Eagle Biz Load and Performance Test Plan

Project Name :	Eagle Biz
Build Version :	0.1
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1. Introduction

Description of Testing

The primary purpose of Performance Testing is to identify and eradicate the bottlenecks that are found in the application which affects the performance.

2. Resource requirements

2.1 Testing Environment

The environment will be identical to the Production environment with minimum user base for 100 users.

2.2. Testing Tools

The performance testing tools which are used during load and stress testing are

A. Neo Load
B. Jmeter
C. NetData

3. Load Test Approach

To carry a load test for minimum 50 to 100 users and observe the performance metrics

3.1. Performance testing metrics

Performance metrics helps to evaluate application performance based on the given scenarios and load.

Performance metrics include:

- **Throughput**: how many units of information a system processes over a specified time
- **Response time or latency:** the amount of time that elapses between a user-entered request and the start of a system's response to that request.

3.2. Planning:

3.2.1. User data and transaction details:

3.2.2. Define test scenarios:

3.2.3. Define test run timelines

A sample graphical chart views will be shown and separate charts can be created for each scenario based on number of active users and elapsed time with throughput.

3.3. Preparation:

3.3.1. Setup data needed for test
3.3.2. Test system in place with data available such that scripts with data requirements are tested against system before execution phase. (as close to end system as possible regarding functionality and data)
3.3.3. Record/Test out scripts
3.3.4. Record script walkthroughs
3.3.5. Run sample multi-user test to ensure data integrity (for example if unique logins are necessary – make sure system is not duplicating user logins).
3.3.6 Define Key measures (transaction rates, Hits/second etc.).
3.3.7. How many of what type of user for a given test
3.3.8. Determine appropriate rate of user think time
3.3.9. Monitoring of test
3.3.10. Determine what systems need to be monitored
3.3.11. Determine what aspects/stats need to be monitored
3.3.12. Setup monitoring in Load Controller as well as Site Scope.

3.4. Execution:

3.4.1. Execute test run scenarios as outlined.
3.4.2. Intermediate review and brief analysis of results.
3.4.3. Simulated user data.
3.4.4. Transaction stats.
3.4.5. Response time stats.
3.4.6. System data.
3.4.7. CPU, Memory, I/O, Disk space.
3.4.8. Web Statistics [Hits/second, HTTP Responses].

3.5. Analysis:

3.5.1 Create/generate reports

3.5.2. Review results and summarize based on scenario

3.5.3 Simulated users data

3.5.4. Transaction stats

3.5.5. Response time stats

3.5.6. System data

3.5.7. CPU, Memory, I/O, Disk space, Linux Resources, Web Statistics.

3.5.8. Report summarizing results and recommendations highlighting issues or concerns uncovered during testing.

4. Out of Scope

The area which is not covered during load testing

Area	Description
Multiple scenarios at single time	The number of hits by multiple users with different scenarios at same time has not been covered.

5. Defect Reporting

All the defects are monitored and recorded in defect tracking/reporting tool Jira

6. Approvals

This section defines the individuals who have approval authority during the performance testing process for this project.

Name	Title	Signature	Date

7. Performance Testing

The various performance testing methodologies used during performance test are:

Type of testing	Description
Load Testing	Performance testing is performed to verify how well the application measures up under varying loads of data, but still within the limits of normal, acceptable operating conditions.

Type of testing	Description
Tools	Neo Load or Jmeter is used as Load testing tool.

8. Test Development and Testing Deliverables

- Test scripts
- Test run results
- Analysis reports as per the load
- Performance Error reports (i.e. failed transactions)
- Graph report of Throughput and Response Time