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IMS Connector for Java: A Perspective on Web-Enabling Your IMS Transactions

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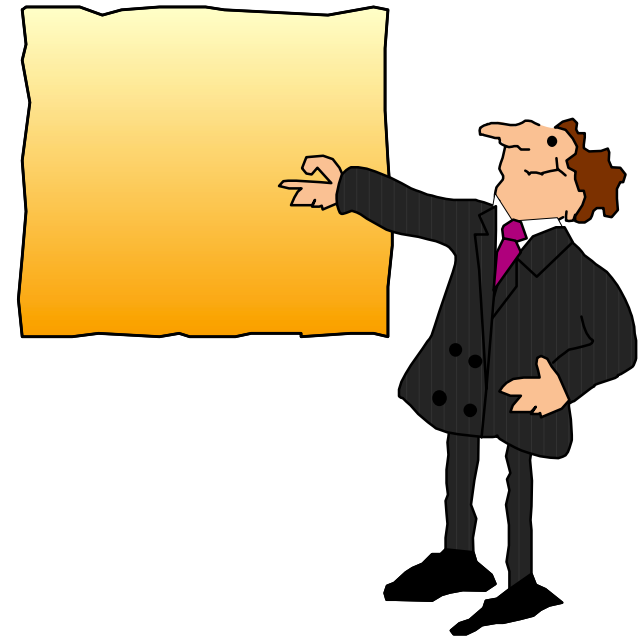
Miami Beach, FL

October 22-25, 2001

Agenda



- IMS is Ideal for e-business
- Enterprise and Application Integration
 - ▶ J2EE Platform and Connector Architecture
- IMS Connector for Java
 - ▶ Features
 - ▶ Runtime Environment
 - ▶ Development
 - ▶ Migration
- Demo
- Helpful References



IMS is Ideal for e-business

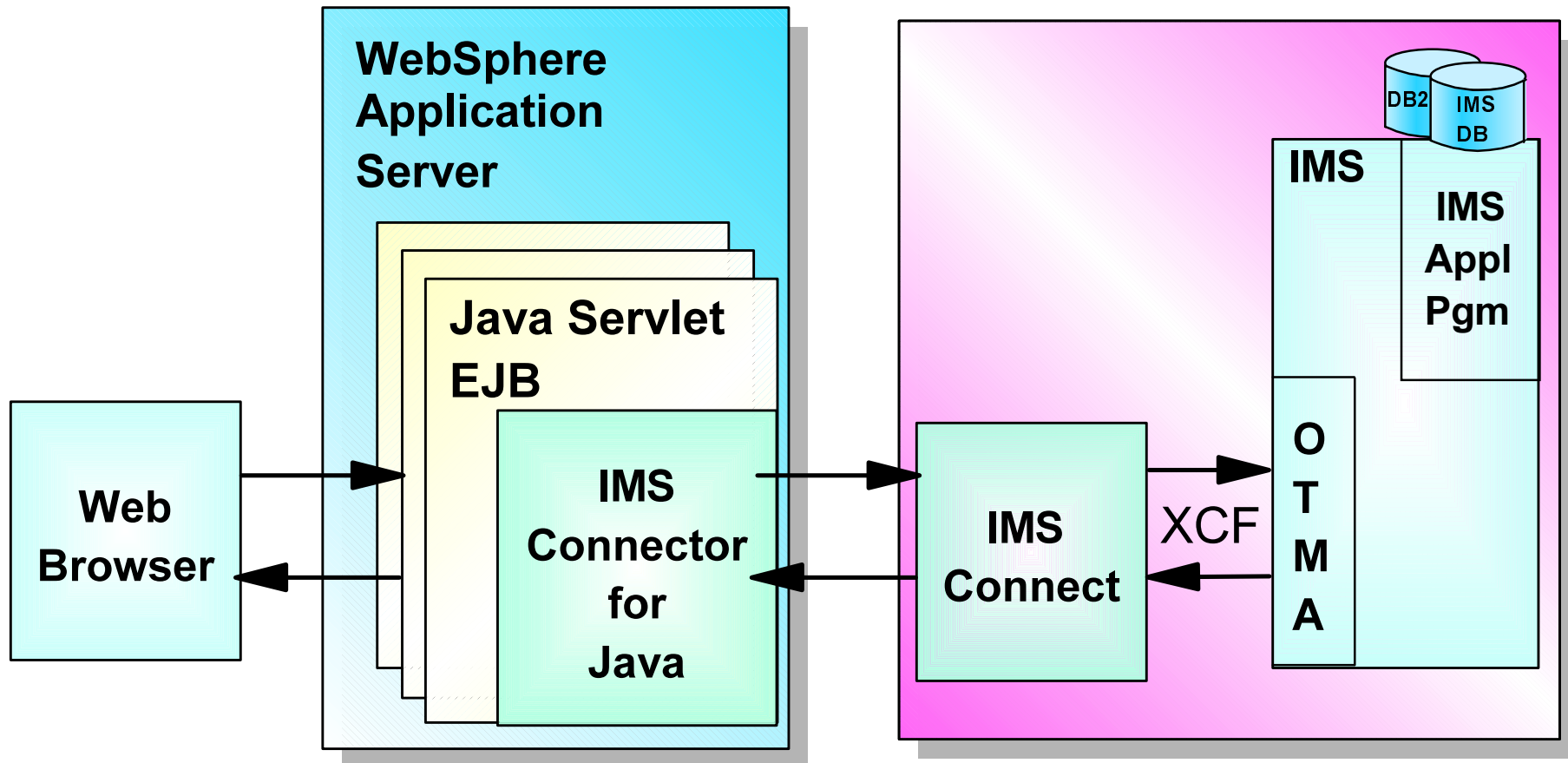


- **IMS is Ideal for e-business**
 - ▶ *IMS is scalable with high performance*
 - ▶ *IMS is highly available*
 - ▶ *IMS is secure*
 - ▶ *e-business with IMS offers investment protection*
- **e-business enablement is the number one applications issue today for many IMS users**
- **For many enterprises, e-business solutions are all about accessing existing IMS transactions and data from the web**

