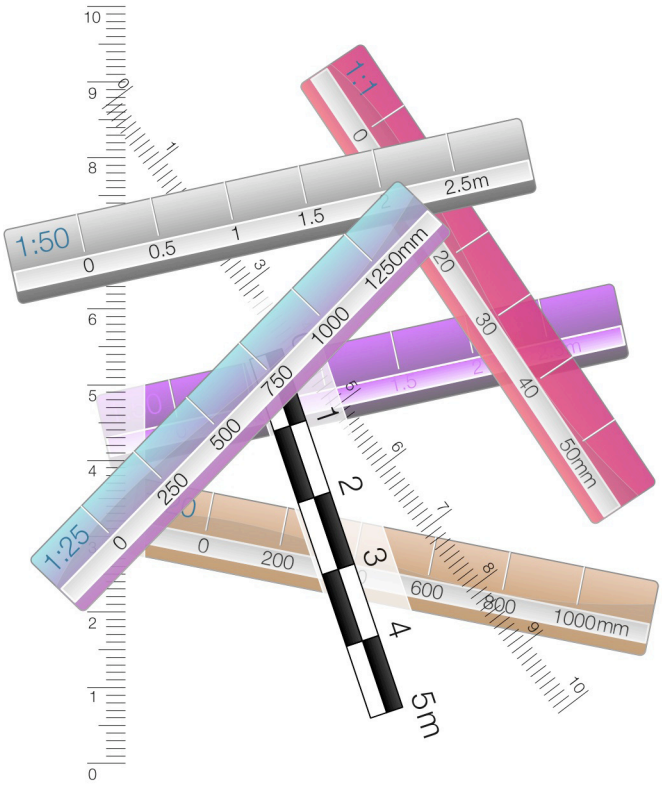
Sizing Samples

An Oracle "How To" Paper 2009



Presented By:

Paul Kramer

William Indest

ORACLE | SIEBEL

Disclaimer

"I love to go shopping. I love to freak out salespeople. They ask me if they can help me, and I say, "Have you got anything I'd like?" Then they ask me what size I need, and I say, 'Extra medium'."

Stephen Wright

The purpose of this document is to provide several sample estimates to give a general idea of the size and quantity of hardware systems needed to support a specific deployment of Oracle's Siebel CRM application and an enterprise-wide SOA implementation. These samples are intended for educational use, and are in no way a guarantee of capacity or performance. For an actual production deployment footprint, the customer should have a detailed analysis performed by Oracle's Expert Services during the design and configuration phases of a deployment. Continue reading at your own risk.

Scenario 1: Call Center
This sizing estimates the hardware for 500 peak concurrent users out of a total 750 users who are spread across three sites. The OBI (Analytics) portion is sized for 100 peak concurrent users.

Production CPUs specs and example server models (all HP blades. These HP server models are for illustrative purposes only.)

For the Siebel Application & DB servers:
· 3.0 GHz quad-core Xeon, as in a BL460c

