Engineer

Rehearsed the forge CI hook, found 2 defects

Rehearsed the forge-side CI hook and found two defects unreachable by reading the file: a fallback that put an unresolvable argument on the hook's input, and git's own environment variable following the gate into the checkout and turning 19 tests red.

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tests turned red by git's own environment

Situation. The self-hosted git forge accepts pushes and can run a hook on the server side to reject work that does not pass the gate. A server-side hook is the one piece of automation that cannot be tested by running it locally: it executes in a bare repository, with no working tree, under an environment the forge sets, reading the pushed references from its standard input. Reading the script and concluding it is correct is a guess.

Task. The hook had to be rehearsed against a real bare repository and a real push before being trusted, rather than deployed and discovered.

Action. The rehearsal creates a bare repository, installs the hook, clones it, commits, pushes, and asserts on both the accept and the reject path. It found two defects, neither of which was visible in the file. The first was a fallback in the argument handling: when the hook could not determine a reference it substituted a placeholder that was not a resolvable object, and because the value arrives on the hook’s standard input rather than as a parameter, the failure surfaced as an unrelated error much further down. The second is the one worth remembering. Git exports an environment variable naming the repository directory when it invokes a hook, and that variable is inherited by everything the hook runs. The gate checks out the pushed revision and runs the test suite inside it, and the test suite inherited the pointer to the bare repository — so nineteen

tests that touch git resolved against the wrong repository and went red, on code that was correct. The environment has to be cleared at the boundary, and that boundary is invisible unless the thing is actually run.

Result. The hook works on both paths and both defects were found before any real push met them. The limit is that a rehearsal is still a simulation: it proves the hook survives one push shape, and the forge in production sees pushes this rehearsal does not construct, including forced updates and branch deletions.

Bring this experience to your project

Use “Rehearsed the forge CI hook, found 2 defects” as a starting point for a similar challenge in your organisation. The services behind this work are available for your project. The whole setup written down as files, so it can be recreated exactly and never lives only in one person's head.

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Look behind the result

Read the situation, decisions and result in this example. We can discuss which parts transfer to your constraints and which need another approach. Rehearsed the forge CI hook, found 2 defects — 19 tests turned red by git's own environment

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Does your CI behave the same as your laptop?

Talk through your project with the engineer responsible for delivery. We agree the scope, price basis and handover in writing before work begins.

Role context: Python Engineer. It draws on DevOps, Infrastructure, Automation & CI/CD, Linux & Servers, Testing & QA and Python. And while you are here, we are rather good at Infrastructure as Code, DevOps & CI/CD Automation and System Administration.

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One piece of **a longer record** — and it is all on this site.

Every entry is written the same way: the situation, the task, what we did and what changed.

See the whole record

Define the improvement you need

Bring the deployment path, the operational risks and the people on call. We can scope a change with checks, a recovery route and clear ownership.

See what it costs Get in touch →

Does your CI behave the same as your laptop?

Ask about the decisions behind “Rehearsed the forge CI hook, found 2 defects”. You will speak with the people who can explain the work and assess your own project.

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