



IBM Software Group

Rational Application Developer

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RAD Product Manager

Rational. software



ON DEMAND BUSINESS™



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Agenda

Rational Application Developer

- Software development lifecycle
- Rational Application Developer 7.5
 - Infrastructure hints & tips
 - Accelerating your JEE development
 - Web 2.0 Support
 - JSF Overview
 - WebSphere support and Problem determination tools
 - EIS Adapters
 - Portal / Portlet
 - Collaboration/Integration with other products
- Rational Application Developer 7.5.x - SCA Feature pack





RAD accelerates SOA, Java EE, Web 2.0 and Portal development for IBM middleware

Web 2.0

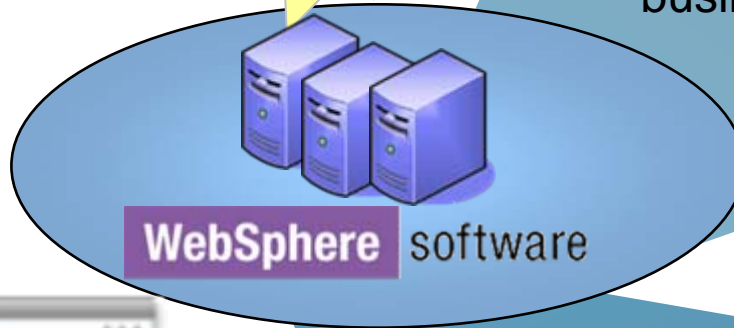
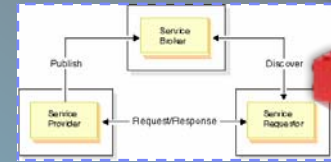
Extend SOA and Java EE assets with dynamic, rich AJAX applications



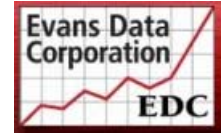
RAD 7.5 and WAS v7 synchronized release dates

SOA

Discover, generate, deploy and test Web Services to integrate business applications



Evans Data 2008 IDE User Choice Award



Java EE 5

Quickly develop and test Java EE 5 applications, with annotation based programming and integrated WebSphere support



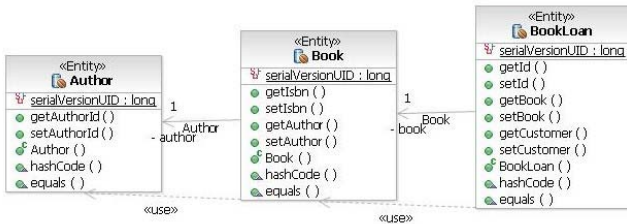
Portal

Rapid visual design of portal and portlets, and testing with WebSphere Portal

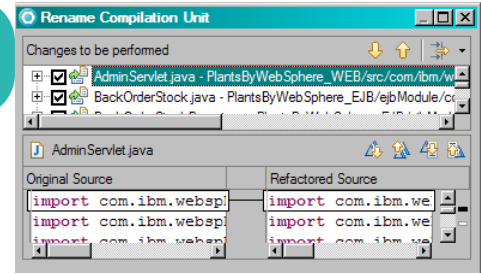


RAD increases efficiency and shortens the development and test cycle

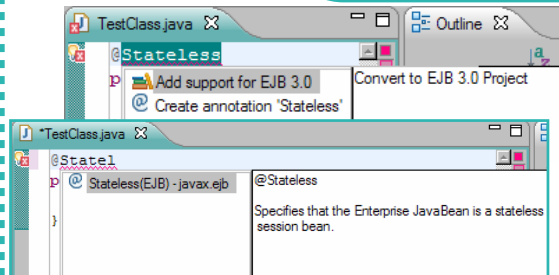
Visualize and enforce Java EE architectures



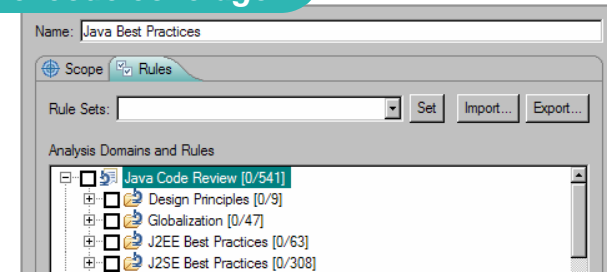
Refactor, rename, enhance



Accelerate development with annotation based programming and quickfixes



Analyze with static analysis rules and line level code coverage



Unit test with WebSphere Integrations

Server	State	Status
WebSphere Application Server v6.1 at localhost	Stopped	
WebSphere Application Server v7.0 at localhost	Starting...	Synchronized



Rational Application Developer v7.5 Value Statements

The added value of the features and functions in RAD v7.5 will benefit your organization by:

- **Increased developer productivity**
 - *Improved iterative development – focus on creation, validation, refactoring and deletion of artifacts (exploit the annotation based programming model style)*
 - *Programming model support for WAS V7.0 standards support: (JEE5 (EJB3.0, JPA, JSF 1.2, JAX-WS 2.1, JAX-B2.0, JSP 2.1, Servlet 2.5, ..)*
 - *Simplified development of RIA clients to extend and expose services and feeds*
- **Improved application quality**
 - *Through line level code coverage, advanced code review and debug capabilities*
- **Integration with other IBM products**
 - *WebSphere test environments for WAS 7.0, WAS 6.1, and WAS 6.0 included*
 - *WebSphere feature pack support (Web 2.0 FEP, Web Services FEP, EJB 3.0 FEP)*
 - *WebSphere Portal 6.1 / 6.0 development (WP 6.1 server included)*
 - *WebSphere adapter Support (SAP, PeopleSoft, Siebel, ..)*
- **Provides governance support**
 - *Install Manager allows flexible installation and maintenance*
 - *Process Advisor guides developers for best of breed practice*
- **IBM support**
 - *24x7 phone support*
 - *Bug fixes*



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Flexible Install Options



- Built on top of Eclipse 3.4 and using the IBM JRE 1.6
- Alternatively, you can install Rational Application Developer into an existing instance of Eclipse on your desktop if both are on the same Eclipse levels
- IBM Installation Manager simplifies, and optimizes your install
 - ▶ Minimize your install footprint by only installing the options you need
 - ▶ Shell share with other Rational products to help developers more easily manage their desktop
 - ▶ Enterprise install capabilities for simple maintenance and provisioning of your own standardized install configurations (create response files for what install configuration you need)

Flexible Help Options



Ability to install documentation based on the needs of your development environment.

- Available on the world wide web for those that want no footprint on their workstations:
 - ▶ (<http://publib.boulder.ibm.com/infocenter/radhelp/v7r5/index.jsp>)
- Available on the an internal web server those that want no footprint on their workstations but don't have external access
- Available for download on each workstation

Migration



- ▶ Ability to migrate from RAD 6.0.0.x or RAD 7.0.0.x via
 - Import projects using Project Interchange.
 - Import projects shared in a source code management (SCM) system.
 - Open a version 6.0.x or version 7.0.x workspace with the current version of the product.
- ▶ Workspace Migration wizard
 - Select the projects that you want to migrate
 - Highlights which files in the workspace will be modified
 - Runtime target of the project will be highlighted if you have projects that target a runtime environment that is not available
 - Ability to remove the resources that are no longer required from the workspace.
- ▶ . Upon migration completion, the Migration Validation window opens and the user can see the messages generated during the validation of the migration.

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What's new with Java EE 5?



The Java EE 5 platform introduces a simplified programming model.

Information is inserted as an *annotation* directly into a plain old Java object (POJO) without leaving your source editor. Annotations are generally used to embed in a program data that would otherwise be furnished in a side file. With annotations, you put the specification information right in your code next to the program element that it affects. This is a more intuitive and convenient approach.

ie. (@Stateless, @Stateful, @MessageDriven, @Entity)

The developer can use annotations instead of XML deployment descriptors -- that is, side files for defining components and specifying deployment instructions (these are now optional).



RAD helps with – Java EE 5 development



RAD helps simplify and accelerate Java EE 5 development

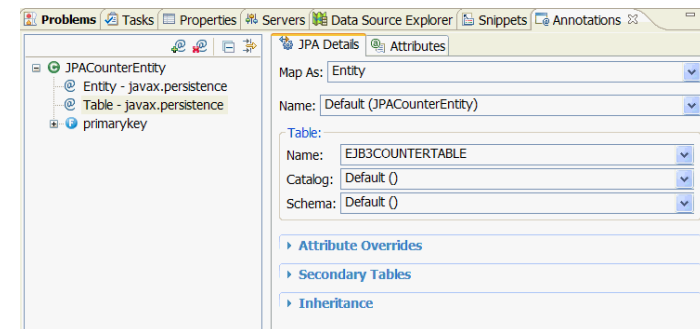
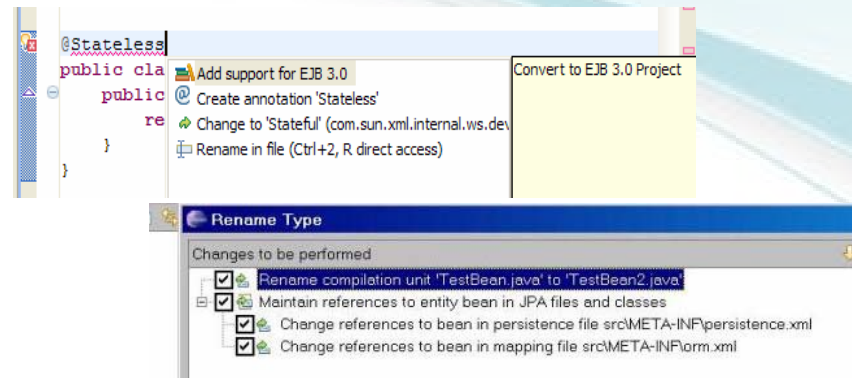
- Content assist and as you type validation
- Quickfixes for code and project configuration
- Advanced refactoring options to allow you to modify and maintain code in an iterative manner.
- Annotation view to manage and modify annotation properties

```

package com.ibm.test;
import javax.ejb.MessageDriven;

@MessageDriven
}

```



RAD helps with – JPA tools

- Create and automatically initialize mappings:
 - Create new database tables from existing entity classes (top-down mapping)
 - Create new entity beans from existing database tables (bottom-up mapping).
 - Create mappings between existing database tables and entity beans (meet-in-the-middle mapping), where names or other attributes differ.

Filter results

Create Manager Beans

Generate entities

Generate Entities

Generate Entities from Tables

Source folder:

Package:

Synchronize Classes in persistence.xml

Table	Entity Name
<input checked="" type="checkbox"/> DEPARTMENT	Department
<input type="checkbox"/> DEPT	Dept
<input type="checkbox"/> EMP	Emp
<input type="checkbox"/> EMPACT	Empact
<input checked="" type="checkbox"/> EMPLOYEE	Employee
<input type="checkbox"/> EMPMDC	Empmdc

Select All / Deselect All

JPA Manager Bean Wizard

Tasks

Select a JPA Entity from the top table and a task from the left column.

Entity	Task
Department	Primary Key
Employee	Query Methods
	Relationships
	Concurrency Control
	Other

Select a task from the left column to modify the associated properties.

This displays queries used to retrieve JPA data. You can add new queries or edit existing queries to return results tailored to your needs.

- getDepartment
- getDepartmentByAdmrddept
- getDepartmentByDeptname
- getDepartmentByLocation
- getDepartmentByMgmo
- getDepartmentOrdered

Edit Query Method

Modify filters, order results, and select the attributes returned by the query.

