

AI TESTING: DELIVER BETTER SOFTWARE, FASTER

Software testing is an information service. Its goal is to provide stakeholders with objective information about the defects persisting in their system. A software defect is anything in the code, configuration, data or specification that can decrease the value of software to its stakeholders. The effectiveness of an information service can be assessed based on its accuracy, relevance and accessibility. Improving software testing implies making it progressively better at detecting and interpreting defects, whilst reducing the timeframes and costs.

With the growth of available digital data and computational capabilities, we are seeing the use of subsymbolic artificial intelligence (AI) deliver improvements in autonomy and efficiency across many industries. In software testing, using AI can help harness the power of big data analytics to enhance the generation of test ideas and the interpretation of test results – both tasks traditionally thought to be highly cognitively demanding. These can also be complemented by advanced execution capabilities.

Using AI algorithms introduces new levels of automation and system exploration. At Exactpro, the use of AI algorithms combined with the principles of model-based testing form

the **AI Testing** approach. It is designed to strengthen the operational resilience of client infrastructures and, by association, the entire financial technology landscape.

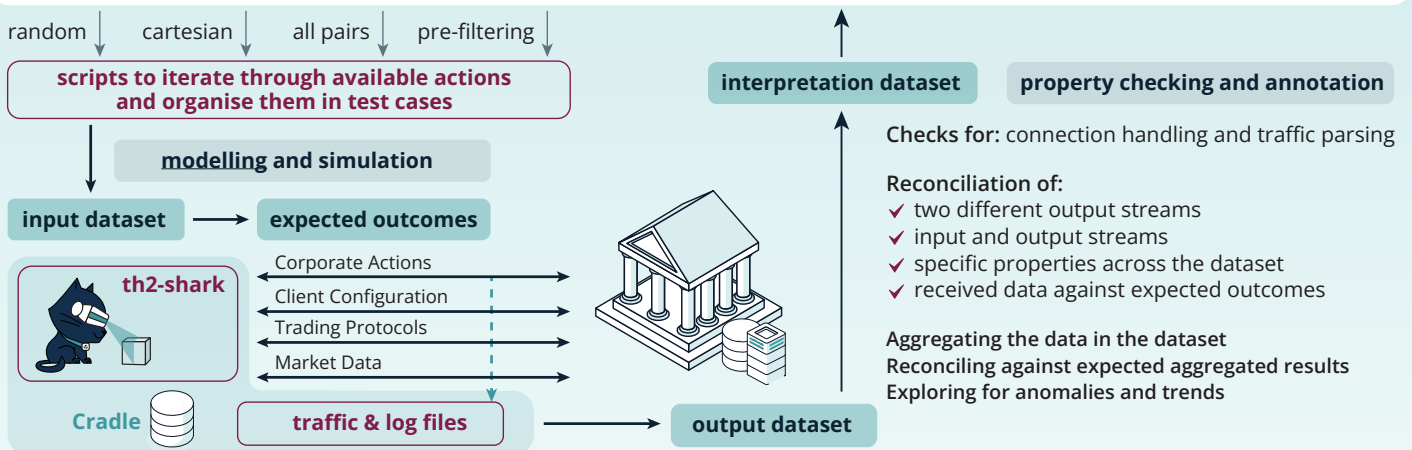
Exactpro's AI-enabled cross-asset and technology-agnostic approach is gaining industry adoption. Each instance of the technology transformation facilitated by Exactpro is supported by a custom-made test framework leveraging our corresponding domain expertise, industry-tested system modelling capabilities and test libraries.

AI Testing ensures that a test framework can fully match the complexity of the system under test. Helping account for massive amounts of parameter permutations unique to the system being tested, AI-enabled automation provides increased versatility of the test library, compared to manual or more formal test generation methods.

Leveraging AI and machine learning, Exactpro transforms the quality evaluation service by providing more extensive, highly-performant yet resource-efficient testing of the functional and performance aspects of financial technology platforms. The approach ensures more effective test coverage via better detection of potential vulnerabilities.

AI TESTING TRADING TECHNOLOGY CASE STUDY

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| test basis | ✓ all instruments and their trading control permutations | ✓ protocol specifications, machine-readable dictionaries | ✓ information obtained from testing |
| | ✓ all users and their trading control permutations | ✓ various input actions check lists | ✓ calculated weights |
| | ✓ all relevant reference data actions | | |



* Visit our website to see examples of AI Testing implementations for [clearing & settlement and investment banking systems](#).

TEST LIBRARY GENERATION AND OPTIMISATION

Would you like to see the benefits of AI-enabled test library generation and optimisation for yourself? Watch our latest AI Testing demo by following this QR code.

