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Subject: [RFC PATCH 1/4] Container Freezer: Add TIF\_FREEZE flag to all architectures

Posted by [Matt Helsley](#) on Thu, 03 Apr 2008 21:03:17 GMT

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This patch is the first step in making the refrigerator() available to all architectures, even for those without power management.

The purpose of such a change is to be able to use the refrigerator() in a new control group subsystem which will implement a control group freezer.

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```
include/asm-alpha/thread_info.h | 2 ++
include/asm-avr32/thread_info.h | 2 ++
include/asm-cris/thread_info.h   | 2 ++
include/asm-h8300/thread_info.h  | 2 ++
include/asm-m68k/thread_info.h   | 1 +
include/asm-m68knommu/thread_info.h | 2 ++
include/asm-parisc/thread_info.h | 2 ++
include/asm-s390/thread_info.h   | 2 ++
include/asm-sparc/thread_info.h  | 2 ++
include/asm-sparc64/thread_info.h | 2 ++
include/asm-um/thread_info.h     | 2 ++
include/asm-v850/thread_info.h   | 2 ++
include/asm-xtensa/thread_info.h | 2 ++
13 files changed, 25 insertions(+)
```

Index: 2.6.25-rc3-mm1/include/asm-alpha/thread\_info.h

```
=====
--- 2.6.25-rc3-mm1.orig/include/asm-alpha/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-alpha/thread_info.h
@@ -76,12 +76,14 @@ register struct thread_info *__current_t
#define TIF_UAC_SIGBUS 7
#define TIF_MEMDIE 8
#define TIF_RESTORE_SIGMASK 9 /* restore signal mask in do_signal */
+#define TIF_FREEZE 19 /* is freezing for suspend */

#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
#define _TIF_SIGPENDING (1<<TIF_SIGPENDING)
#define _TIF_NEED_RESCHED (1<<TIF_NEED_RESCHED)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
#define _TIF_RESTORE_SIGMASK (1<<TIF_RESTORE_SIGMASK)
+#define _TIF_FREEZE (1<<TIF_FREEZE)
```

```
/* Work to do on interrupt/exception return. */
#define _TIF_WORK_MASK (_TIF_SIGPENDING | _TIF_NEED_RESCHED)
Index: 2.6.25-rc3-mm1/include/asm-avr32/thread_info.h
```

```
=====
--- 2.6.25-rc3-mm1.orig/include/asm-avr32/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-avr32/thread_info.h
@@ -88,6 +88,7 @@ static inline struct thread_info *current
#define TIF_MEMDIE 6
#define TIF_RESTORE_SIGMASK 7 /* restore signal mask in do_signal */
#define TIF_CPU_GOING_TO_SLEEP 8 /* CPU is entering sleep 0 mode */
+#define TIF_FREEZE 19 /* is freezing for suspend */
#define TIF_DEBUG 30 /* debugging enabled */
#define TIF_USERSPACE 31 /* true if FS sets userspace */
```

```
@@ -99,6 +100,7 @@ static inline struct thread_info *current
#define _TIF_MEMDIE (1 << TIF_MEMDIE)
#define _TIF_RESTORE_SIGMASK (1 << TIF_RESTORE_SIGMASK)
#define _TIF_CPU_GOING_TO_SLEEP (1 << TIF_CPU_GOING_TO_SLEEP)
+#define _TIF_FREEZE (1 << TIF_FREEZE)
```

```
/* Note: The masks below must never span more than 16 bits! */
```

```
Index: 2.6.25-rc3-mm1/include/asm-cris/thread_info.h
```

```
=====
--- 2.6.25-rc3-mm1.orig/include/asm-cris/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-cris/thread_info.h
@@ -86,6 +86,7 @@ struct thread_info {
#define TIF_RESTORE_SIGMASK 9 /* restore signal mask in do_signal() */
#define TIF_POLLING_NRFLAG 16 /* true if poll_idle() is polling TIF_NEED_RESCHED */
#define TIF_MEMDIE 17
+#define TIF_FREEZE 19 /* is freezing for suspend */
```

```
#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
#define _TIF_NOTIFY_RESUME (1<<TIF_NOTIFY_RESUME)
@@ -93,6 +94,7 @@ struct thread_info {
#define _TIF_NEED_RESCHED (1<<TIF_NEED_RESCHED)
#define _TIF_RESTORE_SIGMASK (1<<TIF_RESTORE_SIGMASK)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
+#define _TIF_FREEZE (1<<TIF_FREEZE)
```

```
#define _TIF_WORK_MASK 0x0000FFFE /* work to do on interrupt/exception return */
#define _TIF_ALLWORK_MASK 0x0000FFFF /* work to do on any return to u-space */
```

```
Index: 2.6.25-rc3-mm1/include/asm-h8300/thread_info.h
```

```
=====
--- 2.6.25-rc3-mm1.orig/include/asm-h8300/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-h8300/thread_info.h
@@ -92,6 +92,7 @@ static inline struct thread_info *current
```

