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Linux kernel stable tree

Stable Group

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commit [476b09e07bd519ec7ba5941a6a6f9a02256dbb21](#) (patch)
tree [f468659e1958946a0a42907dd474459544e09e3f](#)
parent [b7c6033a8fa3893ff1e451877d3fd8c8401945be](#) (diff)
download [linux-476b09e07bd519ec7ba5941a6a6f9a02256dbb21.tar.gz](#)

diff options

context:

3



space:

include



mode:

unified



serial: imx: Add missing .thaw_noirq hook

[Upstream commit 4561d8008a467cb05ac632a215391d6b787f40aa]

The following warning is seen with non-console UART instance when system hibernates.

```
[ 37.371969] -----[ cut here ]-----
[ 37.376599] uart3_root_clk already disabled
[ 37.380810] WARNING: CPU: 0 PID: 296 at drivers/clock/clock.c:952 clk_core_disable+0xa4/0xb0
...
[ 37.506986] Call trace:
[ 37.509432] clk_core_disable+0xa4/0xb0
[ 37.513270] clk_disable+0x34/0x50
[ 37.516672] imx_uart_thaw+0x38/0x5c
[ 37.520250] platform_pm_thaw+0x30/0x6c
[ 37.524089] dpm_run_callback.constprop.0+0x3c/0xd4
[ 37.528972] device_resume+0x7c/0x160
[ 37.532633] dpm_resume+0xe8/0x230
[ 37.536036] hibernation_snapshot+0x288/0x430
[ 37.540397] hibernate+0x10c/0x2e0
[ 37.543798] state_store+0xc4/0xd0
[ 37.547203] kobj_attr_store+0x1c/0x30
[ 37.550953] sysfs_kf_write+0x48/0x60
[ 37.554619] kernfs_fop_write_iter+0x118/0x1ac
[ 37.559063] new_sync_write+0xe8/0x184
[ 37.562812] vfs_write+0x230/0x290
[ 37.566214] ksys_write+0x68/0xf4
[ 37.569529] __arm64_sys_write+0x20/0x2c
[ 37.573452] invoke_syscall.constprop.0+0x50/0xf0
[ 37.578156] do_el0_svc+0x11c/0x150
[ 37.581648] el0_svc+0x30/0x140
[ 37.584792] el0t_64_sync_handler+0xe8/0xf0
[ 37.588976] el0t_64_sync+0x1a0/0x1a4
[ 37.592639] ---[ end trace 56e22eec54676d75 ]---
```

On hibernating, pm core calls into related hooks in sequence like:

```
.freeze
.freeze_noirq
.thaw_noirq
.thaw
```

With .thaw_noirq hook being absent, the clock will be disabled in a unbalanced call which results the warning above.

```
imx_uart_freeze()
    clk_prepare_enable()
imx_uart_suspend_noirq()
    clk_disable()
imx_uart_thaw
    clk_disable_unprepare()
```

Adding the missing .thaw_noirq hook as imx_uart_resume_noirq() will have the call sequence corrected as below and thus fix the warning.

```
imx_uart_freeze()
    clk_prepare_enable()
imx_uart_suspend_noirq()
    clk_disable()
imx_uart_resume_noirq()
    clk_enable()
imx_uart_thaw
    clk_disable_unprepare()
```

Fixes: 09df0b3464e5 ("serial: imx: fix endless loop during suspend")

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Diffstat

```
-rw-r--r-- drivers/tty/serial/imx.c 1
```

1 files changed, 1 insertions, 0 deletions

diff --git a/drivers/tty/serial/imx.c b/drivers/tty/serial/imx.c

index 8b41a783b37eef..3f5878e367c742 100644

--- a/drivers/tty/serial/imx.c

+++ b/drivers/tty/serial/imx.c

```
@@ -2551,6 +2551,7 @@ static const struct dev_pm_ops imx_uart_pm_ops = {
    .suspend_noirq = imx_uart_suspend_noirq,
    .resume_noirq = imx_uart_resume_noirq,
    .freeze_noirq = imx_uart_suspend_noirq,
+   .thaw_noirq = imx_uart_resume_noirq,
    .restore_noirq = imx_uart_resume_noirq,
    .suspend = imx_uart_suspend,
    .resume = imx_uart_resume,
```