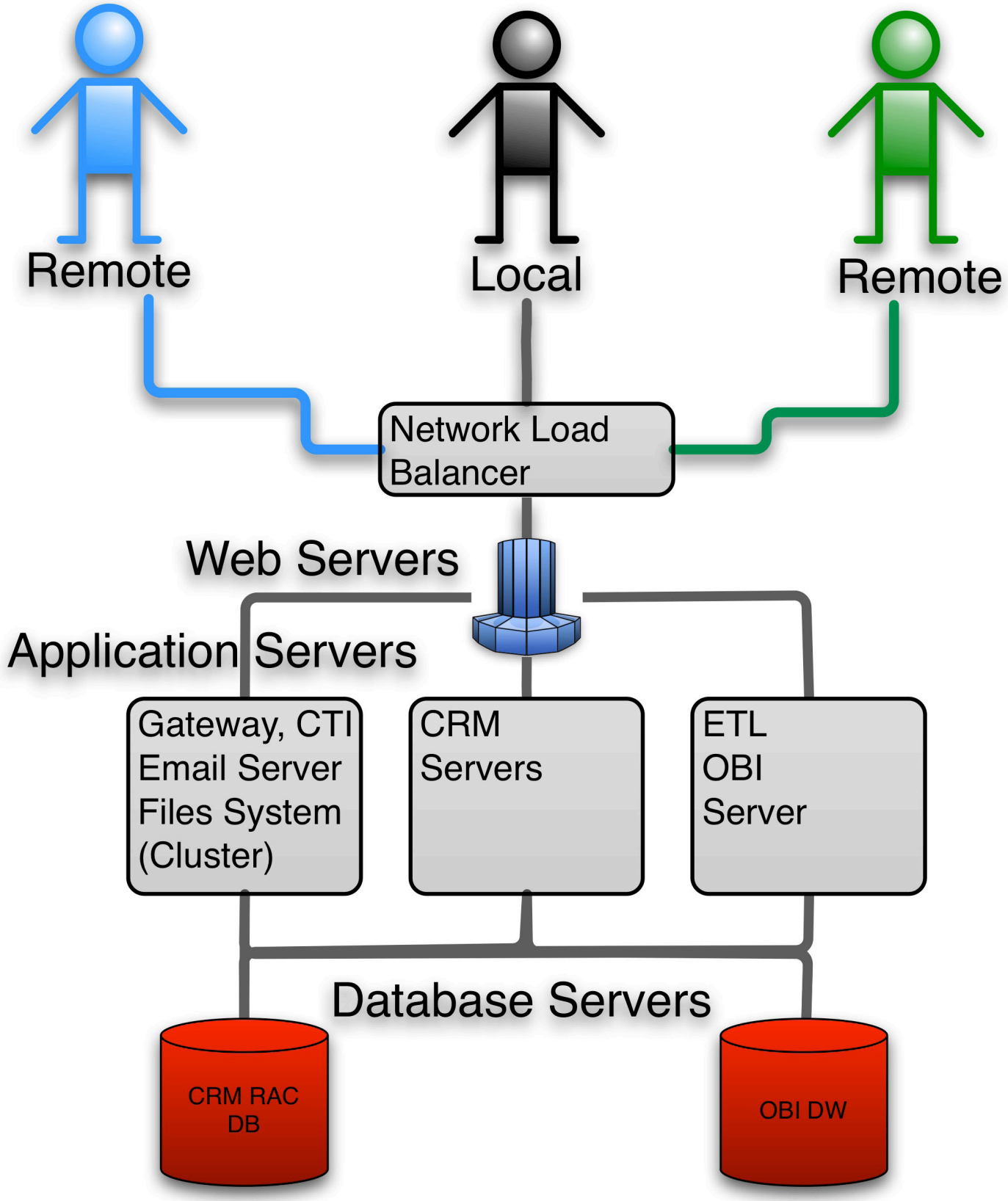
For the Web Servers:
· 3.0 GHz dual-core Xeon, as in the BL260c.

For the browser-based clients (running IE6 on Win XP):
Pentium III 1 GHz, 256 MB, > 1 GB disk space.

For High Availability (H/A):
· Do consider deploying the DBs with an Oracle RAC configuration.
· Web and application layer servers are deployed in load balanced pools.
· Cluster CTI/Email/SFS/Gateway (GW) server.
It is optional to deploy a second server for OBIEE H/A.

Other notes:
These boxes should be deployed with a 1 Gbit network between servers. The Storage capacities provided here don't include RAID overhead.
Ideally, test and Q/A configurations should be as close to production capacity and architecture as possible. Although we don't recommend it, some customers will scale back the H/A, and/or the storage or processing capacity.

Here is a depiction of the topology for the Call Center Scenario:


Remote
Local
Remote
Network Load Balancer
Web Servers
Application Servers
Gateway, CTI
Email Server
Files System
(Cluster)
CRM
Servers
ETL
OBI
Server
Database Servers
CRM RAC
DB
OBI DW

Production Servers and Capacities – Base Quantities: These are minimum capacities.

