



ORACLE FUSION MIDDLEWARE

Overview & Strategy

Nick Dimtchev (nick.dimtchev@oracle.com)

Senior Architect – Fusion Middleware Technologies

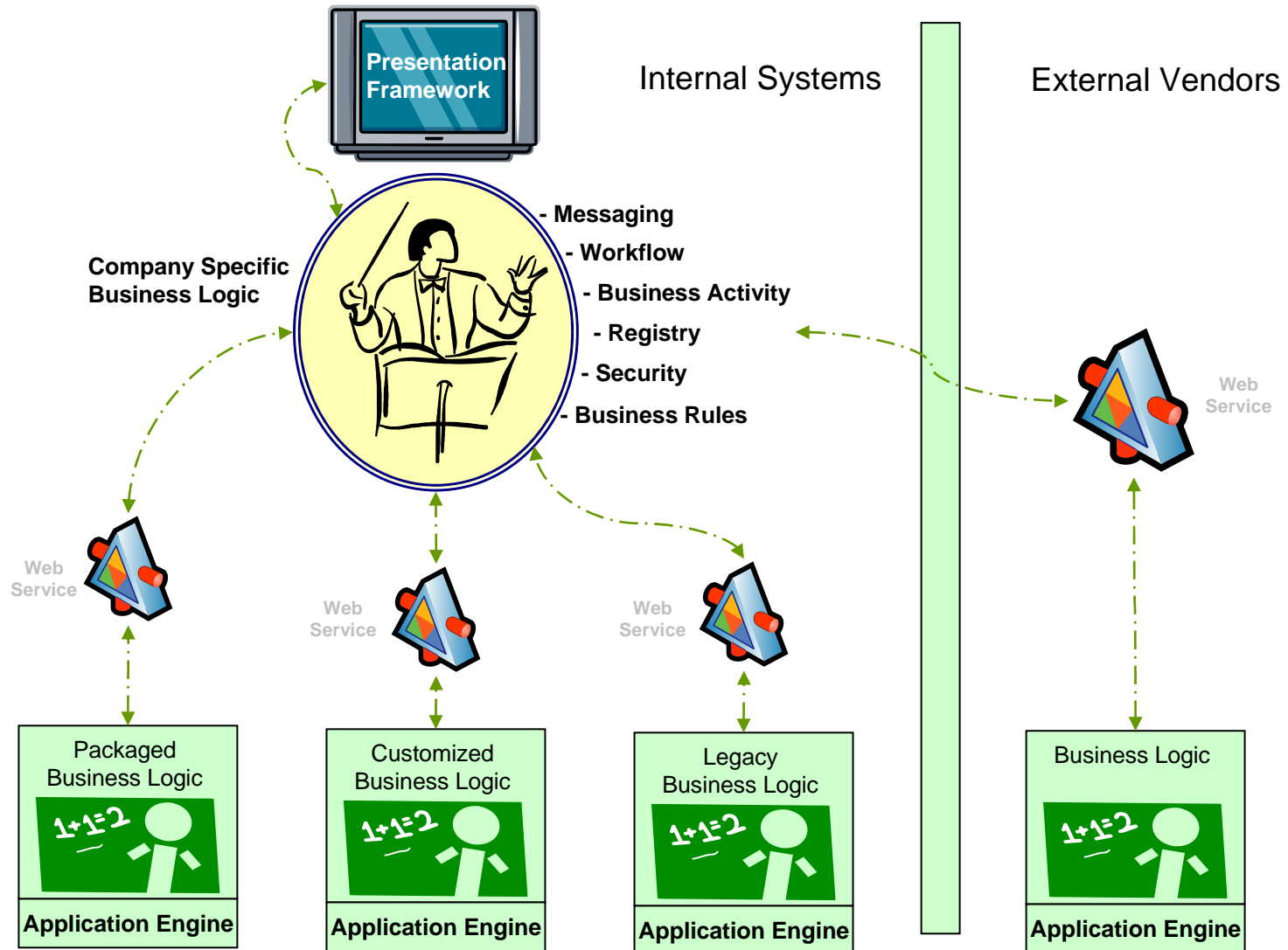
Fusion Middleware Product Strategy

Best Middleware for Oracle DB

- Oracle Fusion Middleware is Open
 - Strong Support for all DBs: MSFT, Sybase, Informix, DB/2, Oracle
- No Middleware is better with Oracle DB
 - J2EE: Database Web Services
 - Integration: DB Events; Analytic Functions
 - Portal: XDB Content Repository
 - Scalability: DRM (JDBC Stats)
 - HA: Back-Up, Disaster Recovery, FaN
 - Clusters: OCFS, ASM, RAC, CRS
 - Security: Proxy User, Enterprise User Security
 - SW Provisioning: Installation, Patching, Cloning
 - Monitoring: Topology Mgmt, ASLM
 - Diagnosability: End to End Log Correlation
- Customer Benefits
 - Exploit Database Features, Easier to Develop, Maintain