Query Method Name:

Result Attributes | Filter Results | Order Results

Select which attributes should be returned by the query:

Attribute	Type
<input checked="" type="checkbox"/> jadmrdept	employees.list.Department...
<input type="checkbox"/> departmentCollection	java.util.Set<employees...
<input checked="" type="checkbox"/> deptname	String
<input checked="" type="checkbox"/> deptno	String
<input checked="" type="checkbox"/> employeeCollection	java.util.Set<employees...
<input checked="" type="checkbox"/> location	String
<input checked="" type="checkbox"/> mgmo	employees.list.Employee

Select All / Deselect All

Use an existing java bean to contain the results

Query Statement:

Named Query Name:

```
SELECT d.admrddept, d.deptname, d.deptno, d.employeeCollection, d.location, d.mgmo FROM Department d
```

OK / Cancel

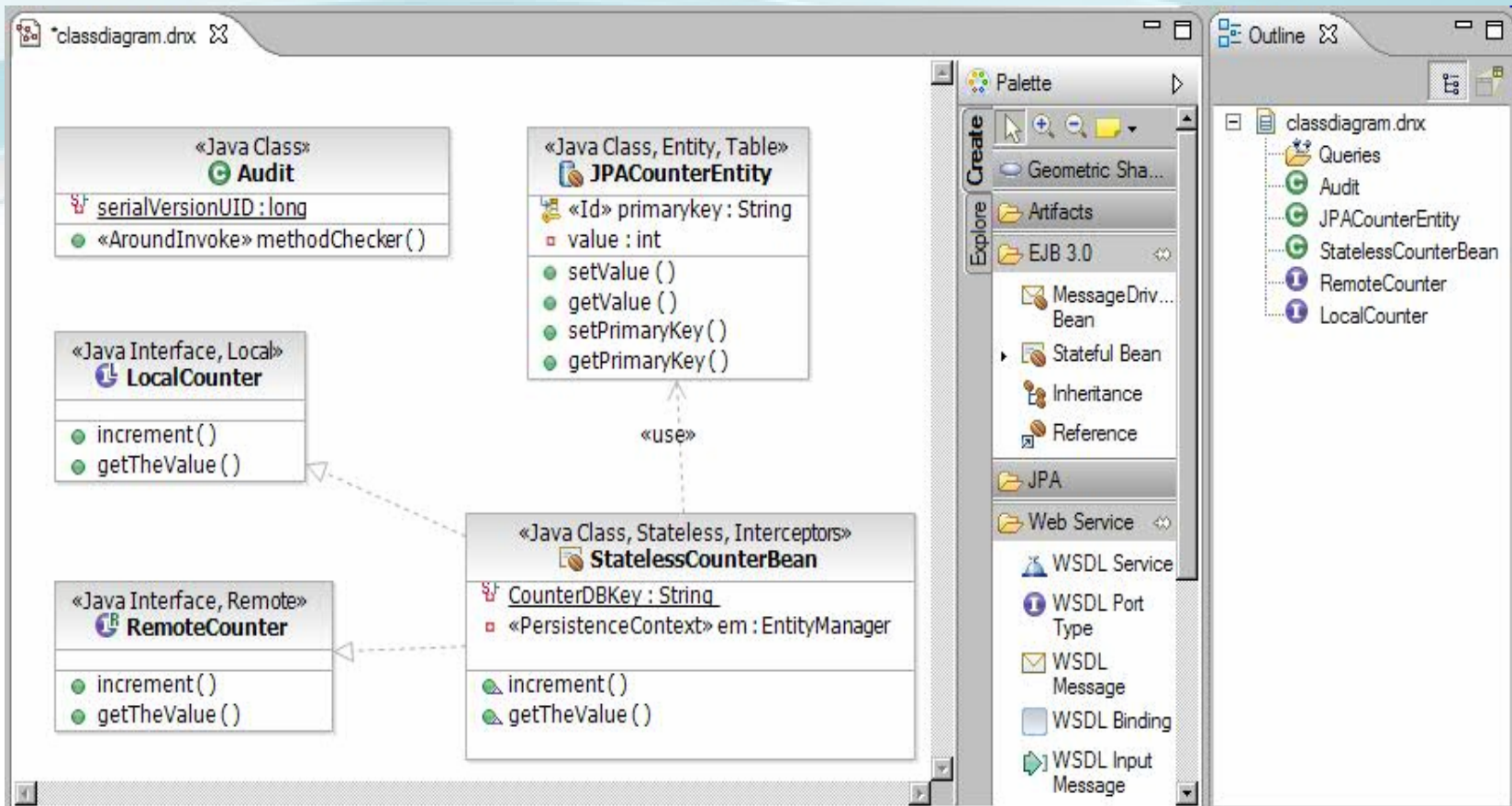


RAD helps with - Visualizing your EJB 3.0 beans

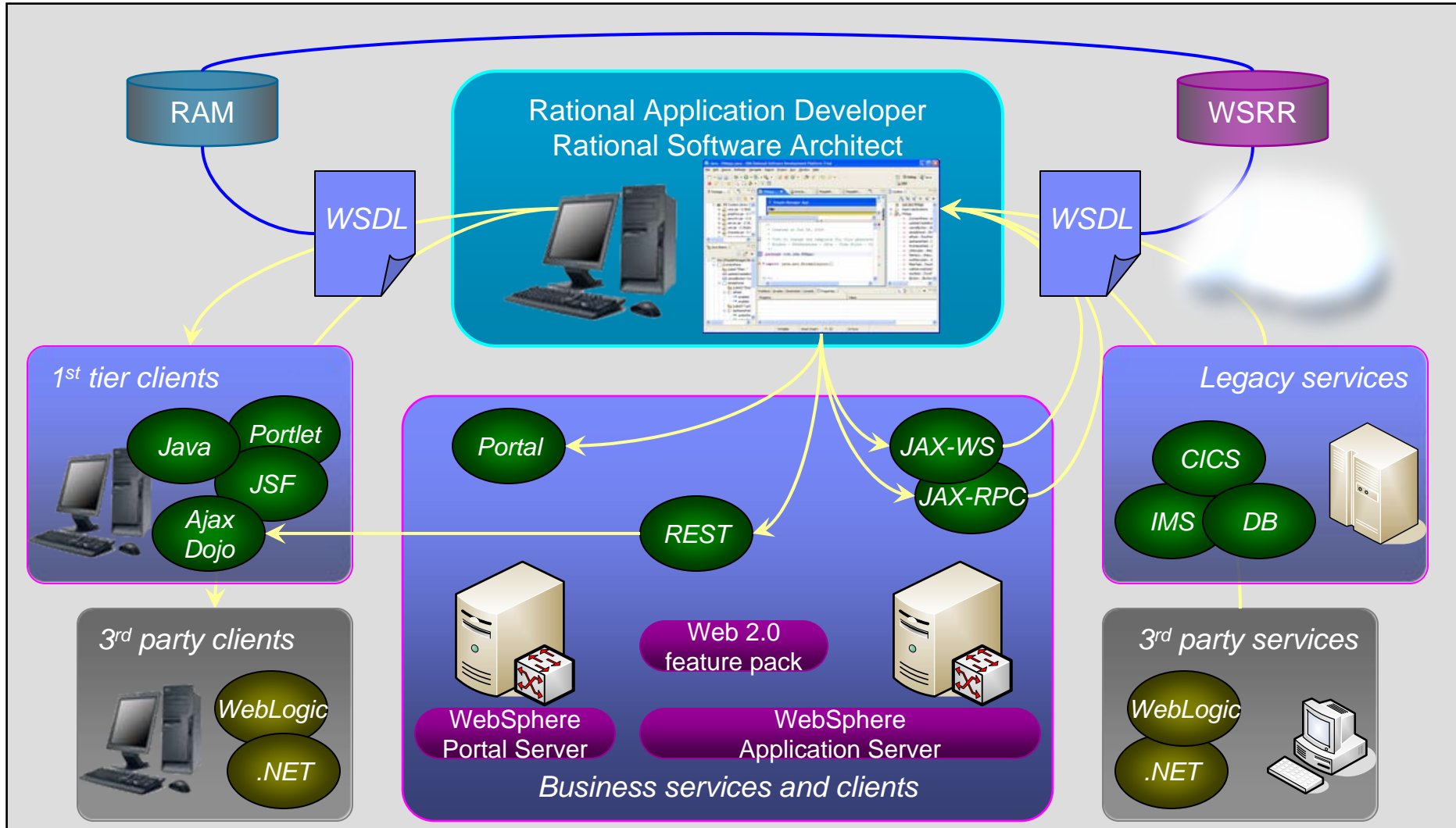


EJB Visualizer updated to view & edit EJB 3.0 beans

- Beans can be annotation or XML deployment descriptor based



RAD helps with Heterogeneous SOA



Web Services Development

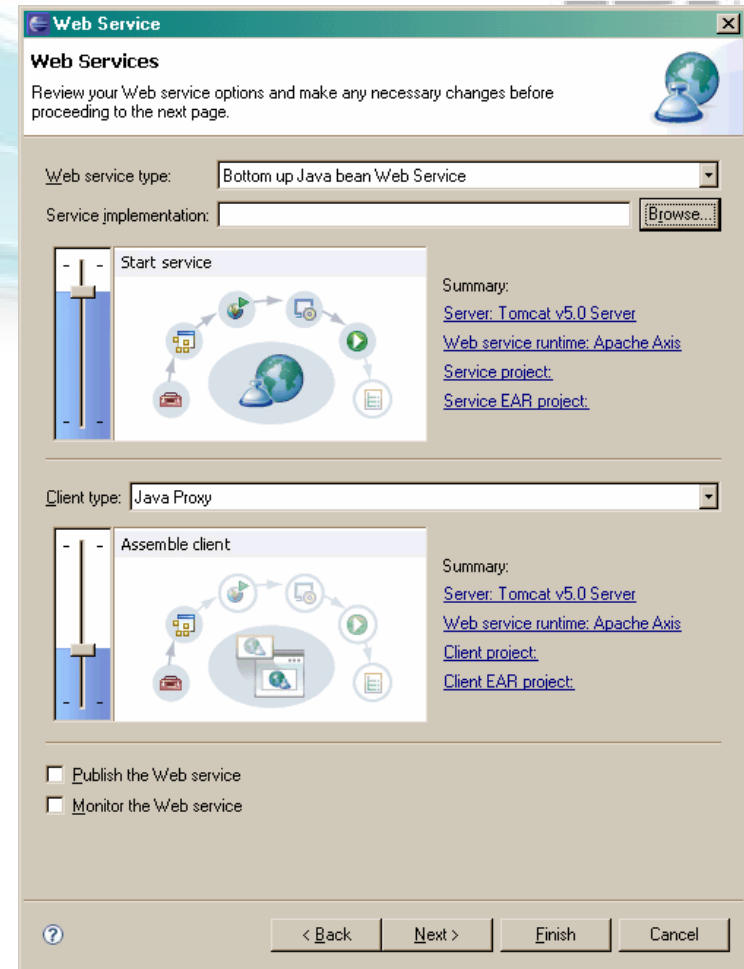
Discovery of Web services in Page Designer palette

Simplified WSDL/Schema views in the editor

Better (performing) validators in WSDL and XML schema validation

Deployment and testing of Web Services into WebSphere Application server

Test Web Service client with Universal Test client



RAD helps with – JSR 181 - Web Service Metadata Annotations

Sample JAX-WS Web Service:

```
import javax.jws.WebService;
import javax.jws.WebMethod;

@WebService
public class Echo {
    @WebMethod
    public String echoString(String input) {
        return input;
    }

    public int echoInt(int input) {
        return input;
    }
}
```

Only echoString() will appear as a WSDL operation.

JSR 222 - JAX-B Schema to Java Bean Generation



JAXB 2.0 provides full support of all XML Schema features, significantly fewer generated classes, generated classes that are easier to manipulate, and a more flexible validation mechanism

- RAD wizard that takes your schema file and generates JAXB classes for you
- RAD wizard includes schema library support
 - ▶ If selected, by default, each schema will have a project created for it or user can change this to whatever project grouping makes sense for their usage pattern

RAD helps with - Quality of Service



Quality of service is the ability to provide different priority to different applications, users, or data flows, or to guarantee a certain level of performance to a data flow

Policy Set:

Use policy sets to simplify configuring the qualities of service for Web services and clients. Policy sets are assertions about how Web Services are defined. Using policy sets, you can combine policy types. Policy Sets can be defined at the global level or on a specific project

Users can use the WebSphere Admin console to create custom Policy Sets and then import them to RAD (or vice versa)

Users can modify the custom binding associated with a policy type within RAD. RAD will assist with validation of changes the user makes to the custom binding files

Example of Policy Sets and Policy Types within them:

- **WS-Security default:**
 - ▶ WS-Security, WS-Addressing
- **Reliable Asynchronous Messaging Profile (RAMP) default:**
 - ▶ WS-Security, WS-Addressing, WS-Reliable Messaging.
- **WS HTTPS default:**
 - ▶ HTTP Transport, SSL Transport, WS-Addressing
- **Reliable Messaging:**
 - ▶ WS-Reliable Messaging.



