Core description:

The core configuration description is:

- 1C/1T: 1 Physical Core, 1 Logical Core per physical core (1 Hyperthread)

using core #2 (socket 0, 2nd physical core)

- 1C/2T: 1 Physical Core, 2 Logical Cores per physical core (2 Hyperthreads)

using core #2 and #14 (socket 0, 2nd physical core, 2 Hyperthreads)

- 2C/1T: 2 Physical Cores, 1 Logical Core per physical core

using core #2 and #4 (socket 0, 2nd and 3rd physical cores)

--------------------------------

Install DPDK

Clone dpdk:

git clone <http://dpdk.org/git/dpdk>

for stable release: git clone http://dpdk.org/git/dpdk-stable

for Next tree branch：

git clone http://dpdk.org/git/next/dpdk-next-net

Clone dts:

git clone http://dpdk.org/git/tools/dts

1: configure hugepage

to reserve 4G of hugepage memory in the form of four 1G pages:

default\_hugepagesz=1G hugepagesz=1G hugepages=16

or:

echo 1024 > /sys/devices/system/node/node0/hugepages/hugepages-2048kB/nr\_hugepages

echo 1024 > /sys/devices/system/node/node1/hugepages/hugepages-2048kB/nr\_hugepages

export RTE\_SDK=`pwd`

export RTE\_TARGET=x86\_64-native-linuxapp-gcc

or

       make install RTE\_SDK=`pwd` T=x86\_64-native-linuxapp-gcc -j32

       make -C examples/l3fwd RTE\_SDK=`pwd` T=x86\_64-native-linuxapp-gcc

（gcc 编译用的头文件：kernel-headers,kernel-devel，文件后需带内核版本号）

mkdir /mnt/huge

mount -t hugetlbfs nodev /mnt/huge

make install T=x86\_64-native-linuxapp-gcc

/bin/sh: 2: cc: not found apt install gcc

# yum install numactl-devel when encounter fatal error “numa.h: No such file or directory” when compiling dpdk

If the same problem for Ubuntu OS, please: apt-get install libnuma-dev to fix it.

* BIOS upgrade tool:

Dedi prog SF100 ISF

To download driver and software:

<http://www.dediprog.com/pd/spi-flash-solution/SF100>

* configure DTS:
* git clone http://dpdk.org/git/tools/dts

vim execution.cfg

vim conf/crbs.cfg

vim conf/ports.cfg

lspci –nn | grep Eth

ethtool –I ethname

set proxy:

export http\_proxy=http://proxy-prc.intel.com:911

git clone <http://dpdk.org/git/dpdk>

export https\_proxy=https://proxy-prc.intel.com:911

proxy=http://proxy-prc.intel.com:911 (for fedora dnf usage, append this content to /etc/dnf/dnf.conf)0

(Ubuntu17.04 在~/.profile 设置可永久生效, 其他版本可能在~/.bashrc里面设置)

* file share server:

IP: [\\10.240.176.131](file:///\\10.240.176.131)

* update BIOS:(not fanalized)

1. advance🡪process configuration🡪Turbo🡪Disable🡪F10
2. reset
3. F2🡪boot manager

Git log

Git apply \*.path

Git reset –hard HEAD

Dhclient – ethname

# 总核数 = 物理CPU个数 X 每颗物理CPU的核数

# 总逻辑CPU数 = 物理CPU个数 X 每颗物理CPU的核数 X 超线程数

# 查看物理CPU个数

cat /proc/cpuinfo| grep "physical id"| sort| uniq| wc -l

# 查看每个物理CPU中core的个数(即核数)

cat /proc/cpuinfo| grep "cpu cores"| uniq

# 查看逻辑CPU的个数

cat /proc/cpuinfo| grep "processor"| wc -l

查看CPU信息（型号）

cat /proc/cpuinfo | grep name | cut -f2 -d: | uniq -c

查看内 存信息

# cat /proc/meminfo

Redhat 7.3 install scapy：

Download scapy：

Wget http://mirrors.aliyun.com/fedora/releases/24/Everything/x86\_64/os/Packages/s/scapy-2.3.1-2.fc24.noarch.rpm

rpm -ivh scapy-2.3.1-2.fc24.noarch.rpm

tar -czf small.tar.gz small(目录名)  ;压缩并打包目录。

[‎2/‎6/‎2017 9:44 AM] Lu, PeipeiX:

mount -o remount,rw /

git usage:

git apply \*.patch

scp 10.67.118.31:/home/osimg/ubuntu16.img

git clone http://dpdk.org/git/dpdk

然后

git tag

再git checkout

指定的版本

export http\_proxy=http://proxy-prc.intel.com:911

pktgen usage：

to get pktgen source code:

git clone http://dpdk.org/git/apps/pktgen-dpdk

1：edit the /etc/sysctl.conf file to setup the hugepages size:

