jump to the content

Gentoo.LinuxHowtos.org howtos, tips&tricks and tutorials for gentoo linux

from small one page howto to huge articles all in one place

Other .linuxhowtos.org sites: www.linuxhowtos.org
         toolsntoys.linuxhowtos.org

Last additions:

How to make X listen on port 6000
How to make X listen on port 6000
words:
34
views:
77949
userrating:

May, 25th 2007:
Words
496
why adblockers are bad
April, 26th 2007:
Words
77
Website translation planned
Apr, 10th. 2007:
Words
63
Compile Time Estimator integrated into genlop

image:Druckversion / /data/printer.gif (null)
 .
image:pdf icon / /data/pdf.png (null)

You are here:

nice and PORTAGE_NICENESS

Very simply put, the Linux kernel has a (process) scheduler that selects which process to run next in your system. One factor influencing the scheduler's decision about which process to assign CPU time to, is the priority of a process. Processes with a high priority will run before those with a lower priority, and processes with the same priority will take turns in running, one after the other and over again.

Better have a look at it for yourself: Run top from a terminal on your host and pay special attention to the PR and NI columns:

Sample top output

```
  PID USER        PR  NI  VIRT  RES   SHR S %CPU %MEM    TIME+  COMMAND
 8005 root        20   0 85188  33m   57m R  3.3  6.7  8:43.77 X
 8148 tobias      20  10 25624 2376   24m S  0.3  0.5  0:00.60 xscreensaver
    1 root        20   0  2476  552  2304 S  0.0  0.1  0:00.31 init
    2 root        39  19     0    0     0 S  0.0  0.0  0:00.00 ksoftirqd/0
    3 root        15  -5     0    0     0 S  0.0  0.0  0:00.09 events/0
```

The PR column indicates the priority level of a process, the value in the NI column displays the so-called nice value of process, which allows you to adjust the priority of a running process. Possible values range from -20 (very high priority), via 0 (standard priority) to 20 (very low priority). In our little example the xscreensaver process has a higher nice value than X, which indicates that X has a higher priority than xscreensaver.

Now, how do we make this work to our advantage when using Portage?

If you keep using your computer while compiling packages you will notice that your box is much less responsive as usal. This is caused by having two "groups" of processes with the same nice priority: your usual running tasks on one side, and emerge (and its child processes) on the other. Now, if you could renice emerge and its children to a higher nice (i.e. lower priority!) value (default is 0), compiling would inevitably take somewhat longer, but you could use your workstation without noticing much difference to its usual performance. That's what the PORTAGE_NICENESS parameter in /etc/make.conf is for:

Code Listing 1: Put this in /etc/make.conf
```
PORTAGE_NICENESS="15"
```

You can generally "renice" individual processes from the commandline, (e.g. renice 0 -p 8148 to prioritize xscreensaver in the above example), but this will not work with emerge, as Portage reads the PORTAGE_NICENESS setting from /etc/make.conf once and executes all child processes with the specified nice value.

From http://www.gentoo.org/news/en/gwn/20041101-newsletter.xml
current rating:

image:Support us on Content Nation / /images/cn.png (null)

<!--
Other free services

toURL.org
Shorten long
URLs to short
links like
http://tourl.org/2
            tourl.org

.

Reverse DNS lookup
Find out which hostname(s)
resolve to a
given IP or other hostnames for the server
            www.reversednslookup.org
-->

New Packages
        - as
image:rdf newsfeed / /data/rdf.png (null)
            - as
image:rss newsfeed / /data/rss.png (null)
            - as
image:Atom newsfeed / /data/atom.png (null)

image:rdf newsfeed / /data/rdf.png (null)
 |
image:rss newsfeed / /data/rss.png (null)
 |
image:Atom newsfeed / /data/atom.png (null)
      - Powered by
image:LeopardCMS / /data/leopardcms.png (null)
 - Running on
image:Gentoo / /data/gentoo.png (null)
 -
      Copyright 2004-2020 Sascha Nitsch Unternehmensberatung GmbH

image:Valid XHTML1.1 / /data/xhtml.png (null)

:
image:Valid CSS / /data/css.png (null)
:
image:buttonmaker / /data/buttonmaker.png (null)
- Level Triple-A Conformance to Web Content Accessibility Guidelines 1.0 -
- Copyright and legal notices -
Time to create this page: ms
<!--
image:system status display / /status/output.jpg (null)
-->