

Jump Start Your Applications Integration Using Oracle AIA

Lionel Dubreuil
Oracle Corporation
Paris

Keywords:

Aia soa bpm applications integration process canonical object

Introduction

Oracle Application Integration Architecture (AIA) Foundation Pack enables you to simplify cross-application business process integrations using a standards-based, prebuilt integration solution. Designed to promote rapid deployment, re-usability, and configurability of business processes, AIA Foundation Pack saves significant time, effort and cost, compared to building integrations from the ground up and helps you realize the value of a Service-Oriented Architecture (SOA) at an accelerated pace.

Creating a Sustainable Competitive Advantage

With companies relying on upwards of hundreds to thousands of different application systems to manage mission critical business functions, application landscapes today are complex and rigid infrastructures often connected by fragile, hard-coded integrations that were costly to implement and are risky to change.

In order for IT to effectively engage as a strategic partner to the business—helping to drive business transformation, growth and competitive advantage—CIOs are focusing now more than ever on the agility of systems and infrastructures to meet the rapidly changing pace of business at lower cost to the enterprise.

Oracle Application Integration Architecture Foundation Pack

Oracle Application Integration Architecture Foundation Pack is a standards-based integration solution that enables organizations to accelerate the delivery of integration projects based on SOA. As many organizations have experienced, adopting SOA comes with its own unique set of benefits and challenges. From determining what data needs to be exchanged to figuring out how to overcome technical hurdles, there is a vast array of decisions to be worked through.

AIA Foundation Pack reduces the number of unknowns typically associated with integration by delivering a set of predefined canonical content, design patterns and templates, utilities, reference architecture, and a methodology. Available in a readily consumable format leveraging Oracle Fusion Middleware, partners and customers can leverage these assets to jumpstart new application integration projects with existing applications and deliver on the promise of SOA: business agility.

AIA Foundation Pack is comprised of the following components proven by Oracle's own experience implementing SOA-based integration projects:

- **Enterprise Business Objects and Services** – reusable, standards-based building blocks that form the basis for a common vocabulary across your applications

- **Reference Process Models** – documented, application independent process models that serve as a valuable blueprint for business analysts in a SOA-based implementation
- **Predefined Reference Architecture and Methodology** - Oracle's documented and proven approach to implementing service-oriented architecture including more than two dozen pre-defined design patterns
- **Integrated Development Lifecycle Tools** -support for process model decomposition and analysis, service design, service construction, bill of materials dependency analysis, deployment plan generation for composite processes and services, installation and deployment

Enterprise Business Objects (EBO) and Enterprise Business Services (EBS)

One of the most common challenges in application integration is inconsistent business semantics across applications. AIA addresses this challenge by providing standards-based Enterprise Business Objects and Enterprise Business Services that form the basis for a common vocabulary across all your Oracle and non-Oracle applications.

An EBO represents a common definition for a well-known business object such as Account, Sales Order, Customer, etc., These definitions have been developed by rationalizing both Oracle's extensive portfolio of applications and existing industry standards (i.e. Open Applications Group Integration Specification, OAGIS). Using EBO's enables you to implement a common data abstraction layer between systems, thereby eliminating the need to map data directly from one application to another.

An EBS represents an implementation independent web service definition for performing a task. Enterprise Business Services are generally coarse-grained and typically perform a specific business activity or a business task, such as creating an account or checking for the presence of an account in a billing system. Each EBS has a well-defined interface described via XML. This interface description is composed of all the details required for a client to independently invoke the service.

Leveraging AIA Foundation Pack to establish a canonical definition of shared objects and services enables you to move beyond hard-to-integrate application silos and deliver innovative solutions at lower cost and risk. As you bring new applications into the mix or upgrade to newer versions, the abstraction layer acts as a buffer, protecting your integration from changes. And since EBO's and EBS's are designed for extensibility, any extensions you create on top of what is delivered out of the box are clearly identified and preserved through the upgrade process.

AIA Foundation Pack includes an extensive library of EBOs and EBS's, supporting a broad range of both horizontal and vertical process integrations.

Reference Process Models (RPM)

AIA Foundation Pack includes an extensive collection of Reference Process Models that have been decomposed to four levels of detail to help you see and understand how Oracle Applications can be used to optimize your business processes. These RPM's may be used to provide a clear picture of your business processes and lay the foundation for understanding your application portfolio and roadmap, which in turn helps you understand and plan for your future business service portfolio.

To ensure the delivery of sustainable models, Foundation Pack RPMs have been rationalized against Oracle Applications and external guiding sources, such as the enhanced Telecom Operations Map® (eTOM) and Supply Chain Operations Reference-model (SCOR), to give you a clear and complete picture of best-practice processes to start your process design.