$ sudo vi /etc/sysctl.conf

Add to the bottom of the file:

vm.nr\_hugepages=256

2：edit the /etc/fstab file to mount the hugepages at startup:

$ sudo vi /etc/fstab

Add to the bottom of the file:

huge /mnt/huge hugetlbfs defaults 0 0

$ sudo mkdir /mnt/huge

$ sudo chmod 777 /mnt/huge

Show bios version

dmidecode -t bios

perf top

dmesg

cat /proc/cpuinfo

cat /proc/cmdline

vim /etc/default/grub

intel\_iommu=on iommu=pt

update-grub (activate the new config for Ubuntu arch OS)

grub2-mkconfig (activate the new config for fedora arch OS)

how to open telnet function for Ubuntu for remote login

<http://blog.csdn.net/ycc541/article/details/46610311>

<http://www.cnblogs.com/junsky/archive/2009/08/01/1536361.html>

[Fedora开启telnet服务](http://blog.csdn.net/fm0517/article/details/39183019)

安装telnet服务：  
#yum install telnet-server xinetd -y  
  
重启telnet服务：  
#systemctl enable telnet.socket  
#systemctl start telnet.socket  
  
关闭防火墙：fire

ufw disable/enable

安装相关库：

install python-xlwt

install python-pexpect

install python-numpy

install python-docutils

install python-pcapy

install scapy

压缩dpdk到dts/dep下面

配置conf/crbf.cfg ports.cfg

Ip link show

把execution/execution.cfg 复制到dts文件夹下

Qemu -serial telnet:localhost:5432

需要在VM里面修改： /boot/grub2/grub.cfg

linux16 /vmlinuz-4.4.3-300.fc23.x86\_64 root= 一行末尾添加 console=ttyS0,115200

mputty,putty, mobaXterm

performance test report

<http://fast.dpdk.org/doc/perf/DPDK_17_02_Intel_NIC_performance_report.pdf>

weekly report

要  cc   to  NPG-PRC-SW STV [npg-prc-sw.stv@intel.com](mailto:npg-prc-sw.stv@intel.com)

; NPG-PRC-SW STV CW [npg-prc-sw.stv.cw@intel.com](mailto:npg-prc-sw.stv.cw@intel.com)

17.02 performance test report

<http://fast.dpdk.org/doc/perf/DPDK_17_02_Intel_NIC_performance_report.pdf>

hugepage operate

cat /proc/meminfo |grep -i huge

rm -fr /mnt/huge/\*

ls /dev/hugepages/\*

rm -fr /dev/hugepages/\*

mount |grep -i huge

git 查询提交者：

git log --pretty=format:"%h - %an, %ar : %s"

for more about how to use git:

<https://git-scm.com/book/zh/v1/Git-%E5%9F%BA%E7%A1%80-%E6%9F%A5%E7%9C%8B%E6%8F%90%E4%BA%A4%E5%8E%86%E5%8F%B2>

**ethtool -s <dev> autoneg on**

apply leave email:

[bg1\_intel\_ops@pactera.com](mailto:bg1_intel_ops@pactera.com)

pip install  xxxxxx

有关多核cpu的linux命令： top 按 1 或者htop 或用tasket

看亲核性： cat/proc/[pid]/task/[tid]/status

Testpmd –nb-cores =N 设置N个core做转发。不设默认都是一个core转发，即使 –c 或-l参数设置了多个core。

Start a second testpmd:

./x86\_64-native-linuxapp-gcc/app/testpmd -c 0x0f -n 4  -b 0000:0a:00.0 --file-prefix=vhost1 --socket-mem=512,0 -- -i

git config --global http.proxy http://proxy-prc.intel.com:911

re

验证0.25倍数的正则表达式：  /^\d+(\.(0|25|5|75)0\*)?$/g

验证非负整数： /^(0|[1-9][0-9]\*)$/

验证正整数：/^([1-9][0-9]\*)$/

验证浮点数：/^(0(\.\d\*[1-9]+\d\*)?)$|^([1-9]\d\*)(\.\d\*)?$/

Mellanox official performance test report

<http://fast.dpdk.org/doc/perf/DPDK_17_05_Mellanox_NIC_performance_report.pdf>

intel nic driver download：

<https://sourceforge.net/projects/e1000/>

[fengqin.wang@pactera.com](mailto:fengqin.wang@pactera.com)

