今天试着在suse服务器上的centOS系统部署dpvs,是按照github的教程一步一步来进行的:https://github.com/iqiyi/dpvs

记录一下完整的过程以及中间遇到的坑。

第一步：

```
git clone https://github.com/iqiyi/dpvs.git
cd dpvs
```

第二步：下载dpdk-17.11.2.tar.xz放在dpvs的目录下，可以通过命令：

```
wget https://fast.dpdk.org/rel/dpdk-17.11.2.tar.xz   # download from dpdk.org if
link failed.
```

但由于我这里wget命令无法使用，我直接把dpdk-17.11.2.tar.xz下载到本地然后用xftp上传。

解压dpdk-17.11.2.tar.xz：

```
tar vxf dpdk-17.11.2.tar.xz
```

```
$ cd dpvs
```

```
$ cp patch/dpdk-stable-17.11.2/*.patch dpdk-stable-17.11.2/
```

```
$ cd dpdk-stable-17.11.2/
```

```
$ patch -p 1 < 0001-PATCH-kni-use-netlink-event-for-multicast-driver-par.patch
```

```
$ patch -p1 < 0002-net-support-variable-IP-header-len-for-checksum-API.patch
```

第三步：dpdk编译安装：

```
$ cd dpdk-stable-17.11.2/
```

```
$ make config T=x86_64-native-linuxapp-gcc
```

```
$ make
```

```
$ export RTE_SDK=$PWD
```

这里在进行make的时候遇到了一些问题 ：

这里报错name.h：no such file or dictory

经过网上查阅资料，发现要安装依赖包numactl-devel ；于是尝试yum install numactl-devel，又出现以下问题：

又尝试rpm安装依然不行：

```
[root@localhost dpdk-stable-17.11.2]# rpm -ivh numactl-devel-2.0.12-2.fc30.aarch64.rpm
warning: numactl-devel-2.0.12-2.fc30.aarch64.rpm: Header V3 RSA/SHA256 Signature, key ID cfc659b9: NOKEY
error: Failed dependencies:
        numactl-libs = 2.0.12-2.fc30 is needed by numactl-devel-2.0.12-2.fc30.aarch64
[root@localhost dpdk-stable-17.11.2]#
```

后来终于找到解决办法，要先更新yum源，步骤如下：

`$ mv /etc/yum.repos.d/CentOS-Base.repo /etc/yum.repos.d/CentOS-Base.repo.backup`

`$ cd /etc/yum.repos.d/`

`$ wget http://mirrors.163.com/.help/CentOS7-Base-163.repo`
`#下载163的yum源配置文件，放入/etc/yum.repos.d/ ，由于我的wget命令无法使用，所以直接下载到本地`
`然后上传到服务器`

`$ yum makecache   #运行yum makecache生成缓存`

`$ yum -y update`

然后再安装依赖numactl-devel，

`$ yum install numactl-devel`

安装之后再执行make即可。

第四步：设置DPDK hugepage

for NUMA machine

`$ echo 8192 > /sys/devices/system/node/node0/hugepages/hugepages-2048kB/nr_hugepages`
`$ echo 8192 > /sys/devices/system/node/node1/hugepages/hugepages-2048kB/nr_hugepages`

`$ mkdir /mnt/huge`
`$ mount -t hugetlbfs nodev /mnt/huge`

在执行第二条时候出错，没有解决。

第五步：绑定网卡。

`$ modprobe uio`
`$ cd dpdk-stable-17.11.2`

`$ insmod build/kmod/igb_uio.ko`
`$ insmod build/kmod/rte_kni.ko`

`#察看网卡状态`
`$ ./usertools/dpdk-devbind.py --status`

`#将网卡ens192停掉`
`$ ifconfig ens192 down  # ens192 is 0000:0b:00.0`
`#绑定ens192网卡`
`$ ./usertools/dpdk-devbind.py -b igb_uio 0000:0b:00.0`

第六步：编译dpvs

`$ cd dpdk-stable-17.11.2/`
`$ export RTE_SDK=$PWD`
`$ cd dpvs`

```
$ make
```
```
$ make install
```

这里进行make之前又需要安装两个依赖包：

```
$ yum install openssl-devel
```

```
$ yum install popt-devel
```

编译成功之后打开bin目录：

```
$ ls bin/
```
```
dpip  dpvs  ipvsadm  keepalived
```

第七步：启动dpvs：

```
$ cp conf/dpvs.conf.single-nic.sample /etc/dpvs.conf
```

```
$ cd dpvs/bin
```

```
$ ./dpvs &
```

在执行./dpvs &的时候再次遇到问题：

```
DPVS: dpvs version: 1.7-2, build on 2019.07.16.00:06:52
CFG_FILE: Opening configuration file '/etc/dpvs.conf'.
CFG_FILE: log_level = WARNING
NETIF: dpdk0:rx_queue_number = 8
NETIF: worker cpu1:dpdk0 rx_queue_id += 0
NETIF: worker cpu1:dpdk0 tx_queue_id += 0
NETIF: worker cpu2:dpdk0 rx_queue_id += 1
NETIF: worker cpu2:dpdk0 tx_queue_id += 1
NETIF: worker cpu3:dpdk0 rx_queue_id += 2
NETIF: worker cpu3:dpdk0 tx_queue_id += 2
NETIF: worker cpu4:dpdk0 rx_queue_id += 3
NETIF: worker cpu4:dpdk0 tx_queue_id += 3
NETIF: worker cpu5:dpdk0 rx_queue_id += 4
NETIF: worker cpu5:dpdk0 tx_queue_id += 4
NETIF: worker cpu6:dpdk0 rx_queue_id += 5
NETIF: worker cpu6:dpdk0 tx_queue_id += 5
NETIF: worker cpu7:dpdk0 rx_queue_id += 6
NETIF: worker cpu7:dpdk0 tx_queue_id += 6
NETIF: worker cpu8:dpdk0 rx_queue_id += 7
NETIF: worker cpu8:dpdk0 tx_queue_id += 7
EAL: Error - exiting with code: 1
  Cause: [netif_lcore_init] bad lcore configuration (eg. p=d1)et/WXHt9951220
```

没有解决.