WebSphere Middleware Integration Capabilities with Siebel CRM

Hanumaiah Chowdary

Siebel / PeopleSoft SME, WebSphere BPTSE
Email: Chowdary@us.ibm.com
Mobile: 408-373-2501
Agenda

- **IBM SWG Alliance with Oracle**
- Siebel Connectivity options
- Detailed view on different Siebel Integration options
- Demos and Customer References
- Why WebSphere for Siebel?
- Summary
IBM SWG Product Lifecycle Model for Oracle Apps

**Adopt and Enable**

**Technology Adoption**
- **OEM**: WAS, DB2, Ascential, LDAP, Portal, Business Processes
- **Standards**: Fusion Apps, BPEL, Web Services, JSR168...
- **Expertise**: Access to technical leaders & architects across SWG

**Technology Enablement**
- **Resources**: On-site resources and Development Centers in Beaverton, Toronto, La Gaude, SVL & Gaithersburg
- **Platforms**: DB2 v9/9.5, ECM, Ascential, IDS, WAS, MQ & Adapters, Portal, Access Mgr, etc...
- **Benchmarks**: Application with IBM infrastructure
- **Collateral**: Red Books, White papers, brochures and demos

**Sell & Implement**

**Technical Sales Support**
- **Level 1**: TechLine Support & Sizing
- **Level 2**: Advanced Technical Support
- **Level 3**: Int'l Competency Center
- **Technical Education**: SI’s & Sales

**Implementation Support**
- Support for Proof of Concepts
- Field based Solution Technical Sales
- Brand Specific Enablement Resources

**Support**

**Post Sales Support**
- Joint Defect support
- Support call hand-off

**Joint Customer Business Focus**
- 17,000+ applications customers
- Joint Industry Solutions
- Unrivaled Support
- 30 year “Top Tier” relationship
## Experience: Oracle Application Currency & Extensions

<table>
<thead>
<tr>
<th>Application</th>
<th>Data</th>
<th>Integration</th>
<th>Mgmt</th>
<th>Interface</th>
<th>Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Business Suite</td>
<td></td>
<td></td>
<td></td>
<td>Portal</td>
<td>Functional Tester</td>
</tr>
<tr>
<td>Siebel CRM</td>
<td>DB2 ZOS</td>
<td></td>
<td></td>
<td></td>
<td>Performance Tester</td>
</tr>
<tr>
<td>PSFT Enterprise</td>
<td>IDS</td>
<td>WebSphere Application Server</td>
<td></td>
<td>Portal</td>
<td>Domino</td>
</tr>
<tr>
<td>JDE EnterpriseOne</td>
<td></td>
<td>WebSphere Enterprise Service Bus</td>
<td></td>
<td></td>
<td>Sametime</td>
</tr>
<tr>
<td>Retail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProfitLogic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>360Commerce</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banking: iflex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telco</td>
<td>DB2 UDB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MetaSolv</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JD Edwards World</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Service Enabling Oracle Applications

**WebSphere adapters**
- A consistent framework for access to back-end systems and technologies
- Mission-critical quality of service
- A portfolio of pre-built Oracle application adapters as well as a toolkit to generate your own

**Web Services**
- Programmatic exposure of web services

**WebSphere MQ**
- Straightforward point-to-point integration

**WebSphere Data Power**
- XML Acceleration

**Message Broker**
- High volume based transactions with complex events
Agenda

• IBM SWG Alliance with Oracle

• **Siebel Connectivity options**

  • Detailed view on different Siebel Integration options

  • Demos and Customer References

  • Why WebSphere for Siebel?