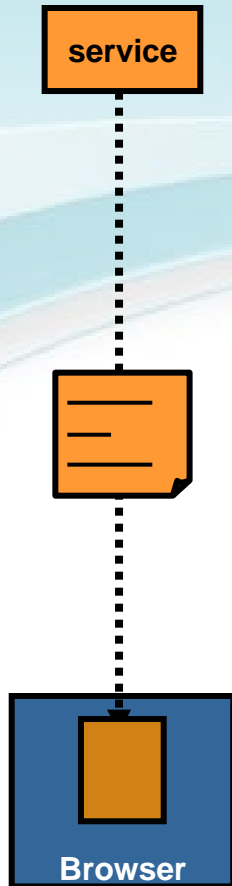
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Web 2.0 style services – key concepts



REST

- ▶ **RE**presentational **S**tate **T**ransfer
- ▶ Server side architectural style relying on HTTP semantics to access services or resources
- ▶ Easily invoked by browsers via Ajax

JSON

- ▶ **J**ava**S**cript **O**bject **N**otation
- ▶ Data format used to exchange information between browser and a service
- ▶ Directly consumable by JavaScript clients

Ajax

- ▶ **A**synchronous **J**ava**S**cript **A**nd **X**ML
- ▶ Browser based technology to provide highly interactive and responsive web pages
- ▶ Enables the browser to invoke services directly from the client

WAS Feature Pack for Web 2.0 Highlights

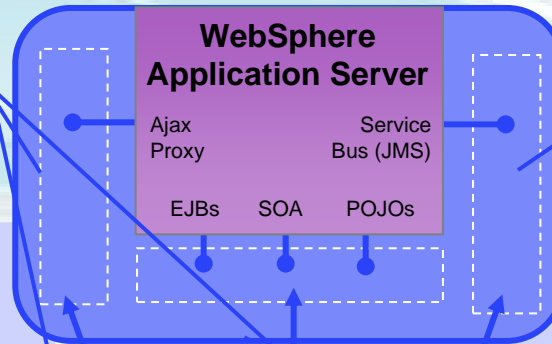


Web 2.0 to SOA Connectivity

For enabling connectivity from Ajax clients to SOA services and other JEE assets. Extends enterprise data to customers and partners through web feeds.

AJAX Messaging

For connecting Ajax clients to real-time updated data like stock quotes or instant messaging.



External Web Services

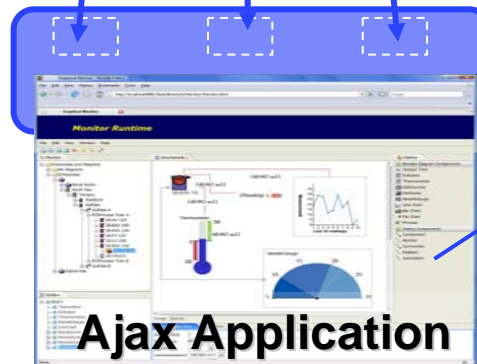


Event-Driven Data

IBM \$125.25 +\$2.50... MSFT \$43.75 -\$1.50 ...



Web Feeds



Ajax Application

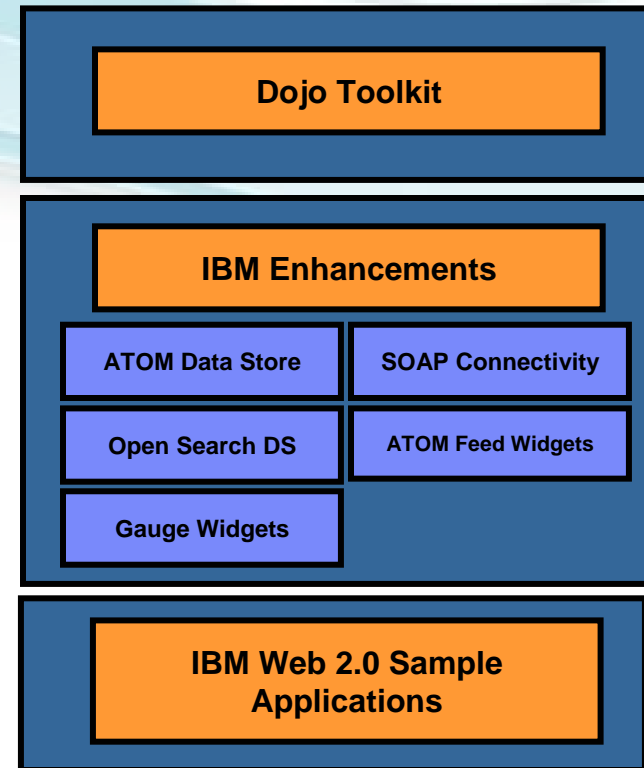
Ajax Development

Based on Dojo (dojotoolkit.org) with IBM extensions. Reduces time to market and helps lower Ajax adoption costs.

Dojo Toolkit



- JavaScript open source toolkit with IBM extensions.
- Rich set of interactive widgets
- Provides core functionality for event handling, localization, accessibility
- Eliminates many browser inconsistencies with JavaScript
- Reduces time to market and helps lower Ajax adoption costs.
- IBM is an active contributor to the Dojo Foundation.
- Dojo is part of the OpenAJAX Alliance



RAD helps with RIA Clients – Source level



- Provides a world class JavaScript source level development environment
 - ▶ JavaScript editor with content assist, validation, refactoring, outline view
 - ▶ Integration & support for Dojo
 - Dojo specific content assist, validation, refactoring

– In HTML

```
<div dojoType="
</body>
</html>
```

Attribute: dojoType
Data Type: ENUM
Enumerated Values:
- dijit.form.DropDownButton
- dijit.form.ComboButton

```
<p><div dojoType="dijit.ColorPalette" ></p>
</body>
</html>
```

align="left"
attributemap
class
defaulttimeout="0"

– In JavaScript

```
var dialog = new dijit.Dialog();
dialog.
```

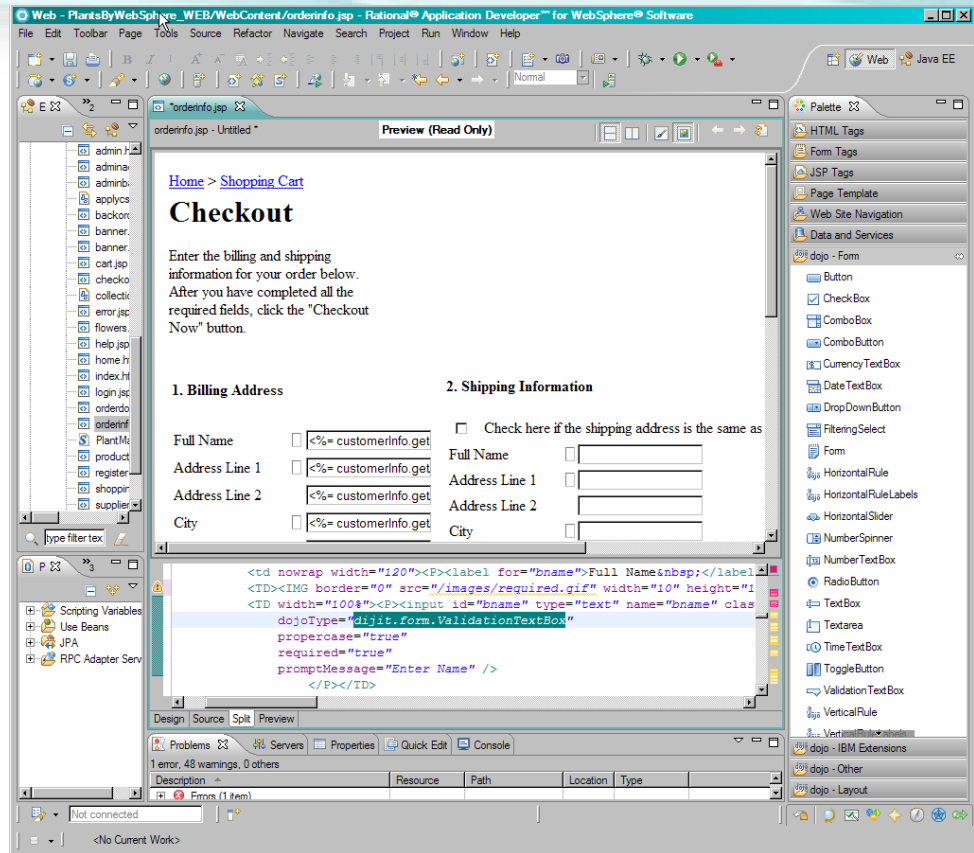
△ _alreadyInitialized Boolean - dijit.Dialog
△ _fadeIn - dijit.Dialog
△ _fadeOut - dijit.Dialog
△ _lastFocused - dijit.Dialog
△ _lastFocusItem - dijit.Dialog
△ modalconnects Array - dijit.Dialog



RAD helps with RIA Clients – Visual Editing



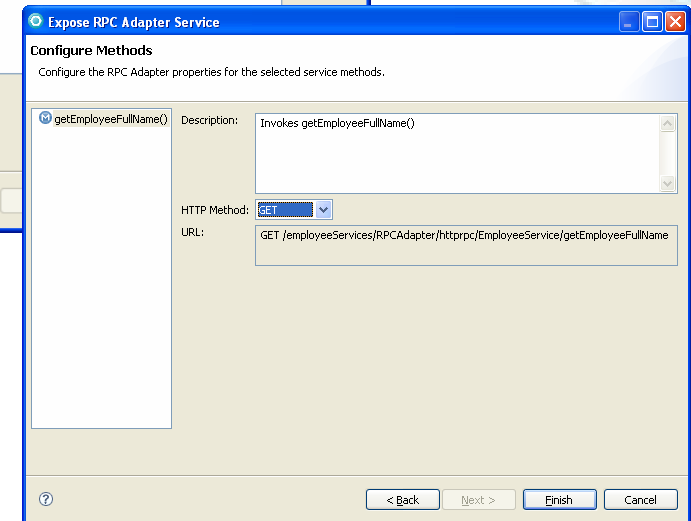
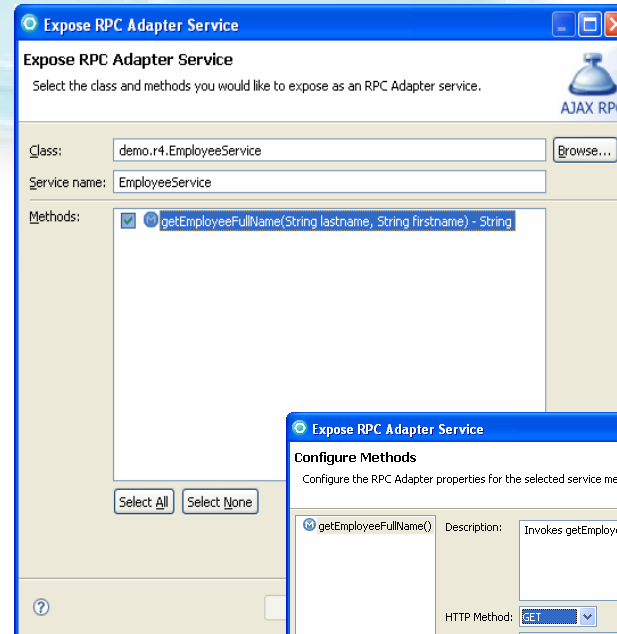
- Support for visual construction of RIA pages with Dojo Widgets on Palette for easy drag-and-drop to page
 - Page Designer split pane view
- DOJO property views for setting widget attributes
- Access to REST services, web remoting interfaces and feeds



RAD helps with RIA server side development



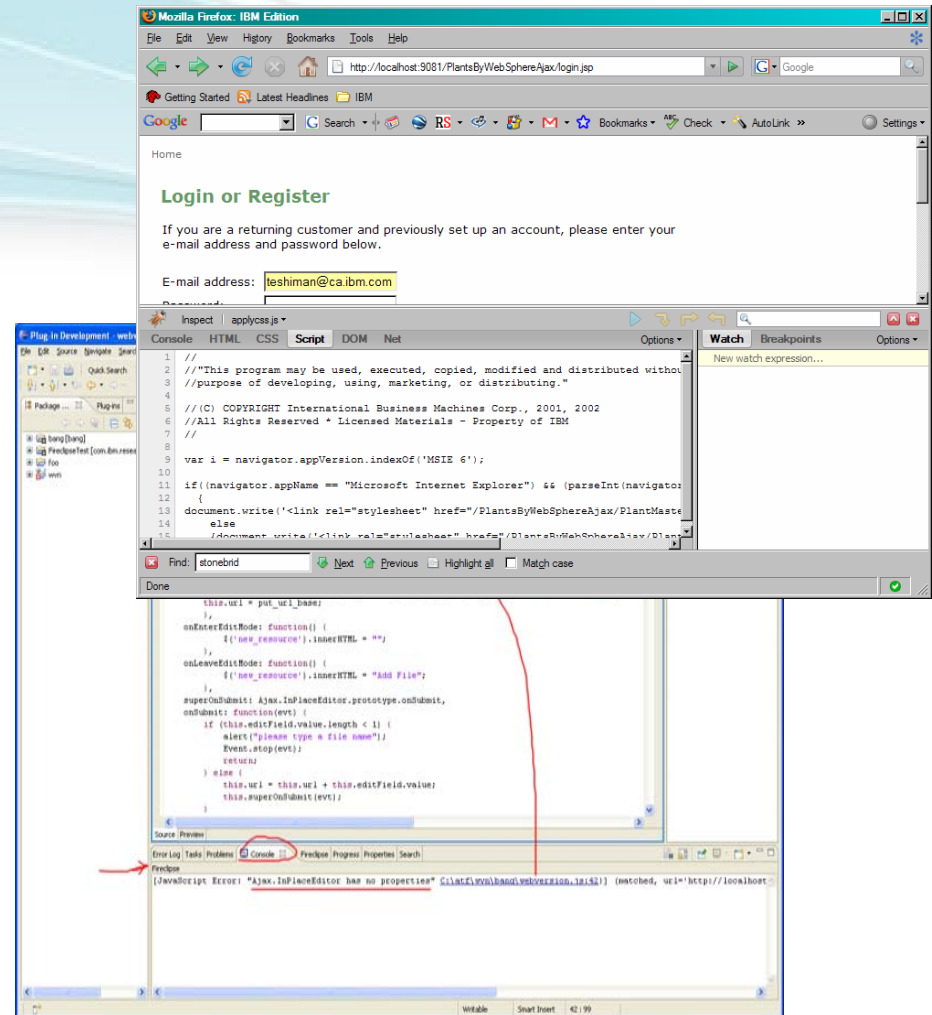
- Wizards to expose methods of Java objects (EJB's, PoJo's, web service proxies) via the Web Remoting framework and the RPC Adapter
 - ▶ Endpoints can be used as REST-style Services
- Configure and deploy Ajax Proxy allows secure access to internet based services and mashups not in your domain
- Server tools support – recognize Web 2.0 feature pack when available



RAD helps with RIA debugging and testing



- Firebug JavaScript debugger
 - ▶ Shipping with RAD
- Eclipse integration in RAD
 - ▶ Automatic installation of Firebug
 - ▶ Launch page into Firebug
 - ▶ Editor synchronization
 - ▶ Problems and Console views synchronization



Customer Pain Points – How RAD and WAS help!

