ORACLE | PeopleSoft.
PeopleSoft. | Enterprise

Sun
ORACLE

ORACLE ENTERPRISE BENCHMARK REV. 1.0

ORACLE ENTERPRISE FINANCIALS 9.0 (DAY-IN-THE-LIFE BENCHMARK) USING ORACLE11g ON ORACLE'S SUN SPARC ENTERPRISE M-SERIES SERVERS

As a global leader in e-business applications, Oracle is committed to delivering high performance solutions that meet our customers' expectations. Business software must deliver rich functionality with robust performance. This performance must be maintained at volumes that are representative of customer environments.

Oracle benchmarks demonstrate our software's performance characteristics for a range of processing volumes in a specific configuration. Customers and prospects can use this information to determine 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

Day-in-the-Life Benchmark	PeopleSoft Enterprise Financials 9.0	
Batch (Close-the-Books)	Baseline, Batch Only	Batch with 1,000 Online Users
	21.74 minutes	**23.30 minutes**
	7,059,591 Journal Lines per Hour	**6,597,239 Journal Lines per Hour**
	6,898,060 Ledger Lines per Hour	**6,436,236 Ledger Lines per Hour**
With Reporting	33.09 minutes	34.72 minutes

Testing showed that concurrent online transactions had a minimal impact on the "Close-the-Books" batch processing.

BENCHMARK PROFILE

In November 2010, Oracle conducted a benchmark in Burlington, MA to measure the concurrent batch and online performance of selected processes in Oracle's PeopleSoft Enterprise Financials 9 with Oracle11*g*™ 11.2.0.1. An eight processor Oracle Sun SPARC Enterprise M5000 server was used for the database server. Oracle's Sun SPARC Enterprise M4000 was used for the application server/web server. The database server and the application server/web server each utilized Solaris 10 10/09. Oracle's Sun Storage F5100 Flash Array was used for the application database.

This 'Day-in-the-Life' benchmark measured the concurrent batch and online performance for a large database model. *This scenario more accurately represents a production environment where users and scheduled batch jobs must run concurrently. This benchmark measured performance results during a 'Close-the-Books' process.*

Testing was conducted in a controlled environment with no other applications running. The tuning changes, if any, were approved by Oracle Enterprise Development and will be generally available in a future update. **The goal of this Benchmark was to obtain performance results for Oracle's PeopleSoft Enterprise Financials 9 on Oracle's Sun SPARC Enterprise M-series servers.**

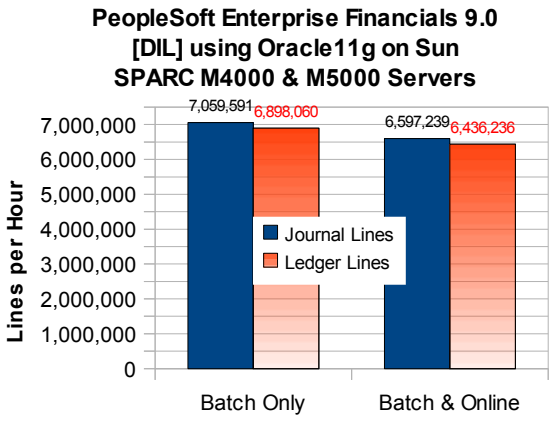

Figure 1: PeopleSoft Enterprise Financials 9.0 Processing Rates

BATCH METHODOLOGY

PeopleSoft Enterprise Financials 9 batch processes can be initiated from the SQL*Plus command line. In this benchmark, all batch processes except the "Consolidations" used the SQL*Plus command line interface to initiate Application Engine (AE), SQR, nVision and COBOL jobs. The "Consolidations" batch process was initiated from a web browser.

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.

BATCH BUSINESS PROCESSES

The PeopleSoft Enterprise Financials 9 processes included in this benchmark are as follows:

Journal Generator: (AE) This process creates journals from accounting entries generated from various data sources, including non-PeopleSoft systems as well as PeopleSoft applications. In the benchmark, the Journal Generator (FS_JGEN) process is set up to create accounting entries from Oracle's PeopleSoft applications in the same database, such as PeopleSoft Enterprise Payables, Receivables, Asset Management, Expenses, Cash Management. The process is run with the option of Edit and Post turned on to edit and post the journals created by Journal generator. Journal Edit is an AE program and Post is a COBOL program.