IMS Connector for Java



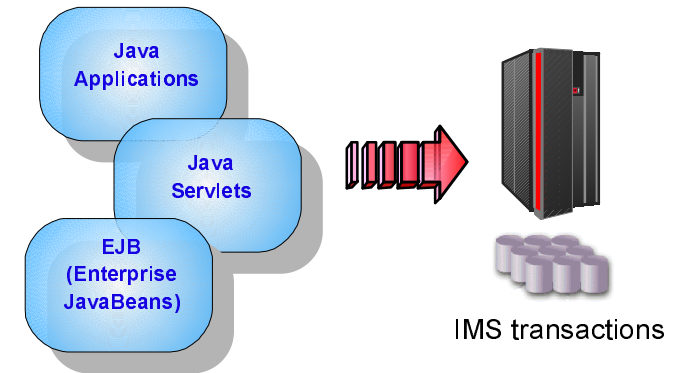
Accessing your IMS transactions from the Web



IMS Connector for Java

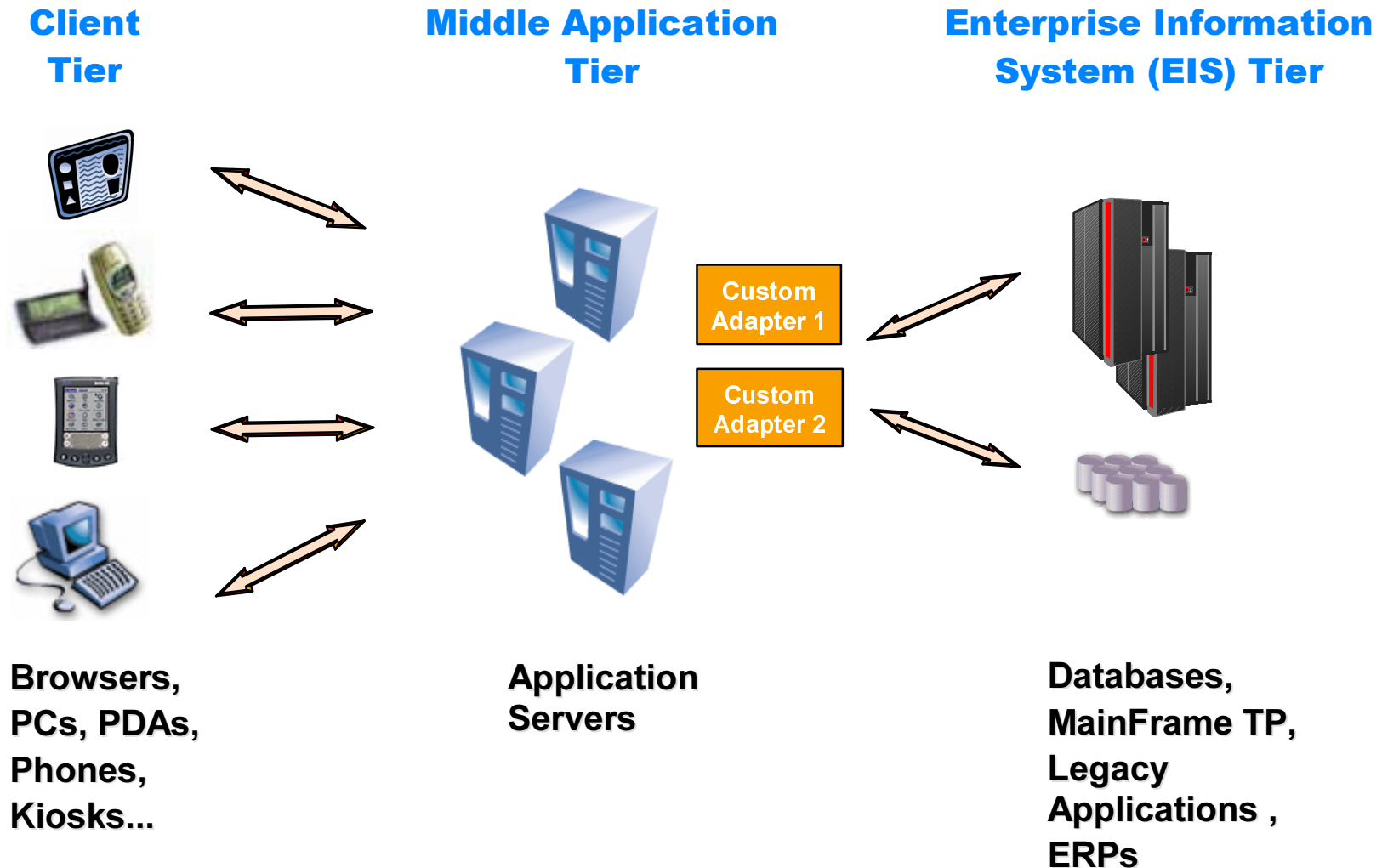


Helping IMS Users make the transition to e-business easier



- One of the IBM e-business Connectors (also called WebSphere Adapters)
- Consists of Java components and class libraries which allows Java applications (Java servlets, Enterprise JavaBeans) to submit IMS transactions via IMS Connect
- Implements J2EE Connector Architecture and IBM Common Connector Framework (CCF)

Enterprise Systems



Key issues in EIS integration: Heterogeneous and complex EISes; Ease of integration and application development; Transactions, security and scalability

Enterprise Integration with J2EE



- Java 2 Platform, Enterprise Edition (J2EE)
 - ▶ Defines a standard architecture that provides a secure, stable platform for large-scale e-business processing on the Web
 - ▶ Huge Industry Support
 - ▶ Write Once, Run Anywhere™
- J2EE Connector Architecture is added to J2EE 1.3 to ease the EIS integration

