TEAM ID: NM2025TMID03458

TITTLE: EDUCATIONAL ORGANIZATION USING   SERVICENOW

Performance Testing

1. Introduction

Performance testing evaluates the speed, stability, scalability, and responsiveness of the ServiceNow system when used by students, faculty, and administrative staff in an educational environment. It ensures the system can handle peak load situations such as admission periods, exam time, certificate requests, or IT support surges.

2. Objectives

- Verify portal responsiveness for students and staff
- Test ServiceNow performance under heavy load (peak usage)
- Ensure fast form submission & request processing
- Validate Service Level Agreements (SLAs)
- Ensure system stability and quick response times
- Identify performance bottlenecks and optimize resources

3. Performance Metrics

Metric	Description
Response Time	Time to open forms, submit requests
Throughput	Number of requests processed per second
Transaction Speed	Speed of workflows, approvals, ticket creation
System Utilization	CPU, memory, network consumption
Error Rate	Failed or delayed transactions
Scalability	Ability to support more users during peak times

4. Test Scenarios

Scenario	Description
Portal Login Test	Students and staff logging into Self-Service Portal
Ticket Creation Load Test	500+ tickets created simultaneously for IT or certificate services
Knowledge Base Access Test	Multiple users searching FAQs at once
Approval Workflow Test	Bulk approval requests for admin workflows
Email Notification Test	System sending automated notifications
Peak Intake Scenario	Heavy use during admissions / exam results period

5. Tools Used

Tool	Purpose
ServiceNow Performance Analytics	Monitor system KPIs
LoadRunner / JMeter (optional)	Load & stress testing
Browser Developer Tools	Response time & network analysis
ServiceNow Logs and Dashboard	Track server and script execution

6. Performance Testing Types

Test Type	Description
Load Testing	Check system under normal & expected load
Stress Testing	Push beyond limits to find breaking point
Spike Testing	Sudden high user load (exam results announcement)
Endurance Testing	Long-duration testing (weekly usage cycles)
Scalability Testing	Increase users to test system expansion

7. Execution Steps

1. Identify peak usage areas (admissions, IT helpdesk, academic requests)
2. Design test scripts for Service Catalog, Portal, workflows
3. Simulate multiple users accessing forms & submitting requests
4. Monitor performance dashboards and logs
5. Analyze response times & throughput
6. Evaluate error logs and resource usage
7. Optimize system configuration
8. Retest for validation

8. Expected Results

- Response time < 3 seconds for portal load
- Ticket creation within 1–2 seconds
- No system crash during heavy load
- System handles 1,000+ users simultaneously (example capacity)
- Minimal errors and no data loss

9. Findings

- Fast and stable portal performance
- Efficient workflow execution and ticket handling
- SLA maintained during peak usage
- Requires continuous monitoring during exam & admission cycles

10. Conclusion

Performance testing ensures that ServiceNow supports high-volume student & staff activity with fast response time, stability, and reliability. By evaluating system behaviour under load, the educational institution can deliver efficient digital services, improve user satisfaction, and ensure smooth operations during peak academic periods.