欢迎第一次加入的伙伴(开会时请从下一页开始展示)

- 开放编辑，直接点击 request for edit 然后在东亚时区群里at吴伟
- 如果没有找到自己的内容分类，可以添加1-2页在最开始或中间
- 欢迎在开始的前5分钟进行自我介绍
- 日常八卦在东亚时区RISC-V双周同步微信群中，欢迎加入
- 东亚时区Slides会公开到：https://github.com/cnrv/RISCV-East-Asia-Biweekly-Sync/tree/main/biweekly-meetings仓库，并且默认了CC协议

东亚时区RISC-V双周会

2025年11月27日·第 115 次

https://github.com/cnrv/RISCV-East-Asia-Biweekly-Sync

Host: 廖仕华

Organizer: PLCT Lab plct-oss@iscas.ac.cn

会议议程（15:00 - 16:00）

- 自我介绍、等待参会者接入、非技术话题八卦（没有的话就直接跳过）
- RVI 的更新和八卦（基本上跟东亚双周会群内消息同步）
- 东亚地区小伙伴的项目更新
- 自由讨论

RISC-V International 同步、全球开源社区八卦（陈逸轩）

[sig-vector] [提案]用于 RISC-V 向量扩展的无进位乘加向量指令，以加速 CRC 算法

关于 vfslide1up/dn 指令的 sNaN 处理和 NV 标志的说明

RVV 中双精度浮点运算的后续研究，采用 RV32 标量核心

更新 in-lane vrgather 提案

[tech-p-ext]重命名 DIF 指令为 ABD

RISC-V 中文社区的同步与八卦（聂雨婷）

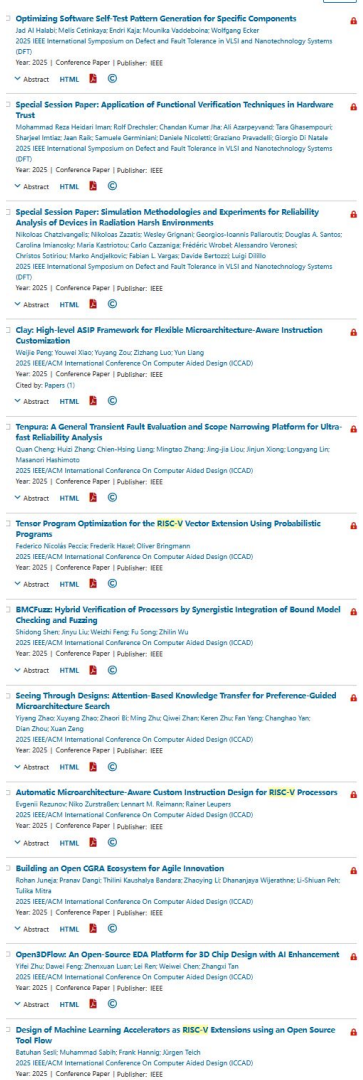
RISC-V 韩语社区的同步与八卦

RISC-V 德语社区的同步与八卦

- Codasip announces strategic licensing agreement with EnSilica for its CHERI-enabled embedded CPU from the 700 family
- A New Era for Edge AI: Codasip's Custom Vector Processor Drives the SYCLOPS Mission
- IAR and Quintauris join forces to advance Functional Safety software for RISC-V Automotive real-time applications

2025 IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFT), 2025 IEEE/ACM International Conference On Computer Aided Design (ICCAD), 2025 IEEE Nordic Circuits and Systems Conference (NorCAS) 最近2周IEEE RISC-V 德国发表文章20篇左右

- Optimizing Software Self-Test Pattern Generation for Specific Components
  Infineon Technologies AG
- Special Session Paper: Application of Functional Verification Techniques in Hardware Trust
  University of Bremen
- Special Session Paper: Simulation Methodologies and Experiments for Reliability Analysis of Devices in Radiation Harsh Environments Infineon Technologies AG



