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RISC-V双周会

2023年06月08日·第059次

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

Host: 史宁宁

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）
- Unratified Specs 的参考实现进展
- 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

1. [Safety Critical Real-Time Operating System, SAFERTOS® Available With MiV_RV32 Soft CPU](#)
2. [SOPHGO Donates 50 RISC-V Motherboards](#)
3. [Rise: RISC-V Software Ecosystem – Linux Foundation Project (riseproject.dev)](#)
4. [NOEL-V Processor's Security Extensions for Safe and Secure Computing](#)

RISCV Summit Europe

RISC-V 韩语社区的同步与八卦

- 三星本月1日表示加入RISE(RISC-V Software Ecosystem·Rise)
  - RISE是linux foundation搞得
  - 三星只说要加入然后和其他企业进行合作，没提到具体打算做什么

- 31日,Tenstorrent和LG电子合作：LG获得用于车载芯片、电视芯片的RISC-V、人工智能(AI)及视频编解码器芯片

RISC-V 日语社区的同步与八卦

- 日本Socionext 和 Techsor 推出了符合 LPWA 标准之一 ZETA 标准的物联网tag "ZETag(R)"

ZETag(R)用LSI"SC1330A"の概要

品番　　　:SC1330A

電波帯域　:418〜510MHz、815〜930MHz

変調方式　:Advanced M-FSK(2/4/8-(G)FSK)

内蔵CPU　　:32bits RISC-V Processor

消費電力　:TX:22mA(送信電力+10dBm時)

電源電圧　:+1.8〜+3.6V

動作温度　:-40〜+85℃

パッケージ:QFN 4mm x 4mm(24ピン)

RISC-V 俄语社区的同步与八卦

俄语社区本次暂无更新(胜利日在放假)

AOSP for RISC-V 进展

- Google AOSP upstream PR
  - Android (RISC-V) Review 双周报 第 18 期（in Chinese）：https://zhuanlan.zhihu.com/p/635503220
    - ART 部分继续进展，继续完成 assembler 的实现；看来上一期里还远远谈不上完成，本期中可以看到 assembler 部分继续了 part 3 ~ part 5，是否还有，需要再观察一下下一期的情况。
    - binary_translation 项目仍然是目前和 riscv64 相关的最活跃的项目。
    - 貌似 google 已经开始考虑 NDK 上对 riscv64 的支持，但是 NDK 的实现还存在一些依赖没有解决；还有就是构建系统 bazel 上对 riscv64 的支持还未完成。
    - 其他能看到的就是 google 已经开始推进 xts 的工作，正在解决一些构建中对 riscv64 的缺失问题。
- RVI Android SIG upstream:
  - Chromium for Android apk 移植
    - 继续 ChromePublic apk 的移植，109 上已定位 UKM 的 crash 问题涉及的上游补丁。
    - 继续升级到 115 并建立长期跟踪机制
    - RVI 仓库更新：https://github.com/aosp-riscv/chromium/pulls?q=is%3Apr+is%3Aclosed
    - Google upstream: https://chromium-review.googlesource.com/q/cc:unicornxw@gmail.com+AND+mergedbefore:2023-06-09
- 技术文章
  - N/A

RISC-V GCC进展

- Zvfh扩展的gcc patch目前正在review中：
  https://gcc.gnu.org/pipermail/gcc-patches/2023-June/620665.html

- ZC扩展gcc 部分已经rebase完成，正在更新binutils部分：
  https://gcc.gnu.org/pipermail/gcc-patches/2023-June/620918.html

- 钟居哲提交了一系列RVV auto-vec gcc patch：
  https://gcc.gnu.org/pipermail/gcc-patches/2023-June/620699.html

- 尝试porting RVV0.7 opcode到binutils 2.40：
  https://github.com/revyos/binutils-gdb

- 史玉龙修复了回归测试中发现的错误：

  https://gcc.gnu.org/pipermail/gcc-patches/2023-May/620256.html

- RISC-V GNU toolchain东亚时区双周会会议slides链接：
  https://docs.google.com/presentation/d/12G6zRr9BEUcswGrjc6wGNebf4WM3IrQATC3CxGxVyN0/edit#slide=id.g224dd9d1f1c_0_0

