某局点S10510 堆叠口负载不均衡

堆叠 **赵广旭** 2022-03-28 发表

组网及说明

现场设备两台S105设备进行堆叠，由于现场的业务还在逐步迁移的阶段，只有主设备上单接了Bras设备。业务网关在bras上。

问题描述

目前业务高峰期会有卡顿的情况，单个堆叠口跨框流量较大达到98%，另一个堆叠口基本没有发包。

过程分析

当前收集诊断发现接口流量不均的现象还是比较明显：

Ten-GigabitEthernet2/1/0/47
Current state: UP
IP packet frame type: Ethernet II, hardware address: 50da-0063-f000
Description: Ten-GigabitEthernet2/1/0/47 Interface
Bandwidth: 10000000 kbps
Loopback is not set
Media type is optical fiber, port hardware type is 10G_BASE_SR_SFP
10Gbps-speed mode, full-duplex mode
Link speed type is autonegotiation, link duplex type is autonegotiation
Maximum frame length: 9216
MDI type: Automdix
Last link flapping: 40 weeks 5 days 11 hours 52 minutes
Last clearing of counters: 12:30:27 Thu 10/14/2021
Current system time:2022-03-16 13:31:59
Last time when physical state changed to up:2021-06-04 01:39:26
Last time when physical state changed to down:2021-06-04 01:37:34
Peak input rate: 51903440 bytes/sec, at 2022-03-16 12:30:02
Peak output rate: 33333741 bytes/sec, at 2022-01-12 08:32:34
Last 300 seconds input: 155351 packets/sec 35761547 bytes/sec 3%
Last 300 seconds output: 4553 packets/sec 2049865 bytes/sec 0%
Input (total): 56644298010 packets, 14353249120033 bytes
    49045525292 unicasts, 2706239849 broadcasts, 4892532869 multicasts, 0 pauses
Input (normal): 56644298010 packets, - bytes
    49045525292 unicasts, 2706239849 broadcasts, 4892532869 multicasts, 0 pauses
Input: 0 input errors, 0 runts, 0 giants, 0 throttles
    0 CRC, 0 frame, - overruns, 0 aborts
    - ignored, - parity errors
Output (total): 45765796775 packets, 25742510781995 bytes
    35459259452 unicasts, 4268213630 broadcasts, 6038323692 multicasts, 0 pauses
Output (normal): 45765796774 packets, - bytes
    35459259452 unicasts, 4268213630 broadcasts, 6038323692 multicasts, 0 pauses
Output: 0 output errors, - underruns, - buffer failures
    0 aborts, 0 deferred, 0 collisions, 0 late collisions
    0 lost carrier, - no carrier

Ten-GigabitEthernet2/1/0/48
Current state: UP
IP packet frame type: Ethernet II, hardware address: 50da-0063-f000
Description: Ten-GigabitEthernet2/1/0/48 Interface
Bandwidth: 10000000 kbps
Loopback is not set
Media type is optical fiber, port hardware type is 10G_BASE_SR_SFP
10Gbps-speed mode, full-duplex mode
Link speed type is autonegotiation, link duplex type is autonegotiation
Maximum frame length: 9216
MDI type: Automdix
Last link flapping: 40 weeks 5 days 11 hours 52 minutes
Last clearing of counters: 12:30:27 Thu 10/14/2021
Current system time:2022-03-16 13:31:59
Last time when physical state changed to up:2021-06-04 01:39:26
Last time when physical state changed to down:2021-06-04 01:37:34
Peak input rate: 1243764786 bytes/sec, at 2022-03-12 12:40:10
Peak output rate: 458000032 bytes/sec, at 2021-10-21 11:47:39
Last 300 seconds input: 40393 packets/sec 14614101 bytes/sec 1%
Last 300 seconds output: 355497 packets/sec 447727992 bytes/sec 36%
Input (total): 3389306197861 packets, 4013678149761071 bytes
    3388620742875 unicasts, 0 broadcasts, 685454986 multicasts, 0 pauses
Input (normal): 3389306197861 packets, - bytes
    3388620742875 unicasts, 0 broadcasts, 685454986 multicasts, 0 pauses

