Test Strategy for e-commerce project

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Test Strategy Id: E-Com190315

Goals:
Check the provided service in order to expand new market.

System Description:
E-commerce project which is represented by 3 services:
- Authentication service – generate & validate tokens for users.
- Product service – provides set of products which could be chosen by users whom token was granted.
- Cart service – gives an opportunity to put chosen products into cart & checkout.

Stakeholders: owner(s) of e-commerce system, customers, devs, QAs, PMs, DevOps , marketing team.

Entrance Criteria for performance testing:
Functional tests already run.
No open critical/major defects remaining from the prior test phase.
Required test environment is configured.
Tests required for performance testing are ready.

Exit Criteria for performance testing:
Tests run successfully.
Performance Analysis Report
Results received from perf. testing are within previously approved limits.
All KPIs are met.

Exit Criteria for project acceptance:
Successful execution of the functional & nonfunctional test activities.
No open critical, major, or average severity defects.

Possible Risks:
Cost overruns
Time overruns
Lack of engineers
Lack of test environment
Hardware outage
Exit Criteria for performance testing is not met.

KPIs (will be re-checked each quarter.**):**
Response time (~1sec, but TBC with BO) & connect Time. Response time when the service is slowed to min/max time.
Errors rate (We expect 1% of the login request to fail. None of the “add a product to a cart” requests fail.). Or may be errors per second.
Downtime (TBC with BO)
Availability (TBC with BO)
Throughput (TBC with BO)
Number of Users (TBC with BO)
Hits Per Second (TBC with BO)

Assumable performance test approaches (TBC with BO):

1 **Load testing:**
- Log in to service with increasing load (e.g. 2000, 3000, 4000);
Should define normal load and add the expected load that will increase after expand a new market.

2. **Stress testing:**
Log in to service with max load/more than capacity.

3. **Spike testing:**
Log in to service with sudden increments/decrements.

4. **Endurance testing:**
Log in to service with multiple users over a period of time (e.g 5000 users load for 2 hrs).