ACPI on Linux

ACPI is usually also implemented in the BIOS/Firmware. In case of buggy implementations it could conflict with Linux ACPI implementation, causing error in the journal. Apparently this is due to faulty communication between a PCI device, the motherboard, and the kernel.

There are three workarounds, which in all cases involve setting a kernel parameter (if you're using GRUB, here's how it's done):

- pcie_aspm=off
- pci=nomsi: disables Message Signaled Interrupts. I'm not sure exactly what this is, but adding this parameter disables USB devices... so no go.
- pci=noaer : this shoots the messenger, so to speak. Errors still occur, but they aren't reported, and system logs keep normal proportions.
- pci=nommconf I've only recently heard about this one. It disables Memory-Mapped PCI Configuration Space, and reverts to the traditional handling of configuration space.

pci=noaer does the job since the error is benign and always corrected. However, it also prevents troubleshooting other, more serious, potential errors that won't be reported as well. Plus, letting errors occur continuously might not be the optimal solution.

Therefore, I'm wondering whether I shouldn't try pci=nommconf instead, in order to solve the error for real.

So far though, I haven't come across any warning regarding potential unintended, unpleasant side-effects of pci=nommconf, but there surely must be some...

Links

- https://wiki.archlinux.org/title/Power_management
- https://www.kernel.org/doc/Documentation/admin-guide/kernel-parameters.txt