

知 某局点S5130S-HI Openflow流表下发不成功

OpenFlow 李先福 2020-03-09 发表

组网及说明

设备: S5130S-HI

版本: R6127P02

问题描述

客户使用开源SDN控制器下发流表给S5130S-HI, 发现设备上没有成功下发对应的流表。

过程分析

(1) 从debug信息看到设备有如下报错

*Mar 17 01:02:32:949 2013 H3C OFP/7/ERROR: Instance 4 controller 1 receive a illegal packet.

*Mar 17 01:02:32:949 2013 H3C OFP/7/PACKET:

Instance ID: 0x4, Controller ID: 0x1 send

Version: 0x4, Type: error, Length: 0x74, Xid: 0x0

Type: 0x4, Code: 0x9

Extra Data:

04 0e 00 68 00 00 00 00 01 00 00 d9 99 2c 3a

00 00 00 00 00 00 00 00 00 00 00 00 00 3a 93

ff ff ff ff ff ff ff ff ff ff ff 00 01 00 00

00 01 00 1c 80 00 17 08 63 63 63 00 ff ff ff 00

80 00 19 08 07 07 07 00 ff ff ff 00 00 00 00 00

00 04 00 18 00 00 00 00 00 00 10 00 00 00 05

00 00 00 00 00 00 00 00

(2) 从服务器侧的抓包看到控制器下发Openflow时少带了ETH_TYPE:0x0800

客户报文是:

Match

Type: OpenFlow Extensible Match - OFPMT_OXM (0x0001)

Length: 24

OXM field

Class: Basic class for openFlow - OFPXM_OPENFLOW_BASIC (0x8000)

0000 000. = Field: Switch input port - OFPXM_OFB_IN_PORT (0x00)

0 = Has mask: No

Length: 4

Value: 00000005

OXM field

Class: Basic class for openFlow - OFPXM_OPENFLOW_BASIC (0x8000)

0001 100. = Field: IPv4 destination address - OFPXM_OFB_IPV4_DST (0x0c)

1 = Has mask: Yes

Length: 8

Value: 10.1.1.0 (10.1.1.0)

Mask: ffffff00

Padding

正常报文应该是:

Match

Type: OpenFlow Extensible Match - OFPMT_OXM (0x0001)

Length: 18

OXM field

Class: Basic class for openFlow - OFPXM_OPENFLOW_BASIC (0x8000)

0000 101. = Field: Ethernet frame type - OFPXM_OFB_ETH_TYPE (0x05)

0 = Has mask: No

Length: 2

Value: 0800

OXM field

Class: Basic class for openFlow - OFPXM_OPENFLOW_BASIC (0x8000)

0001 011. = Field: IPv4 source address - OFPXM_OFB_IPV4_SRC (0x0b)

0 = Has mask: No

Length: 4

Value: 1.2.1.1 (1.2.1.1)

Padding

(3) 控制器侧发出的报文不正确, 导致流表无法下发。

解决方法

修改控制器侧流表下发的设置, 流表就可以正常下发了。