Subject: Re: [LTP] [PATCH 1/8] Scaling msgmni to the amount of lowmem
Posted by Subrata Modak on Tue, 19 Feb 2008 08:50:55 GMT
View Forum Message <> Reply to Message

> Nadia Derbey wrote:
> > Andrew Morton wrote:
> >
> >> On Mon, 11 Feb 2008 15:16:47 +0100 Nadia.Derbey@bull.net wrote:
> >>
> >>
> >>> [PATCH 01/08]
> >>>
> >>> This patch computes msg_ctlmni to make it scale with the amount of
> >>> lowmem.
> >>> msg_ctlmni is now set to make the message queues occupy 1/32 of the
> >>> available
> >>> lowmem.
> >>>
> >>> Some cleaning has also been done for the MSGPOOL constant: the msgctl
> >>> man page
> >>> says it's not used, but it also defines it as a size in bytes (the code
> >>> expresses it in Kbytes).
> >>>
> >>
> >>
> >> Something's wrong here. Running LTP's msgctl08 (specifically:
> >> ltp-full-20070228) cripples the machine. It's a 4-way 4GB x86_64.
> >>
> >> http://userweb.kernel.org/~akpm/config-x.txt
> >> http://userweb.kernel.org/~akpm/dmesg-x.txt
> >>
> >> Normally msgctl08 will complete in a second or two. With this patch I
> >> don't know how long it will take to complete, and the machine is horridly
> >> bogged down. It does recover if you manage to kill msgctl08. Feels like
> >> a terrible memory shortage, but there's plenty of memory free and it
> >> isn't
> >> swapping.
> >>
> >>
> >>
> >
> > Before the patchset, msgctl08 used to be run with the old msgmni value:
> > 16. Now it is run with a much higher msgmni value (1746 in my case),
> > since it scales to the memory size.
> > When I call "msgctl08 100000 16" it completes fast.
> >
> > Doing the follwing on the ref kernel:
> > echo 1746 > /proc/sys/kernel/msgmni

> > msgctl08 100000 1746
> >
> > makes th test block too :-(
> >
> > Will check to see where the problem comes from.
> >
>
> Well, actually, the test does not block, it only takes much much more
> time to be executed:
>
> doing this:
> date; ./msgctl08 100000 XXX; date
>
>
> gives us the following results:
> XXX   16   32   64   128   256   512   1024   1746
> time(secs)   2   4   8   16   32   64   132   241
>
> XXX is the # of msg queues to be created = # of processes to be forked
> as readers = # of processes to be created as writers
> time is approximative since it is obtained by a "date" before and after.
>
> XXX used to be 16 before the patchset ---> 1st column
>   --> 16 processes forked as reader
>   --> + 16 processes forked as writers
>   --> + 16 msg queues
> XXX = 1746 (on my victim) after the patchset ---> last column
>   --> 1746 reader processes forked
>   --> + 1746 writers forked
>   --> + 1746 msg queues created
>
> The same tests on the ref kernel give approximatly the same results.
>
> So if we don't want this longer time to appear as a regression, the LTP
> should be changed:
> 1) either by setting the result of get_max_msgqueues() as the MSGMNI
> constant (16) (that would be the best solution in my mind)
> 2) or by warning the tester that it may take a long time to finish.
>
> There would be 3 tests impacted:
>
> kernel/syscalls/ipc/msgctl/msgctl08.c
> kernel/syscalls/ipc/msgctl/msgctl09.c
> kernel/syscalls/ipc/msgget/msgget03.c

We will change the test case if need that be. Nadia, kindly send us the
patch set which will do the necessary changes.

Regards--
Subrata

>
> Cc-ing ltp mailing list ...
>
> Regards,
> Nadia
>
>
>
> ---
> This SF.net email is sponsored by: Microsoft
> Defy all challenges. Microsoft(R) Visual Studio 2008.
> http://clk.atdmt.com/MRT/go/vse0120000070mrt/direct/01/
> _____
> Ltp-list mailing list
> Ltp-list@lists.sourceforge.net
> https://lists.sourceforge.net/lists/listinfo/ltp-list

_____
Containers mailing list
Containers@lists.linux-foundation.org
https://lists.linux-foundation.org/mailman/listinfo/containers