Clang/LLVM 进展 (PLCT)

Upstream

1. [RISCV] Add special case for (select cc, 1.0, 0.0) to lowerSELECT https://reviews.llvm.org/D151719
2. [InstSimplify] Simplify select i1 ConstExpr, i1 true, i1 false to ConstExpr https://reviews.llvm.org/D151631
3. [LoopIdiom] Freeze BitPos if !isGuaranteedNotToBeUndefOrPoison https://reviews.llvm.org/D151690
4. [SCCP] Replace new value's value state with removed value's https://reviews.llvm.org/D152337

Corev-llvm
- 仓库, https://github.com/openhwgroup/corev-llvm-project
- 汇编器完成开发，且与gcc对比全部通过
  , https://github.com/openhwgroup/corev-llvm-project/issues/28
-

QEMU/Spike/Sail/ACT进展 (PLCT)

- QEMU
  - 更新PC relative translation支持
    - https://lists.gnu.org/archive/html/qemu-riscv/2023-05/msg00540.html
  - mstatus相关修复
    - https://lists.gnu.org/archive/html/qemu-riscv/2023-06/msg00084.html
- Spike
  - 更新BF16的支持
    - https://github.com/riscv-software-src/riscv-isa-sim/pull/1321
- Sail
  - 更新CMO支持
    - https://github.com/riscv/sail-riscv/pull/137

V8 for RISC-V 更新（邱吉、陆亚涵、荆培杨）

指针压缩遗留问题修复

1. 4583609: [riscv] Fix pointer compression |
   https://chromium-review.googlesource.com/c/v8/v8/+/4583609

Port 上游更新

2. 4593016: [riscv][wasm-gc] Inlining into JS: Lower traps to conditional jump to trap call |
   https://chromium-review.googlesource.com/c/v8/v8/+/4593016

3. 4576325: [riscv][builtins] Split CallApiCallback into generic and optimized variants |
   https://chromium-review.googlesource.com/c/v8/v8/+/4576325

实现 rvv for riscv32

4. 4538202: [build] Add riscv32 config |
   https://chromium-review.googlesource.com/c/chromium/src/+/4538202

5. 4323697: [riscv32]Implement simd for liftoff and turbofan |
   https://chromium-review.googlesource.com/c/v8/v8/+/4323697

Spidermonkey for RISC-V更新（邱吉、陆亚涵）

- **Enable wasm baseline compiler**

  https://phabricator.services.mozilla.com/D180186

OpenJDK for RISC-V 更新(RV64及upstream) 杨飞

1. Reviewed jdk-mainline PRs:
- https://github.com/openjdk/jdk/pull/14189 (8308977: gtest:codestrings fails on riscv)
- https://github.com/openjdk/jdk/pull/14138 (8308817: RISC-V: Support VectorTest node for Vector API)
- https://github.com/openjdk/jdk/pull/14166 (8308915: RISC-V: Improve temporary vector register usage avoiding the use of v0)
- https://github.com/openjdk/jdk/pull/14197 (8308997: RISC-V: Sign extend when comparing 32-bit value with zero instead of testing the sign bit)
- https://github.com/openjdk/jdk/pull/14203 (8308765: RISC-V: Expand size of stub routines for zgc only)
- https://github.com/openjdk/jdk/pull/14214 (8303417: RISC-V: Merge vector instructs with similar match rules)
- https://github.com/openjdk/jdk/pull/14256 (8309254: Implement fast-path for ASCII-compatible CharsetEncoders on RISC-V)
- https://github.com/openjdk/jdk/pull/14279 (8309332: RISC-V: Improve PrintOptoAssembly output of vector nodes)
- https://github.com/openjdk/jdk/pull/14299 (8309405: RISC-V: is_deopt may produce unaligned memory read)
- https://github.com/openjdk/jdk/pull/14288 (8308726: RISC-V: avoid unnecessary slli in the vectorized arraycopy stubs for bytes)
- https://github.com/openjdk/jdk/pull/14308 (8309419: RISC-V: Relax register constraint for AddReductionVF & AddReductionVD nodes)
- https://github.com/openjdk/jdk/pull/14309 (8309418: RISC-V: Make use of vl1r_v & vfabs_v pseudo-instructions where appropriate)

