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Subject: 2.6.22-ovz002 on powerpc  
Posted by [Christian Kaiser2](#) on Tue, 04 Sep 2007 10:15:15 GMT  
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Hi all,

I tried my best today at your new development kernel based on a 2.6.22 Linux Kernel. My first question is: why did you use the 2.6.22 Kernel as base for your work and not the latest 2.6.22.6 that already includes some bugfixes. The first error I got when I tried to compile on a powerpc64 machine was:

```
In file included from include/asm/pgalloc.h:6,
      from arch/powerpc/mm/mem.c:36:
include/asm/pgalloc-64.h: In function 'do_pte_alloc':
include/asm/pgalloc-64.h:87: error: 'PTE_CACHE_NUM' undeclared (first use
in this function)
include/asm/pgalloc-64.h:87: error: (Each undeclared identifier is reported
only once
include/asm/pgalloc-64.h:87: error: for each function it appears in.)
make[1]: *** [arch/powerpc/mm/mem.o] Error 1
make: *** [arch/powerpc/mm] Error 2
make: *** Waiting for unfinished jobs....
```

So I took the updated version of "include/asm/pgalloc-64.h" from 2.6.22.6 and that error was solved.

Beside this I realized that you forgot to update the powerpc system tabe. So I added the fairsched specific system calls in "include/asm-powerpc/systbl.h" and "include/asm-powerpc/unistd.h".

But I am still getting another error:

```
Building modules, stage 2.
MODPOST 143 modules
WRAP arch/powerpc/boot/zImage.pseries
ERROR: "nf_ct_icmp_timeout" [net/netfilter/nf_conntrack.ko] undefined!
make[1]: *** [__modpost] Error 1
make: *** [modules] Error 2
make: *** Waiting for unfinished jobs....
```

These conntrack things are confusing me... so I added the "nf\_ct\_icmp\_timeout" variable at the beginning of "net/netfilter/nf\_conntrack\_standalone.c". Without CONFIG\_NF\_CONNTRACK=m it fails building somewhere else.

Booting the Kernel on a QS20 blade ends up in this loop of exceptions:

```
Memory: 1020352k/1048576k available (4736k kernel code, 28224k reserved,
768k data, 590k bss, 384k in)
```

Mount-cache hash table entries: 4096  
Page beancounter hash is 8192 entries.  
Processor 1 found.  
Processor 2 found.  
Processor 3 found.  
Brought up 4 CPUs

-----[ cut here ]-----

Badness at kernel/sched.c:7495

Call Trace:

```
[c00000003ef03550] [c0000000000f3d4] .show_stack+0x68/0x1b0 (unreliable)
[c00000003ef035f0] [c0000000001ad700] .report_bug+0x94/0xe8
[c00000003ef03680] [c000000000246f4] .program_check_exception+0x178/0x61c
[c00000003ef03730] [c00000000004f0c] program_check_common+0x10c/0x180
--- Exception: 700 at .measure_one+0xc4/0x16c
    LR = .measure_one+0xac/0x16c
[c00000003ef03ae0] [c0000000004bbac] .build_sched_domains+0x950/0xda0
[c00000003ef03d70] [c0000000004c030] .arch_init_sched_domains+0x34/0x70
[c00000003ef03e10] [c000000000457038] .sched_init_smp+0x30/0xcc
[c00000003ef03ea0] [c000000000440b30] .kernel_init+0x14c/0x3c4
[c00000003ef03f90] [c0000000002613c] .ppc_kernel_thread+0x4c/0x68
```

