

## Performance Testing of an Automated Document Processing and Delivery Solution

### Customer

The customer is one of the leading companies that implement solutions for document processing and delivery.

<b>Company</b>	<i>Software Developer</i>
<b>Country</b>	<i>United Kingdom</i>
<b>Business Domain</b>	<i>Document Management Software</i>
<b>Services Used</b>	<i>Performance Testing</i>
<b>Cooperation Model</b>	<i>QA Outsourcing for a Development Company</i>
<b>Duration</b>	<i>1 month</i>
<b>Efforts</b>	<i>0.5 man-month</i>

### Project

The customer's cross-platform solution for document processing and delivery allows corporate customers to send faxes and SMS-messages centrally from users' workstations through a specially allotted server. It can be integrated with other document processing and managing solutions. Administrators can minimize the cost of faxes and SMS-messages by setting up permissions for the dispatch and receipt of messages.

### Challenge

The A1QA technical test team faced the challenge of testing the performance of the client-server functionality of the application. The scope of testing included the following objectives:

- Test the stability of the application over a prolonged period of time, determining the workload limit that causes application failure.
- Determine the fax transmission speed.
- Analyze the dependency between the time for fax processing and the size of a file.
- Uncover memory leaks, if any.

### Solution

The QA team needed to conduct a comprehensive set of client-based progressive load tests over an extended period of time. For this purpose, the automation experts generated a script using TestComplete, which automated the client-server interaction.

The client and server applications were installed on different servers. The test team monitored the performance of each server (CPU, RAM, and hard disk usage), calculating overall statistics and statistics for each process completed by the test product.

Two test iterations were performed on two application versions. Each iteration included three series of tests with different configurations and parameters.

### Technologies Used

**Testing tools:** TestComplete

**Programming language:** JavaScript

**Other tools:** Windows OS built-in performance monitoring tools

### Success

Two series of tests were carried out in accordance with the plan agreed upon by the customer and the functional test team. The customer received a detailed report on the required characteristics of the application, including:

- A set of graphs and diagrams.
- A thorough analysis of the acquired values.

The data that was obtained during the testing has made it possible to define the application's workload limit and clarify the presence of memory leaks. The testing results concerning the time for file processing allowed the team to estimate the number of users that can work in the system simultaneously.