# 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

2025年01月23日·第 96 次

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

Host: 陈嘉炜

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（陈逸轩）

- Best of 2024: What is RISC-V and Why Has it Become Important for Java?
- 面向智能汽车应用的多核 RISC-V 设计
- RISC-V ISA和实现的六种近期趋势
- SpacemiT 开发出面向新一代人工智能应用的服务器 CPU 芯片 V100

# RISC-V 中文社区的同步与八卦（聂雨婷）

1. **Ubuntu 24.04 LTS与LLVM/Clang正式支持HiFive Premier P550开发板。**

https://x.com/ubuntu/status/1877703210606977152
https://www.phoronix.com/news/LLVM-Clang-SiFive-P550

2. **SiFive 正式成立中国分公司，中文名称定 为「芯伍科技」**

https://mp.weixin.qq.com/s/sK2Hhs1_JMsmL84Dv8xTng

3. **Linux 6.14 内核将首次支持 SpacemiT 平台**

https://www.phoronix.com/news/Linux-6.14-SpaceMiT-RISC-V-CPUs

4. **RISC-V国际基金会CEO Calista Redmond离职，加入Nvidia作为VP Global AI Initiatives**

https://riscv.org/riscv-news/2024/12/risc-v-ceo-calista-redmond-resigns-after-5-years-of-progress/

# RISC-V 韩语社区的同步与八卦

-

# RISC-V 德语社区的同步与八卦（罗云翔）

- Embedded World 2025 11-13 March 纽伦堡 https://www.embedded-world.de/

# RISC-V 日语社区的同步与八卦

-

# RISC-V 中国峰会进展（吴伟）

# GCC 进展

- 新32位ABI规范已合入psABI手册

  https://github.com/riscv-non-isa/riscv-elf-psabi-doc/pull/381

- Zicfiss与Zicfilp已合入gcc上游

  https://gcc.gnu.org/git?p=gcc.git;a=commit;h=dc76aa0e4d5398104b6b26f08b46524b97de5100

- 将-march=rv64gcv -mabi=lp64d添加至--enable-multilib的默认构建中

  https://github.com/riscv-collab/riscv-gnu-toolchain/pull/1657

- Xsfvfnrclip的intrinsic更新已合入gcc上游

  https://gcc.gnu.org/git/?p=gcc.git;a=commit;h=030aaea78c130a31d36d1dd56b0e8b90d973b522

- 玄铁更新了XTheadvector在gcc上游的一些错误

  https://gcc.gnu.org/git/?p=gcc.git&a=search&h=HEAD&st=commit&s=xthead

# Clang/LLVM 进展 (PLCT)

- [RISCV] Stack clash protection for dynamic alloca
  https://github.com/llvm/llvm-project/commit/01d7f434d21a
- [RISCV] Add Qualcomm uC Xqciint (Interrupts) extension
  https://github.com/llvm/llvm-project/commit/171d3edd0507
- [RISCV] Add Qualcomm uC Xqcicm (Conditional Move) extension
  https://github.com/llvm/llvm-project/commit/737d6ca44d38

# QEMU/Spike 进展（呼唤志愿者）

# Sail/ACT进展 (PLCT)

- Support **Smcntrpmf** in Sail-RISCV

  https://github.com/riscv/sail-riscv/pull/690

  Cycle and Instret Privilege Mode Filtering
- Add **Smstateen/Ssstateen** extension regs

  https://github.com/riscv/sail-riscv/pull/694

  Machine/Supervisor-mode view of the state-enable extension
- Sail **Crosscheck** Testing with ACT Against Spike
- Tests and Coverpoints for the **LR/SC instructions of Atomic** extension

  https://github.com/riscv-non-isa/riscv-arch-test/pull/600
- Tests and Coverpoints for **Hints** operations

  https://github.com/riscv-non-isa/riscv-arch-test/pull/601

  (unpriv 2.9. HINT Instructions)
- [ACT] **Physical Memory Protection 64**

  https://github.com/riscv-non-isa/riscv-arch-test/pull/603
- Added Tests and Coverage for **Exception Handling**(Illegal instruction, environment calls and misaligned address exceptions) and **Trap State Restoration Exceptions**

  https://github.com/riscv-non-isa/riscv-arch-test/pull/605

# V8 for RISC-V 更新（邱吉、陆亚涵）

1. 6186134: [riscv] Fix Debug check failed: is_int12(lo12). | https://chromium-review.googlesource.com/c/v8/v8/+/6186134
2. 6184955: [riscv][maglev] Custom handling for TypedArray length loading | https://chromium-review.googlesource.com/c/v8/v8/+/6184955

