CloudEngine switch OVSDB with NSX-V controller troubleshooting

Introduction

This article discusses how to debug Huawei CloudEngine switch OVSDB with VMware NSX-V controller issues that occur frequently.

Solution

1. Error in running command **ovsdb-client save-key**.
   a. Error: Open privkey.pem failed.
      Verify whether exists the **privkey.pem** file in **/etc/openvswitch/** path. The **privkey.pem** file is created by command **ovs-pki req+sign vtep**.

   b. Error: Encrypto key failed.
      Verify whether root user has run **huaweiswitch-key** process.

   c. Error: Session connect failed when trying to connect to netconf.
      Verify whether the information is correct in **ovsdb-client.cfg**, specially check below option:

```
Netconf IP: 192.168.92.1  //IP address of Ethernet1/0/0 of VRP
Netconf port: 22          //Port number for setting up a NETCONF connection
```

2. Error in running command **/etc/openvswitch/ovsdb-init start**.
   a. Error information: ovsdb-server: I/O error: open: /usr/local/etc/openvswitch/conf.db failed (No such file or directory)
      Verify whether the DB file has been created by command **ovsdb-tool create /usr/local/etc/openvswitch/conf.db /etc/vtep.ovsschema**. The error will lead to the ovsdb-server process to start failed.

   b. Error information: ovsdb-client: failed to connect to "unix:/usr/local/var/run/openvswitch/db.sock" (No such file or directory)
      The error is because that ovsdb-server process to start failed lead to the ovsdb-client process to start failed. Please create issue on the open-source community.

   c. Error: Please save netconf password first.
      Verify whether root user has run **huaweiswitch-key** process.

d. Error information: ovsdb-server: /usr/local/var/run/openvswitch/ovsdb-server.pid: already running as pid 29595, aborting
The error is because that the ovsdb-server process is running. Verify that more than one ovsdb-client process is running. If there are more than one ovsdb-client process is running, use the command **/etc/openvswitch/ovsdb-init stop** to stop OVSDB service and start the ovsdb service.

3. OVSDB Controller connection is not coming up.
   a. Verify whether the information is correct in **ovsdb-client.cfg**, specially check below option:

```
1. Manager information:
Link type: ssl
Controller IP: 192.168.10.100
Controller port: 6640
```

   b. Make sure VMWare NSX-V controllers are reachable. Ping the IP addresses of the controllers in CLI.
   In the following example, 192.168.60.210 is the IP address of a NSX-V controller.

```
root@huawei:~# ping 192.168.60.210 -c 5
PING 192.168.60.210 (192.168.60.210) 56(84) bytes of data.
64 bytes from 192.168.60.210: icmp_seq=1 ttl=63 time=6.02 ms
64 bytes from 192.168.60.210: icmp_seq=2 ttl=63 time=1.56 ms
64 bytes from 192.168.60.210: icmp_seq=3 ttl=63 time=1.31 ms
64 bytes from 192.168.60.210: icmp seq=4 ttl=63 time=1.41 ms
64 bytes from 192.168.60.210: icmp_seq=5 ttl=63 time=1.07 ms

--- 192.168.60.210 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4005ms
rtt min/avg/max/mdev = 1.074/2.278/6.029/1.882 ms
```

4. Traffic doesn't pass through.
   a. Verify whether vteps are reachable and it both of them are reachable from each other based on the Nve1 address as source address.
      a. Run following command in VRPv8.

```
<HUAWEI>system-view
Enter system view, return user view with return command.
[~HUAWEI]display current-configuration | section include 5000
#
bridge-domain 5000
 vxlan vni 5000
#
interface 10GE1/0/13.1 mode l2
 encapsulation untag
 bridge-domain 5000
#
interface Nve1
 source 5.5.5.9
 vni 5000 head-end peer-list 192.168.60.213
```

```
#
mac-address static 0050-56a4-63be bridge-domain 5000 source 5.5.5.9 peer
192.168.60.213 vni 5000
```

b. Verify whether remote vtep's IP, include VM's MAC, is reachable from local vtep's IP.

```
<huawei>ping -a 5.5.5.9 192.168.60.213
  PING 192.168.60.213: 56  data bytes, press CTRL C to break
    Reply from 192.168.60.213: bytes=56 Sequence=1 ttl=63 time=4 ms
    Reply from 192.168.60.213: bytes=56 Sequence=2 ttl=63 time=1 ms
    Reply from 192.168.60.213: bytes=56 Sequence=3 ttl=63 time=2 ms
    Reply from 192.168.60.213: bytes=56 Sequence=4 ttl=63 time=2 ms
    Reply from 192.168.60.213: bytes=56 Sequence=5 ttl=63 time=2 ms

  --- 192.168.60.213 ping statistics ---
    5 packet(s) transmitted
    5 packet(s) received
    0.00% packet loss
    round-trip min/avg/max = 1/2/4 ms
```

If the IP is unreachable, Verify the underlay network please.

b. Verify whether all replicators are unreachable from the Nve1 address as source address.

```
<CE6850HI-130.31>display bfd session all
S: Static session
D: Dynamic session
IP: IP session
IF: Single-hop session
PEER: Multi-hop session
LDP: LDP session
LSP: Label switched path
TE: Traffic Engineering
AUTO: Automatically negotiated session
VXLAN: VXLAN session
(w): State in WTR
(*): State is invalid
Total UP/DOWN Session Number : 1/0
--------------------------------------------------------------------------------
Local      Remote     PeerIpAddr      State     Type        InterfaceName
--------------------------------------------------------------------------------
16395      1241562668 192.168.60.213  Up        S/AUTO-VXLAN       -
--------------------------------------------------------------------------------
```

If the IP is unreachable, Verify the underlay network please.

c. If the issue still exists please create issue on [the open-source community].

5. Other issues.
   Please create issue on [the open-source community], and CloudEngine switch open-source developers will answer your questions or help to solve your problems.

6. Collect logs:
   a. Collect VRPv8 logs:
      Collecting Log Information
      When a device is faulty, collect the log information on the device immediately. The log information helps you know what had happened during device operation and where the fault occurred.
      Logs, including user logs and diagnostic logs, record user operations, system faults, and system security. To obtain user logs and diagnostic logs on the device, run the following commands:

```
<HUAWEI> save logfile                                  //Collect common user logs.
<HUAWEI> system-view
[~HUAWEI] diagnose
[~HUAWEI-diagnose] save logfile diagnose-log       //Collect diagnostic logs.
[~HUAWEI-diagnose] collect diagnostic information
                                  //Collect diagnostic information the system.
```

      After the preceding configurations are complete, upload all files in flash:/logfile/ to your computer through FTP or TFTP.

   b. OVSDB logs:
      In open system, the log path is: /usr/local/var/log/openvswitch/.