W-ETAF: WIPRO ENDUR TEST AUTOMATION FRAMEWORK

CTRM – A Changing Landscape

Commodity trading continues to be driven by significant changes happening in the business landscape due to multiple exogenous parameters like assurance of supply, constantly changing regulatory and compliance requirements, need for improved performance and profitability while addressing environmental concerns.

CTRM IT landscape is evolving to manage the increased volatility in the global commodity markets and interlinked distribution chains. Current state of CTRM technology solutions largely emphasize on supporting trading operations, portfolio management, asset optimization and risk modeling activities, while subtly addressing the issues of platform compatibility, quality assurance and workflow management. This provides opportunities for CTRM market players to explore niche areas and embed advanced features like strategic planning, mathematical modeling, credit exposure management and multi-segment trading into their value proposition.

In order to address the need for enhanced system solutions, CTRM product vendors are releasing frequent updates and releasing frequent update patches and software versions with enhancements. Consequently, energy wholesale & commodity trading companies are frequently required to modify their IT systems and architectures to cope with these changes.

Frequent System Changes – More Testing to Maintain System Integrity

Frequent system changes entail multiple rounds of testing. Changes in system functionality, patch installation and add-on implementation systems result in multiple rounds of testing and test management, thereby increasing the efforts and costs of making a change. A significant part of the testing effort comprises of regression testing in an endeavor to maintain the existing functionality. Considerable business involvement is also required to maintain system integrity. All these factors contribute to increased cost of change and longer lead times.

Automated software testing is a proven approach to increase the effectiveness, efficiency and coverage of testing. An industry standard test automation solution needs to be closely aligned with the business processes and core functionalities for which it has been envisaged. Hence, the test solution needs to be modular and easy to enhance. Implementation and maintenance of an automated test solution requires careful planning and co-ordination, it also needs a separate team and associated cost.

W-ETAF: Wipro Endur Test Automation Framework

In order to considerably reduce the time and effort for the implementation and maintenance of an automated test solution, Wipro has devised an Endur Test Automation Framework which can reduce the TCO of test automation by as much as 45% during Upgrade, Testing and Support and E2E lifecycle management.

Leveraging our in-depth CTRM domain knowledge and extensive testing experience, Wipro has formulated the innovative and comprehensive solution: W-ETAF – Wipro Endur Test Automation Framework. It enables the rapid deployment of OpenLink Endur, streamlines testing workflow and optimizes the testing cycle of the customer.

W-ETAF is a hybrid framework combining modular and data-driven models. Reusability, modularity and customization are at the crux of the offering, driving partial convertibility and extensibility in various business flows, where the logic, actions to be performed and input data are repeated. A brief outline of model has been summarized below along with its objectives, architecture and core features.
W-ETAF Highlights

Built on HP QTP test advantage plug-ins, this ensures compatibility with Endur GUI upgrades and version releases in the future.

Includes Endur regression test pack across commodity trade lifecycle, EOD processes, trade and credit events and settlement/accounting operations.

Contains test cases structured in a matrix format, which allows selecting a subset of test cases according to functional requirements. Delivers the process document for running full or partial regression tests based on project requirements.

Follows a simple layered architecture for higher script execution performance. This layered approach enables faster maintainability for any changes to the test case, which will be localized to a particular module in the framework.

The driver script drives all the functions defined, based on modules (for example deal capture, confirmation, settlement, etc.).

Provides easy handling of change requests and traceability for debugging.

Test execution results, customized reporting and status updates in HTML.

The help file contains the structure and syntax of core and generic functions to ensure reusability and agile development.
W-ETAF Results In

Rapid Deployment of Enhancements
- Reduced script creation time by optimized framework
- Reusable components to accelerate script development
- Optimizing tools usage and integration with freeware tools

Increase Test Coverage
- Increased coverage by data-driven testing
- Increasing test cases without increasing the execution time
- Integration with the requirement management tools

Reduced Test Execution Cycle
- Automated script execution
- Results and Report integration with Test Management tools

Case Highlights

Challenges
- The client, one of the largest Europe-based energy companies, wanted to set up a Unified and Integrated Testing Support Platform and use Openlink Endur System for CTRM functions
- Cluttering and complexity of system required large manual efforts to complete the testing of new upgrades and releases by product vendor and restructuring in business process
- Burgeoning overhead cost of IT support, risk management and testing activities
- Client was looking for streamlining testing workflow and speed up test lifecycle

Benefits Achieved
- Complete Upgrade and Testing in a timely, cost-efficient and stable manner to minimize business disruptions
- Helped maximize ROI – 50% to 60% reduction in effort/cost across test lifecycle
- Seamless and quick execution of EOD processes
- Customized Reporting and Agile Deployment
- Improved Quality Assurance, Workflow Optimization and Effective Performance Management
- Leveraged best practices, ensured low risk and timely implementation
- Customized Reporting and KPIs Traceability
OpenLink’s successful collaboration with Wipro in developing a UFT automation framework will enable our mutual clients to improve quality, reduce costs and enable a more rapid response to both new business requirements and technical upgrades.

Wipro has methodically analyzed the breadth of Openlink’s Endur application and provided innovative and comprehensive scripting solutions within a short timeframe. Wipro has developed a portable and scalable UFT automation framework which will assist our clients during Endur upgrades and enhancements.

With Wipro’s extensive function library-based framework, automation testers can more easily create UFT scripts which take advantage of the power of reusable application script components in constructing diverse end-to-end business scenarios. With this approach, clients implementing Wipro’s UFT framework will potentially realize significant cost savings and faster deployments over time due to the ease of test script creation, as well as maintenance.

Roger Burkhardt
EVP, Chief Technology Officer
OpenLink

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