Servers/ blades	Server Models	Peak Users	CPU per Server	Cores per CPU	RAM (GB) per Server	Disk (GB) per Server	Base Server Capacity Description
Web	BL260c	500	1	2	2	2	1 Server: 1 CPU, 2 GB RAM, 2 GB disk
Call Center	BL460c	500	1	4	8	10	2 Servers: 1 CPU, 8 GB RAM, 10 GB disk
GW/CTI/ SFS/Email	BL460c	500	1	4	4	10	1 Server: 1 CPU, 4 GB RAM, 10 GB disk
OBI/ETL	BL460c	100	1	4	8	20	1 Server: 1 CPU, 8 GB RAM, 20 GB disk
CRM DB RAC	BL460c	500	2	4	8	120	2 Servers: 2 CPU, 8 GB RAM, 120 GB storage
Database Datamart	BL460c	100	1	4	8	180	1 Servers: 1 CPU, 8 GB RAM, 180 GB storage

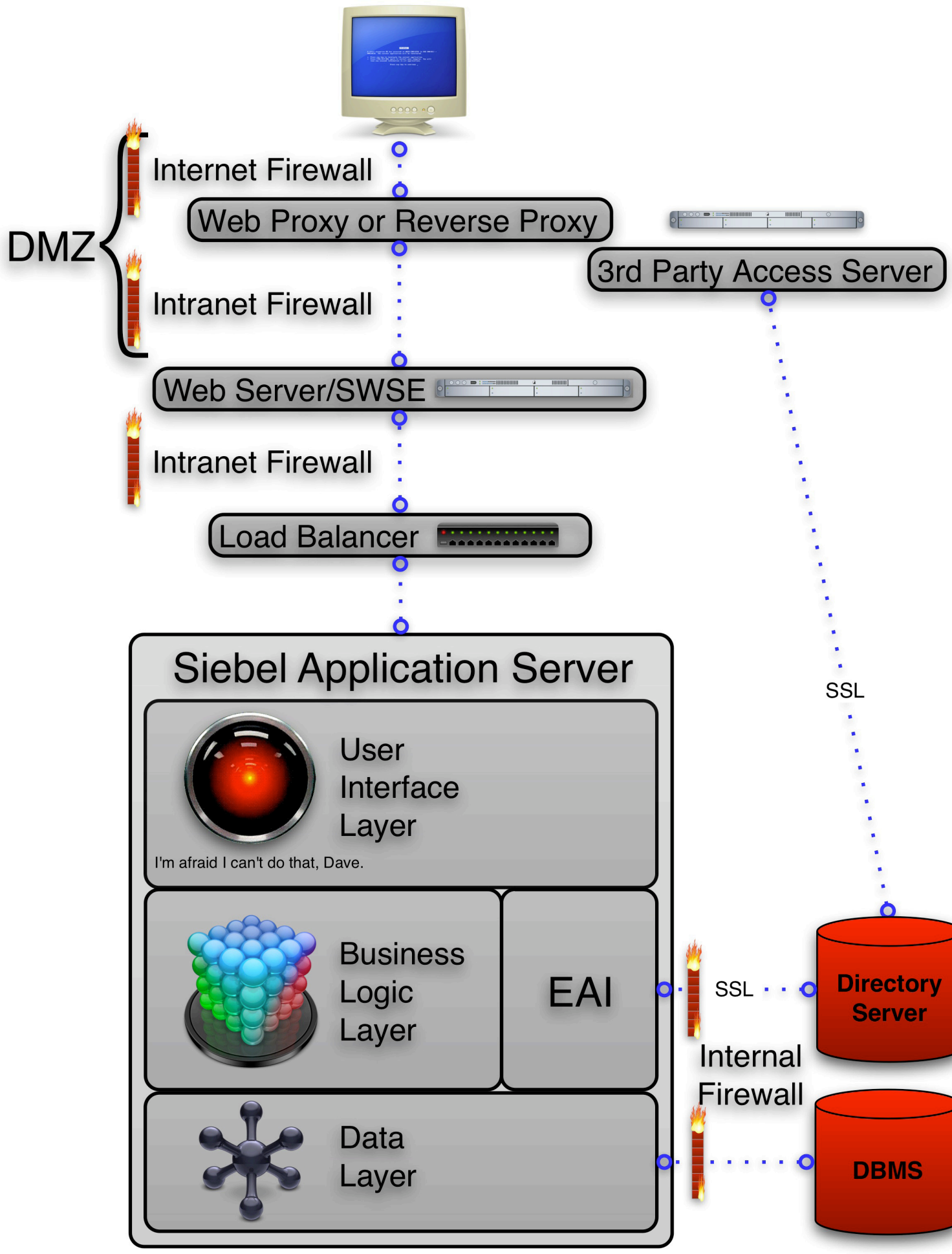
Production Servers and Capacities – High Availability (H/A) Configuration Quantities

