📊 Monitoring & Analysis Phase

**1️⃣ Objective**

* **Collect & analyze performance data** during test execution.
* **Identify bottlenecks**, slow response times, and resource constraints.

**2️⃣ Test Summary**

| **📌 Metric** | **📄 Details** |
| --- | --- |
| **Total Test Duration** | 2.5 hrs *(Ramp-up: 15 min, Steady: 120 min, Ramp-down: 15 min)* |
| **Virtual Users** | 500 |
| **Total Requests Sent** | 12,000 |
| **Environment** | Pre-Production |
| **Test Type** | Load Test |
| **Execution Cycle** | 1 *(Plan: 3–4 cycles for comparison)* |

**3️⃣ Response Time Summary**

**🐾 Script 1: Search**

| **Step** | **Transaction** | **Throughput (TPS)** | **Min (s)** | **Max (s)** | **Median (s)** | **Avg (s)** | **Hits** | **✅ Pass %** | **❌ Fail %** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Open URL | 13.3 | 0.8 | 2.7 | 1.2 | 1.26 | 1331 | 100% | 0% |
| 2 | Search | 13.42 | 0.1 | 2.6 | 0.36 | 0.42 | 1316 | 100% | 0% |

**🛍 Script 2: View Details**

| **Step** | **Transaction** | **TPS** | **Min (s)** | **Max (s)** | **Median (s)** | **Avg (s)** | **Hits** | **✅ Pass %** | **❌ Fail %** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Open URL | 13.32 | 0.83 | 2.72 | 1.15 | 1.23 | 300 | 100% | 0% |
| 2 | Click Category | 2.98 | 0.1 | 5.6 | 0.35 | 0.48 | 288 | 100% | 0% |
| 3 | Click Product ID | 3.02 | 0.1 | 0.94 | 0.34 | 0.39 | 266 | 100% | 0% |
| 4 | Click Item ID | 2.97 | 0.1 | 1.39 | 0.34 | 0.38 | 250 | 100% | 0% |

**🛒 Script 3: Add to Cart**

| **Step** | **Transaction** | **TPS** | **Min (s)** | **Max (s)** | **Median (s)** | **Avg (s)** | **Hits** | **✅ Pass %** | **❌ Fail %** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Open URL | 10.11 | 0.89 | 2.09 | 1.19 | 1.78 | 48 | 100% | 0% |
| 2 | Click Sign In | 8.2 | 0.1 | 0.73 | 0.31 | 0.76 | 47 | 100% | 0% |
| 3 | Login | 7.5 | 0.1 | 5.9 | 0.82 | 1.12 | 44 | 100% | 0% |
| 4 | Click Category | 7.1 | 0.1 | 0.6 | 0.4 | 0.57 | 21 | 100% | 0% |
| 5 | Click Product ID | 6.6 | 0.1 | 0.53 | 0.4 | 0.51 | 39 | 100% | 0% |
| 6 | Click Add to Cart | 6.2 | 0.1 | 0.7 | 0.37 | 0.42 | 36 | 100% | 0% |
| 7 | Click Sign Out | 5.1 | 0.27 | 0.82 | 0.39 | 0.45 | 33 | 100% | 0% |

**💳 Script 4: Checkout**

| **Step** | **Transaction** | **TPS** | **Min (s)** | **Max (s)** | **Median (s)** | **Avg (s)** | **Hits** | **✅ Pass %** | **❌ Fail %** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Open URL | 10.11 | 0.86 | 1.15 | 1.09 | 1.09 | 4 | 100% | 0% |
| 2 | Click Sign In | 8.2 | 0.1 | 0.32 | 0.32 | 0.27 | 3 | 100% | 0% |
| 3 | Login | 7.5 | 0.63 | 0.63 | 0.63 | 0.63 | 2 | 100% | 0% |
| 4 | Click Category | 7.1 | 0.32 | 0.32 | 0.32 | 0.32 | 2 | 100% | 0% |
| 5 | Click Product ID | 6.6 | 0.39 | 0.39 | 0.39 | 0.39 | 2 | 100% | 0% |
| 6 | Click Add to Cart | 6.2 | 0.28 | 0.28 | 0.28 | 0.28 | 2 | 100% | 0% |
| 7 | Proceed to Checkout | 6.1 | 0.42 | 0.42 | 0.42 | 0.42 | 2 | 100% | 0% |
| 8 | Payment & Continue | 5.9 | 0.32 | 0.32 | 0.32 | 0.32 | 2 | 100% | 0% |
| 9 | Click Confirm | 5.6 | 0.42 | 0.42 | 0.42 | 0.42 | 2 | 100% | 0% |
| 10 | Click Sign Out | 5.2 | 1.55 | 1.55 | 1.55 | 1.02 | 2 | 100% | 0% |

**4️⃣ CPU, Memory, Network Utilization**

| **📊 Metric** | **🌐 Web Server (S1)** | **💻 App Server (S2)** | **🗄 Database Server (S3)** |
| --- | --- | --- | --- |
| **Min Memory** | 12% | 15% | 18% |
| **Max Memory** | 50% | 60% | 70% |
| **Avg Memory** | 36% | 42% | 49% |
| **Min CPU** | 45% | 48% | 50% |
| **Max CPU** | 78% | 82% | 84% |
| **Avg CPU** | 68% | 70% | 72% |
| **Min Network** | 110 KB/s | 125 KB/s | 128 KB/s |
| **Max Network** | 190 KB/s | 222 KB/s | 225 KB/s |