

Codifying Architectural Frameworks for Web Services and Federated Systems

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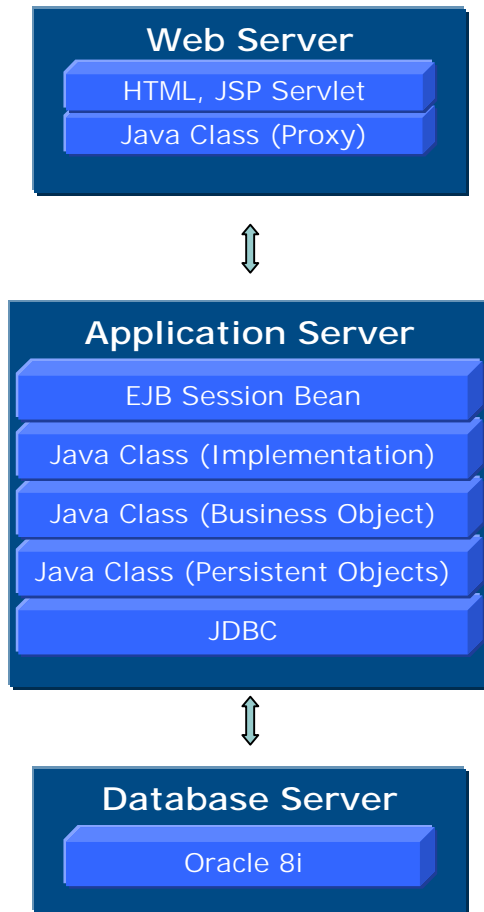
Web Services: From Technology to Reality
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- Introduction to Model Driven Architecture (MDA)
- Impact of MDA on the Enterprise
- MDA Applied to Federated Systems



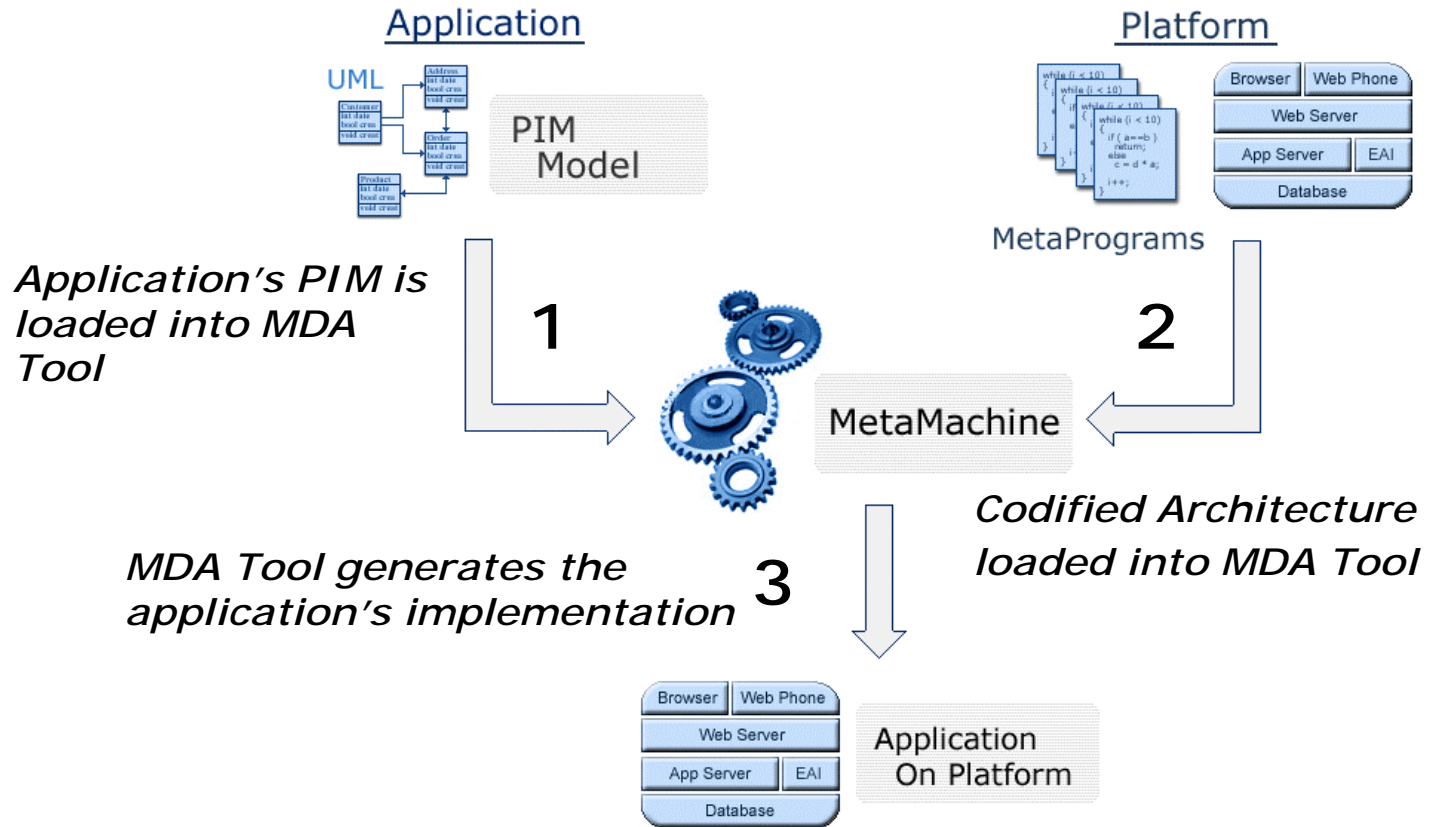
- **MDA:**
OMG's Next Generation of Standards
 - Applications Expressed in a Platform Independent Model (PIM)
 - MDA Tools Translate PIM to an Implementation
- OMG Task Forces Specify Industry Specific PIM's

