

Project Ramp-Up Notes

Business Breakthrough Program Build Business With BPEL & SOA

Version 1.1
November 22nd, 2006

You are ready to ramp up on the powerful Oracle application development and deployment platform. The platform includes powerful, highly integrated tools which will enable you to deliver on your mandate of new functionality in record time. And ongoing enhancement and management will be similarly productive.

The Deployment Platform Notes in this document, and the associated diagram cover the actual Production Platform, mostly from a "processor-based licensing perspective." As you will see with the full Quotation, there is a separate Development and Test Platform which will be licensed mainly by the Named User Plus metric.

PROPOSAL SUMMARY -- Here is a summary of the specific software components which will be part of your platform:

DEVELOPMENT & TESTING

1 X Dual-Core, Dual-CPU Server

20 X Named User Plus licenses
Except for database and IDS

PRODUCTION

2 X Dual-Core, Dual-CPU Servers

Processor-based licensing

PRODUCTS LICENSED

On each machine, the following products will be licensed:

Oracle Application Server Enterprise Edition, which includes:

- Oracle Portal*
- Oracle Discoverer*
- Oracle Enterprise Services Bus*
- Oracle HTTP Server*
- Oracle Identity Management w/SSO*

Oracle BPEL Process Manager Option
Oracle XML Publisher Option

Oracle Application Server Diagnostics Pack

Oracle Database Standard Edition

Internet Developer Suite ("IDS" -- 4 seats, for Development Only)

PROPOSAL COMPONENTS NOTES -- Please see below a deployment Schematic for Production. *The numbers here refer to specific elements on the Schematic.*

1. DEVELOPMENT WORKSTATIONS: Although the schematic depicts the deployment environment only, the development workstations are shown as well. All developers can use the tools included at no charge with the industry leading "JDeveloper" tool, including tools for BPEL process modelling and J2EE development. Oracle's Proposal also includes 4 seats of "IDS" (Internet Developer Suite), which are used by any developers implementing Discoverer metadata.

2. MANAGEMENT WORKSTATIONS: Various deployed tools provide the opportunity for systems managers to manage and monitor on-going processes. For instance, both BPEL and XML Publisher include specialized system management tools. These are in addition to the usual Enterprise Manager-

related tools. In the Proposal here, a specialized enhancement to the built-in Enterprise Manager toolkit for Application Server has been added – “Diagnostics Pack”.

3.HUMAN WORKFLOW: BPEL provides the opportunity to extend any process orchestration with human workflow.

4.LOAD BALANCER: This is an optional system which will enable maintenance of the IP presence of the clustered Application Server systems. Note that a separate tier of web caching and/or HTTP servers is not shown. Application Server includes the built-in Apache HTTP server which is often used.

5.APPLICATION SERVER ENTERPRISE EDITION: The basis of the development factory ramp up will be the AS EE, including both Infrastructure and Middletier components.

New applications created by your group will be deployed in the clustered Oracle Containers for Java (OC4J) which at the core of the Application Server environment.

6. & 7. AS CLUSTERING: Application Server comes with built-in clustering as part of the basic licensing. This means that all clustered servers are working; hot standby is achieved at the same time, but the so-called standby machine is not being wasted.

8.INFRASTRUCTURE SERVICES: All AS services make use of shared AS Infrastructure services, including Identity Management. (The Apache HTTP server and the OC4J containers are part of the Middletier.)

9. & 10. MIDDLETIER SERVICES: The specific services desired are deployed as Options or Features of the AS EE deployment. These services include Discoverer, Portal, Enterprise Services Bus, BPEL Process Manager and XML Publisher. Additionally, the AS Diagnostics Pack is included for the extra capability provided by this extension to Enterprise Manager. From a licensing perspective, Discoverer, Portal and ESB are all included in the AS EE basic license.

Middletier services can be deployed (as shown here) on the same physical servers as the AS Infrastructure, given a modest transaction volume. Alternatively, Middletier and Infrastructure services can be deployed on separate systems. As well, multiple Middletier services may, depending on best practices requirements on manageability and system load, be deployed separately, and still share a common Infrastructure with other services.