- Confusion over Rich Internet Application (RIA) technology options
 - Hundreds of proprietary and open source Ajax toolkits to choose from
 - ✓ **Dojo is widely becoming the library of choice and it is backed by the endorsement of IBM and Sun**
 - Concern over vendor lock-in with proprietary Ajax Frameworks
 - ✓ **Dojo is part of the OpenAJAX Alliance**
 - Risks of going with OS Ajax Framework and/or lack of enterprise features
 - ✓ **Dojo provides a lot of enterprise features like localization, accessibility and WAS provides support for simplified access to server side objects and services with the Web Remoting framework**
 - Want to be able to start small and grow with RIA
- Ajax security concerns
 - The proliferation of JavaScript code in browsers has led to multiple security issues, notably cross-site scripting attacks
 - Browser security restrictions pose problems for programmers legitimately seeking to use cross-site functions in building their applications
 - ✓ **AJAX Proxy provides secure access to mashup cross site services**

Customer Pain Points – How RAD and WAS help!

- JavaScript development challenges
 - Javascript is tricky
 - ✓ **RAD provides visual and source tools to simplify JavaScript and Dojo development**
 - ✓ **RAD provides an integrated debug environment with Firebug**
 - How to deal with browser compatibility issues with JavaScript
 - ✓ **Dojo abstracts out low level details of JavaScript and handles differences between browsers**
 - Need to leverage current investment in J2EE & developer skills
 - ✓ **RAD and the WAS Web 2.0 FEP lets you enhance your existing applications with REST style services to target J2EE and SOA artifacts.**

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Enhanced 3rd Party JSF Component Library support



Through a Faces Library Definition Project a developer can define tooling information for a component library.

- ▶ Initialize content from introspecting library jar file
- ▶ Holds artifacts to be copied to web projects
- ▶ Defines:
 - Palette
 - Visualization
 - Tag usage information
- ▶ Presence of project in workspace enables tools in JSF web projects

Create Faces Library Definition

Define Faces Library Definition

Select a Faces tag library and a project to contain its definition. The definition allows new components to be used in Faces web pages.

Library name: Tomahawk

Select a jar file

Select from: File system Workspace Component library project

Jar file: C:\Download\tomahawk-1.1.6.jar

Specify the Faces definitions project where this definition will be stored

Faces definitions project: Tomahawk

< Back Next > Finish Cancel



Custom Component Building



- Faces Component Library
 - ▶ Dynamic Web Project
 - ▶ Build components from existing components
 - ▶ Defined by jsf web page
 - ▶ Test page generated
 - ▶ Necessary files generated (java, tld, faces-config)
 - ▶ jar file generated
 - ▶ Can generate Faces Library Definition project

New Faces Component Library

Faces Component Library
Create a new Faces Component Library

Project name: FacesComponents

Project contents:
 Use default

Directory: C:\Program Files\IBM\SDP75\workspace4\FacesComponents Browse...

Target Runtime
WebSphere Application Server v7.0 New...

Dynamic Web Module version
2.5

Configuration
Faces Component Library Modify...

This configuration includes all of the functionality that you require to create a custom Faces component library and custom Faces components.

EAR Membership
 Add project to an EAR

EAR Project Name: FacesProjectEAR New...

< Back Next > Finish Cancel



Custom Component Building - Visual layout

- Custom component used in a web application
 - ▶ On palette
 - ▶ Visualized
 - ▶ Properties shown in Properties view

The screenshot displays the IBM Rational software interface for building a custom component. The main workspace is divided into three views: Design, Source, and Properties.

Design View: Shows a visual representation of a web form with three input fields: "First name: #{component.firstName}", "Last name: #{component.lastName}", and "Date of birth: #{component.dob}".

Source View: Shows the XML code for the form:

```
<body>
<hx:scriptCollector id="scriptCollector1">
  <h:form styleClass="form" id="form1">
    <fc:person id="person1"></fc:person>
  </h:form>
</hx:scriptCollector>
</body>
</f:view>
</html>
```

Properties View: Shows the properties of the selected component, **fc:person**. The properties are listed in a table:

Attribute Name	Value
binding	
dob	
firstName	
id	person1
lastName	
rendered	

JSP Tags Palette: Shows various tags and components, including "fc:person" under "My Components".

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WebSphere Test Environment support



- **WebSphere Application Server 6.0**
 - Includes support for Web 2.0 feature pack
- **WebSphere Application Server 6.1**
 - Includes support for EJB 3.0, Web Services and Web 2.0 feature pack
- **WebSphere Application Server 7.0**
 - Includes support for Web 2.0 feature pack

- Remote deployment to all WebSphere servers listed above
- Integrated debugging, menu items for admin console, ability launch WSADMIN, application client launcher
- Universal test client to dynamically test your applications

WebSphere Test Environment support

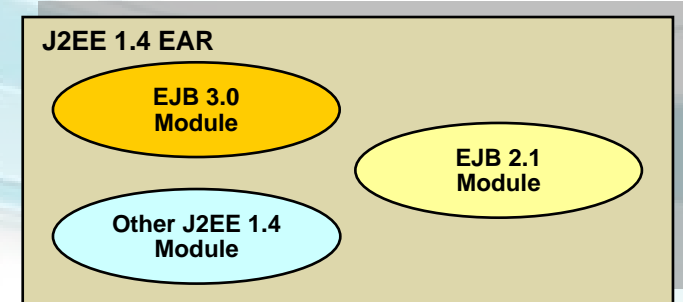


■ Publishing to WebSphere

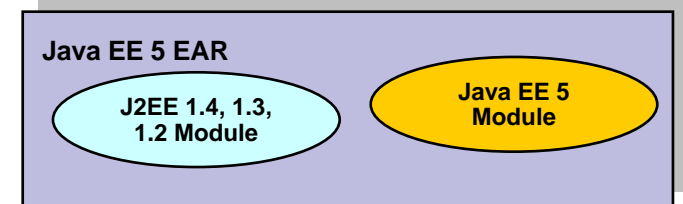
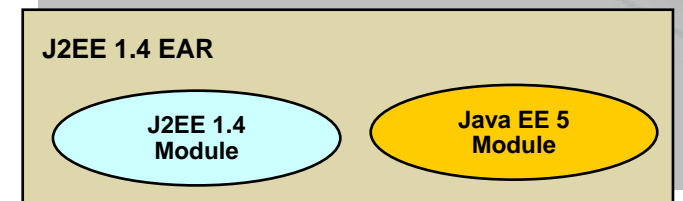
- Support for exporting and publishing to WebSphere
- Support for hot deploy
 - Ability for WebSphere to recognize a change to the archive file and automatically update the server
- Support for automatic update
 - Changes in the workspace are automatically updated to the server

Supported runtime configurations

- WebSphere Application Server 6.1
 - ▶ Feature Pack for EJB 3.0
 - Supports EJB 3.0 and JPA specifications
 - EARs can contain EJB 3.0 and J2EE 1.4 modules
 - EAR without a DD can be deployed
 - No EE 5 Web or application client modules



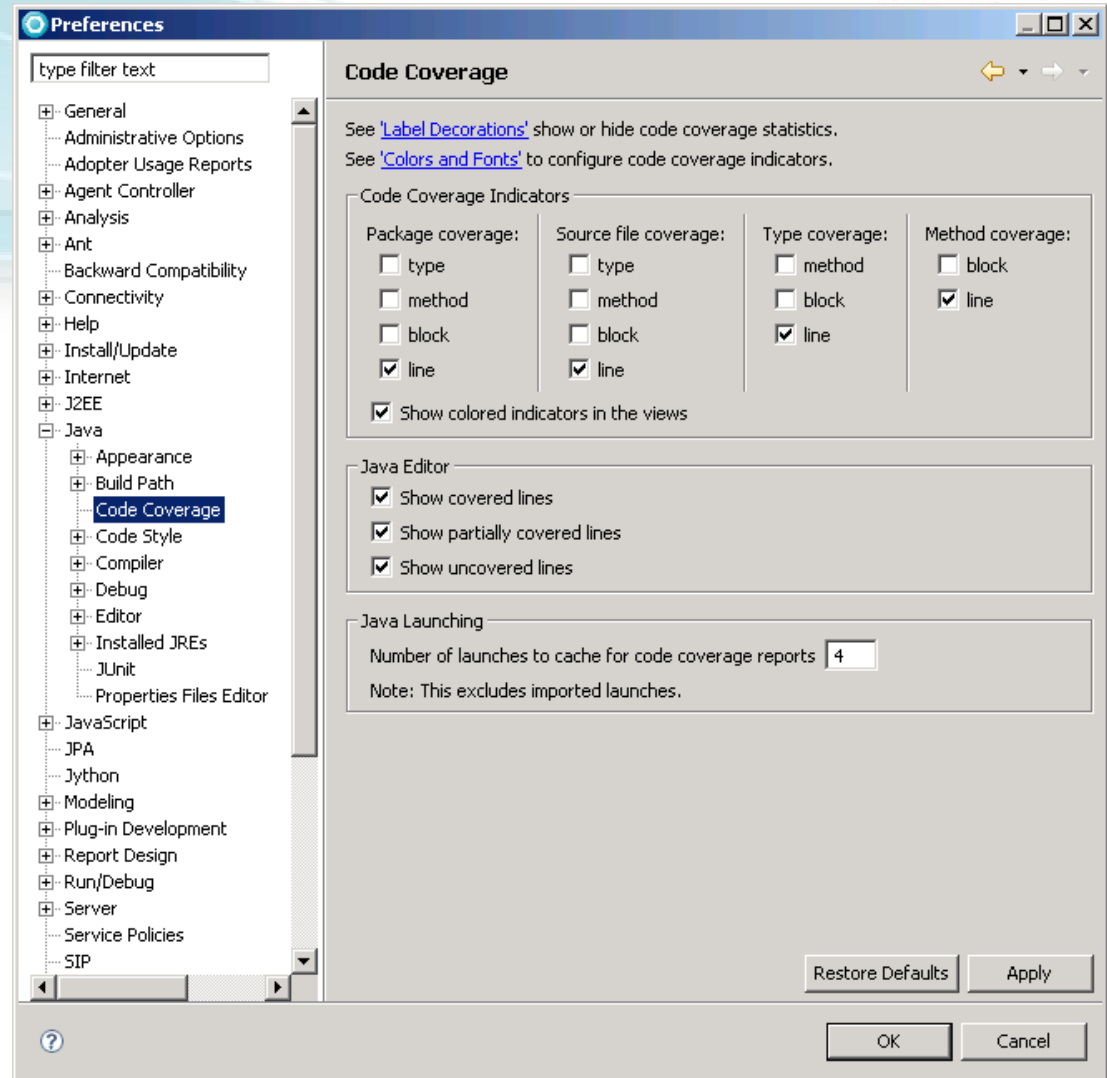
- WebSphere Application Server 7.0
 - ▶ J2EE 1.4 EARs can contain Java EE 5 modules
 - ▶ Java EE 5 EARs can contain legacy J2EE (1.4, 1.3, 1.2) modules.



RAD helps with line level code coverage



- Code coverage of class/method/block/line for package/class/methods
 - ▶ Filtering to include/exclude packages, classes, methods
- Eclipse (Java editor integration) and HTML (portable/BIRT) reports.
- Enables code coverage from Ant
- Support for generating code coverage statistics for web applications



Monitoring & Profiling tools



The **monitoring tools** help you to identify performance and memory usage problems in your Java™ and Web applications, regardless of the application server on which you are running.

