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Stefan Lankes , Jonas Pfoh , Carsten Clauss
Chair for Operating Systems

Insight

Cloud computing addresses the issue that most of their workloads have low utilization. Virtualization and containers are the technology that enables cloud providers to share their hardware between several customers. Our vision that our unikernel and tools can be used to share a cluster between simulations and cloud workloads.

Tool setup

As a starting point, we pick uniform and standard as a tool-centric scenario. Our goal is to provide a tool-centric workflow for the Linux kernel. We use the Linux Test Project as a tool-centric scenario. Currently, we use a Debian 12 VM with:

The hardware is a Dell Inspiron 5510 with:

- 10 CPU cores (4 x 2.4 GHz Intel i7-11370H, 6 x 1.8 GHz Intel i7-11370H)
- 32 GB DDR4-3200 MHz
- Samsung 980 pro 1TB SSD
- Intel Iris Xe Graphics (TGL GT2)

Linux is configured to use the performance governor. We have also configured the Linux kernel to boot with the parameters `mitigations=off nosmt`. We use the Linux kernel 6.1.0-rc1 with the Linux Test Project (LTP) version 20220930 and the Kernel Test Harness (KTH) version 0.0.2. We use the Linux kernel 6.1.0-rc1 because it is the last version that supports the `nosmt` option. We use the Linux Test Harness (KTH) version 0.0.2