

SUMMARY OF THE PENETRATION TEST OF CHEMAXON'S CALCULATOR WEB API

Kancellar.hu carried out a penetration test of Chemaxon's Calculators web API running on the AWS platform according to the OWASP methodology in November 2022.

Kancellar.hu conducted a test on the API deployed at the api.calculators.cxcloud.io domain and analyzed the java source, the applications and the scripts related to the AWS Marketplace and the deployment process.

To summarize the results of the accomplished penetration test, kancellar.hu identified no security vulnerabilities. Details can be found in the full audit report. The most important statements of the report were:

The application or the tested infrastructure elements did not store any data from the inputs, the molecules that were sent in for calculation were only stored in the memory.

The Calculators API had 23 REST endpoints, each of which only worked over the POST method. This prevents the logging of sensitive information through access logs.

The API itself was stateless, had no session management and stored no data about the calculations. To access the API an AWS API key was needed which was produced through the AWS Marketplace (which was out of scope of the test).

The application had a Dynamo database but it had only two tables, both related to the metering of the application. Metering was based on the API key, which was checked by the AWS API Gateway, making it impossible to temper it with metering without knowing someone else's API key.

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