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FastFreeze: Unprivileged checkpoint/restore for containerized applications

Monday, August 24, 2020 7:45 AM (15 minutes)

CRIU is not easy to use for the average user. What to do with the file system? How and where to store images?

We developed an easy-to-use checkpoint/restore tool that uses the CRIU engine. It provides the following features:
* It does not require root access to operate. Only an empty container (e.g. kubernetes) is required
* Provides time virtualization, critical when migrating (java) applications across different machines
* Provides CPUID virtualization, essential when migrating applications across an heterogeneous cluster
* Handles file system checkpoint/restore
* Fast image upload/download from Google Storage or AWS S3
* Image compression
* Production metrics

The talk will do a overview of these different components, and present the current state of rootless CRIU.
I will be covering the introduction of a new kernel capability, CAP_CHECKPOINT_RESTORE, proposed by Adrian Reber.

The tool that I will be presenting will be open-sourced before the talk.

I agree to abide by the anti-harassment policy

I agree

Primary author: VIENNOT, Nicolas (Two Sigma)

Presenter: VIENNOT, Nicolas (Two Sigma)

Session Classification: Containers and Checkpoint/Restore MC

Track Classification: Containers and Checkpoint/Restore MC