



Software Testing & Quality Assurance Services

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Business Challenges

- Software development is very complex process and Quality of software is very important aspect as it reflects how well it complies with a given design, based on functional requirements or specifications. Software Quality is basic requirement of successful business
- In spite of focus on latest technology, processes, great development many companies fail to deliver software on time with Quality. This results into re-work, delays and unsatisfied customer.
- Not many organizations have in-house capability in managing all Software Testing & Quality Assurance projects
- Identification & timely correction of defects in software development on continuous basis
- Not many organizations have in-house capability for executing Automation Testing projects as well as Performance & Load Testing projects.

Functional Testing

Some of our key Functional Testing Services are listed here:

Manual Testing: The most fundamental type of Manual Testing is Validation testing where the focus is on checking validations used on basic input and output fields. In any software application there are more than 60% validation defects, so early detection of validation defects saves time. We have designed Validation Checklist which covers all possible validations. For successful Integration Testing & System Testing, we design End-To-End Scenarios to ensure complete Test Coverage.

Web Application Testing: This includes testing of web applications and websites to identify defects / flaws in the application. For website and web application testing Usability Testing is more important and should be emphasized. So we have designed our Web Application Tests so that all the Functional as well as Usability defects can be detected earlier. We have designed our Web Checklist to reduce time.

Mobile Apps Testing: Mobile Apps testing requires different testing approach than that for conventional testing. Along with Functional Testing & Configuration Testing, for Mobile Apps we have designed the Tests to cover Mobile Centric Testing like UX- User experience, Connectivity, Installation, User Scenarios, Device setting, Mobile interruptions, SD card, SIM card. We have developed capabilities for Android, Windows and iOS Apps testing.

Migration Testing: Migrations can be risky and if not planned well fails to deliver on the expected business and technology objectives. Necessary Quality Assurance and Testing before going ahead to production is the key for a successful migration. We have built our capabilities for Technology Migration Testing (Java to .NET etc)

Service Lines

Functional Testing

- Manual Testing
- Web Application Testing
- Mobile Apps Testing
- Migration Testing
- Product Testing

Automation Testing

Performance Testing

PLM Testing

Test Advisory Services

- Testing As a Services
- Documentation
- Offshore Testing Center

Case Studies

Performance testing of Indian Blue Book – Web application for sell of used cars for Mahindra First Choice Wheels Ltd.

The main aim for this performance testing was to compare existing physical server with Amazon Web services (AWS) server as well as to check response time of the application on both servers.

Prova has designed and executed performance scripts in JMeter which involved lots of transactions from two major logins. The load was 20 million users per month. So the per hour load was calculated. For Load & Stress testing, Test environment which involved Distributed Systems was created. The test suit was executed on both servers. Monitoring of Server configuration, CPU utilization for server & Database, Memory utilization, Network usage was done. Reports were generated and analyzed by our expert team.

Automation Testing for Accounting SaaS based product from Japan

The product was developed for CA firms from Japan. It included complex formulas, Rules & Regulation of taxes for Japanese Government. It was combination of Web applications & Clients server application with some features for desktop application. The product was developed in Japanese language.

We have designed complex Automation approach in which we developed Data Driven Framework using JUnit in Selenium WebDriver, used RIA Test framework for FLEX automation and zkoss framework for desktop automation testing. APACHE POI was used to save test data & Flex locators. Eclipse was used to build the project. Scripting was done in JUnit. AutoIT was used to handle Windows controls and Maven was used as Build Automation tool. Jenkins was used for automatic execution & night builds of the suits.

Product Testing: The key factor of Product testing is to understand what the consumer of the product might do with it, and how the product will respond. We have come up with the solutions so that our testing ensures that the product operates as expected. Usually in product development, testing begins after the implementation of the product requirements. We design our Tests depending on the development methodology used. In Product Testing End-to-End Test scenarios and Test cases are very important as they concentrate on a requirement's outcomes. So we design Test cases by investigating each possible way a user may interact with a feature. This helps to identify gaps in requirements and changes that might be necessitated. Along with functional testing, globalization & localization testing are also important. We have developed different Test suits for it.

Automation Testing

One of our major services is Automation Testing. When it comes to necessity of regression testing frequently with a large no of integration, automation testing always helps. We have developed automation framework to capture complex functionality, multilevel integration, and involvement of large & complex database. We have designed Automation test suit for Web application, Client server application as well as integrations of Web application with Client server application & Desktop application. We have provided the Automation Testing services to many Product development companies.

