

### **Test Replay FAQs**

# 1. Can I debug CI tests directly in the CI environment without the need to replicate issues locally?

This is one the biggest benefits of using Test Replay! Test Replay brings the debugging experience you know and love from the Cypress app directly into your recorded tests in Cypress Cloud. Inspect the DOM, network events, and console logs of your application from your tests exactly as they ran in CI. There's no need to locally reproduce issues in CI with Test Replay, saving you hours of work.

#### 2. How does Test Replay help me debug my application?

Currently, Cypress Cloud provides helpful context when errors occur, such as the stack trace, the error name and message, and videos and screenshots of the execution. While this information can lead to an understanding of the root of the problem, gathering more information to resolve the issue can be time-consuming, as users have to recreate the error locally. This isn't always possible due to network or environment issues.

Test Replay brings the debugging experience you know and love from the Cypress app directly into your recorded tests in Cypress Cloud. It allows you to inspect the DOM, network events, and console logs of your application from your tests exactly as they ran in CI.

#### 3. What makes Cypress Test Replay unique?

Cypress Test Replay is integrated directly into Cypress Cloud so users can enjoy a seamless workflow with their existing test suite and eliminate tool sprawl, reducing cost and training overhead.

With Cypress Cloud, you're getting the expertise, partnership, and support from the builders and maintainers of Cypress. Our community is well-established–10k community members on Discord–and ready to help if you run into an issue. We also have a dedicated technical support and account management team for white glove service and strategic guidance. We also enable seamless context sharing between our open source app and Cloud for more efficient workflows for writing and debugging tests, Smart Orchestration to streamline Cl costs, and detailed analytics to identify trends in your test suite.

#### 4. Is this like Playwright Trace Viewer?

For devs & QAs who run Cypress tests in CI, Test Replay provides a robust debugging experience by allowing them to interact with the DOM and inspect network events, console logs, and JavaScript errors as they happened in CI. Trace Viewer is similar to Test Replay, but for Playwright users. With Trace Viewer, you can explore recorded Playwright traces of your tests meaning you can go back and forward through each action of your test and visually see what was happening during each action.

It's worth noting that Playwright's Node process is separate from debugging the browser, which doesn't come with a live debugger. Combined with incomplete error messages that don't reflect exactly what went wrong in your text, this means that developers must wrangle multiple workflows for debugging with less context for failures than they get with Cypress. Additionally, with Playwright's Trace Viewer, you'd need to implement custom tooling to generate, store, and share trace files.

With Test Replay, Cypress offers time travel debugging in open mode immediately after your test finishes whether they pass or fail, which allows users to step through command entries with snapshots repainting the DOM. A single, real-time workflow! Cypress offers precise error messages to help you determine the root cause of failures in real world scenarios, and you can simply copy/paste a Cypress replay to collaborate with colleagues on issues.

#### 5. Why is a replay better than a video?

Debugging failures in continuous integration (CI) requires a clear understanding of why a test failed. Videos and screenshots can provide initial guidance to developers, but if further information is required to determine the root cause, they may need to reproduce the failure in their local environment. However, reproducing the failure locally may not always be feasible due to constraints such as differences between local and CI environments or network conditions.

Test Replay allows you to bypass the effort and challenges involved in reproducing issues from CI and enables you to 'time-travel' through tests, directly interacting with failed or flaky test runs as they occurred during continuous integration (CI). This feature is particularly useful in debugging non-deterministic problems, which manifest intermittently or sporadically, and lack a clear cause-and-effect relationship.

6. Will using Test Replay have any impact on the runtime of my test suite? What about RAM/CPU usage?

At this time, we are unaware of any large-scale impacts to runtime, and believe that it should be consistent with previous runtimes, including for large test runs. From a performance impact perspective, w

#### 7. Is the network tab feature available exclusively in the Cypress Cloud?

All of the data within Test Replay's Developer Tools in Cypress Cloud (including network events) are already available to you when running tests locally in the Cypress app via your browser's built-in developer tools (e.g. Chrome DevTools). When reviewing a test run that occurred in CI, you can review the network events within Cypress Cloud.

- 8. Does Test Replay support tests that interact with elements inside the Shadow DOM?

  Support for Shadow DOM will not be included in the initial release of Test Replay.
- 9. Is IndexedDB storage supported during test replay?

While IndexedDB will not be supported natively in the initial release of Test Replay, you can log data from IndexedDB to your console at moments in the test where it may be necessary to review. This can be viewed in the console tab.

10. Can I enable or disable Test Replay for specific, individual tests, or is it a global setting? Can I configure my settings so that Test Replay is only enabled for failing test retries?

At this time, users can only opt out of Test Replay via project-level settings in Cypress Cloud. There is no local option for opting out at this time.

# 11. Does Test Replay allow adding bookmarks or markers to navigate to specific points during the replay?

At this time, we don't offer any kind of contextual comments or bookmarks within Test Replay. In the near future, Test Replay will maintain the current timestamp of the replay in the URL – which means you'll be able to send a link for a specific time when sharing with teammates or colleagues.

### 12. Is Test Replay available only in Cypress Cloud, or can it be used in the local environment as well?

Test Replay is a feature that is exclusive to Cypress Cloud; however, a lot of the same functionality exists when running the test locally in the Cypress app. Hover over the command in your Command Log to time travel back to previous states when testing, and use your browser's built-in developer tools (e.g. Chrome DevTools) to review console logs, network requests, and DOM.

**13. Will Test Replay provide hyperlinks to my IDE, similar to the local Cypress runner?**This is not in the scope of the initial release of Test Replay.

