

Zowe toolkit plugin for IntelliJ

At the time of the mentorship, the Zowe toolkit plugin for IntelliJ project was being developed by the IBA Group a.s. The plugin, however was lacking any tests, which would assure the quality of the code. It was decided that the mentee should look into possible ways to test the plugin and present the results to the IBA Group a.s.

Both unit and integration tests, which have been divided into API and UI tests, have been researched. Although they are not recommended by the IntelliJ, the mentee proposed a possible ways to unit test some sections of the code. Other sections rely too much on plugin components, which makes them difficult to mock and are thus not deemed to be cost-effective. The IntelliJ recommends an approach for API tests. The mentee mocked the license agreement on API level, which enabled the headless IDEA to be ran. The mentee also API tested some functionality of connection handling and found possible bugs in the plugin code. The find confirmed the value of these tests. However, there is still work to be done in terms of the API tests, mainly in future tests pertaining to the creation and editing of datasets. There will be a need to compare the newly edited dataset with the desirable outcome. For UI testing, the mentee created basic garbage collecting of unclosed frames. Lastly, all tests were put into a pipeline provided by GitHub Actions. There was a need for UI tests to be run on a self-hosted runner.

We have identified the following opened issues:

- We need to find a way to use newer version of Gradle than 6.8.1. without any errors.
- Find a way to compare the edited dataset with desirable result in API tests.
- Figure out how to use a non-default port in UI tests.
- Figure out how to run UI tests on GitHub hosted runners.

Although there is still some work to be done, we believe that we have proposed a valid way to test the plugin that can be used and build upon.