What is Codification of Architecture

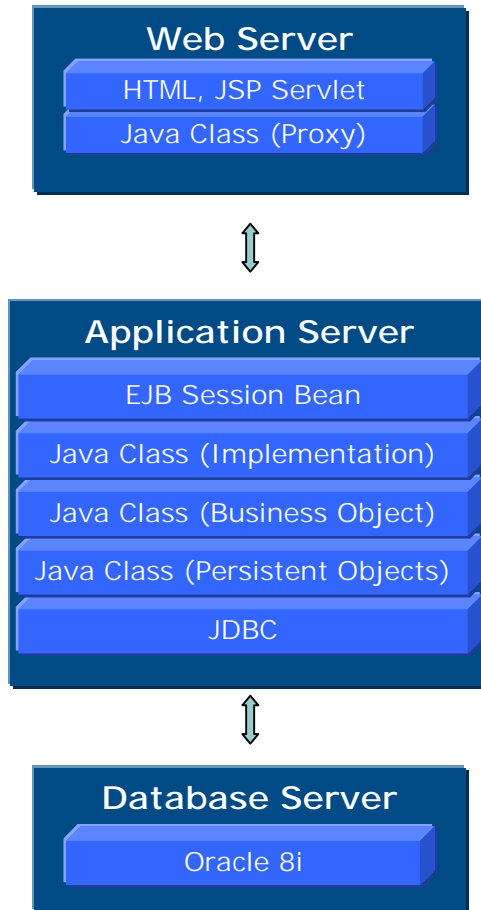


- Programmable Code Generation
- Model Independent Platform
- Executable Architecture

MDA & Architecture Codification



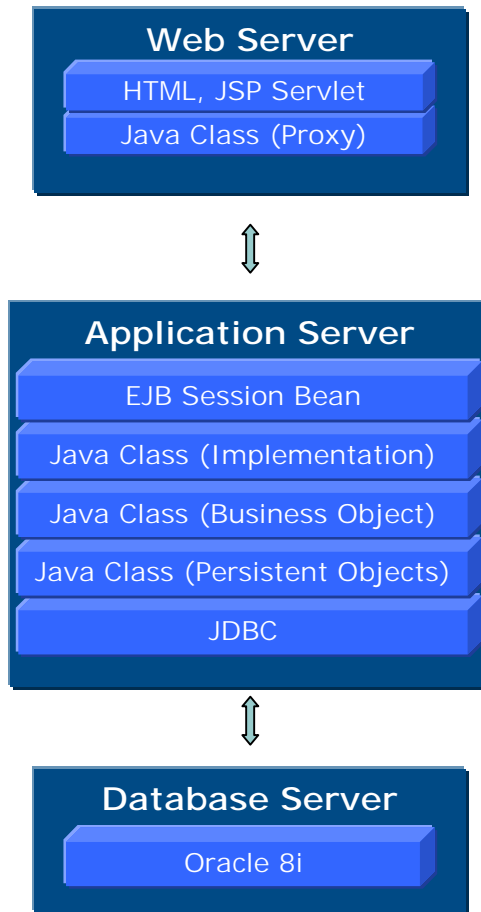
- Traditional Development Compared to Codification
- Economic Impact
- Improved Standards