Allocation: (AE) This process allocates balances held or accumulated in one or more entities to more than one business unit, department or other entities based on user-defined rules.

Journal Edit & Post: (AE & COBOL) Journal Edit validates journal transactions before posting them to the ledger. This validation ensures that journals are valid, for example: valid ChartFields values and combinations, debits and credits equal, and inter/intra-unit balanced, Journal Post process posts only valid, edited journals, ensures each journal line posts to the appropriate target detail ledgers, and then changes the journal's status to posted. In this benchmark, the Journal Edit & Post is also set up to edit and post Oracle's PeopleSoft applications from another database, such as PeopleSoft Enterprise Payroll data.

Summary Ledger: (AE) Summary Ledger processing summarizes detail ledger data across selected GL BUs. Summary Ledgers can be generated for reporting purposes or used in consolidations.

Consolidations: (COBOL) Consolidation processing summarizes ledger balances and generates elimination journal entries across business units based on user-defined rules.

SQR & nVision Reporting: Reporting will consist of nVision and SQR reports. A balance sheet, and income statement, and a trial balance will be generated for each GL BU by SQR processes GLS7002 and GLS7012. The consolidated results of the nVision reports are run by 10 nVision users using 4 standard delivered report request definitions such as BALANCE, INCOME, CONSBAL, and DEPTINC. Each of the nVision users will have ownership over 10 Business Units and each of the nVision users will submit multiple runs that are being executed in parallel to generate a total of 40 nVision reports.

BATCH JOB ALLOCATION

Each of the batch processes except for Consolidations was run as parallel job streams. The SQR and nVision processes were run as parallel job streams, and the total elapsed time of the report job streams is from the start of the first report process until the completion of the last report process. They also, along with the Journal Generator process, run concurrent parallel job streams one after the other until all are complete.

For example, SQRs are run as 7 parallel job streams, followed by another 7 job streams, followed by another 7 job streams, etc., 28 times; followed by the final 4 parallel job streams ($7 \times 28 + 4 = 200$ job streams).

Close the Books	# Jobs	
Process	Concurrent	Total
Journal Generator	16	360
Journal Edits	16	100
Allocation	10	10
Allocation/Journal Edits & Post	10	10
Summary Ledger	16	100
Consolidation	1	1
SQRs	7	200
nVision Reports	10	40

Table 1: Batch Job Streams

BATCH RESULTS

Note that during execution, the Online transactions are creating rows for the month of January of the current year while Batch is processing rows to close the books of the previous year.

					Batch Only				Batch + Online			
Close the Books				**Time**	**Hourly**	**Hourly**	**Hourly**	**Time**	**Hourly**	**Hourly**	**Hourly**
Process	**Journal Lines**	**Ledger Lines**	**Summary Ledger Lines**	**Min.**	**Journal Lines**	**Ledger Lines**	**Summary Ledger Lines**	**Min.**	**Journal Lines**	**Ledger Lines**	**Summary Ledger Lines**
Journal Generator	765,694	646,890		7.05	6,516,545			7.33	6,267,618		
Journal Edits & Post of HCM journals	7,600	69,493		2.6	175,385	1,603,685		2.8	162,857	1,489,136	
Allocation	1,783,180			7.07	15,133,069			8.08	13,241,436		
Journal Edits & Post of Allocation journals		1,782,769		2.92		36,632,240		2.97		36,015,535	
Summary Ledger			179,018	0.98			10,960,286	0.97			11,073,278
Consolidation	1,451	245		1.12				1.15			
Batch Subtotal	**2,557,925**	**2,499,397**	**179,018**	**21.74**	**7,059,591**	**6,898,060**	10,960,286				
Online Transactions	**4,003**	**8**	**0**								
Batch + Online Sub.	**2,561,928**	**2,499,405**	**179,018**					**23.3**	**6,597,239**	**6,436,236**	11,073,278
SQRsGL_LEDGER				11.15				11.17			
SQRsGL_TBAL				3.73				3.82			
nVision Reports				8.9				8.92			
Subtotal				11.35				11.42			
Overall Total:				**33.09**				**34.72**			

Table 2: Batch & Batch+Online Processing Volumes and Results

ONLINE METHODOLOGY

HP's Mercury Interactive LoadRunner® was used as the load driver, simulating concurrent users. It submitted online business transactions at an average rate of one transaction every 3–15 minutes for each LoadRunner user.

