

Energy Model evolution possibilities

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The Energy Model (EM) framework aims to provide information about energy consumption of a given performance domain. The power values stored for each performance level are used during calculation in Energy Aware Scheduler (EAS) or in thermal framework for the CPUfreq cooling device. Recently the EM has been extended to support other devices than CPUs (like GPUs, DSP, etc). It opens new possibilities to use the EM framework and the first proposed is the Devfreq cooling device. Another one is to use EM together with CPU utilization signal maintained by the task scheduler to estimate the energy consumption in the CPU cooling device. Furthermore, the EM could help to control the capping (in thermal or in powercap frameworks) in a more generic way. This presentation will discuss the new use cases and the proposed design, as well as existing obstacles and corner cases.

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