• Summary
WebSphere with Siebel Applications

• **Enterprise Integration**
  - WMQ for Siebel CRM: Siebel MQ EAI connector is certified by Siebel
  - WPS for Siebel CRM: WebSphere Adaptor for Siebel CRM is validated
  - WESB/WPS via web Services integration to Siebel CRM
  - WAS via web Services integration to Siebel CRM

• **Application Platform**
  - WAS and WMQ for Siebel Teller
  - HTTP Web Server for Siebel CRM certified on AIX
  - WAS for Siebel Analytics: the web server to host Analytics Web UI
# Siebel CRM connectivity options

<table>
<thead>
<tr>
<th>Oracle Application</th>
<th>Integrate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adapter</td>
</tr>
<tr>
<td><strong>Siebel CRM</strong></td>
<td>WBI / JCA</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Comparison of connectivity options

<table>
<thead>
<tr>
<th></th>
<th>Web Services</th>
<th>Messaging</th>
<th>Adapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface Coupling</td>
<td>Tight</td>
<td>No – An application may process a variety of messages</td>
<td>Tight</td>
</tr>
<tr>
<td>Transport Coupling</td>
<td>Loose</td>
<td>Tight</td>
<td>Tight</td>
</tr>
<tr>
<td>Implementation Portability</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Security</td>
<td>Standards defined – Not universally implemented</td>
<td>Vendor specific</td>
<td>EIS specific</td>
</tr>
<tr>
<td>Transaction Support</td>
<td>Standards defined – Not universally implemented</td>
<td>Limited in scope to queue entry point</td>
<td>Yes</td>
</tr>
<tr>
<td>Synchronous Invocation</td>
<td>Yes</td>
<td>Custom implementation</td>
<td>Yes</td>
</tr>
<tr>
<td>Asynchronous Invocation</td>
<td>Yes</td>
<td>Yes</td>
<td>EIS specific</td>
</tr>
<tr>
<td>Event Driven</td>
<td>Yes</td>
<td>Yes</td>
<td>EIS specific</td>
</tr>
<tr>
<td>Reliable Payload Delivery</td>
<td>Standard Defined</td>
<td>Yes</td>
<td>EIS specific</td>
</tr>
</tbody>
</table>
Agenda

- IBM SWG Alliance with Oracle
- Siebel Connectivity options
- **Detailed view on different Siebel Integration options**
- Demos and Customer References
- Why WebSphere for Siebel?
- Summary
WebSphere Integration End Points with Siebel CRM

- Messaging (JMS and WMQ)
- Siebel JDB (Java Data Bean) API
- WBI / JCA Adapters
- Web Services or ASIs
- Java/J2EE Code Generation
  - Siebel Tools (JDB/JCA - Plain Vanilla Code)
  - Siebel Web UI DDK (Complete Web Application Resources)
- Siebel – WebSphere Integration Summary
Siebel Terminology related to Integration

- Siebel Object Manager, SWSE, SWE
- Business Objects / Business Components
- Virtual and External Business Components
- Integration Objects / Business Services
- External Integration Objects
- Java Business Services
Enterprise Application Integration (EAI)

• Siebel EAI provides components for integrating Siebel Business Applications with external applications and is designed to work with third-party solutions such as those from IBM, TIBCO, WebMethods, and others.

• Siebel EAI is designed as a set of interfaces that interact with each other and with other components within Siebel application. These interfaces:
  
  – Allow a flexible service-based architecture
  
  – Are compatible with IBM MQ Series and also Microsoft MSMQ
  
  – Expose internal Siebel Objects to external applications.
  
  – Take advantage of pre built adapters and enterprise connectors, and are compatible with third party adapters and connectors.
  
  – Allow for data transformation.
EAI Architecture
Siebel EAI Adapters

- In Siebel EAI, there are three kinds of adapters:
  - **EAI Siebel Adapters**
    - Designed to interact with the Siebel business object layer
  - **EAI UI Data Access Adapters**
    - Allows custom-built Web applications access to business components and business objects.
  - **EAI Transport Adapters**
    - Business services within Siebel EAI that are designed to communicate with other protocols and technologies outside of Siebel applications to transport data from the Siebel system to another system
    - Ex: MQSeries Adapter
Messaging (MQ and JMS)
Messaging (MQ and JMS)

Messaging (MQ) in Siebel CRM

- The **Messaging Integration** with Siebel CRM for **IBM MQSeries** will be achieved by Siebel EAI MQSeries Adapter and also using Siebel EAI MQSeries Server Transport and EAI MQSeries AMI Transport.
- Pre-defined Services like Siebel EAI **XML Gateway Service** can be configured to use Siebel EAI MQSeries Server Transport when the **data format** to be **XML**.

