

知 H3Cloud Learningspace作业分发报错, 提示: 失败重发

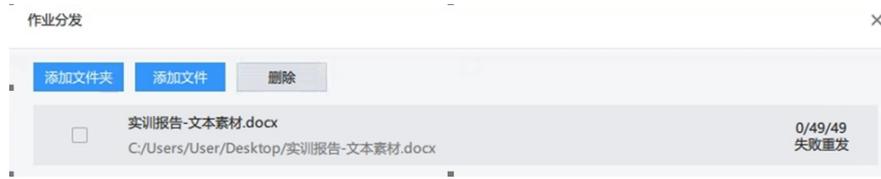
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组网及说明

无

### 问题描述

Learningspace(E1004P04)教师机给学生端下发作业失败，所有学生端下发作业失败，提示失败重发，如图所示：



## 过程分析

作业分发功能需要教师端与虚拟机网络连通，确认现场网络环境是否正常；作业分发是教师端通过tcp协议传给虚拟机，当教师端网络异常，终端没法通信，如果收到了上课的指令，就会一直去尝试连接虚拟机。需要检查现场是否存在IP冲突，网络设备中有没有环路。

该局点经现场确认，教师端与虚拟机、同网段虚拟机之间、教师端和网关之间网络不通，排查环境中网络情况。

1、对一台学生机stu-1-1-17进行抓包，地址为192.168.211.19，虚拟端口vnet2，cvk后台长ping网关和同网段其他虚拟机，虚拟机包没有转发；

```
[root@cvknode1 ~]# ovs_dbg_listports | grep stu-1-1-17
vnet2          0cda42010110 192.168.211.19 1027/6          1500 stu-1-1-17-1604471586065 5907 CLASSROOM-1-KG7E6ZB5

[root@cvknode1 ~]# tcpdump -i vnet2 host 192.168.211.19
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on vnet2, link-type EN10MB (Ethernet), capture size 262144 bytes
16:54:55.272645 IP 192.168.211.19.53883 > 114.114.114.114.domain: 3329+ A? t.khd.2345.cc. (31)
16:54:55.335026 IP 192.168.211.19.55073 > 114.114.114.114.domain: 3329+ A? t.khd.2345.cc. (31)
16:54:56.725888 IP 192.168.211.19 > 192.168.211.18: ICMP echo request, id 1, seq 917, length 40
16:54:57.339067 IP 192.168.211.19.55073 > 114.114.114.114.domain: 3329+ A? update.wps.cn. (31)
16:54:59.274291 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:00.022549 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:00.772468 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:01.335113 IP 192.168.211.19.55073 > 114.114.114.114.domain: 3329+ A? t.khd.2345.cc. (31)
16:55:01.546880 IP 192.168.211.19.64429 > 114.114.114.114.domain: 50762+ A? update.wps.cn. (31)
16:55:01.725721 IP 192.168.211.19 > 192.168.211.18: ICMP echo request, id 1, seq 918, length 40
16:55:02.225556 ARP, Request who-has gateway (08:00:27:8c:f1:67) tell 192.168.211.19, length 28
16:55:02.225917 ARP, Reply gateway 1s-at 6c:1e5:f7:8c:f1:67 (oui unknown), length 40
16:55:02.338203 IP 192.168.211.19.64429 > 114.114.114.114.domain: 50762+ A? update.wps.cn. (31)
16:55:02.804663 IP 192.168.211.19.49764 > cvknode1.8860: Flags [S], seq 2902027487, win 8192, options [msg 1460,nop,wscale 8,nop,nop,sackok], length 0
16:55:03.338097 IP 192.168.211.19.64429 > 114.114.114.114.domain: 50762+ A? update.wps.cn. (31)
16:55:03.336140 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:03.803692 IP 192.168.211.19.49764 > cvknode1.8860: Flags [S], seq 2902027487, win 8192, options [msg 1460,nop,wscale 8,nop,nop,sackok], length 0
16:55:06.054989 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:06.725845 IP 192.168.211.19 > 192.168.211.18: ICMP echo request, id 1, seq 919, length 40
16:55:06.83203 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:09.338438 IP 192.168.211.19.64429 > 114.114.114.114.domain: 50762+ A? update.wps.cn. (31)
16:55:11.726370 IP 192.168.211.19 > 192.168.211.18: ICMP echo request, id 1, seq 920, length 40
16:55:11.803733 IP 192.168.211.19.49764 > cvknode1.8860: Flags [S], seq 2902027487, win 8192, options [msg 1460,nop,nop,sackok], length 0
16:55:13.539510 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:14.288300 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
16:55:15.038168 IP 192.168.211.19.netbios-ns > 192.168.211.255.netbios-ns: NBT UDP PACKET(137): QUERY: REQUEST: BROADCAST
```

2、查看vsw0中流表情况，发现actions为drop状态；

```
[root@cvknode1 ~]# ovs-appctl dpif/dump-flows vswtch0 | grep 192.168.211.19
recirc_id(0), in_port(6), eth(src=0c:da:42:01:10:11), eth_type(0x0800), ipv4(src=192.168.211.19, proto=1, frag=0), packets:748, bytes:55352, used:1.332s, actions:drop
recirc_id(0), in_port(6), eth(src=0c:da:42:01:10:11), dst=08:93:20:b5:4a:3a), eth_type(0x0800), arp(sip=192.168.211.19), packets:0, bytes:0, used:never, actions:
recirc_id(0), in_port(6), eth(src=0c:da:42:01:10:11), eth_type(0x0800), ipv4(src=192.168.211.19, proto=17, frag=0), udp(src=1768:0x0000), packets:1, bytes:11, used:6.240s, actions:drop
recirc_id(0), in_port(6), eth(src=0c:da:42:01:10:11), eth_type(0x0800), packets:1, bytes:66, used:2.461s, Flags:S, actions:drop
```

3、检查虚拟机使用的网络策略模板，规则均为拒绝，问题原因就在于此。

网络策略模板配置界面截图：

- 网络策略模板名称：CLASSROOM-1-KG7E6ZB5
- 虚拟交换机：vswtch0
- MAC地址：0cda42010110
- ACL类型：IP
- 生效时间：未开启
- 入方向默认动作：拒绝
- 出方向默认动作：拒绝

#### 解决方法

修改网络策略模板中出入口方向动作为允许后，网络连通性正常，作业分发功能正常。