HP's Mercury Interactive QuickTest® Professional was used to automatically submit transactions and to record the benchmark measurements on the client PC.

Measurements were recorded when the user load was attained and the environment reached a steady state.

Figure 2 shows a typical 3-tier benchmark configuration. This benchmark was run using a physical 3–tier configuration; with a dedicated database server, and a combined application server/web server on a separate server.

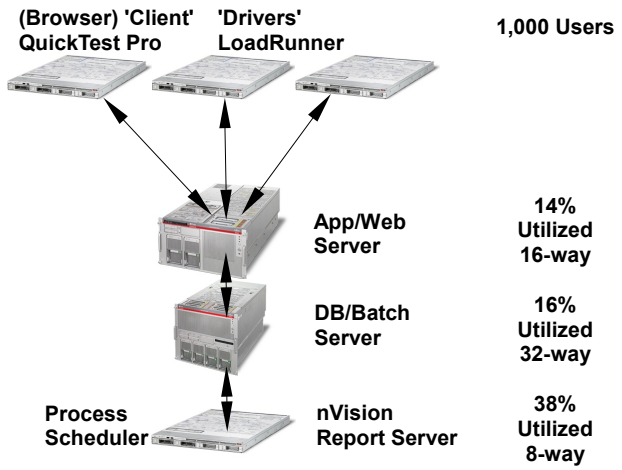

Figure 2: 4-Tier Configuration

Load times were measured from the time the user clicks a hyperlink or push button until the new HTML page has been rendered. Update times were measured from the time the user clicks the <SAVE> button until the new HTML page has been rendered. In this benchmark report, the total transaction processing time is reported. Total transaction processing time covers the overall time required to complete the online business process/transaction excluding the time taken for login and logout.

Measurements were recorded on the servers when the user load was attained and the environment reached a steady state.

ONLINE BUSINESS PROCESSES

Oracle defines a business transaction as a series of HTML pages that guide a user through a business process, such as entering a new asset. The thirty-six PeopleSoft Enterprise Financials 9 business transactions tested in this benchmark are as follows:

ASSET MANAGEMENT (AM)

Asset Additions: Add capitalized assets automatically, with most of the information defaulted from an asset profile.
AM01: Asset Add

Asset Update: Change an existing asset's Tag number
AM02: Asset Cost/Adjust Transfer

Asset Inquiry: Search an existing asset..
AM03: Asset Search: Search 3 different assets and drill down to Asset Accounting entries
AM04: Calculate NBV: Retrieve and review Depreciation information and Depreciation Summary by Cost type of an asset In Service. Calculate Net Book Value (NBV) of the asset for 6 years.

PAYABLES (AP)

Maintain Vendor Information: Create or update profiles for all types of vendors.
AP01: Vendor Add

Review Vendor Information: Review payment status, then link to detailed voucher information.
AP02: Payment Inquiry
AP03: Voucher Inquiry

Enter Vouchers: Record vendor invoice information on pages that are the equivalent of electronic voucher forms.
AP04: Voucher Entry: Add a Voucher of 5 lines
AP05: Voucher Entry with On-Demand Processing to GL: Add a Voucher and process it through Matching, Post Voucher, and Post to GL to see final results.

RECEIVABLES (AR)

Maintain Customers: Establish and maintain customer processing requirements and attributes.
AR01: Customer Add
AR02: Customer Update

Apply Payments: Apply payments to open items through the use of a payment worksheet.
AR03: Apply Payment: Create a worksheet to apply an un-indentified payment to pay for 6 items

Customer Item Inquiry: Sift through a customer's account looking for trends in open items, closed items, or both.
AR04: Inquire Customer Balance
AR05: Build Maintenance Worksheet with On demand processing to GL: Create a worksheet to match 2 credits with 3 debits and write off the remaining balance. Save and Post to GL.

ONLINE BUSINESS PROCESSES CONT.

GENERAL LEDGER (GL)

Journal Entry: Enter Journal Header and line information in domestic or foreign currencies.
GL01: Journal Entry
GL02: Journal Entry with Remote Call to process Journal Edit and Journal Post.

