



Implementing Feature Flags in JavaScript

Get Started

You can participate in this interactive workshop entirely from a browser. We recommend using your browser's profile features to create a separate environment just for the workshop. This is not a requirement, but if you have an existing split account, make sure you log out of that account.

Use a Workshop-only Split.io Account

You should have received credentials for a Split account. If you did not, let the leaders of the workshop know. You can always go to <https://www.split.io/signup/> and create a free developer account.

Make sure you are logged into the Split account for the workshop in a browser tab.

Set Up a codexandbox.io Account

Code Sandbox is a free development environment that supports a variety of JavaScript frameworks. It has a built-in code editor and runtime environment that supports everything you'll use in this workshop.

Navigate to <https://codesandbox.io>. If you don't already have an account, you can create one with either Google or Github. You'll need to have an account to participate in the workshop.

Make sure you are logged into your Code Sandbox account for the workshop in another browser tab.

Get Ready to Use GitHub!

We're going to use two publicly available open-source GitHub repositories for this workshop. You do not need to have your own GitHub account for this workshop.

You don't need to set anything up in advance, but for your reference, the two GitHub repositories we'll use in this workshop are:

- <https://github.com/flagship-workshops/flagship-workshop-react>
- <https://github.com/flagship-workshops/flagship-workshop-nodejs>




Meet the Movie Database

Throughout this workshop, we reference a fictitious company that manages a Movie Database website. Up until now, the movie database has only included movies produced in the USA.

Now, the company wants to expand the database to include movies produced around the world. However, they want to roll out new features in a considered and structured way. They don't want existing users to have a bad user experience. They want to have a beta-test user group experience the new interface and features and then roll out the new features to all the users.

The company has decided that the beta-test user group will still see movies produced in the USA by default. But, they will have a new checkbox that, when checked, shows all movies in the database.

React Frontend

1. Log in to <https://codesandbox.io>
2. Click "Create Sandbox"
3. Click "Import Project"
4. Paste the following link: <https://github.com/flagship-workshops/flagship-workshop-react>
5. Click "Import and Fork" and wait for the environment to load
6. Launch the embedded browser in its own tab
 - a. Click the "Open in New Window" icon () in the embedded browser's upper right corner.
 - b. You can now shrink the embedded browser window back on the original code tab to maximize the space you have for code.
7. Enter any valid email address and anything for the password and click "Login"
8. You should see a result page with the email address you entered and a table of movies produced in the USA


React Frontend + Feature Flags

1. Navigate to <https://app.split.io>
2. Click "Splits"
3. Click "Create Split"
 - a. Name it: "movie_filter"
 - b. Click "Create"
4. Click "Add Rules"
 - a. Change "on" to "INTERNATIONAL"
 - b. Change "off" to "USA"
 - c. Click "Save changes"
 - d. Click "Confirm"



5. Click “DE > Admin settings”
6. Click “API keys”
 - a. Copy the production, client-side JavaScript API key
7. Back in your project in CodeSanbox.io, open the “app.config.js” file. This is where we centralize all the configuration you need for the application to interact with Split and, later, with the backend.
8. Replace “localhost” with the copied API key
9. Edit “movie/movies.js”
 - a. Uncomment “movies” on line 25
 - b. Comment “movies” on line 26
 - c. This sets up the “database” to support both movies produced in the US and movies produced internationally
10. Edit “index.js”
 - a. Replace “App.js” with “App.split.js”
11. Back in the browser tab running the app, things should look the same, but you should see a console message in the developer tools showing: “treatment: USA”
12. In the Split admin console, change the default treatment to “INTERNATIONAL”
 - a. Click “Save changes”
 - b. Click “Confirm”
13. Back in the app, you should now see a checkbox: “Show International Movies”
14. Check the box
 - a. Now, you should see the international movies too