	Server Models	Peak Users	CPU per Server	Cores per CPU	RAM (GB) per Server	Disk (GB) per Server	Base Server Capacity Description
Web	BL260c	500	1	2	2	2	2 Servers: 1 CPU, 2 GB RAM, 2 GB disk
Call Center	BL460c	500	1	4	8	10	3 Servers: 1 CPU, 8 GB RAM, 10 GB disk
GW/CTI/ SFS/Email	BL460c	500	1	4	4	10	2 Servers: 1 CPU, 4 GB RAM, 10 GB disk
OBI/ETL	BL460c	100	1	4	8	20	1 Server: 1 CPU, 8 GB RAM, 20 GB disk (Optional second server)
CRM DB RAC	BL460c	500	2	4	8	120	2 Servers: 2 CPU, 8 GB RAM, 120 GB storage
Database Datamart	BL460c	100	1	4	8	180	2 Servers: 1 CPU, 8 GB RAM, 180 GB storage (Optional cluster with OLTP)

Development Servers and Capacities – Minimum capacities & minimal H/A

Servers/ blades	Server Models	Total Users	CPU per Server	Cores per CPU	RAM (GB) per Server	Disk (GB) per Server	Base Server Capacity Description
Web / CC / OBI	BL460c	-	1	4	8	20	1 Server: 1 CPU, 8 GB RAM, 20 GB disk
Database (RAC) (H/A config suggested)	BL460c	-	1	4	8	80	2 Servers: 1 CPU, 8 GB RAM, 80 GB storage

The following diagram outlines a secure network topology. The third party access server is optional. Note the number of firewalls necessary to secure the network access points.


Internet Firewall
DMZ
Web Proxy or Reverse Proxy
3rd Party Access Server
Intranet Firewall
Web Server/SWSE
Intranet Firewall
Load Balancer
Siebel Application Server
User Interface Layer
I'm afraid I can't do that, Dave.
Business Logic Layer
EAI
Data Layer
SSL
SSL
Internal Firewall
Directory Server
DBMS

Scenario 2: SOA Environment

While the previous scenario was for a specific number of users for a CRM call center operation the next scenario is for a generic SOA implementation, enterprise class, but generic and conservative.

Here are the development system specifications:

Description	Platform	CPU Cores	Mem (Gb)	Disk (GB)	Quantity
Oracle SOA v10.1.3.3 (mid-tier installation, BPEL/ESB/WSM)	Sun	2	8	80 Mirrored Local	2
Oracle WebCenter v10.1.3.2.0	Sun	4	12	80 Mirrored Local	2
Oracle OID v10.1.4	Sun	2	4	80 Mirrored Local	2
Oracle SSO v 10.1.4	Sun	2	8	80 Mirrored Local	2
Oracle WebCache v10.1.2	Sun	2	4	80 Mirrored Local	2
Oracle BAM v10.1.3.3	Wintel	4	16	80 Mirrored Local	1
Oracle SOA Dehydration Store DB /OID Security Repository DB/ WebCenter DBs	Sun	2	16	500 Gig SAN (CX)	4

Here are the training (testing) system specifications:

