# Apollo Trade Processing System - Capacity Plan (v3.0)

## Document Header

Application ID: EQTRADE-APOLLO

Application Name: Apollo Trade Processing System

Business Criticality: BC4

Owner / Approver: DevOps Platform Team, Infra Head, Domain Service Owner

Validity: Valid From Dec 2024 | Next Review Dec 2025 | Frequency – Annual

Service Mapped to IBS: Yes

## 1. Introduction

Apollo SCOT (Standard Chartered Online Trading) is an omni-channel trading platform allowing clients to trade equities across multiple exchanges in Asia, Europe, and North America. It provides both front- and back-office functionalities used by branches, call centres, and dealing desks.

### 1.2 Non-Functional Requirements (NFR) Details

NFR Alignment: CPU ≤ 80 %, Memory ≤ 75 %, Response ≤ 10 seconds.

### 1.3 Scope

Service Overview: Apollo platform supports equities trading in SG and UAE with branch and call-centre integration.

Service Dependants: eBBS, ForgeRock, Strauss, Splunk, OUD, OneCert, MAR, UBS (external), LABCI (external), TREP.

Capacity Monitoring: Monitored through Grafana and Splunk dashboards; monthly review by InfraOps.

### 1.4 Infrastructure Components

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S/No | Servers / CIs | Description | Hosting Model | Data Centre |
| 1 | APOLLO-APP01/02 | Application servers | AWS Cloud (HK region) | AWS HK |
| 2 | APOLLO-DB01 | Database 1 TB EFS/S3 | AWS Cloud | AWS HK |
| 3 | APOLLO-WEB01 | Web Frontend | AWS Cloud | AWS HK |

### 1.5 Capacity Forecast Inputs

|  |  |  |
| --- | --- | --- |
| Capacity Forecast | Applicable (Y/N) | Comment |
| Business Forecast | Y | Projected 20 % increase in trade volume in FY25 based on regional expansion (SG & UAE). |
| Workload Forecast | Y | Based on historical utilization trends (+15 % YoY growth in transactions). |
| Others / Seasonal Events | NA | No seasonal or promotional spikes recorded; routine market peak hours only. |

## 2. Capacity Analysis

Peak Hours: 8:15–9:45 AM, 4:00–5:30 PM, 9:15–10:15 PM, 3:45–5:15 AM (SGT).

Total Concurrent Users: 12,960 (SG) + 2,600 (AE) + 2,600 (MY).

Transactions per Year: 9.86M (SG) + 5M (AE) + 5M (MY).

Performance Target: Average response ≤ 10 seconds.

|  |  |  |  |
| --- | --- | --- | --- |
| Component | Baseline Utilization | Threshold | Remarks |
| App Server | CPU 48 %, MEM 71 %, Storage 62 % | 80 % | Stable utilization within SLA |
| DB Server | CPU 52 %, MEM 65 %, Storage 68 % | 80 % | Healthy, monitored via CloudWatch |
| Web Server | CPU 38 %, MEM 57 %, Storage 54 % | 80 % | Operating efficiently within limits |

## 3. Detailed Capacity Requirements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Component | Resource / Service | Hosting DC / Geo | Quantified Growth | Timeline | Comments |
| App Server | CPU + RAM | AWS HK | +20 % | Q1 2026 | Increase to handle user concurrency |
| DB Server | Storage | AWS HK | +25 % | Q2 2026 | Growth due to transaction data and archival |
| Web Server | N/A | AWS HK | 0 % | - | Current capacity sufficient |

## 4. Capacity Reviews

Monthly capacity review by InfraOps and Application Owner. Metrics reviewed: CPU, Memory, Storage, Network IO. If utilization exceeds 80 % for 3 consecutive months, mitigation plans are initiated via ServiceNow. Annual review scheduled for Dec 2025.

Cost Optimization: Evaluate migration to container-based infrastructure in FY26 for scalability.

## 5. Appendix / Supporting Info

Linked Docs: Apollo Capacity Requirement (Dec 2024), InfraOps Monthly Reports, Apollo NFR v2.1.

BIA Reference: Apollo BIA ID #BIA-2025-09.

Upstream: eBBS, ForgeRock, Strauss, OUD, OneCert, MAR, UBS.

Downstream: LABCI (external), TREP.