

[PATCH] [25/34] x86_64: skip cache_free_alien() on non NUMA

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2007-04/msg12033.html>

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 - *Date:* Mon, 30 Apr 2007 17:49:58 +0200 (CEST)
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Set use_alien_caches to 0 on non NUMA platforms. And avoid calling the cache_free_alien() when use_alien_caches is not set. This will avoid the cache miss that happens while dereferencing slabp to get nodeid.

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mm/slab.c | 7 +++++--
1 file changed, 5 insertions(+), 2 deletions(-)

Index: linux/mm/slab.c

```
=====
--- linux.orig/mm/slab.c
+++ linux/mm/slab.c
@@ -1146,7 +1146,7 @@ static inline int cache_free_alien(struc
* Make sure we are not freeing a object from another node to the array
* cache on this cpu.
*/
- if (likely(slabp->nodeid == node) || unlikely(!use_alien_caches))
+ if (likely(slabp->nodeid == node))
return 0;

l3 = cachep->nodelists[node];
@@ -1394,6 +1394,9 @@ void __init kmem_cache_init(void)
int order;
int node;

+ if (num_possible_nodes() == 1)
+ use_alien_caches = 0;
```

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+
for (i = 0; i < NUM_INIT_LISTS; i++) {
kmem_list3_init(&initkmem_list3[i]);
if (i < MAX_NUMNODES)
@@ -3563,7 +3566,7 @@ static inline void __cache_free(struct k
check_irq_off());
objp = cache_free_debugcheck(cachep, objp, __builtin_return_address(0));

- if (cache_free_alien(cachep, objp))
+ if (use_alien_caches && cache_free_alien(cachep, objp))
return;

if (likely(ac->avail < ac->limit)) {
-
```

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