Secure Image-less Container Migration

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Container runtimes, engines and orchestrators provide a production-grade, robust, high-performing, but also relatively self-managing, self-healing infrastructure using innovative open-source technologies. CRIU allows the running state of containerised applications to be preserved as a collection of files that can be used to create an equivalent copy of the applications at a later time, and possibly on a different system. However, for a live migration mechanism to be effective it is very important to minimize the down-time of these applications without compromising security. Therefore, in this talk we discuss new features of CRIU that enable seamless live migration based on direct communication mechanism between source and destination nodes, in order to avoid the generation of intermediate image files and to keep only necessary state information cached in memory.

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