Architects Specify with:

- Code Fragments
- Prose (.doc)
- UML Snippets

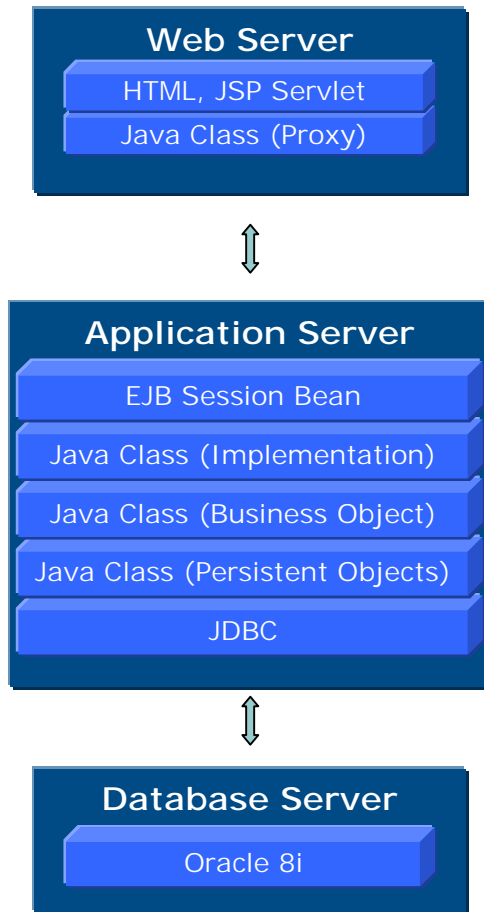
Architects must train Each Development Group on Each Layer of the Architecture



Programmers need:

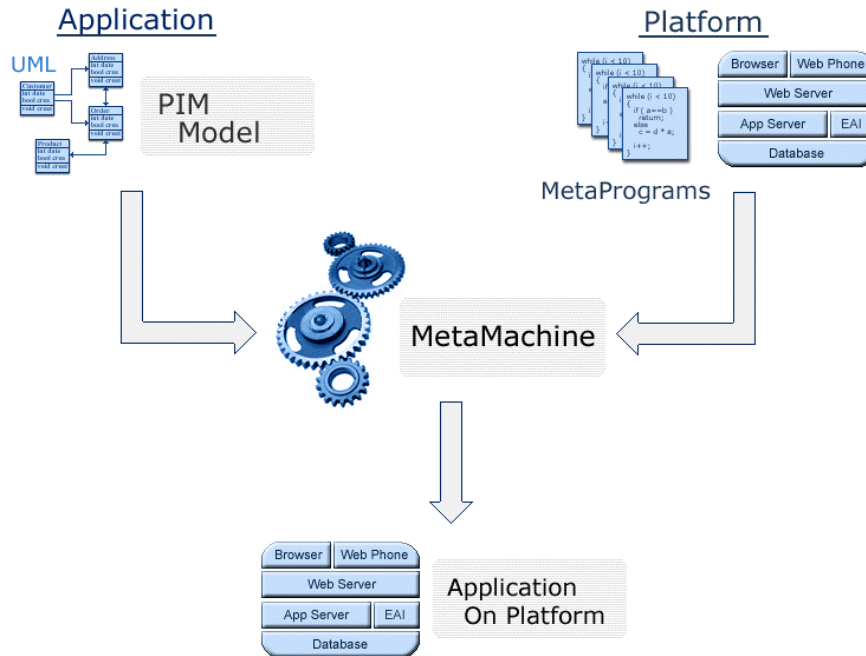
- How to Program in Each Layer (According to the Architecture)
- Implement Each Object in Each Layer

