ORACLE | PeopleSoft.
PeopleSoft | Enterprise

REVISION 2.3

PEOPLESOFT CRM FOR SUPPORT 8.9 USING ORACLE9i ON HEWLETT-PACKARD PROLIANT DL585 AND PROLIANT BL20p SERVERS

As a global leader in e-business applications, Oracle USA 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 USA 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

Benchmark (English)	PeopleSoft CRM 8.9	
	Medium Data Volume Model	
	Average Response	Load 2.6 sec, Save 2.0 sec
	Concurrent Users	1,600
Référence d'exécution (Français)	PeopleSoft CRM 8.9	
	modèle de données de taille moyenne	
	temps de réponse	Load 2,6 sec, Save 2,0 sec
	Concourants Utilisateurs	1.600
Benchmark-Test (Deutsch)	PeopleSoft CRM 8.9	
	Datenbankmodell "Medium"	
	Antwortzeit	Load 2,6 sek, Save 2,0 sek
	Gleichzeitige Benutzer	1.600
Patrón de rendimiento (Español)	PeopleSoft CRM 8.9	
	Modelo con volumen media de datos	
	tiempo de reacción	Load 2,6 sec, Save 2,0 sec
	Simultáneos Utilizadores	1.600
Benchmark (Português)	PeopleSoft CRM 8.9	
	Modelo de Médio Volume	
	tempo de resposta	Load 2,6 sec, Save 2,0 sec
	Simultâneos Usuários	1.600

BENCHMARK PROFILE

In January 2005, Oracle USA (PeopleSoft) conducted a benchmark in Pleasanton, CA to measure the online performance of PeopleSoft CRM for Support 8.9 using Oracle9i™ 9.2.0.5 on a 4-way HP ProLiant® DL585 (AMD® Opteron™) database server, running Microsoft® Windows® Server 2003 Enterprise Edition. Eight 2-way HP ProLiant BL20p G2 Blade servers were used as Application/Web Servers running Microsoft® Windows® Server 2003 Enterprise Edition.

The benchmark measured Services client response times for 1,400 and 1,600 concurrent users. Our standard Medium CRM Support data composition model (see Table 3, page 4) was used and the testing was conducted in a controlled environment with no other applications running. **The goal of this benchmark was to obtain baseline performance data for PeopleSoft CRM for Support 8.9 on the Oracle Database with HP servers.**

Figure 1 illustrates average response times for a single user, and for a single user with 1,400 and 1,600 concurrent users.

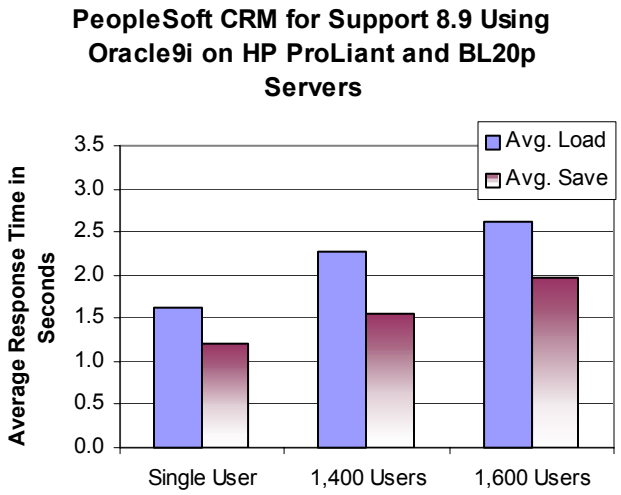

Figure 1: Average Response Times

* The response times are weighted averages corresponding to the transaction mix percentages in Table 1.

METHODOLOGY

Mercury Interactive LoadRunner® was used as the load driver, simulating concurrent users. It submitted a business transaction at an average rate of one every ten minutes for each concurrent user to the application servers via the web servers.

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 the benchmark configuration. This benchmark was run using a partly logical 4–tier configuration; with the application server and the web server instances each sharing a single physical server.

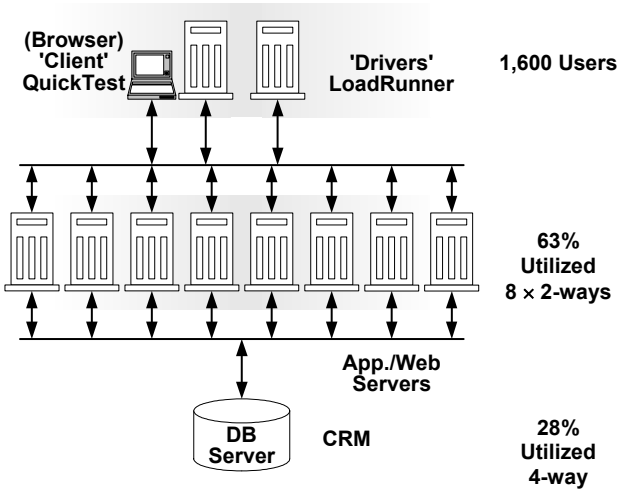

Figure 2: 4-Tier Configuration

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.