The top three levels of the models are conceptual and depict all aspects of enterprise processes supporting a particular function, like Sales, Marketing, and Order Fulfillment. The fourth level is implementation specific. Conceptualization of SOA-based services can be observed on the third level and process integration points and AIA artifacts appear on the lowest level. All models follow a role-based, swim-lane workflow modeling method and include both human and system lanes.

AIA Foundation Pack also includes industry-specific variations of our models for many of the industries that Oracle supports.

Reference Architecture

To ensure your success, Oracle Application Integration Architecture Foundation Pack delivers a robust framework for engineering service-oriented business processes. This framework is based on Oracle's collective experience developing SOA-based solutions and working with global customers and partners. Delivered through a combination of documented best practices, design patterns and programming models, Foundation Pack provides step-by-step guidance on designing, constructing, assembling and extending different AIA artifacts leveraging Oracle tools.

Integrated Development Lifecycle Tools

Developing SOA-based integrations provides increased flexibility, but it requires a consistent, disciplined approach to bring your ideas to reality. AIA Foundation Pack includes a set of tools to help you deliver at every phase of an end-to-end SOA lifecycle. The tools not only accelerate the development process but also guide you through the methodology, enhance developer productivity, and ensure production-readiness as you manage and govern your entire development lifecycle.

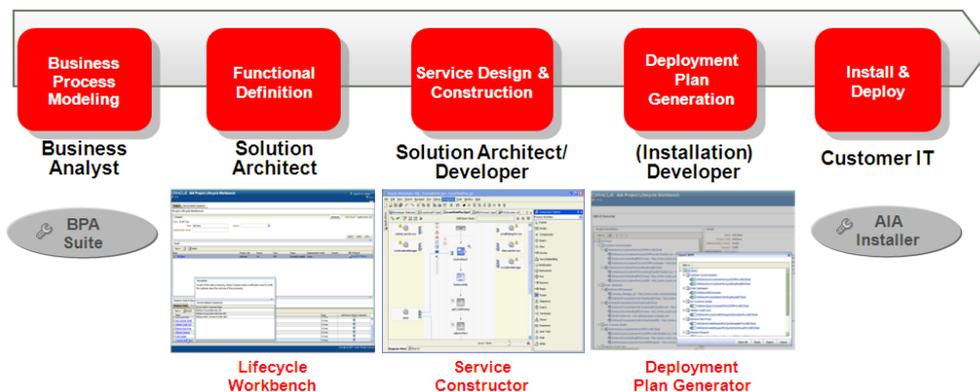


Illustration. 1: AIA Foundation Pack Development Lifecycle Tools

The supplemental tools provided by AIA Foundation Pack promote a best-practice approach to integration development that is closely aligned to a typical SOA development lifecycle. Oracle recognizes that to build enterprise-strength integrations it takes collaboration from various members of your organization that play specific roles in each phase of the lifecycle. Within the development lifecycle, Business Analysts translate business objectives into tangible business process models and this provides transparency to Functional Experts who must decompose the models into meaningful business tasks while identifying functional gaps. Developers then implement new services to deliver on the business intent within a collaborative setting enhancing productivity of each participant while providing visibility to the entire lifecycle.

AIA Foundation Pack delivers the following tools to streamline SOA-based development projects:

- **Project Lifecycle Workbench** – facilitates mapping of business processes into feature requirements and its decomposition into a set of business tasks
- **Service Constructor** – reduces development time by automating core development tasks, promotes distributed and collaborative SOA development environment and provides a structured approach to handling common error scenarios
- **Deployment Plan Generator** – automates the creation of a “bill of materials” for a business process, identifying dependencies between services, and simplifies custom deployments for complex environments

- **Composite Application Validation System (CAVS)** – test integrations without having to build it all; you can validate business process integrations, perform black box testing, create response simulators, author and reuse test cases

Built on Fusion Middleware

Oracle Application Integration Architecture is built on Oracle Fusion Middleware's market leading SOA and BPM products. These products deliver a comprehensive SOA & BPM infrastructure for connecting heterogeneous applications and business partners, managing structured and unstructured business processes and advanced management via a unified framework for governance and monitoring. [Learn more about Oracle's SOA and BPM Products.](#)

Bottom Line

Use AIA Foundation Pack to create reliable and reusable composite business processes across your Oracle and non-Oracle applications at reduced risk and lower total cost of ownership.

With Oracle Application Integration Architecture Foundation Pack you can:

- Jump start your SOA initiative and successfully deliver on SOA projects now
- Deliver your vision of moving beyond hard-to-integrate application silos
- Govern projects to ensure you are making incremental progress towards the vision

Contact address:

Lionel Dubreuil

Oracle
15 boulevard Charles De Gaulle
92700, Colombes
France

Phone: +33(0)157608327
Fax: +33(0)157608327
Email: lionel.dubreuil@oracle.com
Internet: [AIA Foundation Pack on Oracle.com](#)
[AIA Foundation Pack on Oracle Technology Network \(OTN\)](#)