# Spidermonkey for RISC-V更新（邱吉、陆亚涵）

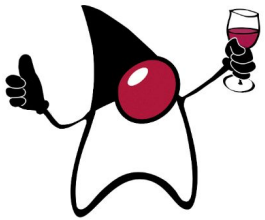
# OpenJDK on RISC-V (PLCT 杨飞)

1. Authored/Co-authored JDK-mainline PRs:

- https://github.com/openjdk/jdk/pull/22410 (8345110: RISC-V: Optimize and and clean up byte reverse assembler routines)
- https://github.com/openjdk/jdk/pull/22452 (8345236: RISC-V: Remove revb_h_h_u and revb_h_w_u macro assembler routines)
- https://github.com/openjdk/jdk/pull/22505 (8345351: RISC-V: Rename macro-assembler routine cmpxchg_weak to weak_cmpxchg)
- https://github.com/openjdk/jdk/pull/22752 (8346235: RISC-V: Optimize bitwise AND with mask values)
- https://github.com/openjdk/jdk/pull/22800 (8346475: RISC-V: Small improvement for MacroAssembler::ctzc_bit)
- https://github.com/openjdk/jdk/pull/22804 (8346478: RISC-V: Refactor add/sub assembler routines)
- https://github.com/openjdk/jdk/pull/22387 (8345047: RISC-V: Remove explicit use of AvoidUnalignedAccesses in interpreter)

- https://github.com/openjdk/jdk/pull/22874 (8346787: Fix two C2 IR matching tests for RISC-V)
- https://github.com/openjdk/jdk/pull/22879 (8346832: runtime/CompressedOops/CompressedCPUSpecificClassSpaceReservation.java fails on RISC-V)
- https://github.com/openjdk/jdk/pull/22884 (8346838: RISC-V: runtime/CommandLine/OptionsValidation/TestOptionsWithRanges.java crash with debug VMs)
- https://github.com/openjdk/jdk/pull/22888 (8346868: RISC-V: compiler/sharedstubs tests fail after JDK-8332689)
- https://github.com/openjdk/jdk/pull/22750 (8346231: RISC-V: Fix incorrect assertion in SharedRuntime::generate_handler_blob)
- https://github.com/openjdk/jdk/pull/22347 (8344916: RISC-V: Misaligned access in array fill stub)

2. Reviewed JDK-mainline PRs:
- https://github.com/openjdk/jdk/pull/23130 (8347794: RISC-V: Add Zfhmin - Float cleanup)
- https://github.com/openjdk/jdk/pull/23171 (8347981: RISC-V: Add Zfa zli imm loads)



# RuyiSDK (Xi Jing, PLCT)

The RuyiSDK Package Manager V0.26 and RuyiSDK IDE V0.0.3 have been released.

1. RuyiSDK Package Manager:
   - Added the “ruyi config” sub-command, similar to git config, for querying and editing the package manager settings.
   - Introduced the “ruyi telemetry” sub-command, allowing users to easily check and change telemetry preferences via command line or scripts.
   - Fixed the virtual environment “-mcpu” mapping issue and upgraded the profile API.
   - The RuyiSDK software source has released a new version of RevyOS.
2. RuyiSDK IDE:
   - The RuyiSDK IDE, customized from the open-source Eclipse project, has released versions for three Linux architectures: x86_64, riscv64, and aarch64.
   - The usage guide for the IDE, using the Milkv Duo development board as an example, has been completed for project import, development, compilation, remote file transfer, remote execution, and remote debugging.
3. OS support matrix:

   The latest updates to the support matrix project primarily involve the LicheePi4A, Duo, and DuoS development boards. Developers interested in these boards can check the bi-weekly progress report for details.

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

# openEuler RISC-V (周嘉诚) (提交人不在线)

*Status / 20240123*

- openEuler 24.03 LTS Service Pack 1:
  - Official (RVA20): Released 🎉 [DL Link]
  - Preview (RVA22+V): Released 🎉 [DL Link]
- Updates
  - openEuler official RISC-V container published to oEPKGS, DockerHub, Quay.io, etc
  - kernel: RISC-V AIA support backported 🎉
- Following releases in 1H'25
  - Q1 - 24.03 follow-up community release for supporting more devices w/ *vendor kernels, proprietary drivers, etc*.