Cost of Architecture
Proportional to the Size of the
Applications

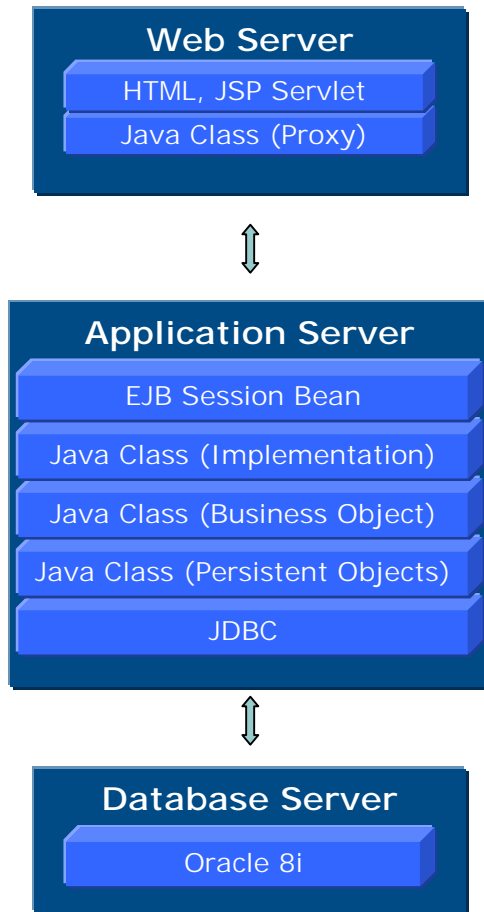


- Each Layer Expressed in Codified Architecture
- Codification Independent of Application

Development with Codified Architecture



- Load PIM
- Load Codified Architecture
- Generate 90% of Application
- Customize 10% of Application



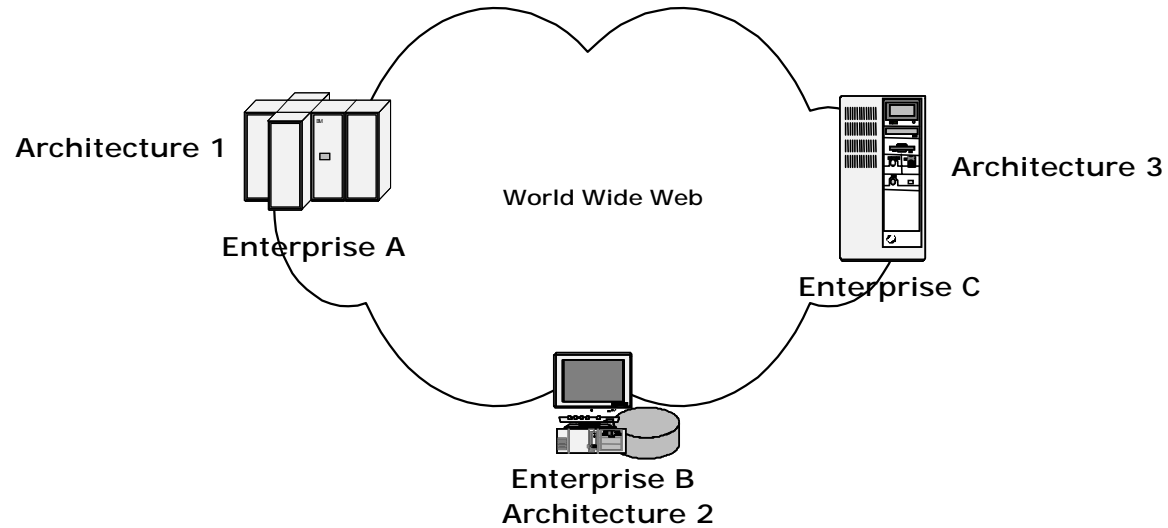
Enterprises:

- Architectural Cost is Fixed
- Code Generation Capability over 90%
- Eliminates Training Developers on Architecture

Architecture Fully Generated— Meaning all Applications will Conform to Enterprise Standards

- User Interface
- Database Structure
- EAI
- Documentation
- Production Control
- Modeling

- Definition
- Web Services
- Challenge
- Interface Compliance
- Unique Enterprise Architecture



- Loosely Connected Systems from Different Enterprises
- Performing Portions of the Same Application

