

TraceLLM is a cutting-edge, AI-driven, analysis engine designed by Ashling to enhance RISC-V based systems debug and trace exploration. Built to work seamlessly within Ashling's **RiscFree** Debugger, **TraceLLM** offers unprecedented insights into your program's real-time behaviour through an intelligent trace capture and analysis engine which can be queried using a natural language, prompt-based interface.

Natural Language Interface

Say goodbye to complex dialogs and limited views. Just ask, and the engine responds. Interact with **TraceLLM** using a simple, prompt-based natural language interface. E.g., "Show me the execution flow for the last 15 seconds."



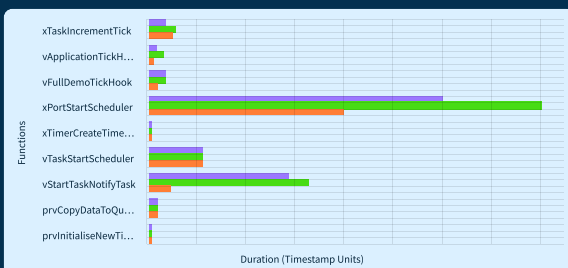
Integration with the Ashling **RiscFree** Debugger

No need for multiple platforms as **TraceLLM** integrates smoothly with Ashling's **RiscFree** Debugger, making your workflow streamlined and efficient.

Find and graph the minimum, maximum, and average execution times of all captured functions.



Here's a bar chart visualizing the minimum, maximum, and average execution time for each captured function in timestamp units.



Ashling TraceLLM

Select Trace: FreeRTOS Debug Session_4 5:16 P.M., 02 Nov '23

How many task context switches were observed in the last executed session?

The trace captured a total of **136** task context switches in the last executed session.

When did MotorControlTask interrupt SensorAnalysisTask?

The **MotorControlTask** interrupted **SensorAnalysisTask** at timestamp **07:15:45**. **SensorAnalysisTask** was running when the higher-priority **MotorControlTask** pre-empted it.

Has PathPlanningTask been stalled while waiting for MutexNavigationData for more than 125ms?

Yes, **PathPlanningTask** stalled for 140ms while waiting for **MutexNavigationData** at timestamp **07:20:10**. This stall time is unusually long and could indicate contention issues or priority inversion scenarios with **MutexNavigationData**.

Ask a question about your captured trace...

In-depth Trace Analysis

Dive into your program's behaviour. The intelligent engine examines the captured trace and delivers unprecedented insights including pinpointing potential bottlenecks, performance issues and offering actionable insights.

Graphical and Text Outputs

Get outputs the way you like. Choose between textual explanations or detailed chart-based representations for your results.



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The future of RISC-V systems debug and trace is here!

TraceLLM isn't just a tool, it's a revolution in RISC-V debug and trace. Dive deep into trace data with precision and clarity all empowered by an intuitive AI assistant. Enhance efficiency, accelerate problem-solving, and harness the full potential of your RISC-V systems with Ashling's **TraceLLM** today!