RISC-V 日语社区的同步与八卦

-

RISC-V 中国峰会进展（吴伟）

Clang/LLVM 上游进展

- [llvm][RISCV] Implement Zilsd load/store pair optimization
  https://github.com/llvm/llvm-project/commit/645e0dcbff33
- [llvm][RISCV] Support P extension CodeGen
  https://github.com/llvm/llvm-project/commit/6b16b31bbd86
- [RISCV] Enable rematerialization for scalar loads
  https://github.com/llvm/llvm-project/commit/4b35ff583fbc61
- [llvm][RISCV] Support Zvfbfa codegen for fneg, fabs and copysign
  https://github.com/llvm/llvm-project/commit/b67796f3fca134

GCC 进展

Binutils Zcmt优化：

https://patchwork.sourceware.org/project/binutils/patch/20251125123406

B扩展指令序Binutils优化：

https://patchwork.sourceware.org/project/binutils/patch/20251121112607

新增 --with-cpu 工具链构建选项：

https://patchwork.sourceware.org/project/gcc/patch/20251126

修复了回归测试中发现的一些错误：

https://github.com/ruyisdk/riscv-gcc/commits/15.1.0/

QEMU/Spike 进展（呼唤志愿者）

Sail/ACT进展 (PLCT)

https://github.com/riscv/sail-riscv

#1397 Add support for Sstvala

#1399 Fix satp legalization to use Supervisor instead of current privilege

#1388 Add configurations for page-fault traps that could set mtval

https://github.com/riscv-non-isa/riscv-arch-test

#751 covergroupgen fix for Zvfhmin

#750 Vector coverpoints

#748 VFP progress

#742 ZicsrF full coverage

#741 ZicsrM running incomplete coverage

#706 Fix auipc hint test includes test binary addresses in its signature

#747 Fix Trap for Sail and Imperas

V8 for RISC-V 更新（邱吉、陆亚涵）

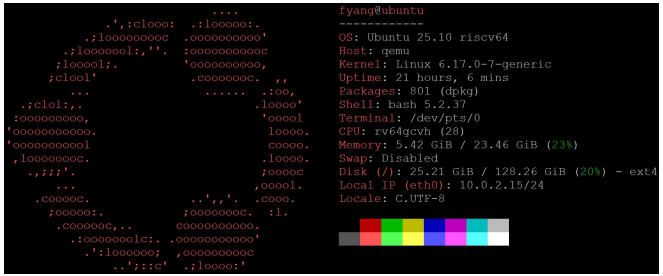
1. 7155968: [maglev][riscv] Replace the DataViewElementOperand with StoreDataViewElement/LoadDataViewElement | https://chromium-review.googlesource.com/c/v8/v8/+/7155968
2. 7165988: [riscv] Encode AccessMode with kMemoryAccessProtectedNullDereference in visitAtomicLoad | https://chromium-review.googlesource.com/c/v8/v8/+/7165988
3. 优化指令选择, 对add+slli的指令对,优先考虑使用shXadd指令替代
   7155850: [riscv] Optimize Word64Add with shxadd instruction on RISC-V | https://chromium-review.googlesource.com/c/v8/v8/+/7155850
4. 7155768: [riscv] Make the index as a immediate whenever possible | https://chromium-review.googlesource.com/c/v8/v8/+/7155768
5. 修复maglev编译器判断smi overflow不正确的问题
   7202584: [riscv][maglev] Fix an issue where SMI values do not overflow correctly | https://chromium-review.googlesource.com/c/v8/v8/+/7202584
6. 7202304: [riscv][wasmfx] Implement tag parameters and returns | https://chromium-review.googlesource.com/c/v8/v8/+/7202304

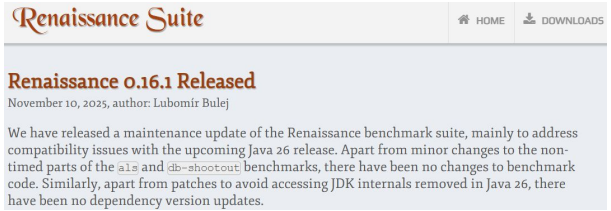
Update by RIVOS:

1. 增加riscv code alignment 编译参数
   7157374: [riscv] Add compilation flags to control code-related alignment | https://chromium-review.googlesource.com/c/chromium/src/+/7157374
2. 6994659: [riscv] Reset the rounding mode when returning from API | https://chromium-review.googlesource.com/c/v8/v8/+/6994659

Spidermonkey for RISC-V更新（邱吉、陆亚涵）

OpenJDK on RISC-V (PLCT 杨飞)




Renaissance Suite

HOME DOWNLOADS

Renaissance 0.16.1 Released

November 10, 2025, author: Lubomír Bulej

We have released a maintenance update of the Renaissance benchmark suite, mainly to address compatibility issues with the upcoming Java 26 release. Apart from minor changes to the non-timed parts of the `als` and `db-shootout` benchmarks, there have been no changes to benchmark code. Similarly, apart from patches to avoid accessing JDK internals removed in Java 26, there have been no dependency version updates.

JDK 26

This release will be the Reference Implementation of version 26 of the Java SE Platform, as specified by JSR 401 in the Java Community Process.

Status

The main line branch is open for bug fixes, small enhancements, and JEPs as proposed and tracked via the JEP Process.

Schedule

2025/12/04	Rampdown Phase One (branch from main line)
2026/01/15	Rampdown Phase Two
2026/02/05	Initial Release Candidate
2026/02/19	Final Release Candidate
2026/03/17	General Availability

Features

JEPs targeted to JDK 26, so far

500: Prepare to Make Final Mean Final
504: Remove the Applet API
516: Ahead-of-Time Object Caching with Any GC
517: HTTP/3 for the HTTP Client API
522: G1 GC: Improve Throughput by Reducing Synchronization
524: PEM Encodings of Cryptographic Objects (Second Preview)
525: Structured Concurrency (Sixth Preview)
526: Lazy Constants (Second Preview)
529: Vector API (Eleventh Incubator)
530: Primitive Types in Patterns, instanceof, and switch (Fourth Preview)

1. Authored/Co-authored JDK-mainline PRs:
- https://github.com/openjdk/jdk/pull/27802 (8369238: Allow virtual thread preemption on some common class initialization paths)
- https://github.com/openjdk/jdk/pull/27676 (8369296: Add fast class init checks in interpreter for resolving ConstantPool entries for static field)
- https://github.com/openjdk/jdk/pull/27728 (8369505: jhsdb jstack --mixed cannot handle continuation stub on Linux)
- https://github.com/openjdk/jdk/pull/27885 (8370176: Mixed mode jhsdb jstack cannot unwind call stack with -Xcomp)
- https://github.com/openjdk/jdk/pull/28340 (8371869: RISC-V: too many warnings when build on BPI-F3 SBC)
- https://github.com/openjdk/jdk/pull/28364 (8372046: compiler/floatingpoint/TestSubNodeFloatDoubleNegation.java fails IR verification)

2. Proposed JDK-25u backport PRs:
- https://github.com/openjdk/jdk25u/pull/281 (8367692: RISC-V: Align post call nop)
- https://github.com/openjdk/jdk25u/pull/238 (8368366: RISC-V: AlignVector is mistakenly set to AvoidUnalignedAccesses)
- https://github.com/openjdk/jdk25u/pull/222 (8362972: C2 fails with unexpected node in SuperWord truncation: IsFiniteF, IsFiniteD)

Go community work update (PLCT 蒙卓)

TL;DR Summary：

- Go1.25 feature freeze（November 26, 2025）
- RVV runtime optimazation reviewing
- RV Zk asm support upstreaming, runtime/crypto library TBD
- C extension lands

