DTrace

DTrace is a dynamic tracing framework developed by Sun for their Solaris and OpenSolaris operating systems. It allows tracing many aspects of execution across the entire system, including application software, system libraries, and kernel processing. It includes a programming language, "D", in which tracing scripts can be written.

A system supporting DTrace implements *probes*, which can be activated by D scripts. The probes have low overhead until activated by scripts, therefore there can be many of them. Recent versions of Solaris have over 70'000 of such probes.

DTrace has been ported to FreeBSD, where it will replace the `ktrace` system. Mac OS X also includes DTrace since the "Leopard" (10.5) release. A Linux port is available, too. According to Wikipedia, it is implemented as a loadable module that works with recent unmodified kernels as of June 2009.

References

- Wikipedia article on DTrace: http://en.wikipedia.org/wiki/DTrace
- DTrace section on BigAdmin, Sun's System Administration Portal: http://www.sun.com/bigadmin/content/dtrace/index.jsp

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