

Oracle® Application Integration Architecture
Foundation Pack 11g Release 1 (11.1.1.2.0):
Release Notes

Release 1 (11.1.1.2.0)

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Preface

These release notes cover the new features and enhancements in Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.2.0).

Additional Resources

There are many additional resources that provide detailed information about this release.

The following guides and resources are available on My Oracle Support (Knowledge > Application Integration Architecture > Foundation Pack):

- *Oracle Application Integration Architecture Foundation Pack: Installation Guide*
- *Oracle Application Integration Architecture Foundation Pack: Getting Started with the Oracle AIA Foundation Pack and Demo*
- *Oracle Application Integration Architecture Foundation Pack: Concepts and Technologies Guide*
- *Oracle Application Integration Architecture Foundation Pack: Development Guide*
- *Oracle Application Integration Architecture Foundation Pack: Infrastructure Components and Utilities Guide*
- *Oracle Application Integration Architecture Foundation Pack: Reference Process Model Guide*
- *Oracle Application Integration Architecture Foundation Pack: Migration Guide to Foundation Pack 11gR1 (11.1.1.2.0)*
- *Oracle Application Integration Architecture Foundation Pack: Product-to-Guide Index*
- Known issues and workarounds

Visit the [My Oracle Support website](#) frequently to keep apprised of ongoing changes.

For all other documentation, visit [Oracle Documentation](#) on Oracle Technology Network.

For training opportunities, visit [Oracle University](#).

Oracle Application Integration Architecture Foundation Pack Overview

Oracle Application Integration Architecture Foundation Pack is a prebuilt integration solution that provides the programming model, best practices, and application-independent data model, as well as supporting tools to implement, test, diagnose, and govern your service oriented architecture.

The Foundation Pack:

- Unifies your application portfolio on a standardized framework
 - Join Oracle and non-Oracle applications on a robust, open standards-based platform
 - Integrate third-party solutions through application-independent design
 - Create process-driven application integrations
- Minimizes integration costs and risk
 - Speed time to value with prebuilt business objects and services
 - Develop flexible integrations using an application-independent model
- Adapts business processes to changing business needs
 - Optimize business operations using documented business processes
 - Simplify upgrades through common objects and services
 - Plug and play applications, through Enterprise Business Services

Product Enhancements for Oracle Application Integration Architecture Foundation Pack

This section discusses new enhancements for Oracle Application Integration Architecture (AIA) Foundation Pack 11gR1 (11.1.1.2.0). These enhancements fall into the following areas:

- [Oracle Fusion Middleware/SOA Suite 11g Adoption](#)
- [Reference Process Models](#)
- [Project Lifecycle Workbench](#)
- [Oracle Enterprise Repository](#)
- [Service Constructor](#)
- [Installation and Deployment](#)
- [Error Handling and Logging](#)
- [Enterprise Business Objects](#)
- [Oracle AIA Foundation Pack Extension for Banking and Wealth Management](#)
- [Business-to-Business Integration](#)
- [AIA Demo](#)

Oracle Fusion Middleware/SOA Suite 11g Adoption

AIA Foundation Pack 11gR1 (11.1.1.2.0) is designed for use in developing and deploying SOA solutions on Oracle Fusion Middleware/SOA Suite 11g.

AIA Foundation Pack 11gR1 (11.1.1.2.0) programming models are geared to take advantage of the following aspects of Oracle Fusion Middleware/SOA Suite 11g:

- Adoption of the Service Component Architecture (SCA)

A SOA composite application is an assembly of services, service components, references, and wires designed and deployed together to meet a business need. The SCA assembly model provides the service details and their interdependencies to form composite applications. The SCA enables you to represent business logic as reusable service components that can be easily integrated into any SCA-compliant application. The resulting application is known as a SOA composite application. The specification for the SCA standard is maintained by the Organization for the Advancement of Structured Information Standards (OASIS) through the Open Composite Services Architecture (CSA) Member Section.

For more information, see [OASIS Open CSA](#).

The various AIA service artifacts – Application Business Connector Services (ABCSs), Enterprise Business Services (EBSs), Enterprise Business Flows (EBFs), and Composite Business Processes (CBPs) are SCA composites. This brings the SOA SCA advantage of standards-based deployment models and assembly models to AIA service artifacts.

The following programming models are provided:

- Detailed programming guidelines for various AIA service artifacts
- Synchronous request-response message exchange pattern (MEP)
- Asynchronous one-way MEP
- Asynchronous request-delayed response MEP
- Publish-subscribe MEP
- Message aggregation MEP
- Error handling and recovery for various MEPs
- Security
- Managing transactions across multiple services in different MEPs
- Guidelines for transformation of messages
- Use of the WebLogic Java Message Service (JMS) server

The WebLogic JMS server is leveraged in various MEPs, suggesting the use of store-and-forward mechanisms.

- Uptake of Oracle Metadata Services Repository (MDS) for asset centralization patterns

The following artifacts are stored in the MDS:

- All abstract WSDLs, schemas, and shared XSLs pertaining to the canonical model and applications
- AIAConfigurationProperties.xml and AIAEHNotification.xml
- Default fault policy
- Cross-reference metadata and domain value maps

AIA 2.4 and 2.5 to AIA Foundation Pack 11gR1 (11.1.1.2.0) Migration

Foundation Pack 11gR1 (11.1.1.2.0) provides a seamless migration strategy for the AIA services developed on Foundation Pack 2.4 and 2.5 and later. AIA services can be migrated with the help of the AIA Migration Utility, which is delivered as a part of Foundation Pack 11gR1 (11.1.1.2.0).

The AIA Migration Utility is capable of doing the following:

- Migrates AIA 2.4 and 2.5 services into SCA-compatible composite services.
- Preserves all 2.4 and 2.5 capabilities.
- Reduces the amount of manual effort required for migration.

For more information about migration, see *Oracle Application Integration Architecture Foundation Pack: Migration Guide for Foundation Pack 11gR1 (11.1.1.2.0)*.

AIA 2.4 and 2.5 to AIA Foundation Pack 11gR1 (11.1.1.2.0) Technical Upgrade Path



[AIA 2.4 and 2.5 to AIA Foundation Pack 11gR1 \(11.1.1.2.0\) migration overview](#)

Reference Process Models

Oracle Business Process Management includes a set of activities that organizations perform to either optimize their business processes or adapt them to new organizational needs. Important elements include business process modeling and analysis (BPA), orchestration (BPEL), and business activity monitoring (BAM).

The BPA element allows a business analyst to create business process models depicting the desired optimized business processes. These models act as a communication device and design blueprint for the technical realization of the desired business process. They provide a business foundation for the addition of technical orchestration details. They also serve as a baseline for modifications resulting from business activity monitoring results.