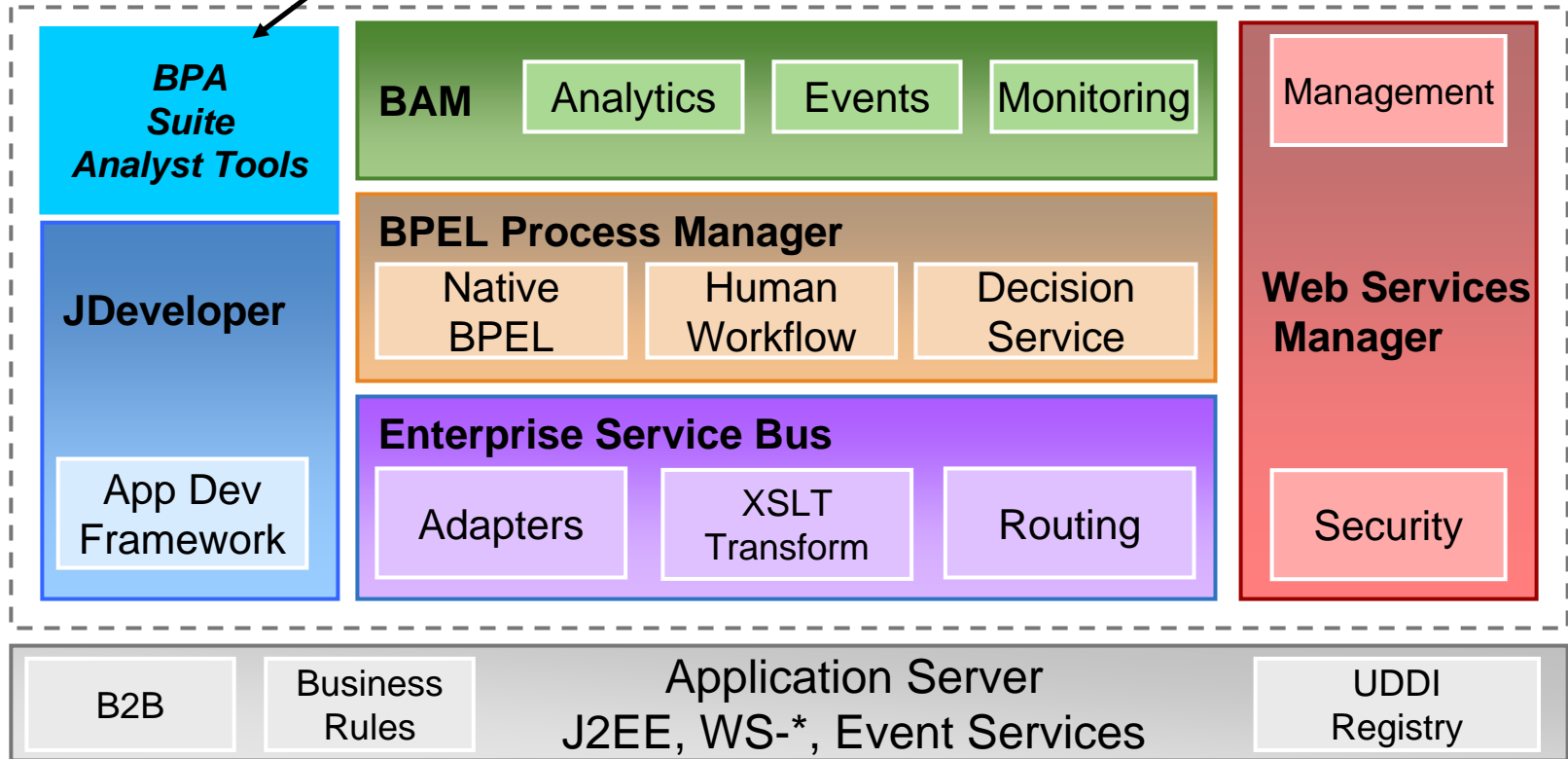
Oracle SOA Suite

SOA – Delivering Better Agility



The Oracle SOA Suite

Modeling, analysis & simulation – New product, OEM ARIS from IDS Scheer...

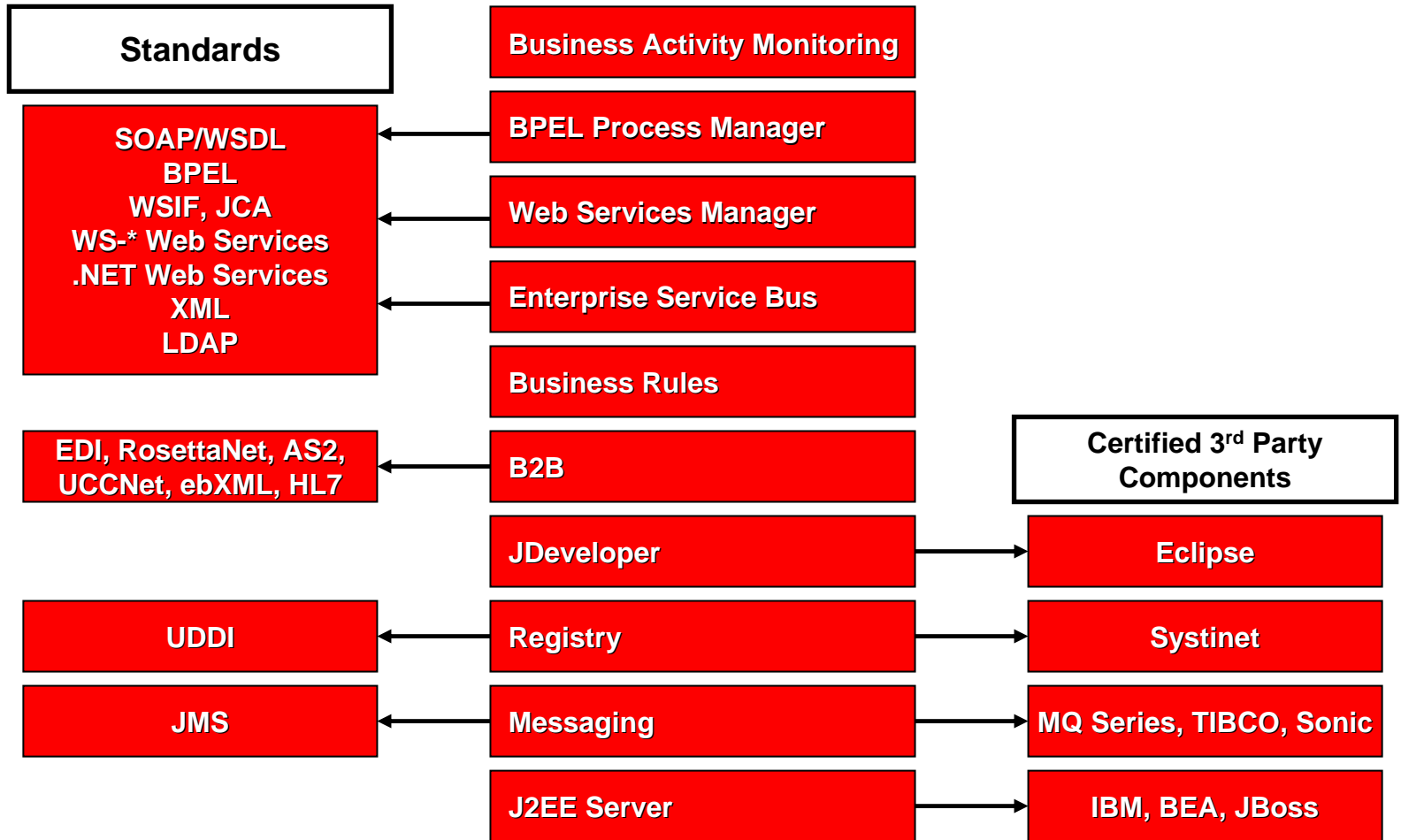


Oracle SOA Platform Drill-down

- JDeveloper
 - Complete IDE, J2EE, Web services, Supports WSIF Bindings
- Adapters
 - Connectivity to 300+ back-end systems, visual design, JCA
- Oracle ESB
 - Messaging, connectivity and data distribution
- Oracle Web Services Manager
 - Service intermediation, security and policy management
- Oracle BPEL PM
 - Standards based orchestration, workflow management
- Oracle BAM
 - Application Monitoring, SLA, KPI management
- Oracle Business Rules
 - Engine, repository, rules editor
- Oracle Application Server (OC4J, Portal, B2B, Wireless, WebCache, OID, Enterprise Manager)
 - Full featured J2EE deployment, scalability, reliability, HA

Oracle SOA Suite

Comprehensive, Hot-Pluggable



Business Process Management

Interface to business processes as services

Build Cross-Application Business Processes

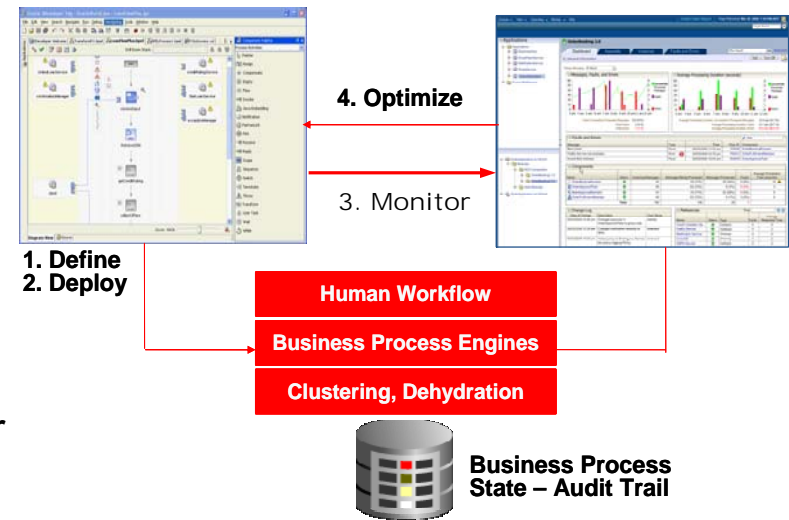
- Define business processes with a intuitive graphical UI
- Provide standard interfaces for applications and legacy systems
- Eliminate redundancy