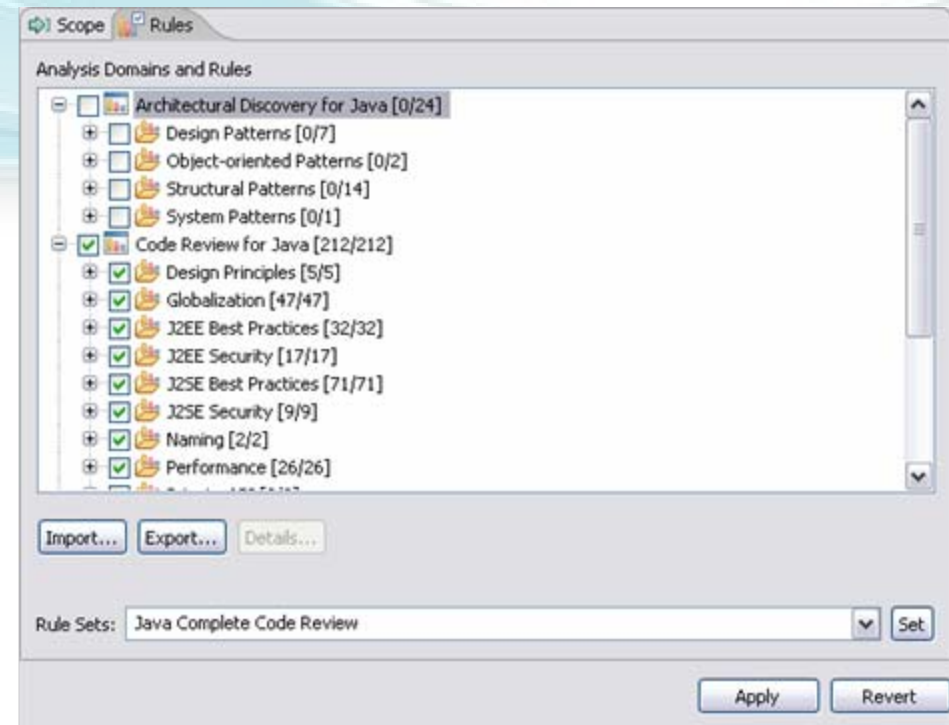
The **profiling tool** enables you to collect and display data related to the runtime behavior of your Java program. It can help you identify problems related to application performance by showing which operations take the most time, are repeated most often, or result in memory leaks.

- **Probekit** allows you to write probes, which are small fragments of Java code. By invoking these at specified points during the execution of your Java class, you can collect runtime data about the application. You can use these probes to profile your application by collecting only the data that you want.

Code Quality Assurance



- Analyze Project/Workspace to find problems of various types:
 - ▶ Design Principles
 - ▶ Globalization
 - ▶ J2EE & J2SE Best Practices
 - ▶ J2EE & J2SE Security
 - ▶ Naming
 - ▶ Performance
 - ▶ Private API
- Produce interactive reports with violations and metrics
- Provides explanations, examples, and quick fixes for problems
- Allow users to create, enable and disable validation rules
- Allow users to create their own rules based on rule templates
 - ▶ Complete Code Review (200+ rules)



Debug Tools



- **Debugger for WebSphere Jython Scripts**
- **Support for DB2 V9 Stored Procedure Debug**
 - ▶ Java and SQL Stored procedures
- **Java and mixed language debugger**
 - Seamless integration when debugging application that calls other languages from Java and vice versa
- **J2EE/Web application debugging**
 - Advanced debug support for Websphere Application Server, including EJBs, JSP pages, and servlets.
- **Step-by-Step Debugging**
 - Control debugging at a higher level. Provide user the ability to stop on entry to every object loaded by the JVM or server.
 - Supported object types: Web objects, XSLT
- **XSLT debugger**
 - The XSLT debugger enables you to detect and diagnose errors in XSLT Transformations
- **Logical display of complex variable types**
 - Display variables in a logical manner, allowing the user to examine variables more easily.
 - Supported complex variable types: JSP 2.0 Implicit object variables, EMF, DOM



Agenda

Rational Application Developer

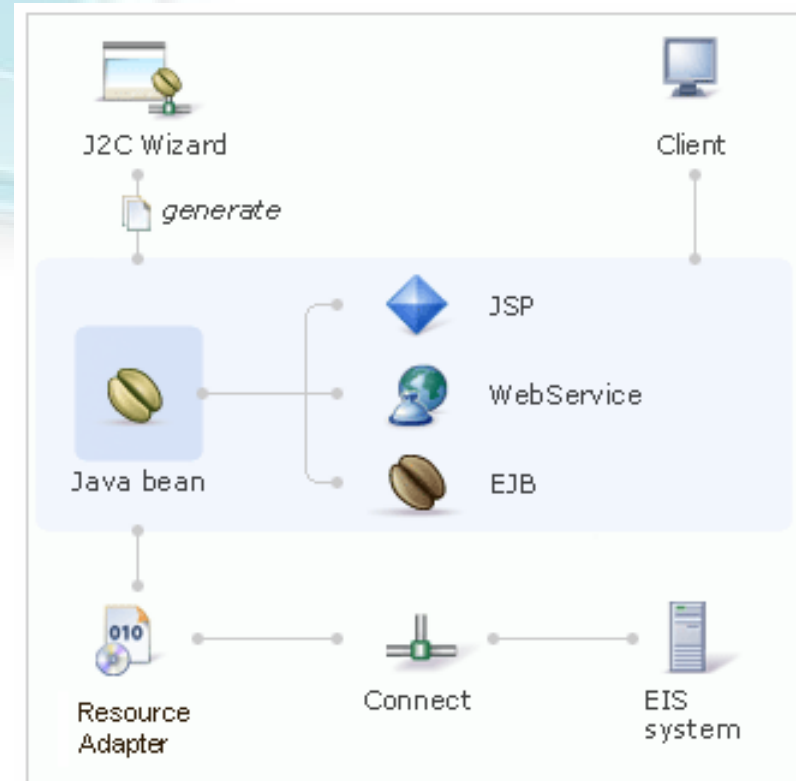
- Software development lifecycle
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What's new - WebSphere Application Adapters

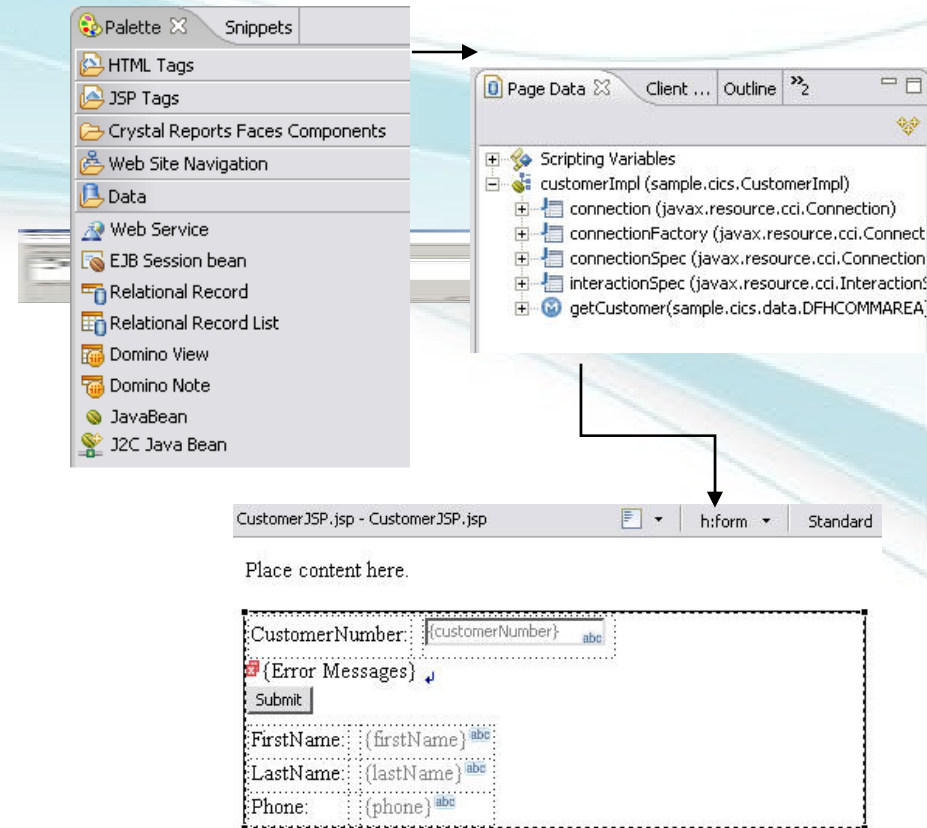


- Tools supporting development time adapters for:
 - SAP
 - PeopleSoft Enterprise
 - Siebel
 - Oracle E-Business Suite
 - JD Edwards
- Outbound support for WAS Adapters
 - J2C Java bean wizard
 - Live connection to discover objects and methods
- Edit data type's schema
 - Refactoring and regeneration of Java data binding and J2C bean
- Support deploy options for new adapters in the existing deploy wizard
 - Simple JSP, Faces JSP, EJB, Web Services



J2C Tools

- **Support for CICS ECI and IMS resource adapters**
- **CICS Transaction Gateway included (developer use)**
- **Page Designer integration**
 - ▶ Palette entry for J2C Java beans for drag and drop
- **Enhanced Editing Support**
 - ▶ Wizard based guidance to expose J2C InteractionSpec properties as input arguments
 - E.g.. User name, password
- **Wizard Session Recording**
 - ▶ Create Ant build file that captures the user interaction with the J2C Wizards to allow command line based regeneration of J2C Java Beans and the Language Data Beans
- **COBOL, C, MFS and PL/I as supported native languages**



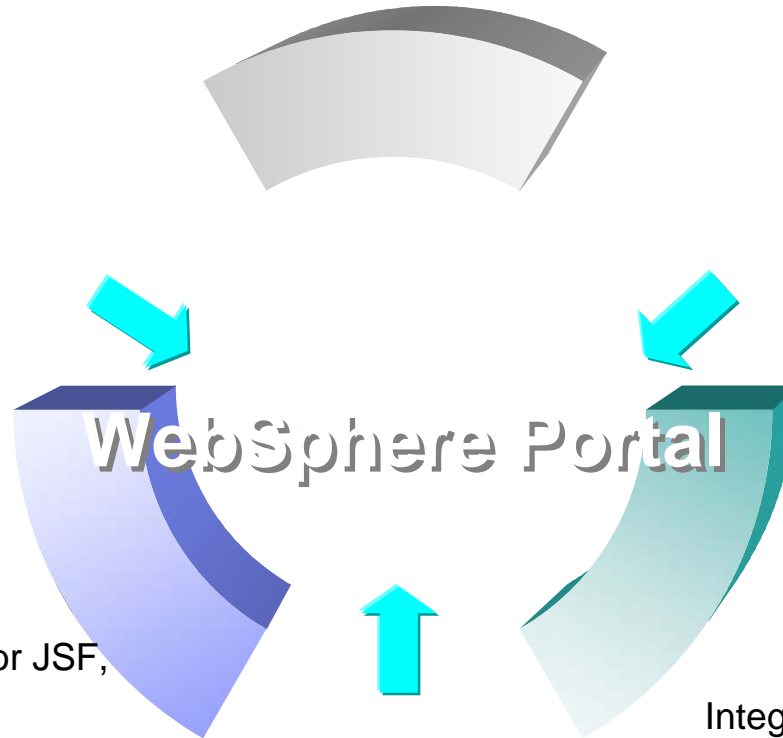
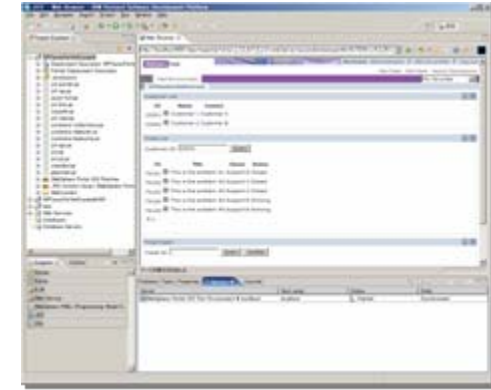
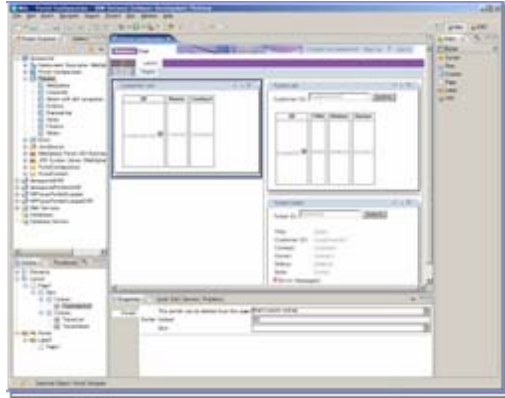
Agenda

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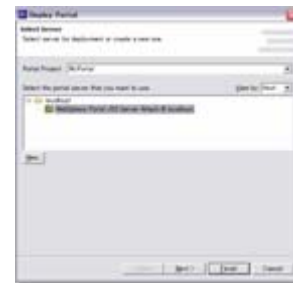
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1st Class Support for Portal App Development



WebSphere Portal



Import & Deploy Wizard

Visual Portlet & Portal Site Development

- ✓ Integrated Portlet support for JSF, Struts framework
- ✓ Portlet templates
- ✓ Portal page Layout
- ✓ Editing of Themes and Skins
- ✓ IBM Portlet API and JSR 168 Portlet API support

Integrated Portal Test Environment

- ✓ WebSphere Portal 6.1
- Integrated WebSphere Test Environment for Portlet Applications
- WebSphere Portal 6.0 (stub support)



JSR 286 Support

- Creation of JSR 286 Portlet Project
- Support for Portlet Events:
 - ▶ JSR 286 allows the Portlets to declare events it wants to publish (send), and events it wants to process (receive).
- Support for Resource Serving: JSR 286 allows Portlets to serve resources. The resources here may be images, jsps and so on. The Portlet can serve resource using resource URLs. The Portlet tooling will address the code generation done as a result of adding `<portlet:resourceURL>` tag in the Portlet JSP.

