

PERFORMANCE TESTING .

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01 **WHAT IS PERFORMANCE TESTING?**

Performance Testing measures how an application behaves under expected and unexpected workloads.

It answers:





- Is the app fast enough?
- Is it stable under pressure?
- Can it scale as users grow?

TRY THIS OUT



02

WHY IS PERFORMANCE TESTING CRITICAL?

- Ensures faster load times 
- Handles peak traffic without crashing 
- Protects brand reputation 
- Enhances user experience and satisfaction 

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03

TYPES OF PERFORMANCE TESTING

- Load Testing – Regular user traffic
- Stress Testing – Pushing to breaking points
- Spike Testing – Sudden traffic surges
- Endurance Testing – Long hours of load
- Scalability Testing – Growing user base



EACH TYPE REVEALS DIFFERENT SYSTEM INSIGHTS!

TRY THIS OUT



04

POPULAR TOOLS FOR PERFORMANCE TESTING

 APACHE JMETER

 LOADRUNNER

 GATLING

 K6

 LOCUST




**CHOOSE TOOLS BASED ON YOUR PROJECT NEEDS
AND SCALABILITY GOALS.**

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05 **KEY METRICS TO TRACK**

 **RESPONSE TIME – SPEED OF REQUESTS**

 **THROUGHPUT – DATA PROCESSED PER SECOND**

 **CONCURRENT USERS – NUMBER OF ACTIVE USERS**

 **ERROR RATE – FAILED REQUESTS**

 **RESOURCE UTILIZATION – CPU, MEMORY, NETWORK**

 **METRICS HELP YOU FIND HIDDEN PERFORMANCE ISSUES.**

TRY THIS OUT



06 HOW TO APPROACH PERFORMANCE TESTING?

DEFINE OBJECTIVES 

CREATE REALISTIC SCENARIOS 

EXECUTE TESTS 

MONITOR SYSTEM BEHAVIOR 

ANALYZE RESULTS 

TUNE & RE-TEST 



IT'S A CYCLE OF TESTING AND IMPROVING.

TRY THIS OUT



07 **BEST PRACTICES FOR PERFORMANCE TESTING**

- ✓ **START EARLY (SHIFT-LEFT TESTING)**
- ✓ **SIMULATE REAL-WORLD SCENARIOS**
- ✓ **MONITOR ALL LAYERS (APP, SERVER, DATABASE)**
- ✓ **TEST IN PRODUCTION-LIKE ENVIRONMENTS**
- ✓ **REGULARLY RE-TEST AFTER UPDATES**



PERFORMANCE IS A MOVING TARGET — KEEP TESTING.

TRY THIS OUT



FINAL THOUGHT: BUILD STRONG, NOT JUST FAST

- SPEED MATTERS.
- STABILITY MATTERS MORE.
- SCALING GRACEFULLY MATTERS MOST.
- PERFORMANCE TESTING ISN'T JUST A TASK — IT'S A COMMITMENT TO EXCELLENCE.

✨ **TEST SMART. TEST OFTEN. WIN USERS.** ✨