The Business Process Publisher is included to enable viewing of the published set of models and to allow business and technical analysts throughout the entire enterprise to view the models with a simple web browser.

For full consumption of the delivered models, the source database is also included with AIA Foundation Pack 11gR1 (11.1.1.2.0). A licensed copy of the Business Process Architect is required to restore the source database and use the models.

AIA Foundation Pack 11gR1 (11.1.1.2.0) includes Reference Process Models (RPMs) for the following:

- Oracle Application Integration Architecture Foundation Pack
- Oracle Application Integration Architecture Foundation Pack Extension for Insurance
- Oracle Application Integration Architecture Foundation Pack Extension for Banking and Wealth Management

Delivered model content includes the Level 0, Level 1, Level 2, and Level 3 models for those processes supported by AIA Foundation Pack 11gR1 (11.1.1.2.0).

Model content is cumulative and includes models delivered with prior AIA releases as well. Up to and including AIA Foundation Pack 11gR1 (11.1.1.2.0), integration artifacts and corresponding RPMs were delivered for portions of the following business process areas.

Communications Industry

- Assurance
- Billing
- Fulfillment
- Product Lifecycle Management

Insurance Industry

- Product Development and Management
- Channel Management
- Marketing
- Sales
- Customer Service
- New Business
- Policy/Member Service
- Incentive Compensation
- Billing
- Claims
- Care Management
- Reinsurance
- Network Management

Utilities Industry

- Billing and Revenue Management
- Customer Service
- Marketing Campaign
- Order Fulfillment
- Product Management
- Sales

Financial Services Industry

- Customer Service
- Financial Control and Reporting
- Marketing
- Payments and Clearing
- Product Management
- Retail Banking
- Sales
- Treasury and Investment Banking
- Wealth Management
- Wholesale Banking

Retail Industry

- Financial Control and Reporting
- Inventory Management
- Procurement
- Sales

Health Sciences

- Research and Development

Cross-Industry

- Asset Lifecycle Management
- Cash and Treasury Management
- Compensation Management

- Customer Service
- Enterprise Information Management
- Enterprise Planning and Performance Management
- Field Service and Depot Repair
- Financial Control and Reporting
- Marketing
- Materials Management and Logistics
- Order Fulfillment
- Procurement
- Product Management
- Production
- Project Management
- Recruiting
- Sales
- Supply Chain Planning
- Transportation Management
- Workforce Deployment
- Workforce Development

Composite Business Flows

- Order to Cash (Siebel Order/Siebel Opportunity to Oracle Order Management/Oracle Transportation Management)
- Order to Cash (Siebel CRM to SAP Sales and Distribution)
- Design to Release (Agile Product Lifecycle Management to Oracle Product Information Management)
- Lead to Order (JDE E1 to CRM On Demand)
- Lead to Order (JDE World to CRM On Demand)
- AIA for Retail Financials (Retail Merchandising to PeopleSoft Enterprise Financials)
- AIA for Retail Financials (Retail Merchandising to E-Business Suite Financials)

Controlled Object Library

In addition to the RPMs, this release contains a more comprehensive Controlled Object Library. The Controlled Object Library was established to ensure a major degree of governance and control over the library of models and their related information. The Controlled Object Library:

- Allows us to enforce standards and to ensure consistency across the library.
- Prevents a free-for-all approach to modeling and limits unnecessary undesired variations that can be prevented.
- Facilitates a change control process that can be tightly controlled to limit exposure to unapproved objects or variations.

Architectural Updates

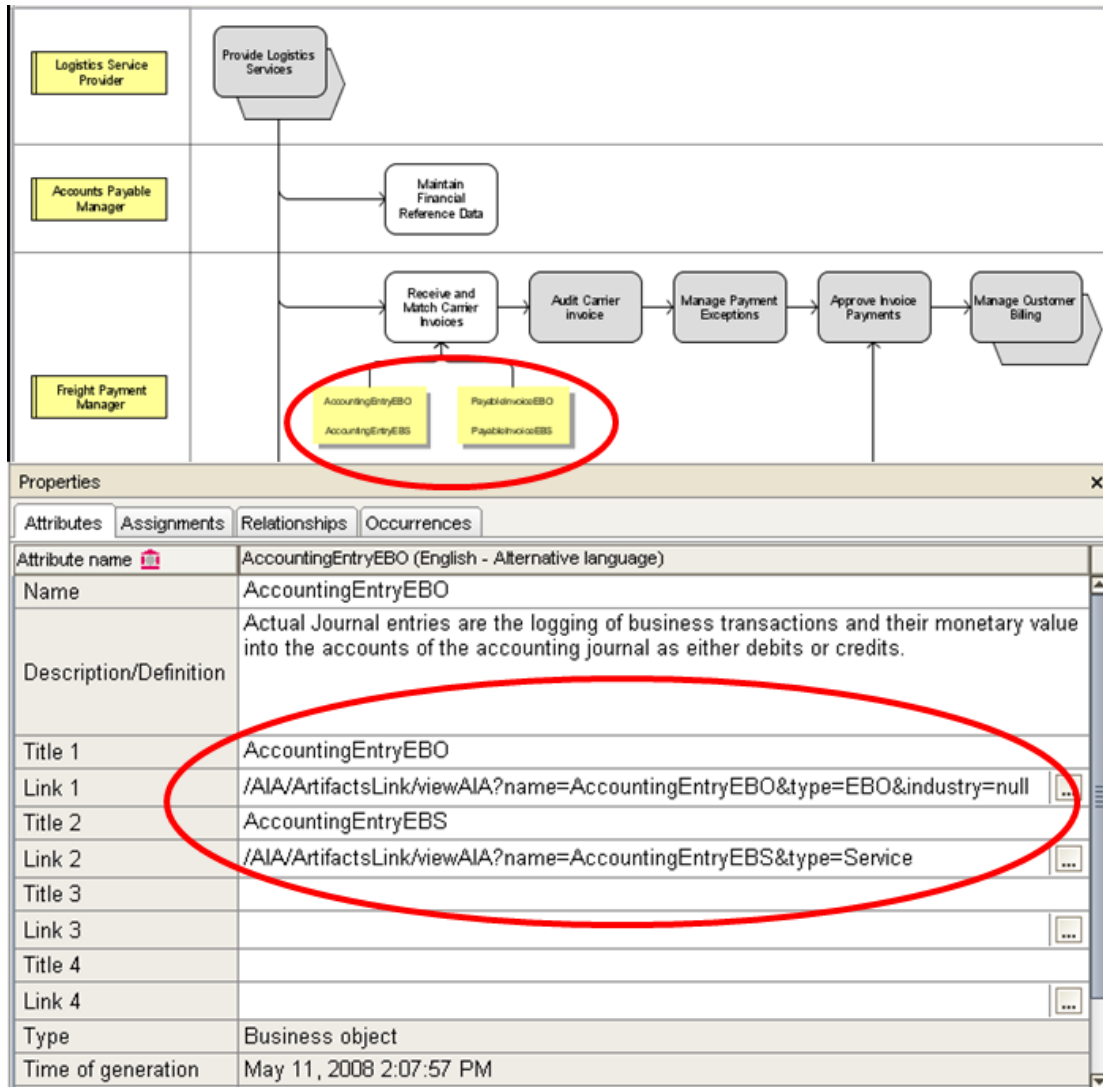
AIA Foundation Pack made several architectural changes starting with the 11gR1 (11.1.1.2.0) release. To align with these changes, we have made the following modifications to the RPMs.