Business Flow Orchestration

- Define and coordinate Application business processes
- Order orchestration enables seamless order capture to fulfillment experience
- Redundant activities are centralized and automated

Establish Business Rules

- Increase agility and improve time to market
- Transparency -- directly viewable by the business analyst



Oracle Enterprise Service Bus (ESB)

Oracle ESB: An ESB Moves Data

Model, Monitor and Configure



Connect

Adapters
Metadata
WS Manager
Security
Apps Events



Enrich

Transformation
Value Mappings
Business Rules
Workflow
System Xref

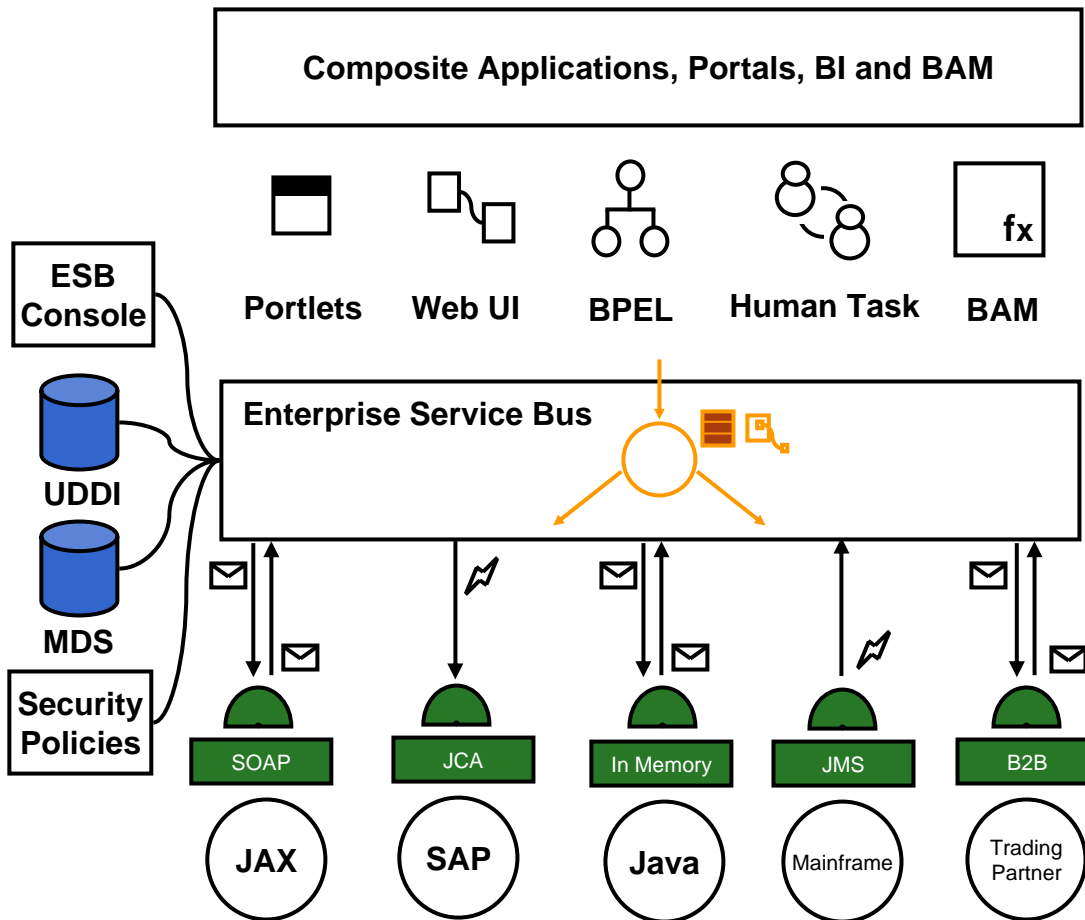


Distribute

Protocol Bus
Messaging
Routing
Interoperability
HA, Scalability



Oracle ESB: Component Architecture



• Components

- Integrated Designer
- Rich Monitoring Console
- JCA Adapters
- Routing Service
 - XPath Filter Expressions
 - XSL Transformation
- Metadata Repository/Server

• Features

- Content Based Routing
- Enterprise Messaging - OEMS
- Native XML and Web Services
- Multi Transport Fabric

• Usage Patterns

- Point to Point
- Canonical Modeling
- Store and Forward
- Request/Response
- Externalized Services

ESB Management Console

The screenshot displays the Oracle Enterprise Manager 10g ESB Control interface. On the left is a 'Services' tree with a 'Name' and 'Status' column. The tree includes Siebel, OracleApps, LoanFlow, CustomerData, CanonicalService, PeopleSoft, and Default, each with sub-operations like Customer, CRMOut, CustIn, and CustDBOut. The 'Service CustOut RS' is selected. The main area shows a diagram with components: CustIn (T: 41), CustIn RS (T: 39), CustOut RS (T: 88), CustDBOut (T: 58), and CRMOut (T: 86). A 'Navigator' window shows a bar chart, and an 'Overlay Metrics [Demo Only]' window has checkboxes for Latency [L], Throughput [T], Instance count [I], Fault [F], and System [S].

The configuration dialog for 'Service CustOut RS' is shown. It includes 'Apply' and 'Reset' buttons. A message says 'Click "Apply" to save your changes'. The 'Rules' section contains a table:

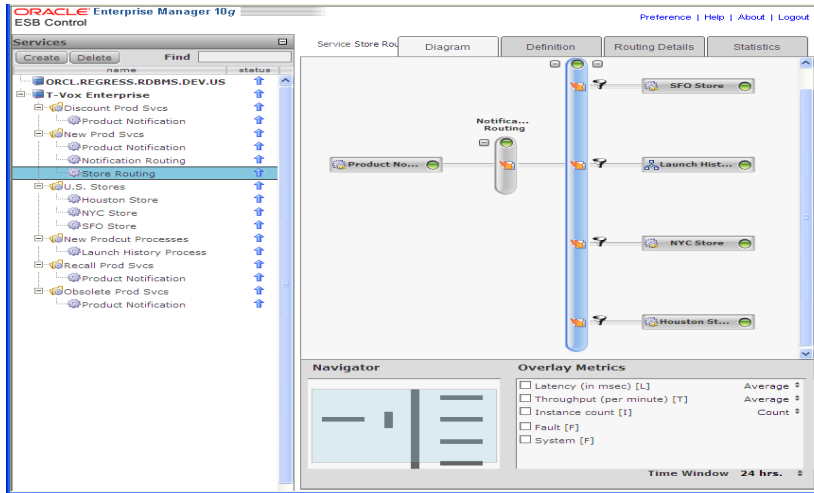
From Operation	To Target Service Operation
MapCustomerData	CustDBOut::merge
MapCustomerData	CRMOut::Produce_Message

The 'Rule Details' section includes:

- From Operation: MapCustomerData
- Target Service Operation: CustDBOut::merge
- Filter Expression: /ns0:Customer/Address/Country = 'US'
- XSLT File: esb:///ESB_Projects/ESBSamples_CustomerData
- Accept Messages From: Any System (selected), Same System, Other Systems
- Execution: Asynchronous, Synchronous (selected)
- Priority: 99

