

Re: ULE vs 4BSD in RELENG_7

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/performance/2007-11/msg00031.html>

- *From:* "Gelsema, P (Patrick) – FreeBSD" <freebsd@xxxxxxxxxxxxx>
 - *Date:* Sat, 10 Nov 2007 16:18:49 +0100 (CET)
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On Mon, November 5, 2007 00:50, Gelsema, P (Patrick) – FreeBSD wrote:

On Sun, November 4, 2007 22:27, Jeff Roberson wrote:

On Sun, 4 Nov 2007, Gelsema, P (Patrick) – FreeBSD wrote:

Hi Jeff,

I tried your patch. Ran a buildkernel, timed. Recompiled kernel including your patch, rebooted and reran. Please find results below.

```
w/o patch
hulk# time make -j8 buildkernel
837.808u 138.167s 10:28.96 155.1% 6349+1349k
2873+7780io 303pf+0w
```

```
w patch
hulk# time make -j8 buildkernel
838.554u 168.316s 10:52.10 154.4% 6263+1332k
6489+7791io 11pf+0w
```

I only understand the 10:52 seconds thing, but it looks like it's stressing less and still getting things done.

Well this doesn't look very good at all. System time increased by 30 seconds! Must be too many extra context switches. The minimum slice value is probably too small and you've got an average of 4 threads per-core.

Can you try re-running with kern.sched.slice_min = 4 and kern.sched.slice = 12 ?

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Can you tell me how 4BSD does on this machine?

ULE w/o patch

hulk# time make -j8 buildkernel

837.808u 138.167s 10:28.96 155.1% 6349+1349k 2873+7780io 303pf+0w

ULE w latest patch

hulk# time make -j8 buildkernel

846.008u 144.377s 10:41.28 154.4% 6364+1354k 7131+7890io 216pf+0w

kern.sched.interact: 30

kern.sched.slice_min: 2

kern.sched.slice: 8

kern.sched.name: ULE

ULE w latest patch (changed slice)

hulk# time make -j8 buildkernel

840.783u 159.639s 10:37.41 156.9% 6280+1338k 656+8025io 0pf+0w

kern.sched.slice_min: 4

kern.sched.slice: 12

kern.sched.name: ULE

4BSD

hulk# time make -j8 buildkernel

823.898u 136.524s 9:50.61 162.6% 6263+1334k 7098+7774io 216pf+0w

Hi Jeff,

With your latest patch applied to RELENG_7 (the one that takes packages into consideration when distributing over cores), I get the following result.

ULE

hulk# time make -j8 buildkernel

838.774u 147.212s 10:38.59 154.3% 6295+1341k 7139+7880io 214pf+0w

hulk# sysctl kern | grep sched

kern.sched.preemption: 1

kern.sched.topology: 0

kern.sched.steal_thresh: 1

kern.sched.steal_idle: 1

kern.sched.steal_htt: 1

kern.sched.balance_interval: 133

kern.sched.balance: 1

kern.sched.tryself: 1

kern.sched.affinity: 3

kern.sched.pick_pri: 1

kern.sched.preempt_thresh: 64

kern.sched.interact: 30

kern.sched.slice: 13

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kern.sched.name: ULE

Rgds,

Patrick

Seems 4BSD wins when it compares to buildkernel. Please let me know if you want me to run other tests.

System is:

```
Timecounter "i8254" frequency 1193182 Hz quality 0
CPU: AMD Athlon(tm) 64 X2 Dual Core Processor 4800+ (2511.47-MHz K8-class
CPU)
Origin = "AuthenticAMD" Id = 0x60fb1 Stepping = 1
Features=0x178bfbff<FPU,VME,DE,PSE,TSC,MSR,PAE,MCE,
CX8,APIC,SEP,MTRR,PGE,MCA,CMOV,PAT,PSE36,CLFLUSH,MMX,FXSR,SSE,SSE2,HTT>
Features2=0x2001<SSE3,CX16>
AMD
Features=0xea500800<SYSCALL,NX,MMX+,FFXSR,RDTSCP,LM,3DNow!+,3DNow!>
AMD Features2=0x11f<LAHF,CMP,SVM,ExtAPIC,CR8,Prefetch>
Cores per package: 2
usable memory = 3527241728 (3363 MB)
avail memory = 3411648512 (3253 MB)
```

Cheers

Patrick

Thanks,
Jeff

System is AMD Athlon X264 2.2Ghz

```
Kernel is GENERIC.
hulk# uname -a
FreeBSD hulk.superhero.nl 7.0-BETA2 FreeBSD
7.0-BETA2 #0: Sun Nov 4
20:30:23 UTC 2007
root@xxxxxxxxxxxxxxxxxxx:/usr/obj/usr/src/sys/GENERIC
amd64
```

I see you have a new patch. Could you send that to me?
When I download
it

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from the mailman site I get weird characters in the
downloaded file :(

Cheers

Patrick

freebsd-performance@xxxxxxxxxxxxx mailing list

<http://lists.freebsd.org/mailman/listinfo/freebsd-performance>

To unsubscribe, send any mail to "freebsd-performance-unsubscribe@xxxxxxxxxxxxx"