Re: [PATCH] Stackgap

Source: http://unix.derkeiler.com/Mailing−Lists/FreeBSD/arch/2005−05/0120.html

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From: Doug Rabson (*dfr_at_nlsystems.com*)
Date: 05/29/05

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To: freebsd−arch@freebsd.org
Date: Sun, 29 May 2005 15:07:49 +0100
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On Saturday 28 May 2005 15:10, Robert Watson wrote:
> *On Fri, 27 May 2005, Suleiman Souhlal wrote:*
> > *You can find an implementation of stackgap from OpenBSD at http://*
> > *people.freebsd.org/~ssouhlal/testing/stackgap−20050527.diff*
> >
> > *You can control the range of the random stack gap with the*
> > *kern.stackgap_random sysctl. A value of 0 disables it. Otherwise,*
> > *it has to be a power of 2 and not too large. The default value is*
> > *64K.*
> >
> > *I've only had the chance to test this on i386. Could anyone test it*
> > *on other architectures as well?*
> >
> > *Any comments/objections?*
>
> *In the past, substantial performance hits have been measured due to*
> *poor stack alignment. Specifically, in combination with less optimal*
> *compiler behavior, the results have been pretty nasty. Have you*
> *tried micro−benchmarking a series of runs with this stack offset*
> *randomness using floating point on stack arguments to see if there's*
> *a measurable cost to moving the stack around? Hopefull if all is*
> *well, there will be little or no difference, but a small error here*
> *could result in a substantial performance hit...*

I recently modified the crt code to force the stack alignment to 16
bytes on startup (so that I could safely write code that uses movaps).