Enterprise Service Bus

Summary



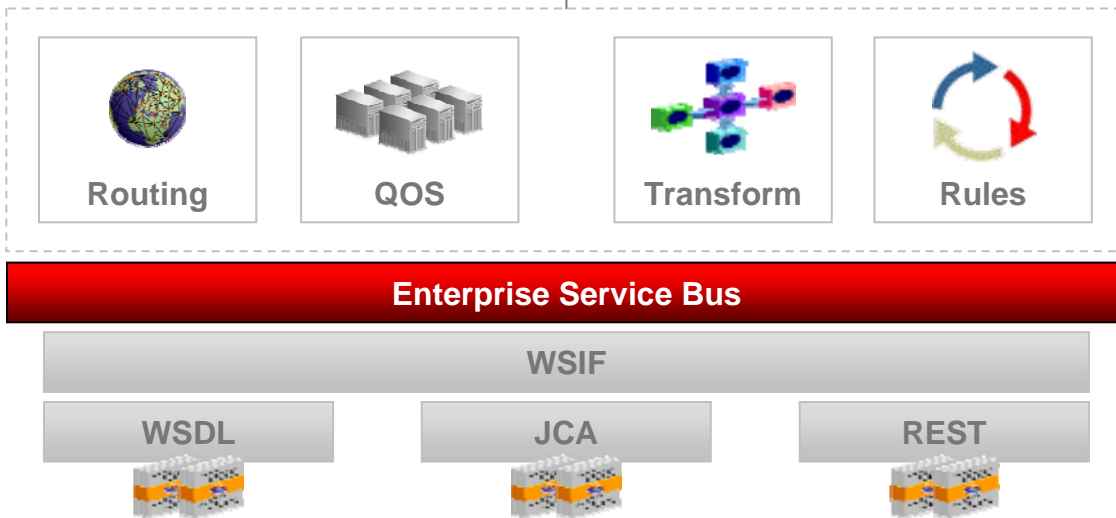
Intelligently Route XML Events and Requests across a Network of Services

Key Benefits

- **Unified Metadata (WSDL)**
- **Unified Addressing (Logical Naming)**
- **300+ Adapters**
- **Integrated UDDI Registry (Systinet)**
- **Rich Monitoring and Message Tracing**
- **WS-***

Key Differentiators

- **Optimized Transport and Data Format**
- **Open Architecture (WSIF/JBI)**
- **Integrated Security**



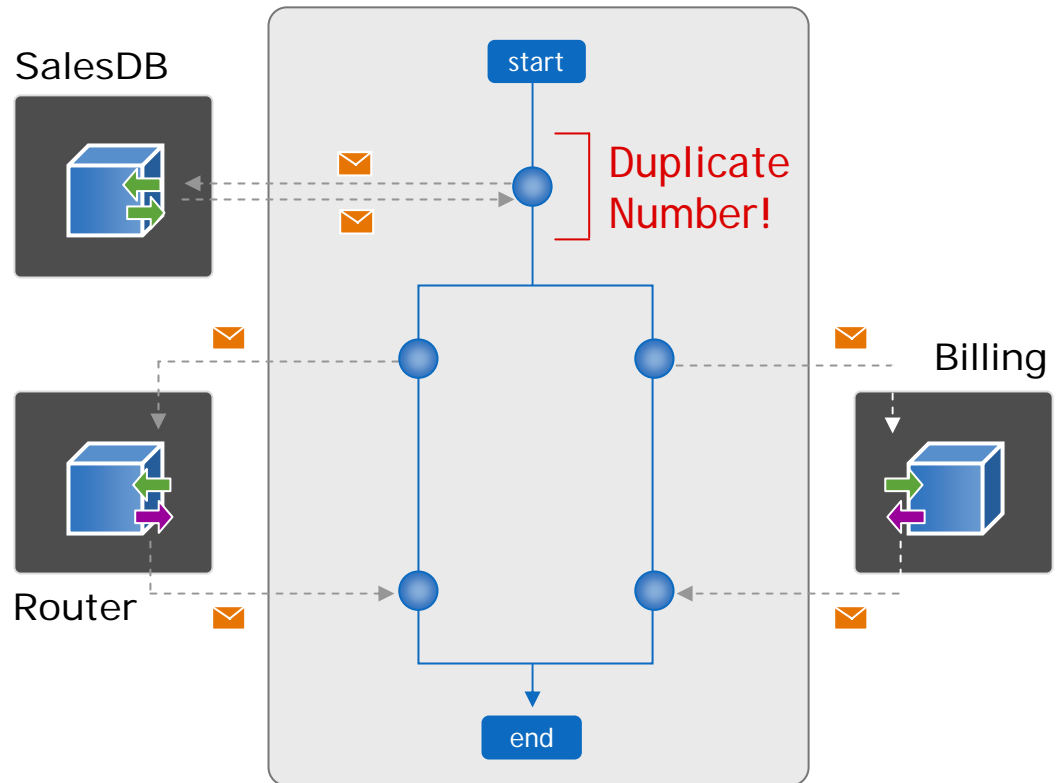


Oracle BPEL Process Manager (Process Orchestration)

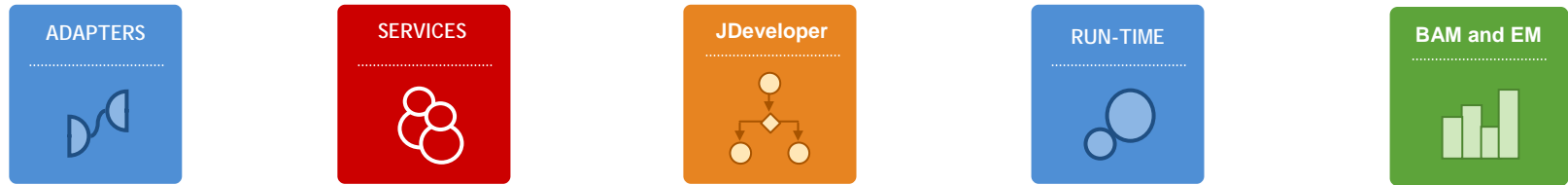
Key Standards: BPEL and Process Orchestration

Standard markup language for composing a set of discrete services into an end-to-end process flow

- 10+ years of R&D from MSFT and IBM
- Rich Flow Semantics
- Optimized Bindings (not just Web services)
- Transformation
- WS-Security
- A Process is a Service



