

MANHATTAN IMPLEMENTATION - REIMAGINED

WHITEPAPER

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Introduction

The word “Implement” carries a lot of weight especially in the software industry. It is the part of the project where all the efforts of planning, designing and testing culminates and the goal of the project is realized and put into effect.

In the supply chain world, Manhattan implementation is no different. Perhaps the weight is getting even heavier with the markets demanding challenging SLAs. And the way ecommerce is growing, companies are forced to adapt to market trends quickly. To keep up with these demands, project implementation timelines have shrunk significantly.

Common Implementation Challenges

- Data migration challenges
- Changing SOPs during the implementation phase leads to changes in the
- Configuration throughout the lifecycle of implementation
- Multiple SDNs during the implementation phase
- Maintaining and propagating the golden configuration across the test staging and pre production environment
- Complex data setup and validation steps
- Lack of domain knowledge

- Integration with wide variety of systems depending on degree of automation
- Lack of planning to address volume and performance issues

Accelerating Implementations

Let's take a look at factors that we call “Accelerators”, that help drive implementations faster.

Vast Domain Expertise And Deep Implementation Expertise

With strong and in depth understanding of Manhattan WMS, our offshore and onsite associates form the core strength of Keystone Logic. Being involved in many complete end to end Manhattan Implementation cycles for Top 100 Retailers, we are ready to execute implementations of any scale and complexity

SIERRA In Automation

During the course of implementation and/or during production support, custom modifications and fixes are delivered on a regular basis. Solid regression testing is the key to determine if the software updates being applied are impacting other functionalities or not.

Considering the manual testing effort and cost required to regression test the system each and every time a fix is delivered, automation is inevitable. While there are several automation tools available, the effort in building an

automation framework that works best for an enterprise software such as Manhattan WMS that involves Web User Interface, RF Emulator, Database interactions and Warehouse Control System (WCS) Interfaces, is enormous.

With a robust automation framework that is tailor-made for testing Manhattan WMS, Keystone's in-house team developed an automation testing tool SIERRA. Let's look at some of SIERRA's features:

- Ready to use Automation Framework that supports Web, RF, Database and WCS interfaces.
- Empowers a business user or manual test engineer to write automated test scripts
- Includes test data creation framework
- Minimal training and associated costs
- Cross platform compatibility and portability

Client Speak:

Senior Manager IT on Manhattan Implementation for leading shoe retailer:

"Today we had a much awaited celebration for the - Manhattan Project, after the system executed successfully a couple of its peak periods operationally. Thanking you all for your dedication and passion in this project, thought would let you all know about it. Thank you again. Kudos to you all, a pat on your back for sure."

Uma Bhemisetty on Manhattan DOM implementation for Men's Warehouse:

"I want to recognize your team's above and beyond contributions in this project success. Their thorough understanding of DOM and our business processes in such a short period is amazing. They are very thorough in their work and it added to low number of issues we saw past go live.

Thank you very much!!"

SIERRA In Performance Testing

One of the yardsticks used to determine the efficiency of any Warehouse Management System is how well it can fulfill orders during peak surges.

For a major children's apparel retailer, the volume of orders coming in during the peak season ranges from 30,000 - 40,000 compared to 7000 - 8000 orders during off season, 4 to 5 times higher.

No matter how well the system is functionally tested, testing the system's performance at its maximum peak volume cannot be avoided. Because, if the system fails to process at any point, it causes unhappy customers, a drop in sales and increase in labor costs.

