



author Denis Arefev <arefev@swemel.ru> 2025-03-21 14:08:15 +0300
committer Greg Kroah-Hartman <gregkh@linuxfoundation.org> 2025-04-25 10:43:57 +0200
commit [836a189fb422e7efb81c51d5160e47ec7bc11500](#) (patch)
tree [429f0aaedb4217ad0a8284f1dd19cb0147baa](#)
parent [402964994e8ece29702383b234fabcf04791ff95](#) (diff)
download [linux-836a189fb422e7efb81c51d5160e47ec7bc11500.tar.gz](#)

diff options

context: 3

space: include

mode: unified

drm/amd/pm/powerplay: Prevent division by zero

commit 4b8c3c0d17c07f301011e2908fecdd2ebdcfe3d1c upstream.

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>
Signed-off-by: Alex Deucher <alexander.deucher@amd.com>
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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 190af79f3236fd..e93b7c4aa8c941 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);
```