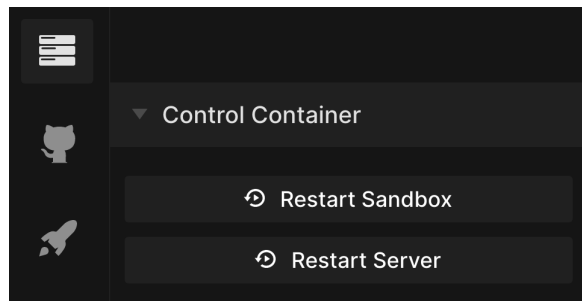
Node.js Backend

1. Log in to <https://codesandbox.io>
2. Click “Create Sandbox”
3. Click “Import Project”
4. Paste the following link: <https://github.com/flagship-workshops/flagship-workshop-nodejs>
5. Click on “Import and Fork” and wait for the environment to load. (This will take ~20 seconds)
6. Once the app loads, you should see a success message in the embedded browser
7. Launch the embedded browser in its own tab
 - a. Click the “Open in New Window” icon () in the embedded browser’s upper right corner
 - b. You can now shrink the embedded browser window back on the original code tab to maximize the space you have for code
 - c. Note the unique URL to the Node.js app from the browser
8. Exercise the movies API by tacking the following on the unique URL from the Node.js app in the browser:
 - a. `/api/v1/movies/<valid email address>`
 - b. Ex: `/api/v1/movies/micah@afitnerd.com`
 - c. You should see a JSON response with the movies produced in the USA



Node.js Backend + Feature Flags

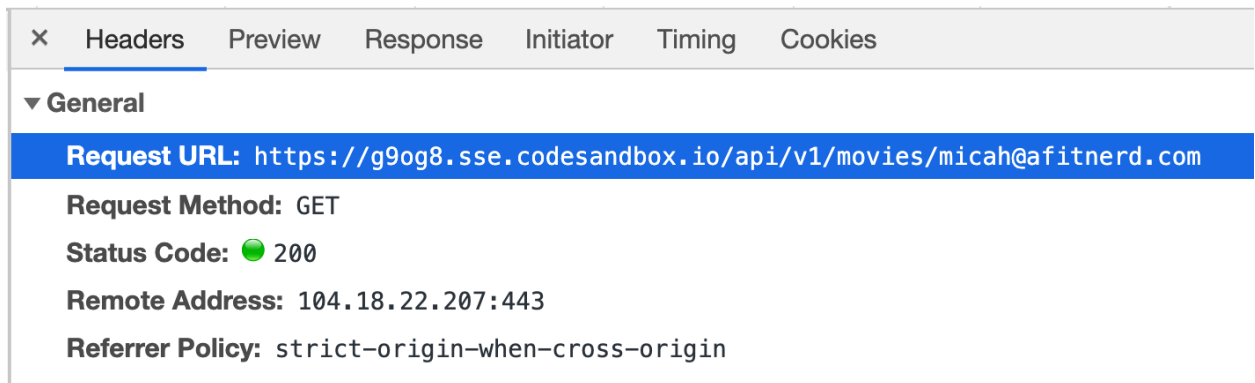
1. In the Split admin console, change the default treatment to “USA”
 - a. Click “Save changes”
 - b. Click “Confirm”
2. In the Split admin console, navigate to: “DE > Admin settings” and click “API keys”
 - a. Copy the production server-side API key
3. Open the “server.config.js” file
4. Replace “localhost” with the actual server-side API key from your Split account
5. Edit “package.json” and change:
 - a. `nodemon server.js` to `nodemon server.split.js`
6. The server will automatically restart
7. Browse to the movies API endpoint as before
 - a. You should see the list of movies produced in the USA again
8. Navigate to your split in the Split admin console
9. Switch the default rule to `INTERNATIONAL`
 - a. Click “Save changes”
 - b. Click “Confirm”
10. Refresh the browser, and you should see a result that includes international movies
 - a. You can also see the output in the codesandbox that shows the value from the treatment
 - b. NOTE: If you don’t see the expected results, you may need to restart the sandbox. Use the “Server Control” section on the left-hand side of the browser tab.





Put it all Together! React Frontend + Node.js Backend + Feature Flags

1. Navigate to your split in the Split admin console
2. Switch the default rule to `USA`
 - a. Click “Save changes”
 - b. Click “Confirm”
3. Switch back to the React app in the codesandbox
4. Open the “app.config.js” file
 - a. Note: we’re using the same Split API key config we set up earlier
5. Replace `backend.baseUrl` with the CodeSandbox URL from your Node.js project
 - a. Note: You only want the part of the URL up to “...codesandbox.io”
6. Edit “index.js”
 - a. Replace “App.split” with “App.backend”
7. The frontend app should now be getting results from the Node.js backend
8. You can confirm this by looking at the network tab of the developer tools in the browser. You should see a network call like:



10. Navigate to your split in the Split admin console
11. Switch the default rule to `INTERNATIONAL`
 - a. Click “Save changes”
 - b. Click “Confirm”
12. Once again, you should see the checkbox to view all movies, and when checked, you should see both movies produced in the USA and movies produced internationally