Key Features | Best of Breed

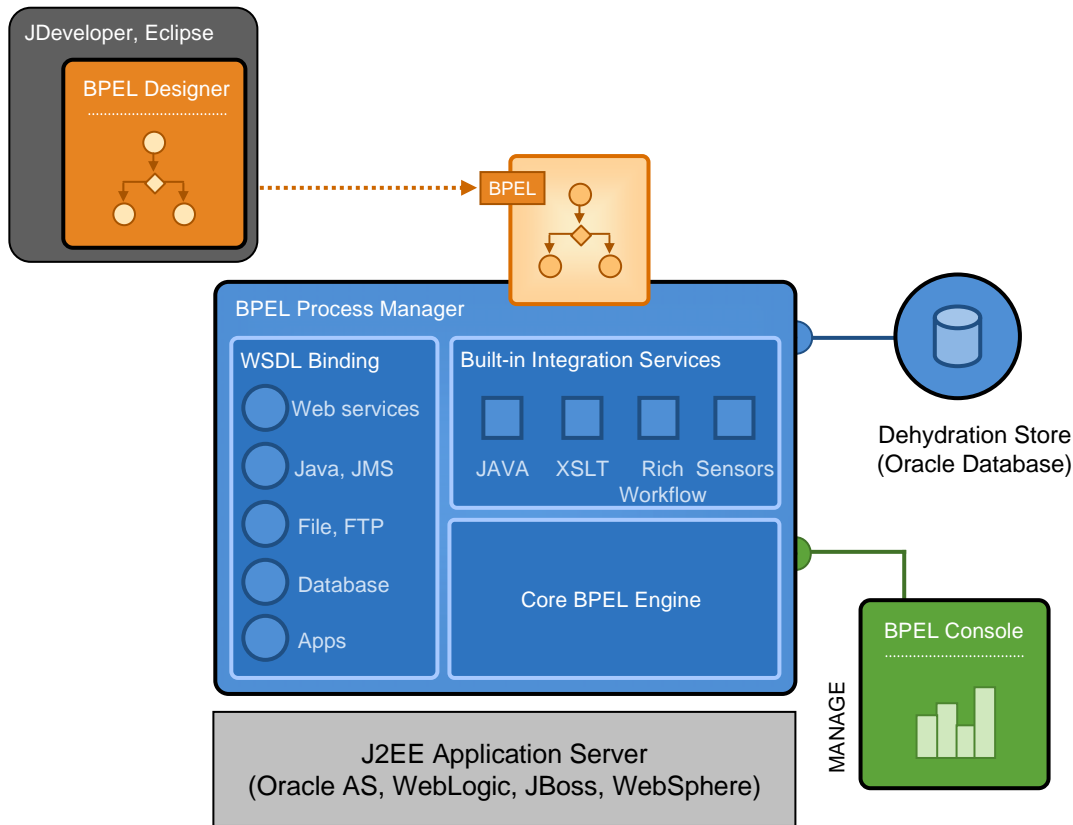


PUBLISH SERVICES	BUILT-IN SERVICES	ASSEMBLE	EXECUTE	MONITOR
<ul style="list-style-type: none"> • Bindings to 100+ backend systems (JCA) • JMS Bridge • .NET, Axis, Workshop, Glue, Systinet, interop • User Tasks/Workflow • Email with Attachment 	<ul style="list-style-type: none"> • Workflow Service • Identity Service • Notification Service • Scheduling Service • Decision Services (Rules) • Error Hospital 	<ul style="list-style-type: none"> • Comprehensive BPEL 1.1 • XSLT Transformation • Visual Modeling Tool • Native Java Binding • XML Facade • Detailed Error Reporting • Ant-based build and deployment framework • Versioning 	<ul style="list-style-type: none"> • Comprehensive BPEL 1.1 • Sync. Messaging • Async. Messaging • Context Dehydration • Reliability • Side-by-side versioning • Compensating Transactions • Clustering • Large XML documents • WS-Policy driven security 	<ul style="list-style-type: none"> • Visual Monitoring • Auditing • BPEL Debugging • In-flight Administration • Performance Tuning • Task Management • Partitioning/Domains • Centralized Security • Real-time PKI Dashboard

WSDL, XML Schema, BPEL, XSLT, XQuery, WS-Security, WS-Addressing, WS-Policy

The Oracle BPEL Process Manager

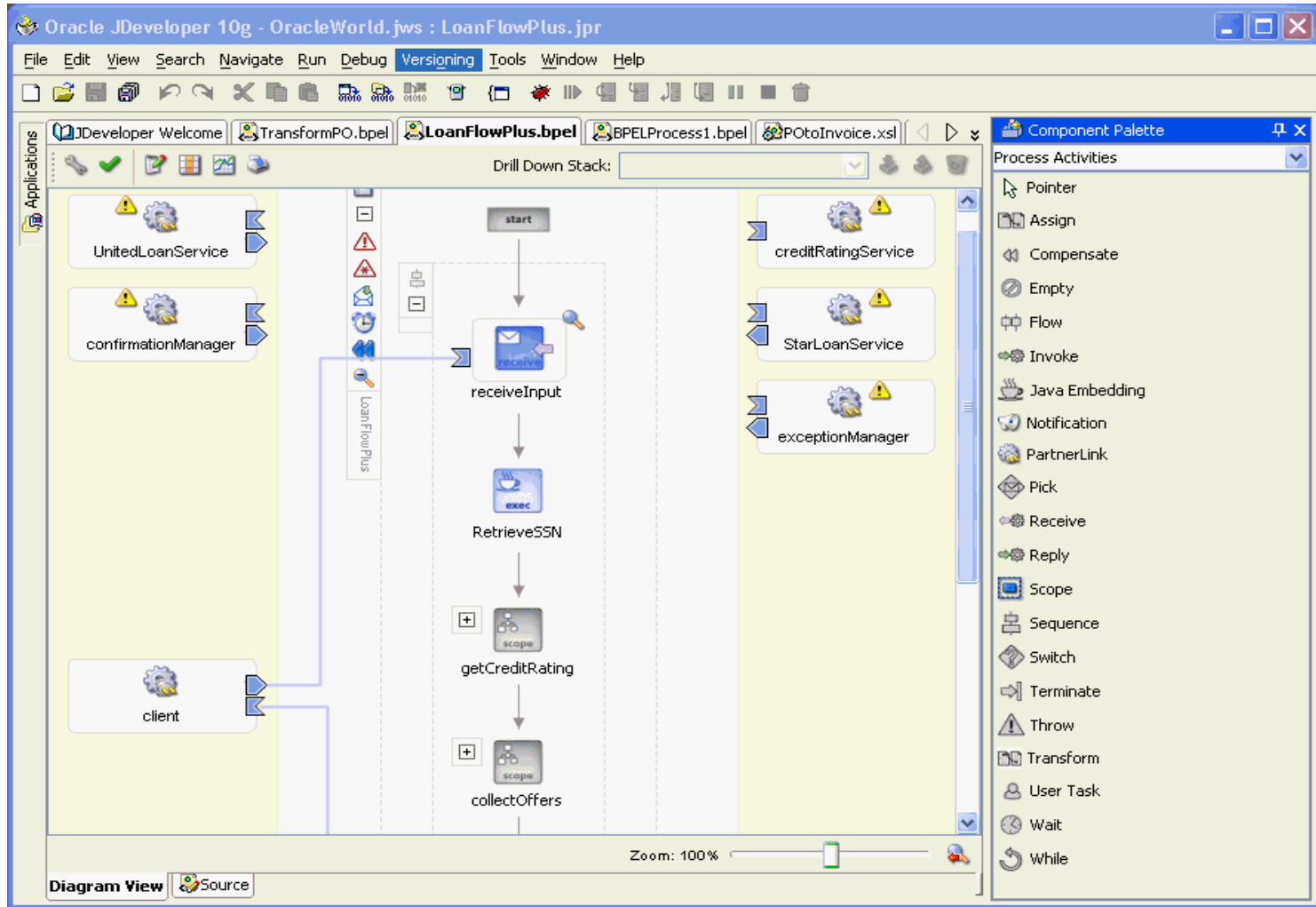
Enterprise-strength infrastructure for designing, deploying and managing BPEL business processes.