2. Reviewed/Merged backport PRs for riscv-port-jdk17u repo:
- https://github.com/openjdk/riscv-port-jdk17u/pull/56 (8307651: RISC-V: stringL_indexof_char instruction has wrong format string)
- https://github.com/openjdk/riscv-port-jdk17u/pull/57 (8307446: RISC-V: Improve performance of floating point to integer conversion)
- https://github.com/openjdk/riscv-port-jdk17u/pull/58 (8308277: RISC-V: Improve vectorization of Match.sqrt() on floats)
- https://github.com/openjdk/riscv-port-jdk17u/pull/59 (8301628: RISC-V: c2 fix pipeline class for several instructions)
- https://github.com/openjdk/riscv-port-jdk17u/pull/60 (8301852: RISC-V: Optimize class atomic when order is memory_order_relaxed)
- https://github.com/openjdk/riscv-port-jdk17u/pull/61 (8301153: RISC-V: pipeline class for several instructions is not set correctly)
- https://github.com/openjdk/riscv-port-jdk17u/pull/62 (8301818: RISC-V: Factor out function mvw from MacroAssemble)
- https://github.com/openjdk/riscv-port-jdk17u/pull/63 (8305008: RISC-V: Factor out immediate checking functions from assembler_riscv.inline.hpp)
- https://github.com/openjdk/riscv-port-jdk17u/pull/64 (8302289: RISC-V: Use bgez instruction in arraycopy_simple_check when possible)
- https://github.com/openjdk/riscv-port-jdk17u/pull/65 (8305728: RISC-V: Use bexti instruction to do single-bit testing)
- https://github.com/openjdk/riscv-port-jdk17u/pull/66 (8301033: RISC-V: Handle special cases for MinI/MaxI nodes for Zbb)
GC)

OpenJDK for RISC-V 更新（RV64及upstream）张定立

Merged & New JDK-mainline PRs:

- https://github.com/openjdk/jdk/pull/14166 | (8308915: RISC-V: Improve temporary vector register usage avoiding the use of v0)
- https://github.com/openjdk/jdk/pull/14197 | (8308997: RISC-V: Sign extend when comparing 32-bit value with zero instead of testing the sign bit)(as co-author)
- https://github.com/openjdk/jdk/pull/14256 | (8309254: Implement fast-path for ASCII-compatible CharsetEncoders on RISC-V)
- https://github.com/openjdk/jdk/pull/14309 | (8309418: RISC-V: Make use of vl1r.v & vfabs.v pseudo-instructions where appropriate)

Backport jdk17u:

- https://github.com/openjdk/riscv-port-jdk17u/pull/63 | (8305008: RISC-V: Factor out immediate checking functions from assembler_riscv.inline.hpp)
- https://github.com/openjdk/riscv-port-jdk17u/pull/65 | (8305728: RISC-V: Use bexti instruction to do single-bit testing)
- https://github.com/openjdk/riscv-port-jdk17u/pull/66 | (8301033: RISC-V: Handle special cases for MinI/MaxI nodes for Zbb)

OpenJDK for RISC-V 更新（RV64及upstream）曹贵

Merged & New JDK-mainline PRs:

- https://github.com/openjdk/jdk/pull/14197 | (8308997: RISC-V: Sign extend when comparing 32-bit value with zero instead of testing the sign bit)(as co-author)
- https://github.com/openjdk/jdk/pull/14279 | (8309332: RISC-V: Improve PrintOptoAssembly output of vector nodes)
- https://github.com/openjdk/jdk/pull/14308 | (8309419: RISC-V: Relax register constraint for AddReductionVF & AddReductionVD nodes)

Backport jdk17u:

- https://github.com/openjdk/riscv-port-jdk17u/pull/62 | (8301818: RISC-V: Factor out function mvw from MacroAssembler)
- https://github.com/openjdk/riscv-port-jdk17u/pull/64 | (8302289: RISC-V: Use bgez instruction in arraycopy_simple_check when possible)
- https://github.com/openjdk/riscv-port-jdk17u/pull/67 | (8308997: RISC-V: Sign extend when comparing 32-bit value with zero instead of testing the sign bit)
- https://github.com/openjdk/riscv-port-jdk17u/pull/68 | (8309427: [riscv-port-jdk17u] Remove unused RoundDoubleModeV C2 node)

openEuler RISC-V（周嘉诚）

- Early preparing for next major release (23.09)