- Features:
  - 6.6-based common kernel for QEMU, SG2042 (Pioneer) & TH1520 (LPi4A)
  - UEFI-supported Hardware & QEMU images
  - Penglai TEE-enabled firmware variants
- Images:
  - UEFI ISO
  - UEFI qcow2 Image w/ Penglai TEE
  - Legacy-boot Images for Pioneer & LPi4A

# 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（20250109）

- **RPM packaging**
  - Koji Status: **F41, GA on Nov 12**
    - **F41: 23460/24320[96.46%] srpm**
    - **F42/Rawhide: 19/24532 srpm**
    - **https://www.fedoravforce.com**
- **main package version:**
  - Toolchain: gcc-14.2.1-3、glibc-2.40-4、binutils-2.43.1-3
  - libffi-3.4.6-3
  - java-11-openjdk,java-17-openjdk,java-21-openjdk
  - java-1.8.0-openjdk
  - java-latest-openjdk
  - perl-5.40.0-511
  - python3.13-3.13.0-1
  - llvm-19.1.0-1
  - golang-1.23.3-1
  - rust-1.82.0-1

- Desktop support Fedora 42:
  - **DONE:**
  - Testing:**XFCE/LXDE/LXQT/Cinnamon/Sway/Budgie/Sugar/GNOME/Mate/KDE/Deepin**
  - **Key Desktop App**
    - firefox-131.0-2
    - libreoffice-24.8.3.2-2
    - Thunderbird-115.11.1-1
    - chromium-126.0.6478.182-2
- Image and REPOs :
  - **https://images.fedoravforce.com**
  - https://openkoji.iscas.ac.cn/pub/dist-repos/dl
  - https://mirrors.iscas.ac.cn/fedora-riscv
  - https://dl.fedoraproject.org/pub/alt/risc-v/fedora-remix
- ROS/ROS2 upgraded to F41
- Sail for rawhide[UPSTREAMING]
- function testing for F41:
  - **Podman[pass], Image:fedorariscv/base（f41）**
  - Ceph[ONGOING]
  - K8s[ONGOING]

```
[opengauss@fedora root]$ fastfetch
            .',;::::;,'.                opengauss@fedora
        .';:cccccccccccc:;,.            ----------------
     .;cccccccccccccccccccccc;.         OS: Fedora Linux 41 riscv64
   .:cccccccccccccccccccccccccc:.       Host: Milk-V Jupiter
  .;ccccccccccccc;.:dddl:.;ccccccc;.    Kernel: Linux 6.6.36+
 .:ccccccccccccc;OWMKOOXMWd;ccccccc:.   Uptime: 8 mins
.:ccccccccccccc;KMMc;cc;xMMc;ccccccc:.  Packages: 545 (rpm)
,cccccccccccccc;MMM.;cc;;WW:;cccccccc,  Shell: bash 5.2.32
:cccccccccccccc;MMM.;cccccccccccccccc:  Terminal: vt220
:ccccccc;oxOOOo;MMM000k.;cccccccccccc:  CPU: Spacemit(R) X60 spacemit,x60 rv64gcv (8) @ 1.60 GHz
cccccc;0MMKxdd:;MMMkddc.;cccccccccccc;  Memory: 813.28 MiB / 7.71 GiB (10%)
ccccc;XMO';cccc;MMM.;cccccccccccccc'    Swap: 0 B / 7.71 GiB (0%)
ccccc;MMo;ccccc;MMW.;ccccccccccccccc;   Disk (/): 2.36 GiB / 14.66 GiB (16%) - ext4
ccccc;0MNc.ccc.xMMd;ccccccccccccccc;    Local IP (end0): 10.0.0.127/24
cccccc;dNMWXXXWM0:;cccccccccccccc:,     Locale: en_US.UTF-8
ccccccc;.:odl:.;ccccccccccccc:,.
cccccccccccccccccccccccccccccc:'.
:ccccccccccccccccccccccc:;,..
 ':cccccccccccccccc::;,.
[opengauss@fedora root]$ /opt/opengauss/bin/gsql -d postgres
gsql ((openGauss-lite 6.0.0 build ) compiled at 2025-01-21 13:43:14 commit 0 last mr  release)
Non-SSL connection (SSL connection is recommended when requiring high-security)
Type "help" for help.

openGauss=# CREATE USER joe WITH PASSWORD "Fedora-VForce";
CREATE ROLE
openGauss=# GRANT ALL PRIVILEGES TO joe;
ALTER ROLE
openGauss=# CREATE DATABASE db_tpcc OWNER joe;
CREATE DATABASE
openGauss=# \l
                                  List of databases
   Name    |   Owner   | Encoding |   Collate   |    Ctype    |    Access privil
eges
-----------+-----------+----------+-------------+-------------+-----------------