New Portlet Project

Portlet Project
Specify a name and location for the new portlet project.

Project name: NewPortletProject

Project contents:
 Use default

Directory: C:\Downloads\jsr286New\NewPortletProject Browse...

Target Runtime
WebSphere Portal v6.1 New...

EAR Membership
 Add project to an EAR
EAR Project Name: EAR New...

Portlet API:
JSR 286 Portlet
JSR 168 Portlet
JSR 286 Portlet
IBM Portlet

Create a portlet

Portlet name: NewPortletProject

Portlet type: Empty Portlet

Create a portlet that extends the GenericPortlet class with minimum code in it.
You have to write the code to complete the portlet.

Show advanced settings

< Back Next > Finish Cancel



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Introducing IBM Rational Team Concert

Software innovation through collaboration



- Enables “real-time, in-context” collaboration for distributed project teams – making software development more automated, transparent and predictive
- Integrates source control, work item, reporting and build capabilities which “think and work in unison”
- Provides real-time project health information and transparency of status through automated data gathering
- Supports out-of-the-box and custom defined processes which break down functional & organizational barriers
- Allows choice of client tools and extends the value of ClearQuest & ClearCase in enterprise deployments

IBM Rational Team Concert

transparent *integrated presence*
 wikis **OPEN** real-time reporting
 chat automated hand-offs **Web 2.0**
custom dashboards automated data gathering
EXTENSIBILITY Eclipse plug-ins services
 architecture **FREEDOM TO CREATE**

JAZZ TEAM SERVER

Open and extensible on

- ✓ Collaborate in context
- ✓ Right-size governance
- ✓ Day one productivity



RTC Views Integrated into RAD / RSA

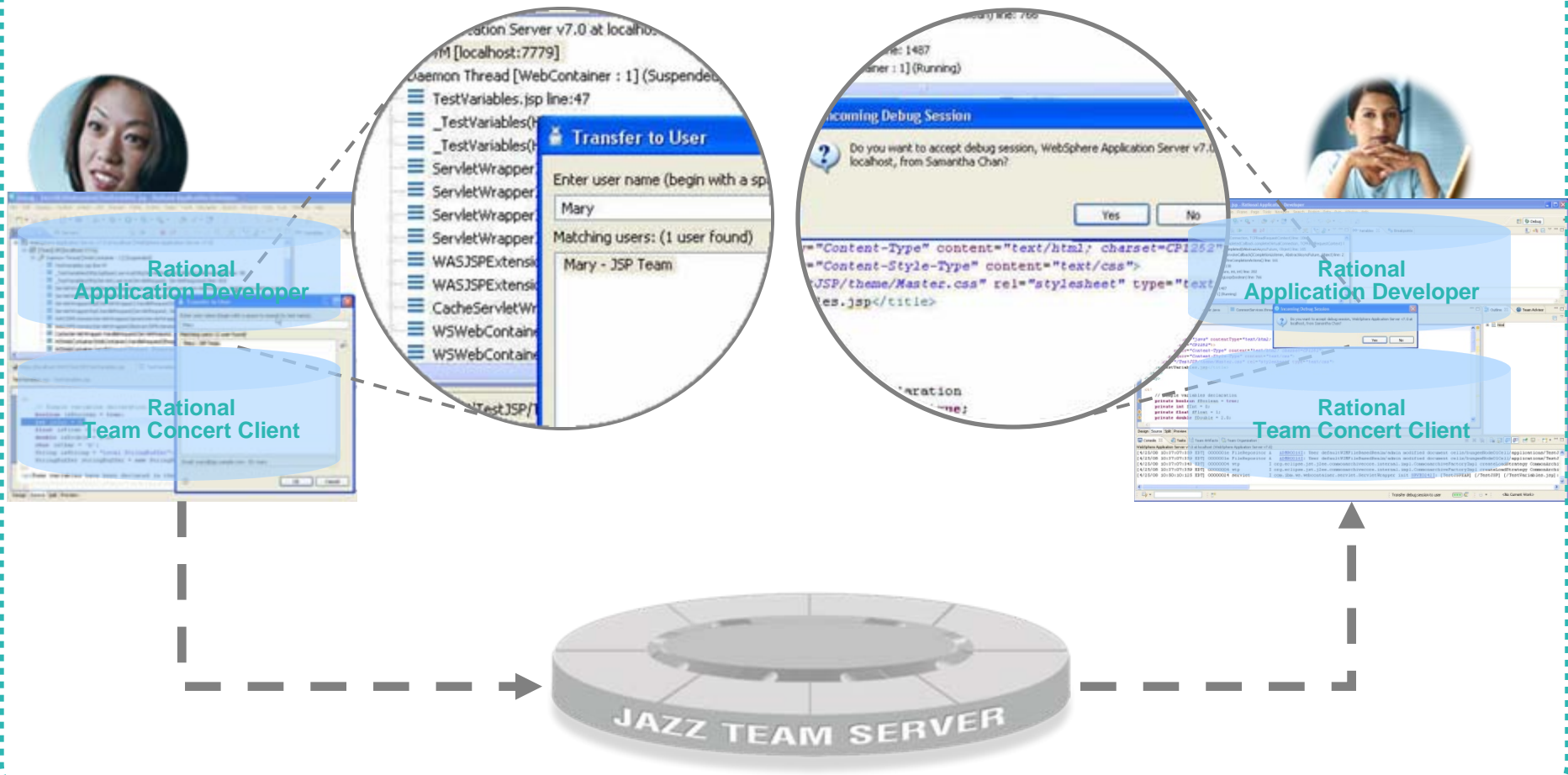
The screenshot displays the Rational Application Developer (RAD) interface with several callout boxes highlighting key features:

- Develop in RAD and RSA perspectives (Modeling, Java EE, ...)**: Points to the top toolbar and the 'Java EE' perspective.
- Manage your workload in the 'Team Central' and 'My Work' views**: Points to the 'My Work' view on the right, which shows a workload summary with 6 Unassigned, 15 Low, and 2 Medium priority items, and an event log.
- Work with your development artifacts in the 'Team Artifacts' view**: Points to the 'Team Artifacts' view on the left, which lists various artifacts like 'Builds', 'Plans', 'Streams', and 'Work Items'.
 - code
 - diagrams
 - metadata
 - ...
- Use Jazz change management constructs and work flows**: Points to the 'My Team Areas' section in the 'Team Artifacts' view, which includes 'Build', 'Community Site', 'Component Development', 'Install', and 'Process' areas.
 - change sets
 - suspend/resume
 - server workspaces, ...



Leveraging Rational Team Concert for Collaborative Debugging

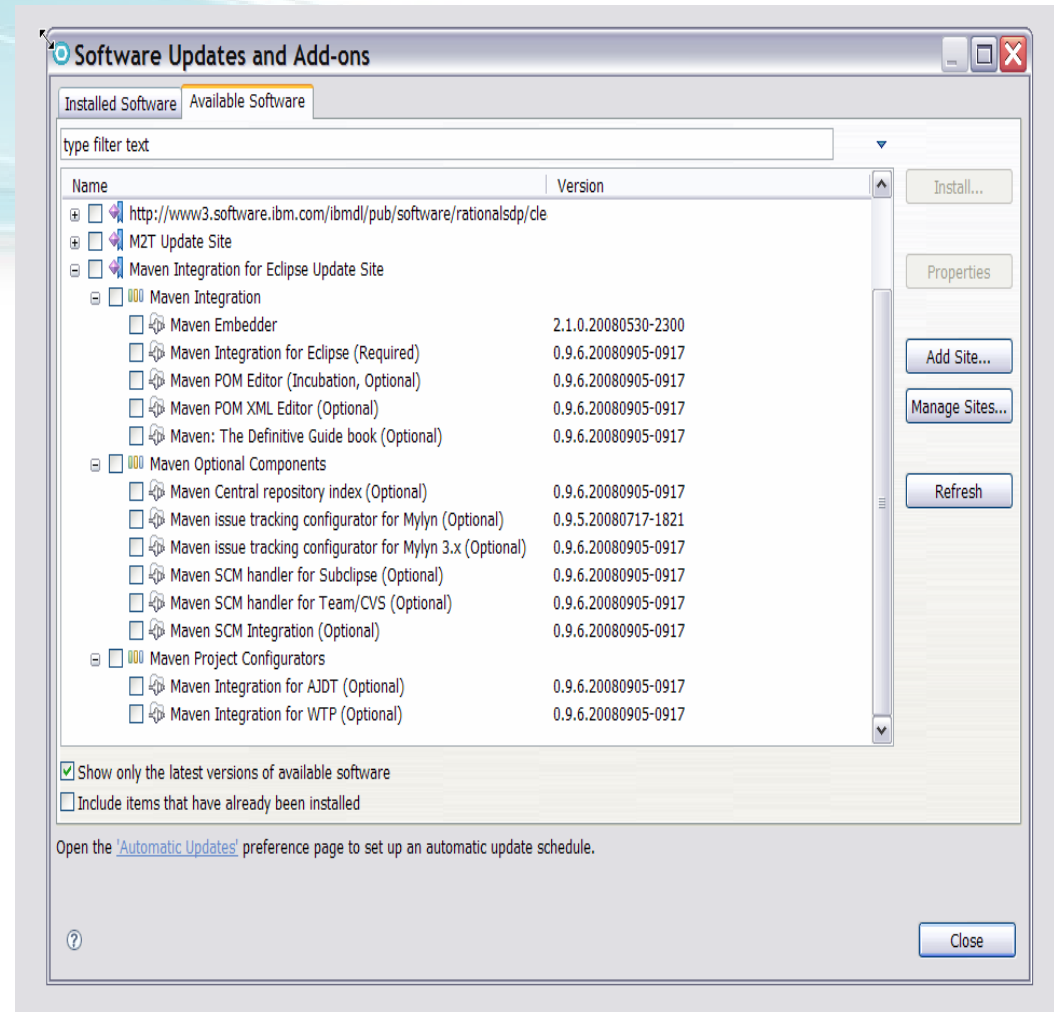
With RAD/RSA and RTC you can share live debug sessions between team members



Third party plug in integration into RAD

Third party plug-ins can be installed into RAD via the Eclipse Update manager if they meet the following criteria:

- Third party plug-ins must have version tolerances that are compatible with the version of Eclipse that RAD is based on:
- ie. RAD 7.5 or higher is based on Eclipse 3.4.1 – third party plug-in must be compatible with Eclipse 3.4.1 or



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Service Component Architecture

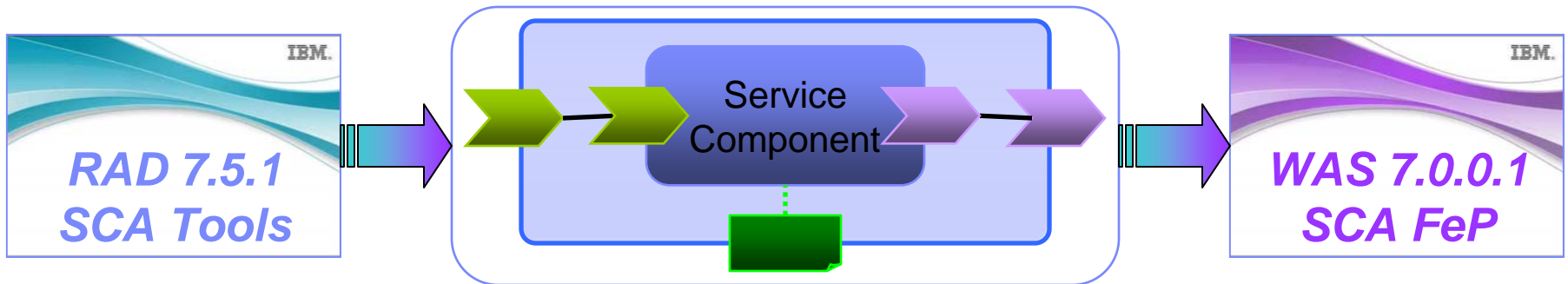
SCA is an open programming model for assembling SOA solutions from flexible, reusable service components based on diverse business IT assets.