- Some work（42+30 PRs）

  - [gcc: Backport inline subword atomic patches from gcc 14 [merged, midstream]](#)

  - [mesa: upgrade (21.3.1 -> 23.0.3) [open]](#)

  - [SDL2: upgrade (2.0.12 -> 2.26.5) [open]](#)

  - [rust: upgrade (1.69.0 -> 1.70.0) [open]](#)

  - [crash: upgrade (8.0.2 -> 8.0.3) [open]](#)

  - [hdf: add riscv64 patch [open]](#)

  - many KDE and Qt6 packages initialized / upgraded

  - many other packaging changes

  - And tons of fixes for the `LLVM parallel universe project`

Gentoo for RISC-V 的情况更新（Gentoo 小队）

- Support statistics (7811/18764，41.63%)：https://whale.plctlab.org/riscv/support-statistics/

    - sys-devel/{clang,llvm} 14.0.6, 15.0.7, 16.0.5
    - sys-devel/gcc 10.4.1, 11.4.0, 12.3.1, 13.1.1
    - dev-lang/ghc 9.0.2
    - dev-lang/go 1.20.5
    - dev-lang/lua 5.1.5, 5.3.6, 5.4.4
    - dev-lang/perl 5.36.1
    - dev-lang/python 3.10.12, 3.11.4, 3.12.0_beta2
    - dev-lang/ruby 3.0.6, 3.1.4, 3.2.2
    - dev-lang/rust 1.70.0
    - dev-java/openjdk 11.0.18_p10, 17.0.6_p10

    - dev-libs/libffi 3.4.4
    - sys-devel/binutils 2.38, 2.39, 2.40
    - sys-libs/glibc 2.37

    - app-office/libreoffice 7.5.3.2
    - gnome-base/gnome-desktop 44.0
    - gnome-extra/cinnamon 5.6.8
    - kde-plasma/plasma-meta 5.27.5
    - xfce-base/xfce4-meta 4.18
    - www-client/firefox 114.0

    注：绿底表示在本周期内更新，*表示有更新修订版

- A total of 7 keywording commits: https://whale.plctlab.org/riscv/RISC-V-双周会/20230608/commits.txt

    - dev-util/cvise: Keyword 2.8.0 riscv
    - net-vpn/openvpn: re-Keyword 2.6.4 riscv
    - sci-libs/onnx: Keyword 1.14.0 riscv

-

Arch Linux RISC-V（潘瑞哲）（可能晚一些到场）

Report generated on: 20230608
Package update count: 1300
Distinct package update count: 1196

[core] 257 / 264 (97.35%)
[extra] 12207 / 13267 (92.01%)

Highlight packages:
linux - 6.2.13.arch1-1 --> 6.3.5.arch1-1
firefox - 113.0-1 --> 113.0.2-1
rust - 1:1.68.2-1 --> 1:1.69.0-3
docker - 1:23.0.5-2 --> 1:24.0.2-1
docker-compose - 2.18.0-1 --> 2.18.1-1
glib2 - 2.76.2-1 --> 2.76.3-1
archiso - 70-1 --> 71-1
imagemagick - 7.1.1.9-1 --> 7.1.1.11-2
redis - 7.0.10-1 --> 7.0.11-1

- Arch Linux RISC-V 中文社区 on Telegram:
  https://t.me/+zTnGwO5zNKAyNmU1

- Finished merging `community` into `extra`

- Enabled several kernel configs to support All Winner D1
- Lichee Pi 4a image and rootfs link

Arch Linux RISC-V（潘瑞哲）

- glibc: [PATCH v3] riscv: Add macros for FPUCW/fcsr in fpu_control.h link
- gcc: [RFC PATCH] driver: unfilter default library path [PR 104707] link
- qemu: linux-user: Add some ioctls for mesa amdgpu support link
  - tutorial for running graphic softwares inside qemu-user with AMD Radeom Graphic Card: link
- gnu-efi: CHAR8 needs to be defined; BOOLEAN does not need to be defined here link
- box64: riscv64 support (4 PRs by xctan @ Arch Linux RISC-V)
- rust: Bump `cc` for `bootstrap` link
- libopenshot:
  - Fix Frame::GetSamplesPerFrame when channels = 0 link
  - Fix Stabilize_Video test for platforms that doesn't use fast color space conversion link
- napi-rs:
  - feat(target): add support for riscv64gc-unknown-linux-gnu link
  - docs(README): update platform support status link

