

Network classifier cgroup

The Network classifier cgroup provides an interface to tag network packets with a class identifier (classid).

The Traffic Controller (tc) can be used to assign different priorities to packets from different cgroups. Also, Netfilter (iptables) can use this tag to perform actions on such packets.

Creating a net_cls cgroups instance creates a net_cls.classid file. This net_cls.classid value is initialized to 0.

You can write hexadecimal values to net_cls.classid; the format for these values is 0xAAAABBBB; AAAA is the major handle number and BBBB is the minor handle number. Reading net_cls.classid yields a decimal result.

Example:

```
mkdir /sys/fs/cgroup/net_cls
mount -t cgroup -onet_cls net_cls /sys/fs/cgroup/net_cls
mkdir /sys/fs/cgroup/net_cls/0
echo 0x100001 > /sys/fs/cgroup/net_cls/0/net_cls.classid
```

- setting a 10:1 handle:

```
cat /sys/fs/cgroup/net_cls/0/net_cls.classid
1048577
```

- configuring tc:

```
tc qdisc add dev eth0 root handle 10: htb
tc class add dev eth0 parent 10: classid 10:1 htb rate 40mbit
```

- creating traffic class 10:1:

```
tc filter add dev eth0 parent 10: protocol ip prio 10 handle 1: cgroup
```

configuring iptables, basic example:

```
iptables -A OUTPUT -m cgroup ! --cgroup 0x100001 -j DROP
```