An overview of uncore frequency impact on performance and power consumption

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Abstract

Recent architectures provide the possibility to modify the uncore frequency (L3 cache, memory controllers, ...). Similar to DVFS techniques, it is handled by the Uncore Frequency Scaling (UFS). In this talk, we will first study the default behavior of UFS and present the impact of uncore frequency on power, energy and performance for different application profile. Then we will present how uncore frequency can be used as a leverage to improve application performance.

Keywords: uncore frequency, performance, power, energy

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