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On going development in rteval to measure real-time latency

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rteval is a tool to help measure real-time latency
It does this by running a measurement module such as cyclictest that both measures latency and simulates a real-time application, while also running load modules that simulate non-realtime applications

Recently rteval has been undergoing a lot of development. These developments will improve the ability to measure and discover sources of latency and to simulate various scenarios a user might be interested in.

Firstly, rtla timerlat has been added as a measurement module. rtla is especially interesting for it's tracing capabilities which help to identify sources of latency in the kernel.

Secondly various means of partitioning machines are being added. Examples include isolcpus, cpusets, cgroups and full blown containers.

Thirdly various miscellaneous improvements such as the ability to employ power savings on cpus are being added.

We hope to use these changes to answer questions such as, can we achieve low latency if we are running a real-time application in one container and other applications in a different container? What kind of effect on latency does using cpu power savings have? What kind of results do we get in a worst case scenario, such as when running measurements and loads everywhere, and what kind of results do we get if tuning is allowed?

The current state of rteval and ongoing and future development will be discussed as well as the various uses of the tool.

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