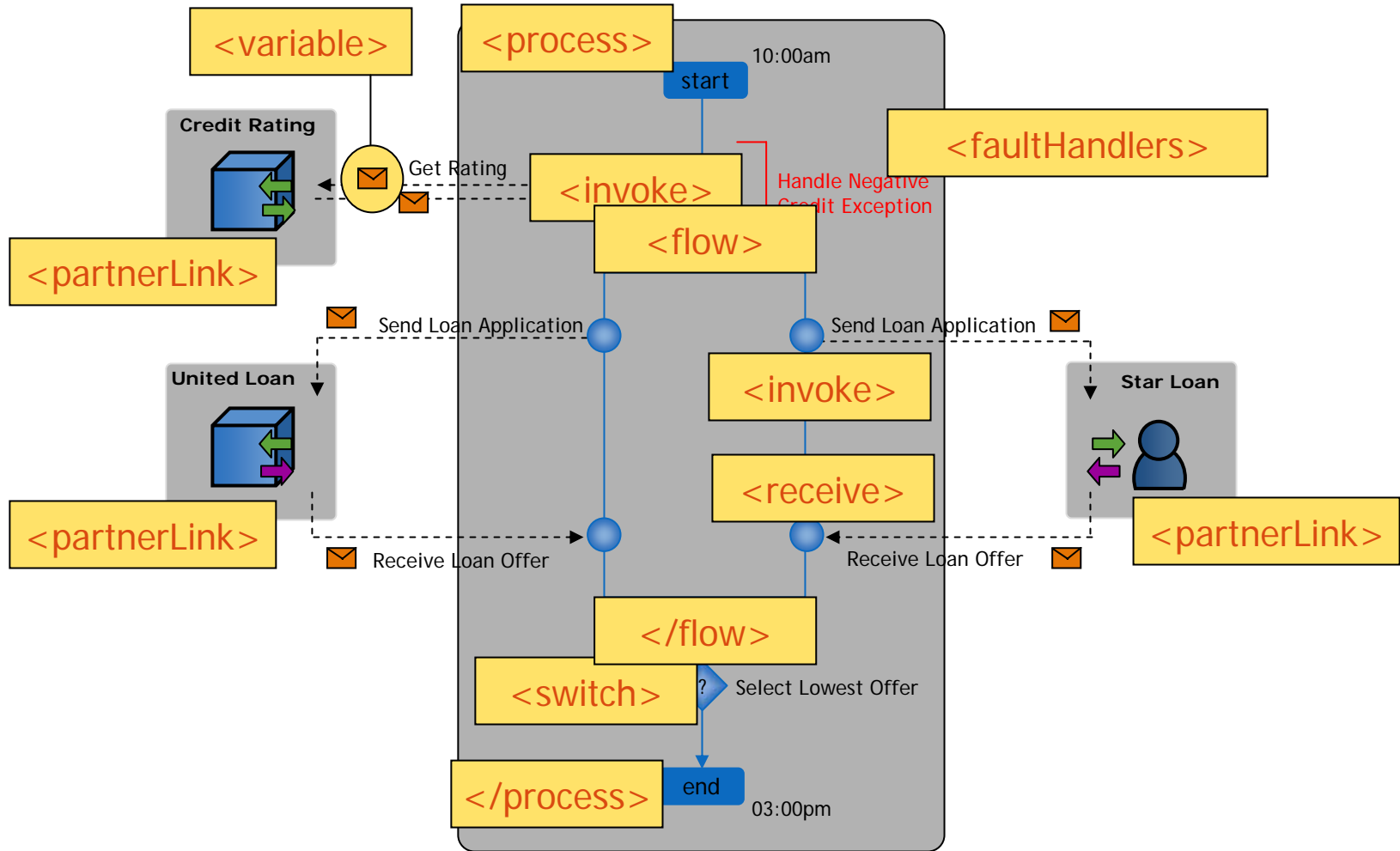
- Comprehensive and native BPEL implementation
- Easy-to-use modeling tool
- Scalable and reliable engine
- Flexible binding framework
- Rich management and monitoring
- Support for Oracle AS, JBoss, WebLogic and WebSphere
- Get up and running in less than 15 minutes!

Orchestrate Services

BPEL Process Manager – Process Modeling

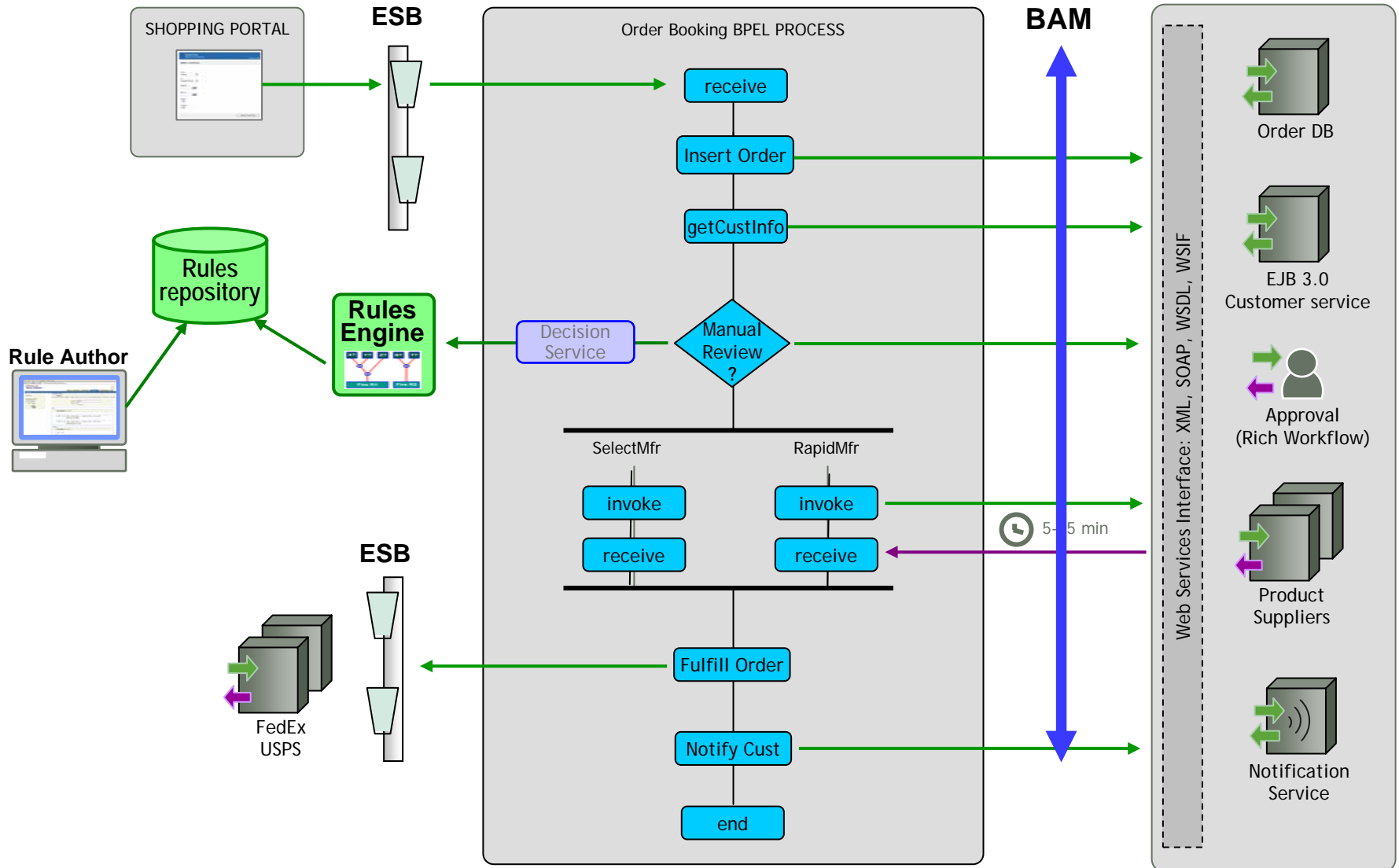
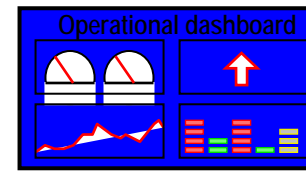


