KEYSTONE LOGIC
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Holiday Readiness Testing

Volume Performance Testing / Stress Test on All Systems and Order Volume to Ensure Peak Performance

White Paper

HOLIDAY READINESS TESTING

- VOLUME PERFORMANCE TESTING / STRESS TEST
on all systems and order volume to ensure peak performance

Purpose

Performance testing is performed to verify systems meet non-functional requirements, identify and resolve any processing bottlenecks, verify scalability of system and identify capacity limits. The performance testing is conducted using Load Runner for both WMOS and EOM applications. In the real-world scenario, the emulators are used by a vast variety of users using different categories of network connections. Some people use extremely high broadband connections while some use low bandwidth mobile connections to use various web services. Thus, a more practical testing has been made possible. Several elements such as auto csv generation are enabled for user friendliness in creating the scripts, whereby the users can now create a csv file for data input in the test plan, directly taking data from a database instead of manual creation of the file. It has the capability of performing various types of load testing in WMOS inbound, outbound and inventory management testing for defined RF/UI and batch functions & order processing capabilities of EOM.

Overiew

- Test script development using Load Runner
- Test Data creation on database
- PO/ASNs (including the order IDs) will be created by posting xml files to the system - Since host activity is included for PIXes and Ship confirms, transactional data for PO & ASNs
- Baseline WMOS performance for off-peak volume
- Execute performance test at defined percentage volumes (e.g. Baseline, Average High Peak)
- Performance test report analysis & feasible recommendations

Objective

The objective is to extend the tool with benchmark set up for simulating large concurrent

users, and to produce performance reports. The project includes extensively leveraging application scalability, performance bottlenecks and discovering various limitations. Tests are conducted on heavily used transactions within the four walls of the warehouse and important end to end flows in the order management system.

Architecture

At the heart of a load generation tool is the core engine that works at the protocol level to generate the traffic/requests which would normally be generated by real users driving the user interface of the application under test.

It is important to note that the protocol engine fires requests synchronously

1. Protocol engine fires request to application under test
2. Protocol engine waits for response before it proceeds with execution of next request.
3. Once response is received by the protocol engine, it is stored in memory for analysis and processing. This response is discarded from memory only after next request is sent.

Process

REQUIREMENT ANALYSIS

- Project Initiation
- Requirement Study
- Identify Critical Transactions for VPT
- POC for MHE simulation using Python and Java
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- # of User and Volume analysis
- Transactional load map
- Design volumes for baselines, average, low and high peak tests

TEST PLANNING

- Test Plan, Test Strategy
- Reviewing Test documents and base lining
- Generating Test and Scripts
- Generating data creation templates
- Test readiness review
- Checklists Creation

ENVIRONMENT SETUP

- To set up the environment as per the requirement
- Installation of OS and Software
- Installation and Configuration of LR components
- Installation of Python for MHE simulation
- Creation of History Data
- DB backup and Restore
- Setup monitoring access to application servers and DB servers under test

TEST EXECUTION

- LR Scenario creation for baseline, average, low and high peak tests
- Performance Test Scenario/script execution
- Collect data
- Analyze data and test results
- Problem investigation including bottlenecks, memory leaks, disks, processors, process, network, deadlocks
- Generate Performance analysis report containing all performance attributes of WMS application

REPORTING AND SIGN OFF

- Test report generation
- Create recommendation report based on analysis
- Updating test documents
- Post implementation review
- Project completion checklist