Performance Testing

For any web application, its performance is a vital aspect for its business. Performance of an application is dependent on many software aspects like Quality of Application, Code Optimization, Database Optimization and hardware aspects like Server Configuration, CPU Utilization, Memory Utilization, Network usage, etc. So we have developed our expertise for all these aspects and we do scripting considering all these factors. In performance testing we just not write the script and execute it, we also do Report's Analysis considering the factors like Number of concurrent users for Load & Stress testing, CPU Utilization, Memory Utilization, Server side monitoring & Analysis and Database monitoring & Analysis. We provide Performance test services which are usually associated with web applications and multi-user systems. While execution of Performance test we do monitoring of Average Response Time, Throughputs, Min Deviations, etc.

We have done performance testing for 20 million users. Our key area is testing Performance of multiuser systems. We have developed different approach for it. And successfully executed it for more than 50 projects.

PLM testing – Application of one of the leading company in Apparel industry

Client required an efficient PLM systems that catapults its profitable growth, helps build great products, bring in the additional structure and ensure the SOPs are being followed; in a very user friendly & efficient way. The application was developed on Dassault Systems- Enovia V6 Platform. The scope of the implementation was to map customer requirements to the out of the box solutions and available configuration.

Prova provided testing approach that incorporated Consumer Goods & Retail (CGR), Program Central, Change management & Variant management for efficient integration testing. We developed Test plan including Use cases, Test cases and execution. Client wanted to train customers on the customized application so we created videos for better understanding of application.

Key Benefits to Our Clients

- Unbiased Software Testing & Quality Assurance
- Proactive identification of defects in applications leading to improved software quality and increased end customer satisfaction
- Benchmarking of Testing & QA practices against global best processes like ISO standards 29119 & 17025
- Continuous monitoring of QA processes to achieve timely and defect free software delivery
- Early detection of risks & possible defects to reduce re-work which eventually reduces cost

PLM Testing

Product Life cycle Management is the process of managing the entire lifecycle of a product from inception, through engineering design and manufacture, to service and disposal of manufactured products. PLM systems help organizations in coping with the increasing complexity and engineering challenges of developing new products for the global competitive markets. As these systems are very complex and highly integrated, thorough testing is critically important. In PLM testing we have developed team on Dassault Systems - Enovia Platform. We have developed expertise in Transportation & Mobility, Consumer Goods & Retail (CGR), Engineering Central, Designer Central, Program Central, Library Central, Change Management, Variant Management (FTR) as well as Life Sciences domain. To carry out PLM testing we carry out QA process from Test Planning to Delivery, Enovia Installation, and Writing & Execution of Test cases for Enovia Thin Client & Thick Client.

Test Advisory Testing

Some of the Test advisory services offered by us are:

Testing as a Service: To improve quality, Software organizations need to focus on improving all aspects of Quality - from processes and products to inception and delivery of product. Testing as a Service (TaaS) is an outsourcing model in which all the QA & Testing activities associated with organization's business activities are performed by our expert and skilled team. As a part of TaaS services, we provide a dedicated Testing teams to help & advice organizations to effectively manage testing strategy, provides testing assistance and quality review. Or sometimes we take care of whole area of testing. Our TaaS model is most suitable for specialized testing efforts like automated regression testing, performance testing, testing of major ERP software, and monitoring/testing of cloud-based applications.

Our team has worked with a varied range of clients with a diversity of different solutions and testing approaches. We also assess Developed Software as well as Development Team for better performance and results. To achieve this –We do assessment of Test Strategies, Test Policy and Processes of your organization. And help you to enhance them according to our established and time tested set of policies, strategies and processes.

Documentation: In software development lifecycle, Documentation is very important as it incorporates every bit & pieces of developing software from inceptions, requirements gathering, designing to Delivery. We provide wide range of services for documentation needed like Software Requirement Specification, Functional Requirement Specification, Design Document, Flow Chart Design Document, Help Manuals & User's Manuals.

Offshore Testing Center: Our Offshore Testing Center (OTC) services help customers to outsource software testing & Quality Assurance at lower cost and lower risk. In which we offer tailored, dedicated testing teams with required skill sets and expertise. The teams can acclimatize to your specific working processes, testing needs and technology choices to ensure alignment with business need. With our OTC services customers can maximize the advantages of offshore outsourcing while keeping control of the testing budgets, confidentiality, security, communications and daily performance.

We have also proved that Agile and Lean thinking can be successfully applied to software testing to improve internal/external collaboration, increase productivity, shorten the feedback loop, reduce waste and generate more business value to our customers. We offer Agile testing teams to bring these benefits to your project. We offer Rapid scaling up/down at a short notice, better control over testing plan/process and also the testing budget. We have Modern and secured workstation /network /communication infrastructure.