

# Performance Testing Checklist

 Show only Checklist

Display Style  
Default 

## 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

### Number of Users per Project (Average)

### Total Number of Employees/Users in Test Data

### 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)

### Metrics to Monitor

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

### Test Start Date

### Test Start Time

## Results Analysis & Reporting

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

### Average Response Time (ms)

### 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

## Transaction Rate (Transactions/Second)

## Data Volume (GB)

## 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)

## Average Number of Concurrent Users

## Server Resource Monitoring Enabled?

 Yes No

## Memory Utilization Threshold (%)

## CPU Utilization Threshold (%)

### 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)

### Network Bandwidth Available (Mbps)

### Packet Loss Percentage (%)

### 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...