**Set up dpdk environment on Linux operate system**

1. Install Linux Operate System
   1. As usual
   2. Update to latest version or specific version you need
2. Configure iommu and huge page in grub command line:
   1. Edit /boot/grub2/grub.cfg

Add “intel\_iommu=on iommu=pt hugepagesz=1G default\_hugepagesz=1G” to specific linux kernel cmdline you need.

* 1. Edit /etc/default/grub

Add “intel\_iommu=on iommu=pt hugepagesz=1G hugepages=8 hugepagesz=2M hugepages=1024 default\_hugepagesz=1G” to GRUB\_CMDLINE\_LINUX.

Exec cmd: grub2-mkconfig -o /boot/grub2/grub.cfg

1. Configure network:

chkconfig --level 2345 network on

chkconfig –list

1. Configure nics need to boot up under /etc/sysconfig/network-scripts/:

Port em0 as example:

TYPE="Ethernet"

DEFROUTE="yes"

IPV4\_FAILURE\_FATAL="no"

IPV6INIT="yes"

IPV6\_AUTOCONF="yes"

IPV6\_DEFROUTE="yes"

IPV6\_PEERDNS="yes"

IPV6\_PEERROUTES="yes"

IPV6\_FAILURE\_FATAL="no"

NAME="em0"

DEVICE="em0"

UUID="44132818-4a00-432e-a15e-36d8af21a7b2"

ONBOOT="yes"

HWADDR="00:1E:67:D0:03:47"

PEERDNS="yes"

PEERROUTES="yes"

For static ip:

IPADDR=10.239.128.86

NETMASK=255.255.254.0

GATEWAY=10.239.128.1

DNS1=10.248.2.1

DNS2=10.239.27.228

DNS3=172.17.6.9

For dynamic ip:

BOOTPROTO=dhcp

1. Install essential package for dpdk:

As for fedora operate system:

yum install -y pexpect

dnf install -y libpcap-devel

dnf install -y gcc-c++ gmp gmp-devel mpfr-devel

dnf install -y bridge-utils

dnf install -y glibc-devel

dnf install -y libgcc

dnf install -y python

yum install -y lsof

yum install libnuma-dev

1. Git clone dts from dpdk.org
   1. git clone <http://dpdk.org/git>/dpdk
2. install kernel devel and set up a soft link to kernel file

注意：dnf install kernel-devel-4.12.11-300.fc26.x86\_64

As for fedora operate system:

ln –s /usr/src/kernels/4.5.5-300.fc24.x86\_64 /lib/modules/4.5.5-300.fc24.x86\_64/build

1. validate env

cd dpdk

export RTE\_SDK=`pwd`

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

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

modprobe uio

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