[qiong.wu7@pactera.com](mailto:qiong.wu7@pactera.com)

[win10 .net framework 3.5无法安装错误代码0x800F081F](http://blog.csdn.net/kr0920/article/details/70153935)

<http://blog.csdn.net/kr0920/article/details/70153935>

新装 Ubuntu 安装并打开sshd的步骤：

<http://blog.csdn.net/weiwei_pig/article/details/50954334>

ixia automation expert:

[leyu@ixiacom.com](mailto:leyu@ixiacom.com)

start VM

qemu-system-x86\_64 -enable-kvm -m 4096 -smp cores=2,sockets=1 -cpu host -name dpdk1-f23 -drive file=/home/osimg/f23.img -netdev tap,id=ipvm1,ifname=tap3,script=/etc/qemu-ifup -device e1000,netdev=ipvm1,id=net0,mac=00:00:00:00:00:01 -localtime -vnc :10 -daemonize

apt-get install libnuma-dev

vhost-user : ./testpmd -n 4 -c 0x0c --socket-mem 1024 --no-pci --file-prefix=virtio --vdev=net\_virtio\_user0,mac=00:01:02:03:04:05,path=./vhost-net -- -i --txqflags=0xf00 --disable-hw-vlan-filter --port-topology=chained

dut : /testpmd -n 4 -c 0x03 --socket-mem 1024--file-prefix=vhost --vdev 'net\_vhost0,iface=vhost-net,queues=1,client=0' -- -i --port-topology=chained

ftp://10.67.118.21/d

export RTE\_SDK=~/dpdk

export RTE\_TARGET=x86\_64-native-linuxapp-gcc

make -j 4 install T=x86\_64-native-linuxapp-gcc

export http\_proxy=<http://proxy-prc.intel.com:911>

How to do the image

<http://wiki.ir.intel.com/sw/index.php/DPDK:_Fedora-23_installation_in_VM_image>

Some specific setting in Ubuntu

<http://wiki.ir.intel.com/sw/index.php/DPDK:_Ubuntu-12.04_installation_in_VM_image>

挂载一个模块

modprobe uio

安装驱动

insmod x86\_64-native-linuxapp-gcc/kmod/igb\_uio.ko

绑定驱动

usertools/dpdk-devbind.py -s |less

./usertools/dpdk-devbind.py -b igb\_uio 03:00.0

每次开机运行：

mount -t hugetlbfs nodev /mnt/huge

modprobe uio

insmod x86\_64-native-linuxapp-gcc/kmod/igb\_uio.ko

./usertools/dpdk-devbind.py -b igb\_uio 83:00.0

解绑网卡：

./usertools/dpdk-devbind.py -u 0000:83:00.0

第三周：

1. test case
2. 安装和编译qemu 2.6, 2.7, 2.8, 2.9, 2.10

 ./configure  --target-list=x86\_64-softmmu --prefix=/home/lei/qemu\_install/qemu\_2.10

./configure --target-list=x86\_64-softmmu --prefix=/home/tester/software/qemu-2.10.0/

make -j 5

make install

手动测试下Multi queue的case

用Ubuntu default的qemu

3、那你在这台机器上准备好DPDK的编译环境，DTS的运行环境，和各种qemu 版本

遇到Unable to locate package autoreconf问题，应该：sudo apt-get install autoconf automake libtool

flex: Command not found问题：yum install -y flex

[bison: Command not found](http://blog.csdn.net/weborn/article/details/6794671) 问题：yum  install -y   bison  bison-devel

default\_hugepagesz=1G hugepagesz=1G hugepages=16

tar **–xvf** xx.tar.xz

1、\*.tar 用 tar –xvf 解压

　　2、\*.gz 用 gzip -d或者gunzip 解压

　　3、\*.tar.gz和\*.tgz 用 tar –xzf 解压

　　4、\*.bz2 用 bzip2 -d或者用bunzip2 解压

　　5、\*.tar.bz2用tar –xjf 解压

　　6、\*.Z 用 uncompress 解压

　　7、\*.tar.Z 用tar –xZf 解压

　　8、\*.rar 用 unrar e解压

　　9、\*.zip 用 unzip 解压

查看相应版本

apt-cache search glib2

tar **–czf** jpg.tar.gz \*.jpg   //将目录里所有jpg文件打包成jpg.tar后，并且将其用gzip压缩，生成一个gzip压缩过的包，命名为jpg.tar.gz

