ACT (Architectural Compatibility Test) Governance

# ACT managed Repositories

Tests:

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

Reports:

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

Framework & tools:

<https://github.com/riscv-software-src/riscof>

<https://github.com/riscv-software-src/riscv-ctg>

<https://github.com/riscv-software-src/riscv-config>

<https://github.com/riscv-software-src/riscv-isac>

# Roles

In the management of our GitHub repositories, we categorize users into three distinct roles:

## **Readers**

The Reader role is granted read-only access by default. These individuals primarily act as code repository general users. They have the freedom to utilize the ACT code repository and are able to publish comments on issues and pull requests (PRs). Moreover, they have the capability to manage their own comments.

## **Maintainers**

Maintainers are the repository's housekeepers. They possess certain write permissions within the repository (see the table below) . Their primary responsibilities include ensuring an orderly code integration process and promptly addressing user issues by allocating issues and PRs to designated reviewers for review. This role is crucial for maintaining the smooth operation of the repository.

The Maintainer role is per-repository. Every repository normally has a minimum of 2 maintainers. One individual can holding a maintainer role for more than 1 repositories

Maintainers need to be familiar with the repository they maintain, understand the process (had a PR merged) of updating and releasing ACT code, and attend ACT regular meetings and release conferences on time. A maintainer can be nominated by anyone, with the final confirmation coming from a vote by admins to be appointed. The term of service for a maintainer is one year.

### Maintainers Candidates

| Repository | Maintainers | | | |
| --- | --- | --- | --- | --- |
| <https://github.com/riscv-non-isa/riscv-arch-test> | Marc Karasek | Allen Baum | Neel Gala |  |
| <https://github.com/riscv-software-src/riscof> | Neel Gala | James Shi | Pawan | 10xEngineers ? |
| <https://github.com/riscv-software-src/riscv-ctg> | Neel Gala | James Shi | Pawan | 10xEngineers ? |
| <https://github.com/riscv-software-src/riscv-config> | Neel Gala | James Shi | Pawan | 10xEngineers ? |
| <https://github.com/riscv-software-src/riscv-isac> | Neel Gala | James Shi | Pawan | 10xEngineers ? |
| <https://github.com/riscv-non-isa/riscv-arch-test-reports> | Allen Baum | James Shi |  |  |

### Maintainer Best Practices

* Maintainers only merge PRs into dev branch
* Maintainers should always check CI failures before merging a PR
* If a PR is associated with multiple PRs from other repositories, the maintainer needs to coordinate with the maintainers of other repos to collectively review the multiple PRs. If the review is successful, they will be merged together.

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### Reviewers

As the maintainer of the ACT cannot be expected to master every detail of each RISC-V extensions or’ instructions, additional reviewers are needed to assist in evaluating the newly added RISC-V extension test cases for ACT. These reviewers typically come from outside the ACT SIG and are designated by the technical TG/SIG when submitting a PR for adding new ACT tests. One or more qualified reviewers can be specified. The reviewers are required to confirm whether the added test cases are comprehensive and also whether the test coverage meets the expectation.

### Best practise for reviewers

* Reviewers assist in reviewing changes to ACT test cases, especially when the maintainer lacks the knowledge required for the evaluation.
* A major PR adding tests for ACT will require both reviewer and maintainer approval
* A minor PR does not require reviewers approval

## **Admins**

Admins are the absolute managers of the repository. They have the authority to configure all permissions within the repository, including the management of all roles. Any significant actions, such as read and write operations on protected branches, must be conducted through an admin. These individuals play a pivotal role in safeguarding the integrity and security of the repository.

ACT repositories admins are ISA & Infra HC‘s and ACT SIG’s chair and vice-chairs, and others appointed by the ISA & Infra HC or RISC-V international.

Admins are in-charge for all ACTs repositories. Admins are typically the main responsible parties or stakeholders of ACT SIG. Admins must have overall control of either the entire architecture test framework and the release process of ACT. They need to work with other TG/SIGs of the RISC-V Foundation to promote RISC-V specifications and compatibility certification efforts.

### Admin Candidates

* Wei Wu (ISA & Infra HC chair)
* Allen Baum (ISA & Infra HC vice-chair)
* James Shi (ACT SIG chair)
* Neel Gala (ACT SIG vice-chair)

### Admin Best Practices

| **Area** | **Repository actions items** | **Reader** | **Reviewer** | **Maintainer** | **Admin** |
| --- | --- | --- | --- | --- | --- |
| General access | View/download/fork repository and all public branches / tags | ✓ | ✓ | ✓ | ✓ |
| General access | View published releases | ✓ | ✓ | ✓ | ✓ |
| General access | View Github Action workflow run | ✓ | ✓ | ✓ | ✓ |
| Issues | Open new issues | ✓ | ✓ | ✓ | ✓ |
| Issues | Close and Reopen their own issues | ✓ | ✓ | ✓ | ✓ |
| Issues | Make comments on public issues and pull-request | ✓ | ✓ | ✓ | ✓ |
| Issues | Edit and delete their own comments | ✓ | ✓ | ✓ | ✓ |
| PRs | Open new pull-request | ✓ | ✓ | ✓ | ✓ |
| PRs | Close and Reopen their own pull-request | ✓ | ✓ | ✓ | ✓ |
| PRs | Make reviews on pull-request |  | ✓ | ✓ | ✓ |
| PRs | Edit and delete their own reviews |  | ✓ | ✓ | ✓ |
| Triage | Apply/dismiss labels |  |  | ✓ | ✓ |
| Triage | Create, edit, delete labels |  |  | ✓ | ✓ |
| Triage | Request pull request reviews |  |  | ✓ | ✓ |
| PRs | Close, reopen, and assign all issues and pull requests |  |  | ✓ | ✓ |
| PRs | Create, edit, run, re-run, and cancel GitHub Actions workflows |  |  | ✓ | ✓ |
| PRs, Branches | Merge pull requests on unprotected branches (e.g. development) |  |  | ✓ | ✓ |
| PRs, Branches | Merge pull requests on protected branches (e.g. release branch) |  |  |  | ✓ |
| Releases | Make a new release |  |  |  | ✓ |
| Branches | Create and edit the repository's branch |  |  |  | ✓ |
| Settings | Change repository's settings and all security related configurations |  |  |  | ✓ |
| Settings | Manage team and collaborator access to the repository |  |  |  | ✓ |

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# ACT Release Meeting

Time:

Topics to discuss:

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## **Sample ACT Workflows:**