Ledger Inquiry: Pinpoint ledger balances using intuitive views based on specific Chart Field combinations.
GL03: Inquire Ledger

Journal Inquiry: Access detailed journals lines based on the Journal Header selected.
GL04: Inquire Journal

EXPENSES (EX)

Employee Self-Service
Expense Entry: - Enter a variety of Travel-related expenses.
EX01: Expense Entry: Enter 5 types of expenses with many detailed lines for each type of expense and submit for approval

Cash Advance Entry: - Enter details for a cash advance and submit for approval.
EX02: Cash Advance Entry and submit for approval

Time Entry: - Enter 4 lines of details for two projects and submit for approval.
EX03: Time Entry and submit for approval

Travel Auth Entry: - Enter 5 types of travel expenses (Airline ticket, Car rental, Hotel, Lunch, Dinner for 3 days of travel) for an extended trip and submit for approval.
EX04: Travel Authorization Entry

Manager Self-Service
Expense Approval: - Select an expense report and click the 'Approve Report' button.
EX05: Expense Approval

Cash Advance Approval: - Select a cash advance and click the 'Approve Request' button.
EX06: Cash Advance Approval

Time Entry Approval: - Select a time report and click the 'Approve Report' button.
EX07: Time Entry Approval

Travel Auth Approval: - Select a travel authorization and click the 'Approve Request' button.
EX08: Travel Authorization Approval

CASH MANAGEMENT (CM)

Bank Account Add: Select an existing bank and add a new Bank Account.
CM01: Bank Account Add

EFT Transfers: Add and EFT request and change the default amount then hit 'Save.'
CM02: EFT Transfers

Bank Reconciliation: Select a specified bank and account. Search on a date range and select one bank statement from the returned rows to run the reconciliation on.
CM03: Bank Reconciliation with remote call to run Reconciliation

Cash Position: Select a specified worksheet, node and calculation preference. Push the 'Calculate' button.
CM04: Cash Position Worksheet

The following table shows how the business transactions were weighted in the measurements of this benchmark. The weightings are intended to simulate a typical user environment.

Application	Transaction	% within App.	% Overall	Pacing in Min.
AM	AM01	15%	0.75%	12
5%	AM02	50%	2.5%	6
	AM03	25%	1.25%	4
	AM04	10%	0.5%	12
AP	AP01	5%	1.25%	12
25%	AP02	10%	2.5%	4
	AP03	10%	2.5%	4
	AP04	74%	18.5%	6
	AP05	1%	0.25%	4
AR	AR01	5%	0.75%	15
15%	AR02	10%	1.5%	12
	AR03	20%	3%	6
	AR04	55%	8.25%	12
	AR05	10%	1.5%	12
GL	GL01	55%	11%	12
20%	GL02	5%	1%	15
	GL03	25%	5%	6
	GL04	15%	3%	12
EX	EX01	20%	6%	6
30%	EX02	5%	1.5%	4
	EX03	45%	13.5	12
	EX04	5%	1.5%	12
	EX05	5%	1.5%	6
	EX06	5%	1.5%	4
	EX07	10%	3%	4
	EX08	5%	1.5%	12
CM	CM01	10%	0.5%	15
5%	CM02	20%	1%	3
	CM03	40%	2%	15
	CM04	30%	1.5%	15
Totals:			**100%**	

Table 3: Business Transaction Mix

ONLINE RESULTS

Table 4 shows the step-by-step processing time, in seconds, for each business transaction.

Transaction	Single User (sec)	1,000 Users (sec)		1,000 Users & Batch Activity (sec)
AM01_BasicAdd				
Add_New_Asset	0.66	0.66		0.66
Capitalize	0.85	0.81		0.71
Save	1.01	1.13		1.02
AM02_CostAdustment				
Search	0.78	0.86		0.8
Save_Cost_Adjustment	0.68	0.7		0.73
Review_Costs_History	0.75	1.06		1.12
AM03_AssetSearch_3testcases				
Search_Asset_#1	1.84	1.89		2.12
Search_Asset_#2	1.67	1.74		2.11
Search_Asset_#3	1.6	1.67		1.89
AM04_CalculateNBV				
DepSumByCostType	0.67	0.67		0.67
SearchForDeprSummary	0.68	0.67		0.64
CalculateNBV_2003	0.65	0.66		0.66
CalculateNBV_2004	0.65	0.66		0.66
CalculateNBV_2005	0.65	0.65		0.65
CalculateNBV_2006	0.65	0.64		0.65
CalculateNBV_2007	0.64	0.65		0.65
AP01_AddVendor				
Add_New_Vendor	0.64	0.68		0.63
Save	0.77	0.71		0.67
AP02_PaymentInquiry				
Search	0.68	0.67		0.68
AP03_VoucherInquiry				
Search	0.69	0.69		0.69
AP04_AddVoucher				
Add_New_Voucher_with_5_lines	1.42	1.22		1.34
Save	1.36	1.29		1.22
AP05_VoucherEntryWithOnDemand_NoWait				
Add New voucher	0.67	0.68		0.67
Save Voucher	0.88	0.92		0.78
Select RealTimeRemoteProcess Journal Generate	0.68	0.68		0.68
Run Voucher Post	1.15	1.16		1.15