BPEL by Example

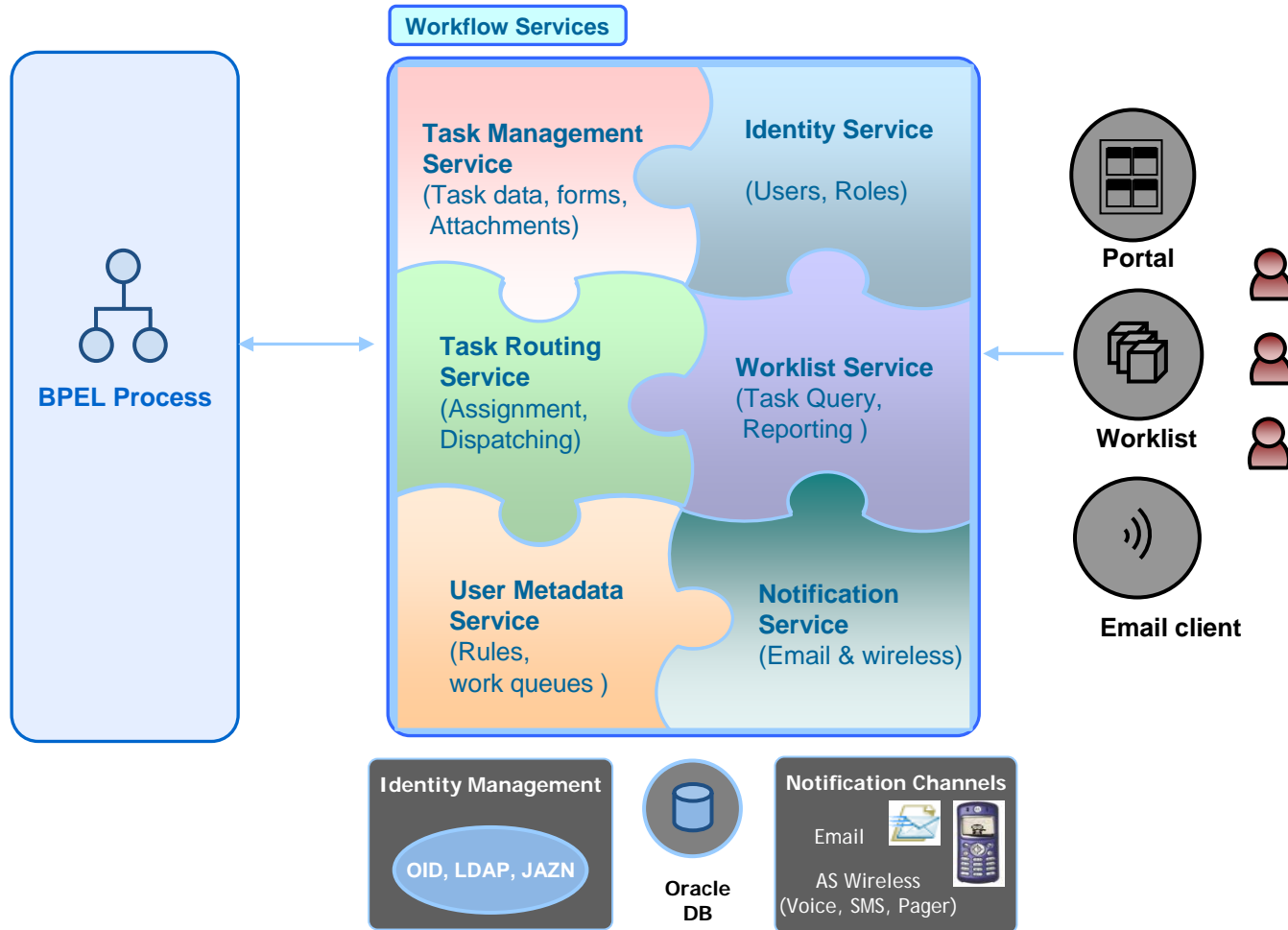


Order Booking SOA Demo

Focus on ESB, Rules, Workflow, BPEL



10.1.3 BPEL PM - Workflow Services



Work-list Application - Home

Supervisors can access Staff tasks.

Filter by Category (assigned to who), Priority, or Status (Assigned, Completed)

ORACLE BPM Worklist
Welcome, jstein [jazn.com]

Home | Reports | Preferences | Logout

My Tasks | My Staff Tasks | Initiated Tasks

My Tasks (Inbox)

Work Queues

- Inbox
- My Work Queues
 - Standard Views
 - High Priority Tasks
 - Tasks Due Soon
 - New Tasks
 - My Views
 - None
 - Proxy Work Queues
 - Delegated Views
 - None

Search: My & Group Any Any

Keyword Category Priority Status Advanced Search

Task Number	Title	Priority	Assigned Users	Assigned Groups	State	Created Date	Expiration Date	Actions
10000	Approve Order	3	jstein		Completed	Jul 26, 2006 3:47 PM		None
10001	Help desk request for jcooper	3	jstein		Expired	Aug 1, 2006 9:32 AM	Aug 2, 2006 9:42 AM	None
10002	Approve Order	3	jstein		Completed	Aug 1, 2006 10:36 AM		None

Organize work into views (like search folders)

Claim (lock) work assigned to Group

Default Task Form

The screenshot displays the Oracle BPM Worklist interface for a task. The top navigation bar includes the Oracle logo, 'BPM Worklist', and user information 'Welcome, jstein [ajzn.com]'. The main content area is titled 'My Tasks > Task Details (Help desk request for jcooper)'. A 'Task Action' dropdown menu is set to '-- Select an Action --' with a 'Go' button. To the right are buttons for 'Reassign...', 'Route...', 'Request Info...', and 'Save'. The task details section shows: Task Number: 10003, Title: Help desk request for jcooper, State: Assigned, Outcome: (empty), Priority: 3, Created Date: 08/02/06, Updated Date: 08/02/06 03:58 PM, Expiration Date: 08/03/06 04:04 PM, Creator: jcooper, Acquired By: (empty), and Assignees: jstein(U). The 'Requester' section contains input fields for ID (jcooper), First Name (Jarnes), Last Name (Cooper), Email (user1@dlsun4254.us), and Phone. The 'Location' field is set to CA. Below this are sections for 'Comments' (with a '+' and '-' button) and 'Attachments' (with a '+' and '-' button). The comments section shows a message from [jstein]: 'Walter I think we need to order more hardware'. The attachments section shows a file 'HelpDeskRequest.pdf (F)' with a 'Delete' button. At the bottom, a 'Short History' table shows the task's status: Action: Task Created, State: Assigned, Outcome: (empty), Updated By: jcooper, Updated Date: Aug 2, 2006 3:54 PM. A 'View Full History' button is also present. The footer indicates 'Page refreshed on Aug 2, 2006 4:00 PM'.