Messaging (JMS) in Siebel CRM

- The **Java Business Service** allows the sending or receiving of messages though a JMS.
- The JMS Receiver server component, in fashion identical to the MQ Series Receiver component, allows the asynchronous receipt of messages, except you are using EAI JMS Business Service instead of EAI MQSeries Server Transport.
Siebel JDB (Java Data Bean)
Siebel Java Data Bean

• What is Java Data Bean?
  – The Java Data Bean is a collection of Java classes that allow developers to interact with a variety of Siebel objects such as business objects, business components, and so on. Using this interface, you can develop Java/J2EE components that interact with Siebel applications.

  – Two Siebel .jar files are needed to compile and run a Java application that uses the Java Data Bean:
    • Siebel.jar
    • SiebelJI_lang.jar (lang = the installed language pack; for example, SiebelJI_enu.jar for English or SiebelJI_jpn.jar for Japanese.)
Adapters ( WBI / JCA )
Adapters Technology

- An Adapter is a component in the WebSphere business integration system that provides communication support between an integration broker and either an application or a technology.

- Adapters are meta-data driven.

- Adapters are bound to a single broker instance, and also to a single instance of the EIS to which they connect.

- Encapsulates business functions as large-grained services.

- Isolates the application’s proprietary APIs.

- Provides a consistent framework to expose external applications.

- Provides bi-directional interaction and synchronous / asynchronous interaction.
Adapters (WBI/JCA): Inbound/Outbound

Inbound Operations – High Level Flow

- Adapter polls the Siebel event component for new events and fetches the events.
  - “Once and only once” event delivery is supported via XA transaction using the Event Staging Table (database)
  - Each event in the staging table is then delivered to the endpoint as part of a unique XA transaction controlled by WebSphere Process Server.
- Adapter retrieves the integration object represented by the Event.
- The integration object values are populated in the business graph which is then dispatched to registered Endpoints within the client application.

Outbound Operations – High Level Flow

- Outbound operations involve calls made from the WebSphere Process Server components to the Siebel Application using the WebSphere Adapter for Siebel Applications.
- SCA Components pass data to the Adapter using WebSphere Business Objects.
- Adapter extracts the BO and determines the Siebel interface to call from the metadata within the BO. The adapter converts the business object data to the appropriate Siebel function call using the Siebel Data Bean Client API provided by Siebel.
WebSphere Adapter for Siebel
IBM WebSphere Adapter for Siebel Business Applications implements the JCA version 1.5 specification, enabling bidirectional connectivity to Siebel Enterprise application.
Siebel WebServices

ASIs (Application Service Interfaces)
ASI – Web Services (In/Outbound)

**Inbound**

Defines an interface for services provided by Siebel Systems and can be invoked from external applications or from within Siebel.

Ex: Data Synchronization, Business Services, Workflow Processes and Application Services.

**Outbound**

- An outbound ASI defines an interface from a Siebel application to an external application and provides a proxy to the external application that can be called from within the Siebel application.

- Web Services can make ASI’s externally available by using information protocols (such as HTTP) and other communication protocols, such as SOAP

- To see a list of available web services in Siebel 7x:
  - Site Map → Administration – Web Services

<table>
<thead>
<tr>
<th>Inbound Web Services</th>
<th>Menu</th>
<th>Name</th>
<th>Delete</th>
<th>Query</th>
<th>Export</th>
<th>Import</th>
<th>Generate WSDL</th>
<th>Clear Cache</th>
<th>Status</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.siebel.com/xml/LOVService">http://www.siebel.com/xml/LOVService</a></td>
<td>EAILOWWS</td>
<td>Status: Inactive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="http://siebel.com/asi/">http://siebel.com/asi/</a></td>
<td>Siebel Account</td>
<td>Status: Active</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="http://siebel.com/asi/">http://siebel.com/asi/</a></td>
<td>Siebel Contact</td>
<td>Status: Inactive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Java / J2EE Code Generation
Siebel Tools (JDB/JCA Code Generation)
Siebel Tools  (JDB/JCA Code Generation)