Table 4a: Baseline Business Transaction Times

ONLINE RESULTS CONTINUED

Table 4 shows the step-by-step processing time, in seconds, for each business transaction.

Transaction	Single User (sec)	1,000 Users (sec)		1,000 Users & Batch Activity (sec)
AR01_CustomerAdd				
Add_New_Customer	0.69	0.66		0.66
Save	0.81	0.8		0.68
AR02_UpdateCustomer				
Search_Existing_Customer	0.79	0.8		0.67
Save	0.84	0.85		0.71
AR03_ApplyPayment				
Search_PaymentbyDepositID	0.8	0.81		0.67
Build_Worksheet	1.08	1.03		1.12
Save_Worksheet	0.69	0.69		0.69
Save_Modified_Worksheet	0.89	0.94		0.9
AddMultipleNewRows	3.18	3.2		3.17
Save	1.12	1.15		1.22
Process Worksheet	0.65	0.65		0.66
AR04_InqCustBalance				
Search by Customer ID	0.67	0.67		0.67
AR05_MaintainWorksheet				
Add New Worksheet	0.66	0.65		0.65
Build Worksheet	1.11	1.13		1.08
Save	1.01	1.06		0.69
WriteOffRemainingAmt	0.75	0.74		0.69
Post To General Ledger	0.64	0.63		0.63
CM01_BankAcctAdd				
Add Bank Account	0.71	0.69		0.65
Save	1.06	0.83		0.89
CM02_EEFTTransfers				
Add Fees & Transfer Request	0.64	0.63		0.64
Save	0.67	0.66		0.66
CM03_AutoRecon				
Search by Bank Account & Date	0.69	0.73		0.67
Run Reconciliation	0.64	0.68		0.66
CM04_CashPositionWorksheet				
Calculate Cash Position	5.08	1.64		2.42
Save	0.68	0.71		0.64

Table 4b: Baseline Business Transaction Times

ONLINE RESULTS CONTINUED

Table 4 shows the step-by-step processing time, in seconds, for each business transaction.

Transaction	Single User (sec)	1,000 Users (sec)		1,000 Users & Batch Activity (sec)
EX01_ExpenseEntry_New				
AddExpenseReport	1.15	1.15		1.16
AddAirTravelExpense	1	0.98		0.71
AddHotelNight1	0.76	0.76		0.71
AddHotelNight2	0.85	0.78		0.72
AddAutoRental	0.93	0.92		0.74
AddLunch1	1.03	0.96		0.71
AddLunch2	1.12	1.09		0.78
AddDinner	1.2	1.12		0.83
SubmitTravelExpense	1.13	1.28		1.22
Save	2.02	2.21		2.15
EX02_CashAdvance				
AddCashAdvance	0.67	0.67		0.63
SubmitCashAdvance	0.68	0.69		0.67
Save	0.64	0.64		0.62
EX03_TimeEntry				
AddTimeEntry	0.63	0.62		0.62
Add2ndTimeEntryRow	0.77	0.69		0.63
SubmitTimeEntry	0.66	0.66		0.65
Save	1.13	1.13		1.19
EX04_TravelAuth				
AddTravelAuth	0.69	0.75		0.65
AddAirTravelExpense	0.73	0.77		0.67
AddHotelExpense	0.83	0.92		0.67
AddAutoRentalExpense	0.85	0.84		0.69
AddLunchExpense	0.68	0.67		0.66
AddDinnerExpense	0.86	0.94		0.77
Submit TravelAuth Expense	1.16	1.27		0.82
Save	1.13	1.22		1.2

Table 4c: Baseline Business Transaction Times

ONLINE RESULTS CONTINUED

Table 4 shows the step-by-step processing time, in seconds, for each business transaction. It also shows the approximate overall transaction rate.