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

BUSINESS PROCESSES

Oracle USA (PeopleSoft) defines a business transaction as a series of HTML pages that guide a user through a business process, such as resolving a customer case.

The eight PeopleSoft 8 CRM 8.9 business processes tested in this benchmark are as follows:

COMMON COMPONENTS

1. Modify Customer Phone Info: After logging in, the user launches the customer 360-degree view. Search for a customer and update their phone information.

2. Modify Address Info: After logging in, the user launches the customer 360-degree view. Search for a customer and update their address information.

CASE CREATION (SUPPORT)

3. Create a New Case from 360: After logging in, the user launches the customer 360-degree view. Search for a customer and click on 'Add Case.' Select a quick code and verify that fields were correctly populated.

4. Create a Case with Entitlement: After logging in, the user launches the customer 360-degree view. Search for a customer and click on 'Add Case.' Enter a case summary and description along with a serial number to validate the entitlement (warranty coverage).

5. Create a Case and Search for a Solution: After logging in, the user launches the customer 360-degree view. Search for a customer and click on 'Add Case.' Select a quick code and verify that fields were correctly populated. Click on the 'Find Solutions' button and initiate the top-ranked solution.

6. Create a Case and Create a Service Order: After logging in, the user launches the customer 360-degree view. Search for a customer and click on 'Add Case.' Enter a case summary and description along with a serial number to validate the entitlement (warranty coverage). Click on "Suggested Next Steps" and follow through to 'Create Service Order.'

CASE UPDATE (SUPPORT)

7. Update a Case with a Note: After logging in, the user launches the customer 360-degree view. Search for a customer and click on 'Support Cases.' Click on the 'Case ID' and then on the "Add Note" button when the summary page opens. Type in the note and click on 'Apply Note.'

8. Email Solution to a Customer: After logging in, the user launches the customer 360-degree view. Search for a customer and click on 'Support Cases.' Click on the 'Case ID' and then on the "Email" button when the summary page opens. Click the checkbox next to a solution and click on 'Send.'

Process	% of Users	Avg. Pacing
Common Components 15%		
Modify Customer Phone Info	7%	10 min
Modify Address Info	8%	10 min
Case Creation 60%		
Create New Case from 360	25%	10 min
Create Case with Entitlement	5%	10 min
Create Case and Search	20%	10 min
Create Case & Service Order	10%	10 min
Case Update 25%		
Update Case with Note	15%	10 min
Email Solution to Customer	10%	10 min
Total	100%	

Table 1: Business Process Mix

Table 1 shows the proportions of the business processes used in the measurements of this benchmark. The proportions are intended to simulate a typical user scenario.

ONLINE PROCESS RESULTS

Table 2 shows average response times, in seconds, for each business process along with the overall averages. It also shows the approximate overall transaction rate.

Process		Single User	1,400 Users	1,600 Users
Common Components				
Modify Customer Phone Info	Load	1.6	2.0	2.0
	Save	0.9	1.1	1.2
Modify Address Info	Load	1.6	1.9	2.2
	Save	0.8	1.1	1.1
Case Creation				
Create New Case from 360	Load	1.6	2.7	3.5
	Save	1.4	2.0	3.3
Create Case with Entitlement	Load	1.6	2.3	2.6
	Save	1.9	2.6	3.1
Create Case, Search for Solution	Load	1.6	2.3	2.1
	Save	1.0	1.2	1.2
Create Case and Service Order	Load	1.7	2.0	3.1
	Save	1.6	2.2	2.7
	Save	1.2	1.4	2.1
Case Update				
Update Case with Note	Load	1.6	2.2	2.2
	Save	1.1	1.3	1.2
Email Solution to Customer	Load	1.6	2.0	2.3
	Save	1.1	1.3	1.1
* Weighted Avg. Load		1.6	2.3	2.6
* Weighted Avg. Save		1.2	1.5	2.0
Transactions/minute		N/a	140	160

Table 2: Business Process Runtimes

The database and application servers were processing a total of ~160 business processes per minute at the peak load of 1,600 concurrent users. The transaction rate is calculated by dividing the total number of completed transactions by the test duration.

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

SERVER PERFORMANCE

Figure 3 shows the average CPU utilization for the Database server, Application servers and Web servers. This is the average across all of the active CPUs for the duration of the test.