1. Authored/Co-authored Go-mainline CLs:
   - 647596: runtime: unify C -> Go ABI transitions on riscv64 | https://go-review.googlesource.com/c/go/+/647596
   - 659175: cmd/link: generate proper attributes for riscv profile | https://go-review.googlesource.com/c/go/+/659175
   - 657036: internal/bytealg: vector implementation of count 1 byte for riscv64 | https://go-review.googlesource.com/c/go/+/657036
   - 663778: cmd/asm, cmd/internal/obj: add zvbb/zvbc/zvkb for riscv64 | https://go-review.googlesource.com/c/go/+/663778
   - 664155: cmd/asm, cmd/internal/obj: add crypto algorithm suites for riscv64 | https://go-review.googlesource.com/c/go/+/664155
   - 663675: cmd/internal/obj: add crypto extension for riscv64 | https://go-review.googlesource.com/c/go/+/663675
   - 702695: cmd/internal/obj: add zfh extensions for riscv64 | https://go-review.googlesource.com/c/go/+/702695
   - 711075: chacha20: improve performance for riscv64 | https://go-review.googlesource.com/c/crypto/+/711075
   - 715960: cmd/compile: add ConstantTimeSelect intrinsics for riscv64 | https://go-review.googlesource.com/c/go/+/715960
   - 719880: math/big: use vector for addVV on riscv64 | https://go-review.googlesource.com/c/go/+/719880
   - 720180: cmd/compile: fold negation into multiplication | https://go-review.googlesource.com/c/go/+/720180
   - 721520: cmd/compile: simplify negative on multiplication | https://go-review.googlesource.com/c/go/+/721520

2. Reviewed Go-mainline CLs:
   - 652717: doc, cmd/internal/obj/riscv: document the riscv64 assembler | https://go-review.googlesource.com/c/go/+/652717
   - 646736: internal/bytealg: vector implementation of equal for riscv64 | https://go-review.googlesource.com/c/go/+/646736
   - 646737: internal/bytealg: vector implementation of compare for riscv64 | https://go-review.googlesource.com/c/go/+/646737
   - 670875: riscv64: fix the path to the RISC-V extensions in spec.go | https://go-review.googlesource.com/c/arch/+/670875
   - cmd/compile: line number debug info regression in go1.25 around literal rewriting | https://github.com/golang/go/issues/74576
   - 348389: cmd/compile: emit classify instructions for infinity tests on riscv64 | https://go-review.googlesource.com/c/go/+/348389
   - 670875: riscv64: fix the path to the RISC-V extensions in spec.go | https://go-review.googlesource.com/c/arch/+/670875
   - 690495: runtime: identify virtual memory layout for riscv64 | https://go-review.googlesource.com/c/go/+/690495
   - 703715: cmd/compile/internal/ssa: add codegen for Zicond extension on riscv64 | https://go-review.googlesource.com/c/go/+/703715
   - 717560: cmd/compile: use FCLASSD for subnormal checks on riscv64 | https://go-review.googlesource.com/c/go/+/717560
   - 705996: cmd/compile/internal/ssa: add codegen for Zicond extension on riscv64 | https://go-review.googlesource.com/c/go/+/705996
   - 713020: cmd/asm,cmd/internal/obj/riscv: add support for riscv compressed instructions | https://go-review.googlesource.com/c/go/+/713020 [merged]
   - 721621: cmd/internal/obj/riscv: improve large branch/call/jump tests | https://go-review.googlesource.com/c/go/+/721621
   - 719221: cmd/internal/obj/riscv: document compressed instructions | https://go-review.googlesource.com/c/go/+/719221
   -

RuyiSDK (何佩)

包管理器

本次 RuyiSDK 软件源的更新主要包含了以下内容：

- 新增软件包：
  - `source/riscv-gnu-toolchain-plct`：`toolchain/gnu-plct` 的源码仓库集合。
- 新增设备支持：
  - Milk-V Jupiter: 兼容各类 Bianbu 镜像。
  - Sipeed LicheePi 3A: 兼容各类 Bianbu 镜像。
  - SpacemiT MUSE Book: 兼容各类 Bianbu 镜像。
  - SpacemiT MUSE Box: 兼容各类 Bianbu 镜像。
  - 香山南湖笔记本: 兼容 RedleafOS。
- 完善了设备支持：
  - 移除 Pine64 Star64 的 Armbian 支持: 上游已停止维护并不再提供系统镜像下载。
  - 适用各类 SpacemiT K1 设备的 Bianbu Desktop 与 Bianbu Minimal: 新增适用于 eMMC 存储设备的镜像。
  - 新增适用各类 SpacemiT K1 设备的 Bianbu Desktop Lite。

