ChecklistGuro

Performance Testing Checklist

Environment and Setup

Ensuring the test environment accurately reflects production and is properly configured for performance testing.

Environment Type

- [ ] Development
- [ ] Staging
- [ ] Production-like

Number of Application Servers

Enter a number...

Number of Database Servers

Enter a number...

Detailed Environment Configuration (OS, versions, etc.)

Write something...

Load Balancer Configuration

- [ ] Enabled
- [ ] Disabled
- [ ] Specific Configuration Required (describe in Long Text)

Specific Environment Dependencies (e.g., external APIs, services)

Write something...

Environment Setup Date

Enter date...

Environment Configuration Document (if applicable)

Upload File

Test Data

Verifying the test data volume, distribution, and relevance to production data.

Number of Projects to Simulate

Enter a number...

Number of Users per Project (Average)

Enter a number...

Total Number of Employees/Users in Test Data

Enter a number...

Data Generation Approach

- [ ] Synthetic Data
- [ ] Masked Production Data
- [ ] Combination

Data Distribution Pattern

- [ ] Uniform
- [ ] Skewed (Specify Skew)

Sample Data File (if applicable)

Upload File

Detailed Description of Data Generation Rules

Write something...

Earliest Date for Project Start

Enter date...

Latest Date for Project Completion

Enter date...

Workload Modeling

Defining and configuring realistic user and system workloads that mimic production conditions.

Estimated Concurrent Users

Enter a number...

Peak Concurrent Users (e.g., during a shift change)

Enter a number...

Primary Workload Profile (e.g., Design Phase, Construction Phase, Maintenance Phase)

- [ ] Design Phase
- [ ] Construction Phase
- [ ] Maintenance Phase
- [ ] Procurement Phase

Typical User Tasks to Simulate (Select all that apply)

- [ ] Creating New Projects
- [ ] Uploading Drawings/Models
- [ ] Updating Task Progress
- [ ] Generating Reports
- [ ] Managing Resources
- [ ] Data Entry

Number of Projects/BIM Models to Simulate

Enter a number...

Description of Typical User Workflow for Testing

Write something...

Transaction Rate (e.g., Reports Generated per Minute)

Enter a number...

Ramp-up Time for User Load (Minutes)

- [ ] 1
- [ ] 5
- [ ] 10
- [ ] 30

Test Execution & Monitoring

Controlling the execution of tests and monitoring key performance indicators (KPIs).

Number of Virtual Users

Enter a number...

Ramp-up Time (seconds)

Enter a number...

Test Duration (minutes)

Enter a number...

Test Scenario Type

- [ ] Peak Load
- [ ] Baseline
- [ ] Stress
- [ ] Endurance

Specific Test Objectives

Write something...

Target Average Response Time (seconds)

Enter a number...

Metrics to Monitor

- [ ] CPU Utilization
- [ ] Memory Usage
- [ ] Disk I/O
- [ ] Network Latency
- [ ] Database Query Time
- [ ] Error Rate

Test Start Date

Enter date...

Test Start Time

Enter time...

Results Analysis & Reporting

Analyzing test results to identify bottlenecks and generating clear, actionable reports.

Average Response Time (ms)

Enter a number...

95th Percentile Response Time (ms)

Enter a number...

Throughput (Transactions/Second)

Enter a number...

CPU Utilization (%)

Enter a number...

Memory Utilization (%)

Enter a number...

Overall Test Result Status

- [ ] Pass
- [ ] Fail
- [ ] Warning
- [ ] Informational

Summary of Key Findings

Write something...

Recommendations for Improvement

Write something...

Performance Test Report (PDF)

Upload File

Scalability Testing

Evaluating the system's ability to handle increasing workloads and user concurrency.

Target Concurrent Users

Enter a number...

Increase in Concurrent Users (Percentage)

Enter a number...

Transactions per Second (TPS) Target

Enter a number...

Hardware Configuration Scaling (e.g., Add Servers, Increase RAM)

- [ ] Add Server Instances
- [ ] Increase RAM per Instance
- [ ] Optimize Database Configuration
- [ ] Vertical Scaling
- [ ] Horizontal Scaling

Database Connection Pool Size

Enter a number...

Caching Strategy Verification

- [ ] Cache Hit Ratio
- [ ] Cache Eviction Policy
- [ ] Cache Invalidation

Scaling Test Scenario Description

Write something...

Stress Testing

Pushing the system beyond its expected limits to identify breaking points and stability issues.

Maximum Concurrent Users

Enter a number...

Transaction Rate (Transactions/Second)

Enter a number...

Data Volume (GB)

Enter a number...

Error Handling Verification Method

- [ ] Log Analysis
- [ ] System Response
- [ ] User Interface
- [ ] Custom Script

Observed System Behavior Under Stress

Write something...

Maximum Acceptable Response Time (Seconds)

Enter a number...

Resource Exhaustion Triggered

- [ ] CPU
- [ ] Memory
- [ ] Disk I/O
- [ ] Network Bandwidth
- [ ] None

Detailed Description of Failure Mode

Write something...

Number of Stress Test Runs

Enter a number...

Endurance Testing

Assessing the system's performance and stability over an extended period.

Test Duration (hours)

Enter a number...

Average Number of Concurrent Users

Enter a number...

Server Resource Monitoring Enabled?

- [ ] Yes
- [ ] No

Memory Utilization Threshold (%)

Enter a number...

CPU Utilization Threshold (%)

Enter a number...

Observed System Errors/Warnings (if any)

Write something...

System Stability During Test?

- [ ] Stable
- [ ] Minor Issues
- [ ] Significant Issues

Unexpected behavior noticed during endurance test (if any)

Write something...

Database Performance

Focusing on the performance of the underlying database and its interaction with the application.

Average Query Response Time (ms)

Enter a number...

Database CPU Utilization (%)

Enter a number...

Database Memory Utilization (%)

Enter a number...

Database Indexing Strategy

- [ ] Optimal
- [ ] Requires Review
- [ ] Suboptimal

Identify Slowest Queries (Top 5)

Write something...

Database Connection Pool Size

Enter a number...

Database Transaction Isolation Level

- [ ] Read Committed
- [ ] Repeatable Read
- [ ] Serializable

Network Performance

Assessing network latency and bandwidth limitations impacting system performance.

Average Network Latency (ms)

Enter a number...

Network Bandwidth Available (Mbps)

Enter a number...

Packet Loss Percentage (%)

Enter a number...

Network Topology

- [ ] Local Area Network (LAN)
- [ ] Wide Area Network (WAN)
- [ ] Wireless Network
- [ ] VPN

Network Protocol Used

- [ ] TCP
- [ ] UDP
- [ ] HTTP
- [ ] HTTPS

Describe any observed network congestion or instability

Write something...

Attach network trace files (e.g., Wireshark captures)

Upload File

Jitter (ms)

Enter a number...