Input: 0 input errors, 0 runts, 0 giants, 0 throttles

0 CRC, 0 frame, - overruns, 0 aborts

解决方法

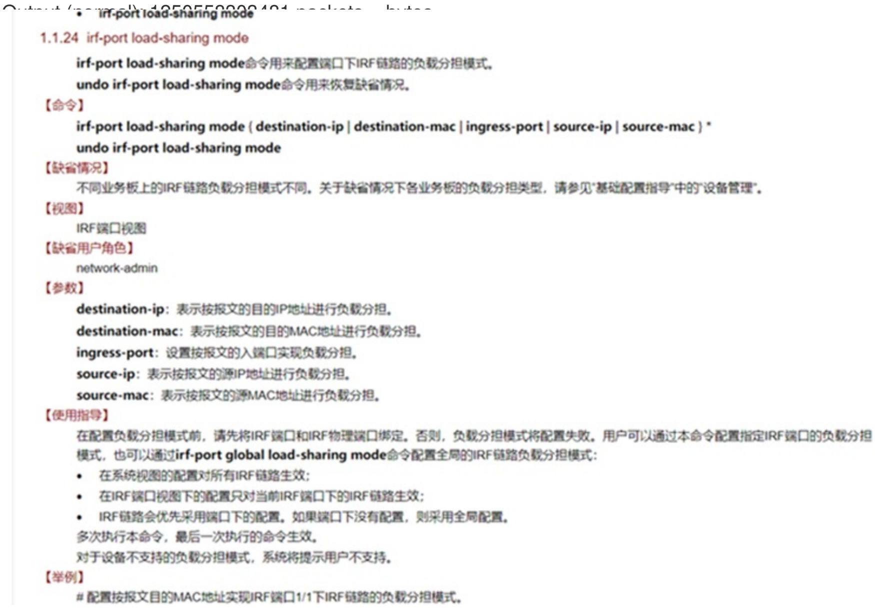
\- ignored, - parity errors

由于无法确定客户现场的具体流量类型，客户最好按照相应的参数来测试，看哪种负载分担模式效果最好。

Output (total): [illegible] packets, [illegible] bytes

1250378097790 unicasts, 0 broadcasts, 180205691 multicasts, 0 pauses

Output (normal): [illegible] packets, - bytes



- irf-port load-sharing mode

1.1.24 irf-port load-sharing mode

irf-port load-sharing mode命令用来配置端口下IRF链路的负载分担模式。

undo irf-port load-sharing mode命令用来恢复缺省情况。

【命令】

irf-port load-sharing mode { **destination-ip** | **destination-mac** | **ingress-port** | **source-ip** | **source-mac** } *

undo irf-port load-sharing mode

【缺省情况】

不同业务板上的IRF链路负载分担模式不同。关于缺省情况下各业务板的负载分担类型，请参见"基础配置指导"中的"设备管理"。

【视图】

IRF端口视图

【缺省用户角色】

network-admin

【参数】

destination-ip：表示按报文的目的IP地址进行负载分担。

destination-mac：表示按报文的目的MAC地址进行负载分担。

ingress-port：设置按报文的入端口实现负载分担。

source-ip：表示按报文的源IP地址进行负载分担。

source-mac：表示按报文的源MAC地址进行负载分担。

【使用指导】

在配置负载分担模式前，请先将IRF端口和IRF物理端口绑定。否则，负载分担模式将配置失败。用户可以通过本命令配置指定IRF端口的负载分担模式，也可以通过**irf-port global load-sharing mode**命令配置全局的IRF链路负载分担模式：

- 在系统视图的配置对所有IRF链路生效；
- 在IRF端口视图下的配置只对当前IRF端口下的IRF链路生效；
- IRF链路会优先采用端口下的配置。如果端口下没有配置，则采用全局配置。

多次执行本命令，最后一次执行的命令生效。

对于设备不支持的负载分担模式，系统将提示用户不支持。

【举例】

\# 配置按报文目的MAC地址实现IRF端口1/1下IRF链路的负载分担模式。

Aggregate Interface: Bridge-Aggregation204

Creation Mode: Manual

Aggregation Mode: Dynamic

Loadsharing Type: Shar

Management VLANs: None

System ID: 0x8000, 50da-0063-f600

Local:

Port	Status	Priority	Index	Oper-Key	Flag
FGE1/7/0/1	U	32768	38	17	{AC}
FGE2/7/0/1(R)	S	32768	37	17	{ACDEF}

Remote:

Actor	Priority	Index	Oper-Key	SystemID	Flag
FGE1/7/0/1	32768	5	6	0x8000, 642f-c7b7-6200	{AEF}
FGE2/7/0/1	32768	9	6	0x8000, 642f-c7b7-6200	{ACDEF}

FortyGigE2/7/0/1

Current state: UP

Line protocol state: UP

IP packet frame type: Ethernet II, hardware address: 50da-0063-f000

Description: FortyGigE2/7/0/1 Interface

Bandwidth: 40000000 kbps

。。。。。。。。。。。。。。。。。。。。。。

Last time when physical state changed to up:2022-02-25 16:35:31

Last time when physical state changed to down:2022-02-25 16:12:14

Peak input rate: 1951616667 bytes/sec, at 2022-03-16 13:31:39

Peak output rate: 324107977 bytes/sec, at 2022-03-15 16:23:59

Last 300 seconds input: 1536513 packets/sec 1951345176 bytes/sec 40%

Last 300 seconds output: 789795 packets/sec 180885569 bytes/sec 4%