

Advanced trouble-shooting of critical real-time systems

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Abstract text In time critical systems, late data is bad data. It is important that the system reacts within its specified deadline. Tracing is an efficient way to record information about a program's execution. It is widely used to diagnose and solve complex problems like missed real-time deadlines, high latencies, concurrency problems and more.

Trace Compass is an open source tool that visualizes and analyzes traces and logs from multiple sources; it allows effective diagnosis of complex embedded systems. This presentation covers the key analysis features for embedded Linux and bare-metal systems: Correlation of different trace formats, e.g. kernel and user space traces, Common Trace Format - CTF.

- Built-in analyses and views for embedded systems.
- Trace collection for Linux Tracing Toolkit next generation - LTTng.
- User defined timing analyses.
- Analyses on those areas showing the root cause of timing issues.
- Thread and hardware allocation analysis.