J2EE Platform



Client Tier

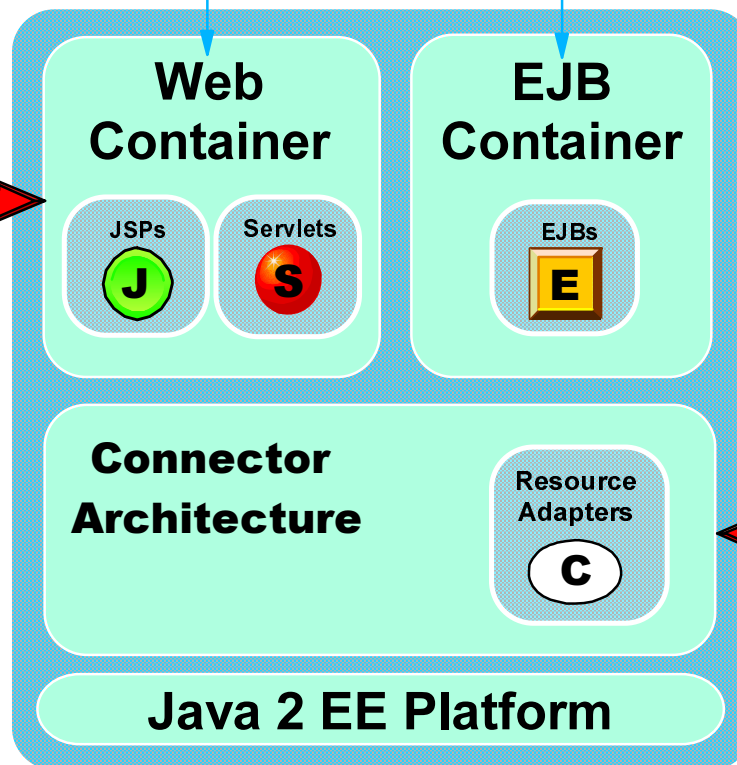
Client-Side
Presentation



Middle Application Tier

Server-Side
Presentation

Server-Side
Business Logic



Enterprise Information System Tier



Application Server

J2EE Connector Architecture

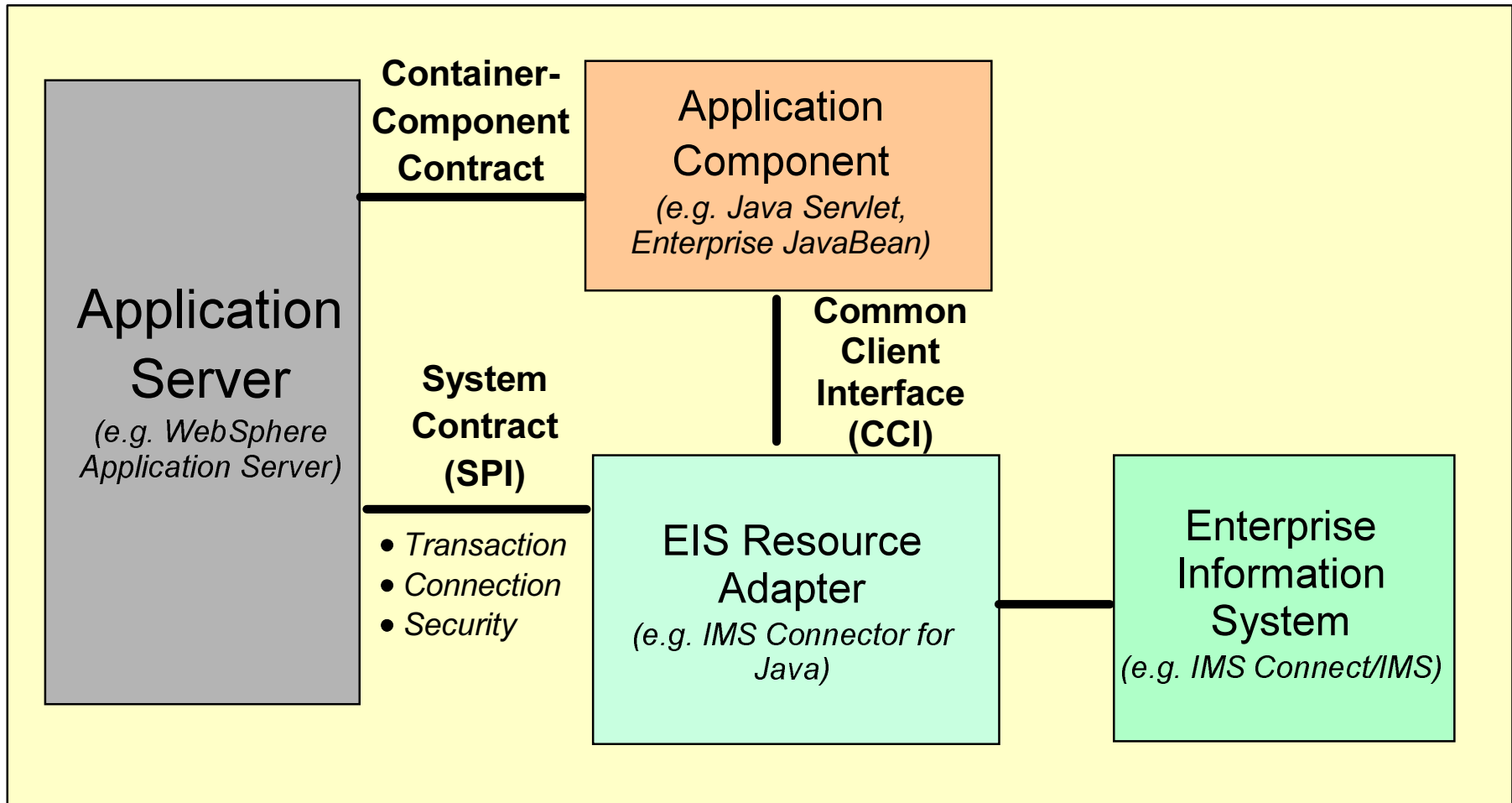


- Standard architecture for Enterprise Information Systems (EIS) integration for connecting the J2EE platform to heterogeneous EISs (ERP, database, and mainframe transaction processing systems)

- Defines a common set of interfaces (SPI and CCI) that standardizes interactions between resource adapters, application servers and application components
 - ▶ Simplifies application component development
 - ▶ Provides a complete set of services to those components
 - ▶ Handles many details of application behavior automatically, without complex programming

- Based on IBM Common Connector Framework (CCF)