### 14. When will the V13 migration guide be available, and what breaking changes should I expect?

The Cypress 13 migration guide will be available in our public-facing Docs once v13 goes live. The most notable change will be that <a href="video">video</a> and <a href="video">video</a> Compression</a> are now set to <a href="false">false</a> by default. Recording and compressing videos can be resource intensive, sometimes impacting the speed that tests run in CI. Test Replay also serves as a replacement for debugging via video for many of our Cloud users. We've changed these video options to be opt in so you can configure recording video based on your needs.

### 15. Does Test Replay support code coverage analysis for Cypress tests? Can I collect code coverage from frontend to backend and even microservice APIs during test replay?

At this time, Test Replay does not have any code coverage analysis built into it, and this will not be in the scope of the GA release.

#### 16. Are there any plugins I can replace with Test Replay?

We now support the functionality included in the following plugins natively: <a href="mailto:cypress-terminal-report">cypress-terminal-report</a>, <a href="

# 17. Will Test Replay display exact reasons in the console and network for updating test scripts?

This is not in the scope of the GA release. Test Replay will display the exact error, and users will need to drill into the actual error to troubleshoot and conclude exact reasons accordingly.

### 18. Does Cypress V13 and Test Replay help reduce Chromium browser crashes during test execution?

At this time, there is no guarantee that Cypress 13 will help reduce Chromium browser crashes during test execution, and there is no direct correlation between the two. If you are experiencing browser crashes, we recommend increasing the CPU/memory on the machine you're running on, enabling <a href="mailto:experimentalMemoryManagement">experimentalMemoryManagement</a> in your config file, or lowering <a href="mailto:numTestsKeptInMemory">numTestsKeptInMemory</a> in your config file during <a href="mailto:cypress">cypress</a> open</a>. Learn more <a href="mailto:HERE">HERE</a>.

#### 19. Are there plans to extend Test Replay to browsers other than Chromium?

At this time, there are no immediate plans to support Firefox or Webkit.

#### 20. Does Test Replay resolve the video recording issue in Firefox?

At this time, replays are only recorded for test runs in Chromium-based browsers (Chrome, Edge, and Electron).

#### 21. What's the experience for tests run on Firefox browsers?

Test Replay uses CDP, which is not implemented in Firefox. Test Replay will be disabled (with a message that it's only available on Chromium) for tests run in Firefox or WebKit (Safari). Because you can only run Cypress for a single browser per group, you can re-enable video for Firefox to debug those tests.

#### 22. How can I control (mask) what data is shared with the Cloud?

You will not be able to mask data within Test Replay; you should turn it off if you're sending PII in your tests. As a best practice, we recommend not using live data or real credentials, as any information that you see in the test runner will be captured by Test Replay or printed to DevTools.

#### 23. Will I see historic data in Test Replay at launch?

When enabling this feature on existing projects, note that Test Replay will only be available on new tests and not on historical runs.

# 24. How does Test Replay handle capturing bundled code, and what security measures are in place to protect sensitive information?

Test Replay captures several different types of data; Chrome DevTools Protocol (CDP) data (e.g., network requests, DOM, console logs), and Cypress Data. For Cypress data, we communicate with the Cypress app server. For other data, we use the Chrome DevTools Protocol (CDP) to capture.

#### Security measures in place:

- Encryption: Our data protection policies state that we must have strong encryption for sensitive data at rest and in transit. We encrypt SQLite databases and use HTTPS for transmitting data to our cloud services for further processing.
- Access Controls: We have employed role-based access controls (RBAC) to limit access to sensitive data only to authorized users.
- Secure Cloud Storage: Cypress transmits and stores event data captured in AWS S3. Cypress utilizes pre-signed URLs for authorization using pre-signed PUT URLs for S3 uploads to ensure secure and direct data transfer. S3 buckets are encrypted.
- Audit Logging: Cypress maintains and monitors audit logs to track data access and usage, identifying potential security breaches and unauthorized activities.

 Regular Security Assessments: Cypress conducts regular security assessments, including vulnerability scanning and penetration testing, to identify and address potential security vulnerabilities.

#### 25. How do I get started with Test Replay?

To start using Test Replay, upgrade to Cypress 13 and record a test to Cypress Cloud. Test Replay is enabled by default, and there is no additional configuration you need to do to use it. Once recorded, log into Cypress Cloud and view the previous test runs. While inspecting a test, click the "Test Replay" button to review it.

#### 26. How much does Test Replay cost?

Test Replay is available for all Cypress Cloud plans at no additional cost.

### 27. Can I use Test Replay with a previous version of the Cypress app? (<13)

No, Test Replay only works with v13.

#### 28. Test Replay is blocked by my firewall. What should I do?

If your recordings occur behind a firewall or <u>restrictive VPN</u>, you need to introduce a new subdomain to your allowlist: capture.cypress.io.

### 29. What types of testing can I debug with Test Replay?

Anything you can do with Cypress – E2E, Component, API, etc.

#### 30. Why might I want to re-enable video defaults?

Test Replay is a Cypress Cloud feature. Open source users who aren't using Cloud might want to re-enable <a href="video">video</a> for debugging. If you have low memory or disk space, you might want to re-enable <a href="videoCompression">videoCompression</a> to reduce the video file size.

#### 31. How do I re-enable video defaults?

You can re-enable video and videoCompression by setting them to true in your config. Learn more in our documentation.

#### 32. Is there a workaround for shouldUploadVideoOnPass?

Yes, it's available <u>here</u> – this workaround gives you fine grain control of if/when to upload video.

#### 33. What's on Cypress' roadmap?

We're still scoping, researching, and validating future roadmap items. Functionality and timeline for these items is TBD. Follow us on LinkedIn or Twitter or join our Discord community to stay in the loop on updates.