1、try run Vhost/Virtio Basic rx/tx, Vhost/Virtio-net Basic rx/tx and Vhost/Virtio multiple queue test cases manually

2、make install qemu v2.6, v2.7, v2.8, v2.9,v 2.10

3、install ubuntu16.10 ,make install dpdk, run dts and install qemu v2.6, v2.7,v 2.8, v2.9, v2.10 on the other server

4、

scp 10.67.118.31:/home/osimg/ubuntu16.img

P0104454

http://10.240.176.130:8080/jenkins/

10.240.176.131 test result

Testpmd 起不来时把–s去掉

sendp([Ether(dst="00:20:00:00:00:00", src="a0:36:9f:7b:c2:61")/IP()/UDP()/Raw(load="P"\*26)], iface="ens802f0")

Data Plane Development Kit

QA

**Your request(s) have been submitted successfully. The id for this request is 4064605.**

https://jira01.devtools.intel.com/browse/DPDK-4042

4057

sendp(x, inter=0, loop=0, iface=None, iface\_hint=None, count=None, verbose=None, realtime=None, return\_packets=False, \*args, \*\*kargs)

Send packets at layer 2

sendp(packets, [inter=0], [loop=0], [verbose=conf.verb]) -> None

rmmod i40e

insmod i40e-2.0.30/src/i40e.ko

sendp([Ether(dst="",src="68:05:ca:fa:fa:e1")/IP()/UDP()/Raw("X"\*18)], iface="ens785f0")

sendp([Ether(dst="68:05:ca:bb:bb:b0",src="68:05:ca:fa:fa:e1")/IP()/UDP()/Raw("X"\*18)], iface="ens785f0"

sendp([Ether(dst="68:05:ca:bb:bb:b0",src="68:05:ca:fa:fa:e1")/ Dot1Q(vlan=0)/IP()/UDP()/Raw("X"\*18)], iface="ens785f0")

sendp([Ether(dst= " F6:7C:E5:0A:94:BB", src= " 90:e2:ba:48:80:40")/IP(dst= "10.239.129.88", src= "10.239.129.65", len=46)/UDP(sport=53, dport=53)/Raw(load="P"\*26)], iface="ens7f0", count=10)

sendp([Ether(dst= " 12:B4:77:1B:3B:7A", src= " 90:e2:ba:48:80:40")/IP()/UDP(sport=65535, dport=65535)/Raw(load="P"\*26)], iface=" ens2f0", count=2000)

sendp([Ether(dst=nutmac, src=srcmac)/Dot1Q(vlan=vlanvalue)/IP(dst=destip, src=srcip, len=46)/UDP(sport=srcport, dport=destport)/Raw(load="P"\*26)], iface="ens785f0", count=1)

VNI(vni)

self.pkt = outer / Vxlan(vni=self.vni) / inner

sendp[Ether(src="00:00:10:00:00:00",dst=" 3c:fd:fe:a3:a0:96") / IP(src="192.168.1.1",dst="192.168.1.2") /UDP(sport=63,dport=4789)/Vxlan(vni=1000)/Ether(src="00:00:20:00:00:00",dst="00:00:20:00:00:20")/IP(src="192.168.2.1",dst="192.168.2.2")/UDP()/(”X”\*18)], iface="ens2f0")

Dut:

68:05:ca:bb:bb:b0 81:00.0

Tester:

68:05:ca:fa:fa:e1 05:00.0

./examples/tep\_termination/build/tep\_termination -c 0x3c00000 -n 4 --socket-mem 2048,2048 -- -p 0x1 --udp-port 4789 --nb-devices 2 --filter-type 3 --tx-checksum 1 --encap 0 --decap 1

./examples/tep\_termination/build/tep\_termination -c 0x3c00000 -n 4 --socket-mem 2048,2048 -- -p 0x1 --udp-port 4789 --nb-devices 2 --filter-type 3 --tx-checksum 1 --encap 1 --decap 0

c431384c8fbf8503693bcae1bdcd58d6fa459b8a

timeout:

