



PEOPLESOFT GENERAL LEDGER 8.4 (WITH COMBINATION EDITING) USING DB2 UDB FOR WINDOWS ON AN IBM eSERVER xSERIES x440

As the world's leading provider of application software for the Real-Time Enterprise, PeopleSoft delivers high performance solutions that exceed our customers' expectations. Business software must deliver rich functionality with robust performance maintained at volumes representative of customer environments.

PeopleSoft benchmarks demonstrate our software's performance characteristics for a range of processing volumes with a specific platform configuration. Customers and prospects can use this information while planning the software, hardware, and network configurations necessary to support their processing volumes.

The primary objective of our benchmarking effort is to provide as many data points as possible to support this important decision.



SUMMARY OF RESULTS

Benchmark (English)	PeopleSoft General Ledger 8.4 (with Combo. Editing)	
	Large Volume Model	
	Edit & Post	1,000,000 lines – 7.38 minutes
	Journal Lines/Hour	8,126,411 per hour
Référence d'exécution (Français)	PeopleSoft Comptabilité Générale et Analytique 8.4 (avec Combination Editing)	
	Grand modèle de données	
	Edit & Post	1.000.000 lignes – 7,38 minutes
	Lignes/heure	8.126.411 par heure
Benchmark-Test (Deutsch)	PeopleSoft Hauptbuch 8.4 (mit Validierung von ChartField-Kombinationen)	
	Datenbankmodell "Large"	
	Validieren & Buchen	1.000.000 Zeilen – 7,38 Minuten
	Journalzeilen/Stunde	8.126.411 pro Stunde
Patrón de rendimiento (Español)	PeopleSoft Contabilidad General 8.4 (con Combo. Editing)	
	Modelo con volumen superior de datos	
	Edit & Post	1.000.000 líneas – 7,38 minutos
	Líneas/hora	8.126.411 por hora
Benchmark (Português)	Contabilidade 8.4 (com Combo. Editing), do PeopleSoft	
	Modelo de Grande Volume	
	Edit & Post	1.000.000 linhas – 7,38 minutos
	Linhas/hora	8.126.411 por a hora

BENCHMARK PROFILE

In September 2002, PeopleSoft and IBM conducted a benchmark in Pleasanton, CA to measure the batch performance of the Edit (with Combination Editing) and Post processes in PeopleSoft General Ledger 8.4, using IBM® DB2® Universal Database Enterprise Edition Version 7.2 w/FP 6 for Windows on an 8-way IBM® eServer xSeries x440 server, running Microsoft® Windows 2000 Datacenter Server w/SP 2.

The benchmark measured runtimes for one standard database model representing a large organization. Testing was conducted in a controlled environment with no other applications running. The tuning changes, if any, were approved by PeopleSoft Development and will be generally available in a future release or update. **The goal of this performance test was to obtain reference performance results for PeopleSoft General Ledger 8.4 on DB2 UDB for Windows.**

Figure 1 shows the resulting throughput with the Combination Editing logic.

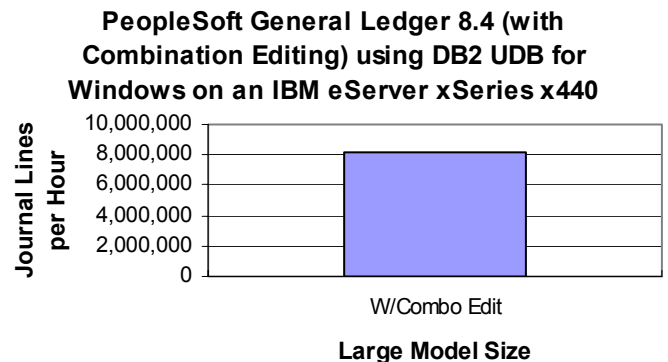


Figure 1: Journal Line Processing Rate

METHODOLOGY

PeopleSoft 8, General Ledger batch processes can be initiated either from a browser or on the server. For this benchmark, all jobs were initiated from a browser.

The Edit process was executed in fourteen parallel streams and the Post process was executed in ten parallel streams for this benchmark. In this benchmark, no errors were generated during the Journal Edit process.

Batch processes are background processes, requiring no operator intervention or interactivity. Results of these processes are automatically logged in the database. The runtimes are posted to the Process Request database table where they are stored for subsequent analysis.

PROCESSES

The two General Ledger processes measured in this benchmark are as follows:

Journal Edit (GL_JEDIT): Validates journal entries, including items such as ChartField values, control totals and debit/credit balancing. If a journal is flagged with an error status, it can be corrected using the GL online correction feature. The **Combination Editing** feature/process uses ChartField combination rules to validate ChartField combinations (by 'Account' and 'Department').

Journal Post (GLPPPOST): Summarizes detail line activity and either inserts a new row or updates an existing row in the ledger. There is one ledger row for each unique combination of ChartField values, accounting period, and fiscal year. In this benchmark, the Post step updated 40% of the existing ledger rows with 60% being inserts. This is typical for companies that perform the edit and post functions on a frequent basis.