The RPMs include the EBS name and links. The links now point to Oracle Enterprise Repository where technical details are described for AIA integration artifacts. We have added a new diagram to our model hierarchy, the Functional Allocation Diagram (FAD), which includes the EBS object and its corresponding link to the Oracle Enterprise Repository. The new FAD diagram can also be enhanced to include key performance indicators (KPIs) and other business artifacts, as desired.

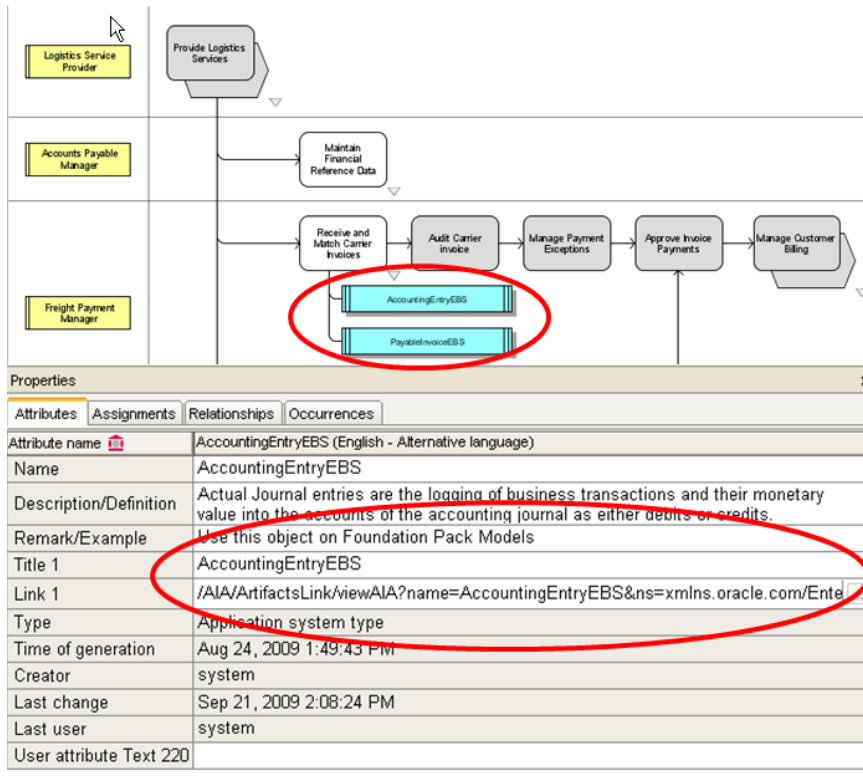
We no longer include:

- Integration Scenario names and corresponding links to the Business Service Repository (BSR)
- Enterprise Business Object (EBO) names and corresponding links to the BSR
- Enterprise Business Message (EBM) names

The excluded integration artifact references are still available in Oracle Enterprise Repository and can be accessed via the EBS link. Levels 0 and 1 for Foundation Pack models have not changed. The object used on Level 2 has changed from a compound Business Object including both the EBO and EBS names and links to a Business Service object including only the EBS name and link. The following graphics show a Level 2 Foundation Pack 2.X release model and a new AIA Foundation Pack 11gR1 (11.1.1.2.0) release model.