```

    TIF_NEED_RESCHED */
#define TIF_MEMDIE 4
#define TIF_RESTORE_SIGMASK 5 /* restore signal mask in do_signal() */
+#define TIF_FREEZE 19 /* is freezing for suspend */

/* as above, but as bit values */
#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
@@ -99,6 +100,7 @@ static inline struct thread_info *current
#define _TIF_NEED_RESCHED (1<<TIF_NEED_RESCHED)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
#define _TIF_RESTORE_SIGMASK (1<<TIF_RESTORE_SIGMASK)
+#define _TIF_FREEZE (1<<TIF_FREEZE)

#define _TIF_WORK_MASK 0x0000FFFE /* work to do on interrupt/exception return */

```

Index: 2.6.25-rc3-mm1/include/asm-m68k/thread\_info.h

```

=====
--- 2.6.25-rc3-mm1.orig/include/asm-m68k/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-m68k/thread_info.h
@@ -58,5 +58,6 @@ struct thread_info {
#define TIF_DELAYED_TRACE 14 /* single step a syscall */
#define TIF_SYSCALL_TRACE 15 /* syscall trace active */
#define TIF_MEMDIE 16
+#define TIF_FREEZE 19

#endif /* _ASM_M68K_THREAD_INFO_H */

```

Index: 2.6.25-rc3-mm1/include/asm-m68knommu/thread\_info.h

```

=====
--- 2.6.25-rc3-mm1.orig/include/asm-m68knommu/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-m68knommu/thread_info.h
@@ -88,12 +88,14 @@ static inline struct thread_info *current
#define TIF_POLLING_NRFLAG 3 /* true if poll_idle() is polling
    TIF_NEED_RESCHED */
#define TIF_MEMDIE 4
+#define TIF_FREEZE 19 /* is freezing for suspend */

/* as above, but as bit values */
#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
#define _TIF_SIGPENDING (1<<TIF_SIGPENDING)
#define _TIF_NEED_RESCHED (1<<TIF_NEED_RESCHED)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
+#define _TIF_FREEZE (1<<TIF_FREEZE)

```

```

#define _TIF_WORK_MASK 0x0000FFFE /* work to do on interrupt/exception return */

```

Index: 2.6.25-rc3-mm1/include/asm-parisc/thread\_info.h

```

=====
--- 2.6.25-rc3-mm1.orig/include/asm-parisc/thread_info.h

```

```

+++ 2.6.25-rc3-mm1/include/asm-parisc/thread_info.h
@@ -62,6 +62,7 @@ struct thread_info {
#define TIF_32BIT          4      /* 32 bit binary */
#define TIF_MEMDIE 5
#define TIF_RESTORE_SIGMASK 6 /* restore saved signal mask */
+#define TIF_FREEZE 19 /* is freezing for suspend */

#define _TIF_SYSCALL_TRACE (1 << TIF_SYSCALL_TRACE)
#define _TIF_SIGPENDING (1 << TIF_SIGPENDING)
@@ -69,6 +70,7 @@ struct thread_info {
#define _TIF_POLLING_NRFLAG (1 << TIF_POLLING_NRFLAG)
#define _TIF_32BIT (1 << TIF_32BIT)
#define _TIF_RESTORE_SIGMASK (1 << TIF_RESTORE_SIGMASK)
+#define _TIF_FREEZE (1 << TIF_FREEZE)

#define _TIF_USER_WORK_MASK  (_TIF_SIGPENDING | \
                             _TIF_NEED_RESCHED | _TIF_RESTORE_SIGMASK)

```

Index: 2.6.25-rc3-mm1/include/asm-s390/thread\_info.h

```

=====
--- 2.6.25-rc3-mm1.orig/include/asm-s390/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-s390/thread_info.h
@@ -101,6 +101,7 @@ static inline struct thread_info *current
    TIF_NEED_RESCHED */
#define TIF_31BIT 18 /* 32bit process */
#define TIF_MEMDIE 19
+#define TIF_FREEZE 20 /* is freezing for suspend */

#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
#define _TIF_RESTORE_SIGMASK (1<<TIF_RESTORE_SIGMASK)
@@ -113,6 +114,7 @@ static inline struct thread_info *current
#define _TIF_USEDFFPU (1<<TIF_USEDFFPU)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
#define _TIF_31BIT (1<<TIF_31BIT)
+#define _TIF_FREEZE (1<<TIF_FREEZE)

#endif /* __KERNEL__ */

```

Index: 2.6.25-rc3-mm1/include/asm-sparc/thread\_info.h

```

=====
--- 2.6.25-rc3-mm1.orig/include/asm-sparc/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-sparc/thread_info.h
@@ -137,6 +137,7 @@ BTFIXUPDEF_CALL(void, free_thread_info,
#define TIF_POLLING_NRFLAG 9 /* true if poll_idle() is polling
    * TIF_NEED_RESCHED */
#define TIF_MEMDIE 10
+#define TIF_FREEZE 19 /* is freezing for suspend */

