QA AUTOMATION - PRODUCTION SUPPORT

After undertaking a project to customize and build optimized IT business systems for increased scaling operations, businesses often need the help of external experts to automate workflow and critical operations.

This project was an extension of a Production Support project for a client. During the 8 year project, the client's market share went from 5% at the start to over 40% today. They have two of the three largest pharmaceutical manufacturers as their customers, and two of the four largest distributors as their clients. They're the big dog in this small industry.

While their test harness was unique, as was the QA automation system that kept them able to do continuous deployment, it's important to note that when we took over the application, they had only 5% of the market share and the application was crashing at least twice a month. So, the primary problem we tackled for them was making the application stable. In a matter of three months, we were able to give them a 99.5% availability of the SLA.

We performed load testing for a scenario where the number of orders processed through their system doubled in a day or a week and found that the system would crash. This became our second focus. As a part of our production support, we built a road map, and in every monthly release, we added some system improvements and positioned the application to take on the growth that they have been experiencing. We are processing close to one hundred thousand orders a day right now.

However, we do not use an Apache server. We are hosting PHP code on an IIS and for good reason. The DEA has to certify this system every other year. If the DEA does not certify it, the client cannot have any business. The DEA said that they were not going to certify anything that is open source. It has to be an IIS, and it has to be SQL Server.

There's also a reason why we didn't recommend a rewrite or a migration to Microsoft.Net from PHP. We've actually rewritten a lot of backend jobs on C#. There is still some PHP code left. And, the client is very risk averse for the right reasons, so they essentially want to modernize the train as the train is moving. As you can guess, it's excruciatingly slow. But that emphasizes the importance of the

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way we organized our regression testing. If we can do continuous development and continuous deployment, that's a competitive advantage from a QA automation perspective, and it yields higher quality code, theoretically.

As the client started to support bigger names in the pharmaceutical industry, the need to make sure that our monthly releases were working correctly and not breaking critical functions. We're talking about one hundred thousand orders a day, so we couldn't afford an hour of downtime. That was the reason why building a regression automation suite became incredibly important. Our client did want to make monthly releases. Customers are incredibly happy about that. They will recommend some things to change and we're able to commit to the plan so that those changes will be a few months away - but not quarters away, and certainly not years away.

In the end we actually had somewhere between 700 and 800 test scenarios, then went through an exercise of rationalizing and grouping those 700+ test scenarios into 350 organized scenarios. From there we built the test automation suite. The team used to take weeks at a time to undertake the regression testing scenario, but we were actually able to get the results in two to four hours in its current state.

Automation is the key to executing critical workflows and processes in a more timely fashion. Optimizing and automating complex, advanced business IT systems can save a company thousands of dollars, and can better the bottom line. Using the services of experienced, professional IT experts can help a business save even more than this in time, money, and resources.