-----[ cut here ]-----

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[c00000003ef03730] [c00000000004f0c] program_check_common+0x10c/0x180
--- Exception: 700 at .measure_one+0xc4/0x16c
    LR = .measure_one+0xac/0x16c
```

[...]

Mit freundlichen Grüßen / Best Regards  
Christian Kaiser

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Subject: Re: 2.6.22-ovz002 on powerpc  
Posted by [Pavel Emelianov](#) on Wed, 05 Sep 2007 09:01:47 GMT

Christian Kaiser2 wrote:

> Hi all,  
>  
> I tried my best today at your new development kernel based on a 2.6.22  
> Linux Kernel. My first question is: why did you use the 2.6.22 Kernel as  
> base for your work and not the latest 2.6.22.6 that already includes some  
> bugfixes. The first error I got when I tried to compile on a powerpc64  
> machine was:  
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> In file included from include/asm/pgalloc.h:6,  
>                   from arch/powerpc/mm/mem.c:36:  
> include/asm/pgalloc-64.h: In function 'do\_pte\_alloc':  
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> in this function)  
> include/asm/pgalloc-64.h:87: error: (Each undeclared identifier is reported  
> only once  
> include/asm/pgalloc-64.h:87: error: for each function it appears in.)  
> make[1]: \*\*\* [arch/powerpc/mm/mem.o] Error 1  
> make: \*\*\* [arch/powerpc/mm] Error 2  
> make: \*\*\* Waiting for unfinished jobs....  
>  
> So I took the updated version of "include/asm/pgalloc-64.h" from 2.6.22.6  
> and that error was solved.  
> Beside this I realized that you forgot to update the powerpc system tabe.  
> So I added the fairsched specific system calls in  
> "include/asm-powerpc/systbl.h" and "include/asm-powerpc/unistd.h".  
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> But I am still getting another error:  
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> Building modules, stage 2.  
> MODPOST 143 modules  
> WRAP arch/powerpc/boot/zImage.pseries  
> ERROR: "nf\_ct\_icmp\_timeout" [net/netfilter/nf\_conntrack.ko] undefined!  
> make[1]: \*\*\* [\_\_modpost] Error 1  
> make: \*\*\* [modules] Error 2  
> make: \*\*\* Waiting for unfinished jobs....  
>  
> These conntrack things are confusing me... so I added the  
> "nf\_ct\_icmp\_timeout" variable at the beginning of  
> "net/netfilter/nf\_conntrack\_standalone.c". Without CONFIG\_NF\_CONNTRACK=m it  
> fails building somewhere else.

We haven't fixed the netfilter compilation yet. But we're going to have them in ovz004 kernel I think.

> Booting the Kernel on a QS20 blade ends up in this loop of exceptions:  
>

```
> Memory: 1020352k/1048576k available (4736k kernel code, 28224k reserved,  
> 768k data, 590k bss, 384k in)  
> Mount-cache hash table entries: 4096  
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> Processor 1 found.  
> Processor 2 found.  
> Processor 3 found.  
> Brought up 4 CPUs  
> -----[ cut here ]-----  
> Badness at kernel/sched.c:7495
```

Oh yes! This is a known thing as well. I believe this will be fixed in ovz004 kernel as well.

All of th above is unlikely to appear in ovz003 as we have another critical BUG with VE stop, so ovz003 kernel will come with this fix along with the 2.6.22 stable update, tickless kernel support and SLUB allocator. The ppc issues will be delayed up to ovz004.

```
> Call Trace:  
> [c00000003ef03550] [c00000000000f3d4] .show_stack+0x68/0x1b0 (unreliable)  
> [c00000003ef035f0] [c0000000001ad700] .report_bug+0x94/0xe8  
> [c00000003ef03680] [c0000000000246f4] .program_check_exception+0x178/0x61c  
> [c00000003ef03730] [c000000000004f0c] program_check_common+0x10c/0x180  
> --- Exception: 700 at .measure_one+0xc4/0x16c  
> LR = .measure_one+0xac/0x16c  
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> [c00000003ef03e10] [c000000000457038] .sched_init_smp+0x30/0xcc  
> [c00000003ef03ea0] [c000000000440b30] .kernel_init+0x14c/0x3c4  
> [c00000003ef03f90] [c00000000002613c] .ppc_kernel_thread+0x4c/0x68  
> -----[ cut here ]-----  
> Badness at kernel/sched.c:7495
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```
> Call Trace:  
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> [c00000003ef03730] [c000000000004f0c] program_check_common+0x10c/0x180  
> --- Exception: 700 at .measure_one+0xc4/0x16c  
> LR = .measure_one+0xac/0x16c  
> [...]
```

```
>  
> Mit freundlichen Grüßen / Best Regards  
> Christian Kaiser  
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```

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