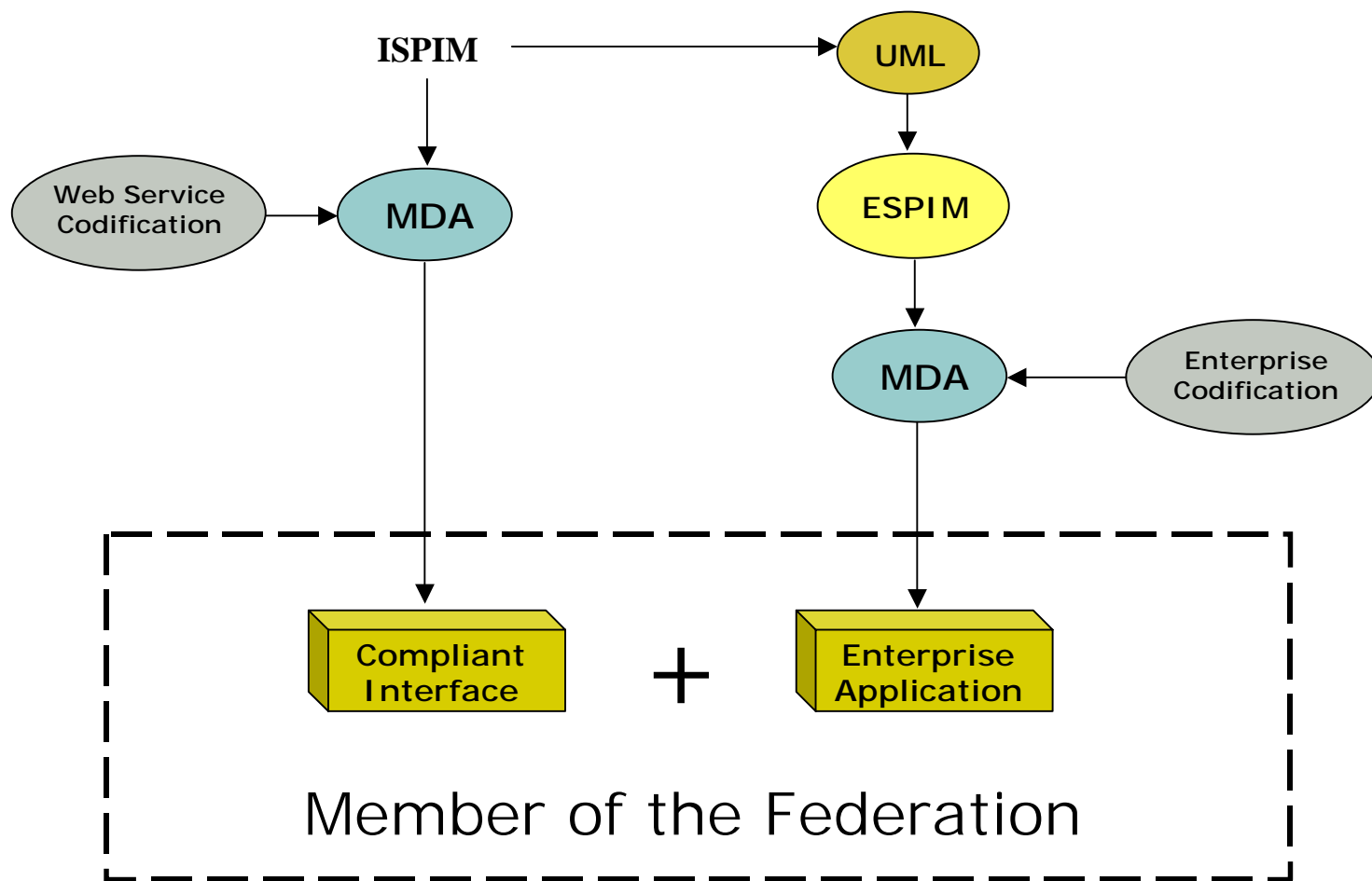
- Web Services Connect Systems
 - SOAP
 - UDDI
- PIMs Express the Application

- Interface Compliance
- Application Needs to be Implemented to Each Enterprise's Architecture
- Each Enterprise's Application Needs to Implement Unique Functions

- Industry Specific PIM Defines Interface
- MDA & Codified Architecture Generate Interface
 - J2EE
 - .Net

- Enterprises Enhance the PIM to Create an Enterprise Specific PIM (ESP)
- Enterprises Create Codified Architecture Unique to their Environment

Federated System Overview



- Web Services & Federated Systems Accelerate Enterprise Change
- Advances Cause Architectural Complexity
- MDA & Codification of Architecture
 - Manage Complexity
 - Provide Economic Benefits
 - Increase Adherence to Corporate Standards

Thank You

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