1、lsof -Fp /var/run/.rte\_hugepage\_info

testpmd之类的没有没有kill

2、lsof -Fp /var/run/.pg\_config"

./tools/pci\_unbind.py --bind=igb\_uio 0000:08:00.0

echo 2 > /sys/bus/pci/devices/0000\:85\:00.0/max\_vfs

echo "8086 10ed" >/sys/bus/pci/drivers/pci-stub/new\_id

echo 0000:85:10.0 >/sys/bus/pci/devices/0000\:85\:10.0/driver/unbind

echo 0000:85:10.2 >/sys/bus/pci/devices/0000\:85\:10.2/driver/unbind

echo 0000:85:10.0 >/sys/bus/pci/drivers/pci-stub/bind

echo 0000:85:10.2 >/sys/bus/pci/drivers/pci-stub/bind

编译出错

AR librte\_pmd\_i40e.a

ar: librte\_pmd\_i40e.a: File format not recognized

/root/dpdk/mk/rte.lib.mk:142: recipe for target 'librte\_pmd\_i40e.a' failed

make[6]: \*\*\* [librte\_pmd\_i40e.a] Error 1

/root/dpdk/mk/rte.subdir.mk:63: recipe for target 'i40e' failed

make[5]: \*\*\* [i40e] Error 2

/root/dpdk/mk/rte.subdir.mk:63: recipe for target 'net' failed

make[4]: \*\*\* [net] Error 2

/root/dpdk/mk/rte.sdkbuild.mk:76: recipe for target 'drivers' failed

make[3]: \*\*\* [drivers] Error 2

/root/dpdk/mk/rte.sdkroot.mk:128: recipe for target 'all' failed

make[2]: \*\*\* [all] Error 2

/root/dpdk/mk/rte.sdkinstall.mk:85: recipe for target 'pre\_install' failed

make[1]: \*\*\* [pre\_install] Error 2

/root/dpdk/mk/rte.sdkroot.mk:107: recipe for target 'install' failed

make: \*\*\* [install] Error 2

打patch

1. Update your code from git server by git pull

2. Changed your code

3. Add changed in your locale temporary storage

Git status

git add ./filename

4. Submit changed in your locale git storage

git commit –m “your comments”

5. Update your comments

git commit –amend

6. If you have many changes in different files, pls repeat 3-5

7. Build patch

git format-patch –X --signoff --subject-prefix=’PATCH VX’

-X: X means how many commit need to build patch.

VX: V it means version, X it means version number eg: V1 V2 V3

8. Edit your patch

Pls edit your patches add [dts] in your patch subject:

Eg:

Subject: [dts][PATCH V1] fix skip case comments error

9. Copy your patch to ODC mail server

scp –r your-patch-folder root@10.238.55.12:/home/dts

10. Update mail sever git config

cp /root/.gitconfig\_youname /root/.gitconfig

11. Send patch to yourself and check patch

git send-email –-to your\_email\_addr ./your-patch-folder/\*.patch

12. Send patch to dts.org

git send-email –to dts@dpdk.org ./your-patch-folder/\*.patch

13. Trace your patch comments and stats until you received apply email form dts.org manager

VM\_Power\_Manager

/usr/bin/qemu-system-x86\_64 -name guest=vm0,debug-threads=on -S -object secret,id=masterKey0,format=raw,file=/var/lib/libvirt/qemu/domain-2-vm0/master-key.aes -machine pc-i440fx-1.6,accel=kvm,usb=off -cpu host -m 9766 -realtime mlock=off -smp 4,sockets=4,cores=1,threads=1 -uuid e9f51514-5860-4de4-9d3e-611c0b48812b -no-user-config -nodefaults -chardev socket,id=charmonitor,path=/var/lib/libvirt/qemu/domain-2-vm0/monitor.sock,server,nowait -mon chardev=charmonitor,id=monitor,mode=control -rtc base=utc -no-shutdown -boot strict=on -device piix3-usb-uhci,id=usb,bus=pci.0,addr=0x1.0x2 -device virtio-serial-pci,id=virtio-serial0,bus=pci.0,addr=0x3 -drive file=/home/image/sriov-fc25-0.img,format=raw,if=none,id=drive-virtio-disk0 -device virtio-blk-pci,scsi=off,bus=pci.0,addr=0x4,drive=drive-virtio-disk0,id=virtio-disk0,bootindex=1 -chardev socket,id=charchannel0,path=/tmp/powermonitor/vm0.0,server,nowait -device virtserialport,bus=virtio-serial0.0,nr=10,chardev=charchannel0,id=channel0,name=virtio.serial.port.poweragent.0 -chardev socket,id=charchannel1,path=/tmp/powermonitor/vm0.1,server,nowait -device virtserialport,bus=virtio-serial0.0,nr=11,chardev=charchannel1,id=channel1,name=virtio.serial.port.poweragent.1 -chardev socket,id=charchannel2,path=/tmp/powermonitor/vm0.2,server,nowait -device virtserialport,bus=virtio-serial0.0,nr=12,chardev=charchannel2,id=channel2,name=virtio.serial.port.poweragent.2 -chardev socket,id=charchannel3,path=/tmp/powermonitor/vm0.3,server,nowait -device virtserialport,bus=virtio-serial0.0,nr=13,chardev=charchannel3,id=channel3,name=virtio.serial.port.poweragent.3 -vnc 127.0.0.1:0 -device cirrus-vga,id=video0,bus=pci.0,addr=0x2 -device virtio-balloon-pci,id=balloon0,bus=pci.0,addr=0x5 -chardev socket,path=/tmp/vm0\_qga0.sock,server,nowait,id=vm0\_qga0 -device virtio-serial -device virtserialport,chardev=vm0\_qga0,name=org.qemu.guest\_agent.0 -net nic,model=e1000,addr=0x1f -net user,hostfwd=tcp:10.240.176.247:6104-:22 -msg timestamp=on

Test\_plan

<https://sharepoint.amr.ith.intel.com/sites/SWDevEng/DPDK/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fSWDevEng%2fDPDK%2fDocuments%2fDPDK%2017%2e11&FolderCTID=0x012000D52E01C57B273741A303699E4C6F92DD>

<http://hub.pactera.com/?q=home-page>

git bisect start

git bisect good v17.08

git bisect bad "commit id"

git bisect good/bad

git reset --hard commitID

IndentationError:unindent does not match any outer indentation level 缩进的问题

[lsof命令执行很慢的经历](http://blog.chinaunix.net/uid-24648266-id-5744774.html)

执行strace lsof，查看系统调用，发现涉及到了错误的DNS服务器IP。  
终于找到了原因，原来是DNS服务器配置错误。  
（/etc/resolv.conf里，DNS server写了一个不存在的IP地址）

1. port\_start\_stop

lsof -Fp /var/run/.pg\_config

/proc/net/rpc/ nfsd 服务 cd /mnt , time ls

Message from syslogd@virtual-247 at Dec 20 19:20:42 ...

kernel:NMI watchdog: BUG: soft lockup - CPU#7 stuck for 22s! [qemu-system-x86:29767]

Failed to capture pid!!!

/proc/sys/kernel/pid\_max 变大点

cat /sys/bus/pci/devices/0000\:00\:04.0/uevent

相同的session

how to disable misc packets from tester

This is the summary about how to disable misc packet on ORL7.1

If met unexpected packets from tester, please use tcpdump check the packet type first.

1. ICMPv6 packet

Root cause: These packets were sent out by dhclient, which started by network manager.

When port links status changed, network manage will auto start dhclient to request ip address.

Solution: Disable Network manager and kill dhclient

*systemctl stop NetworkManager.service*

*systemctl disable NetworkManager.service*

*systemctl disable dhclient*

Tcpdump packet :

07:14:59.906213 IP6 :: > ff02::16: HBH ICMP6, multicast listener report v2, 1 group record(s), length 28

07:14:59.948247 IP6 :: > ff02::1:ff22:2221: ICMP6, neighbor solicitation, who has fe80::6a05:caff:fe22:2221, length 24

07:15:00.951269 IP6 fe80::6a05:caff:fe22:2221 > ff02::2: ICMP6, router solicitation, length 16

1. Dhcp6 packet

Root cause: These packets were sent out by kernel driver. When link status changed from down to up, Kernel will send out icmp packet to discovery network.

Solution: disable ipv6 (Has been applied into DTS)

*sysctl net.ipv6.conf.ens5f0.disable\_ipv6=1*

Tcpdump packet:

07:34:59.475532 IP 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from 68:05:ca:22:22:21 (oui Unknown), length 300

07:35:04.035776 IP 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from 68:05:ca:22:22:21 (oui Unknown), length 300

07:35:16.374232 IP 0.0.0.0.bootpc > 255.255.255.255.bootps: BOOTP/DHCP, Request from 68:05:ca:22:22:21 (oui Unknown), length 300

1. LLDP packet

Root cause: i40e driver default will enable LLDP. After interface up, LLDP packet will be sent out.

