UAT Execution &Report Submission

Skill /Recommender Application

Team ID : PNT2022TMID03200

What is Performance Testing?

Performance testing is a testing technique that determines the speed, scalability, and stability of an application under a given workload. It helps to ensure the quality of the software and makes the application ready to be released into the market.

- Speed - The speed at which the application responds.
- Scalability - The maximum user load that the application can handle.
- Stability - The condition of the application under varying loads.

Types of Performance Testing

To understand how an application will perform once it goes live, there are many different types of performance tests done based on multiple factors. Here are some of the most common ones.

- Volume testing - The main objective of volume testing is to check the performance of the application in different database volumes. The behavior of the application is monitored by populating varying volumes of data into the database.
- Stress testing - The main objective of stress testing is to identify the main breaking point of a software application. This is done by testing the application under extreme workloads to gauge its performance under high traffic or data processing.
- Spike testing - The main objective of spike testing is to test the reaction of the application when a sudden large spike (generated by users) occurs in the load.
- Scalability testing - The main objective of scalability testing is to determine whether the application can scale up effectively in the event of user overload. This testing also helps you to plan capacity addition to your application for the future.
- Load testing - The main objective of load testing is to identify performance bottlenecks or the application's ability to perform under anticipated user loads.

- Endurance testing - Endurance testing is done to make sure the software can handle the expected load over a long period of time.

Performance Testing Process

The methodology for the performance testing process can vary widely with different organizations, but the objective remains the same. Here is a generic seven-step process on how to execute performance testing.

Step 1: Identify the Testing Environment

The testing environment or the test best is where all the magic happens. Identify the testing environment and know what testing tools are available at your disposal. Understand the details of all the hardware, software and different network configurations ahead of time.

Step 2: Identify the Performance Metrics

In addition to the general performance metrics such as response time, throughput and constraints, it is also important to identify the performance success criteria. Oftentimes, there may not be a wide enough variety of performance benchmarks that you can identify. You can find similar applications which are already successful in order to set performance goals.

Step 3: Plan and Design Performance Tests

Identify a number of key scenarios by taking into account user variability, test data, and plan performance. This is required to simulate a variety of use cases and outline what metrics will be gathered.

Step 4: Configure the Test Environment

Arrange all the necessary testing tools and monitoring resources to prepare the testing environment before execution.

Step 5: Implement the Test Design

Design all the performance tests according to your performance criteria and metrics.

Step 6: Run the Tests

Execute and run the performance tests. Also, capture and monitor all the test data that is generated.

Step 7: Analyze, Tune and Retest

After every performance test, analyze the finding and fine tune the test again to see an increase or decrease in performance. Run the tests again using the same or different parameters.

Performance Planning

Sprint	Total Story Points	Duration	Sprint start Date	Sprint End date	Story Points completed	Sprint Release Date
Sprint-1	20	6 Days	24 oct 2022	29 oct 2022	20	29 oct 2022
Sprint-2	20	6 Days	31 oct 2022	5 nov 2022	20	5 nov 2022
Sprint-3	20	6 Days	7 nov 2022	12 Nov 2022	20	12 nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

Benefits of Performance Testing

If you are losing customers, it is probably due to the poor performance of your software. Here are some benefits of performance testing and why measuring performance for your software is so important:

- Identifies issues at an early stage and helps development teams find errors before the release
- Monitors the speed, stability, and accuracy of the application in normal as well as critical scenarios
- Increases customer satisfaction by measuring the application’s response from the customers
- Validates the functional features of the new software
- Improves load capacity and helps organizations increase their user volumes

Performance Testing Tools

There are a large number of performance testing tools available in the market. To achieve the best result with performance testing, it is important to opt for a tool based on your requirements. Here is a list of the most popularly used testing tools.

- LoadNinja - LoadNinja allows you to create scriptless and sophisticated load tests withina short time without compromising on the quality. Since it is scriptless, it removes the need for script translation and scrubbing.
- JMeter - JMeter is an open-source, cloud-based testing tool that helps you to analyze andmeasure the performance of web applications.
- HP LoadRunner - HP LoadRunner is one of the most powerful performance testing toolscapable of determining the real-time behavior of applications under very heavy loads.
- WebLoad - WebLoad is used for web and mobile load testing. It combines all the performance testing components into a single process for the verification of web andmobile applications.

Sprint Delivery Schedule

Sprint	Functional Requirement	User story/task	Priority	Acceptance
Sprint-1	UI Design	As a user its an better user interface in website	Medium	Slight better impersion in website
Sprint-1	Registration	As a user ,I can register application through email to matched the password at correct manner	High	I can access my account /dashboard

Sprint-1		I can register for application through gmail	Medium	I can receive confirmatio nemail and click confirm
Sprint-1	Login	I can log into application by entering email& password	High	I can access my account /dashboard
Sprint-1	Flash	I can access the website in a second	High	I can access my account/ dashboard
Sprint-1	Dashboard	As a user if I logged in correctly , I can view my dashboard and I can navigate to any pages which are already listed	High	I can have my account safely

Submission of Sprint -2

Sprint -3	Sendgrid service	Mail will be sent to company on successful job application	Medium	I can get a notification in second
Sprint -3	Learning resource	I can learn the course and I will attain the skills which will be useful for developing technicalskills	High	I can gain the knowledge of skills
Sprint -3	Docker	I can access the website in any device	High	I can access my account in any device
Sprint -3	Kubermates	I can access the website in any device	High	I can access my account in any device

Submission of Sprint -3

Sprint-4	Unit Testing	I can access the website any interruption	High	I can access the website without any interruption
Sprint-4	Integration testing	I can access the website without any interruption	High	I can access the website without any interruption
Sprint-4	System testing	I can access the website without any interruption	Medium	I can access the website without any interruption

Submission of Sprint -4