

知 SecPath L5000-C(V7) 配置七层服务器负载均衡后无法访问服务器业务解决方法

七层服务器负载均衡 刘嘉炜 2019-04-12 发表

组网及说明

现场问题描述:

问题描述

现场部署SecPath L5000-C(V7)配置七层服务器负载均衡, 根据HTTP报文头中的“trffweb”字段进行负载均衡, 配置完成后发现服务器负载均衡不成功。

过程分析

过程分析:

1、排查配置, 发现客户配置无误。

```
loadbalance policy "http80_url redirection" type http
```

```
class fw action fw
```

```
#
```

```
virtual-server "http80_url redirection" type http
```

```
virtual ip address 20.3.8.1
```

```
parameter http http_any
```

```
lb-policy "http80_url redirection"
```

```
service enable
```

```
sticky-sync enable
```

```
#
```

```
loadbalance class fw type http match-any
```

```
match 1 url trffweb
```

```
#
```

```
loadbalance action fw type http
```

```
server-farm fw sticky sip_300s
```

```
#
```

```
real-server fw_1
```

```
ip address 10.24.89.75
```

```
port 9080
```

```
server-farm fw
```

```
success-criteria at-least 1
```

```
#
```

```
real-server fw_2
```

```
ip address 10.24.89.75
```

```
port 9081
```

```
server-farm fw
```

```
success-criteria at-least 1
```

```
#
```

```
real-server fw_3
```

```
ip address 10.24.89.76
```

```
port 9080
```

```
server-farm fw
```

```
success-criteria at-least 1
```

2、上述配置排查无问题, 所以下一步需要debug LB会话来看服务器负载均衡是否工作正常?

```
deugging lb all
```

```
t m
```

```
t d
```

```
*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Virtual server received a notification, type : 1.
```

```
*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Received 1 packets from TCP.
```

```
*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11079] received request successfully: Event=User-Input.
```

```
*Apr 10 11:20:03:072 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11079]:
```

```
Direction=Request, State=Request_line --> Done, Parse Length=495.
```

```
*Apr 10 11:20:03:072 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11079], HTTP packet header:
```

```
GET /trffweb HTTP/1.1
```

\\报文头部携带了“trffweb”字段

Accept: application/x-ms-application, image/jpeg, application/xaml+xml, image/gif, image/pjpeg, application/x-ms-xbap, */*
Accept-Language: zh-CN
User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0; .NET4.0C; .NET4.0E)
Accept-Encoding: gzip, deflate
Host: 20.3.8.1
Connection: Keep-Alive
COOKIE: JSESSIONID=0000ujzQ37ZQuiMzlhGSDQdaCyE:18kehkg2a

*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11079] forwarding method is Server-farm. **\\已经匹配了负载均衡到Server-farm**

*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11079] used the previous real server. **\\选择实服务器**

*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11079] got an idle connection successfully.

*Apr 10 11:20:03:072 2019 H3C LB/7/FSM: -COntext=1; Transaction [11079]: State=WAITING -> TRANSMITTING, Direction=Request.

*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Sent 0 packets to TCP.

*Apr 10 11:20:03:072 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11079] sent request successfully [Local=20.3.8.1/1473, Peer=10.24.89.75/9081]. **\\数据的目的地址已经变更为实服务地址, 说明负载均衡是正常的。**

*Apr 10 11:20:03:072 2019 H3C LB/7/FSM: -COntext=1; Transaction [11079] State=TRANSMITTING -> TRANSMITTING, Direction=Request.

*Apr 10 11:20:03:073 2019 H3C LB/7/EVENT: -COntext=1; Received 1 packets from TCP.

*Apr 10 11:20:03:073 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11079] received response data successfully: Event=Server-Input.

*Apr 10 11:20:03:073 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11079]: Direction=Response, State=Status_line --> Done, Parse Length=144.