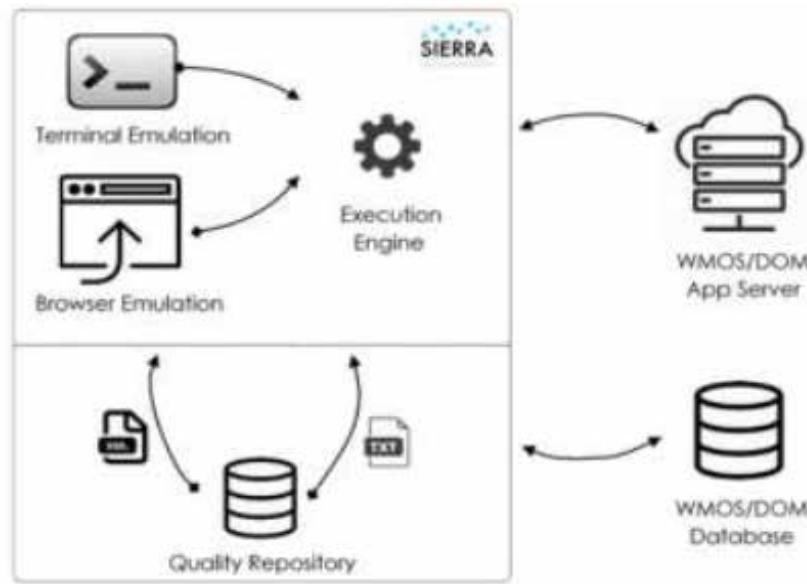
In a recent Performance Testing project of an existing fully operational distribution center, where only the hardware was being upgraded and moved to a different location with no changes to software, no issues were expected. However, during the test, it was observed that the Allocation phase of wave process took a significantly long time to complete, degrading the wave performance.

Allocation On Old Hardware	Allocation On New Hardware
15 min	52 min

Table 1.0 Allocation Performance Comparison

After a thorough analysis, retests and comparing wave performance on old and new hardware, the root cause of this issue was that the RAID controller on the new hardware was missing Write Cache, leading to higher I/O rates. Due to this logging during Allocation phase was taking more time. This was a critical issue to be identified because, had we gone live, it would be very difficult to identify the root cause since we cannot perform these tests, analysis and comparisons on the production system.

SIERRA is also Keystone's Volume and Performance Testing Platform. Let us take a look at some of its features:



- Ability to load and performance test many different server/protocol types:
 - HTTP, HTTPS, SOAP / REST, FTP, Database via JDBC, Message-oriented middleware (MOM) via JMS and native commands or shell scripts
- Complete portability and 100% Java purity
- Full multithreading framework allows concurrent sampling by many threads and simultaneous sampling of different functions by separate thread groups
- Highly Extensible core:
 - Pluggable Samplers allow unlimited testing capabilities
 - Several load statistics may be chosen with pluggable timers
 - Data analysis and visualization plugins allow great extensibility as well as personalization
 - Functions can be used to provide dynamic input to a test or provide data manipulation.
 - Scriptable Samplers (Bean Shell, BSF-compatible languages and JSR223-compatible languages)

Test Case Repository

At Keystone we continuously work towards simplifying customer problems by sharing best practices followed across projects. One example of this effort is our Test Case Repository.

With exposure to multiple supply chain verticals such as sports apparel and footwear, clothing, food and hardware goods across retail, wholesale and ecommerce channels, Keystone has built a ready to use Test Case Repository which can be adapted to new customer flows with minimal effort, thereby reducing the time and cost spent on developing new test cases from scratch.

Conclusion

With the right mix of all its “Accelerators”, Keystone Logic as an implementation partner, can help organizations drive a successful go live of Manhattan Implementations of any scale.

About Zensar

Zensar is a leading digital solutions and technology services company that specializes in partnering with global organizations across industries on their Digital Transformation journey. A technology partner of choice, backed by strong track-record of innovation; credible investment in Digital solutions; assertion of commitment to client's success, Zensar's comprehensive range of digital and technology services and solutions enable its customers to achieve new thresholds of business performance.

Keystone Logic

Zensar, with its experience in delivering excellence and superior client satisfaction through myriad technology solutions, is uniquely positioned to help them surpass challenges around running their existing business most efficiently, helping in their legacy transformation, and planning for business expansion and growth through innovative and digital ways.



THANK YOU.

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