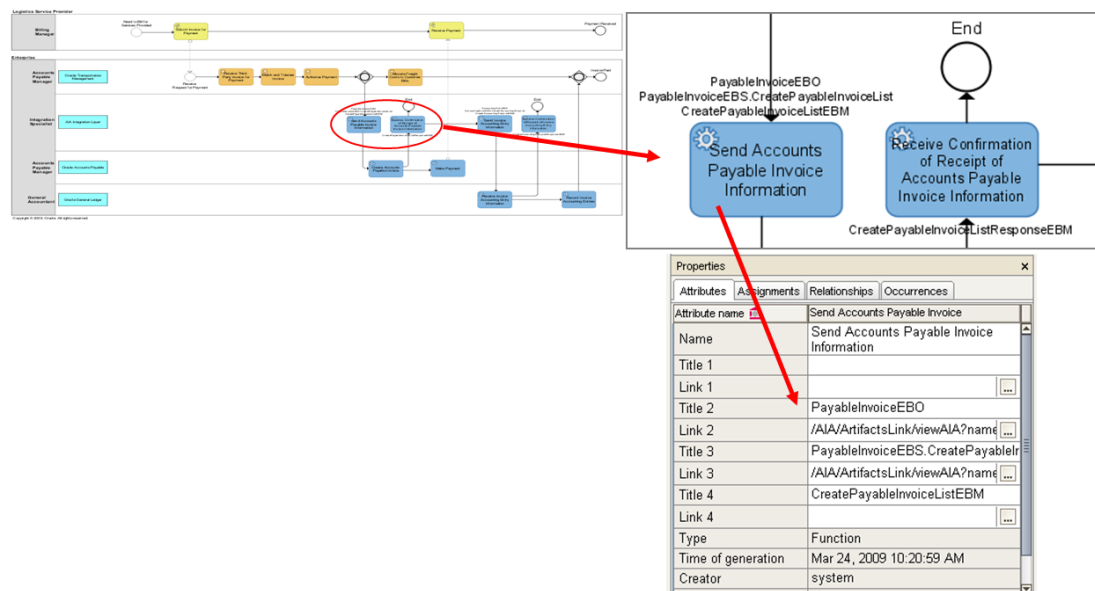


Previous Foundation Pack Level 2 AIA 2.X release model

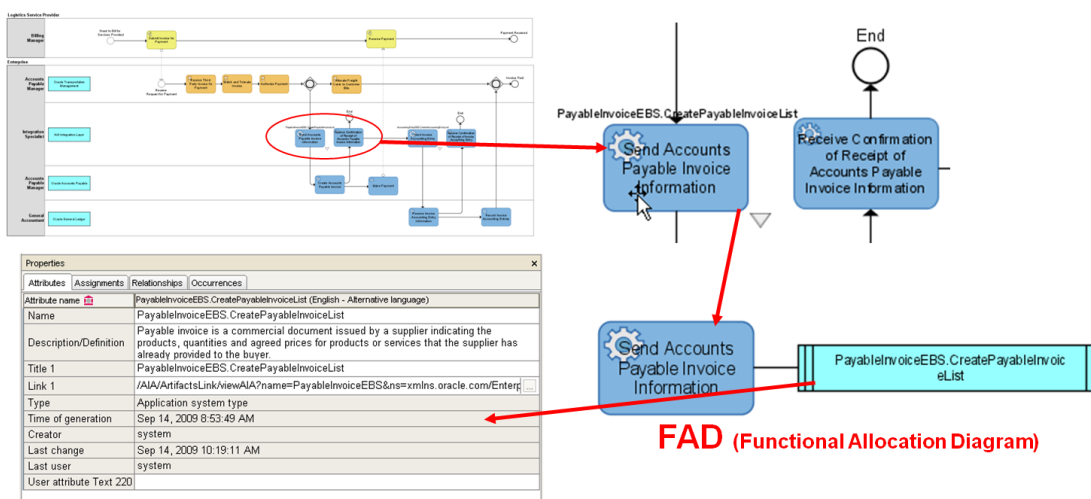


New Foundation Pack Level 2 AIA Foundation Pack 11gR1 (11.1.1.2.0) release model

Level 0 through 2 for Process Integration Pack (PIP) models have not changed. The object used on Level 3 has been changed from an automated object showing the Integration Scenario, EBO and EBS names and links, and EBM name to an Automated Activity object showing only the EBS name and link. The new Automated Activity object also links to the associated FAD. The following graphics show a Level 3 PIP 2.X release model and a new PIP Level 3 AIA Foundation Pack 11gR1 (11.1.1.2.0) release model.



Previous PIP Level 3 AIA 2.X release model



New PIP Level 3 AIA Foundation Pack 11gR1 (11.1.1.2.0) release model

Project Lifecycle Workbench

AIA Foundation Pack offers a comprehensive approach to SOA development, delivery, and deployment. AIA Foundation Pack's programming models provide architectural and tooling provisions to support the entire SOA lifecycle. AIA Foundation Pack 11gR1 (11.1.1.2.0) provides tooling that streamlines development lifecycle activities, enforces the AIA methodology, enhances productivity, and ensures the quality of final SOA deliverables.

Project Lifecycle Workbench is an 11g Oracle Application Development Framework-based web application. It formalizes and orchestrates SOA development lifecycle activities. Specifically, it provides the following functionality:

- Facilitates functional experts' process definition, decomposition, and service reuse during the functional analysis phase of the development lifecycle.
- Automatically associates implementation artifacts to their respective functional definitions during the implementation phase.
- Supports installation developers' deployment plan generation activities by autogenerating a bill of material for a given development project.

For the functional analysis phase of the development lifecycle, a functional expert analyzes and decomposes a CBP into a series of business tasks. In AIA's parlance, a portfolio of services substantiates a given business task: some may be application-agnostic EBSs and the others may be application-specific ABCSs.

Based on the desired functionality, the functional expert decides to do one of the following:

- Reuses any qualified services from the existing service portfolio stored in the Oracle Enterprise Repository.
- Identifies brand new services to be constructed.

The functional expert performs the process definition, decomposition, service reuse, and new service identification using the Project Lifecycle Workbench, as illustrated in the following figure.

ORACLE AIA Project Lifecycle Workbench

Home | Logged In As weblogic | Logout

Project Lifecycle Workbench

Search | Advanced | Saved Search | Implicit Search

Match: ☒ All ☐ Any

Name: Industry:

Implementation Vendor:

Search | Reset | Save...

Detail

View | Detach

Name	Project Code	Version	Type	Status	Implementation Vendor	Industry	Bill Of Material
AIA Service Constructor QA Samples	AIASCSamples	1	PIP	Generally Available	Oracle	Core	Generate Bill Of Material
AIA Demo	AIADemo	11.1.1.2.0	PIP	Generally Available	Oracle	Core	Generate Bill Of Material

Business Tasks & Document Links

Business Tasks | Document Links

View | Detach

Name	Scope	Add Service Solution Component
Update Sales Order	In Scope	
Update Customer from Order	In Scope	
Update Customer	In Scope	
Query Customer	In Scope	
Create Customer	In Scope	
Process Sales Order	In Scope	

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Project Lifecycle Workbench: functional definition and decomposition

As shown above, a Project is composed of a set of Business Tasks. Each Business Task is then broken down in to Service Solution Components, each of which represents a chunk of business functionality and corresponds to a service to be constructed.

View |

Name

- [AIA Service Co](#)
- [AIA Demo](#)
- [jha test](#)

Business Tasks

Business Tasks

View |

Name

- [Customer Synchroni](#)
- [Order Submission](#)
- [Get Customer Details](#)
- [Validate Credit Card](#)
- [Retrieve Item Prices](#)

Description

Whenever a new order is submitted in the shop application, the order details are collected and transformed into a canonical representation.

Service Solution Component

Service Solution Component Name

- AIADemo ProcessSalesOrder CBP
- AIADemo ProcessSalesOrder Shop Requestor ABCS
- AIADemo ProcessSalesOrderOrchestration EBS
- AIADemo JMS Consumer Transport Adapter

Service Solution Components that comprise the Order Submission Business Task

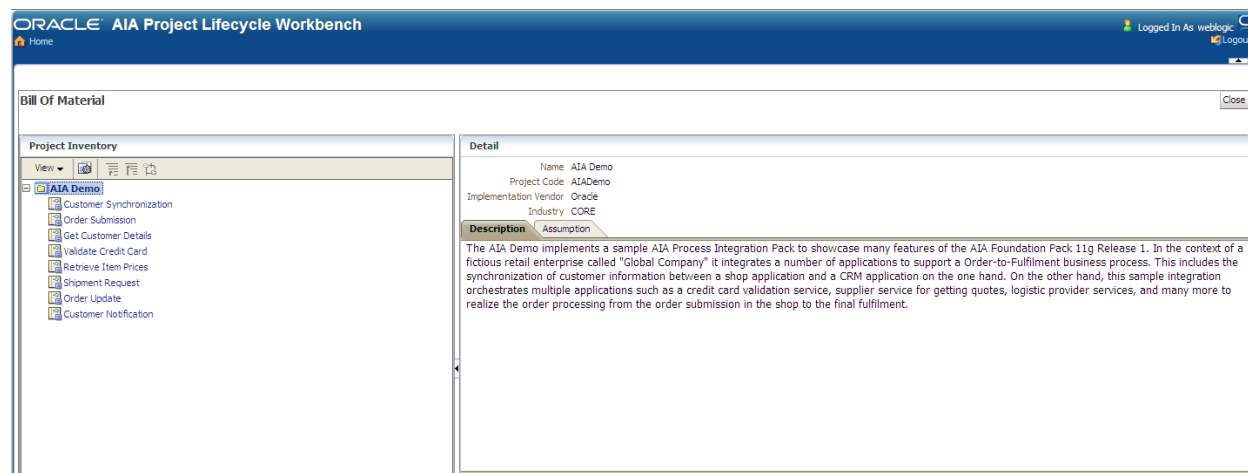
A Service Solution Component is the mechanism by which functional experts convey to their development stakeholders that a new service needs to be implemented to fulfill the desired functionality of the given Service Solution Component.

