Tracking Time to Complete

Article #3 in the 'QaTraq Professional Series'

QaTraq Professional Series

The 'QaTraq Professional Series' is a series of articles looking at how you can tackle some of the more critical aspects of your test process with QaTraq Professional. In this third article we examine how you can track actual and estimated time to complete test runs.

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Introduction

It is not unheard of, just before a product release, for a project manager to approach the test team and explain that we really must add this piece of functionality even though it means a last minute change to the code. Much to the test teams frustration this means another cycle of testing on a product that was stable and almost ready for release. Once the project manager has let this request sink in, the next question is almost always "How long will it take you to regression test before we can release?" This is never an easy question to answer!

With QaTraq Professional however we can quickly identify a number of test scripts that we might want to rerun and then report on the estimated time to run these scripts. As well examining how long it took to run these scripts on previous test cycles, we can obtain a clear picture about the impact that such a last minute change might have on the teams ability to deliver on any agreement reached.

Estimating the time to run a test script is never going to be an exact science. There are too many variables involved to enable you to pin point exact values. For example what happens when you hit that serious bug half way through the test script? How does such a bug impact the completion of the rest of the tests? How long are the tester and developer going to spend together pin pointing the exact scenario to recreate the bug? These sorts of issues will make estimating time to complete testing an in-exact science. However, having at least some idea of time to complete can provide a team with an invaluable gauge on the impact of undertaking specific areas of work. Not least it gives you the evidence you need to argue your case for or against undertaking additional test cycles.

How QaTraq Pro Tracks Actual and Estimated Time

Time tracking within QaTraq Professional is directly related to Test Scripts, Test Cases and Test Results (i.e. the aspects which make up a test run). So let's consider some definitions relating to these aspects of QaTraq Professional first.

Scripts: A Test Script is a document that describes in detail how a group of related tests should be conducted. A Test Script contains information outlining the tests, defines the pre-requisites and contains a number of test cases.

Cases: A test case is a specific test intended to verify one particular aspect of a Product (component or requirement). One or more test cases can be included in a test script, where every test case included in a test script is then assigned a specific test result record.

Results: Every test script has a number of associated test results; one test result record for each test case included in the test script.

QaTraq tracks both estimated and actual time to complete individual test case which are contained within a test script. It also tracks both estimated and actual at the test script level. So for example if we have one test script we can track the following four values:

	Estimated Time	Actual time
Test Script Level	**Overall Estimated Time**	**Overall Actual Time**
Test Case Level	**Calculated Estimated Time**	**Calculated Actual Time**

Overall Estimated Time is the estimated length of time you expect the test script to take to run, including all of the test cases contained within the test script.

Overall Actual Time is the actual length of time it takes to run the test script and enter all the test results.

Calculated Estimated Time is the estimated time that QaTraq Professional calculates based on the individual estimated times the user assigns to each of the test cases that are included in the test script.

Calculated Actual Time is the actual time QaTraq Professional calculates based on the times entered by the user for each test result record the user enters when running the test script

So taking the Calculated Actual time as an example; when a user enters individual test results against each test case the user can also enter the time taken to complete each test case/result. When all test cases have been run and all test results entered, QaTraq Professional will display the total calculated time it took to run all test cases contained in the test script.

Entering Estimated and Actual Time Data

Estimated time information is entered as you create and develop your test scripts. Actual time information is entered as you enter your test results. So from the two diagrams below, taken from a screen where we are modifying a test script, you will see:

1. When modifying a test script we can enter the "Overall Estimated Time" we expect it will take us to run through this test script.

2. That QaTraq has determined the "Calculated Estimated Time" based on the Est. Time values assigned to each individual test case within the test script.

3. Within each test case, contained in the test script, we can specify an Estimated Time value that we expect it will take to complete this test case.

When entering results against a test script you will find similar time value entry fields, again at both the test script level and test case level. However, when entering the results the time values entered will be the "actual" time values based on the time taken to complete the tests.

So with Estimated time values entered when we create/modify our test scripts and Actual time values entered when we enter our test results, QaTraq Professional can then provide us with a number of reports giving us a clear picture of the amount of time and effort expended within our test project.

Reporting on Estimated and Actual Time

To help provide visibility of the estimated and actual time to complete your test projects QaTraq Pro provides a number of key reports. Four of these reports are outlined below.
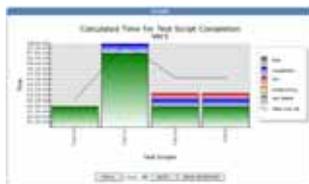
The **Test Script Calculated Time** report allows you to compare the estimated and actual time it took to run the test cases within a test script. Each test case within a test script has both an estimated time to complete and an actual time to complete. The sum of the time taken for all the test cases within a script is displayed so that you can compare the estimated against the actual.

The **Test Script Overall Time** report allows you to compare the estimated and actual time taken to run a test script (where the report takes the time values from the test scripts "overall" time recorded value). The bar graphs allow you to compare, side by side, the estimated overall times for 1 or more test scripts.
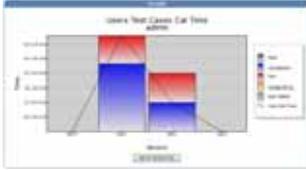
The ***Users Test Cases Calculated Time*** report allows you to see both the estimated and actual time that a particular user will spend, or has actually spent, running test cases. Once the tests have been run you can also see how long a particular user spent running a set of tests and compare that against the estimated time.

The ***Scripts per Build Overall Time*** report shows the estimated and actual time taken to run test scripts, and displays the information on a grid combining the test script titles against the version/build of the software under test. This report is useful for helping test teams visualize how much effort is going into the different areas of testing and different versions/builds of the product under test.

Summary

Having detailed recorded estimated and actual completion time information is key to running successful test projects. Using a selection of reports within QaTraq Professional makes it easy to quickly select a number of different test scripts and get a figure which enables us to plan the effort to complete an area of testing. Thus providing key information needed to keep people like project managers and test managers clearly in control of a test project.

About QaTraq Professional

The capabilities discussed in this article are part of the QaTraq Professional application. To install and run QaTraq Professional you will need to:

1. Install and Set-up QaTraq Professional
   http://www.testmanagement.com/download.html

2. Purchase and Install a QaTraq Professional Licence
   http://www.testmanagement.com/proupgrade.php

To find out more about QaTraq Professional please visit:

QaTraq Professional: http://www.testmanagement.com/proupgrade.html

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