J2EE Connector Architecture



J2EE Platform



Client Tier

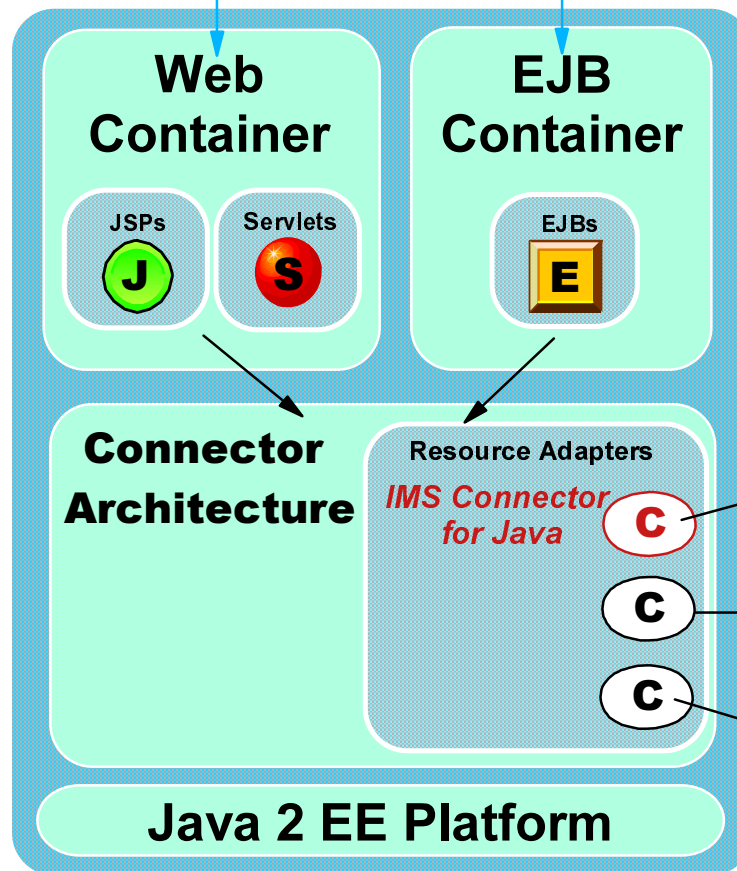
Client-Side Presentation



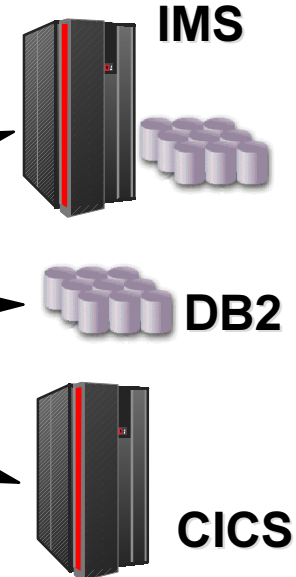
Middle Application Tier

Server-Side Presentation

Server-Side Business Logic



Enterprise Information System Tier



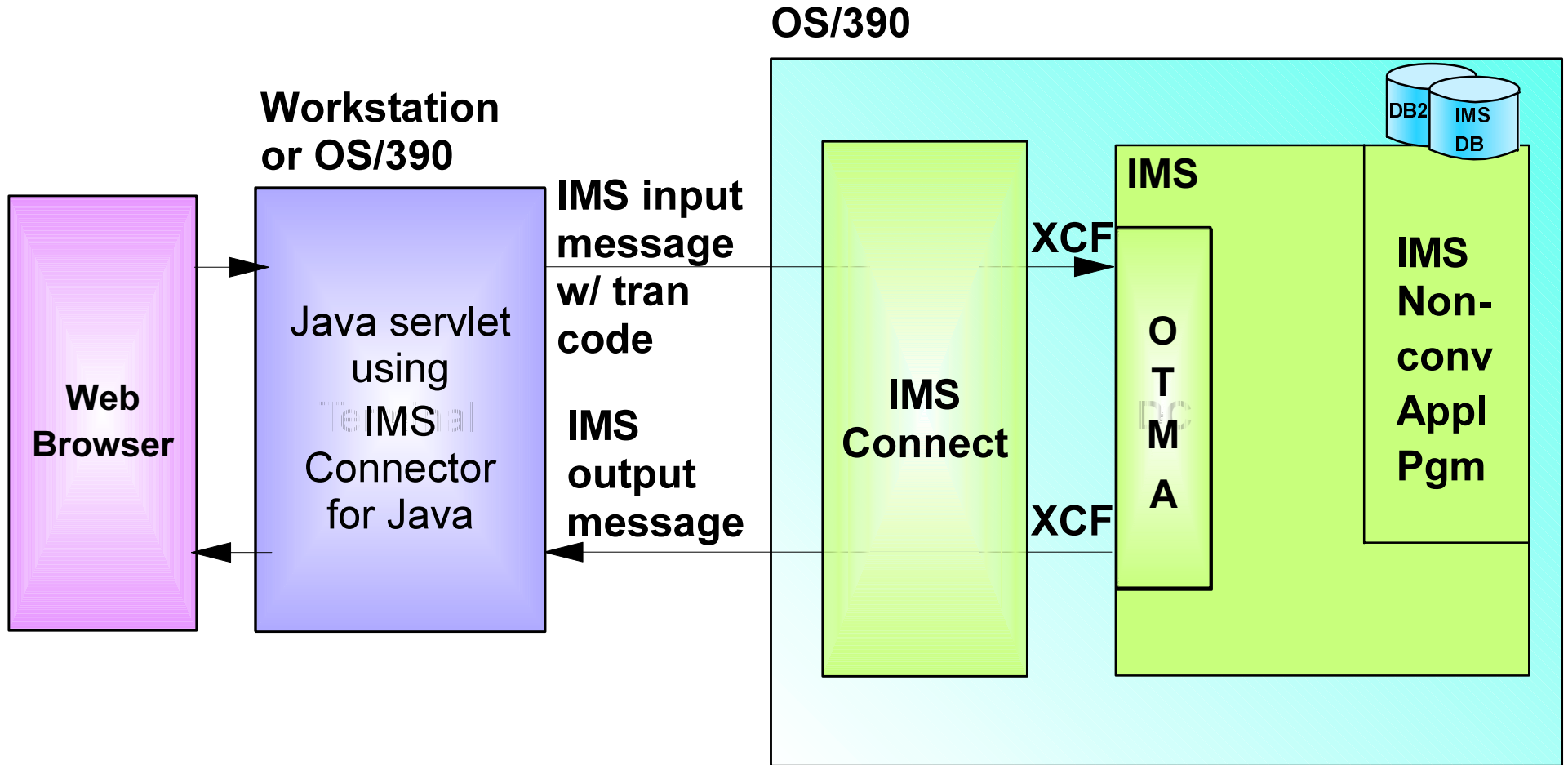
WebSphere
Application Server

IMS Connector for Java Features



- ★ Implements the J2EE Connector Architecture (IMS Connector is a Resource Adapter) and IBM Common Connector Framework (CCF)
- ★ Allows Java applications to access both IMS non-conversational and conversational transactions from the web
- ★ Supports multi-segment input and output messages
- ★ Communicates with IMS via IMS Connect using TCP/IP or enhanced local connection (Local Option support)
- ★ Provides rapid client application development by integrating with IBM VisualAge for Java and WebSphere Tools

