

Desktop Resource Management (GNOME)

Tuesday, 25 August 2020 08:00 (45 minutes)

Graphical user sessions have been plagued with various performance related issues. Sometimes these are simply bugs, but often enough issues arise because workstations are loaded with other tasks. In this case a high memory, IO or CPU use may cause severe latency issues for graphical sessions. In the past, people have tried various ways to improve the situation, from running without swap to heuristically detecting low memory situations and triggering the OOM. These techniques may help in certain conditions but also have their limitations.

GNOME and other desktops (currently KDE) are moving towards managing all applications using systemd. This change in architecture also means that every application is placed into a separate cgroup. These can be grouped to separate applications from essential services and they can also be adjusted dynamically to ensure that interactive applications have the resources they need. Examples of possible interventions are allocating more CPU weight to the currently focused application, creating memory and IO latency guarantees for essential services (compositor) or running oomd to kill applications when there is memory pressure.

The talk will look at what GNOME (and KDE) currently does in this regard and how well it is working at at this point so far. This may show areas where further improvements in the stack are desirable.

I agree to abide by the anti-harassment policy

I agree

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Session Classification: LPC Refereed Track

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