Transaction	Single User (sec)	1,000 Users (sec)		1,000 Users & Batch Activity (sec)
EX05_ApprvExpEntry				
ApproveTransactions	1.84	2.04		2.15
ApproveButton	0.66	0.66		0.66
OK	1.17	1.2		1.35
EX06_ApprvCashAdv				
ApproveTransactions	1.77	2.09		2.17
ApproveButton	0.69	0.69		0.7
OK	0.69	0.82		0.74
EX07_ApprvTimeEntry				
LinkApproveTransactions	1.8	2.14		2.15
ApproveButton	0.7	0.69		0.66
OK	0.73	0.72		0.63
EX08_ApprvTravelAuth				
LinkApproveTransactions	1.75	1.98		2.13
ApproveButton	0.67	0.66		0.68
OK	0.69	0.7		0.65
GL01_JournalEntry				
Add_Journal_with_5_Lines	0.71	0.69		0.69
Save	0.78	0.81		0.69
OK_ConfirmJournalSaved	1	0.98		0.93
GL02_JournalEntry_Post				
Add_Journal_with_5_Lines	0.68	0.68		0.69
Save	0.26	0.26		0.24
OK_ConfirmJournalSaved	0.9	0.92		0.68
Edit_&_Post_Journal	0.66	0.66		0.79
GL03_Ledgerinquiry				
SearchbyBU,Ledger,Year &Period	0.69	0.69		0.69
SearchbyAccount_ID	0.65	0.74		0.65
RetrieveLedgerDetails	0.77	0.74		0.67
GL04_JournalInquiry				
SearchbyBU,Ledger,Year &Period	0.69	0.68		0.68
SearchbyJournalid	1.77	1.75		1.74
Retrieve Journal Details	1.38	1.42		1.32
Transactions per Minute	N/A	136		136

Table 4d: Baseline Business Transaction Times

The online transaction timings did not grow appreciably with the addition of the "Close-the-Books" batch processes.

The database and application servers were processing a total of ~136 business transactions per minute at the peak load of 1,000 concurrent users. The transaction rate is calculated by dividing the number of users by the corresponding pacing.

Performance may vary on other hardware and software platforms and with other data composition models.

SERVER PERFORMANCE

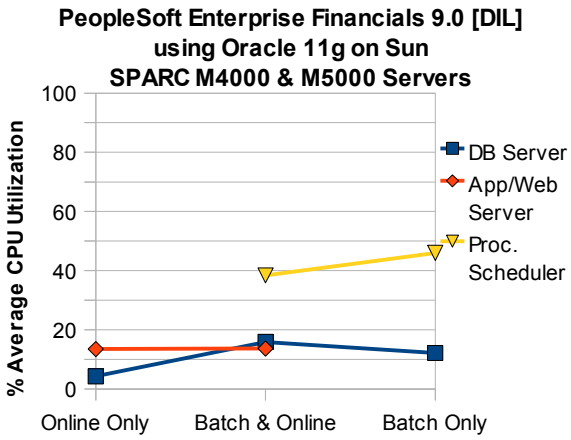

Figure 3: Average CPU Utilization

DB Server		DB Server	App/Web Server	nVision Process Scheduler
Online		4.34%	13.50%	n/a
Batch & Online		15.90%	13.70%	38.40%
Batch Only		12.20%	n/a	46.00%

Table 5: Average CPU Utilization

DB Server		DB Server	App/Web Server	nVision Process Scheduler
Online		50.7	4	n/a
Batch & Online		51.9	4	1.22
Batch Only		50.7	n/a	1.34

Table 6: Average Memory Utilization (GB)

Note that the available memory not drawn upon by the application is made available for caching. This may improve performance and reduce the corresponding disk storage system activity.

