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## How good is the match between LHC software and current/future processors?

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In the CERN openlab we have looked at how well LHC software matches the execution capabilities of current and, to some extent, future processors. Thanks to current silicon processes, transistor counts in the billions ( $10^9$ ) have become commonplace and microprocessor manufacturers have been deploying transistors in multiple ways to increase performance. In this talk I will review the various architectural enhancements we have observed in the past and comment on the usefulness for HEP software. I will also make some suggestions for tuning our software, and finally speculate on how well our software will fit some of the possible future processor designs.

### Summary

Sverre Jarpe is CTO in the CERN openlab, a joint collaboration with leading industrial partners in order to assess cutting-edge information technology for the Large Hadron Collider's Computing Grid. He has been working in computing at CERN for over 30 years and has held various managerial and technical positions promoting advanced but cost-effective computing solutions. S. Jarpe holds a degree in Theoretical Physics from the Norwegian University of Science and Technology in Trondheim.

**Presenter:** Mr JARPE, Sverre (CERN)

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