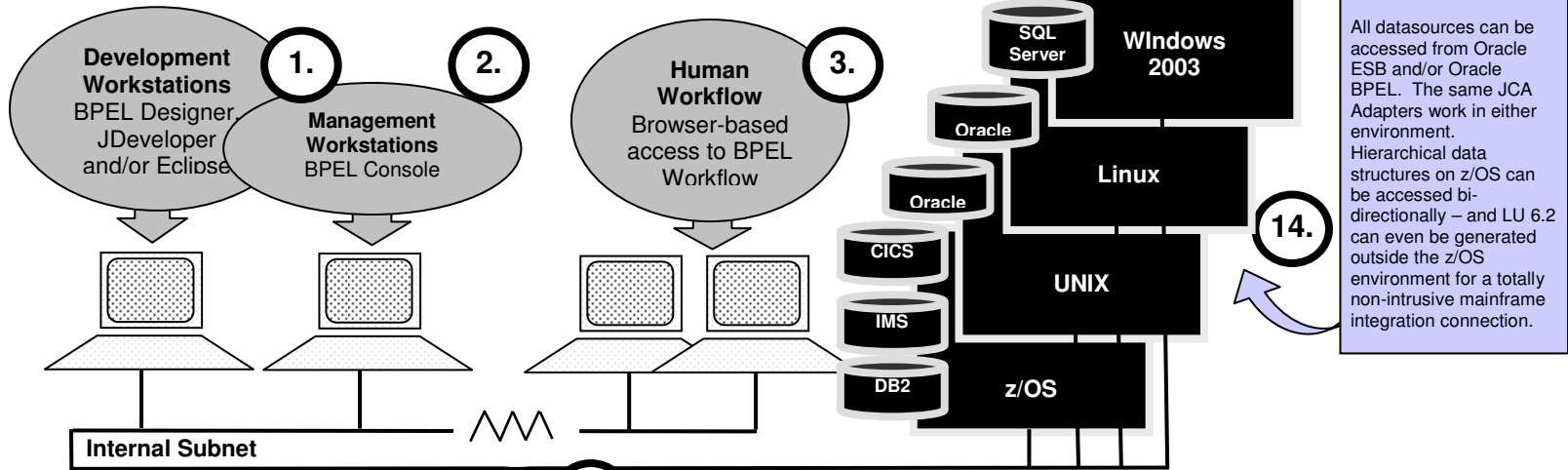
11. SERVERS: The servers shown are dual-core, dual-CPU servers. Given that these servers are based on IBM chip technology, the processor licensing conversion factor of .5 will apply; multiplying .5 times the total number of cores gives the core equivalents for licensing purposes.

12. DATABASE AND DATABASE CLUSTERING: Oracle DB Standard Edition includes Real Application Clustering (RAC) as part of the license. As shown here, the DB is deployed in a cluster to a common datastore (possibly a SAN). In this case then, the entire application deployment stack achieves High Availability (HA). And there are no wasted hot standby machines. In the case of the your planned deployment, the Database and Application server deployments will be on the same physical machine, although this would not affect licensing.

13. OPERATIONAL DATASTORES: Various aspects of the in-process Oracle AS environment require an operational datastore, including for identity management and a “cache” for BPEL (known as the “dehydration store”). These databases sometimes must be licensed and they can be located almost anywhere that performance permits.

14. CONNECTIVITY: The Oracle ESB and BPEL environments include the common JCA-based adapter library. From out-of-the-box included technology adapters for common databases, to specialized ERP and datasource adapters (including for instance CICS, DB2, IMS etc.), you will have total capabilities of building out a powerful integration environment.

SOA Pilot Deployment Platform



Data Source Connectivity

All datasources can be accessed from Oracle ESB and/or Oracle BPEL. The same JCA Adapters work in either environment. Hierarchical data structures on z/OS can be accessed bi-directionally – and LU 6.2 can even be generated outside the z/OS environment for a totally non-intrusive mainframe integration connection.

