CONduit

Test plan

1. Introduction
   1. Purpose of this Test plan

The purpose of this document is to specify performance requirements and conditions for Conduit website. The document will outline the Soak Test scenarios, test cases, parameters and data used in evaluating the capacity of the included features.

* 1. Test plan identification

|  |  |
| --- | --- |
| Application Name | Conduit |
| Test Cases | Main page |
| Sign up |
| Sign in |
| Article creating |
| Setting |
| Profile |

1. Test description
   1. Pre-requisites
      1. Execution of Performance testing follow after development stories mark as "Done" to avoid functionality bugs
      2. The performance testing process uses the Agile principles as the development process
      3. Performance testing is a continuous process that integrated into Cl tools.
      4. Check-in's Conduit is done regularly (scheduled on the CI)
      5. The final code should be promoted to the Production environment after performance e2e testing is completed and results meet expectations.
      6. Performance testing jobs on the CI should follow the performance testing purpose and type

In an attempt to detect issues as early as possible Application performance testing will start as early as possible with basic performance measurements being taken as part of the dev process and final end-2-end performance testing being performed after all development for the increment has been completed but before implementation.

Early stage tests will be incorporated into the CI process allowing basic performance tests to be executed for each build whilst the more extensive end-2-end testing will be instigated in the appropriate performance test tool on Non-functional environment

* 1. Test objectives
     1. Ensure the performance of the application according to the stated requirements
     2. Check for compliance with ESLAY, NFR, acceptance criteria
     3. Early discovery of bottlenecks related to the application system, infrastructure, network,
     4. Early detection of performance degradations associated with performance metrics
  2. Items to be tested
     1. Main page

- Open home page

- Select first/random tag

- Open first/random article

* + 1. Sign up

- Open Sign up page

- Enter the required data and click on the "Sign up" button

- Open the settings and check the correctness of the saved data

* + 1. Sign in

- Open sign in page

- Enter correct email and password

- Click on the "Sign in" button

- Open the profile and make sure that it matches the entered details for entering

* + 1. Article creating

- Open article creation page

- Correctly fill in all required fields and click "Publish article"

- Add a comment to the appropriate field and publish it

* + 1. Setting

- Open settings page

- Add / change data

- Click on the "Update settings" button

- Open the settings again and make sure that the new data is saved

- Click on the logout button

* + 1. Profile
  1. Items not to be tested
     1. Functionality of the whole website
     2. Features which are not implemented by the start of the performance testing
  2. Test data

Test data must be generated before starting testing

1. Suspension criteria and resumption requirements
   1. Functional issues
      1. Test environment issues (not ready, any trouble with accessing to it etc.)
      2. Not stable version of the application
      3. Test data issues (no test user or wrong credentials, incomplete data)
      4. Significant changes in workflow of functionality of the application which require updates in the test plan or scripts/scenarios
      5. Testing tools issues (load generation, monitoring)
   2. Resumption criteria
      1. Test plan is complete/updated and approved by Company and the client.
      2. Correct version is installed in performance testing environment, i.e. the version previously functionally tested and fixed if needed
      3. Test data is complete and in the performance testing environment in sufficient time to allow test scripts to be completed.
      4. Test accounts have been created in the performance testing environment in sufficient time to allow test scripts to be completed.
      5. Test scripts complete.
      6. All assigned resources are available to monitor the test.
      7. All parameter sets used in the script are generated based on the Database values.
2. Testing tasks
   * 1. Basic scripting
     2. Basic scenarios creation
     3. Setting up load generation tools
     4. Setting up monitoring and collecting tools
     5. Deployment stable version to environment
     6. Smoke testing
     7. Running set of performance testing:
        1. Capacity
        2. Regular load test (after definition of capacity)
        3. Volume
        4. Stress
        5. Durable (stability)
        6. Scalability
3. Test environment

For performance testing a dedicated environment on premise/cloud/VMs and optional database. The configurations of the servers should be as much as close to production’s ones.

1. Risks

* Performance testing results can be essentially different even in case of minor difference in think times, arrival rate and test duration
* During the execution of the tests, some major performance or functional problems that may require code changes, creation of a new build may be discovered and in that case, it may be necessary to repeat the load test from the beginning
* Performance testing tool is not capable of identically reproducing real life scenarios - so results could only be trusted as having limited reliability level
* Network/systems latency issues