

# [RFC] sleepy linux

---

*Source:* <http://linux.derkeiler.com/Mailing-Lists/Kernel/2007-12/msg08640.html>

---

- *From:* Pavel Machek <pavel@xxxxxx>
  - *Date:* Wed, 26 Dec 2007 00:07:31 +0100
- 

This is RFC. It does not even work for me... it sleeps but it will not wake up, because SATA wakeup code is missing. Code attached for illustration.

I wonder if this is the right approach? What is right interface to the drivers?

Sleepy Linux

~~~~~

Copyright 2007 Pavel Machek <pavel@xxxxxx>  
GPLv2

Current Linux versions can enter suspend-to-RAM just fine, but only can do it on explicit request. But suspend-to-RAM is important, eating something like 10% of power needed for idle system. Starting suspend manually is not too convinient; it is not an option on multiuser machine, and even on single user machine, some things are not easy:

- 1) Download this big chunk in mozilla, then go to sleep
- 2) Compile this, then go to sleep
- 3) You can sleep now, but wake me up in 8:30 with mp3 player

Today's hardware is mostly capable of doing better: with correctly set up wakeups, machine can sleep and successfully pretend it is not sleeping -- by waking up whenever something interesting happens. Of course, it is easier on machines not connected to the network, and on notebook computers.

Requirements:

- 0) Working suspend-to-RAM, with kernel being able to bring video back.
  - 1) RTC clock that can wake up system
  - 2) Lid that can wake up a system,  
or keyboard that can wake up system and does not lose keypress

or special screensaver setup

3) Network card that is either down  
or can wake up system on any packet (and not loose too many packets)

```
diff --git a/arch/x86/kernel/process_32.c b/arch/x86/kernel/process_32.c
index 9663c2a..0f65aa9 100644
--- a/arch/x86/kernel/process_32.c
+++ b/arch/x86/kernel/process_32.c
@@ -178,6 +178,7 @@ void cpu_idle(void)
/* endless idle loop with no priority at all */
while (1) {
tick_nohz_stop_sched_tick();
+ detect_idle();
while (!need_resched()) {
void (*idle)(void);
```

```
diff --git a/drivers/input/input-polldev.c b/drivers/input/input-polldev.c
index 92b3598..83a8046 100644
--- a/drivers/input/input-polldev.c
+++ b/drivers/input/input-polldev.c
@@ -151,7 +151,7 @@ int input_register_polled_device(struct
```

```
INIT_DELAYED_WORK(&dev->work, input_polled_device_work);
if (!dev->poll_interval)
- dev->poll_interval = 500;
+ dev->poll_interval = 50000;
input->private = dev;
input->open = input_open_polled_device;
input->close = input_close_polled_device;
diff --git a/drivers/input/input.c b/drivers/input/input.c
index 307c7b5..2deca60 100644
--- a/drivers/input/input.c
+++ b/drivers/input/input.c
@@ -263,8 +263,14 @@ void input_event(struct input_
```