Similar functionality plug-in is available for VAJava and WSAD IE.
Siebel Web UI DDK (Dynamic Developer Kit)
Siebel – J2EE Integration (pre-7.8)

• Tightly Coupled Object Interfaces
  – Java Business Service
  – Java Data Bean (JDB)
  – J2EE Connector Architecture (JCA)

• Loosely Coupled Interfaces
  – Message oriented – MQ etc
  – Web Services

• Geared more towards data layer integration
Siebel 7.8 and above - Web UI DDK Solution

• Siebel 7.8 delivers solutions to expose Siebel Data in J2EE environment.

• The Web UI DDK Wizard in Siebel Tools creates repository objects, enters administrative runtime data, and generates sample J2EE artifacts for an Siebel view

• The Web UI DDK is intended to be used as a learning tool and a starting point for Java developers to expose Siebel application functionality in a custom J2EE Web application

Siebel Mediator in RAD actually generates a complete, flexible JSF Portlet(s) from any Siebel Business Components
Web UI DDK Wizard

- Siebel developer invokes the Web UI DDK Wizard in Siebel Tools
- Smart wizard creates repository objects, enters administrative runtime data, and generates J2EE artifacts for the Java Developer

**Step 1**
- Map require data from View to Integration Object (IO)

**Step 2**
- Create IO and Business Services in the Siebel Repository
  - Select view to run wizard

**Step 3**
- Create new Web Services in the Siebel Administration
  - Generate J2EE artifacts
    - JSP pages
    - WSDL
    - Java sources
    - Libraries
    - Readme
Siebel – WebSphere Integration Summary
WebSphere offers a variety of connectivity solutions with Siebel CRM. These solutions are primarily targeted at connecting Siebel to other applications, existing or new, and to integrate Siebel with transaction environments or other customer data environments.

--- Business APIs and Web Services – Access and operate on application objects i.e. Siebel Business Objects and Siebel Business Services

--- Messaging – Exchange messages with application i.e. Siebel Transport Adapters (JMS, MQ, Http)

----- Batch Processing – Read and write bulk data via staging tables i.e. Siebel Enterprise Integration Manager

----- Workflow – Interact with application workflow i.e. Siebel Workflow

----- Direct extraction – Read data from application base tables directly
## Siebel – WebSphere Integration Summary

<table>
<thead>
<tr>
<th>Interface Type</th>
<th>EIS Interface</th>
<th>Direction</th>
<th>Interface Technologies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>API</td>
<td>ASI</td>
<td>Bi-directional</td>
<td>Java, all Transport Adapters</td>
<td>Application Service Interfaces for bi-directional exchange of Integration Objects</td>
</tr>
<tr>
<td>API</td>
<td>Business Services</td>
<td>Inbound</td>
<td>Java, all Transport Adapters</td>
<td>Siebel application/processing logic</td>
</tr>
<tr>
<td>API</td>
<td>EAI Siebel Adapter</td>
<td>Inbound</td>
<td>Java, all Transport Adapters</td>
<td>Siebel Business Service for standard C R U D Integration Object operations</td>
</tr>
<tr>
<td>API</td>
<td>Business Components</td>
<td>Inbound</td>
<td>Java, all Transport Adapters</td>
<td>Siebel application Business Object access</td>
</tr>
<tr>
<td>API</td>
<td>VBC</td>
<td>Outbound</td>
<td>Java, all Transport Adapters</td>
<td>Siebel application makes synchronous outbound call via Virtual Business Components</td>
</tr>
<tr>
<td>API</td>
<td>Web UI DDK</td>
<td>Inbound</td>
<td>SOAP</td>
<td>Access to Siebel Views for custom UI development (i.e. portals)</td>
</tr>
<tr>
<td>Messaging</td>
<td>Transport Adapters</td>
<td>Bi-directional</td>
<td>SOAP, JMS, WMQ, HTTP</td>
<td>Bi-directional transport adapters to interact with Siebel APIs</td>
</tr>
<tr>
<td>Event store</td>
<td>All inbound interfaces</td>
<td>Outbound</td>
<td>Java</td>
<td>Poll for events, retrieve via inbound interfaces, and publish</td>
</tr>
<tr>
<td>Workflow</td>
<td>Siebel Workflow</td>
<td>Bi-directional</td>
<td>Java, all Transport Adapters</td>
<td>Siebel Workflow for application process activities</td>
</tr>
<tr>
<td>Batch</td>
<td>EIM</td>
<td>Bi-directional</td>
<td>ODBC, JDBC</td>
<td>Enterprise Integration Manager for bulk import/export</td>
</tr>
</tbody>
</table>
Agenda

