

Uclamp cgroup usage challenges in Android

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Android has been benefiting from extensive use of the cgroup V1 interface to boost important tasks (the top-app and foreground groups) and limit unimportant ones (background). Our recent investigations have shown that combining CPU shares in addition to the newly introduced util-clamp feature can improve user-visible jank specifically in cases where background load is high. Unfortunately, util-clamp and CPU shares are both attached to the CPU controller which constrains userspace's ability to classify tasks and drive these features independently. The issue becomes even bigger when we plan to migrate to cgroup v2. In addition to this, the util-clamp max aggregation can be ineffective because of co-scheduling leading to sub-optimal energy consumption. This talk will describe those problems in more detail and dis

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Primary authors: WANG, Wei (Google LLC); PERRET, Quentin (Google)

Presenters: WANG, Wei (Google LLC); PERRET, Quentin (Google)

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