The Latest E-Business Suite R12.x OA Framework Rich User Interface Enhancements

Padmaprabodh Ambale, Gustavo Jimenez
Applications Technology Group
The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle’s products remains at the sole discretion of Oracle.
Session Agenda

- OA Framework in Release 12
- Rich User Interface
- OA Framework Usability Roadmap
- OA Framework Personalization Roadmap
- Extensibility using Oracle ADF
Release 12 Technology Stack
3-Tier Logical Architecture

Client

Application

10g

OA Framework
JSP
BC4J
UIX
Forms
OC4J

Database

10gR2
or
11g

Global Single Data Model
RAC & ASM

HTTP/S

ORACLE
FUSION MIDDLEWARE
APPLICATION SERVER

ORACLE
DATABASE

© 2011 Oracle Corporation. All rights reserved.
Oracle Application Framework

Overview

• Web application development framework for the E-Business Suite
• Declarative application development based on MVC architecture
• Runtime personalization framework to create upgrade-safe personalizations
• Declarative extensions development
Oracle Application Framework
Component Stack

- Application Server 10g
- OC4J 10g
- Portal 10g
- JDeveloper 10g
- ADF BC4J 10g

View
- OAF View UIX
- Portlets WSRP, JSR-168

Controller
- OAF Controller
- OAF Model BC4J
- Web Services

Model & Business Services
- AOL and SSO Services
- MDS

© 2011 Oracle Corporation. All rights reserved.
# Oracle Application Framework
## Release 12 and Beyond

<table>
<thead>
<tr>
<th>Release 12.0</th>
<th>Release 12.1 (up to 12.1.3)</th>
<th>Release Post-12.1.3 (Roadmap)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern Look and Feel</td>
<td>Rich User Interface</td>
<td>Simplified ADF integration</td>
</tr>
<tr>
<td>Support for WSRP Portlets</td>
<td>• Configurable Home Page</td>
<td>AutoVue integration</td>
</tr>
<tr>
<td>Web services support</td>
<td>• New Navigator and Favorites</td>
<td>Error messages as popups</td>
</tr>
<tr>
<td>Personalization</td>
<td>• Look-ahead LOV</td>
<td>Personalization</td>
</tr>
<tr>
<td>• Personalization Document Manager</td>
<td>• Inline Attachments</td>
<td>• Add new items based on dynamically created view objects</td>
</tr>
<tr>
<td>• Contextual Hierarchy Page</td>
<td>• Popup dialogs</td>
<td>• Extend personalization capability to more components and properties</td>
</tr>
<tr>
<td>• Support for EL Syntax</td>
<td>• Rich content container</td>
<td>• Support attaching PPR events and actions</td>
</tr>
<tr>
<td>• Enhanced Configurable Page Personalization</td>
<td>• Flexfield Reference support</td>
<td>• Support Undo Personalization</td>
</tr>
<tr>
<td>• Enhanced Home Page Personalization</td>
<td>• Record History support</td>
<td>• Support Copy Personalization</td>
</tr>
<tr>
<td>• Configurable Start Page</td>
<td>• Support for RESTful services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Support for personalizing additional attributes</td>
<td></td>
</tr>
</tbody>
</table>

© 2011 Oracle Corporation. All rights reserved.
Rich User Interface
Configurable Home Page

New Navigator Tree
Rich User Interface
Configurable Home Page

Dashboard
Embedded Content
Reconfigured Layout
Rich User Interface
Configurable Home Page

- More compact layout
- More real estate for custom content
- Tree-based Navigator
- Easy to personalize
- Favorites now as a pull-down in the global header
- Feature controlled by profile option
Rich User Interface
Navigator

Drop-down Navigator Menu
Rich User Interface

Favorites

Drop-down Favorites Menu
Rich User Interface
Navigator and Favorites

• Allows rapid cross-responsibility, cross-application navigation
• Can add and manage Favorites with a single click
• Feature controlled by profile option
Rich User Interface

Look-Ahead LOV

Inline, look-ahead LOV window
Rich User Interface
Look-Ahead LOV

• List of Values now supports look-ahead
• Inline list appears after user types in three or more characters and pauses
• Quick inline access to desired result reduces number of steps and time taken to complete tasks
• Behavior can be controlled by profile options
• Can also be controlled in pages by developer and/or through Personalization
Rich User Interface

Inline Attachments

Inline Add Attachment window
Rich User Interface

Inline Attachments

Inline View Attachment window
Rich User Interface
Inline Attachments

• Allows attachments to be
  – Added inline
  – Viewed inline
  – Edited inline
  – Deleted inline

• Eliminates navigation to the Add/Edit Attachments and View Attachments pages

• Allows users to work in context to the base page and current task
Rich User Interface
Profile Options

