# Load testing

# Smoke test

Purpose:  
Ensure the basic functionality of the system works under minimal load.

Setup:  
Run a small number of virtual users (5–10) performing simple, representative tasks with standard think times.

What to check:  
Verify that endpoints respond correctly, requests complete successfully, and the system is stable.

Why:  
This confirms that the test environment and scenarios are properly configured before heavier tests are executed.

## Load test

Purpose:  
Measure how the system performs under expected real-world traffic conditions.

Setup:  
Simulate a gradual ramp-up to a typical peak user load (e.g., 100–200 users), keeping users active over a realistic period.

What to check:  
Monitor response times, throughput, error rates, and system resource usage during sustained traffic.

Why:  
Identifies whether the system can handle normal peak loads without degrading performance or stability.

## Spike test

Purpose:  
Assess how well the system handles sudden, unexpected surges in user traffic.

Setup:  
Begin with moderate load, then sharply increase the number of users in a very short time (e.g., from 50 to 500 users instantly).

What to check:  
Observe system stability, error rates, and how quickly the system recovers after the spike.

Why:  
Useful for simulating spikes in traffic, ensuring the system can absorb rapid load increases without crashing.