Terminologies

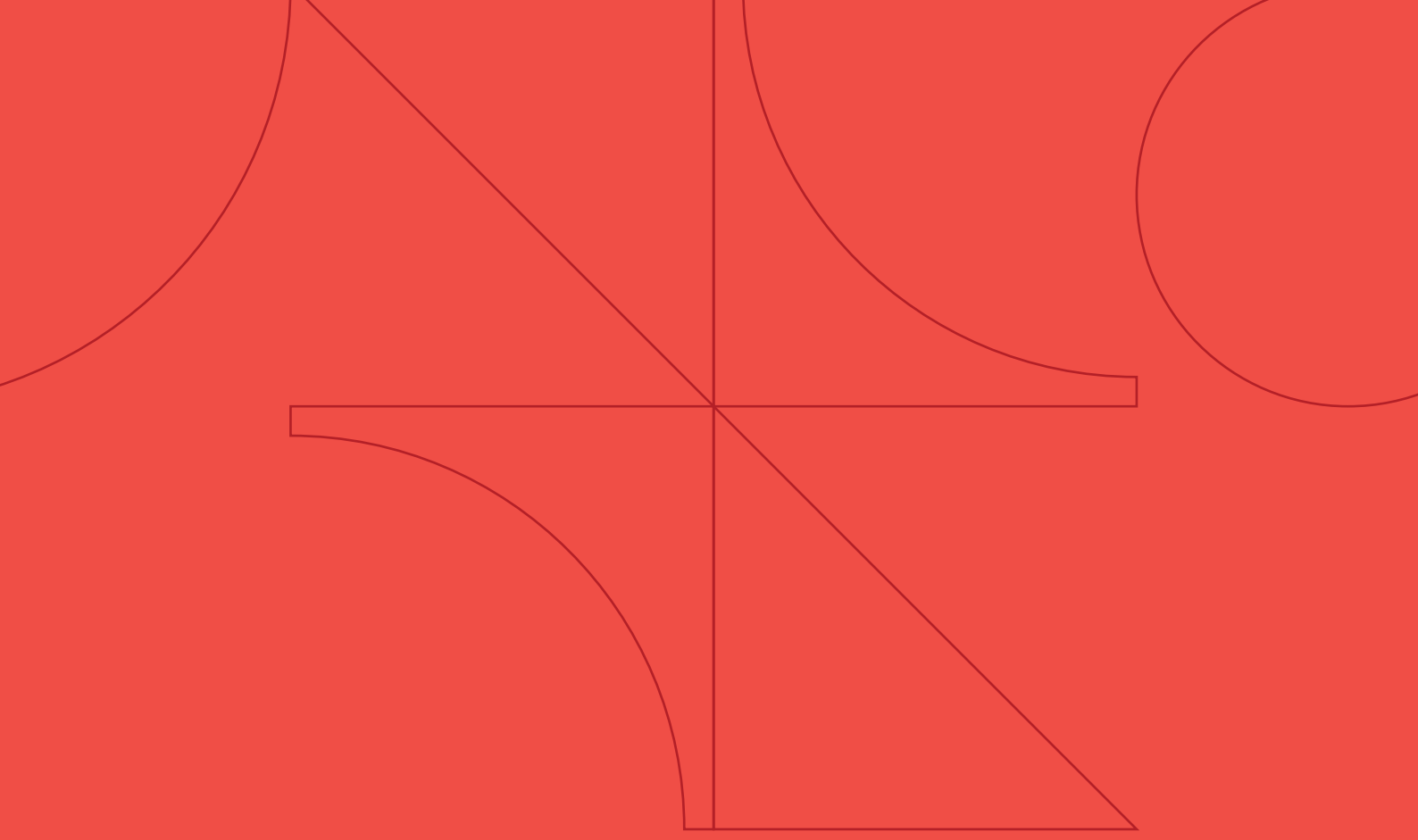
WMOS – Warehouse Management Open System
EOM – Enterprise Order Management System
PO – Purchase Order
ASN – Advance Shipment Notice
PIX – Perpetual Inventory Transactions
VPT – Volume Performance Test

Zensar Technologies

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 a strong track record of innovation; credible investment in Digital solutions; and unwavering commitment to client success, Zensar's comprehensive range of digital and technology services and solutions enables its clients achieve new thresholds of business performance. Zensar, with its experience in delivering excellence and superior client satisfaction through myriad technology solutions, is uniquely positioned to help its clients surpass challenges they face running their existing business most efficiently, helping in their legacy transformation, and planning for business expansion and growth through innovative and digital ways.

Keystone Logic

Keystone Logic is a focused, successful and skilled organization in the Omnichannel fulfilment space. The company's goal is to enable customers to derive significant and sustainable value from their supply chain investments while transforming their supply chain as an engine of future growth.
Zensar Technologies and Keystone logic merged together in March 2017. The joint proposition of Zensar and Keystone in Omnichannel and Order Management along with strong management team leading the business will enhance the value to deliver best in class to their clients.



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An RPG Company

We conceptualize, build, and manage digital products through experience design, data engineering, and advanced analytics for over 145 leading companies. Our solutions leverage industry-leading platforms to help our clients be competitive, agile, and disruptive while moving with velocity through change and opportunity.

With headquarters in Pune, India, our 10,500+ associates work across 30+ locations, including Milpitas, Seattle, Princeton, Cape Town, London, Singapore, and Mexico City.

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