Soluction: Update i40e driver to latest version and disable LLDP agent in i40e driver

Add i40e\_aq\_stop\_lldp(hw, true, NULL) in i40e\_main.c

https://sharepoint.amr.ith.intel.com/sites/SWDevEng/DPDK/SitePages/Home.aspx?RootFolder=%2Fsites%2FSWDevEng%2FDPDK%2FDocuments%2FDPDK%2018%2E02&FolderCTID=0x012000D52E01C57B273741A303699E4C6F92DD&View={0C81970A-0860-4098-9D59-B1CF605ECF78}

1. VF regression
   1. Fortville\_25g, Fortville\_eagle, Fortville\_spirit

OS: FC25 (kernel: 4.8.6-300.fc25.x86\_64)

CPU: Intel(R) Xeon(R) CPU E5-2699 v3 @ 2.30GHz

Intel(R) Ethernet Converged Network Adapter XXV710-DA2 (2x25G)

                                Device id: 8086:158b

Driver version: 2.4.3(i40e)

firmware-version: 6.01 0x80003221 1.1691.0

      Intel(R) Ethernet Converged

Network Adapter X710-DA4 (4x10G):

Device id: 8086:1572

Driver version: 2.4.3(i40e)

firmware-version: 6.01 0x80003221 1.1691.0

         Ethernet Controller XL710 for 40GbE QSFP+ 1583:

Device id: 8086:1583

Driver version: 2.4.3(i40e)

firmware-version: 6.01 0x80003221 1.1691.0

* 1. Sagepond, Sageville

OS: FC25 (kernel: 4.8.6-300.fc25.x86\_64)

CPU: Intel(R) Xeon(R) CPU D-1541 @ 2.10GHz

Intel Corporation Ethernet Controller 10G X550T:

Device id: 8086:1563

Driver version: 4.4.0-k (ixgbe)

firmware-version: 0x80000482

                        Intel Corporation Ethernet Connection X552/X557-AT 10GBASE-T:

Device id: 8086:15ad

Driver version: 4.4.0-k (ixgbe)

firmware-version: 0x800003e7

* 1. Niantic

OS: FC25 (kernel: 4.8.6-300.fc25.x86\_64)

CPU: Intel(R) Xeon(R) CPU E5-2699 v4 @ 2.20GHz

Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection:

Device id: 8086:10fb

Driver version: 5.2.3(ixgbe)

firmware-version: 0x61bf0001

* 1. Powerville

OS: FC25 (kernel: 4.8.6-300.fc25.x86\_64)

CPU: Intel(R) Xeon(R) CPU E5-2699 v3 @ 2.30GHz

82599ES 10-Gigabit SFI/SFP+ Network Connection 10fb:

Device id: 8086:10fb

Driver version: 5.2.3(ixgbe)

firmware-version: 0x61bf0001

1. VFD
   1. Niantic

OS: UBT14.04LTS (kernel: 3.13.0-85-generic)

CPU: Intel(R) Xeon(R) CPU E5-2699 v3 @ 2.30GHz

Intel Corporation 82599ES 10-Gigabit SFI/SFP+ Network Connection:

Device id: 8086:10fb

Driver version: 3.15.1-k (ixgbe)

firmware-version: 0x61bf0001

* 1. Fortville\_25g

OS: UBT14.04LTS (kernel: 3.13.0-85-generic)

CPU: Intel(R) Xeon(R) CPU E5-2699 v3 @ 2.30GHz

Intel Corporation Device [8086:158b]:

Device id: 8086:158b

Driver version: 2.0.19 (ixgbe)

firmware-version: 6.01 0x80003221 1.1691.0

all\_queue\_drop

Title: How to solve "DPDK failed to select IOMMU type"

\* Environment:

         - CPU: Intel(R) Xeon(R) CPU E5-2699 v3 @ 2.30GHz

         - Kernel: 4.10.0-28-generic

         - OS: Ubuntu 16.04.2

         - VFIO

         - testpmd

\* Details:

1, bind pci to vfio-pci

2, run testpmd, and you will get logs:

         EAL:   0000:8d:10.0 failed to select IOMMU type

         EAL: Requested device 0000:8d:10.0 cannot be used

         EAL: No probed ethernet devices

3, check kernel message by "dmesg"

         vfio\_iommu\_type1\_attach\_group: No interrupt remapping support.  Use the module param "allow\_unsafe\_interrupts" to enable VFIO IOMMU support on this platform

4, there are 2 ways to solve it.

