

Load & Stability Report – PdfGuard

Product

PdfGuard – On-Prem PDF Rendering Engine

Test Objective

The objective of this test was to verify stability, load resilience, and correct enforcement of system limits under sustained and peak load. The tests simulate realistic production conditions in an on-premise environment.

Test Environment

- **Deployment:** On-Premise
 - **Operating System:** Linux (VM)
 - **Hosting:** Strato Virtual Machine
 - **Virtual Machine Resources:**
 - **vCPU:** 2 cores
 - **Memory:** 8 GB RAM
 - **Runtime:** Java (Servlet-based)
 - **Web Server:** Apache Tomcat
 - **Configuration:**
 - `maxThreads = 8`
 - `acceptCount = 16`
 - `maxPostSize = 200 KB`
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Tested Scenarios

Burst Load Test

- Multiple test runs with **5 × 1,000 concurrent HTTP POST requests**
- Executed using multiple parallel client processes (CMD sessions)

Result: - All requests were processed successfully - No crashes or deadlocks observed - Thread and queue limits behaved as expected - Approximately **5,000 PDFs were generated within ~20 seconds**

Payload Boundary Tests

- JSON payloads up to approximately **170 KB**
- Payloads exceeding **200 KB**

Result: - Payloads below the limit were processed successfully - Payloads above the limit were reliably rejected - The configured `maxPostSize` limit is enforced correctly

Long-Running Stability Test

Duration: 24 hours

Load profile: 1 request per second (**conservative, sustained baseline**)

Total volume: approximately **86,400 PDF generations**

Observations: - Stable response times throughout the entire test period - No increasing latency - No memory leaks or resource exhaustion - System behavior after 24 hours identical to the initial state

Performance

- PDF rendering times frequently below **1 ms**
 - Values below 1 ms are logged as **0 ms** due to millisecond resolution
 - No noticeable performance degradation with large text content
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Assessment

- ✓ No crashes or restarts
 - ✓ Clean resource and thread management
 - ✓ Predictable behavior under sustained and peak load
 - ✓ Suitable for continuous 24/7 operation
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Conclusion

The PdfGuard PDF Rendering Engine demonstrates stable, controlled, and predictable behavior under sustained and peak load. The engine is suitable for production use in on-premise and enterprise environments.

This report is based on internal load and stability testing and serves as technical performance documentation.