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| Performance Test plan document | |
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| Version: | 1.0 |
| Date: | 25/09/19 |

## 1. INTRODUCTION

## Description of Testing

This section should be used to define what is being tested and the primary purpose (the “why” the testing is being conducted. Consideration may be given to special circumstances, special focus/emphasis, or other issues that are unique to this project.

## 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. NeoLoad

b. Jmeter

## 3. TESTING SCOPE

## 3.1. Levels of Testing

This section lists out the levels of testing that will be performed for this project.

## 3.2. Performance

|  |  |
| --- | --- |
| Planning | Define scope, plan out timeline and resource allocation |
| Preparation | User data, scripts and monitoring setup |
| Execution | Running simulated user scenarios against test system |
| Analysis | Review of data gathered, success determination and summarize results |

Planning is a critical in the success and smooth performance testing cycle. There are three levels to the planning and preparation.

### 3.3. Detailed planning:

###### 3.3.1. User data and transaction details:

###### 3.3.2. Define test scenarios:

###### 3.3.3. 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.

### 3.4. Preparation:

3.4.1. Setup data needed for test

###### 3.4.2. 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)

###### 3.4.3. Record/Test out scripts

###### 3.4.4. Record script walkthroughs

###### 3.4.5. Run sample multi-user test to ensure data integrity (for example if unique logins are necessary – make sure system is not duplicating user logins)

###### 3.4.6 Define Key measures (transaction rates, Hits/second etc..)

###### 3.4.7. How many of what type of user for a given test

###### 3.4.8. Determine appropriate rate of user think time

###### 3.4.9. Monitoring of test

###### 3.4.10. Determine what systems need to be monitored

###### 3.4.11. Determine what aspects/stats need to be monitored

###### 3.4.12. Setup monitoring in Load Controller as well as Site Scope.

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### 3.5. Execution:

###### 3.5.1. Execute test run scenarios as outlined

###### 3.5.2. Intermediate review and brief analysis of results

###### 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

###### 3.5.8. Web Statistics [Hits/second, HTTP Responses]

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### 3.6. Analysis:

###### 3.6.1 Create/generate reports

###### 3.6.2. Review results and summarize based on scenario

###### 3.6.3 Simulated users data

###### 3.6.4. Transaction stats

###### 3.6.5. Response time stats

###### 3.6.6. System data

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

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

### 4. Areas Not Being Tested

The area which is not covered during QA Testing.

| **Area** | **Description Of What Will Not Be Tested** |
| --- | --- |
| Multiple scenarios at single time | The number of hits by multiple user with different scenarios has not been covered. |

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## 5. Defect Reporting

All the defects are monitored and recorded in defect 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** |
| --- | --- | --- | --- |
|  |  |  |  |

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## 7. Performance Testing

The various performance testing methodologies used during performance test are:

| **Type of testing** | **Description** |
| --- | --- |
| Performance 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. |
| Load Testing | Load testing is performed to demonstrate how the product functions under certain high volume conditions (helps determine its breaking point). Load testing is usually performed in conjunction with Performance Testing. |
| Stress testing | **Stress testing** used to determine the stability of a given system or entity. It involves **testing** beyond normal operational capacity, often to a breaking point, in order to observe the results. |
| Tools | Neoload/Jmeter are used for Performance/Load testing tool. |

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## 8. Document Tracking

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| --- | --- | --- |
| **Date** | **Action Taken** | **By Whom** |
|  |  |  |