

❖ Case Studies

1. ERP System (USA)

→ About Project :

This project is in ERP system developed on the Odoo platform. Application has 5 core Modules (Business Development, Risk management, Finance, E&S and 3 Supporting Modules (HR, Capacity Development and Reporting)

→ Challenge :

The application was slowing down during peak traffic.

Create Employee failures were reported when more than 25 users accessed the system simultaneously.

Response time for key transactions like “Risk Engine” and “Invoicing” exceeded 10–12 seconds.

→ Objective:

Validate application performance under peak loads.

VAPT : Automated scanning for known vulnerabilities.

Penetration Testing: Manual and automated exploitation of vulnerabilities.

Authentication & Authorization Testing: Testing for weak passwords, session management flaws, and privilege escalation.

API Security Testing: Assessing API endpoints for injection flaws, data exposure, and access control issues.

Configuration Review: Checking server, database, and application security settings.

→ **Result Delivered:**

Delivered below reports:

- Performance benchmarks
- Bottleneck analysis
- Optimization suggestions

2. SaaS System (UK)

→ **About Project:**

A multi-tenant SaaS-based CRM platform built on microservices architecture, serving more than 10,000 concurrent users globally. The platform provides sales pipeline management, customer support, and reporting dashboards.

→ **Challenge:**

Application slowed down during month-end reporting cycles.

Subscription renewal workflows failed under high concurrency.

API latency (8–10 seconds) when syncing with third-party CRMs.

→ **Objective:**

Load Testing: Validate scalability under 15k+ concurrent users.

Stress Testing: Identify system breaking points during subscription renewal.

Endurance Testing: Ensure stability during 24-hour continuous workloads.

Bottleneck Identification: Analyze database query performance and API response delays.

→ **Result Delivered:**

Database indexing improved query response by 45%.

Optimized caching reduced report generation time from 12s to 3s.

API latency reduced by 40% via gateway tuning.

Delivered performance benchmark report for scaling roadmap.

3. API Testing (India)

→ **About Project:**

An e-commerce platform exposing REST APIs for payments, product catalog, order tracking, and third-party vendor integration. APIs serve mobile apps, web apps, and third-party partners.

→ **Challenge:**

Order tracking API response exceeded 6s during flash sales.

Payment API dropped requests under heavy transaction spikes.

Inconsistent response times across regions due to load balancing issues.

→ **Objective:**

Load & Stress Testing: Validate order and payment APIs under peak sale traffic.

Spike Testing: Assess system stability during sudden transaction surges.

Soak Testing: Monitor memory leaks and throughput during 48-hour runs.

API Performance Benchmarking: Evaluate SLA compliance for critical endpoints.

→ **Result Delivered:**

Order API response reduced to <2s under load.

Payment API optimized to handle 5x transaction volume without failures.

Implemented auto-scaling policies to handle regional traffic spikes.

Delivered detailed API performance dashboards with SLA metrics.

4. Fintech System (Singapore)

→ **About Project:**

A digital lending and payment system offering loan origination, credit scoring, EMI collection, and wallet services. The platform integrates with multiple banks and payment processors.

→ **Challenge:**

Credit scoring engine took 15s+ per request under load.

Loan disbursement workflows slowed during end-of-day batch processing.

High transaction failures during peak EMI collection hours.

→ **Objective:**

Performance Benchmarking: Validate throughput for 1M+ daily transactions.

Load & Stress Testing: Assess stability of credit scoring and disbursement workflows.

Endurance Testing: Ensure long-duration transaction reliability.

Scalability Assessment: Test ability to scale under increasing EMI traffic.

→ **Result Delivered:**

Credit scoring engine optimized to respond in <5s.

Loan disbursement performance improved by 35%.

Batch EMI processing scaled to handle 3x peak loads.

Delivered capacity planning report for future transaction growth.

Thank you