IDE

VS Code插件：

- 添加解压 source 功能
- 添加下载进度
- 添加虚拟环境管理图形化入口
- 将配置项（Ruyi 包管理器目录、遥测信息）移动至插件设置
- 交付测试团队准备上架 vscode marketplace

Eclipse 插件：

- 引入 CI 检查 DCO 规范并在 GitHub Pages 自动发布插件
- 重构插件目录、优化现有文档
- 解决 Eclipse SDK IDE 中的开发、调试问题

详见RuyiSDK双周进展报告：https://github.com/ruyisdk/wechat-articles

openEuler RISC-V (周嘉诚)

Gentoo for RISC-V 的情况更新（Gentoo 小队）

Arch Linux RISC-V (Felix & PRZ)

Arch Linux RISC-V (Felix & PRZ) - Electron

-

Fedora on RISC-V status update（20251127）

- **RPM packaging (https://www.fedoravforce.org)**
  - Koji Status: **F43, GA on October 28, 2025**
    - **F43/rawhide: 20237 [82.14%] srpm**
    - **RVA23[ONGOING]**
    - **F42: 22471 [92.32%] srpm**
- **main package version(F43):**
  - Toolchain:
    - **gcc-15.2.1-4**
    - glibc-2.42-4
    - **binutils-2.45.1-1**
  - **libffi-3.5.2-1**
  - java-25-openjdk-25.0.0.0.36
  - java-latest-openjdk(24.0.1.0.9-4)
  - perl-5.42.0-520
  - **python3.14-3.14.0-2**
  - **llvm-21.1.6-1**
  - golang-1.25.2-1
  - **rust-1.91.0-1**

- Desktop support Fedora 42:（**updating to F43**）
  - DONE: XFCE/LXDE/**GNOME**/**KDE**/Sugar/i3/LXQT/Cinnamon/Sway/Budgie/Mate/Deepin
  - **Key Desktop App**
    - **firefox-145.0-1**
    - libreoffice-25.2.3.1-3
    - **thunderbird-140.1.0-1**
    - chromium-137.0.7151.119-1
- Image and REPOs :
  - **https://images.fedoravforce.com**
  - Images: rsync://mirror.iscas.ac.cn/fedora-riscv/releases/42/Spins/
  - REOP: rsync://mirror.iscas.ac.cn/fedora-riscv/releases/42/Everything
  -
- ROS/ROS2 upgraded to F42
- Sail for rawhide[UPSTREAMING]
- function testing for F42:
  - **Podman**, **Image**:**fedorariscv/base**
  - Ceph[DONE] , **DPDK, SPDK**
  - K8s[DONE]

