



Service Description

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Spatineo Inc.

Spatineo Performance is an easy to use SaaS product for performance testing of geospatial services. It's designed to help the spatial data providers ensure that their WMS, WFS and WMTS services fulfil given capacity requirements, and to give them analytical insights in the services' scalability with increasing user volumes.

1. Spatineo Performance SaaS product

1.1. General

- Application supports testing of OGC WMS, WFS and WMTS services: Freely selectable amounts of GetMap, GetTile, GetFeature, DescribeFeatureType and GetCapabilities requests can be added to test plans.
- 100% web-based application, no software installations are required, and you can access your test data anywhere at any time.
- Running in a highly scalable and reliable Amazon AWS Cloud Computing platform. Dedicated high-performance test servers for generating the test load are allocated for each test to ensure reliable test results.
- The tests plans are generated leveraging Spatineo MapFocus technology (patent pending) to simulate realistic variation of the test requests.
- The testing network traffic for the European customers is generated from data centres within Europe and the test data is also stored in Europe.
- Supported standards: OGC Web Map Service (WMS) versions 1.1.1 and 1.3.0, OGC Web Feature Service (WFS) versions 1.0.0, 1.1.0 and 2.0.0, OGC Web Map Tile Service (WMTS) version 1.0.0 and ArcGIS MapServer versions 9.3+.

1.2. Test planning

- Intuitive user interface for planning the tests: test setup assistant guides you through selecting the basic options which you can fine-tune before starting the test.
- Predefined test profiles, like the INSPIRE normalised capacity testing procedures for View and Download Services, make planning typical load tests simple.
- Free of charge simulated tests to practice using the application or to demonstrate how the application works.
- Customisable ramp-up time and test length as well as maximum generated loads up to thousands of requests per second can be defined for each of the test meters.
- A single test can target one or more service end points, for example WMS and WFS endpoints of the same server at the same time.
- Each test meter included in a test can be fully customised including layer or feature type, images sizes, map projections and image formats.

- All the test plans and results are available for later reviewing. Running a similar test again later is simple with copy test functionality.

1.3. Collaborative test sessions

- Spatineo Performance includes team collaboration tools for following the test run and writing real-time notes to a shared test log. The log is archived with the test results to provide a good basis analysing the test cases at a later time.
- The entire test teams consisting of both your own people and support personnel from your IT services provider can follow the tests in real-time and provide insights about the server and database status during at different phases of the test.
- Test timeline shows the test progress and gives a visual analysis of the response time and success/fail ratio of the generated requests in near real-time during the test. This means that too low or too high capacity tests can be noticed early on and cancelled to save time during the test iterations.
- The test timeline can be viewed as combined graph for all the meters or as separate graphs for each of the meters included in the test.

1.4. Scalability analysis

- Result analysis provides insights in service scalability: The measured response time of the successful requests versus the request frequency is shown on graphically with detailed statistics for each of the result frequency categories.
- The scalability graph can be zoomed-in to better reveal the variation in the fast response time scales.
- The percentages of successful, failed and timed-out requests are visualised for each request frequency category. This reveals how the service handles usage exceeding it's maximum capacity.
- Request frequency limits after which the service is considered degraded (less than 99% of the requests succeed) and unreliable (less than 95% of the requests succeed) are automatically calculated based on test data.
- Total statistics of all the requests done during the test are shown in numerical form below the scalability graphs.
- The analysis of the test results can be downloaded as a machine readable JSON file.

1.5. Credits based performance testing packages

- Credits can be purchased in packages and can be used within 12 months of the purchase. Packages include either an agreed upon amount or unlimited credits.
- One credit allows the execution of a single test plan.
- Cancelled tests will not consume test credits. Results for a cancelled test can be later purchased at the cost of one test credit.
- Each new purchased test package extends the expiration of any remaining, previously purchased test credits by 12 months.

2. Spatineo Performance consultancy package

- The testing during the consultancy project is done by using Spatineo Performance SaaS product. The general features of the product are described under 1.1. “General”.
- A test plan is created together with the customer in a startup meeting (1-2h) and refined later during the project if needed.
- Two tests (4-6h each) are run in close co-operation with the customer and their service provider.
 - On the first test, determine performance baseline and identify bottlenecks.
 - On the second test, focus on testing solutions for the identified bottlenecks.
- Analysis on the results and recommendations for improving the service are documented in the final report and presented to the customer in the conclusion meeting (3h).
- Consultancy package includes unlimited credits of Spatineo Performance for the test engineer to use during the test days and 5 test credits for the customer to use within 12 months of the project closing date. See under 1.5. “Credits based performance testing packages” for credit usage and validity.
- Results for the tests executed during the consultancy project will be accessible to the customer after the project.