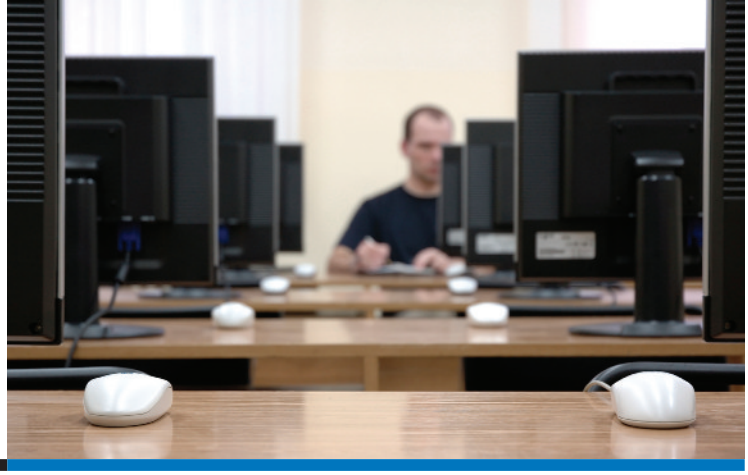

Knowledge *Expertise* *Technology*

nFocus Automation Approach

Balancing cost, quality and schedule

There is incessant pressure on IT projects to reduce cost and time but at the same time supply reliable systems. Even the best laid test plans can be compromised by these pressures, especially if the problems arise late in the project life-cycle.

Change is often the main reason for these pressures; for example, changes due to scope creep, technical difficulties and/or incorrect estimates.

Consequences

The consequence of compromising the agreed test process is a less than predictable outcome of the project. This is due in part to the heroic, but often misguided, attempts to reduce or even abandon testing. The end result of these actions is a reduced level of reliability of the system under test.

The challenges of today's development and test processes

Most commercial systems can be described in the following layers: -

- User Interface
- Application and associated interfaces
- Transport
- Database
- Batch

Each layer can be broken down into discrete testable components. Often each component is developed and unit tested in isolation and then shelved until sufficient components are available to execute a meaningful system test.

These shelved components, when integrated at a later date, often do not work together due to the many changes that have occurred as the project progresses. Therefore, there is no discernable reliability improvement until System or Acceptance Test stage and even then the amount of change to resolve problems can prevent reliability improvement.

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nFocus Automation Approach continued

A proposed solution

What if we could continually test and retest the individual components as they are completed?

What if we could continually test and retest integrated parts of the system?

The result would be that any problem, whether a defect in a new function or a regression defect in an existing delivered function would be found immediately and quickly resolved. If these defects are identified and resolved then contiued reliability improvement would be achieved.

To continually test each function or component manually is not feasible. However, if the tests for each layer can be easily automated, then the automation approach becomes possible and cost effective.

How can the nFocus Automation Approach help maintain and improve reliability?

nFocus use a proprietary tool and test cases are defined in spreadsheets which are converted into tests for user interface test tools and bespoke test harnesses for web services and database stored procedures.

The spreadsheet interface allows the test analyst to write repeatable, self checking component and integration tests but without the need for detailed technical knowledge of the test tools and harnesses.

The underlying iterative process debugs each component as it is completed and then allocates the successful tests to a regression test suite, of which some or all are executed on each delivery of the system.

Any approved changes in functionality can be retested by reworking the spreadsheets. The last build before system test can then be shown as defect-free and reliable (within the constraints of the defined tests).

How can nFocus help you?

nFocus has proven this approach on a number of medium to large size projects. We have the skills, experience and tools to implement this approach:

- Consultants to define and agree the development and test process
- Test managers to manage the end to end testing process
- Test automation specialists to implement and kick off the automation process
- Test analysts to write and execute the automated tests
- Tool and specialist partners that compliment our experience, skills and technologies

Our people are supported by our own Test Process Framework and a wealth of experience that ensures implementation of automation is as risk free as possible.

Each project is different, so we advise that a proof of concept is authorised in order to establish that your project can get the expected gains from automation. Additionally, we will identify which tools can achieve the optimum performance and return on investment whilst ensuring they are compatible with your existing processes and technologies.

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