Fedora on RISC-V status update（20251127）

```
[root@localhost ~]# cat /etc/os-release
NAME="Fedora Linux"
VERSION="43 (Server Edition)"
RELEASE_TYPE=stable
ID=fedora
VERSION_ID=43
VERSION_CODENAME=""
PRETTY_NAME="Fedora Linux 43 (Server Edition)"
ANSI_COLOR="0;38;2;60;110;180"
LOGO=fedora-logo-icon
CPE_NAME="cpe:/o:fedoraproject:fedora:43"
HOME_URL="https://fedoraproject.org/"
DOCUMENTATION_URL="https://docs.fedoraproject.org/en-US/fedora/f43/"
SUPPORT_URL="https://ask.fedoraproject.org/"
BUG_REPORT_URL="https://bugzilla.redhat.com/"
REDHAT_BUGZILLA_PRODUCT="Fedora"
REDHAT_BUGZILLA_PRODUCT_VERSION=43
REDHAT_SUPPORT_PRODUCT="Fedora"
REDHAT_SUPPORT_PRODUCT_VERSION=43
SUPPORT_END=2026-12-02
VARIANT="Server Edition"
VARIANT_ID=server
[root@localhost ~]# fastfetch
                   .',;::::;,'.                 root@localhost
               .';:cccccccccccc:;,.             --------------
            .;cccccccccccccccccccc;.            OS: Fedora Linux 43 (Server Edition) riscv64
          .:ccccccccccccccccccccccc:.           Host: QEMU Virtual Machine (virt)
        .;ccccccccccccc;.:dddl:.;ccccccc;.      Kernel: Linux 6.17.5-300.0.riscv64.fc43.riscv64
       .:ccccccccccccc;OWMKOOXMWd;ccccccc:.     Uptime: 3 mins
      .:ccccccccccccc;KMMc;cc;xMMc;ccccccc:.    Packages: 429 (rpm)
      ,cccccccccccccc;MMM.;cc;;WW:;cccccccc,    Shell: bash 5.3.0
      :cccccccccccccc;MMM.;cccccccccccccccc:    Terminal: vt220
      :ccccccc;oxOOOo;MMM000k.;ccccccccccc:     CPU: rv64gch (4)
      cccccc;0MMKxdd:;MMMkddc.;cccccccccccc;    Memory: 343.40 MiB / 5.75 GiB (6%)
      ccccc;XMO';cccc;MMM.;cccccccccccccccc'    Swap: 0 B / 5.75 GiB (0%)
      ccccc;MMo;ccccc;MMW.;ccccccccccccccc;     Disk (/): 1.99 GiB / 14.66 GiB (14%) - ext4
      ccccc;0MNc.ccc.xMMd;ccccccccccccccc;      Local IP (eth0): 10.0.2.15/24
      cccccc;dNMWXXXWM0:;ccccccccccccc:,        Locale: en_US.UTF-8
      ccccccc;.:odl:.;ccccccccccccc:,.
      ccccccccccccccccccccccccccccc:'.
      :cccccccccccccccccccccc:;,..
       ':cccccccccccccccc::;,.
[root@localhost ~]#
```

Debian for RISC-V（于波）


请此页编辑者删除水印
RevyOS

Sophgo Linux Upstream Status Update（汪辰）

https://github.com/sophgo/linux/wiki [Last updated: Nov/26/2025]

Linux Upstream Status updated for Sophgo: Nov/26/2025:
https://ruyisdk.cn/t/topic/2050

- CV18XX
  - Top syscon: v5 is picked by sophgo/for-next, will be pulled in v6.19
  - USB DTS: fix dwc2 FIFO sizes, picked by sophgo/for-next
- SG2042
  - SPI-norflash DTS part: v2 is picked by sophgo/dt/riscv, expected to be pulled in v6.19.
  - net: stmmac: dwmac-sophgo: Add phy interface filter: updated to v8, and applied to netdev/net-next.git, expected to be pulled in v6.19.
- SG2044
  - Fix incorrect use of bus width value macros: v1 and picked by spi/for-next, expected to be pulled in v6.19.

OpenCloudOS SIG 进展（孙敏）

Box64 RISC-V 进展

-

固件（王翔）

- OpenSBI
  - 添加SiFive的cache驱动https://lists.infradead.org/pipermail/opensbi/2025-November/009091.html
  - 添加运行时栈overrun检测 https://lists.infradead.org/pipermail/opensbi/2025-November/009130.html
  - 修正S模式MMIO的权限检测 https://lists.infradead.org/pipermail/opensbi/2025-November/009137.html
  - 修正K1的Makefile修正丢失的目标文件 https://lists.infradead.org/pipermail/opensbi/2025-November/009144.html
  - 在异常处理访问低特权等级内存时有一个异常处理程序记录异常信息，添加代码清除MPRV https://lists.infradead.org/pipermail/opensbi/2025-November/009146.html
  - HART保护抽象，为将来添加更多保护机制做准备 https://lists.infradead.org/pipermail/opensbi/2025-November/009154.html
- EDK2
  - 修正RISC-V PlatformSecLib缺少库 https://github.com/tianocore/edk2-platforms/pull/909
  - 修正RISC-V下一些平台的代码，适配库的变化https://github.com/tianocore/edk2-platforms/pull/910
  - RISC-V下非对齐内存访问支持
  - https://github.com/tianocore/edk2/pull/11809

