

## ComicHub.io Testing

### Automatic Testing

ComicHub.io is divided into two repositories - one which contains its [frontend](#) and one that contains its [backend](#). Both sides have automated tests available.

### Frontend Testing

All testing on the frontend is done through the [angular cli](#). The cli must be installed as node, npm and the apps dependencies (via npm install).

**Unit Tests:** The frontend is based on the karma test runner and the jasmine assertion suite. They can be run via the command `npm run test`.

**End to End Tests:** The frontend also has E2E tests that are based on the protractor test runner. These can be run via `npm run e2e`.

### Backend Testing

The backend requires that node and npm be installed and the dependencies be installed via npm install. Some tests also use the [postman](#) app.

**Unit Tests:** The backend's unit tests may be run by the command `npm run test`. These are used to test functionality that does not require http requests or database usage.

**Integration Tests:** The app uses [postman](#) to test its various routes. First the postman app must be installed. Then the tester must import the tests via file - import and select the file "webcomic.postman\_collection.json" in the test directory of the server. Finally the tester must create an environment called ComicHub.io and set the domain variable to localhost:3000 to test the local server or comichub.io to test the production server.

### Manual Testing

- Removed bug that prevented the scheduler from publishing volumes
- Removed bug that left holes in the numbering when deleting pages/chapters/volumes
- Removed bug that inserted the wrong values into the database
- Removed bug that caused scheduler to crash
- Removed bug that allowed empty strings into certain database variables
- Removed bug that loaded a comic from cache without checking if it was up to date

- Removed bug where deleted comics were not removed from cache
- Removed bug that resetted the page counter after every new comic page upload
- Removed bug that triggered updateThumbnail even if thumbnail didn't change

### Known bugs

- On sending anything to update a comic, the HTTP: 200:OK messages are logged as errors by the browser
- Clicking any area in the same row as the "Choose File" button will cause the button to be clicked
- Uploading an image that is larger than 5mb does not show an error message.
- Switching between the "Manage Comic 1" tab and the "Manage Comic 2" tab does not call the route to get a comic
- Works on Firefox, Chrome, Opera
  - Does not work on Internet Explorer
  - Edge has limited functionality, only for browsing