

System Testing – Financial Application

Industry/Vertical: Finance Industry

Focus Area: Corporate Actions

A corporate actions are events initiated by a public company that affects the securities (equity or debt) issued by the company. Corporate Actions may have direct or indirect impact on the shareholders. It becomes important for investment and financial management companies to track and guide their customers on upcoming corporate events.

Engagement Model: Onsite Testing

Solution Area: Functional, Regression, Database Testing

Solution Synopsis:

Customer implementation of Third Party Corporate Action Product in different environment which again involved lots of customization needed to be tested

Also, in-house application which will be integrated with this product need to be tested and modified as per new feature in the product

Planned Phased approach was taken which involved understanding of Business Workflows, Feature change analysis, detailed TestPlan and TestCase Designing, Test Execution and Bug Reporting. Metrics were collected at each stage so effort can be well estimated and current state of the application can judged.

Lots of critical bugs in the in-house third party system exposed.

Good Quality and timely delivery resulted Happy Customer

End Customer is global provider of banking, financial, advisory, investment and funds management services.

Customer Background:

Its main business focus is making returns by providing a diversified range of services to clients and acts on behalf of institutional, corporate and retail clients and counterparties around the world

Customer was already using Third party Corporate Actions Product. The product was highly configurable and lots of customization was done in the product to suite End Customer business needs. Also this product was integrated with number of external in-house developed applications

Business Need: A new version of this product was being released which has lots of new features and bug fixes to the previous versions. Changes were also made by core dev team to in-house application.

This being a very critical application Business need was to do Regression testing of previous features and bug-fixes and verify the functionality of new features making sure business users are not impacted. Business could afford 0% downtime and problems in the application.

Six Phased approach was applied

Phase -1 – Business Workflow understanding

Solution Implementation: Made sure that team understands all the business workflows on how application is being used by business users. It always involved understanding key areas for business and getting to know dependencies on external system

Phase-2 – Feature Change Analysis

Involved understanding the changes in the current release. Also key note was taken on existing production issue and old bugs so that critical areas can be thoroughly re-tested

Phase-3 – Test Planning and Design Phase

Test-Plan and Test-Cases were designed taking in consideration the scope of testing, timelines, dependencies, risks, hardware and software requirements and resource requirements. Reviews of TestPlan by all stakeholders and peers reviews of test-case done so that any discrepancy can be caught earlier on.

Phase-4 – SIT Test Execution and Bug Reporting Phase

Test Execution was divided into multiple Testcycles. Bug were reported with as much as detailed information and isolation so that it is easier and quicker for developer to fix the bugs

Phase-5 – Metrics Gathering and UAT Phase

Metrics were gathered at each stage to make sure project status can be tracked. After moving the code from Test Environment to UAT environment for business users to test, complete support was given to business users in order to execute their business scenarios

Phase 6 – Implementation and Maintenance Phase

Once implemented in production, team was available to support maintenance and enhancement request in the project

Benefits of the Solution:

1. Process and Planned Approach made sure all key stakeholders were available at right time
2. Even though system was integrated with lots of external applications, business workflow knowledge gain earlier made the work lot easier
3. Proper documents of business scenarios and test-case will be useful for future integrations and releases
4. Having Proper Test-Plan and Test-Case in place made sure system is being thoroughly tested
5. Gathering Metrics throughout the test execution cycle gave managers enough visibility on current state of quality of product and pending Testing effort
6. Setting up Benchmark of product with real-time data while doing performance testing made sure users have fast system at work on.
7. Critical bugs which were already existing in the customer production environment were exposed which could have led to serious business losses
8. Finding Critical bugs in core third party product which were fixed with further patches was a feather in the cap

Key Challenges:

1. Complicated System Environment Architecture and dependency on External in-house applications made Test-Environment setup a critical process.
2. Since both in-house integrations and third party product need to be tested it involved a good communication process between all stakeholders
3. Since servers were on Unix, it meant tester had good knowledge on Unix commands to isolate issues
4. Database Testing on Sybase involved good expertise on SQL query and using Sybase SQL analyzer tools like DBArtisan

Services:

1. Functional Testing
2. Regression Testing
3. Performance Testing
4. Acceptance Testing
5. Installation Testing
6. Database Testing

Customer Quote:

“Your well Planned and systematic Testing Effort resulted in good quality delivery. Business users are really excited.”



Hardware Platforms used in this solution: OS : Unix
Application Servers and Database Server installed on Unix boxes

Software Platforms used in this solution: Development Technology: PowerBuilder, Java
Database: Sybase
Database Query Tool : DB-Artisan