STORAGE SYSTEM PERFORMANCE

Oracle's Sun Storage F5100 Flash Array was used for data storage. I/O performance is crucial to batch and online performance and is summarized as follows:

DB			Reads KB/Sec	Writes KB/Sec	I/Os per Sec
Online		Avg.	1270	7855	301
		Peak	36189	30162	1183
Batch & Online		Avg.	23700	38794	1699
		Peak	260072	134880	12108
Batch Only		Avg.	22419	33500	1324
		Peak	215461	122364	9184

Table 7: I/O Performance – DB Server

DATA COMPOSITION DESCRIPTION

Number of Business Units	Large
General Ledger	100
Payables	25
Receivables	10
Asset Management	20
Cash Management	50
Expenses	50
Inter-Unit activity as a % of Trans/Run	30%

Table 8: Data Composition – Business Units

ChartFields	Large
Operating Unit	1,000
Account	5,000
Department	10,000
Product	5,000
Project	50,000
Affiliate	500

Table 9: Data Composition – ChartFields

General Ledger Data Comp & Volumes	Large
Business Units	100
Volume of Existing Ledger Data (3 Years)	60,000,000
Current Journals Lines	
Journal Headers	2,000
Average Lines per Header	50
Journal Lines	100,000
Historical Journal Headers	500,000
Historical Avg. Lines per Header	200
Historical Journal Lines (1 year)	100,000,000
Allocations Business Units	10
Allocations Steps	1,000
Allocations Groups	100
Groups per Business Unit	10
Allocations Steps per Group	10
Pool Rows to be Selected	1,000,000
Basis Rows to be Selected	250,000
Allocation Journal Headers in output	2,500
Allocation Journal Lines per Header	200
Allocation Journal Lines total in output	500,000
BUs that have Inter-Unit Activity (20% BUs)	20
Inter-Unit Activity as a % of Journal Trans/run	30%
Total Journal Headers – Incl. GL & Subsys.	4,740
Total Journal Lines -Incl. GL & subsystems	1,319,530

Table 10: Data Composition – General Ledger

Asset Management Data Comp & Volumes	Large
Business Units	20
Current Total Assets	1,500,000
Current Retires	5,000
Current Transfers	5,000
Other (Adds/Adj)	10,000
Total Current Transactions	20,000
Current Depreciation (DIST_LN_JG_VW)	1,125,000
Current Accounting Results	2,330,000
Number of Journal Headers Generated	20
Average number of Journal Lines Generated per Header	6,000
Total journal lines	120,000
I/U Activity as a % of Trans/run	30%
Historical Cost and Depreciation (3 years)	75,000,000

Table 11: Data Composition – Asset Management

Expenses Data Comp & Volumes	Large
Business Units	50
Employees	50,000
Current Expense Activity (EX_ACCTG_LINE)	7,050
Current Expense Report Headers	1,000
Current Expense Report Lines	7,000
Average lines per header	7
Current Cash Advances	50
Number of Journal Headers Generated	50
Average number of Journal Lines Generated per Header	160
Current Total Journal Lines Generated	8,000
I/U Activity as a % of Trans/run	30%
Historical Expense Activity (1 year)	500,025
Expense Report Headers	70,575
Average lines per header	7
Cash Advances	6,000

Table 12: Data Composition – Expenses

Cash Management Data Comp & Volumes	Large
Cash Management	50
Banks	10
Bank Accounts	1,000
Current Bank/EFT Transfers	2,000
Current Deal Transactions	100
Current External Transactions	2,000
Current Total Accounting Transactions (TRA_ACCTG_LINE)	8,200
Number of Journal Headers Generated	50
Average number of Journal Lines Generated per Header	50
Total Journal Lines	2,500
I/U Activity as a % of Trans/run	30%
Historical Bank/EFT Transfers	480,000
Historical Deal Transactions	20,000
Historical Total Accounting Transactions (TRA_ACCTG_LINE)	1,000,000

Table 13: Data Composition – Cash Management

Receivables Data Comp & Volumes	Large
Business Units	10
Customers	200,000
Current Accounting Lines (ITEM_DST)	156,000
Current New Items/Invoices and closed	39,000
Current Receipt Accounting Lines (PAY_MISC_DST)	50,000
Current Payments (Peak Day)	25,000
Do you use cash control?	Yes
Total Current Accounting Lines	206,000
Number of Journal Headers Generated	10
Average number of Journal Lines Generated per Header	3,903
Current Total Journal Lines Generated	39,030
I/U Activity as a % of Trans/run	30%
Historical Accounting Lines-ITEM_DST (1 year)	42,000,000
Historical Closed Items (4 ITEM_DST rows/item)	10,000,000
Historical Open Items (2 ITEM_DST rows/item)	1,000,000

