Programming: LLVM Clang, GCC, 30 Years of Haskell and More

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- **Intel GCC Patches + PRM Update Adds SERIALIZE Instruction, Confirm Atom+Core Hybrid CPUs**[1]

  Intel has seemingly just updated their public programming reference manual as well as sending out some new patches to the GCC compiler for supporting new instructions on yet-to-be-released CPUs.

  Hitting the mailing list early this morning was support for TSXLDTRK. TSXLDTRK is Intel TSX Suspend Load Address Tracking and is confirmed as coming with Sapphire Rapids / Golden Cove. With that is the XSUSLDTRK to suspend tracking load addresses and XRESLDTRK so that software developers can choose the memory accesses that do not need to be tracked by a TSX (Transactional Synchronization Extensions) read set.

- **Upstreaming LLVM's Fortran "Flang" Front-End Has Been Flung Back Further**[2]

  Upstreaming of LLVM's Fortran front-end developed as "f18" and being upstreamed with the Flang name was supposed to happen back in January. Three months later, the developers still are struggling to get the code into shape for integration.

- **LLVM Clang 10.0 Compiler Performance On Intel + AMD CPUs Under Linux**[3]

  With last week's release of LLVM/Clang 10.0, here are our first benchmarks looking at the stable release of the Clang 10.0 C/C++ compiler compared to its previous (v9.0.1) release on various Intel and AMD processors under Ubuntu Linux.
GCC 11 Will Likely Support Using LLVM's libc++

While GCC 10 isn't even out for a few more weeks, looking ahead to next year's GCC 11 release is already one interesting planned change.

GCC 11's C++ front-end (G++) will likely offer support for using LLVM's libc++ standard library. There was recently a question asked on the GCC mailing list over the ability to do -stdlib=libc++ for using LLVM's C++ standard library in conjunction with the GCC C++ compiler.

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**How does kanban relate to DevOps?**

Kanban means "visual signal" and has its roots in the Toyota manufacturing industry. It was developed by Taiichi Ohno to improve manufacturing efficiency. When we jump a few decades into the future, kanban complements agile and lean, often used with frameworks such as scrum, Scaled Agile Framework, and Disciplined Agile to visualize and manage work.

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**Joachim Breitner: 30 years of Haskell**

Vitaly Bragilevsky, in a mail to the GHC Steering Committee, reminded me that the first version of the Haskell programming language was released exactly 30 years ago. On April 1st. So that raises the question: Was Haskell just an April fool's joke that was never retracted?

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**Monthly Report - March**

I lost a friend of mine, Jeff Goff (aka DrForr), who passed away on 13th March, 2020, while snorkeling with a group in the Bahamas. He will be missed by many of his friends. May his soul rest in peace.

Most of the time last month was occupied by COVID-19. Being a type-2 diabetic didn't help the cause either. I have suffered with consistent cough all my life. It is really scary when think from COVID-19 point of view. I have survived so far by the grace of ALLAH s.w.t.

I have been working from home since the first week of March. I have been kind of self quarantined. Kids, specially the twins (3 years old) not allowed to play with me. It is really hard to focus on work but somehow I have managed so far. I am getting used to it now.

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