Arch Linux RISC-V（潘瑞哲）

- lychee: test(client): make exponential_backoff better link
- alt-pytest-asyncio: test: fix flaky test on slow machines link
- jumpy: build: upgrade mimalloc to 0.1.36. link
- JuPyMake: Split compiler flags by whitespace. link
- pyalpm: test: fix test_db_{grpcache_pkg_segfault,read_grp} link
- syscalls:
  - Add RISC-V support link
  - Add fetch for arch-specific syscalls link
- nix: Add implementation of `PTRACE_{GET,SET}REGSET`link
- plz: Add riscv64 support link

Fedora for RISC-V（傅炜）

- **RPM packaging**
  - Status: **Updating Fedora 38**
  - 19760/23118 [85.4%] srpm have been built.
  - Spin: Server/Workstation/Cloud
  - WIP Spin: IoT/CoreOS
- **main package version:**
  - **Toolchain(up-to-date for F38)**
    - gcc-13.1.1-2[DONE]→13.1.1-3[rawhide]
    - glibc-2.37.4[DONE]
    - Binutils 2.39-12[DONE] → 2.40-7[rawhide]
  - libffi-3.4.4-2(up-to-date)
  - java-latest-openjdk-19.0.2.0.7→**20** [ONGING]
  - perl-5.36.1-496(up-to-date)
  - Python 3.11.2-1(up-to-date) → 3.11.3-1/ 3.12
  - **LLVM/Clang 16.0.4-1(up-to-date)**
  - golang-1.20.4-1(up-to-date)
  - rust-1.69.0-2(up-to-date)→1.70 [ONGING]

- **Key App**
  - firefox-113.0.1-3[DONE]→**114** [ONGING]
  - Libreoffice 7.5.3.2-2[DONE] MOCK
  - **Thunderbird 102.10.0[DONE]**
  - Chromium-113.0.5672.63 [ONGING]
- **Image :**
  - **Sophgo SG2042 EVB/Milk-V[DONE]**
    - **zsbl→edk2→GRUB→Fedora**
  - **TH1520 BeagleV/LPi4A/***[DONE]**
  - StarFive JH7110 boards[ONGING]
- **ROS/ROS2 upgraded to F38**
- **Desktop support:**
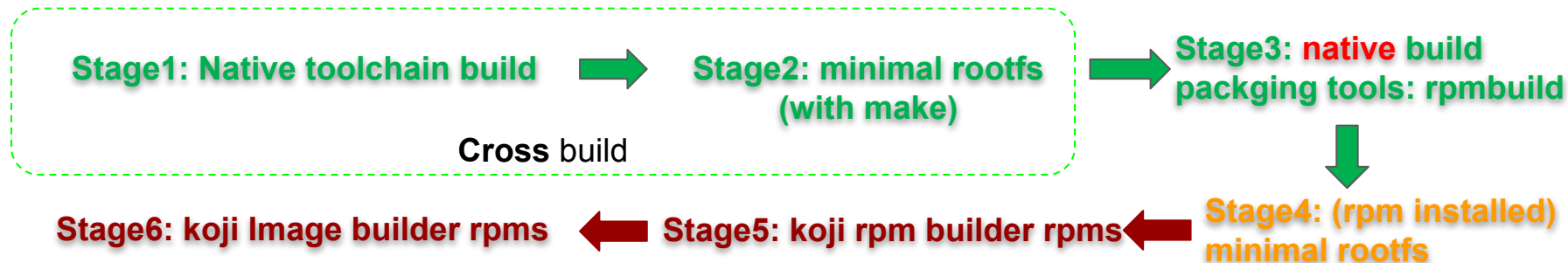 - **DONE：XFCE/LXDE/LXQT/GNOME/ Budgie/Cinnamon/Mate/Sugar/Sway**
  - **Building：KDE/Deepin**
- **function testing:**
  - **Podman[pass],**
  - **Container Image：fedora-rv64**
  - **Ceph[pass]**
  - **K8s [pass][tested by Sophgo]**

