         No      -  -
15: PSC      Packet Services Card 2          Active         No      -  -
16: PSC      Packet Services Card 2          Active         No     28  -
```

A conclusão improvável terminou acima de ser uma placa de linha defeituosa, que quando substituído, resolvida a edição.

Nota: quando XGLC 28 foi substituído, o sistema reatou a substituição XGLC a PSC 1 de Demux em vez do PSC previamente anexado 16. A tarefa da Cartão-Entalhe-porta (CSP) tem o direito de anexar um XGLC a todo o PSC que livre desejar a, neste caso PSC 1 em vez de PSC 16. Em consequência, os testes de XGLC 28 estavam contra PSC 1 e não PSC 16 ou PSC 12, mas neste momento baseado em todos os testes feitos até agora (isto é a edição acontece se conectado a PSC 12 ou a PSC 16), tinha-se concluído que as falhas eram devido a XGLC 28 e a não nenhum PSC.

```
Sun Apr 29 05:17:25 2012 Internal trap notification 60 (CardDown) card 28
Sun Apr 29 05:17:25 2012 Internal trap notification 7 (CardRemoved) card 28

Sun Apr 29 05:19:56 2012 Internal trap notification 8 (CardInserted) card 28
Sun Apr 29 05:19:58 2012 Internal trap notification 5 (CardUp) card 28
Sun Apr 29 05:20:00 2012 Internal trap notification 55 (CardActive) card 28

[local]XGW# show port util table
Sunday April 29 05:23:53 UTC 2012
                                ------ Average Port Utilization (in mbps) ------
Port   Type                       Current            5min             15min
                                 Rx      Tx       Rx       Tx       Rx     Tx
----- ------------------------  ------- -------  ------- -------  ------- -------
19/1  10G Ethernet              1817    1770     1852    1868     1899    1929
20/1  10G Ethernet              0       0        0       0        0       0
21/1  1000 Ethernet            0       0        0       7        0       7
22/1  1000 Ethernet            3       55       3       58       3       59
23/1  10G Ethernet              1685    1867     1718    1858     1782    1868
26/1  10G Ethernet              0       0        0       0        0       0
27/1  10G Ethernet              1982    1866     1982    1846     2022    1927
28/1  10G Ethernet              0       0        0       0        0       0

[local]XGW# link-aggregation port switch to 20/1
Sunday April 29 05:33:18 UTC 2012
Are you sure? [Yes|No]: yes
Sunday April 29 05:33:21 UTC 2012

2012-Apr-29+05:33:21.124 [lagmgr 179050 warning] [1/0/2337 <lagmgr:0>
lagmgr_state.c:1163] [software internal system critical-info syslog] LAG group
50 (global) with master port 19/1 has changed partner from (007F,00-26-88-8E-
4F-F0,0034) to (007F,00-26-88-A7-FF-F0,0034) [local]LENYKSCJPNR XGW# show port util table Sunday
April 29 05:34:05 UTC 2012 ------ Average Port Utilization (in mbps) ------ Port Type Current
5min 15min Rx Tx Rx Tx Rx Tx ----- ------------------------ ------- ------- ------- ------- ----
--- ------- 19/1 10G Ethernet 0 0 1724 1688 1795 1783 20/1 10G Ethernet 1785 1737 112 108 37 36
21/1 1000 Ethernet 0 29 0 8 0 7 22/1 1000 Ethernet 3 55 3 56 3 57 23/1 10G Ethernet 0 0 1430
1522 1609 1720 26/1 10G Ethernet 1632 1790 89 95 29 31 27/1 10G Ethernet 0 0 1719 1669 1865 1780
28/1 10G Ethernet 1840 1738 0 0 0 0

[local]XGW# show npu stats debug slot 1
Sunday April 29 05:34:18 UTC 2012
NPU debug stats for slot 1
  debug-pkt-drop-invalid-iphdr              9


[local]XGW# show card table
Sunday April 29 05:34:27 UTC 2012
Slot         Card Type                        Oper State     SPOF  Attach
-----------  -------------------------------  -------------  ----  ------
 1: PSC      Packet Services Card 2           Active         No     28  -
 2: PSC      Packet Services Card 2           Active         No      -  -
 3: PSC      Packet Services Card 2           Active         No     19  -
 4: PSC      Packet Services Card 2           Active         No     20  -
 5: PSC      Packet Services Card 2           Active         No     21 37
 6: PSC      Packet Services Card 2           Active         No     22 38
 7: PSC      Packet Services Card 2           Active         No     23  -
 8: SMC      System Management Card           Active         No     24 25
 9: SMC      System Management Card           Standby        -       -  -
10: PSC      Packet Services Card 2           Active         No     26  -
11: PSC      Packet Services Card 2           Active         No     27  -
12: PSC      Packet Services Card 2           Standby        -       -  -
13: PSC      Packet Services Card 2           Active         No      -  -
14: PSC      Packet Services Card 2           Active         No      -  -
15: PSC      Packet Services Card 2           Active         No      -  -
16: PSC      Packet Services Card 2           Active         No      -  -
```

```
[local]LENYKSCJPNR XGW# show port npu count 28/1
Sunday April 29 05:35:39 UTC 2012
Counters for port 28/1
Counter                  Rx Frames       Rx Bytes      Tx Frames        Tx Bytes
-------------------- ------------ -------------- ------------ ---------------
Bad IPv4 header 0               0            n/a             n/a

[local]XGW# show npu stats debug all-pac
Sunday April 29 05:36:05 UTC 2012
NPU debug stats for slot 1
  debug-pkt-drop-invalid-iphdr              32

[local]XGW# show npu stats debug all-pac | grep debug-pkt-drop-invalid-iphdr
Sunday April 29 05:36:47 UTC 2012
debug-pkt-drop-invalid-iphdr 41  <== PSC 1
  debug-pkt-drop-invalid-iphdr         3722008
  debug-pkt-drop-invalid-iphdr             920
  debug-pkt-drop-invalid-iphdr             141
  debug-pkt-drop-invalid-iphdr         3579872
  debug-pkt-drop-invalid-iphdr              47
  debug-pkt-drop-invalid-iphdr         3817343

[local]XGW# show port util table
Sunday April 29 05:37:52 UTC 2012
                               ------ Average Port Utilization (in mbps) ------
Port   Type                      Current           5min             15min
                                 Rx      Tx      Rx       Tx       Rx     Tx
----- ----------------------  ------- -------  ------- -------  ------- -------
19/1  10G Ethernet             0       0        301     297      1300    1280
20/1  10G Ethernet             1686    1603     1490    1454     496     484
21/1  1000 Ethernet            0       0        0       6        0       7
22/1  1000 Ethernet            3       53       3       55       3       55
23/1  10G Ethernet             0       0        448     475      1265    1349
26/1  10G Ethernet             1539    1692     1383    1460     461     486
27/1  10G Ethernet             0       0        252     246      1334    1288
28/1 10G Ethernet 1758 1705 1413 1390 471 463
```