

Performance Testing

Overview

Performance testing ensures the security intelligence system can handle large-scale data processing and real-time threat detection efficiently.

Testing Parameters

1. **Throughput:** Measure the number of security events processed per second.
2. **Latency:** Time taken to detect and respond to threats.
3. **Scalability:** Evaluate system behavior under increased load.
4. **Fault Tolerance:** Check resilience during component failures.
5. **Resource Utilization:** Monitor CPU, memory, and network usage.

Testing Methodology

- **Load Testing:** Simulating high volumes of security logs.
- **Stress Testing:** Pushing the system beyond its capacity to identify breaking points.
- **Endurance Testing:** Running the system continuously for extended periods.
- **Failover Testing:** Evaluating system recovery after failures.

Expected Outcomes

- The system should process security data with minimal delays.
- Automated response mechanisms should trigger within predefined SLAs.
- Scalability should allow smooth operations even with increased cyber threats.