Accessing IMS Transaction from the Web



IMS Connect



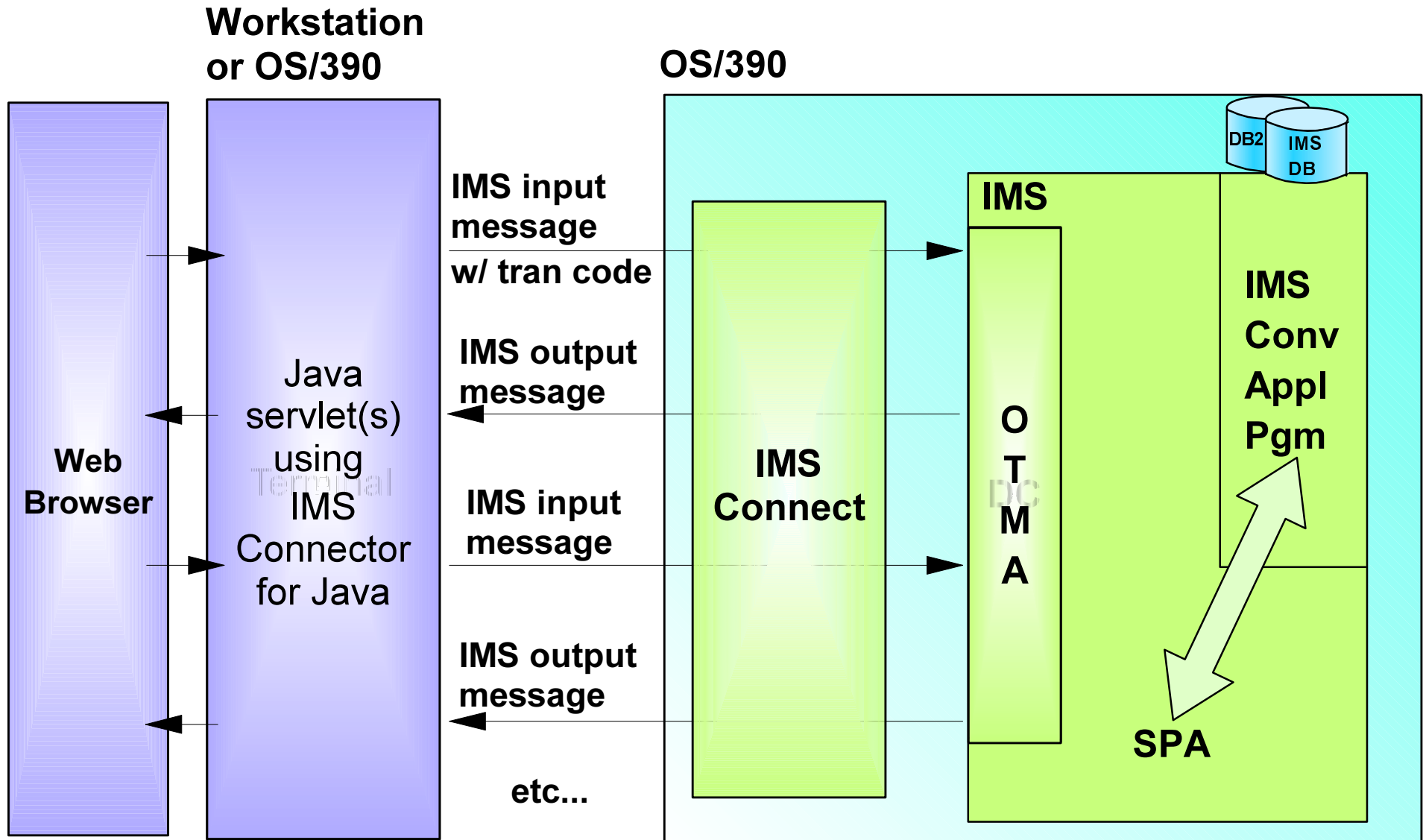
- Provides enhanced communications between one or more TCP/IP clients or Local clients and one or more IMS systems
- Allows customer to have access to existing and new IMS transactions and thus databases via the intranet/internet
- Allows fast deployment of IMS transactions
 - ▶ Without modifying the IMS transaction
 - ▶ Without heavy workstation development
- SMP/E installable/maintainable

IMS Conversational Transaction



- **IMS Connector for Java also supports IMS Conversational transaction**
 - ▶ An IMS Conversational transaction is a connected series of interactions with IMS application program
 - ▶ Intermediate data for interactions stored in SPA (Scratch Pad Area)
- **IMS Connector for Java provides two application models (HTTPSession and Navigator) that helps customer to build Java applications (e.g. Java servlet or EJB) to iterate through an IMS Conversational transaction from the web**

