

EXIGEN[®] SERVICES: EXIGEN SERVICES EXPERTISE: TESTING AS A STANDALONE SERVICE



Starting from the mid-1990s, Exigen Services has been a recognized expert in custom software testing, and the tradition continues today. In 2008, Brown and Wilson's *Black Book of Outsourcing* rated Exigen Services as the **No. 1 outsourcing vendor for software testing and quality assurance.**

IMPORTANCE OF TESTING

Testing is a crucial step in any systems development project. Incomplete testing can lead to defects in the production environment, causing unnecessary risks to the business, including damage to the brand, the loss of customers to competitors, and ultimately, a decrease in revenue.

EXPERIENCED TEST TEAM

In the course of thousands of projects in industries where the cost of failure is exceptionally high, such as the healthcare and banking sectors, Exigen Services has gained a great deal of experience in software testing and quality assurance. Our company employs more than **250 quality engineers globally**, many of whom have certifications from well-respected authorities such as International Software Testing Qualifications Board (ISTQB). They are well versed in the use of a wide variety of recognized testing tools such as HP Quality Assurance. Our test teams can vary from two test engineers to dozens of experts.

COLLABORATION WITH THE CUSTOMER

Our testing practices include different forms of collaboration with customer. Our testing background includes local testing projects with the participation of third party vendors as well as long-term, complex projects implemented jointly with the customer's in-house team. In addition to testing within the scope of software development projects, Exigen Services offers standalone testing services.

Our approach is to involve qualified test engineers in the software development life cycle as soon as possible. After gaining a solid understanding of the system's business needs, test engineers detect discrepancies between the specifications and software behavior and identify any fundamental misalignments between business processes and the software developed. Exigen Services test engineers actively communicate with the development team and other project stakeholders while remaining independent as quality assessors. Their deliverables are not limited to pure defect lists, but also include carefully developed metrics, both on the project level (defect containment effectiveness, mean time to defect resolution, etc.) and the product level (defect density, test automation coverage, etc.).

FACTS AND FIGURES

- **Headquarters:**
San Francisco, USA
- **Main offices and delivery centers:**
 - USA:** New York
 - Europe:** London, Frankfurt, Stockholm, Copenhagen, Riga, Vilnius
 - Russia:** St. Petersburg, Kazan, and Nizhniy Novgorod
 - Ukraine:** Dnepropetrovsk and Odessa
 - Belarus:** Minsk
 - China:** Suzhou
- **Number of employees:** 2000



Exigen Services Latvia Quality Assurance and Documentation Division Director Girts Baltaisbrenčis states: *“We are not just offering testing services, as so many other companies do. We are performing an assessment of the client’s current testing processes and coming up with proposals for enhancements. The client has the option of accepting all of our proposals, just a selected package, or none. Working with the client, we agree on how best to proceed. Exigen Services is part of the process from start to finish, not only ready to develop the testing strategy, but also execute it.”*

In addition to his duties at Exigen Services, Girts is president of the Latvian Software Testing Qualifications Board, which is a member of the international software testing board, ISTQB.

SERVICE PACKAGE

Besides utilizing our testing expertise as a part of regular software development services, we are successfully providing it as a separate offering for many of our customers. In both cases, the service package includes (but is not limited to):

- ▶ manual and automated functional testing
- ▶ performance and load testing
- ▶ application security testing
- ▶ usability testing

Our thorough testing approach gives our customers confidence that their systems will satisfy all business requirements. Exigen Services does not try to impose a single methodology on the customer; instead, it helps the customer organize the testing process and make it transparent. Being tightly integrated into the customer team, our testing experts play the role of an independent software controller, performing auditing and optimization of testing projects both on- and offsite.

Regarding testing methodology, Girts Baltaisbrenčis notes: *“We are using different methodologies and adapting to particular client or project requirements based on client experience and current processes and environments.”*

STRATEGIC TESTING ASSESSMENT AND IMPLEMENTATION

Our most successful testing engagements have followed a rigorous, phased approach. To ensure success going forward, we have formalized this phased approach into four standardized steps:

Step 1: Testing assessment. We ascertain the test environment and methodologies that currently exist at the client site.

Step 2: Testing process upgrade. We take all required steps to arrive at a better testing process.

Step 3: Testing partnership. We perform testing as agreed with the client, and support an ongoing testing partnership with the client.

Step 4: Accelerating quality. We work toward long-term testing optimization.

The benefit of this approach is that it builds in decision-making points at optimum times to ensure that Exigen Services and our clients are in agreement on what needs to be done. The engagement can then proceed at full speed. It offers logical re-evaluation points for clients, who receive a specific outcome, and then decide to proceed or not proceed, depending on their perceived value and resources.



OUR TESTING AUTOMATION TOOLS

HP LoadRunner, HP QuickTest Professional (functional testing), Segue SilkTest, HP Quality Center (test management), IBM Rational Robot, AutomatedQA, TestComplete, Microsoft Application Center Test, Compuware TestPartner, PMD, Selenium, Grinder, and Fortify.