--------
 db_tpcc   | joe       | UTF8     | en_US.UTF-8 | en_US.UTF-8 |
 postgres  | opengauss | UTF8     | en_US.UTF-8 | en_US.UTF-8 |
 template0 | opengauss | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/opengauss
       +
           |           |          |             |             | opengauss=CTc/op
engauss
 template1 | opengauss | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/opengauss
       +
           |           |          |             |             | opengauss=CTc/op
engauss
(4 rows)

openGauss=#
```

```
[opengauss@fedora ~]$ fastfetch
            .',;::::;,'.                opengauss@fedora
        .';:cccccccccccc:;,.            ----------------
     .;cccccccccccccccccccccc;.         OS: Fedora Linux 41 riscv64
   .:cccccccccccccccccccccccccc:.       Host: Sipeed Lichee Pi 4A
  .;ccccccccccccc;.:dddl:.;ccccccc;.    Kernel: Linux 6.6.66-g1c6721ec2918-dirty
 .:ccccccccccccc;OWMKOOXMWd;ccccccc:.   Uptime: 58 mins
.:ccccccccccccc;KMMc;cc;xMMc;ccccccc:.  Packages: 534 (rpm)
,cccccccccccccc;MMM.;cc;;WW:;cccccccc,  Shell: bash 5.2.32
:cccccccccccccc;MMM.;cccccccccccccccc:  Terminal: vt220
:ccccccc;oxOOOo;MMM000k.;cccccccccccc:  CPU: thead,c910 rv64gc (4) @ 1.85 GHz
cccccc;0MMKxdd:;MMMkddc.;cccccccccccc;  GPU: Img gpu [Integrated]
ccccc;XMO';cccc;MMM.;cccccccccccccc'    Memory: 823.28 MiB / 7.64 GiB (11%)
ccccc;MMo;ccccc;MMW.;ccccccccccccccc;   Swap: 0 B / 7.64 GiB (0%)
ccccc;0MNc.ccc.xMMd;ccccccccccccccc;    Disk (/): 2.30 GiB / 14.66 GiB (16%) - ext4
cccccc;dNMWXXXWM0:;cccccccccccccc:,     Local IP (end0): 10.0.0.192/24
ccccccc;.:odl:.;ccccccccccccc:,.        Locale: en_US.UTF-8
cccccccccccccccccccccccccccccc:'.
:ccccccccccccccccccccccc:;,..
 ':cccccccccccccccc::;,.
[opengauss@fedora ~]$ /opt/opengauss/bin/gsql -d postgres
gsql ((openGauss-lite 6.0.0 build ) compiled at 2025-01-21 13:43:14 commit 0 last mr  release)
Non-SSL connection (SSL connection is recommended when requiring high-security)
Type "help" for help.

openGauss=# CREATE USER fedora WITH PASSWORD "Fedora-VForce";
CREATE ROLE
openGauss=# CREATE DATABASE topic OWNER fedora;
CREATE DATABASE
openGauss=# \l
                                  List of databases
   Name    |   Owner   | Encoding |   Collate   |    Ctype    |    Access privil
eges
-----------+-----------+----------+-------------+-------------+-----------------
--------
 db_tpcc   | joe       | UTF8     | en_US.UTF-8 | en_US.UTF-8 |
 postgres  | opengauss | UTF8     | en_US.UTF-8 | en_US.UTF-8 |
 template0 | opengauss | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/opengauss
       +
           |           |          |             |             | opengauss=CTc/op
engauss
 template1 | opengauss | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/opengauss
       +
           |           |          |             |             | opengauss=CTc/op
engauss
 topic     | fedora    | UTF8     | en_US.UTF-8 | en_US.UTF-8 |
(5 rows)

openGauss=#
```

dnf install opengauss-server

# Debian for RISC-V（于波）

- Official port update

  Is riscv buildds fast enough? [1][2]

- Debci

  unstable > 20K

  testing is running also

- Some works

  1. keyring-pass [ITP done] Chromium [129]
  2. gridengine [patch, PR1, PR2]
  3. onboard[ftbfs on rv64], coot [ftbfs on rv64]
  4. redleafos new image