Action

Advanced Actions

Save

Payload Data

Comments

Attachments

History

Action	State	Outcome	Updated By	Updated Date
Task Created	Assigned		jcooper	Aug 2, 2006 3:54 PM

Rules – My Rules

The screenshot shows the Oracle BPM Worklist interface for configuring a rule named 'MyRule1'. The page title is 'ORACLE BPM Worklist' with a user greeting 'Welcome, jstein [jazn.com]'. The breadcrumb trail is 'Preferences > My Rules > MyRule1'. On the left, a 'Preferences' sidebar lists 'Vacation', 'My Rules', 'Group Rules', 'Custom Views', and 'Display'. The main area is titled 'Rule Detail: MyRule1' and contains the following fields:

- Rule Name:** MyRule1
- Rule will apply only to workflow tasks of type:** default_HelpDeskServiceRequest_1.0_HelpDeskRequestWF
- Applicability Period:** A checkbox for 'Rule should only apply from' followed by two date pickers and an 'until' label.
- Description:** A text area containing 'This demonstrates My Rules'.
- Conditions:** A section for 'For default_HelpDeskServiceRequest_1.0_HelpDeskRequestWF tasks with:' containing an 'Add Condition' button and a condition: 'Location' (dropdown) 'contains' (dropdown) 'US' (text input).
- Task the following action:** A list of radio buttons: 'Reassign to:', 'Delegate to:' (selected), 'Set outcome to:', and 'Take no action'. The 'Delegate to:' field is set to 'User' (dropdown) 'jstein' (text input).
- Set outcome to:** A dropdown menu set to 'Unresolved'.

At the bottom, there are 'Save updates' and 'Cancel' buttons.

Applicability Period

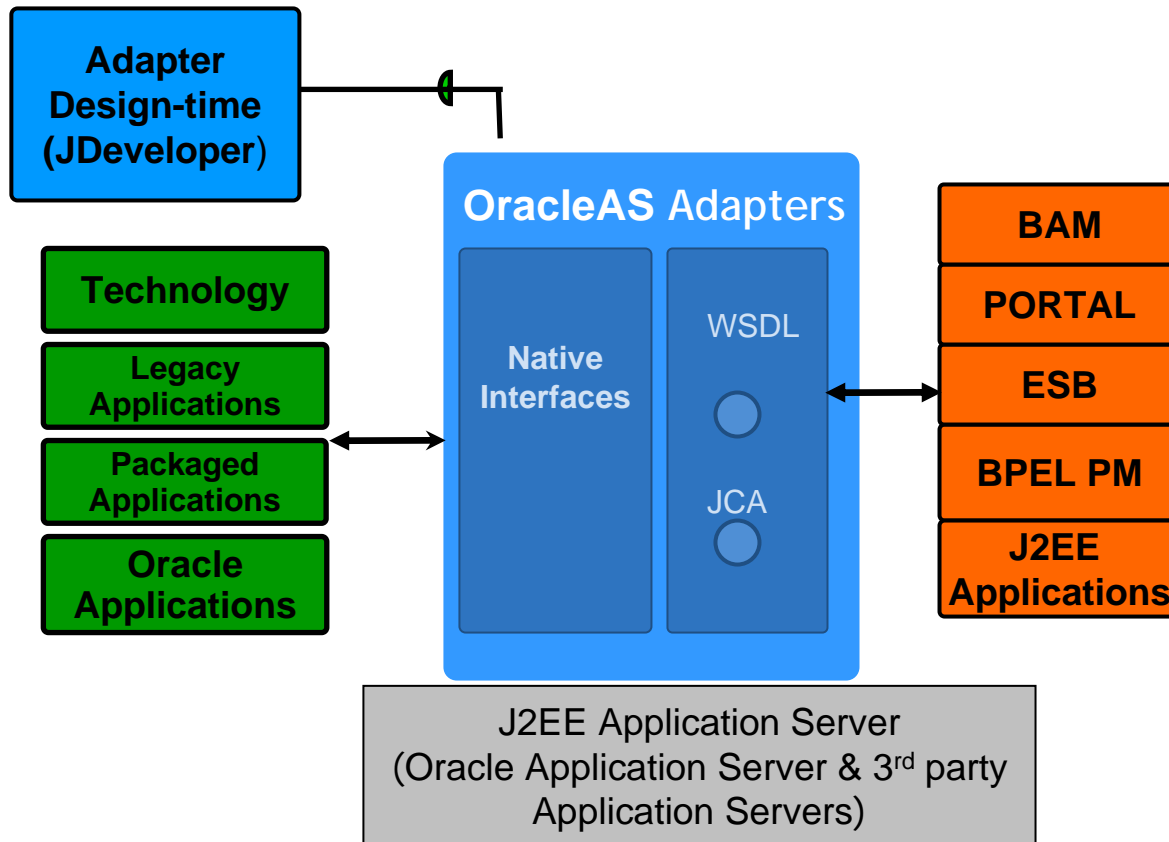
Standard Task Attributes & Flex Fields

Reassign, Delegate, Set Outcome

Oracle Adapters

Oracle Adapters

Enterprise-strength infrastructure for connectivity to enterprise information systems (EIS).



- Comprehensive and pervasive connectivity
- Support for SOA /EDA
- Open Standards Support
- Hot Pluggable
- Rapid development
- Robust & highly scalable.
- Managed through Oracle Application Server 10^g

Some of the Adapters Available for Oracle SOA Suite...

Applications

- Oracle Applications
- SAP R/3
- Peoplesoft
- JD Edwards
- Siebel
- Clarify
- Lotus Notes
- Ariba
- AXIOM mx/open
- Baan
- BroadVision
- Clarify
- Commerce One
- Hogan Financials
- i2 Technologies
- Lawson
- Livelink
- Manugistics
- Microsoft CRM
- Vantive
- Walker Interactive
- Remedy
- Salesforce.com

Databases

- Oracle 8i and above
- IBM DB/2 UDB
- Informix
- Clarion
- Clipper
- Cloudscape
- DBASE
- Dialog
- Essbase
- FOCUS Data Access
- Great Plains
- Microsoft SQL Server
- MUMPS (Digital Standard MUMPS)
- Navision Financials (ODBC 3.x)
- Nucleus
- Paradox
- Pointbase
- PROGRESS
- Red Brick
- RMS
- SAS Transport Format
- Sybase
- Teradata
- Unisys DMS 1100/2200
- UniVerse

Technology

- SOAP
- HTTP, HTTP-S
- Email – POP3, SMTP, IMAP
- FTP, FTP-S
- Flat File
- LDAP
- JMS
- Oracle AQ
- IBM MQSeries
- TIBCO Rendezvous
- Socket

Legacy

- CICS
- IMS/DB
- IMS/TM
- VSAM
- ADABAS
- Natural
- Tuxedo
- CA-Datcom
- Screen Scraping
- CA-IDMS
- C-ISAM, D-ISAM, K-SAM, QSAM

Design Time Introspection View

The screenshot displays the Oracle Applications Module Browser interface. At the top, there is a blue header bar with the text "Oracle Applications Module Browser". Below the header, there is a search field labeled "Object Name:" and a row of checkboxes for filtering: Tables, Views, APIs, CP, XML Gateway, and EDI. The main area is divided into two panes. The left pane shows a tree view of product families and their associated database objects. The right pane is currently empty.

- ProductFamilies
 - Advanced Planning (SCP_PF)
 - Applications Technology (ATG_PF)
 - Contracts Suite (OK_PF)
 - Discrete Manufacturing (DMF_PF)
 - Exchange Suite (EXCHG_PF)
 - Financials (FIN_PF)
 - Human Resources Suite (HR_PF)
 - Interaction Center (CC_PF)
 - Marketing Suite (MKT_PF)
 - Marketing and Sales Suite (MAS_PF)
 - Order Management Suite (OM_PF)
 - Configurator (CZ)
 - Transportation (FTE)
 - Order Management (ONT)
 - Sales Order (ONT_SALES_ORDER)
 - XML Gateway (11)
 - EDI (5)
 - PLSQL (3)
 - OpenInterfaces (8)



Q&A