Description	Platform	CPU Cores	Mem (Gb)	Disk (GB)	Quantity
Oracle SOA v10.1.3.3 (mid-tier installation, BPEL/ESB/WSM)	Sun	2	8	80 Mirrored Local	2
Oracle WebCenter v10.1.3.2.0	Sun	4	12	80 Mirrored Local	2
Oracle OID v10.1.4	Sun	2	4	80 Mirrored Local	2
Oracle SSO v 10.1.4	Sun	2	8	80 Mirrored Local	2
Oracle WebCache v10.1.2	Sun	2	4	80 Mirrored Local	2
Oracle BAM v10.1.3.3	Wintel	4	16	80 Mirrored Local	1
Oracle SOA Dehydration Store DB /OID Security Repository DB/ WebCenter DBs	Sun	2	16	500 Gig SAN (CX)	4

Here are the quality assurance system specifications:

Description	Platform	CPU Cores	Mem (Gb)	Disk (GB)	Quantity
Oracle SOA v10.1.3.3 (mid-tier installation, BPEL/ESB/WSM)	Sun	2	8	80 Mirrored Local	2
Oracle WebCenter v10.1.3.2.0	Sun	4	12	80 Mirrored Local	2
Oracle OID v10.1.4	Sun	2	4	80 Mirrored Local	2
Oracle SSO v 10.1.4	Sun	2	8	80 Mirrored Local	2
Oracle WebCache v10.1.2	Sun	2	4	80 Mirrored Local	2
Oracle BAM v10.1.3.3	Wintel	4	16	80 Mirrored Local	1
Oracle SOA Dehydration Store DB /OID Security Repository DB/ WebCenter DBs	Sun	2	16	500 Gig SAN (CX)	4

Here are the production system specifications:

Description	Platform	CPU Cores	Mem (Gb)	Disk (GB)	Quantity
Oracle SOA v10.1.3.3 (mid-tier installation, BPEL/ESB/WSM)	Sun	2	8	80 Mirrored Local	2
Oracle WebCenter v10.1.3.2.0	Sun	4	12	80 Mirrored Local	2
Oracle OID v10.1.4	Sun	2	4	80 Mirrored Local	2
Oracle SSO v 10.1.4	Sun	2	8	80 Mirrored Local	2
Oracle WebCache v10.1.2	Sun	2	4	80 Mirrored Local	2
Oracle BAM v10.1.3.3	Wintel	4	16	80 Mirrored Local	1
Oracle SOA Dehydration Store DB /OID Security Repository DB/ WebCenter DBs	Sun	2	16	1,000 Gig SAN (CX)	4

Here are the disaster recovery system specifications:

Description	Platform	CPU Cores	Mem (Gb)	Disk (GB)	Quantity
Oracle SOA v10.1.3.3 (mid-tier installation, BPEL/ESB/WSM)	Sun	2	8	80 Mirrored Local	2
Oracle WebCenter v10.1.3.2.0	Sun	4	12	80 Mirrored Local	2
Oracle OID v10.1.4	Sun	2	4	80 Mirrored Local	2
Oracle SSO v 10.1.4	Sun	2	8	80 Mirrored Local	2
Oracle WebCache v10.1.2	Sun	2	4	80 Mirrored Local	2
Oracle BAM v10.1.3.3	Wintel	4	16	80 Mirrored Local	2
Oracle SOA Dehydration Store DB /OID Security Repository DB/ WebCenter DBs	Sun	2	16	1,000 Gig SAN (CX)	4

Dénouement

While we don't know how to respond to requests for extra medium sizes we do like to share our experiences with a topic that normally is not broached in the course of interacting with a customer. Tables of data are dry and can cause ennui, listlessness and careless driving - we hope we have transcended these effects and provided you with reference material that you may put to good use in your endeavours.

"Yesterday, my wife backed out of our driveway, plowed up some hedges, knocked down the mailbox, flattened the garbage can and then lost control of the car."

The Second Author

Title: Sizing Samples
Authors: Paul Kramer and William Indest
Managers: John Andrzejek and James Perry

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200
oracle.com

EOF