

## [patch 05/28] Add cmpxchg64 and cmpxchg64\_local to powerpc

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*Source:* <http://linux.derkeiler.com/Mailing-Lists/Kernel/2007-10/msg12368.html>

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  - *Date:* Wed, 31 Oct 2007 18:37:15 -0400
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Make sure that at least cmpxchg64\_local is available on all architectures to use for unsigned long long values.

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-----  
include/asm-powerpc/system.h | 18 ++++++-----  
1 file changed, 16 insertions(+), 2 deletions(-)

Index: linux-2.6-lttng/include/asm-powerpc/system.h

-----  
--- linux-2.6-lttng.orig/include/asm-powerpc/system.h 2007-10-31 17:32:44.000000000 -0400  
+++ linux-2.6-lttng/include/asm-powerpc/system.h 2007-10-31 17:56:25.000000000 -0400  
@@ -461,7 +461,7 @@ \_\_cmpxchg\_local(volatile void \*ptr, unsi  
return old;  
}

---  
-#define cmpxchg(ptr,o,n) \  
+#define cmpxchg(ptr, o, n) \  
{ \  
\_\_typeof\_\_(\*(ptr)) \_o\_ = (o); \  
\_\_typeof\_\_(\*(ptr)) \_n\_ = (n); \  
@@ -470,7 +470,7 @@ \_\_cmpxchg\_local(volatile void \*ptr, unsi  
})

---  
-#define cmpxchg\_local(ptr,o,n) \  
+#define cmpxchg\_local(ptr, o, n) \  
{ \  
\_\_typeof\_\_(\*(ptr)) \_o\_ = (o); \  
\_\_typeof\_\_(\*(ptr)) \_n\_ = (n); \  
@@ -490,6 +490,20 @@ \_\_cmpxchg\_local(volatile void \*ptr, unsi  
\*/  
#define NET\_IP\_ALIGN 0  
#define NET\_SKB\_PAD L1\_CACHE\_BYTES  
+  
+#define cmpxchg64(ptr, o, n) \  
}

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```
+ ({ \
+ BUILD_BUG_ON(sizeof(*(ptr)) != 8); \
+ cmpxchg((ptr), (o), (n)); \
+ })
+#define cmpxchg64_local(ptr, o, n) \
+ ({ \
+ BUILD_BUG_ON(sizeof(*(ptr)) != 8); \
+ cmpxchg_local((ptr), (o), (n)); \
+ })
+#else
+#include <asm-generic/cmpxchg-local.h>
+#define cmpxchg64_local(ptr, o, n) __cmpxchg64_local_generic((ptr), (o), (n))
#endif

#define arch_align_stack(x) (x)
```

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