Fedora for RV32（张松松）

- 研究 Fedora 项目原有的 bootstrap 脚本，基于 Fedora on RV32 进行修改：
  - https://github.com/U2FsdGVkX1/Fedora_bootstrap
- 基于原有的 Fedora 项目原有的 bootstrap 脚本，创建新的 bootstrap 项目框架，目标是实现多构架 rpm 系发行版的 bootstrap
  - https://github.com/fedora-riscv/bootstrap
- 给定srpm列表，自动拉取对应的srpm文件以便rpm编包使用
  - https://github.com/fedora-riscv/srpm-get
- 记录所有 bootstrap 的过程，形成文档：
  - https://github.com/fedora-riscv/bootstrap-development-log
  - https://github.com/fedora-riscv/rpmbuild-fedora-log
- 目前bootstrap进入到了rpm编包阶段，36/154[23%]。

Stage1: Native toolchain build ➡ **Stage2: minimal rootfs (with make)** ➡ **Stage3: native build packging tools: rpmbuild**

Cross build

⬇

Stage6: koji Image builder rpms ⬅ **Stage5: koji rpm builder rpms** ⬅ **Stage4: (rpm installed) minimal rootfs**

Debian for RISC-V（于波）

- ## Official porting update

  Release team hopes official support riscv64 after Bookworm release(2023/06/10)

- ## Debci update

  britney's Job History(~4800)

- Some works

  1. Firefox 113.0.2

  2. [bmo] Webassembly issue on rv64

  3. mmdebstrap for RV32 (sbuild WIP)

  4. jimtcl upgrade #1036882

Pass/Fail

Pass
Neutral
Fail
Temporary failure
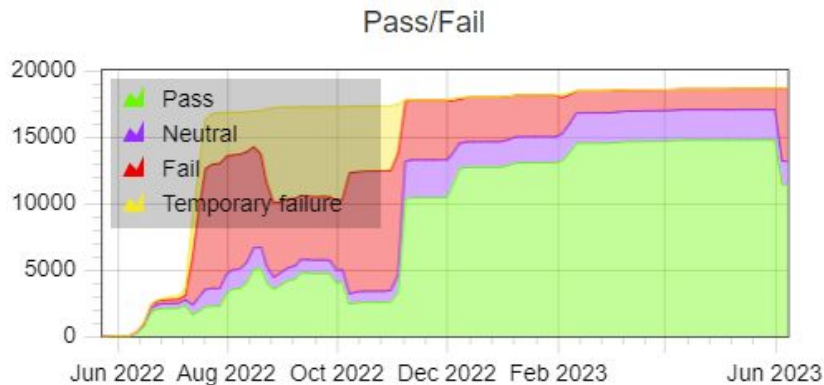
Deepin for RISC-V

- deepin-stage2
  - https://build.tarsier-infra.com/project/show/home:revy:deepin-riscv-stage2
  - succeeded: 5865 / failed: 29 / unresolvable: 760
  - 更新工具链 gcc12.2.0/glibc2.36/binutils2.40支持
  - 推进与deepin v23 beta版本的主线同步源码
- deepin-port-stage1
  - 已经集成4706软件包
  - 推进与deepin v23 beta版本的主线同步源码
- 推进板子支持
  - https://github.com/deepin-community/sig-deepin-riscv64/issues/22
  - 现已移除visionfive1/D1相关支持 因为没有GPU
  - 计划增加lpi4a的支持

FW相关更新（王翔）

❖ opensbi
  - ➢ 修正aclint_mswi_cold_init初始化时的参数检测，防止访问mswi_hartid2data溢出
  - ➢ 修正sbi_system_suspend的返回值
  - ➢ 改进sbi_console
    - ■ 修正打印flag的获取，flag的出现应该是无序的
    - ■ 添加'+'、' '、'\''flag的支持
    - ■ 简化printi的传参数，有无符号、进制、大小写信息可以通过类型字符传递
    - ■ 添加八进制支持
    - ■ 修正输出格式的错误
    - ■ 添加print_info用于传递状态信息
    - ■ 修正字符输出缓冲区的清空时机