Table 14: Data Composition – Receivables

Payables Data Comp & Volumes	Large
Business Units	25
Vendors	100,000
Current Voucher Lines (PS_VCHR_ACCTG_LINE)	580,000
Current Voucher Headers	50,000
Average lines per voucher header	10
Current Payments	15,000
Number of Journal Headers Generated	10
Average number of Journal Lines Generated per Header	30,000
Current Total journal lines generated	300,000
I/U Activity as a % of Trans/run	30%
Historical Voucher Lines (PS_VCHR_ACCTG_LINE)	145,000,000
Historical Voucher Headers	12,500,000
Average lines per header	10
Historical Payments	3,750,000

Table 15: Data Composition – Payables

3rd Party, Legacy & Other PS Applications Data Comp & Volumes	Large
Total Journal Transactions	250,000
Number of Journal Headers Generated	100
Average number of Journal Lines Generated per Header	2,500

Table 16: Data Composition – Miscellaneous

BENCHMARK ENVIRONMENT

HARDWARE CONFIGURATION

Oracle's Sun SPARC Enterprise M5000 was used as the batch/database server. The system was equipped with the following:

- 8 x SPARC64 VII+ quad-core processors running at 2.66GHz each with 11 MB of on-chip L2 Cache
- Total Memory: 128 GB
- Network: Gigabit full duplex.
- Storage: Oracle's Sun Storage F5100 Flash Array with 80 x 24 GB Flash Modules providing ~1.9 TB of flash storage

Application Server/Web Server:

An Oracle Sun SPARC Enterprise M4000 system served as the application server/web server. The system was equipped with the following:

- 4 x SPARC64 VII+ quad-core processors running at 2.66GHz each with 11 MB of on-chip L2 Cache
- Total Memory: 128 GB
- Network: Gigabit full duplex.

LoadRunner Controller/Load Drivers:

An Oracle Sun X2200 M2 server was used as the LoadRunner load driver and controller. The system was equipped with the following:

- 2 x 2.3 GHz AMD Opteron 2356 based quad-core processors
- Total Memory: 32 GB.

HARDWARE CONFIGURATION CONTINUED

QuickTest Pro Clients:

Three Oracle Sun X2200 M2 servers were used as clients. Two systems were equipped with the following:

- 2 x 2.3 GHz AMD Opteron 2356 based quad-core processors
- Total Memory: 32 GB.

While the the third system was equipped with the following:

- 2 x 2.3 GHz AMD Opteron 2356 based quad-core processors
- Total Memory: 16 GB.

nVision Process Scheduler:

An Oracle Sun X2200 M2 server was used as the Process Scheduler. The system was equipped with the following:

- 2 x 2.3 GHz AMD Opteron 2356 based quad-core processors
- Total Memory: 32 GB.

SOFTWARE VERSIONS

Oracle's PeopleSoft Enterprise Financials/SCM 9.00.00.331

Oracle's PeopleSoft Enterprise (PeopleTools) 8.49.23 64bit

Oracle Database 11*g* Enterprise Edition Release 11.2.0.1.0 – 64bit Production

Oracle Tuxedo 9.1 RP36 Jolt 9.1 64bit

MicroFocus Server Express 4.0 SP4 64bit

Oracle Solaris 10 10/09 (Database server)

Oracle Solaris 10 10/09 (Application/Web server)

Microsoft® Windows Server 2003 SP2 32-bit on the Process Scheduler, the Load Drivers, and the QTP client

HP (Mercury) QuickTest Professional 9.2 Build 2610

HP (Mercury) LoadRunner 8.1.4.0 Build 1914

Microsoft Internet Explorer® 6.0.3790.3959 w/SP 2 on the QTP client

Oracle WebLogic Server™ 9.2 MP3

Java version "1.5.0_12"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_12-b04)
Java HotSpot(TM) Server VM (build 1.5.0_12-b04, mixed mode)

ICE Tracking:

1979925000
1979913000
1978230000
1830449001
1830436001
1830427001
1830425001
1830420001
1831836001
1767656000
1756919000
1801409000
1747492000

Oracle (PeopleSoft) Pleasanton
5815 Owens Drive
P. O. Box 8018
Pleasanton, California 94588-8618
Tel 925/694-3000
Fax 925/694-3100
Email info@peoplesoft.com
WorldWideWebhttp://www.oracle.com