- Rich UI capabilities are enabled in 12.1.3
- Profile options and their default values listed below

<table>
<thead>
<tr>
<th>Profile Name</th>
<th>Profile Options</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FND: Disable Configurable Home Page</td>
<td>True, False</td>
<td>False (Site)</td>
</tr>
<tr>
<td>FND: Disable Navigator and Favorites Rich Menu</td>
<td>True, False</td>
<td>False (Site)</td>
</tr>
<tr>
<td>FND: Disable Look Ahead LOV</td>
<td>True, False</td>
<td>False (Site)</td>
</tr>
<tr>
<td>FND: Disable Inline Attachments</td>
<td>True, False</td>
<td>False (Site)</td>
</tr>
</tbody>
</table>
Rich User Interface

Popup

<table>
<thead>
<tr>
<th>Focus Name</th>
<th>Assignment Number</th>
<th>Job</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palmer, Blair</td>
<td>1256</td>
<td>CON500.Consultant</td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Aafjes, Bert</td>
<td>231-2</td>
<td>CON600.Consultant</td>
<td>Vision Corporation</td>
</tr>
<tr>
<td>Abbott, Lorraine</td>
<td>1257</td>
<td>CON500.Consultant</td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Abraham, John</td>
<td>1944</td>
<td>ANA400.Analyst</td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Bailey, Jennifer</td>
<td>89</td>
<td>MGR500.Manager</td>
<td>Recruiting-East</td>
</tr>
<tr>
<td>Bennett, Terry</td>
<td></td>
<td></td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Bolena, Larry</td>
<td></td>
<td></td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Bowman, Karen</td>
<td></td>
<td></td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Brackett, Kenneth</td>
<td></td>
<td></td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Bronson, Charles</td>
<td></td>
<td></td>
<td>Corporate Human Resources</td>
</tr>
<tr>
<td>Bucy, Cela</td>
<td></td>
<td></td>
<td>Corporate Human Resources</td>
</tr>
</tbody>
</table>

Inline Popup window
Rich User Interface
Popup

- New component to show content on top of the page
- Drilldown views can be coded as popups
  - Quick view of contextual information of the selected component or row
- Can display related links or action links or shortcuts
- Can be read only or used for data entry
- Popup content can be embedded as part of base page response
- Popup content can also be fetched as a separate request with support for parameter passing

© 2011 Oracle Corporation. All rights reserved.
12.1.2

Rich User Interface
Rich Content Container

Embedded OBIEE Analytic Contents
Rich User Interface
Rich Content Container

- New component to allow embedding any rich, URL-reachable web content
- Support for following content types
  - OBIEE Analytics
  - ADF Task Flows
  - Flash
Rich User Interface

REST Interface

- Powerful and light-weight interface to expose your business services
  - Referred to as “RESTful Services”
- RESTful services send or receive data in standard XML formats
- Custom User Interfaces / Widgets can be built by invoking those APIs
- Example custom user interfaces:
  - Flash / Flex
  - Yahoo Widgets
Rich User Interface
REST Interface Architecture

Oracle E-Business Suite

Rich Client

Browser based

Standalone

HTTP Request

HTTP URL, Cookie & Header

Cookie Validation

URL Validation

Authorization

REST Context

Initialize Handler

Process Request

OAF REST Interface

HTTP Body

OAF Model

Custom Handler

© 2011 Oracle Corporation. All rights reserved.
Rich User Interface
Embedding Custom Rich Content
Rich User Interface

Navigator Search

- Type-ahead search
- Icons use less space
- Icons use less space
- Manage Navigator moves down
Rich User Interface

Exceptions as Popups

Error message appears in a popup window
AutoVue Integration

• Oracle AutoVue offers Print services in addition to other capabilities
  • AutoVue-based Print solutions reduce total cost of ownership for licensed software
  • AutoVue Print service has been integrated with OA Framework attachments
  • Any attachment can be printed through a central AutoVue server and printer
Personalization

• Extend personalization to more components and properties
• Add new items based on dynamically created view objects
• Support attaching PPR events and actions
• Support Undo Personalization
• Support Copy Personalization
Personalization

Newly-supported components

Support added for:

- Advanced Table
- Header
- Message Component Layout
- Rich Text Editor
- Reset and Submit button
- Table
Personalization

View Object Creation

- Create new view objects for use in your page through the administrator personalization UI

[Diagram of Oracle Employee interface with highlighted button: BC4J Personalization]
Personalization
View Object Creation

Dynamic View Object
- ViewInstanceName: NewDeptVO
- SQLQuery:
  select deptno, dname from dept

Where Clause Params:
- Bind Index: No results found.
  - Enabled
  - ExecuteQuery
- Name   |   DataType
  - Deptno |   oracle.jbo.domain.Number
  - Dname  |   java.lang.String

[Add View Instance] [Cancel]
Personalization
Copy and Undo

Manage Personalization Levels
Below is a list of personalization levels that have been defined for the page and/or region.

