

Resource groups and cpu shares in namespaces.
This is an example of working with resource groups.

1. Install the cgroup tools.

```
lin70 #yum install libcgroup-tools
```

2. Create a namespace user for the cgroups.

```
lin70 #useradd nsuser
```

3. Create a highprio and a lowprio group.

```
lin70 #cgcreate -a nsuser -g cpu:highprio  
lin70 #cgcreate -a nsuser -g cpu:lowprio
```

4. Put the following values in both groups.

```
lin70 #echo 80 > /sys/fs/cgroup/cpu/highprio/cpu.shares  
lin70 #echo 60 > /sys/fs/cgroup/cpu/lowprio/cpu.shares
```

Make sure you have 3 terminals opened.

In terminal 1 run top.

In terminal 2 run the following commands and watch the bash shell get 99% CPU. The first command creates a new namespace with the defined cgroup and runs a bash shell. The second command will put the cpu to work.

```
lin70 #cgexec -g cpu:highprio unshare \  
--fork --pid --mount-proc bash  
lin70 #while true ; do ((3453443/45)) ; done
```

(top output)

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
3143	root	20	0	115380	1936	1564	R	99.9	0.1	1:19.29	bash

In terminal 3 run the following commands and watch the bash shells get different CPU percentage. The first command creates a new namespace with the defined cgroup and runs a bash shell. The second command will put the cpu to work.

```
lin70 #cgexec -g cpu:lowprio unshare \  
--fork --pid --mount-proc bash  
lin70 #while true ; do ((3453443/45)) ; done
```

(top output)

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
3143	root	20	0	115380	1936	1564	R	57.3	0.1	2:04.00	bash
3155	root	20	0	115380	1936	1564	R	42.7	0.1	0:06.47	bash

Stop both while loops.