

Execution of Automated Test Suite Case Study

Goals:

The OASIS Lab was engaged to review, update, and execute an existing suite of tests created in Visual Studio for Team Systems 2008.

A secondary goal was to assess the current state of their automated tests and make recommendations for future improvements in tools, scripts, and structure.

Key issues identified by the Client were:

- Automated scripts were used to both verify key functionality and to generate specific test data for further testing.
- Automated scripts had been executed frequently but not maintained in the two or more years they'd been in place.
- Execution of the existing tests had not been successful over the previous year, yielding a negative ROI.
- Automation Assessment – the maturity of the scripts, their suitability for the intended purpose (regression testing), tool recommendations, etc.

Solution/Approach:

The OASIS team reviewed the existing tests and uncovered the following issues:

- Automated test scripts contained multiple steps with each step completing all fields on a page.
- Queries used to feed data to the scripts were incorrect
- Automated scripts only had verification built into the final step and the code used to verify

the success/failure of the script searched for a word on the screen. This lack of functional verification translated into steps that failed, but scripts that passed.

- Step failures were reported as 'Passed' due to the lack of verification in each step

Results:

Execution Effort:

- All queries for data were fixed and comments were added that directed any future testers what values needed to be updated before the query was executed.
- Each script was updated to address the step "failures".
- Every script executed successfully in both test environments; data was generated for additional testing, saving the client weeks of work to generate the same data manually.

Automation Assessment:

- All scripts needed to be re-written to include verification that the functionality being tested was working.
- Delivered comparison between several more customary automation tools.
- VSTS 2008 doesn't include the features needed for real functional regression testing. Recommendation to either upgrade to 2010 or switch to a more standard automation tool.