**Page: Framework Toolbox Tutorial: Labs**

<table>
<thead>
<tr>
<th>Select</th>
<th>Object:</th>
<th>Extract Translations</th>
<th>Delete Personalizations</th>
<th>Activate</th>
<th>Deactivate</th>
<th>Upload Translations</th>
<th>Undo All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select</td>
<td>All</td>
<td>Select None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personalization Level</th>
<th>Value</th>
<th>Last Updated</th>
<th>Activate</th>
<th>Translate</th>
<th>Copy Personalization</th>
<th>Undo Personalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td>Site</td>
<td>8-September-2010</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsibility</td>
<td>OA Framework Toolbox Tutorial Labs</td>
<td>8-September-2010</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function</td>
<td>Framework Toolbox Labs Employees (1)</td>
<td>8-September-2010</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>High Technology - Computers</td>
<td>8-September-2010</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>United States of America</td>
<td>8-September-2010</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Vision Operations</td>
<td>8-September-2010</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OA Footer**

<table>
<thead>
<tr>
<th>Select Personalization Level</th>
<th>Value</th>
<th>Last Updated</th>
<th>Activate</th>
<th>Translate</th>
<th>Copy Personalization</th>
<th>Undo Personalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Personalization Defined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Rich User Interface with ADF
ADF: Next-Generation Development Framework
Oracle Application Development Framework

• Increase productivity & ease-of-use
  – Visual and declarative development
  – Takes care of the “plumbing” code
  – Implements best practices
• Promote service oriented development
  – Re-usable business services
  – Composite applications development
• Standards-based
  – Choice of technology, deployment platform
• End-to-end coverage
  – MVC, security, customization
ADF Faces Rich Client Components

- Built in Ajax
- Skin-able
- Accessibility & internationalization
- The usual components plus:
  - Charts, Gantt, geo-map, pivot, calendars
- Built in advanced functionality:
  - Drag and drop framework
  - Dialog and pop-up framework
  - “Active Data” - Dashboards / push updates
  - Templating and declarative components

© 2011 Oracle Corporation. All rights reserved.
Levels of Integration Between EBS and ADF

Integration with Oracle E-Business Suite can include:

• Access to Oracle E-Business Suite data
  – Using AppsDataSource with ADFBC
  – Using SOA Suite

• Access to Oracle E-Business Suite stored procedures
  – Using AppsDataSource

• Navigation between ADF and OAF pages in UI
  – Profile option contains application server node information
  – Register ADF pages as ADFX-type functions and put them in EBS menus or permission sets
Navigation between OAF and ADF pages

OAF Page

ADF Page
Embedding ADF content in an OAF page

© 2011 Oracle Corporation. All rights reserved.
Requirements

The 12.1.3 new UI features require:

- ATG 12.1.3 Family Pack
- 12.1.1 Maintenance Pack
- JDeveloper OA Extension 12.1.2 or 12.1.3 for custom extensions that include rich content

Additional resources for ADF integration:

- MOS note #563047.1 Using Oracle Application Framework (OAF) and Application Development Framework (ADF)
- MOS note #974949.1 Oracle E-Business Suite Software Development Kit for Java (Includes AppsDataSource, Java Authentication and authorization Service) Readme – Patch 9863609
Summary

• Greater end user productivity through enhanced rich user interactions
• Enhanced personalization capabilities that reduce extent of customizations thereby lowering TCO
• Better integration with Fusion Middleware technologies like ADF to bring in modern technologies to your Enterprise
Available OA Framework Courses

- R12 Extend Oracle Applications: Building OA Framework Applications (D49185GC10)
  - This class shows you the methods and the tools that Oracle's E-Business Suite developers use to create OA Framework-based pages. You will learn the concepts and techniques for developing OA Framework-based pages, and by the end of the course you will have completed an full-featured applications that queries, inserts, updates, and deletes data from an E-Business Suite instance (database).

- R12 Extend Oracle Applications: Customizing OA Framework Applications (D49187GC10)
  - This course will teach the student how to customize the E-Business Suite using OA Framework technologies, including building, personalizing, and extending methods. Additionally, the course will teach the student how to deploy those customizations.

- Visit the Oracle Education website at http://education.oracle.com for more details and course scheduling options.
Available E-Business Suite Technology Courses

- In the “Categories” field, select the E-Business Suite Technology item, and then select the “GO” button.
- This will show you the catalog of E-Business Suite Technology training available from Oracle University, covering 11i, R12, and R12.x courses.
- Training is available in a number of formats including in-class instructor-led, live virtual class (LVC) over the Internet, and eKits for training content.