

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：

```
/home/icbmon/dpvs/dpdk-stable-17.11.2/lib/librte_eal/linuxapp/eal/eal_memory.c:56:18: fatal error: numa.h: No such file or directory
#include <numa.h>
^
compilation terminated.
make[5]: *** [eal_memory.o] Error 1
make[4]: *** [eal] Error 2
make[3]: *** [linuxapp] Error 2
make[2]: *** [librte_eal] Error 2
make[1]: *** [lib] Error 2
make: *** [all] Error 2
[root@localhost dpdk-stable-17.11.2]#
```

<https://blog.csdn.net/WYH19951220>

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：

```
Downloading packages:

Error downloading packages:
  numactl-devel-2.0.9-6.el7_2.x86_64: [Errno 256] No more mirrors to try.

[root@localhost dpdk-stable-17.11.2]#
```

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:00:00
```

```
#绑定ens192网卡
```

```
$ ./usertools/dpdk-devbind.py -b igb_uio 0000:0b:00:00
```

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：

```
[root@localhost bin]# ./dpvs &
[1] 28473
[root@localhost bin]# current thread affinity is set to F
EAL: Detected 4 lcore(s)
EAL: No free hugepages reported in hugepages-1048576kB
EAL: Probing VFIO support...
EAL: PCI device 0000:03:00.0 on NUMA socket -1
EAL:   Invalid NUMA socket, default to 0
EAL:   probe driver: 15ad:7b0 net_vmxnet3
EAL: PCI device 0000:0b:00.0 on NUMA socket -1
EAL:   Invalid NUMA socket, default to 0
EAL:   probe driver: 15ad:7b0 net_vmxnet3
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
```

<https://blog.csdn.net/WYH19951220>

```
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 (cpu=1), exit 9951220
```

没有解决.