# RevyOS (郑景坤)

- New image
  - Lichee Pi 4A: 20250110 :https://mirror.iscas.ac.cn/revyos/extra/images/lpi4a/20250110/
  - Milk-v Meles: 20250110 https://mirror.iscas.ac.cn/revyos/extra/images/meles/20250110/
  - New kernel (6.6), new SDK (2.0.2)
  - Milk-V Pioneer: 20241230

    https://mirror.iscas.ac.cn/revyos/extra/images/sg2042/20241230/
- Community Addition
  - wishlist：许愿清单上线
  - known compatibility issue: 新增已知兼容性问题列表
- **ROS2**
  - RevyOS maintains two ROS2 distributions: Humble and Jazzy.
  - jazzy build 1388/1481 > 1388/1481 (93.7%)
  - humble build 1548/1719 -> 1490/1740 (85.6%)
  - CI test results:

    Pass: 39,323/39,578 > 39,410/39,664 (99.36%)

    Failed: 146, Skipped:108

    Total time: 6.18 hours

# RevyOS supported devices

Image download directory

1、Lichee Pi 4A

2、Lichee Cluster 4A

3、beaglev-ahead

4、Milk-V Pioneer

5、Milk-V Meles

6、Lichee Console 4A

7、RISC-V Book

8、Lichee Book

SD card support

1、LicheePi 4A

2、beaglev-ahead

3、Milk-V Meles

4、LicheeConsole4A

Mainline support

1、LicheePi 4A

2、Milk-V Meles

2、Milk-V Pioneer

# Alpine for RISC-V（Meng Zhuo）

| Section | aarch64 | riscv64(12-25) | riscv64(1-23) |
|---|---|---|---|
| main | 5534 | 5461 | 5022 |
| community | 19755 | 18388 | 18590 |
| test | 7037 | 5851 | 6007 |

内核及对应Uboot/firmware套件移植

目前在testing下

- testing/linux-p550
- testing/linux-spacemit
- testing/linux-sophgo
- testing/linux-starfive

应用迁移与打包进度

- opencv：#16742
- abuild-linter AL65 : SPDX checker #55
- community/yofi: #77760
- community/zenith: #77759
- community/xh: #77758

# Sophgo Linux Upstream Status Update（汪辰）

https://github.com/sophgo/linux/wiki [Last updated: Jan/23/2025]

- CV18XX Series
  - https://lore.kernel.org/linux-riscv/19bb108e93bb58eecc6a53d78ff4e75fc380f072.camel@gmail.com/ 讨论支持 SG2000 的 ARM 核
- SG2042
  - https://lore.kernel.org/linux-riscv/cover.1733281657.git.unicorn_wang@outlook.com/ PWM 支持第 6 版补丁评审讨论
  - https://lore.kernel.org/linux-riscv/cover.1736923025.git.unicorn_wang@outlook.com/ PCIe 支持第 3 版补丁评审讨论
  - https://lore.kernel.org/linux-riscv/cover.1736921549.git.unicorn_wang@outlook.com/ MSI 中断控制器第 3 版补丁评审讨论
- SG2044
  - N/A

# RT-Thread (RISC-V) Upstream Status Update（汪辰）

PR list：

- bsp: cvitek: remove support for spinor/spinand: https://github.com/RT-Thread/rt-thread/pull/9884
- bsp: qemu-virt64-riscv: remove config RISCV_S_MODE: https://github.com/RT-Thread/rt-thread/pull/9887
- bsp/cvitek: print arch info. during boot-up: https://github.com/RT-Thread/rt-thread/pull/9919
- lwp: Kconfig: LWP_DEBUG default as n: https://github.com/RT-Thread/rt-thread/pull/9921
- Revert "[action] add cvitek/c906_little ci": https://github.com/RT-Thread/rt-thread/pull/9945
- [bsp][cvitek] fix c906_little build warning in cache.c: https://github.com/RT-Thread/rt-thread/pull/9922

RFC discussion

- [Feature] 为 RTT 建立 maintainer 机制: https://github.com/RT-Thread/rt-thread/issues/9871
- [Feature] 初始的统一 doxgen 框架: https://github.com/RT-Thread/rt-thread/issues/9880

# Box64 RISC-V 进展

- 用 RVV 和 XTheadVector 实现了 MMX 指令
- SIMD 指令优化
  - PSLL*, PSRL*
  - PUNPCK*
- 改进 TSO 模拟性能
  - 重做 STRONGMEM 机制，减少栅栏指令数量
- Benchmark
  - 对比扩展指令集对 DBT 性能的影响