*Apr 10 11:20:03:073 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11079], HTTP packet header: **\\但是当LB将此HTTP请求交给服务器时, 服务器却回复302错误。**

HTTP/1.1 302 Found

Location: http://20.3.8.1:9081/trffweb/

Content-Language: zh-CN

Content-Length: 0

Date: Wed, 10 Apr 2019 03:20:04 GMT

3. 进一步测试客户实服务器服务是否正常, 让客户跨过LB直接使用http:// 10.24.89.75:9081/trffweb发现服务器还是无法访问, 但是客户反馈当输入http:// 10.24.89.75:9081/trffweb/时发现可以访问服务器服务。再次debug LB策略发现使用http:// 20.3.8.1:9081/trffweb/访问时发现此时可以正常访问到实服务器。

正常时的DEBUG信息:

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Virtual server received a notification, type : 1.

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Received 1 packets from TCP.

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11078] received request successfully: Event=User-Input.

*Apr 10 11:20:20:272 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11078]:

Direction=Request, State=Request_line --> Done, Parse Length=496.

*Apr 10 11:20:20:272 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11078], HTTP packet header:

GET /trffweb/ HTTP/1.1 \\对比发现"/trffweb/"字段后多个"/"

Accept: application/x-ms-application, image/jpeg, application/xaml+xml, image/gif, image/pjpeg, application/x-ms-xbap, */*

Accept-Language: zh-CN

User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 6.1; WOW64; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30729; Media Center PC 6.0; .NET4.0C; .NET4.0E)

Accept-Encoding: gzip, deflate

Host: 20.3.8.1

Connection: Keep-Alive

COOKIE: JSESSIONID=0000ujzQ37ZQuiMzlhGSDQdaCyE:18kehkg2a

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11078] forwarding method is

Server-farm.

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11078] used the previous real server.

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11078] got an idle connection successfully.

*Apr 10 11:20:20:272 2019 H3C LB/7/FSM: -COntext=1; Transaction [11078]: State=WAITING -> TRANSMITTING, Direction=Request.

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Sent 0 packets to TCP.

*Apr 10 11:20:20:272 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11078] sent request successfully [Local=20.3.8.1/1473, Peer=10.24.89.75/9081].

*Apr 10 11:20:20:272 2019 H3C LB/7/FSM: -COntext=1; Transaction [11078] State=TRANSMITTING -> TRANSMITTING, Direction=Request.

*Apr 10 11:20:20:294 2019 H3C LB/7/EVENT: -COntext=1; Received 1 packets from TCP.

*Apr 10 11:20:20:294 2019 H3C LB/7/EVENT: -COntext=1; Transaction [11078] received response data successfully: Event=Server-Input.

*Apr 10 11:20:20:294 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11078]: Direction=Response, State=Status_line --> Chunked, Parse Length=1448.

*Apr 10 11:20:20:294 2019 H3C LB/7/PACKET: -COntext=1; Transaction [11078], HTTP packet header:

HTTP/1.1 200 OK

\\此时发现服务器回复正常

Content-Type: text/html; charset=gb2312

Cache-Control: no-store

Pragma: no-cache

Expires: Thu, 01 Jan 1970 00:00:00 GMT

Content-Language: zh-CN

Transfer-Encoding: chunked

Date: Wed, 10 Apr 2019 03:20:20 GMT

至此原因已经找到非我司L5000-C问题，而是客户本身实服务就存在问题，但是目前业务服务器侧无法做变动，只能在设备侧想办法解决。

解决方法

此类需求可以通过HTTP重写解决，但是和产品线确认目前SecPath L5000-C(V7)版本暂时不支持url改写，只能通过url重定向解决。

修改配置将/trffweb改写为/trffweb/, 使用户使用携带"/trffweb/"字段的HTTP请求报文访问后解决。

具体配置：

```
virtual-server "http80_url redirection" type http
```

```
virtual ip address 20.3.8.1
```

```
parameter http http_any
```

```
lb-policy "http80_url redirection"
```

```
default server-farm fw
```

```
service enable
```

```
sticky-sync enable
```

```
#
```

```
loadbalance policy "http80_url redirection" type http
```

```
class redirect action redirect
```

```
class fw action fwq
```

```
class zhzy action zhzy
```

```
#
```

```
loadbalance class fw type http match-any
```

```
match 1 url /trffweb$ \\$表示结束
```

```
#
```

```
loadbalance action fw type http
```

```
redirect relocation /trffweb/
```