06-23-2022 Task 11

Test Purpose

* Perform capacity testing for 2200 text posts.

Test Summary

* 1200 post: The Comfort zone is up to 8 users, the Degradation zone is starting from 8 users, the Saturation point is reached when the user count is 16. When the user count is 48, failed transactions start to grow very fast, looks like at this moment we had a problem with the database, we had duplicate rows for different tables (I ran 2 times this test and all of them had this problem with the database).

Test Setup

| Test type | Capacity testing |
| --- | --- |
| Software/hardware configuration | Windows 10 64bit  Memory 32 GB  Processor I7 3.0 GHz  Disk 96.3 GB |
| Load generator configuration | Windows 10 64bit  Memory 5500 MB  Cores: 1 |
| Load testing tool | Apache JMeter 5.4.3 |
| App | BlogEngine.NET 3.2.0.3 |
| Number of users | 70 |
| Ramp-up period | 2000s |
| Test duration | 2000s |
| Test scenario | Main script, Anonymous script, Open post script algorithms |

Capacity testing: 2200 posts (Test: 1)

|  | Active threads | Throughput | Response time avg | Failed transaction% | avg CPU | avg Memory | Response time  median | Response time  90 pct |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2200 posts** | Max: 70 | 6.1 (Max: 15.2) | 3.34s | 13% | 21.5% | 458 mb | 2.2 s | 4.24s |

Throughputs for 1100 posts

| Throughput |  |
| --- | --- |
| Response time |  |
| CPU |  |
| Database |  |

Capacity testing: 2200 posts and 100 users (Test: 2)

| Throughput  Response time |  |
| --- | --- |
| CPU |  |

Test Purpose

* Perform load testing for 2200 text posts.
* Perform load testing for 2200 mixed posts.

Test Summary

* We can observe that response time is less and uses less CPU for tests with 2200 text posts.

Test Setup

| Test type | Load testing |
| --- | --- |
| Software/hardware configuration | Windows 10 64bit  Memory 32 GB  Processor I7 3.0 GHz  Disk 96.3 GB |
| Load generator configuration | Windows 10 64bit  Memory 5500 MB  Cores: 1 |
| Load testing tool | Apache JMeter 5.4.3 |
| App | BlogEngine.NET 3.2.0.3 |
| Number of users | 8 |
| Ramp-up period | 300s |
| Test duration | 2000s |
| Test scenario | Main script, Anonymous script, Open post script algorithms |

Load testing : 2200 text posts and 2200 mixed posts

|  | **2200 text posts** | **2200 mixed posts** |
| --- | --- | --- |
| avg Throughput | 1.89 (Max: 3.8) | 2.77 (Max: 5.2) |
| avg Response time | 512 ms | 447 ms |
| Transaction count | 3782 | 5535 |
| Failed transaction | 15% | 5% |
| avg CPU | 23.2% | 26.3% |
| avg Memory | 431 mb | 433 mb |
| Response time  median | 159 ms | 306 ms |
| Response time  90 pct | 243.5 ms | 1.97 s |
| Response time  95 pct | 383.7 ms | 2.44 s |

2200 text posts

| Active  threads  Response time |  |
| --- | --- |
| Throughput |  |
| CPU |  |
| Memory Usage |  |
| Errors  count |  |

Load testing : 2200 mixed posts

| Active  threads  Response time |  |
| --- | --- |
| Throughput |  |
| CPU |  |
| Memory Usage |  |
| Errors  count |  |