EXIGEN SERVICES TESTING PROJECTS

ONGOING TESTING FOR ONE OF THE LARGEST MOBILE OPERATORS IN EUROPE AND THE UNITED STATES

One of our major testing projects has been under way since 2005 for one of the largest mobile operators in the European Union and United States. The Exigen Services team, consisting of 70 software testing engineers, performs testing activities for a wide range of applications. These include an online store, partner business portals, self-service portals, Intelligent Voice Recognition-based solutions (including customer support voice menus and web services), and applications for finances, accounting and business planning.

Exigen Services also assists the customer with security analyses of customer IT projects at various development stages to ensure that security is incorporated into the application life cycle. Although black box testing is often used for security assessments, our experts practice a white box approach, which considerably improves testing efficiency.

SYSTEM TESTING FOR A LARGE EUROPEAN ENERGY COMPANY

A team of five Exigen Services test engineers performed fully automated regression testing for one of the largest SAP-based billing systems in the world. In addition to standard testing, our team supported the migration of the billing system to a new platform that provides the following functional features:

- ▶ invoice generation
- ▶ gas and electric meter monitoring
- ▶ generation of reports for business analysis

Within this project, Exigen Services experts performed regression testing, which required the development and maintenance of automated scripts, and analysis of test results. The size of the tested system was one of the major project challenges, requiring an immense amount of work to prepare an adequate testing environment.

TESTING OF A LOYALTY AND CUSTOMER MANAGEMENT SOLUTION

Exigen Services also provides testing as a standalone service for a USA-based provider of innovative on-demand loyalty and customer management solutions for retailers. The client engaged Exigen Services as a custom testing vendor to increase the annual number of product releases, improve system stability and automate the testing process. Our team, composed of five test engineers, performs 99 percent of all customer system tests, including functionality for bonus definition and calculation, email campaigns, and shopper tracking of account information.



TESTING OF A SECURITY PROCESSING AND MAINTENANCE SYSTEM

The next testing project is carried out on an ongoing basis for a USA-based affiliate of a major international bank. Our six-member test team performs unit, component, integration, regression, smoke, non-functional, and acceptance tests for a real-time security processing and maintenance system. Team responsibilities include test plan creation and execution, reporting test results, and suggesting improvements in the test process. The project involves both manual and automated testing.

TESTING OF AN INTEGRATED PLATFORM FOR MANAGEMENT OF DEVELOPMENT ACTIVITIES

Testing as a standalone service was also performed for a leading provider of software application life cycle solutions, a Zurich-based company operating globally with offices in Europe and North America. Our experts performed acceptance testing (including functional, smoke, cross-platform, and regression tests) for the integrated product, which is used to coordinate and manage development activities. During various project phases, the test team included three to eight test specialists.

TESTING OF PERSONAL COMPUTER OPERATING SYSTEM DEVICE DRIVERS

The software division of a multinational computer technology and IT consulting corporation engaged Exigen Services to perform functional, performance, and stress tests for personal computer operating system device drivers. The goal was to ensure that the drivers supported new hardware components. During the project, from 1997 to 2003, a team of 10 to 15 test engineers was responsible for test plan creation and execution, test result reporting, and the suggestion of improvements in the test process. The project involved both manual and automated testing.

TESTING OF A JAVA COMPONENT FRAMEWORK

Another testing project for a multinational computer technology and IT consulting corporation was dedicated to testing a Java component framework. During this project, from 1997 to 2000, a three- to four-member team performed functional and integration tests, using both manual and automated testing. Our responsibilities included test plan creation and execution, reporting test results, and suggesting improvements in the test process.

APPROACH TO TESTING

Our approach to testing is summarized by Exigen Services Vice President, Professional Services, David Webb: *“Exigen Services believes that IT outsourcing should mitigate the risk clients are often exposed to from large-scale IT initiatives, and that outsourcing only succeeds when applications are delivered on time having been fully reviewed and fully tested. To that end, we integrate quality assurance and testing methods deeply into every phase of our development and project management process.”*

ABOUT EXIGEN SERVICES

Exigen Services is the leading application outsourcing services provider, combining world class skills, recognized expertise in development methodologies, and industry experience to reduce risks, lower costs and deliver results.



Exigen Services has pioneered a new approach to global application outsourcing, Outsourcing 2.0, which includes commercial terms that optimize financial alignment between the client and vendor. As a result, Exigen Services makes IT outsourcing a much easier and more beneficial undertaking for global enterprises.

Since 2000, Exigen Services has been the global leader in the use of distributed Agile methods for rapid and precise systems development throughout the banking, insurance, brokerage, healthcare, telecommunications, government and media industries.

Exigen Services has achieved high honors in a variety of independent lists and rankings, including Brown & Wilson's *Black Book of Outsourcing in 2008*, the Global Services 100 list in 2009, and Inc Magazine's 2009 *Inc5000*. Exigen Services is also a top 10 provider of outsourced product development. Clients range from mid-sized growth companies to Fortune 500 organizations, and include Sun Microsystems, CSC, Universal Music Group, Standard & Poor's, T-Mobile, Westpac Bank and many others.

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