RAD 7.5.1 SCA Tools

▶ Beta available now

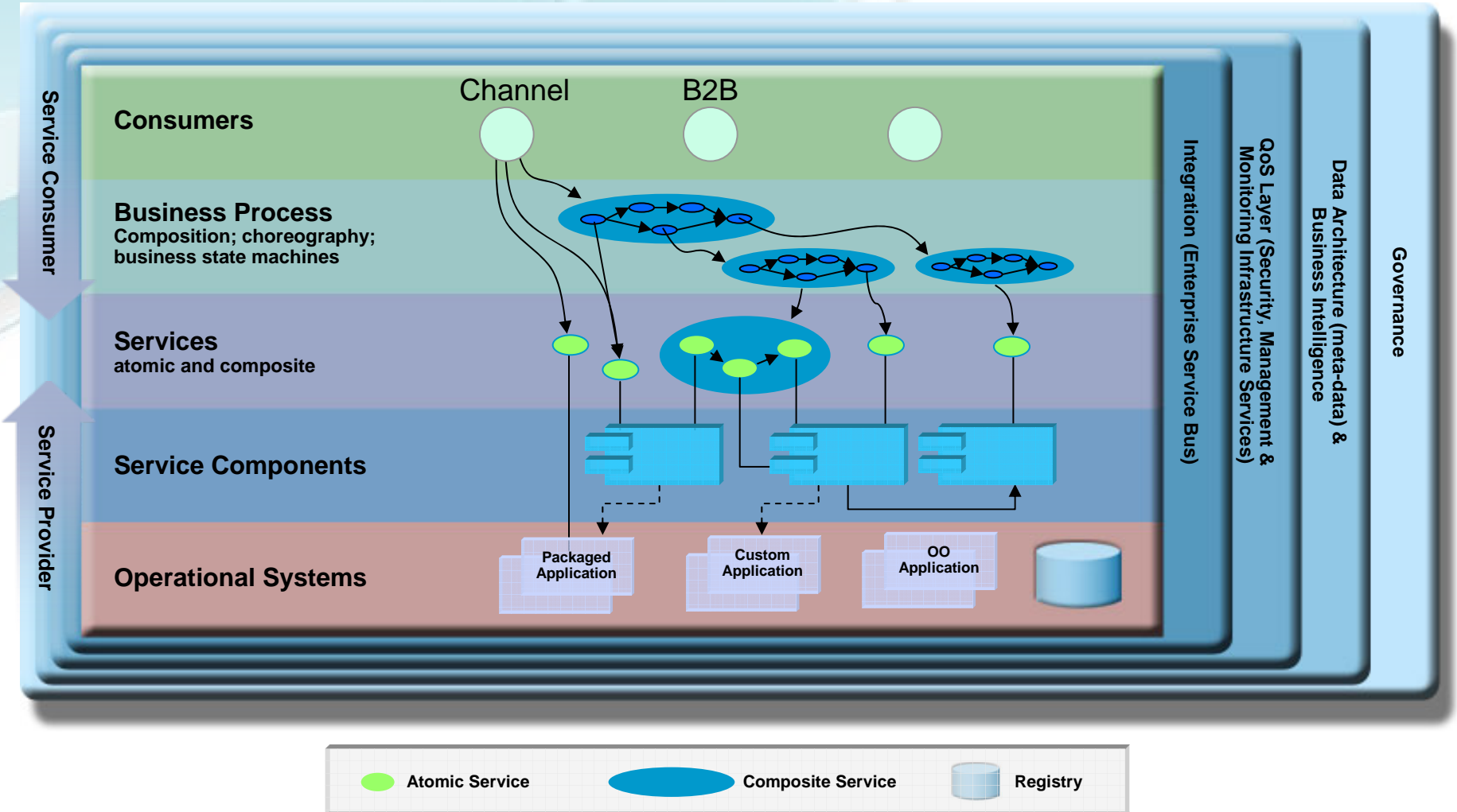
WAS 7.0 SCA Feature Pack

▶ GA available now

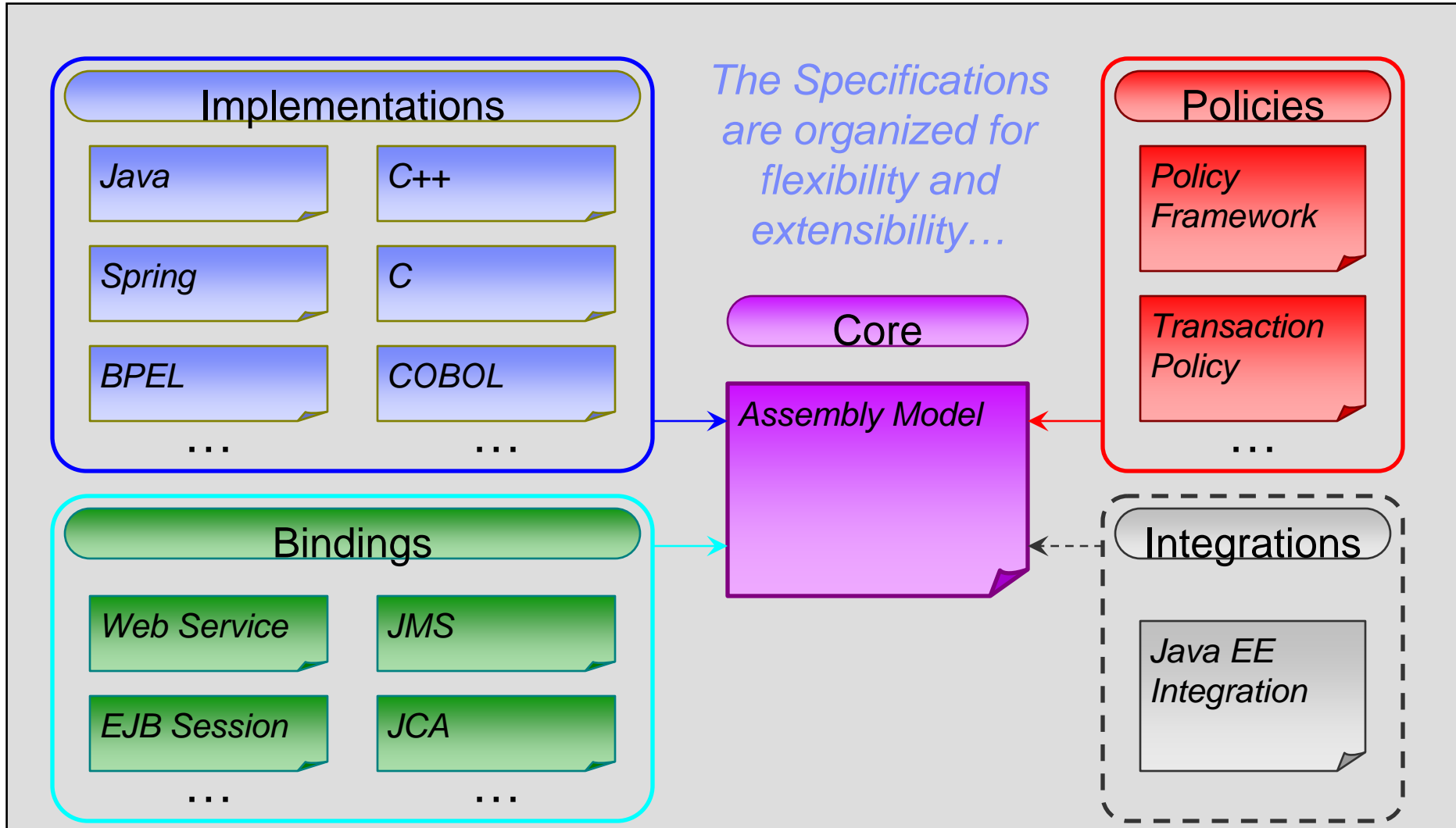


SOA Solution Layering

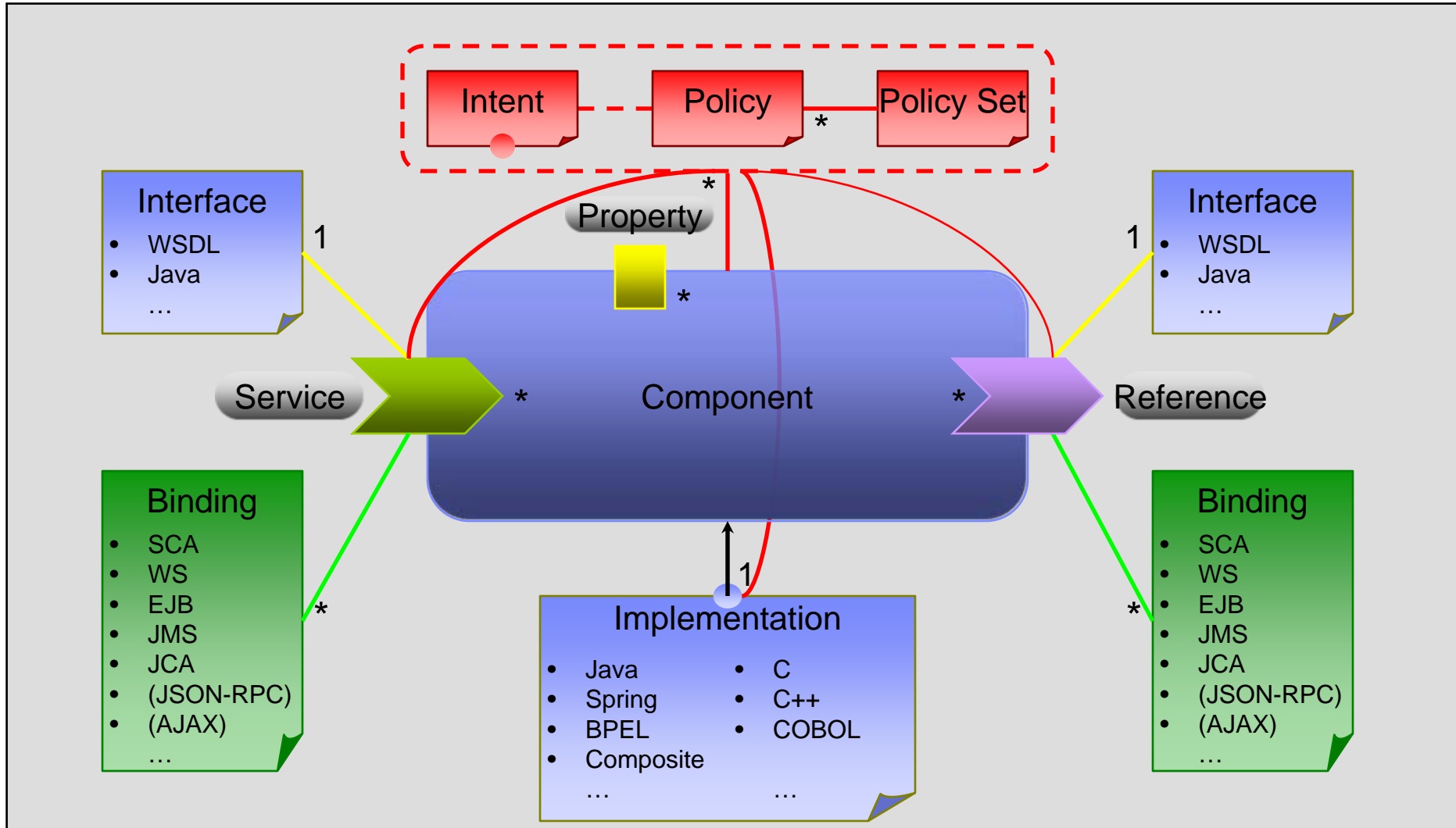
Leveraging the SOA Reference Architecture