• IBM SWG Alliance with Oracle

• Siebel Connectivity options

• Detailed view on different Siebel Integration options

• **Demos and Customer References**

• Why WebSphere for Siebel?

• Summary
IBM SOA and Oracle Apps Demo - Product View
IBM WebSphere Integrates JD Edwards, PeopleSoft and Siebel

Royal Caribbean Cruises Ltd.

**Action Taken**

- WebSphere Adapters and integration middleware for JD Edwards, PeopleSoft, and Siebel
- Connected various legacy information sources as part of its SOA strategy

**Business Challenge**

- Transform its business beyond cruise vacations to become a full-fledged vacation company
- Expand to offer land and sea packages and overnight stays without a full-cruise commitment

**Benefits**

- Information is instantly available, accurate, and accessible from ship to shore
- “We estimate that we have saved at least 30% in terms of time and costs as a result of using the WebSphere Adapters.”
  
  – Mike Sutten, CIO
IBM WebSphere Integrates Siebel

South African Revenue Service

**Business Challenge**

- Achieve single, dynamic view of all taxpayers to reconcile accounts
- Incorporate data from disparate legacy systems for use across many tax compliance applications

**Action Taken**

- WebSphere’s platform to integrate data from 12 separate back-end tax systems
- Interfaced with Siebel Universal Application Network and Siebel Call Center on the front end.

**Benefits**

- Integrated main line-of-business applications in just four weeks
- Savings up to $3 million per day
- Improved service for South Africa’s 20 million taxpayers
Agenda

- IBM SWG Alliance with Oracle
- Siebel Connectivity options
- Detailed view on different Siebel Integration options
- Demos and Customer References
- Why WebSphere for Siebel?
- Summary
What Does this mean to YOU and Your Customer?

- **Strength of WebSphere with Siebel:**
  - A variety of proven options to connect to the enterprise
  - An Integrated Approach that reduces effort & risk.
  - Customer can be confident they have proven market leading technologies across the SOA spectrum
  - Potential to reduce overall project cost as much as 30% by lowering licensing costs, support costs, development effort, integration costs, and delivering superior price/performance
  - You can leverage the full capabilities of IBM hardware, software & services to deliver a complete reliable, scalable, integrated solution for your customer.

- **How can we Help?**
  - Documentation
  - SME’s
  - Online Demos
    - Live demonstration of IBM SOA integration using Oracle Applications
Agenda

- IBM SWG Alliance with Oracle
- Siebel Connectivity options
- Detailed view on different Siebel Integration options
- Demos and Customer References
- Why WebSphere for Siebel?

- Summary
In Summary

• WebSphere for Innovation

• Existing Oracle acquired applications are going to stay for years to come

• Let’s show our customers that they made the right decision with WebSphere

• Show IBM strength to customers (Software + Hardware + Services)

• Reach out to Oracle WebSphere alliance team for help

This is our opportunity … it is up to us to make it happen!
In Summary...continued

- IBM and Oracle strategic partnership is growing both competition and cooperation

- Siebel customers can feel comfortable with Oracle’s “Application Unlimited” commitment to continue to support IBM Software

- SOA is a joint strategic direction of IBM and Oracle
  - Best-of-breed IBM SOA Middleware
  - Best-of-breed Oracle Applications leading with Siebel for CRM

- You can start today with IBM SOA Middleware and integrate Siebel with other applications to maximize business value...no need to wait.

Thousands of Customers are doing this today!
Thank You