/* as above, but as bit values */

```

```

#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
@@ -145,6 +146,7 @@ BTFIXUPDEF_CALL(void, free_thread_info,
#define _TIF_RESTORE_SIGMASK (1<<TIF_RESTORE_SIGMASK)
#define _TIF_USEDFPU (1<<TIF_USEDFPU)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
+#define _TIF_FREEZE (1<<TIF_FREEZE)

#endif /* __KERNEL__ */

```

Index: 2.6.25-rc3-mm1/include/asm-sparc64/thread\_info.h

```

=====
--- 2.6.25-rc3-mm1.orig/include/asm-sparc64/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-sparc64/thread_info.h
@@ -236,6 +236,7 @@ register struct thread_info *current_thr
#define TIF_ABI_PENDING 12
#define TIF_MEMDIE 13
#define TIF_POLLING_NRFLAG 14
+#define TIF_FREEZE 19 /* is freezing for suspend */

#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
#define _TIF_SIGPENDING (1<<TIF_SIGPENDING)
@@ -249,6 +250,7 @@ register struct thread_info *current_thr
#define _TIF_RESTORE_SIGMASK (1<<TIF_RESTORE_SIGMASK)
#define _TIF_ABI_PENDING (1<<TIF_ABI_PENDING)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
+#define _TIF_FREEZE (1<<TIF_FREEZE)

```

```

#define _TIF_USER_WORK_MASK ((0xff << TI_FLAG_WSAVED_SHIFT) | \
    (_TIF_SIGPENDING | _TIF_RESTORE_SIGMASK | \
Index: 2.6.25-rc3-mm1/include/asm-um/thread_info.h

```

```

=====
--- 2.6.25-rc3-mm1.orig/include/asm-um/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-um/thread_info.h
@@ -83,6 +83,7 @@ static inline struct thread_info *curren
#define TIF_MEMDIE 5
#define TIF_SYSCALL_AUDIT 6
#define TIF_RESTORE_SIGMASK 7
+#define TIF_FREEZE 19 /* is freezing for suspend */

#define _TIF_SYSCALL_TRACE (1 << TIF_SYSCALL_TRACE)
#define _TIF_SIGPENDING (1 << TIF_SIGPENDING)
@@ -91,5 +92,6 @@ static inline struct thread_info *curren
#define _TIF_MEMDIE (1 << TIF_MEMDIE)
#define _TIF_SYSCALL_AUDIT (1 << TIF_SYSCALL_AUDIT)
#define _TIF_RESTORE_SIGMASK (1 << TIF_RESTORE_SIGMASK)
+#define _TIF_FREEZE (1 << TIF_FREEZE)

```

```

#endif

```

Index: 2.6.25-rc3-mm1/include/asm-v850/thread\_info.h

```
=====
--- 2.6.25-rc3-mm1.orig/include/asm-v850/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-v850/thread_info.h
@@ -82,12 +82,14 @@ struct thread_info {
#define TIF_POLLING_NRFLAG 3 /* true if poll_idle() is polling
      TIF_NEED_RESCHED */
#define TIF_MEMDIE 4
+#define TIF_FREEZE 19 /* is freezing for suspend */

/* as above, but as bit values */
#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
#define _TIF_SIGPENDING (1<<TIF_SIGPENDING)
#define _TIF_NEED_RESCHED (1<<TIF_NEED_RESCHED)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
+#define _TIF_FREEZE (1<<TIF_FREEZE)
```

/\* Size of kernel stack for each process. \*/

Index: 2.6.25-rc3-mm1/include/asm-xtensa/thread\_info.h

```
=====
--- 2.6.25-rc3-mm1.orig/include/asm-xtensa/thread_info.h
+++ 2.6.25-rc3-mm1/include/asm-xtensa/thread_info.h
@@ -138,6 +138,7 @@ static inline struct thread_info *curren
#define TIF_MEMDIE 5
#define TIF_RESTORE_SIGMASK 6 /* restore signal mask in do_signal() */
#define TIF_POLLING_NRFLAG 16 /* true if poll_idle() is polling TIF_NEED_RESCHED */
+#define TIF_FREEZE 19 /* is freezing for suspend */

#define _TIF_SYSCALL_TRACE (1<<TIF_SYSCALL_TRACE)
#define _TIF_SIGPENDING (1<<TIF_SIGPENDING)
@@ -146,6 +147,7 @@ static inline struct thread_info *curren
#define _TIF_IRET (1<<TIF_IRET)
#define _TIF_POLLING_NRFLAG (1<<TIF_POLLING_NRFLAG)
#define _TIF_RESTORE_SIGMASK (1<<TIF_RESTORE_SIGMASK)
+#define _TIF_FREEZE (1<<TIF_FREEZE)

#define _TIF_WORK_MASK 0x0000FFFE /* work to do on interrupt/exception return */
#define _TIF_ALLWORK_MASK 0x0000FFFF /* work to do on any return to u-space */
```

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Containers mailing list

Containers@lists.linux-foundation.org

<https://lists.linux-foundation.org/mailman/listinfo/containers>