The functional expert specifies the functional requirement and metadata of the Service Solution Component using the Project Lifecycle Workbench. In so doing, the functional requirement and metadata are persisted for each new service to be constructed, and will eventually flow downstream to the Service Constructor tool.

For the deployment plan generation and packaging phase of a development lifecycle, it is necessary to know the complete inventory of the technical artifacts, such as the composites that implement the functionality, queues, database objects, and so forth.

An AIA project, a PIP, for example, is a collection of functionally related composites. As functional experts decompose a business process and locate needed services (either new or reused ones) as discussed above, they essentially outline all functionally significant services that should make up an overall project.

As such, an installation developer may obtain the complete composite inventory of a PIP by clicking the Generate Bill Of Material button in the Project Lifecycle Workbench. The user may further customize and revise the generated bill of material by including and excluding any subset of the overall composites that make up the project.



Viewing a bill of material in the Project Lifecycle Workbench

With the bill of material in hand, the installation developer may produce an aggregated deployment plan using the Deployment Plan Generator. This deployment plan contains master instructions for all deployment activities for a PIP, covering not only composites, but also queues, adapters, database objects, and so forth.

Oracle Enterprise Repository

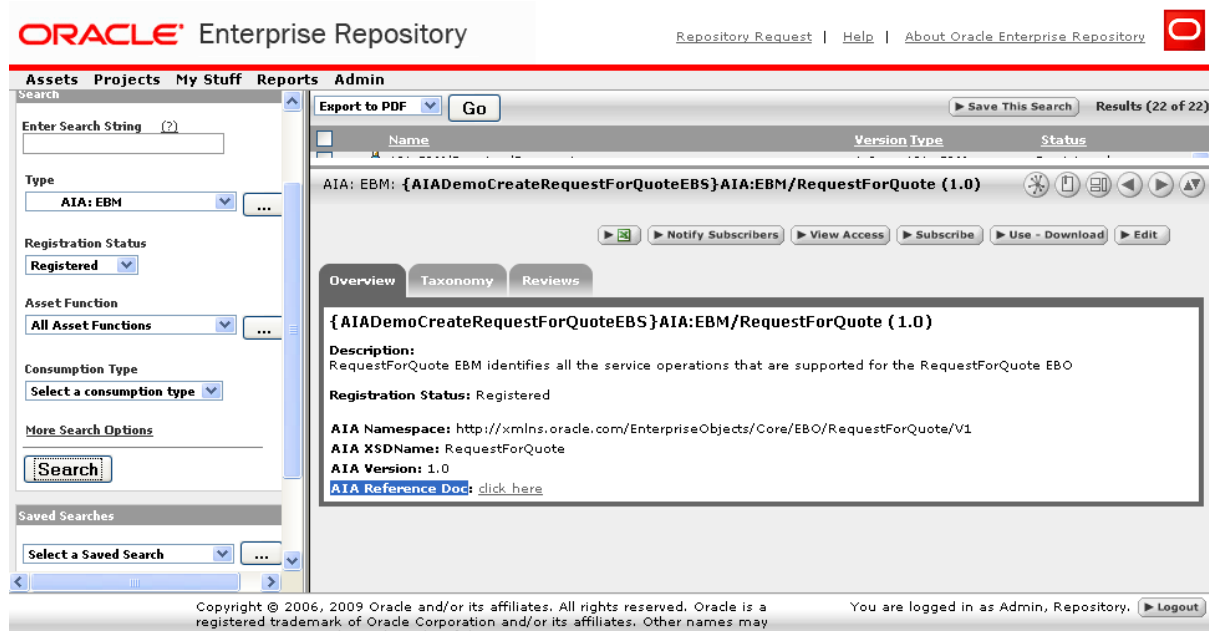
Oracle Enterprise Repository is Oracle's SOA repository and is an optional component for AIA Foundation Pack 11gR1 (11.1.1.2.0). Project Lifecycle Workbench operates in concert with Oracle Enterprise Repository to govern all of AIA's design-time assets and to encourage SOA reuse and sharing across the distributed development community.

AIA Foundation Pack's use of Oracle Enterprise Repository is distributed across the entire development lifecycle, including:

- Functional experts or solution architects evaluate AIA Foundation Pack's prebuilt SOA portfolio and facilitate asset reuse during the functional definition phase of the AIA lifecycle. This use is embedded

in the Service Solution Component specification experiences in the Project Lifecycle Workbench.

- Developers autoharvest AIA Foundation Pack's design-time implementation assets during the implementation phase of the AIA lifecycle. In so doing, the in-flight implementation assets are made available to the larger AIA development community.
- System administrators autoharvest AIA Foundation Pack's deployed runtime assets upon the completion of AIA Foundation Pack installation. In so doing, we achieve end-to-end SOA visibility across the entire AIA lifecycle.



Viewing a harvested EBM in the Oracle Enterprise Repository

As a part of AIA Foundation Pack 11gR1 (11.1.1.2.0), we deliver:

- AIA Foundation Pack Solution Pack: This is a catalog of AIA prebuilt SOA portfolio definitions and metadata, which customers can import into Oracle Enterprise Repository.
- AIA Foundation Pack Harvester: This utility harvests and publishes SOA assets (preferably AIA-compliant) to the Project Lifecycle Workbench backend and, optionally, Oracle Enterprise Repository. These SOA assets may be prebuilt by AIA or custom-implemented by customers or system integrators. The AIA Harvester is implemented on top of the 11gR1 Oracle Enterprise Repository Harvester Extension Framework.

Note. While Oracle Enterprise Repository provides SOA governance, particularly SOA visibility, to the overall AIA product line, it is not a mandatory component for AIA installation and execution.