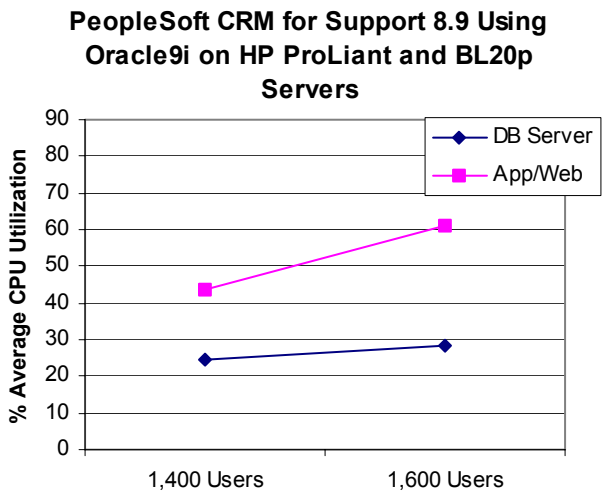

Figure 3: Average Server CPU Utilization

Note that the 1,400-User and 1,600-User runs used eight Application/Web servers. The single App/Web CPU value for these two runs is the average across the eight boxes.

DATA COMPOSITION DESCRIPTION

The standard database was comprised of:

Data Composition	Standard Medium Model
# of Consumers	5,000,000
# of Consumer Phones (2 each)	10,000,000
# of Consumer Addresses (2)	10,000,000
# of Consumer Email Addresses	10,000,000
# of Customer Companies	250,000
# of Company Addresses (1)	250,000
# of Contacts (3 each)	750,000
# of Contact Addresses (1 each)	750,000
# of Contact Email Addresses	750,000
# of Contact Phones (2 each)	1,500,000
# of Workers	6,000
# of Cases (1 per consumer, 2 per company)	5,500,000
# of Solutions	200,000
# of Products/Items	50,000

Table 3: Data Composition

BENCHMARK ENVIRONMENT

HARDWARE CONFIGURATION

Database Server:

A Hewlett-Packard® ProLiant® DL585 was used as a database server. It was equipped with the following:

- 4 × 2.2 GHz AMD® Opteron™ 848 processors, each with 1 Megabyte of Level 2 Cache
- 8 Gigabytes of Memory
- ~1.56 Terabytes of total Disk Space (88 × 18.2GB)
- 3 × Hewlett-Packard® SmartArray 5312 Disk Controllers

Application/Web Server(s):

8 × HP ProLiant® BL20p G2 blade servers were used as the application/web servers. They were equipped with the following:

- 2 × 3.06 GHz Intel® Xeon™ processors, each with 512 Kilobytes of Level 2 Cache and 1 Megabyte of Level-3 write-back cache per CPU
- 4 Gigabytes of Memory
- ~36.4 GB of storage with an integrated SmartArray 5i Plus Controller

QuickTest Client PC:

HP Evo D510 mini-tower with the following:

- 1 × 2.4 GHz Intel® Pentium® IV Processor
- 768 Megabytes of Memory

Load Simulation Driver(s):

1 × Hewlett-Packard® NetServer® 1p1000r was used as the load driver controller. It was equipped with the following:

- 2 × 1 Gigahertz Pentium® III Xeon™ Processors, each with 1 Megabyte of Level-2 Cache
- 4 Gigabytes of Memory
- ~36 Gigabytes of total Disk Space (2 × 18.2 GB)
- 1 × SCSI Internal Disk Controller

1 × Hewlett-Packard® NetServer® 1p1000r was used as the load driver. It was equipped with the following:

- 2 × 1 Gigahertz Pentium® III Xeon™ Processors, each with 1 Megabyte of Level-2 Cache
- 4 Gigabytes of Memory
- ~36 Gigabytes of total Disk Space (2 × 18.2 GB)
- 1 × SCSI Internal Disk Controller

SOFTWARE VERSIONS

PeopleSoft CRM for Support 8.9

PeopleTools 8.45.03

Oracle9i™ 9.2.0.5

Microsoft® Windows® Server 2003 Enterprise Edition (on the Database server and App/Web servers)

Microsoft® Windows 2000 Advanced Server 5.0 Build 2195 (on the Drivers)

Microsoft® Windows® XP Professional w/SP 2 (on the client)

BEA WebLogic Server™ 8.10 w/SP 1

Mercury Interactive LoadRunner® 7.8

Mercury Interactive QuickTest® Professional 6.5

BEA Tuxedo® 8.1 RP89 with Jolt 8.1

Microsoft Internet Explorer® 6.0

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