BATCH RESULTS

The table below contains the actual runtimes, in minutes, for each process. It also shows how many journal lines were executed per minute and, by linear extrapolation, per hour.

Process	With Combo Edit
Edit Journal	4.96
Post Journal	2.42
Total	7.38
Journal Lines /Min	135,440
Journal Lines /Hr	8,126,411

Table 1: Process Runtimes

The testing was conducted in a controlled environment with no other applications running. Performance may vary on other hardware and software platforms and with other data composition models.

SERVER PERFORMANCE

PeopleSoft General Ledger 8.4 (with Combination Editing) using DB2 UDB for Windows on an IBM eServer xSeries x440

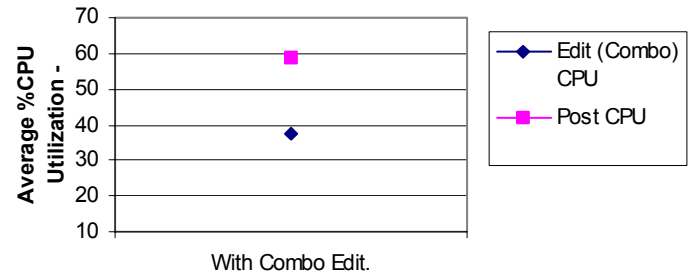


Figure 2: CPU Utilization

The % CPU Utilization is the average across the eight processors for the duration of each batch process. The test implementation may have been slightly I/O bound.

DATA COMPOSITION DESCRIPTION

The table below describes the standard data composition model for the large database size tested in this benchmark. 60% (600,000) of the transactions are in a single business unit.

Number of			Large
Business Units			33
Ledger Rows (2 years)*			14,100,000
Existing Journal Rows (2 Runs)			2,000,000
Journal Transactions per Run			1,000,000
Journal Lines per Header	Total for all Accounts	100%	500
	Revenue (-)	30%	150
	Expense (+)	60%	300
	Asset (+)	6%	30
	Liability (-)	2%	10
	Equity (-)	2%	10
Journal Headers			2,000
Unique Chartfields Combinations			200,000
New Unique Chartfields Combinations			100,000
Number of Concurrent Processes			14
Number of Journal Headers per Concurrent Process			200
Ratio of first business Unit versus Number of Concurrent Processes**			6:14
Steps per Group			6

Table 2: Data Composition

LEDGER COMPOSITION

The number of ledger rows represents the base level of the ledgers prior to transaction processing. This base level includes 3 ledgers (Local, Budgets and Forecast), where Budget rows are equivalent to Local rows; **Forecast rows are equivalent to Local rows**. However, the journal transactions were posted to a single Local ledger. The number of ChartFields remained constant throughout the testing. The ledger rows were distributed into two years of 12 periods for each year 1997 and 1998.

Assume Local represents 1/3 of the total ledger rows and the remaining 2/3 are within the Budget and Forecast ledger. For example, in a total of 9,000,000 ledger rows 3,000,000 would be Local, 3,000,000 would be Budgets, and 3,000,000 rows in a Forecast ledger.

JOURNAL COMPOSITION

The number of journal rows to be processed represents the base level prior to transaction processing. The number of journal transactions processed is representative of a typical company within each category. The number of journal lines per header determines the ratio of detail journal lines per header. For example, 50,000 transactions would consist of 500 unique journals' headers with 100 detail lines each. **Existing historical data for Journals consisted of data spread evenly over 2 days (12-05-98 to 12-06-98). Journals to be processed during the benchmark Edit/Post process are for the periods of 12-07-98 through 12-08-98.**

PERFORMANCE TOOLKIT ENVIRONMENT

HARDWARE CONFIGURATION

The IBM® eServer xSeries model x440 was used as the database server. It was equipped with the following:

- 8 × 1.6 Gigahertz Intel® Xeon™ Processors MP, each with 1 Megabyte of Level-3 Cache, and an average of 8 Megabytes of Level-4 Cache (64 MB total per chassis)
- 8 Gigabytes of Memory
- ~2,700 Gigabytes of total Disk Space (30 × 18 GB + 60 × 36 GB + 2 × 18 GB internal)
- 1 × IBM TotalStorage FC2-133 Host Bus Adapter (FASfT) (Driver 8.1.4.60)
- 1 × SCSI Disk Controller

SOFTWARE VERSIONS

PeopleSoft General Ledger w/Combination Editing 8.4

PeopleTools 8.4

IBM® DB2® Universal Database Enterprise Edition Version 7.2 w/FP 6 for Windows

Microsoft® Windows 2000 DataCenter Server w/SP 2

The logo for PeopleSoft, featuring the word "PeopleSoft" in a blue, serif font with a registered trademark symbol.

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