

sysfs-devices-power..txt

What: /sys/devices/.../power/
Date: January 2009
Contact: Rafael J. Wysocki <rjw@sisk.pl>
Description:

The /sys/devices/.../power directory contains attributes allowing the user space to check and modify some power management related properties of given device.

What: /sys/devices/.../power/wakeup
Date: January 2009
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Description:

The /sys/devices/.../power/wakeup attribute allows the user space to check if the device is enabled to wake up the system from sleep states, such as the memory sleep state (suspend to RAM) and hibernation (suspend to disk), and to enable or disable it to do that as desired.

Some devices support "wakeup" events, which are hardware signals used to activate the system from a sleep state. Such devices have one of the following two values for the sysfs power/wakeup file:

- + "enabled\n" to issue the events;
- + "disabled\n" not to do so;

In that cases the user space can change the setting represented by the contents of this file by writing either "enabled", or "disabled" to it.

For the devices that are not capable of generating system wakeup events this file contains "\n". In that cases the user space cannot modify the contents of this file and the device cannot be enabled to wake up the system.

What: /sys/devices/.../power/control
Date: January 2009
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Description:

The /sys/devices/.../power/control attribute allows the user space to control the run-time power management of the device.

All devices have one of the following two values for the power/control file:

- + "auto\n" to allow the device to be power managed at run time;
- + "on\n" to prevent the device from being power managed;

The default for all devices is "auto", which means that they may be subject to automatic power management, depending on their drivers. Changing this attribute to "on" prevents the driver from power managing the device at run time. Doing that while the device is suspended causes it to be woken up.

What: /sys/devices/.../power/async
Date: January 2009

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Contact: Rafael J. Wysocki <rjw@sisk.pl>

Description:

The /sys/devices/.../async attribute allows the user space to enable or disable the device's suspend and resume callbacks to be executed asynchronously (ie. in separate threads, in parallel with the main suspend/resume thread) during system-wide power transitions (eg. suspend to RAM, hibernation).

All devices have one of the following two values for the power/async file:

- + "enabled\n" to permit the asynchronous suspend/resume;
- + "disabled\n" to forbid it;

The value of this attribute may be changed by writing either "enabled", or "disabled" to it.

It generally is unsafe to permit the asynchronous suspend/resume of a device unless it is certain that all of the PM dependencies of the device are known to the PM core. However, for some devices this attribute is set to "enabled" by bus type code or device drivers and in that cases it should be safe to leave the default value.