



WHY IT OCCURS

DOM REBUILD

Page re-renders (AJAX update, React/Angular refresh) and replaces the node in the DOM tree.



NAVIGATION

A page reload or SPA route change destroys the old DOM entirely.



STALE HANDLE

Selenium's WebElement holds a reference to the old node, which no longer exists.



NO AUTO-RETRY

Selenium re-uses that stale reference instead of automatically re-locating the element.

SELENIUM FIX: RE-LOCATE

```
// Re-locate the element right before every
interaction
WebElement btn =
driver.findElement(By.id("submit"));

try {
    btn.click();
} catch (StaleElementReferenceException e) {
    btn = driver.findElement(By.id("submit"));
    btn.click();
}
```

PLAYWRIGHT: AUTO-WAITING LOCATOR

```
// Locator re-queries the DOM on every
action, no stale ref possible
const button =
page.locator('#submit');

await button.click(); // always finds
fresh element
```

WHY PLAYWRIGHT DOESN'T HIT THIS

LOCATORS, NOT HANDLES

A Playwright Locator is a query, re-evaluated fresh at the moment of each action.

AUTO-WAITING

Playwright waits for the element to be attached, visible, and stable before acting.

RETRY-ABILITY

Built-in actionability retries absorb the exact DOM churn that breaks stale Selenium refs.

KEY TERMS

WebElement: Selenium's handle to a DOM node at lookup time.

Locator: Playwright's query; resolves fresh on each use.

Actionability: Checks an element is ready before acting.

DOM Detachment: A node removed/replaced, voiding old refs.

