

Focused Software Product Testing and Quality Assurance

Functional Testing

Functional tests tend to answer the question of "can the user do this" or "does this particular feature work." Functional testing refers to the requirements documentation, although some of the development methodologies work from use cases or user stories.

Our approach:

- ✓ Requirements are analyzed, all of the issues and questions are addressed and resolved.
- ✓ Test scripts (or checklists, or test cases) are documented, requirements are traced.
- ✓ Tests are executed against a specific software version
- ✓ A test result report is generated and published (includes application status description and recommendations on application quality improvement).

Tools: MS Visual Studio Team System Test Edition, TestLink

Deliverables: Test scripts (or checklists, or test cases), requirements traceability matrix, test result report

Security Testing

Security testing verifies if your software offers reliable user and system security and protects end-users from intrusions and the theft or loss of private and sensitive data.

Our approach:

- ✓ Application architecture and business needs are analyzed, security testing checklist is prepared (with main threatening attacks to check and mandatory security requirements to comply with).
- ✓ An application is examined in compliance with the prepared checklist.
- ✓ Test result report is created with the described detected problems and recommendations on application quality improvement.

Tools: OWASP Web Scarab, Websecurityfy

Deliverables: Security testing checklist, test result report

Automated Functional Testing

Automated tests are commonly used for manual testing efforts reduction, increasing the speed of complex solutions testing and status assessment, testing applications or parts without user interface.

Our approach:

- ✓ Requirements are analyzed, all of the issues and questions are addressed and resolved.
- ✓ Test scripts are developed and debugged.
- ✓ Test can be incorporated into any continuous integration environment for automated execution.
- ✓ Tests are executed against a specific software version.
- ✓ Test result report is generated and published (includes application status description and recommendations on application quality improvement).

Tools: Selenium, SilkTest, QuickTestPro, WATIR

Deliverables: Test scripts, test scripts documentation, requirements traceability matrix, test result report

Load Testing

Load testing generally refers to the practice of modeling the expected usage of a software program by simulating multiple users accessing the program concurrently.

Our approach:

- ✓ Software requirements are analyzed, application load model is prepared and approved with a customer.
- ✓ Test scripts are developed and debugged.
- ✓ Tests are executed.
- ✓ In case of low application performance, the achieved results are analyzed and the reason is detected (Application/Database/Network/Client side processing/Load balancer/Third-party applications).
- ✓ Test result report is prepared, containing the achieved results description and application performance improvement recommendations.

Tools: JMeter, LoadRunner

Deliverables: Test result report (load model is usually included in report), test scripts, test scripts documentation

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Compatibility Testing

Compatibility testing—a part of software non-functional tests—is testing conducted on the application to evaluate the application's compatibility with the computing environment (different hardware; different bandwidth handling; operating systems; database; other system software: Web server, networking/ messaging tool, etc.; browser).

Our approach:

- ✓ *Compatibility matrix is prepared (environment to support requirements is specified, documented, and approved with a vendor).*
- ✓ *Test scripts are created (functional test scripts can be used).*
- ✓ *Tests are executed against compatibility matrix according to the priorities and schedule defined.*
- ✓ *Test result report is prepared (includes application status description and recommendations on application quality improvement).*

Deliverables: Compatibility matrix, test scripts, test result report

Usability and User Interface Testing

Usability testing measures the ease of use of a specific application. Commonly, an application is evaluated by a group of potential users. User Interface testing usually refers to application testing in conformance with standard human interface guidelines, accessibility requirements, or corporate style guides, etc.

Our approach:

- ✓ *Based on incoming information: business, usability, user interface requirements, checklist(s) is prepared.*
- ✓ *In case of independent usability expertise, the testing team is created from the pool of available employees.*
- ✓ *An application is examined according to the prepared documents.*
- ✓ *Feedback and test result are included in the test result report along with the recommendations on application usability improvement.*

Deliverables: Usability / User Interface checklist, test result report

Localization Testing

Localization testing focuses on verifying to what extent a globalized application is adapted to a particular culture/locale.

Our approach:

- ✓ *Language/culture requirements are documented in the form of instructions.*
- ✓ *Functional test scripts are created.*
- ✓ *An application is examined according to functional test scripts taking into account the instructions for every supported language/culture.*
- ✓ *Test result report is prepared (includes application status description and recommendations on application quality improvement).*

Deliverables: Localization testing instructions, test scripts, test result report

Sustaining Testing Services

Test Planning

Creation of appropriate testing strategy is a great challenge for specialists who neither have dealt with software testing before, nor have insufficient experience in this area. Depending on your business objectives and size/complexity of the project, we can define testing activities required for you, quality criteria to be met, and resources to be utilized, optimal schedule, required deliverables, etc. The earlier testing activities are started on the project, the more potential risks are prevented. It is critical to apply the corrective actions at the moment of minimal effort and cost required for error or issue resolution.

However, testing strategy is a subject for review and improvement during the whole project period. In Altoros, we have a sequence of periodical activities that focus on optimizing the testing process.

Deliverables: Test plan

Test Management

Our test management services are aimed at helping project stakeholders, sponsors, and project managers develop a testing process, build a testing team, and establish effective collaboration between the testing team and other project members. These factors are important for project success.

Our typical project management services can be defined as:

- ✓ *testing process development from scratch*
- ✓ *existing testing process audit, control and optimization*
- ✓ *test planning*
- ✓ *risks identification and mitigation*
- ✓ *results reporting and forecasting likely project progress that helps you make effective decisions*

Documentation Services

Altoros's Documentation Services are aimed at supporting software development process from A to Z. We can provide comprehensive requirements, specifications, user guides, administrative, promotional and other documents required for your software product. We have vast experience in creating project documentation and support adapted to different target audience, written in different languages and formats.

Format:

- ✓ *HTML/CHM*
- ✓ *PDF*
- ✓ *MS office / OpenOffice*
- ✓ *Flash Help*
- ✓ *Wiki*

Languages:

- ✓ *English*
- ✓ *Russian*

Documentation (Help) is one of the most important things that influence user impression of the product. That is why it is extremely important to supply end-users with well-structured clear documents and minimize negative feedback and support requests.

Deliverables: Program help systems, Web site offline help, user/ installation guides, multimedia tutorials, functional specifications, case studies, Web content, test plan, test cases, test scenarios, checklists for different testing types, etc.

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