

5 Test Scenarios and Results

The following are scenario configurations and data used for testing.

5.1 Originations FileWatcher, New Application

This is a scenario creating a large number of applications in screenless mode coming from several large input files, with 90 threads. This scenario is using the Originations Alpha solution with Decision calls and simple enrichment calls (with 2 seconds bureau delay). The maximum collection size is increased to 1000 from 10 in the previous performance report.

5.1.1 Scenario Design – Common Settings

| Setting | Description |
|--|---|
| Solution | OAS |
| Service ID, BPF associated | 1, New Application |
| Hardware Configuration | 1 |
| Scenario Configuration | |
| Database | Oracle 11g R2 x64 |
| Number of Applications DB Pre-loaded | 1,000,000 |
| Bureau Delay | 2 s |
| Bureau Record Size | 5 KB |
| Multi-Tenant Environment | No (Single-Tenant) |
| RDS Captured for raw, parsed, enriched | Enabled |
| Scenario Data | |
| Test Volume | 600,000 applications (60 files, each file contains 10,000 applications) |

Performance Benchmark Report

Originations, Connectivity and Enrichment

5.1.2 Scenario Design – Scenario Specific Settings

| Setting | Description |
|-----------------------------------|-----------------------|
| Calling system concurrent threads | N/A |
| Connectivity threads | 1 for file monitoring |
| BPS Threads | 90 |
| Connectivity to BPS Record Chunk | 1000 records |
| Logs and traces | Disable |

5.1.3 Results and Analysis

Average Application per Second is **34.07** APS. The memory and CPU utilization is stable throughout the execution period. Network utilization and disk IO are well within the capacity of the hardware and resources.

Processing Time

The results have been achieved with the following settings:

| Parameter | Description |
|--------------------------------|---|
| Average response time per file | 293.5 s |
| Average Application per Second | 34.07 |
| Total test duration | 4h 53min |
| Total applications passed | 60 files (each file contains 10,000 applications) |
| Total applications failed | 0 file |

Resource Consumption

The following table shows the **average** and **standard deviation** resource consumption in specific software. For details, refer to the charts section:

Performance Benchmark Report

Originations, Connectivity and Enrichment

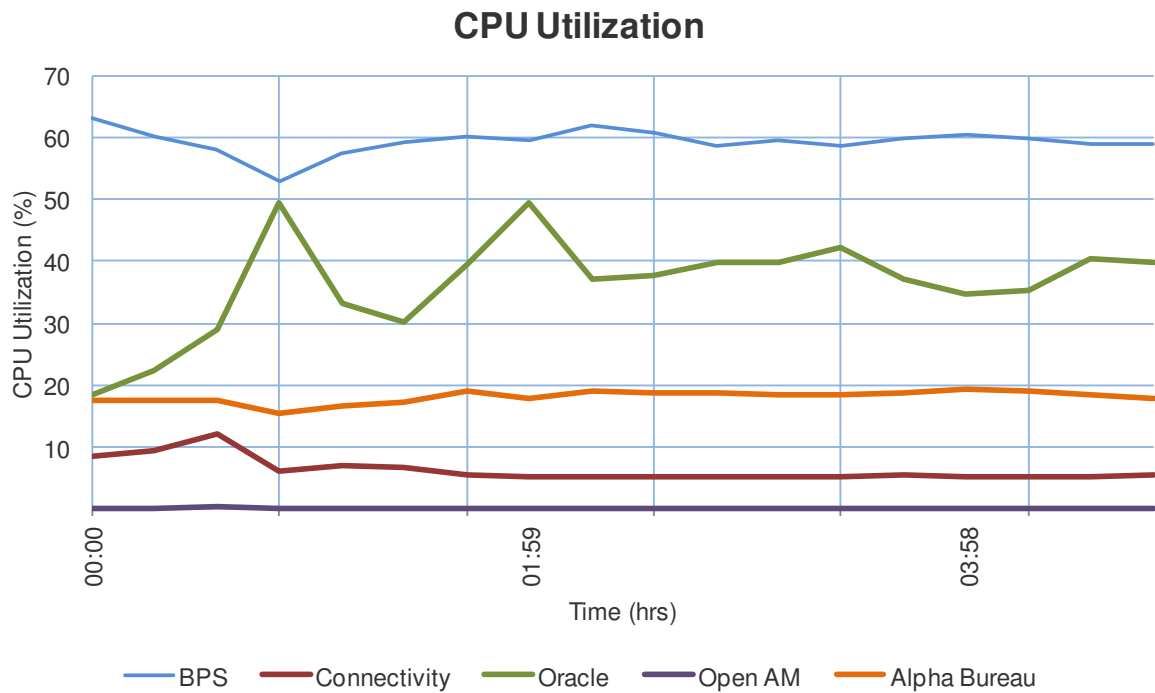
| Hardware Resource | BPS | WE | Connectivity | Database (Oracle) | OpenAM | Alpha Bureau |
|---------------------------------|------------------|------------|--------------------|-------------------|---------------------|---------------------|
| | Average/SD | Average/SD | Average/SD | Average/SD | Average/SD | Average/SD |
| CPU Utilization (%) | 59.32/ 14.61 | N/A | 6.331/ 2.766 | 36.24/ 14.03 | 0.16/ 0.395 | 18.10/ 6.731 |
| Committed Memory (GB) | 6.164/ 0.2987 | N/A | 2.216/ 0.0057 | 6.928/ 0.0717 | 0.7388/ 0.00383 | 0.8562/ 0.03312 |
| Disk I/O ReadBytes (MB) | 0.0185/ 0.716 | N/A | 0.00235/ 0.1186 | 2.499/ 8.299 | 0.00009/ 0.00399 | 0.00014/ 0.00596 |
| Disk I/O WriteBytes (MB) | 0.523/ 0.155 | N/A | 0.0462/ 0.429 | 4.238/ 1.440 | 0.00069/ 0.00306 | 0.079/ 0.0361 |
| Network I/O Bytes Received (MB) | 0.819/ 0.182 | N/A | 0.459/ 0.165 | 0.525/ 0.121 | 0.00128/ 0.00022 | 0.0205/ 0.00607 |
| Network I/O Bytes Sent (MB) | 0.8029/ 0.171 | N/A | 0.649/ 0.134 | 0.2313/ 0.0641 | 0.00955/ 0.00108 | 0.1239/ 0.0382 |

Performance Benchmark Report

Originations, Connectivity and Enrichment

5.1.4 Charts

CPU Utilization



- The average CPU utilization is stable with the exception of the Oracle CPU when the scheduled jobs are executing.
- CPU utilization on the BPS machine is 59% on average during the whole execution.
- CPU utilization on the Oracle machine is 36% on average and there are some peaks to 49%.
- Alpha Bureau / OpenAM / Connectivity machines are quite low on utilization.