         #1, add “vfio\_iommu\_type1.allow\_unsafe\_interrupts=1” in grub

         #2, echo "options vfio\_iommu\_type1 allow\_unsafe\_interrupts=1" > /etc/modprobe.d/vfio\_iommu\_type1.conf

         Note, Item #1 tested on wangfei's server.

./x86\_64-native-linuxapp-gcc/app/testpmd -c 0xf -n 4 -b 0000:81:02.0 -b 0000:81:0a.0 --socket-mem 1024,1024 --file-prefix=test1 -- -i

Set fwd rxonly

Set verbose 1

Vlan set filter on/off 0

Rx\_vlan add/rm 2 0

./x86\_64-native-linuxapp-gcc/app/testpmd -c 0xf00 -n 4 -b 0000:85:10.0 --socket-mem 1024,1024 --file-prefix=test2 -- -i

ip link set $PF\_INTF vf 0 vlan 0

ip link set ens260f0 vf 0 vlan 2

设置的时候要先port stop all 在设置vlan set filter on 0

Vconfig add ens259f0 2

vconfig rem ens259f0.2

tcpdump -i ens259f0 -vvv -e -Q in

python auto\_regression.py -o Fedora26 -n Fortville\_eagle -t vifo\_clang -i 10.240.176.151 -rerun 0 -R -comm -T x86\_64-native-linuxapp-clang,execution\_clang.cfg

driver:

/etc/rc.local

'/sys/bus/pci/devices/0000:00:03.0/net': No such file or directory

Driver不对，更新driver

vm\_dut = self.instantiate\_vm\_dut(set\_target, cpu\_topo, autodetect\_topo=True)

**编译DPDK时：**

**The bug is not reproducible, so it is likely a hardware or OS problem**

./build/l3fwd\_power [EAL options] -- -p PORTMASK [-P] --config(port,queue,lcore)[,(port,queue,lcore)]

备份 Linux 系统的策略有很多，比如使用 dd 命令直接克隆硬盘分区：

sudo dd if=/dev/sda1 of=/dev/sdb1

　　或者，使用 tar 将硬盘上的文件打包：

cd /

sudo tar cvpzf backup.tgz --exclude=/proc --exclude=/mnt --exclude=/sys --exclude=/backup.tgz /

　　还原系统的命令是：

sudo dd if=/dev/sdb1 of=/dev/sda1

　　或

tar xvpfz backup.tgz -C /

1. Install qemu-kvm

sudo apt-get install bridge-utils

sudo apt-get install kvm qemu

sudo apt-get install virtinst  virt-viewer virt-manager

1. Modify the network

/etc/network/interfaces

# interfaces(5) file used by ifup(8) and ifdown(8)

auto lo

iface lo inet loopback

auto eno3

iface eno3 inet manual

auto br0

iface br0 inet dhcp

bridge\_ports eno3

1. Prepare the start if script

/etc/qemu-ifup

set -x

switch=br0

if [ -n " $1 " ]; then

        /usr/sbin/tunctl -t $1

        /sbin/ip link set $1 up

        sleep 0.5s

        /usr/sbin/brctl addif $switch $1

        exit 0

else

        echo " Error : no interface specified "

        exit 1

fi

报错：

/lib/modules/4.13.9-300.fc27.x86\_64/build: No such file or directory. Stop.

安装：dnf install kernel-devel-4.13.9-300.fc27.x86\_64

dnf install elfutils-libelf-devel

网桥：

brctl addbr br0,brctl show,brctl addif br0 eno1,ifup br0,ifconfig eno1 up,ssh connect fail /boot/.ssh/know\_hosts file remove key

[kernel-4.15.16-300.fc27.x86\_64.rpm](http://mirrors.163.com/fedora/updates/27/x86_64/Packages/k/kernel-4.15.16-300.fc27.x86_64.rpm)

date -s 04/17/18

date -s 11:01:00

hwclock –systohc

如果你kernel时低版本，在/usr/src/kernels下找到相应版本的include/linux/pci.h ，在高版本的相应文件中找到

static inline bool pci\_is\_bridge(struct pci\_dev \*dev) 函数，手动复制到低版本的pci.h文件里。重新编译dpdk