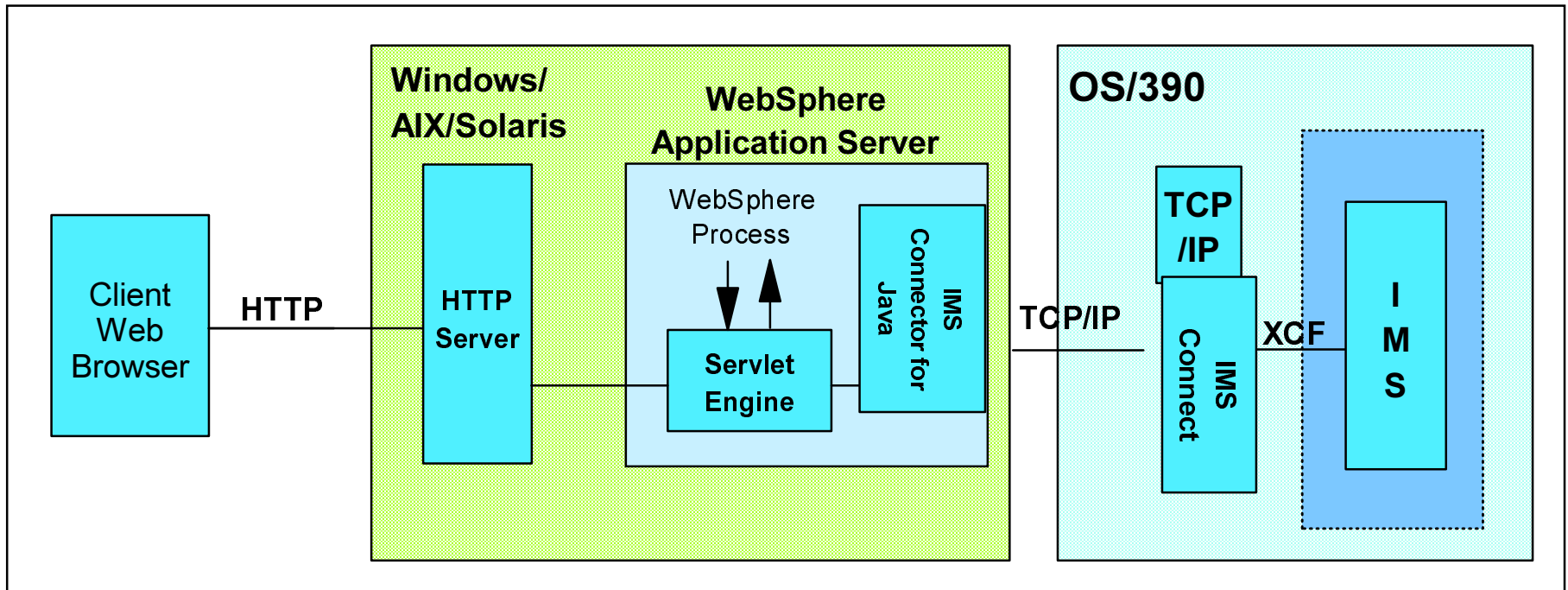
Conversational



Runtime Environment



- Distributed Environment
 - ▶ TCP/IP



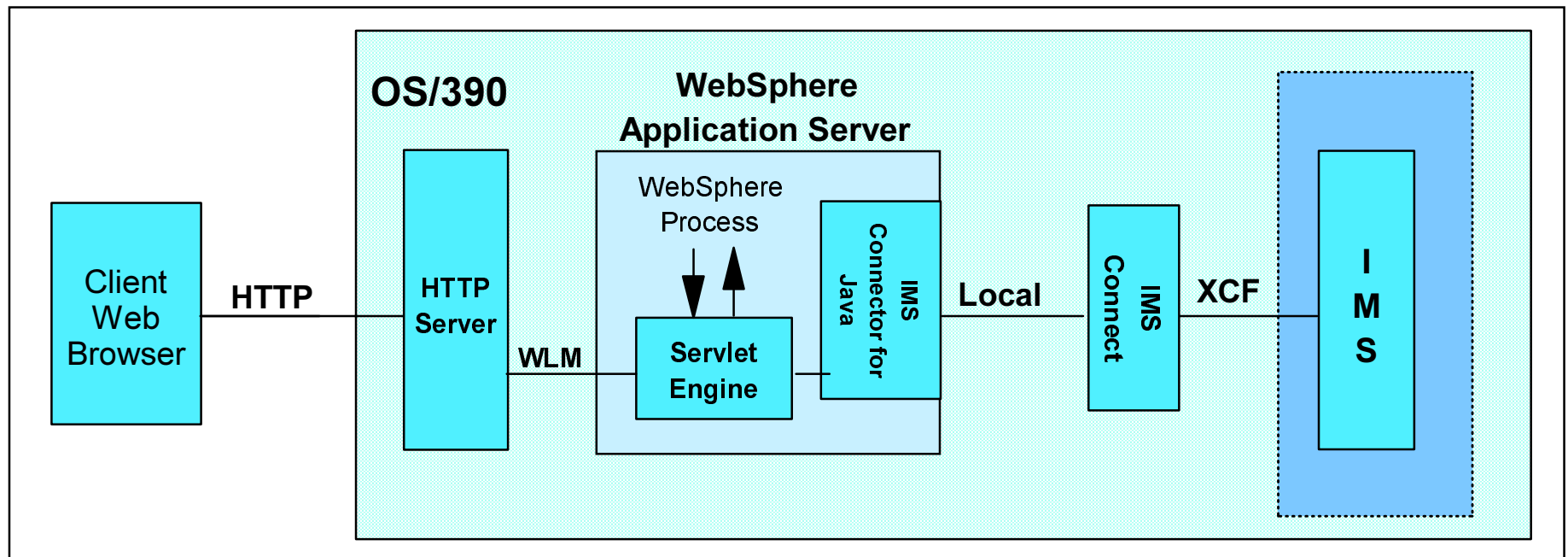
Runtime Environment



■ OS/390(z/OS) Environment

▶ Local Option

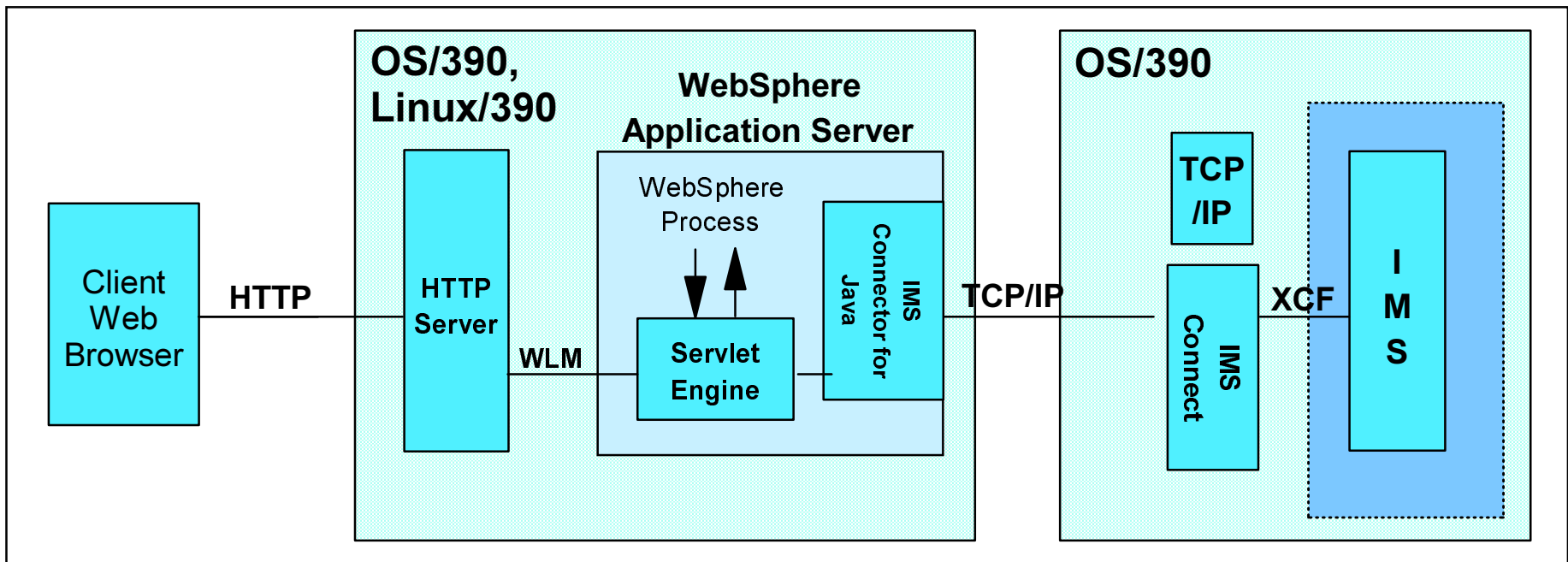
- Provides non-TCP/IP communications between WebSphere and IMS Connect when WebSphere and IMS Connect are in the same MVS image



Runtime Environment



- OS/390(z/OS) Environment