固件相关更新（洛佳）

- 本次没有更新。

RISCV性能跟踪小队 - 陈小欧

- SPEC CPU 2017 Run Error with GCC 13.1.0

  623,523 : gcc11.3.0 OK   gcc13.1.0 Run Error

  657: gcc11.3.0 Run Error

  510: gcc11.3.0 OK gcc13.1.0 Run Error

- SPEC CPU2017 -ffast-math -flto 对性能的影响

intspeed

Benchmarks	O3			O3+flto+feedback			O3+ffast-math		
	Threads	Run Time	Rate	Run Time	Rate	Delta	Run Time	Rate	Delta
600.perlbench_s	8	355	5.01	324	5.47	9.18%	360	4.94	-1.40%
602.gcc_s	8	493	8.07	463	8.59	6.44%	497	8.01	-0.74%
605.mcf_s	8	746	6.33	655	7.21	13.90%	759	6.22	-1.74%
620.omnetpp_s	8	447	3.65	406	4.02	10.14%	447	3.64	-0.27%
623.xalancbmk_s	8	325	4.36	327	4.33	-0.69%	328	4.32	-0.92%
625.x264_s	8	214	8.26	201	8.78	6.30%	214	8.23	-0.36%
631.deepsjeng_s	8	393	3.64	356	4.03	10.71%	395	3.62	-0.55%
641.leela_s	8	511	3.34	450	3.79	13.47%	520	3.28	-1.80%
648.exchange2_s	8	308	9.55	409	7.18	-24.82%	366	8.03	-15.92%
657.xz_s	8	NR	NR	1070	5.78	NR	1079	5.73	NR
Est.		SPECspeed(R)	5.4	SPECspeed(R)	5.64	4.44%	SPECspeed(R)	5.3	-1.85%

intrate

Benchmarks	O3			O3+flto+feedback			O3+ffast-math		
	Copies	Run Time	Rate	Run Time	Rate	Delta	Run Time	Rate	Delta
500.perlbench_r	8	1441	8.84	1278	9.96	12.67%	1441	8.84	0.00%
502.gcc_r	8	954	11.9	873	13	9.24%	970	11.7	-1.68%
505.mcf_r	8	1567	8.25	1333	9.7	17.58%	1578	8.19	-0.73%
520.omnetpp_r	8	1568	6.69	1444	7.27	8.67%	1583	6.63	-0.90%
523.xalancbmk_r	8	1175	7.19	1195	7.07	-1.67%	1211	6.97	-3.06%
525.x264_r	8	833	16.8	794	17.6	4.76%	836	16.8	0.00%
531.deepsjeng_r	8	1120	8.19	951	9.64	17.70%	1119	8.19	0.00%
541.leela_r	8	1637	8.09	1319	10	17.70%	1635	8.1	0.12%
548.exchange2_r	8	1197	17.5	1604	13.1	-25.14%	1190	17.6	0.57%
557.xz_r	8	1251	6.91	1226	7.05	2.03%	1247	6.93	0.29%
Est.		SPECrate(R)	9.44	SPECrate(R)	10	5.93%	SPECrate(R)	9.38	-0.64%

fpspeed

Benchmarks	O3			O3+flto+feedback			O3+ffast-math		
	Threads	Run Time	Rate	Run Time	Rate	Delta	Run Time	Rate	Delta
603.bwaves_s	8	1420	41.5	1382	42.7	2.89%	1433	41.2	-0.72%
607.cactuBSSN_s	8	1079	15.4	1015	16.4	6.49%	1116	14.9	-3.25%
619.lbm_s	8	1391	3.77	1373	3.82	1.33%	1401	3.74	-0.80%
621.wrf_s	8	1088	12.2	1188	11.1	-9.02%	937	14.1	15.57%
627.cam4_s	8	938	9.45	1053	8.42	-10.90%	845	10.5	11.11%
628.pop2_s	8	1062	11.2	1075	11	-1.79%	1022	11.6	3.57%
638.imagick_s	8	3090	4.67	4003	3.6	-22.91%	2348	6.14	31.48%
644.nab_s	8	1294	13.5	1263	13.8	2.22%	1145	15.3	13.33%
649.fotonik3d_s	8	880	10.4	891	10.2	-1.92%	882	10.3	-0.96%
654.roms_s	8	1926	8.17	1891	8.33	1.96%	1910	8.24	0.86%