Service Constructor

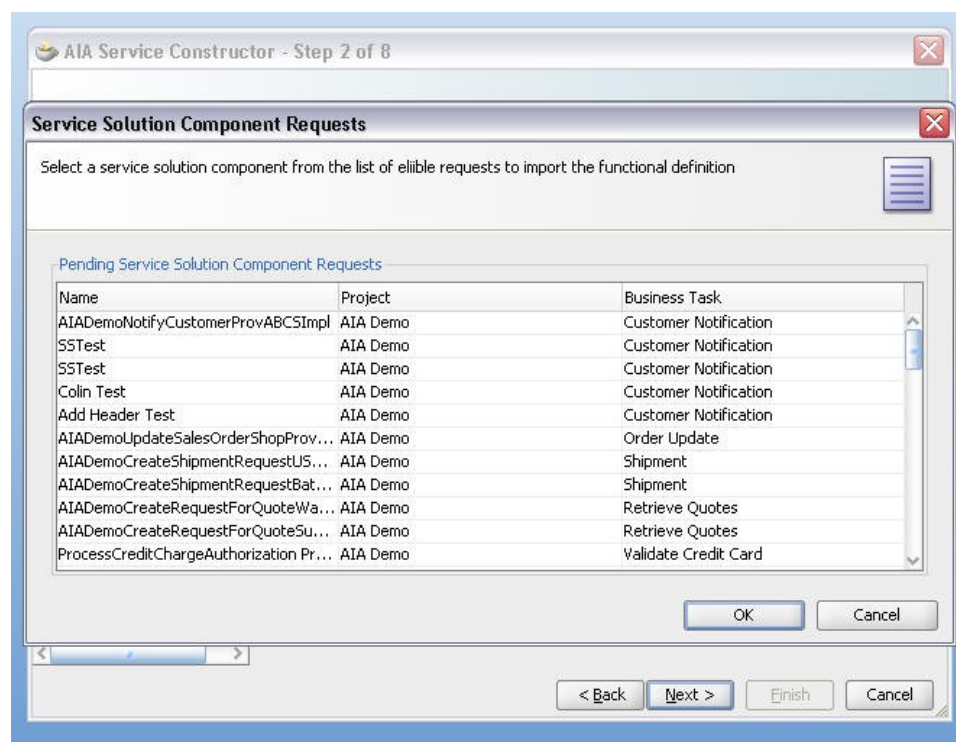
Service Constructor upgrades the formerly provided Artifact Generator 2.X to produce prebuilt ABCS projects as 11g SCA-compliant composites. Service Constructor is delivered as an extension to Oracle JDeveloper, providing a friendlier user interface (UI) that guides developers through the service definition process.

Primary features of Service Constructor include:

- **Collaboration:** Connects to the Project Lifecycle Workbench and directly imports Service Solution Component requests.
- **Smart Definitions:** Inspects EBSs and target services to learn and automatically populate attributes describing EBMs and Application Business Messages (ABMs), when possible.
- **Template-based generation:** Applies AIA best practices and programming models to create uniform ABCS projects as a strong foundation for developers.
- **Annotations:** Includes annotations, linking the project to both the Service Solution Component requested by the Solution Architect in the Project Lifecycle Workbench and the templates for annotations that will be further completed by the developer.

Collaboration: Project Lifecycle Workbench

Service Constructor connects to Project Lifecycle Workbench and imports Service Solution Component requests. This eliminates duplicate entry of details describing the component and associates the development of the component with the project and functional decomposition, promoting collaboration.



Display of Eligible Service Solution Component Requests

Smart Definitions: Service Inspection

In many scenarios, the developer can point Service Constructor to the WSDLs of services that will interact with the ABCS being created and Service Constructor will inspect it to autopopulate attributes of the message description. In the case of a provider ABCS, the service interface can be quickly defined by providing the corresponding EBS WSDL and operation.

Template-Based Generation: Built-In Architectural Guidance

Continuing the features provided by the Artifact Generator 2.X, best practices and programming model constructs are represented in a template-based engine to create new ABCS projects with a solid foundation. Naming, error handling, Composite Application Validation System (CAVS), and dynamic extension invocation standards are built into the projects that are generated at the conclusion of the service definition interview.

Annotations: Describing the Service Solution Component

Projects generated by Service Constructor contain annotations under two classifications. If the project is created following the AIA lifecycle methodology, a unique identifier is included so that the AIA Harvester can properly associate it to the project. There are additional required annotations that are put in place for the developer to continue describing the component for the AIA Harvester.

Installation and Deployment

The AIA Installer delivers all Oracle-delivered AIA content to the server on which the installation is performed and continues to deploy Foundation Pack and, optionally, other integration content to servers specified during the installation.

Foundation Pack is deployed on an Oracle WebLogic Server where Oracle SOA Suite is deployed and running. Once the installation and deployment of Foundation Pack is complete, all AIA content is made available, namely:

- Standard business data object and service definitions: EBSs, EBOs, and EBM.
- Infrastructure components and utilities, which include Project Lifecycle Workbench, the Error Handling Framework, CAVS, and so forth.
- Reference Process Models
- Development and deployment tools and utilities.

Installation can be performed in different ways using several AIA Installer-based options and manual deployment options.

AIA Installer is a wizard-driven, platform-independent installer that gathers user input on what to install and where to deploy. In this release, AIA offers multiple modes of installation and deployment, namely:

- **Basic Installation and Deployment mode:** Basic, single-server installation of AIA.
- **Cluster Deployment mode:** Deploys AIA directly on an existing SOA Suite Cluster to derive high-availability, effective workload distribution, increased throughput and performance, and so forth.

- **Remote Deployment mode:** Deploys AIA to a SOA server other than the one from which the installation was launched.
- **Silent Installation and Deployment mode:** Bypasses the UI of the AIA Installer and provides the necessary input for the AIA Installer using a response file.
- **Files Only Installation mode:** Delivers all AIA artifacts to the directories of the physical server.

AIA content can also be used to deploy custom content, as AIA exposes all the required toolkits to do so.

Using Project Lifecycle Workbench, users can create and manage AIA projects and their deliverables. A bill of materials and subsequently a deployment plan can be generated for content chosen from the AIA project using AIA-delivered deployment tools. This deployment plan can be deployed to any target server using the same tools used by the wizard-based AIA Installer. This way, deployment of custom content is also an automated process, thereby letting users stay focused on what to deploy and not on how to deploy.

In addition to these modes, AIA Installer provides additional flexibilities during installation, primarily with respect to AIA instance and AIA database selection.

In this release, AIA supports multiple deployments of AIA on the same physical server, provided that they are installed on SOA servers on different WebLogic domains. Each of these deployments has Foundation Pack deployed and is called an AIA Instance. Multiple AIA Instances belonging to the same physical AIA installation (AIA HOME) can be located either on the same physical server or on different physical WebLogic servers.

This opens up a variety of deployment topologies, for example having two or more developer instances on the same physical server to optimize hardware and spreading out functional integration pieces belonging to the same AIA installation across different servers.

This also allows the spawning of multiple environments while performing continuous code integration in a single AIA Home. This facilitates environment migration to a large extent.

