**Performance Test Strategy**

For BlogEngine.NET 3.2 ver. 1.0.0

1. Introduction

This document describes the approach, pass/fail criteria, environmental needs, responsibilities, staffing and training needs, schedule, risks and contingencies, infrastructure and tools which could be used for the performance testing of the BlogEngine.NET 3.2 application.

BlogEngine.NET is an open source software product maintained on CodePlex, and it aims for clarity, lack of complexity while making use of all the features that .NET offers.

BlogEngine.NET can support a variety of data storage: XML (by default) and the database (SQL). For the storage of the database BlogEngine.NET use a dbblogprovider.

The aim of BlogEngine.NET 3.2 performance testing is to determine the overall complex evaluation of the back-end server system (software + hardware) in different conditions of usage:

* Different number of the posts.
* Posts with a text and attached photo.
* Different number of the users.
* Different types of data storage.

1. Features to be tested

Admin features: login/logout, user creating/deleting.

Editor features: login/logout, posts creation/editing.

Users features: post opening/commenting, calendar opening, contacts opening, search by name.

1. Features not to be tested

Additional plugins, users login/logout (except admin and editor role), third party services, archive, etc.

1. Approaches

Generate user scripts based on real data from analytics server and use it for load model during all types of performance testing (Smoke testing, Capacity testing, Load testing, Volume testing, Scalability testing). Monitoring of server performance in different conditions.

1. Item pass/fail criteria

Error rate less than 2% (according to BlogEngine.NET 3.2 documentation)

Response time for Home page opening less than 5s.

1. Environmental needs (facilities, hardware, software, network, sup-plies, level of security, special tools)

Host Server with operation system with Windows 10 or MS Windows Server 2016 and installed BlogEngine.NET 3.2 on it.

Possibility to configure CPU numbers and RAM size of server.

Stable network connection with server.

1. Test data

User (Admin, Editor) credentials, Server Analytic (Statistic).

1. Responsibilities

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| --- | --- | --- | --- | --- |
| # | Project Role | Name | Location | Responsibilities |
| 1 | Performance Tester | Dmytro Yaroslavtsev | Vinnytsia, Ukraine | Performance Test Documentation creation and updating;  Test scripts creation and updating;  Performance testing;  Performance test results reporting. |

1. Staffing and training needs

Communication channel with BlogEngine.NET 3.2 Development team for consultation about its configuration.

1. Schedule (test milestones and item transmittal events)

Active phase: 31 AUG 2020 – 22 DEC 2020

Configuration phase: 31 AUG 2020 – 13 SEP 2020

Load investigation phase: 14 SEP 2020 – 18 OCT 2020

Testing phase: 19 OCT 2020 - 22 NOV 2020

General reporting: 22 NOV 2020 - 22 DEC 2020

1. Risks and contingencies

• Using Proxy server may affect response time.

• Monitoring of CPU and memory utilization create an additional load.

• Using complex Network infrastructure affects the time of response.

1. Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Project Role** | **Name** | **Date of approving** |
| 1 | Project Manager |  |  |
| 2 | Development Team Lead |  |  |
| 3 | Testing Team Lead |  |  |