 - ▶ TCP/IP



Developing with IMS Connector

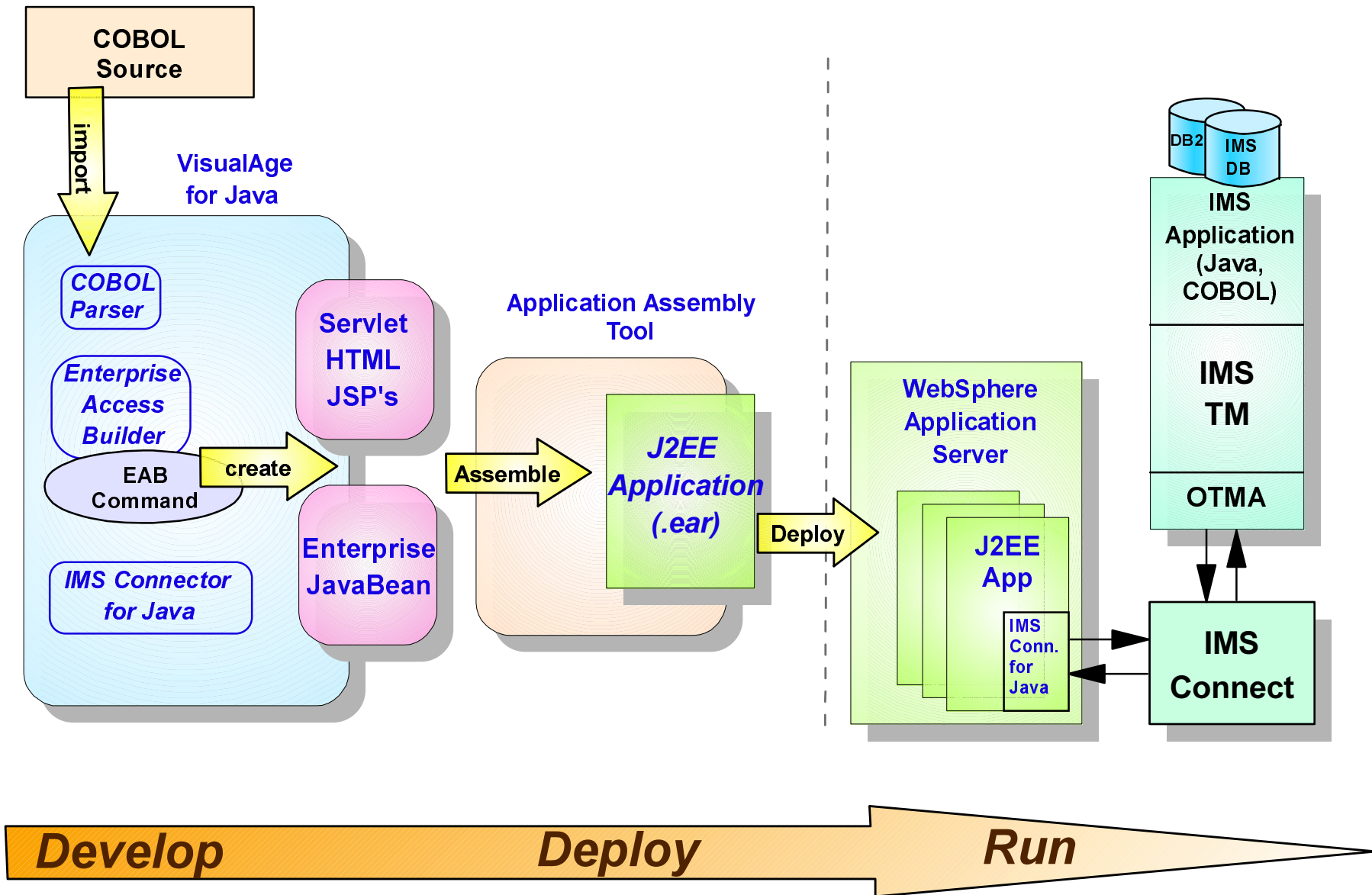


4 Easy Steps

1. Create an EAB command representing the IMS transaction
2. Use the EAB command to create a J2EE application component (e.g. Java servlet, Enterprise JavaBeans)
3. Test and Debug your J2EE application with VisualAge for Java WebSphere Test Environment
4. Assemble and Deploy your J2EE application to your WebSphere Application Server environment