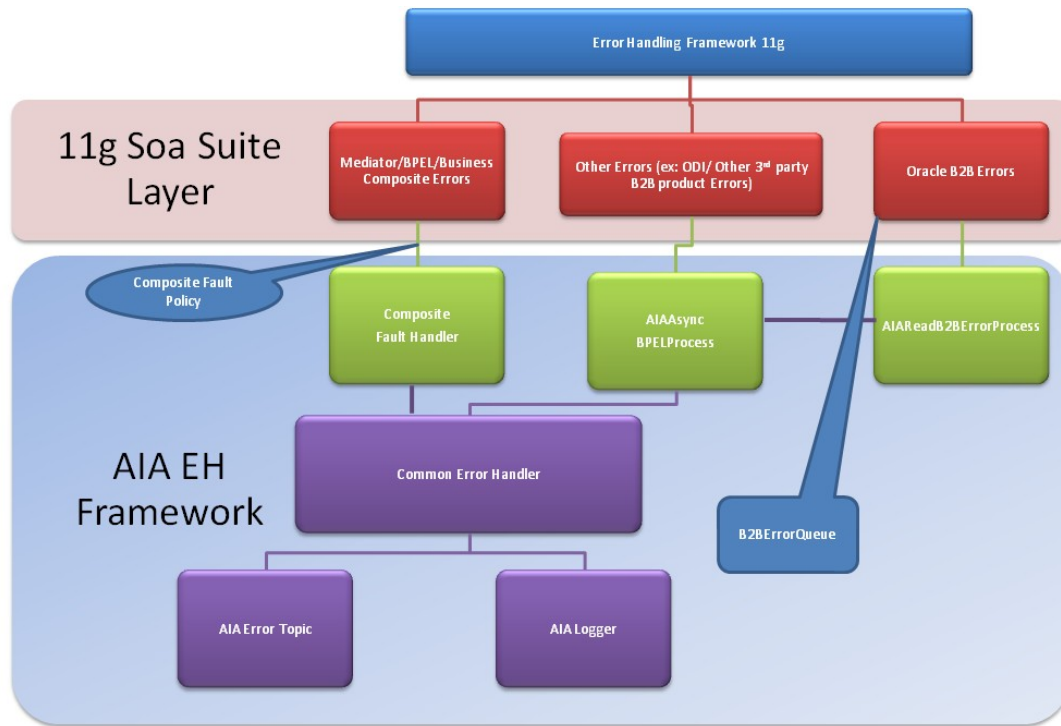
AIA Installer also provides flexibility when configuring each AIA-related database schema, including XREF, AIALIFECYCLE, JMS, and so forth. Using the AIA Installer, each schema can be configured in a manner such that the same physical database server for all AIA schemas, or each schema, can be configured on a different database server. The installation can also connect to an existing database schema made available through a previous AIA installation or by using exposed AIA database scripts. In addition, AIA schema configuration against a Real Application Clusters (RAC) database is supported out-of-the-box.

AIA installation leverages MDS to store shared information, such as the Enterprise Object Library, cross reference metadata, domain value maps, and so forth, thereby centralizing information and reducing the redundancy and inconsistency that would have been created by the proliferation of this information across multiple servers.

AIA Installer offers an improved UI, as well as an improved installation engine to provide a better overall installation experience. Help screens are available for each installation screen and the AIA Installer also provides the flexibility to resume or retry installation attempts.

Error Handling and Logging

The Foundation Pack Error Handling Framework provides customers with a prebuilt solution for managing errors across the integration layer. It provides a consistent error handling approach that enables integration components, including participating applications, to contribute to an end-to-end error resolution.



Error Handling Framework overview

The primary features of the Error Handling Framework include:

- A consistent approach to handling errors across integration patterns and implementation technologies.
- Preference-based notifications that serve as auto-alerts each time an error occurs.
- UI to define error scenario classifications. The UI also includes a mechanism for mapping roles to these error scenarios so that appropriate roles are notified based on defined classifications.
- Error and trace logging defined by different levels.
- Pluggable and extensible framework that allows customers to hook up custom behavior at various points within the Error Handling Framework.

As part of AIA Foundation Pack 11gR1 (11.1.1.2.0), the Error Handling Framework delivers the following features and enhancements:

- Uptake of Oracle Fusion Middleware 11g, including B2B Server.
- Decoupling of error notifications from human workflow.
- Customization of error notifications.
- Error notification throttling.

Uptake of Oracle Fusion Middleware 11g Including B2B Server

The Error Handling Framework leverages all capabilities of the Oracle Fusion Middleware 11g stack including the unified error hospital, the uptake of the Fault Policy Framework across the entire Oracle SOA Suite, and so forth.

In addition, the Error Handling Framework also includes the uptake of the Oracle B2B Server 11g. By establishing a JMS-based communication between Oracle B2B Server and the Error Handling Framework, even errors occurring in the B2B Server can be covered by the same unified error handling approach.

Decoupling Error Notifications from Human Workflow

With the Error Handling Framework, users have the choice of whether they want to receive emailed error notifications or leverage the Oracle BPM Worklist application to track issues, or both. The Error Handling Framework enables customers to use one or both approaches, depending on their requirements.

While one organization may want to leverage the Oracle BPM Worklist application with its features such as tracking, reassignment, and forth, others may want to only receive email notifications in the case of an error and use another issue tracking system.

An error notification sent by the Error Handler provides a link that takes users directly to the faulted instance in Oracle Enterprise Manager, where they can quickly understand and solve the root problem.

Flow Trace ⓘ
This page shows the flow of the message through various composite and component instances. ⓘ

ECID: 00001J1cjUyCSsQRyaYBT01AwTW60007Gz4
Started: Nov 4, 2009 3:58:53 PM

Faults (1)

Faults
Select a fault to locate it in the trace view.

Error Message	Recovery	Fault Time	Fault Location	Composite Instance
oracle.fabric.common.FabricInvocationException		Nov 4, 2009 3:58:54 PM	SamplesCreateCustomerSiebelReq...	SamplesCreateC...

