

checkpoint-restart (was Re: suspending programs)

Source: <http://linux.derkeiler.com/Mailing-Lists/Debian/2005-04/2496.html>

From: michael (linux_at_networkingnewsletter.org.uk)

Date: 04/19/05

To: debian user <debian-user@lists.debian.org>

Date: Tue, 19 Apr 2005 12:10:50 +0100

On Tue, 2005-04-19 at 03:32 -0700, Alvin Oga wrote:

> hi ya

>

> On Tue, 19 Apr 2005, roberto wrote:

> > Hello,

> > i usually run large simulations, and it happened sometimes power to go down

> > suddenly, i don't know why.

>

> > I'd like to restart my programs just at the same point where they have been

> > suspended.

>

> > are you save the state of the simulation ?? if not ...it's impossible to

> > continue from where you crashed

>

I've done a quick apt-cache search (sarge apt sources) for something like IRIX's `cpr`:

IRIX Checkpoint and Restart (CPR) offers a set of user-transparent software management tools, allowing system administrators, operators, and

users with suitable privileges to suspend a job or a set of jobs in mid-

execution, and restart them later on. The jobs may be running on a single machine or on an array of networking connected machines.

CPR may

be used to enhance system availability, provide load and resource control

or balancing, and to facilitate simulation or modeling.

which he could use, eg by checkpointing every N hours and then use the restart with power back on. The chk pt in this case writes memory image to disk, the other alt is for Roberto to do checkpointing within the simulation (eg write state vars to a file) and knock up a quick restart routine. For any decent/large sim code, I'd guess these already exist...

Debian-User: checkpoint-restart (was Re: suspending programs)

It's hugely unlikely you'd be able to restart at the exact same place,
but cpr would allow you to not lose everything (don't forget there's a
large cost assoc with writing lots of data to disk)

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