Legend

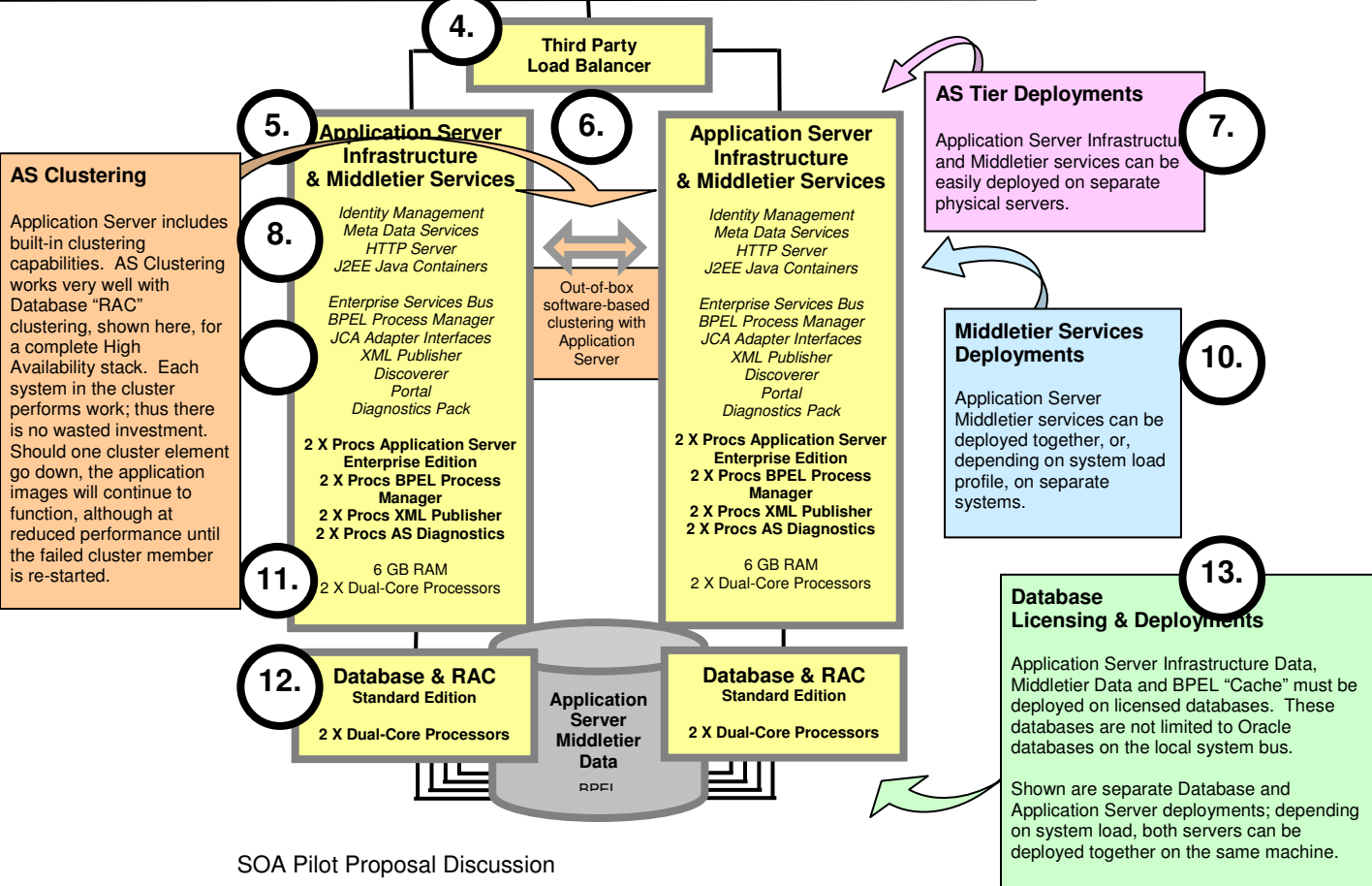
1. S/W Line Item

Existing System

New Component

Included S/W

Optional S/W



AS Clustering

Application Server includes built-in clustering capabilities. AS Clustering works very well with Database "RAC" clustering, shown here, for a complete High Availability stack. Each system in the cluster performs work; thus there is no wasted investment. Should one cluster element go down, the application images will continue to function, although at reduced performance until the failed cluster member is re-started.

AS Tier Deployments

Application Server Infrastructure and Middletier services can be easily deployed on separate physical servers.

Middletier Services Deployments

Application Server Middletier services can be deployed together, or, depending on system load profile, on separate systems.

Database Licensing & Deployments

Application Server Infrastructure Data, Middletier Data and BPEL "Cache" must be deployed on licensed databases. These databases are not limited to Oracle databases on the local system bus.

Shown are separate Database and Application Server deployments; depending on system load, both servers can be deployed together on the same machine.

SOA Pilot Deployment Platform

Version 1.0

Showing Production Environment Only

November 17, 2006

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