



Mindtree

Welcome to possible

Testing services for the capital market industry.

Overview

The financial services industry facilitates large volumes of high value transactions, making defect-free software absolutely critical. IT systems in the dynamic financial services industry are expected to be compliant in handling regulatory changes as well as spikes in demand. Thorough testing of applications is essential to reduce the risk of failure and minimize financial losses resulting from any such failure. Hence, testing services in risk management and service plans are essential before the applications are market ready.

Our solution

Mindtree has worked with leading banks, asset and wealth management firms and superannuation funds for more than 10 years. We provide a full spectrum of finance application testing services for banks and financial institutions to leverage up-and-coming market opportunities. Our cost-effective and value added testing services have helped many customers in the capital market industry to expand their businesses and improve service delivery. Mindtree offers custom-made and comprehensive finance application testing services, consulting, support and maintenance for all types of customer-focused capital market business applications.

Business challenges

- Dynamically changing requirements lead to a shorter window for testing
- Reducing the test cycle through automation to reduce the cost of operations
- Scattered application knowledge makes it difficult to design scientific ways of test estimation
- Multivendor environment and managing dependencies such as application functional knowledge and co-working
- Metrics and testing process effectiveness
- The increasing complexity of today's testing scenarios demand an integrated, open and flexible approach to support the management of the overall test process
- No off-the-shelf Integrated Test Management (ITM) product available from tool vendors
- Tools availability / identification system

Our expertise

Application / system	Coverage
Trading system	<ul style="list-style-type: none"> ▪ Trading concepts of cash market, futures and options and mutual funds ▪ Order matching algorithm ▪ High volume transaction recovery
Index system	<ul style="list-style-type: none"> ▪ Various index computation methodologies including volatility index ▪ Fault-tolerant mechanism with intelligence module
Member interface	<ul style="list-style-type: none"> ▪ Method of listing further issues ▪ Getting membership billing system
Risk management system	<ul style="list-style-type: none"> ▪ Margin and member disablement and enablement ▪ Monitoring illegal ways of trading through the surveillance system
Clearing and settlement	<ul style="list-style-type: none"> ▪ Interfaces provided for members to provide collateral and the reason for providing collateral ▪ Interfaces provided for members to provide trade modification and obligation approval and rejection
Pay-in / pay-out	<ul style="list-style-type: none"> ▪ Processing of partial account transfers ▪ Final pay-in statement generation at the end of a settlement cycle as defined by the clearing corporation ▪ EOD process and pay-in settlement ▪ Assignment process of the depository order for the pay-out statement ▪ Booking validations performed by the depository ▪ Handling cancellation requests and booking validation failures
Management performance system	<ul style="list-style-type: none"> ▪ Tracking and monitoring customer level Service Level Agreements (SLAs) ▪ Managing day-to-day operations based on the defined metrics ▪ Benchmarking internal best in class for individual functions and processes
Online portal-fund reporting	<ul style="list-style-type: none"> ▪ Fund reports – real-time accounting data giving access to detailed position, transaction and tax reports ▪ Investor reports – investor statements (NAV and risk reporting) ▪ Risk reports – independent and comprehensive risk reporting solutions
Regulatory compliance reporting	<ul style="list-style-type: none"> ▪ Automated SEC regulatory compliance reporting system to assure compliance with regulatory requirement

Order management system	<ul style="list-style-type: none"> ▪ Orders in different market segments ▪ Output message from thinkFolio: FIXML ▪ Message queue: IBM WebSphere MQ ▪ Portfolio reconciliation and portfolio mandates
Enterprise Data Management (EDM) system	<ul style="list-style-type: none"> ▪ Data governance, risk management and compliance frameworks ▪ Performance tuning of the trade flow ▪ Testing of the Cadis components ▪ Testing of Cadis services: event watcher and process launcher

Testing services for COTS products

viz. thinkFolio, Cadis and Murex

- Build product feature and functionality level test packs around COTS products
- Provide overall test strategy and end-to-end test coverage to increase quality and reduce cycle time
- Develop a completely automated regression suite – reduce regression efforts and cycle time
- Carry out performance testing for key applications and improve user experience

Success story

Customer profile


India's largest stock exchange in terms of daily turnover and number of trades, for both equities and derivative trading. Ranked among the top five stock exchanges in the world in terms of equity trading volumes.

Business challenges

- Changing requirements while staying within regulatory compliance
- Significant dissatisfaction amongst user / broker community with respect to the quality of new products and the re-engineering of existing ones
- Implementing and integrating new systems smoothly
- Lack of technical expertise to test recovery and fault tolerance mechanism, ensuring availability and scalability of the system


Key differentiators

- Mobile test lab on hire
- Expertise in real-time order matching algorithm
- Expertise in FIX protocol by using VeriFIX – automating, simulating FIX counter parties for rapid deployment
- Independent testing – recovery, failover, contingency, interface, UI and compatibility with complete ownership and decreasing TCO
- Repository of reusable components to reduce finance application testing costs
- Improved operational efficiency in clearing and settlement processes
- Seamless integration with the trading system, the depository system and the clearing bank



Our solution

- Identification of hidden defects at the earlier stage of development through code walkthrough
- Development of tools and utilities for test data generation and verification of results
- Provided expertise in recovery, failover, contingency and batch processing testing along with messaging protocol like FIX on multi-platform environment
- Benchmarking of clearing and web applications to meet the SLAs using Mindtree's performance framework
- Reducing the testing life cycle and cost of operations through automation



Business benefits

- Timely launch of new products / features
- Mindtree's SIT testing ensured significant reduction in post-production defects
- Ensured 24x7 availability of trading system without disrupting end user satisfaction
- Improved performance through fine-tuning the application and eliminating the bottlenecks
- Reduced test efforts through integrated test automation using MindTest QTAF

About Mindtree

Mindtree is a global information technology solutions company with revenues of over USD 400 million. Our team of 11,000 experts engineer meaningful technology solutions to help businesses and societies flourish. We enable our customers achieve competitive advantage through flexible and global delivery models, agile methodologies and expert frameworks.