The Technology Advantage

The BlueSky itour™ product is built entirely on the Oracle® technology platform. It is based upon a 10g Database implementation, which may be clustered using Real Application Clusters (RAC) technology for scalability and resilience, and an application layer running entirely in the Java2 Enterprise Environment (J2EE) environment provided by the 10g Application Server, Oracle Containers for J2EE (OC4J), as it provides for seamless session state replication across clustered servers for improved resilience and scalability.
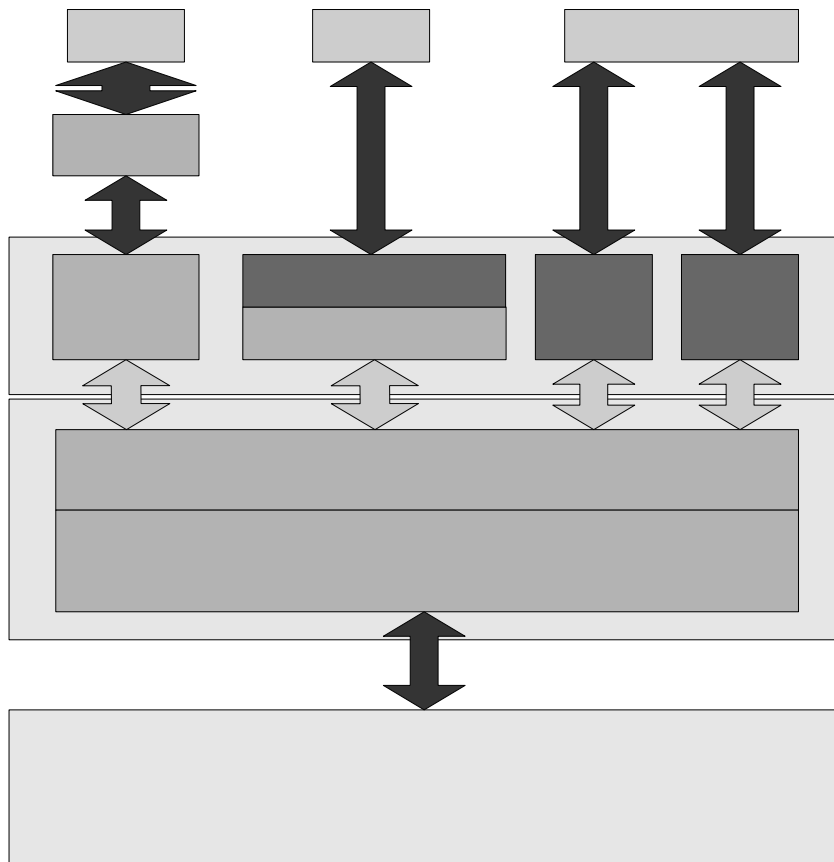
XML (UIX) Framework

The in-house user interface is built using the User Interface XML (UIX) framework, which implements a servlet based interface conforming to the Oracle Browser Look And Feel (BLAF), which provides the same look and feel as that employed within the Oracle eBusiness suite. This gives the benefit of a consistent look and feel when the application is integrated with components from Oracle's 11i application suite.

Java and Oracle 10g

All application code is written in Java using the Oracle 10g Developer Suite product. Oracle 10g Reports is used to generate quality printed output and enables full use of laser printing features such as logo, multiple font and font sizes.

Software Components

The following diagram shows the principal software components of the system. The application code is built to this model and use can then be made of Oracle's standard features to ensure scalability and resilience.

Supports Multiple Interfaces

The application is designed to support multiple interfaces and to cater for new technology interface options as they become available.

The initial offerings will comprise a browser interface for Intranet/Internet users, a Viewdata interface for traditional Travel Agency connections, and a generic approach for interfacing with external components and sub-systems.

External Component Interfaces

The external component interface may be implemented using a relatively simple adapter where the external component is capable of using XML or EDI as a transfer mechanism; the UNICORN interface would fit into this category.

Alternatively, a more complex adapter may be needed where the interface with an external component is, for example, implemented using tape transfers. Oracle HTTP server provides HTTP access to the system, which is an implementation of the Apache platform.

OC4J is an Oracle supplied Java2 Enterprise Edition (J2EE) container and is used for all the JAVA based server-side application code. It includes a JSP Translator, a Java servlet engine and an EJB container.

OC4J is capable of replicating session state across all configured containers within a cluster. This means that even stateful sessions can be failed over to a new node in the event of failure of a node.

Common Browser Look and Feel (BLAF)

User Interface XML (UIX) technology is a toolset provided by Oracle which implements the common Browser Look and Feel (BLAF). BLAF is the look and feel that is used within the Oracle e-Business suite and thus ensures that BlueSky solutions integrate well into that environment.

UIX is a servlet-based framework enabling the construction of the presentation elements of a browser-based application. Renderers are also provided for mobile devices.

Page layout is specified using an XML based syntax with event handling implemented using standard JAVA classes. The UIX framework supports templates, which are used heavily within the BlueSky product. Templates enable quick and consistent development of interfaces and also enable global look and feel changes to be made easily, for example to include branding logos or corporate colour schemes into the interface.

Business Logic Components

The business logic components of the application are implemented using EJB technology. All objects passed between the EJBs and their clients (UIX etc.) will be implemented using the Data Object interface. This Oracle supplied interface is used by UIX to allow data binding to controls and has been adopted as the standard for all other client interfaces within the application in preference to supporting more than one interface mechanism.

The Data Object approach also enables the use of XML as an interfacing mechanism for third party products.

Most of the structures used to support the search and book process are held within the EJB layer, in order to minimize activity against the database.

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