Cypress Ecosystem and Tooling

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Ecosystem and Tooling

Network Requests

Screenshots & Videos

Browsers

Code Coverage

Plugins

Network Requests

Cypress Network Testing Strategy

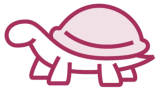
Don’t Stub Responses

Stub Responses

No Stubbed Responses

True end-to-end tests that actually reach your server

Great for traditional server side HTML rendering



Tests will be slower than stubbed responses (Needs to go through all the layers of the server)

Stub Responses

Can control every aspect of response (body, status, headers, delay)

Extremely fast, responses in less than 20 ms

Perfect for JSON responses

No test coverage on some server endpoints

Recommendation

Use stubbed response tests more often for speed and simplicity

Don’t use stubbed response for server side rendering architecture

Avoid stubs for critical paths like Login.

Cypress Commands

```
cy.server()
cy.route(url)
cy.request(url)
```

```
cy.server()
cy.route('**/users').as('getUsers')
cy.visit('/users')
cy.wait('@getUsers')
```

Without Stubbing

No response is passed to route

Cypress will pass the request without stubbing to the server

Wait for request to resolve later

```
cy.server()
cy.route('https://localhost:7777/surveys/customer?email=john@doe.com', [
  {
    id: 1,
    name: 'john'
  }
])
```

With Stubbing

Pass a response to *cy.route()*

Cypress will stub the response in the request

```
cy.server()
cy.route('DELETE', '**/users/*', {})
```

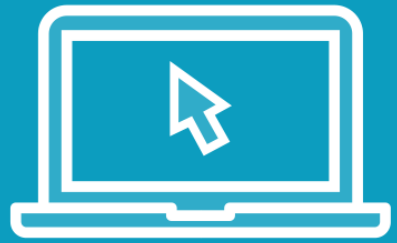
Stubbing Empty Response

Pass an empty JSON response to *cy.route()*

Upcoming

Write Network Request tests for the Conduit app

Demo

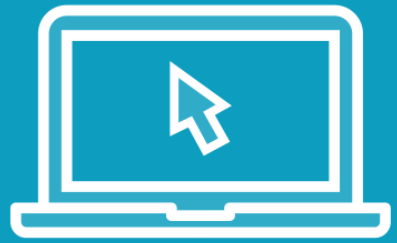


Demo Network Requests on Conduit App

- Write test to post comment
- Use network request with stubbed response
- Use network request with response from server

Cypress Screenshots and Videos

Demo



Screenshot and video recording in Cypress

- Learn how Cypress captures screenshots of tests
- Learn how Cypress can record videos of test runs

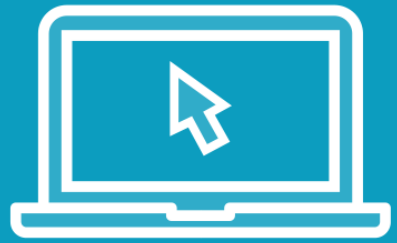
Cypress Browser Support

Cypress Browser Support

As of version 4.x you can run Cypress tests across multiple browsers

- Chrome
- Canary
- Edge, Edge beta, Edge Canary, Edge Dev
- Electron
- Firefox (Beta support)
- Firefox dev edition (Beta support)
- Firefox Nightly (Beta support)

Demo



Demonstrate cross browser support in Cypress and launching tests across multiple browsers

```
cypress run --browser chrome
```

Code Coverage

Code Coverage Dev Dependencies

`@cypress/code-coverage`

`istanbul-lib-coverage`

`nyc`

`babel-plugin-istanbul`

Coverage From Cypress End-to-end Tests

cypress/support/index.js

```
import '@cypress/code-coverage/support'
```

cypress/plugins/index.js

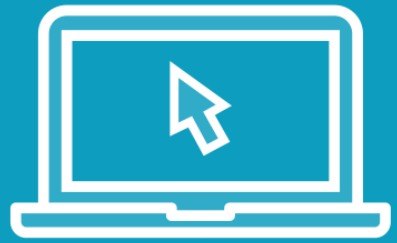
```
module.exports = (on, config) => {

// tasks for code coverage

on('task', require('@cypress/code-
coverage/task'))


}
```

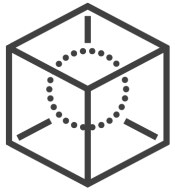
Demo



Demonstrate integrating coverage report in the conduit app

Plugins

Cypress Plugins



Modify or extend internal behavior of Cypress

Alter configuration and environment variables

Write your own custom code that executes during different Cypress stages

Customize how test code is transpiled and sent to browser

Tap into node process running outside the browser

Manipulate a database

Cypress Plugin Structure

cypress/plugins/index.js

```
// export a function
module.exports = (on, config) => {

  on('<event>', (arg1, arg2) => {
    // plugin stuff here
  })
}
```

List of Cypress Plugins

https://docs.cypress.io/plugins/

Summary

Cypress Ecosystem and Tooling

- Network Requests
- Screenshots and Videos
- Cross browser support
- Code coverage
- Plugins