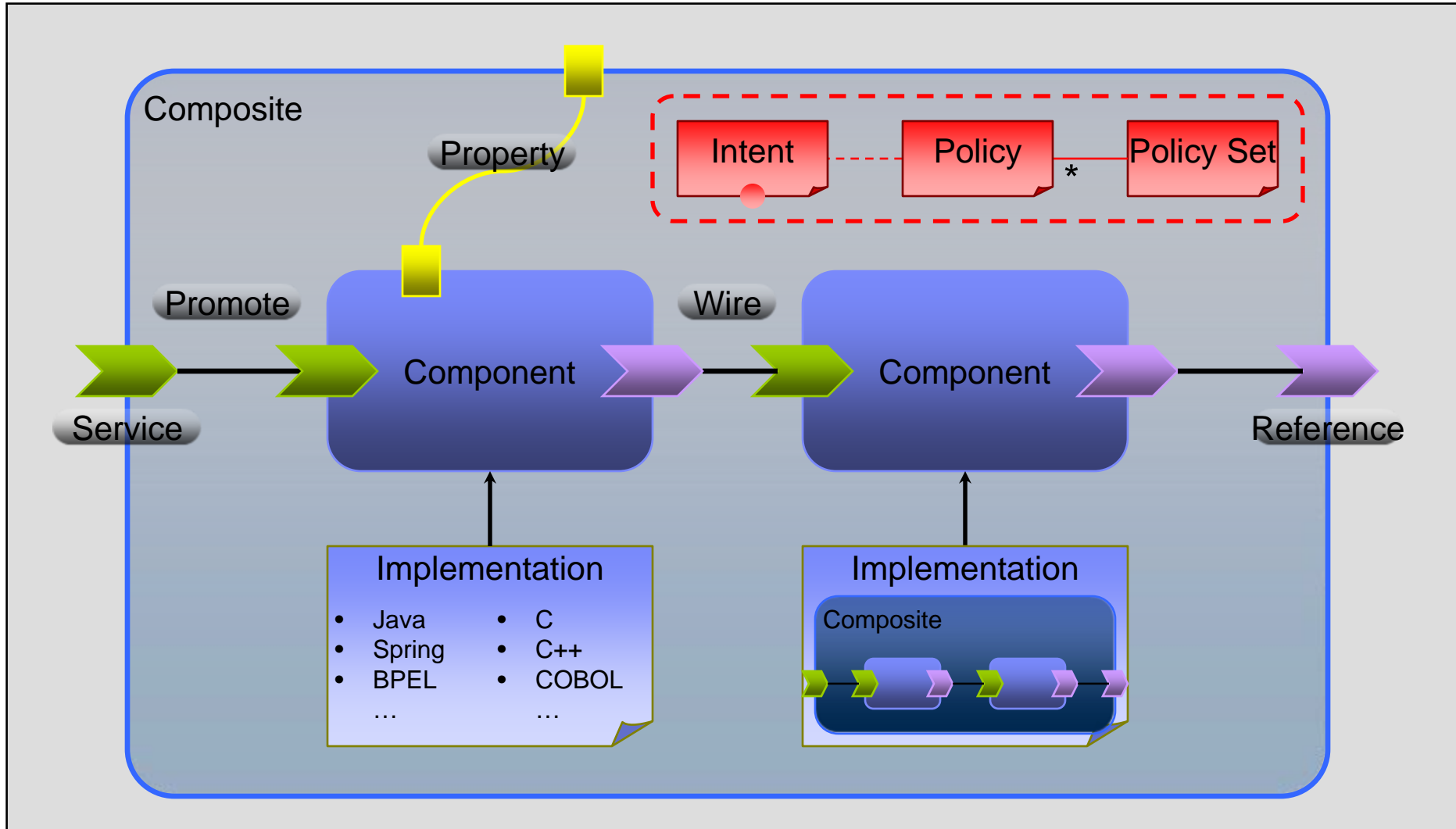
SCA – The Open Specifications



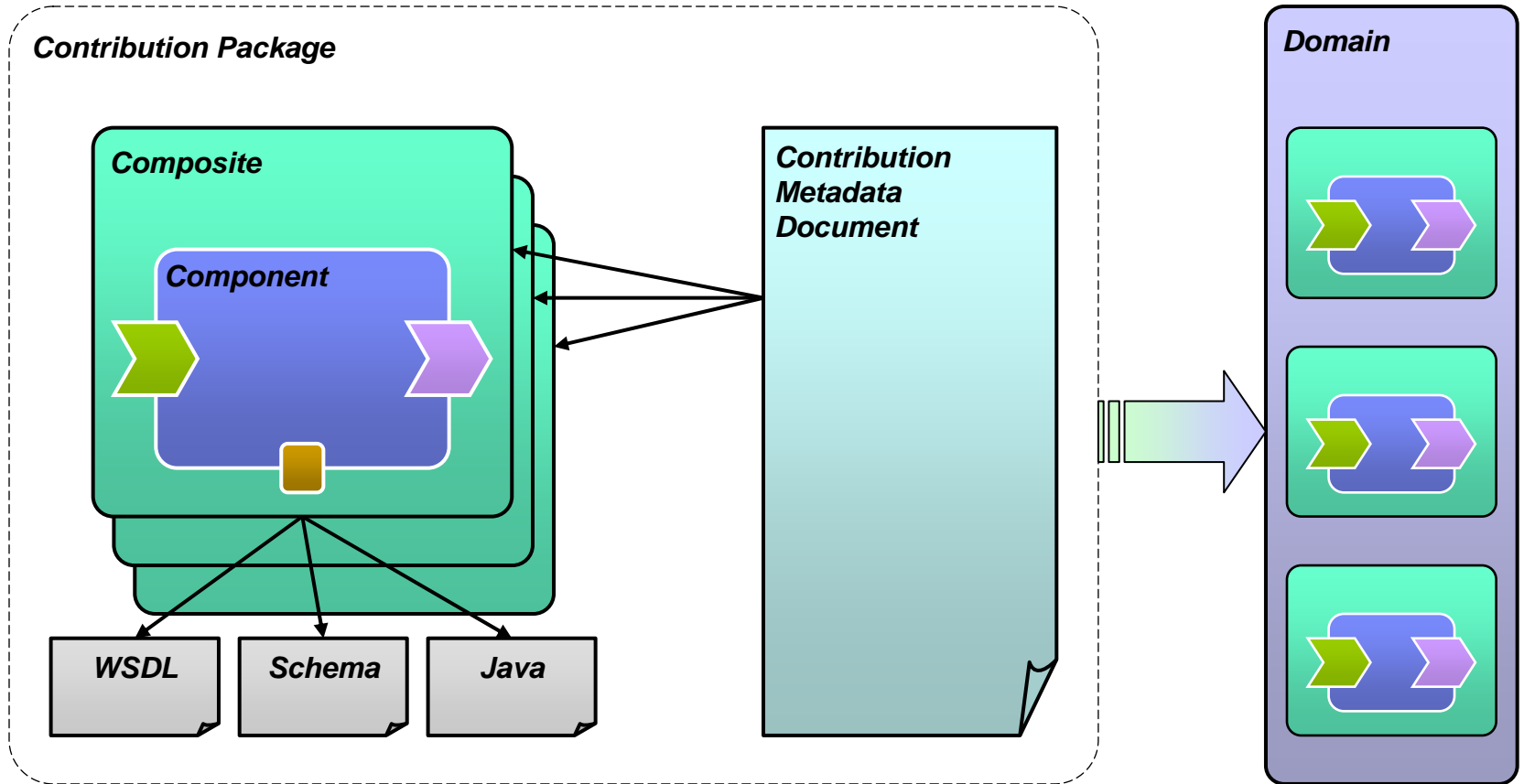
SCA – The Component



SCA – The Composite



SCA – The Contribution

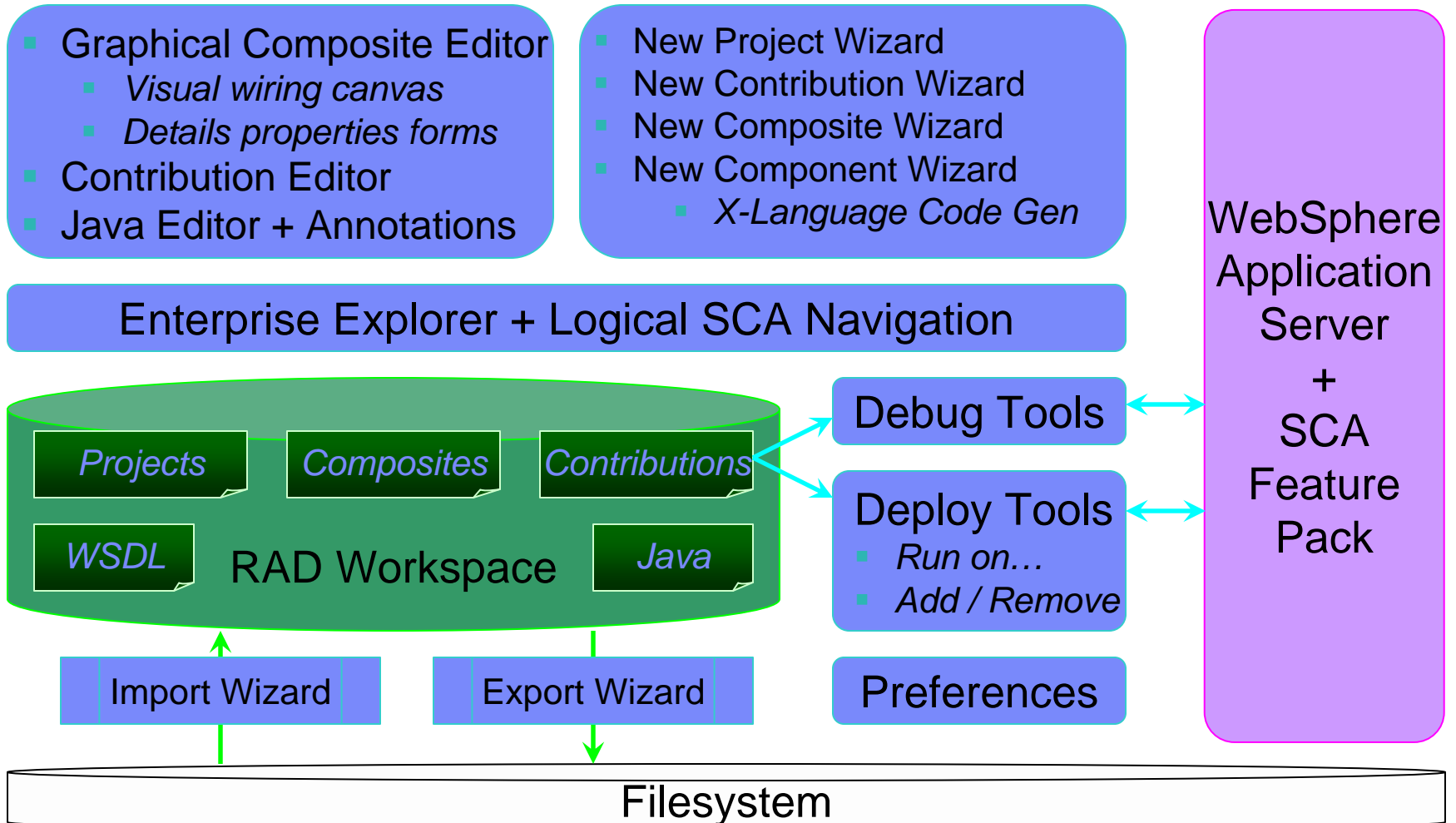


WAS Feature Pack for SCA

- Language neutral assembly model.
- Coarse grained service development.
- Recursive composition.
- Java components.
- Inversion of control (annotations).
- Asynchronous programming model.
- Declarative policy and intents.
- Deployment model similar to OSGi.
- SCA contribution = BLA asset.
- BLA / SCA administration.
- ND – clusters
- Interfaces / Implementations:
 - ▶ WSDL or Java interfaces
 - ▶ Java or Composite implementations
 - ▶ Java \leftrightarrow WSDL 1.1 conversion
- Bindings:
 - ▶ SCA
 - ▶ Web service (SOAP 1.1 and 1.2)
 - ▶ EJB (2.x and 3.0)
- Policy:
 - ▶ Security for Web services
 - ▶ ACID 2PC transactions
- Static JAXB for business data



RAD Tools for SCA





RAD SCA Debug Tools – Overview

- Extension to Java and Mixed Language Debug Support.
- For debugging SCA applications deployed to WAS.





RAD SCA Debug Tools – Features

- Display SCA Context in the Variables view.
 - ▶ Review component configuration while debugging.
- Seamless stepping between SCA and Java EE artifacts.
 - ▶ Supported bindings: SCA, Web Services.
- Logical display of call stacks for debugging SCA components
 - ▶ Hide / show runtime information.
 - ▶ Focus on your application code.
 - ▶ Show component caller / callee relationships in the Debug view.
- Step-by-step debugging
 - ▶ Examine / step-into components without pre-setting breakpoints.
 - ▶ Helps you better understand your component execution flow.



Thank You



<http://www.ibm.com/software/rational/rsdc/>

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