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2025-03-21 14:08:15 +0300

committer

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commit

4b8c3c0d17c07f301011e2908fec2ebdcfe3d1c

(patch)

tree

d3fc95429a1e7719634e06fd142b465ce92c63e3

parent

4e3d9508c056d7e0a56b58d5c81253e2a0d22b6c

(diff)

download

linux-4b8c3c0d17c07f301011e2908fec2ebdcfe3d1c.tar.gz

diff options

context:

3

space:

include

mode:

unified

drm/amd/pm: Prevent division by zero

The user can set any speed value.
If speed is greater than UINT_MAX/8, division by zero is possible.

Found by Linux Verification Center (linuxtesting.org) with SVACE.

Fixes: c52dcf49195d ("drm/amd/pp: Avoid divide-by-zero in fan_ctrl_set_fan_speed_rpm")
Signed-off-by: Denis Arefev <arefev@swemel.ru>
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Cc: stable@vger.kernel.org

Diffstat

-rw-r--r-- drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c 4

1 files changed, 2 insertions, 2 deletions

```
diff --git a/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c b/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c
index 379012494da57b..56423aedef3fa7c 100644
--- a/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c
+++ b/drivers/gpu/drm/amd/pm/powerplay/hwmgr/vega10_thermal.c
@@ -307,10 +307,10 @@ int vega10_fan_ctrl_set_fan_speed_rpm(struct pp_hwmgr *hwmgr, uint32_t speed)
     int result = 0;

     if (hwmgr->thermal_controller.fanInfo.bNoFan ||
-        speed == 0 ||
+        (!speed || speed > UINT_MAX/8) ||
         (speed < hwmgr->thermal_controller.fanInfo.ulMinRPM) ||
         (speed > hwmgr->thermal_controller.fanInfo.ulMaxRPM))
-        return -1;
+        return -EINVAL;

     if (PP_CAP(PHM_PlatformCaps_MicrocodeFanControl))
         result = vega10_fan_ctrl_stop_smc_fan_control(hwmgr);
```