# FW相关更新（王翔）

- opensbi
  - SG2044添加pmu支持
    https://lists.infradead.org/pipermail/opensbi/2025-January/007937.html
  - 修正一些把hart id误用做hart index的错误
    https://lists.infradead.org/pipermail/opensbi/2025-January/007984.html
  - 添加自定义scratch alloc内存对齐的配置
    https://lists.infradead.org/pipermail/opensbi/2025-January/007983.html
  - 添加mips P8700支持
    https://lists.infradead.org/pipermail/opensbi/2025-January/007953.html
  - fdt设备初始化通过carry数组来实现，除了console
    https://lists.infradead.org/pipermail/opensbi/2025-January/007954.html
  - 修正fw_base.S中一个注释
    https://lists.infradead.org/pipermail/opensbi/2025-January/007969.html

# RustSBI团队进展（洛佳）

- 

# RustSBI团队进展（洛佳）

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# 香山开源RISC-V处理器 - ICT / PCL（提交人不在线）

香山开源技术讨论群：
879550595 （QQ）

- **功能**
  - 后端
    - 修复 xTIP (时钟中断等待位) 更新失败，导致错误产生中断的问题 (#4157)
    - 修复边界条件下，rob 发生重定向时没有成功刷新 rob 表项的问题 (#4153)
    - 添加对 htimedelta csr 初始化，以防止 软件读取采用未初始化信息造成 错误 (#4145)
    - 修复 mnret 部分输出信号未 连线的问题 (#4194)
    - 添加 AIA 拓展遗漏的权限检查 (#4166)
    - 整理对 CSR 的访问异常，分类为多个模块共同完成 (#4146)
    - 修复重定向 时快照选择在极端情况出 错的问题 (#4197)
    - 修复 unorder reduction 指令掩码错误问题 (#4197)
    - 修复 reduction 指令 f16 数据选择错误问题 (#4181)
    - 新增 hartReset 功能，在多核 调试下，允许重启指定核 (#4134)
    - 支持硬件可 综合的三 级分类 Top-Down 计数器 (#4122)
    - 添加 mcorepwr/mflushpwr 两个自定义 CSR 寄存器以控制功耗 (#4164)
  - 访存与缓存
    - 修复 PageCache 和 itlbRepeater 中 X 态传播的两处 Bug (#4174)、(#4195)
    - 修复重压场景下 MissQueue 满导致 MMU 卡死的 Bug (#4191)、(#4202)
    - 修复 StoreQueue 中，向量 store 没有被 flush 的 Bug (#4139)
    - 修复 SnpStash 在特定情况下未 probe L1 的错误问题 (CoupledL2 #326)
- **功能**
  - 访存与缓存
    - 修复一系列 WriteEvictOrEvict 相关错误 (CoupledL2 #311)、(CoupledL2 #316)、(CoupledL2 #327)
    - 修复一系列 CMO 相关错误 (CoupledL2 #317)、(CoupledL2 #325)
    - 修复 CCID 错误赋值问题 (CoupledL2 #330)
    - 添加对 uncache buffer 支持新请求合并的功能 (#4154)
    - 添加对 Issue E.b 中新增 Snoop 事务 SnpQuery 的支持 (CoupledL2 #323)
    - 添加对不同 CHI 版本的代码隔离 (CoupledL2 #333)、(CoupledL2 #315)
    - 添加 DataCheck 与 Poison 对于 UC 情况的支持，并修正其初始化 选项 (CoupledL2 #329)、(CoupledL2 #335)、(CoupledL2 #337)
    - 添加 L2 Cache 预取的 CSR 寄存器控制 (CoupledL2 #324)
- **PPA优化**
  - 前端
    - 添加双端口 SRAM 两个 clock 分别门控的选项，默认不分别门控 (#4125)
  - 访存与缓存
    - Load Unit 中部分关键信号改为由寄存器直出 (#4144)
    - 优化 Load Unit 写回数据生成 逻辑 (#4167)
    - 优化 L2 Cache 中 SRAM 出口到寄存器门控信号的关键路径 (CoupledL2 #321)
    - 缩减 LQReplay 项数，在 LQReplay 占用率达到一定 阈值时让 IQ 发射最老的 load (#4183)

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

# Chisel and Additional Technology / Sequencer（提交人不在线）

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# OpenHW & OpenHW Aisa Working Group

# 甲辰计划进展(吴伟)

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# 自由讨论 / AOB

祝大家春节快乐，蛇年大吉！

# 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