Uneven traffic on the aggregate interface of the switch S10506

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Network Topology

Camera---Access SW---Convergence 5560X---Core S105---S58--Storage

Problem Description

10 Gigabit dual link aggregation between core S105---S58, surveillance cameras have packet loss, in vestigation found that there is a link between S105 and S58, the physical port traffic has reached 100 %, the other is about 30%. Customers have tried to change the load mode (source ip, destination ip, source and destination IP) to no avail.

Process Analysis

(1) One of the aggregate links from 10506 to 5800 is full, but the other is only used about 30%.

Ten-GigabitEthernet2/1/0/3

Last 300 second input: 435808 packets/sec 169061478 bytes/sec 14%

Last 300 second output: 870512 packets/sec 1233004334 bytes/sec 100%

Ten-GigabitEthernet1/2/0/3

Last 300 second input: 433986 packets/sec 176646768 bytes/sec 14%

Last 300 second output: 365285 packets/sec 412604521 bytes/sec 33%

(2) Most of the aggregated links under 105 are monitoring services, but many are single-linked.

Aggregate Interface: Bridge-Aggregation2

Aggregation Mode: Dynamic

Loadsharing Type: Shar

Management VLANs: None

System ID: 0x8000, ac74-0986-0000

Local:

Port	Status	Priority	Index	Oper-Key	Flag
GE1/0/0/29	S	32768	53	11	{ACDEF}
GE1/0/0/30(R)	S	32768	48	11	{ACDEF}
GE1/0/0/31	U	32768	38	11	{ACG}
GE1/0/0/32	U	32768	25	11	{ACG}

Aggregate Interface: Bridge-Aggregation3

Aggregation Mode: Dynamic

Loadsharing Type: Shar

Management VLANs: None

System ID: 0x8000, ac74-0986-0000

Local:

Port	Status	Priority	Index	Oper-Key	Flag
GE2/0/0/25	S	32768	40	4	{ACDEF}
GE2/0/0/26	S	32768	20	4	{ACDEF}
GE2/0/0/27	S	32768	13	4	{ACDEF}
GE2/0/0/28(R)	S	32768	4	4	{ACDEF}

(3) Since the local priority forwarding on the device is enabled by default, if the traffic entering the IRF member is already uneven, in this case, if two IRF members have aggregated outgoing interfaces, th e outbound direction of traffic will be uneven.

[Default]

Local-first load sharing is enabled for link aggregation.

Solution

1. Disable local priority forwarding temporarily to avoid uneven traffic. If you disable local-first load sharing, packets on an aggregate interface are load shared among all its Selected ports on IRF member devices. However, this may increase the burden on the IRF link. If the traffic bursts, the IRF link may be full.

Disable local-first load sharing for link aggregation.

<Sysname> system-view

[Sysname] undo link-aggregation load-sharing mode local-first

2. Optimize on-site networking, connect both 5560X to 105 in dual uplinks to avoid uneven traffic on the two chassises on 105. From the diagnosis, there are many single-link aggregation groups on 105. It is recommended that customers evenly distribute aggregations to the two chassises of 105. If the on-site traffic is relatively large, it is recommended to expand the aggregated link connecting 105 and 58 to avoid the burst of traffic and full up the uplink.