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Subject: OpenVZ on Power?

Posted by [Bryson Lee](#) on Thu, 01 Mar 2012 16:03:55 GMT

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Hi,

I'm looking for an alternative to BLCR to provide checkpoint/restart functionality for a Linux application on IBM Power hardware. Having seen some mentions that OpenVZ supports Power, I wanted to try it out.

I've tried to rebuild `vzkernel-2.6.32-042stab049.6.src.rpm` in Mock on an IBM JS-12 blade (Power6) running Fedora 12, and have run into a number of problems. I'll note that we have successfully rebuilt the Fedora12 2.6.32-based kernel from SRPM in the same Mock configuration.

The initial issue was that the patch-042stab049 introduced a single line of invalid syntax into `arch/powerpc/include/asm/elf.h`:

```
export struct page *vdso32_pages[1];
```

Correcting "export" to "extern" resulted in a type-redefinition compile error, since `vdso32_pages` is defined as `IIR "static unsigned int"` in the PPC `vdso.c`.

Removing the extern declaration from `elf.h` entirely, since apparently the symbol usage in the `cpt/cpt_mm.h` is `ifdef'd` by `CONFIG_X86` revealed another stumbling block with undefined functions `[un]charge_beancounter_fast()` due to `CONFIG_BEANCOUNTERS` not getting defined. I added appropriate no-op definitions to the group already present in the `#ifndef CONFIG_BEANCOUNTERS` section of `kernel/include/bc/beancounters.h`, but there appears to be a larger problem in that the contents of `config-vz` aren't getting reflected in the final kernel config used during the RPM build.

My basic question is whether or not there's any hope of successfully generating a ppc64 OpenVZ kernel. I tried the stable RHEL5 kernel SRPM as well, but encountered a different build failure.

I note that the last e.g. `vzctl` version that has an RPM download for ppc64 is 3.0.26 from 2/27/2011, and that the next minor release 3.0.26.1 from about a week later has no mention of Power at all. I reviewed the -announce, -user, and -devel list archives from that timeframe, and didn't see any explicit mention of support for Power being dropped.

Is ppc[64] still a supported architecture for OpenVZ? If so, is checkpoint/restart available? How should I go about building a kernel (and, eventually the utilities) for my Fedora12 systems?

Thanks in advance,

-Bryson Lee

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Subject: Re: OpenVZ on Power?

Posted by [Kirill Korotaev](#) on Thu, 01 Mar 2012 17:06:07 GMT

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1. It should be pretty easy to make OpenVZ compilable/running on PowerPC. Typically it takes a day or so in the worst case since there is almost no code depending on platform, except for maybe syscalls and it's numbers.

2. However, checkpoint restart is not supported on PowerPC platform (originally we supported x32/x86-64 and IA64 platforms, then dropped IA64). Again, it should be pretty straightforward as 95% of state is not platform dependent. However, nobody really asked before...

Thanks,  
Kirill

On Mar 1, 2012, at 20:03 , Bryson Lee wrote:

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> Thanks in advance,  
>  
> -Bryson Lee  
> <ATT00001.c>

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Subject: Re: OpenVZ on Power?

Posted by [Guido Stepken](#) on Thu, 01 Mar 2012 20:35:35 GMT

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Am 01.03.2012 18:06, schrieb Kirill Korotaev:

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>  
> Thanks,  
> Kirill

>  
>

Hi Kirill!

You have been doing great, great job since OpenVZ, since many, many, many providers used it (secretly). Also with Parallels, your commercial "line" ...

But i really, really suggest, that you to migrate to Linux 3.2 AND FreeBSD 9.0 "jails" very soon, since FreeBSD has much much advanced, decicive features, compared to Linux: ZFS, rockstable, even under highest overloads (50x overload you can still login), and you offer migration paths from Linux to FreeBSD for Parallels AND FreeBSD/OpenVZ

Tnx in advance, keep up the good work!

Guido Stepken

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