🚀 Performance Test Execution

**1️⃣ Prerequisites Before Test Run**

Before starting execution, ensure the following are complete:

1. 🖥 **Test Environment Ready & Stable** – All required servers, services, and dependencies are up.
2. 📂 **Test Data Prepared** – Required datasets available and validated.
3. 👥 **Thread Group Configured** – Correct number of virtual users set.
4. 🔄 **Parameterization Complete** – All dynamic input variables in place.
5. 🔗 **Correlation Verified** – All session-specific and dynamic values handled.
6. 🩺 **Smoke Test Done** – Script works correctly with **1 user** before scaling load.
7. 🔀 **Scripts Merged & Synced** – Final combined test plan ready for execution.

**2️⃣ Possible Thread Groups for Performance Testing**

| **🧩 Thread Group** | **📜 Description** | **🎯 Use Case** |
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| **Ultimate Thread Group** | Fine-grained control over **ramp-up**, **hold time**, and **shutdown**. | Complex load patterns, Load/Stress/Endurance tests. |
| **Concurrency Thread Group** | Set **target concurrent users** and ramp-up time. | Fixed concurrent user simulation. |
| **Stepping Thread Group** | Gradually increase load in steps (e.g., +5 users every 30s). | Gradual ramp-up observation. |
| **Open Model Thread Group** (Arrivals) | Continuous influx of **new users** at a set rate. | Real-world traffic modeling. |
| **Arrival Thread Group** | Simulates a fixed number of **hits over time**. | Target hit-based performance testing. |

**3️⃣ Types of Performance Tests & Suggested Thread Groups**

| **⚡ Test Type** | **📜 Purpose** | **🧩 Suggested Thread Group** |
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| **Load Test** | Validate app performance under expected load. | Ultimate Thread Group. |
| **Stress Test** | Push system beyond limits to find breaking point. | Ultimate Thread Group, Arrival Thread Group. |
| **Endurance (Soak) Test** | Run with normal load for extended duration (8–24 hrs) to check for memory leaks, degradation. | Ultimate Thread Group, Arrival Thread Group. |