SORS: Kernel and user level execution trace analysis for multi-core distributed Linux systems

Presenter: Prof. Michel Dagenais, Polytechnique Montréal

Summary: The presentation will briefly introduce the organization of the DORSAL laboratory and the collaborative research and development projects undertaken with the financial support of industrial partners, including Ericsson, and the Canadian and Quebec governments. Then, several recent results in the area of kernel and user level tracing and trace analysis will be outlined, with emphasis on real-time, distributed, multi-core and heterogeneous Linux systems. Different widely used open-source tools developed collaboratively in the DORSAL laboratory, such as LTTng, Trace Compass and the Common Trace Format,

will be described as well as how they were exploited to quickly find the critical path and uncover hard to find problems in several real industrial systems.

Biography: Michel Dagenais is professor at Ecole Polytechnique de Montreal in the department of Computer and Software Engineering. He authored or co-authored over one hundred scientific publications, as well as numerous free documents and free software packages in the fields of operating systems, distributed systems and multicore systems, in particular in the area of tracing and monitoring Linux systems for performance analysis. In 1995-1996, during a leave of absence, he was director of software development at Positron Industries. In 1997, he co-founded the Linux-Québec user group. Most of his research projects are in collaboration with industry and generate free software tools among the outcomes. The Linux Trace Toolkit next generation, developed under his supervision, is now used throughout the world and is part of several specialised and general purpose Linux distributions.

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