fprate

Benchmarks	O3			O3+flto+feedback			O3+ffast-math		
	Copies	Run Time	Rate	Run Time	Rate	Delta	Run Time	Rate	Delta
503.bwaves_r	8	1825	44	1692	47.4	7.73%	1726	46.5	5.68%
507.cactuBSSN_r	8	971	10.4	880	11.5	10.58%	930	10.9	4.81%
508.namd_r	8	852	8.92	842	9.02	1.12%	721	10.5	17.71%
510.parest_r	8	2348	8.91	2183	9.59	7.63%	2161	9.68	8.64%
511.povray_r	8	1833	10.2	1363	13.7	34.31%	1807	10.3	0.98%
519.lbm_r	8	1982	4.26	1969	4.28	0.47%	1980	4.26	0.00%
521.wrf_r	8	1307	13.7	1471	12.2	-10.95%	1120	16	16.79%
526.blender_r	8	1174	10.4	1091	11.2	7.69%	1027	11.9	14.42%
527.cam4_r	8	1061	13.2	1038	13.5	2.27%	1031	13.6	3.03%
538.imagick_r	8	1569	12.7	1760	11.3	-11.02%	1364	14.6	14.96%
544.nab_r	8	1073	12.6	1004	13.4	6.35%	836	16.1	27.78%
549.fotonik3d_r	8	2346	13.3	2321	13.4	0.75%	NR	NR	NR
554.roms_r	8	1741	7.3	1669	7.62	4.38%	1783	7.13	-2.33%
Est.		SPECrate(R)	11.2	SPECrate(R)	11.7			12.1	8.04%

香山开源RISC-V处理器 - ICT / PCL

- 前端
  - 实现分支历史在线检查工具
- 后端
  - 支持向量整型可流水功能单元，通过集成测试
  - 设计实现通用Mgu，用于向量运算的 agnostic 处理和 vd 旧数据合并
- 访存
  - LQ 拆分架构合入主线
  - 完善 LSU 部分的 TopDown 框架
  - 更新适配 LQ 拆分架构的 MDP 实现
- 缓存
  - 解决了若干双核场景下的 bug，目前 CPL2 已成功合入香山主线
  - CPL2 添加 Topdown 性能计数器，以进行香山全系统的性能分析
  - 利用模拟器评估多种替换策略的性能
  - 完成 CHI-Test 测试框架 Slave Agent 的实现

MLIR 结合 RISC-V 相关工作 - 张洪滨

MLIR Vector Dialect 支持 Dynamic Vector Length

- 通过添加 Interface 的方法支持 Dynamic Vector Length 遇到了 ODS 框架的限制
    - 相关链接：
        - https://github.com/buddy-compiler/buddy-mlir/commit/42ba2387d4aedb0f23b315b973b517a8b2738cbf

RVV 向量化性能实验

- Strip-mining 的方法普遍优于 Mask-base 的方法, 依赖于不同的 LMUL 的选择
- 修复 bug 以获得更精确的性能数据
    - https://github.com/sequencer/vector/issues/232

Gemmini Dialect 进展

- Linalg Dialect 到 Gemmini Dialect 的转换
    - https://github.com/buddy-compiler/buddy-mlir/pull/138/files
- 对 ResNet 端到端推理的支持
    - https://github.com/buddy-compiler/buddy-benchmark/pull/62

Chisel and Additional Technology / Sequencer

- Vector LSU refactor
- Vector PnR flow
- Rocket split
- Rocket standalone CI
- chisel binder prototyping
- BuddyCompiler bumping

提交人不在线?

OpenHW & OpenHW Aisa Working Group

注:提交人不在线

- 上海国际嵌入式大会日程发布
  （https://www.embedded-world.com.cn/home/agenda），其中OpenHW分论坛在6月
  15日举行。

ROCm bootstrapping for RISC-V (陆言, PLCT Tariser)

- 本次没有更新。

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