RustSBI团队进展（洛佳）

-

RustSBI团队进展（洛佳）

-

香山开源RISC-V处理器 - ICT / PCL

前端

- RTL 新特性
- 支持 BPU 训练反压 Ftq Resolve Queue，避免读写冲突时训练数据丢弃（#5148）
- 修改 PHR 哈希逻辑（#5209）
- Bug 修复
- 修复 ABTB 在阻塞时输出失效的问题（#5197）
- 修复 TAGE 主表的若干问题，启用主表（#5156）
- 修复 ITTAGE 训练索引非 one-hot 导致的 assertion fail（#5184）
- 修复 FTQ ResolveQueue 未被 redirect 正确冲刷的问题（#5149，#5238）
- 修复 FTQ ResolveQueue 项滞留过久导致 BPU 新预测结果已经覆盖原始 FTQ 项，进而导致 BPU 训练错误的问题（#5225）
- 修复 FTQ bpTrainStallCnt 位宽有误的问题（#5201）
- 时序/面积优化
- 移除 ICache Meta/DataArray 的 SRAMTemplate 中冗余的 holdRead 参数，同时优化时序和面积（#5186）
- 代码质量
- 移除去除跨页取指支持后冗余的ipmp/itlb 端口（#5213）
- 重构 TAGE BaseTable alignBank，顺便修复了 bank 索引计算有误的问题（#5162）
- 重构 VecRotate 逻辑（#5218）
- 调试工具
- 新增 Tage Trace DB（#5219）
- 新增大量软件仿真性能计数器（#5187）

香山开源RISC-V处理器 - ICT / PCL

后端

- RTL 新特性
- 正在推进 V3 向量单元的新设计实现
- 为顶层 debug 模块添加每个 traceGroup 的有效标志，以及 mstatus 寄存器的跟踪支持（#5146）
- Bug 修复
- 修复 nmi 寄存器 gating 相关问题（#5067#5215）
- 拒绝 xip 类 CSR 的乱序读取（#5131）
- 正在修复对 oldVd 的错误依赖、ROB 压缩等等问题
- 代码质量
- 进行 V3 后段代码的质量优化，删除部分冗余代码，修改一些代码风格，进行部分重命名（#5135）
- 时序优化
- 推进对向量 reduction、Regfile 等单元的评估与优化

访存 &缓存

- RTL 新特性
- （V2）为 TLB 添加 pmu 性能事件（#5205）
- （V2）为 CoupledL2 添加了一些性能事件（CoupledL2 #437，CoupledL2 #441）
- 新增 berti 预取器（#5049）
- 调整了 MemBlock 中发射与写回的端口（#5167）
- MMU、LoadUnit、StoreQueue、L2 等模块重构与测试持续推进中
- Bug 修复
- （V2）修复了 MXR 有效时 PMM 没有被禁用的问题（#4997）
- （V2）修复了 DCache 转发 corrupt 状态时时序不匹配的问题（#5228）
- （V2）添加使能位来决定是否检查 KeyID（#5241）
- （V2）修复了 CoupledL2 中将 SnpUnique 错误译码为 SnpPreferUnique 的问题（CoupledL2 #438）
- （V2）在 CoupledL2 中添加 l-credit 管理器以修复性能（CoupledL2 #433）
- 时序
- （V2）简化了 CoupledL2 中 RXSNP 端口的 CMO 请求，并将 RXRSP 与 RXDAT 流水化（CoupledL2 #436）

banshanjdk-8 让你的 java8 程序在 RISC-V 平台极限加速

Chisel and Additional Technology / Sequencer

OpenHW & OpenHW Aisa Working Group

甲辰计划进展(吴伟)

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自由讨论 / AOB

BACKUP

准备加入更多的国际开源组织进行同步观测

欢迎追加或提议