Developing with IMS Connector



Migration



- VisualAge for Java supports tooling for migration assistance from CCF to J2EE Connector Architecture
- VisualAge for Java's Enterprise Access Builder provides tooling to migrate existing EAB commands, Navigators and Java Record Beans from CCF to J2EE Connector Architecture

Roadmap



Version	Description	Runtime Platform
3.5.3/3.5.3.1 (CCF)	<ul style="list-style-type: none"> Added Local Option Support 	Windows, AIX, Solaris, Linux for S/390, OS/390(z/OS)
4.0/4.0.1 (CCF)	<ul style="list-style-type: none"> Added Local Option Enhancements 	Windows, AIX, Solaris, Linux for S/390, OS/390(z/OS)
1.2 (CCF + J2EE CA)	<ul style="list-style-type: none"> New Packaging and Versioning Adds J2EE Connector Architecture Support 	Windows, AIX, Solaris
1.2 (CCF)	<ul style="list-style-type: none"> New Packaging and Versioning Functionalities are the same as 4.0.1 	OS/390(z/OS)
Upcoming	<ul style="list-style-type: none"> J2EE Connector Architecture Support on OS/390(z/OS) Two-Phase Commit Support 	

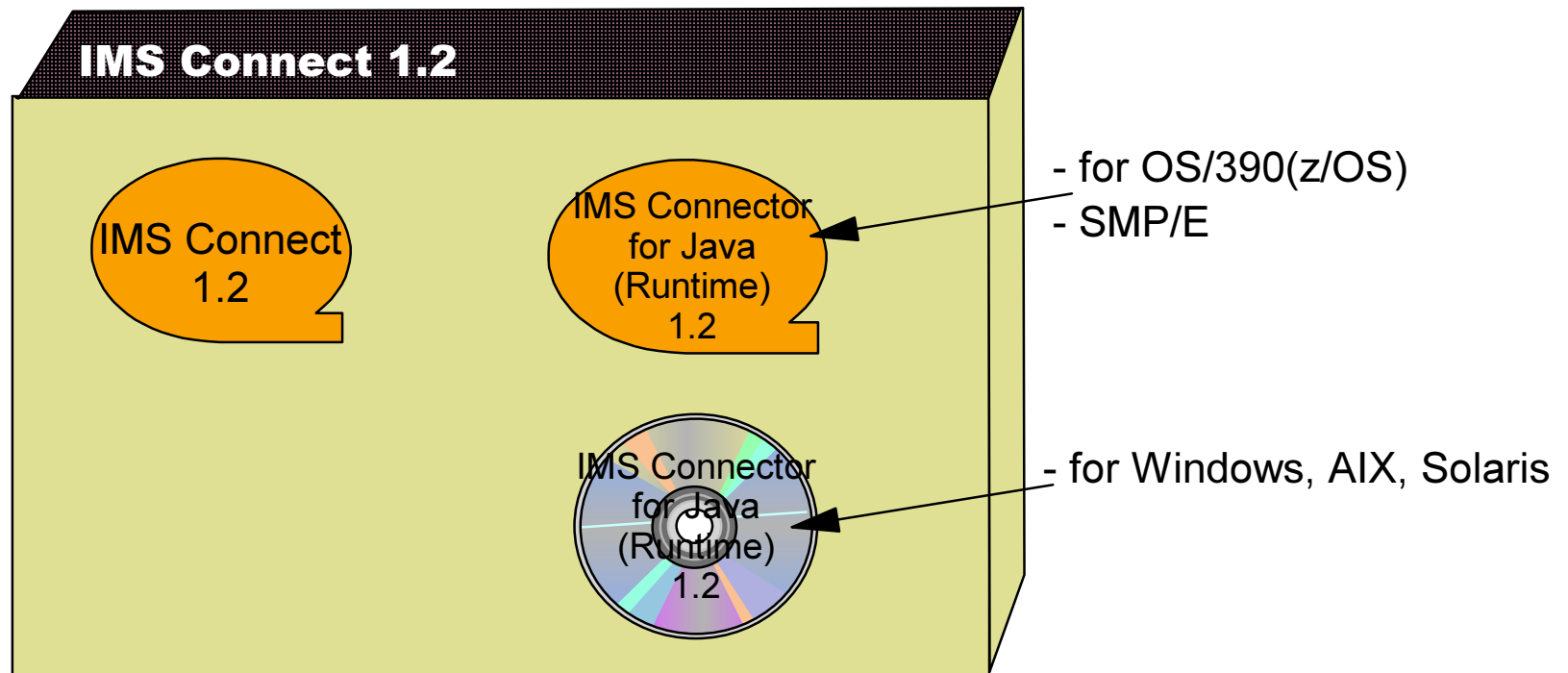


as of Oct/2001

New Packaging



- IMS Connector for Java will be shipped into two pieces:
 - ▶ Runtime - Available as a component of IMS Connect
 - ▶ Development - Available with VisualAge for Java (update via VisualAge Developer's Domain(VADD))
- IMS Connector for Java now shares the same version number with IMS Connect



Demo



- Access the IMS PhoneBook Transaction (IVTNO) from the web

IMS Connector for Java



- ★ Access IMS transactions from the web
- ★ Rapid Application Development with great tooling support
- ★ Conform to industry standard
- ★ Portable, reusable Java code
- ★ Write Once, Run Anywhere™

IMS Connector Documentation



■ Visual Age for Java Online Help

▶ User's Guide

– Online Version

- Help->Task->Accessing the Enterprise->Accessing transactions with the IMS Connector

– PDF Version

- Help->PDF Index->PDF Documents->IMS Connector for Java

▶ Diagnosis Guide

- Help->Task->Accessing the Enterprise->Building IMS Applications

▶ Javadoc for IMS Connector for Java classes

- Help->Reference->IBM APIs->Connectors->IMS Connector

■ IMS Connector for Java website

▶ <http://www.ibm.com/ims>

- Hints and Tips, Platform Guide and Additional Samples

Related Web Sites



*e-business powered
by IMS*

- **IMS, IMS Connect, IMS Connector for Java**
– <http://www.ibm.com/ims>
- **VisualAge for Java**
– <http://www.ibm.com/software/vajava>
- **WebSphere Application Server**
– <http://www.ibm.com/software/webservers>