Sensors (0)

Trace
Click a component instance to see its detailed audit trail.
Show Instance IDs: ☐

Instance	Type	State	Time	Composite Instance
SamplesCreateCustomerSiebelReqABCSImpl	Service	Faulted	Nov 4, 2009 3:58:53 PM	SamplesCreateCustom...
SamplesCreateCustomerSiebelReqABCSImplProcess	BPEL Component	Stale	Nov 4, 2009 3:58:54 PM	SamplesCreateCustom...
SamplesCustomerPartyEBS	Reference	Completed	Nov 4, 2009 3:58:53 PM	SamplesCreateCustom...
SamplesCustomerPartyEBS_ep	Service	Stale	Nov 4, 2009 3:58:53 PM	SamplesCustomerPart...
SamplesCustomerPartyEBS	Mediator Component	Stale	Nov 4, 2009 3:58:54 PM	SamplesCustomerPart...
SamplesCreateCustomerPartyPortalProvABCSImpl	Reference	Stale	Nov 4, 2009 3:58:53 PM	SamplesCustomerPart...
SamplesCreateCustomerPartyPortalProvABCSImpl	Service	Stale	Nov 4, 2009 3:58:53 PM	SamplesCreateCustom...
SamplesCreateCustomerPartyPortalProvABCSImplProcess	BPEL Component	Stale	Nov 4, 2009 3:58:54 PM	SamplesCreateCustom...
SamplesCreateCustomerPartyPortalProvider	Reference	Stale	Nov 4, 2009 3:58:53 PM	SamplesCreateCustom...

[Viewing faulted instance details in Oracle Enterprise Manager](#)

Customizable Error Notifications

The Error Handling Framework allows customization of message content that is included in the error notification. With this feature, customers can determine the structure and degree of detail that should be sent with every error notification. Through the use of XPath expressions, the entire fault payload can be accessed and used in the notification.

Error Notification Throttling

With the error notification throttling feature, customers can avoid sending multiple notifications in the case of an error that is causing many message instances to fail for the very same reason, for example, when a target system is unavailable.

Administrators can configure the error notification logic to send out only a single notification once the number of faulted messages has exceeded a defined threshold for a certain period of time.

The screenshot shows the 'Error Notification' configuration page in the Oracle AIA Setup application. The page has tabs for 'Error Notification', 'System', and 'Configuration'. Under 'Error Notification', there are input fields for 'Error Code', 'Process Name', 'Service Name', 'System Code', 'Role', 'FPI Role', 'Error Type', and 'Error Ext Handler'. Below these fields is a 'Search' button. A table below the search bar lists configured error notifications with columns: Error Code, Service Name, System Code, Process Name, Role, FPI Role, Error Type, Error Ext Handler, Appr Tot Count, Start DateTime, and End DateTime. Two entries are visible in the table.

Error Code	Service Name	System Code	Process Name	Role	FPI Role	Error Type	Error Ext Handler	Appr Tot Count	Start DateTime	End DateTime
	AIADemoProcessSa			AIIntegrationAdm	AIIntegrationAdm	AIADemo_ORDER	AIADemo.ERRORH	0	06-APR-2010 04:01:11	06-APR-2010 04:01:11
	AIADemoProcessCr			AIIntegrationAdm	AIIntegrationAdm	AIADemo_CREDIT	AIADemo.ERRORH	0	06-APR-2010 04:01:11	06-APR-2010 04:01:11

Error notification throttling count and time period setup

Enterprise Business Objects

Our EBOs provide you with a head start so you can focus on your business and leave the bulk of the semantic design of the application business objects to us.

New Enterprise Business Objects

In AIA Foundation Pack 11gR1 (11.1.1.2.0), the following EBOs were added:

Enterprise Business Object	Description
MarketingOffer	A MarketingOffer is a single proposition or message to a customer that provides an incentive to respond. MarketingOffer can be associated with a campaign or a promotion. As a campaign usually involves many promotions, a MarketingOffer is generally associated with a promotion. A MarketingOffer may be delivered through various channels, which are referred to as treatments, direct mail, outbound call, and so forth, for example. MarketingOffer is often used to sell products or services to prospects or existing customers. They can also be used for campaigns to retain customers or change habits, such as getting customers to change from paper-based to electronic statements.
BankGuarantee (BankingAndWealthManagement industry)	A bank guarantee, like a letter of credit, guarantees a sum of money to a beneficiary. Unlike a letter of credit, the sum is only paid if the opposing party does not fulfill the stipulated obligations under the contract. This can be used to essentially insure a buyer or seller from loss or damage due to non-performance by the other party in a contract.

Enterprise Business Object	Description
DepositAccount (BankingAndWealthManagement industry)	A deposit account is a checking/current account or savings account at a banking institution that allows money to be deposited and withdrawn by the account holder. In addition to checking and savings accounts, there are a number of deposit product types, such as fixed deposits, demand deposits, and time/term deposits. A Fixed Deposit account is an account in which funds are held for a term or in which withdrawals can be made only after giving notice or with loss of interest. The demand deposit is payable on demand. The time or term deposit is payable only after a fixed interval of time. This EBO contains attributes and components to support these product types of DepositAccount.
DocumentaryCollection (BankingAndWealthManagement industry)	International trade procedure in which a bank in the importer's country acts on behalf of an exporter for collecting and remitting payment for a shipment. The exporter presents the shipping and collection documents to his or her bank (in own country), which sends them to its correspondent bank in the importer's country. The foreign bank (called the presenting bank) hands over shipping and title documents (required for taking delivery of the shipment) to the importer in exchange for cash payment (in case of 'documents against payment' instructions) or a firm commitment to pay on a fixed date (in case of 'documents against acceptance' instructions). The banks involved in the transaction act only in a fiduciary capacity to collect the payment, but (unlike in documentary credit) make no guaranties. They are liable only for correctly carrying out the exporter's collection instructions and may, if so instructed, sue the non-paying or non-accepting importer on the exporter's behalf.
DocumentaryCredit (BankingAndWealthManagement industry)	A documentary credit is a written undertaking by the issuing bank, on behalf of the buyer (applicant/customer), promising to pay the seller (beneficiary) up to a stated sum of money, within a prescribed time limit and against stipulated documents, such as bill of lading, customs clearance document, and so forth.
FinancialTransaction (BankingAndWealthManagement industry)	A financial transaction is a change in the monetary position of two or more businesses or individuals. It may involve no financial accounts in the case of a foreign exchange transaction or may involve multiple financial accounts for cases such as a disbursement to beneficiary groups. Other transactions such as payments, deposits, withdrawals, transfers, and so forth are also recorded as financial transactions.
LineOfCredit (BankingAndWealthManagement industry)	The LineOfCredit EBO is intended to cater for one or a collection of lines of credit at a customer. It signifies the credit facility given to a customer.
LoanAccount (BankingAndWealthManagement industry)	A loan is a contractual promise where the institution provides a sum of money to a customer, who promises to return the

Enterprise Business Object	Description
	money to the institution over a fixed period in time. The LoanAccount EBO captures details of loans which are either secured or unsecured, for both retail and corporate customers. It does not include lines of credit or credit cards.
WealthManagementFinancialPlan (BankingAndWealthManagement industry)	<p>Wealth Management Financial Plan defines the plan of a customer or business for one or more specific accounts. The main purpose of financial planning is to achieve certain future goal by proper utilization of current and future financial resources. The financial planning can be done to fulfill short term, medium term and long term goal. Based on nature of the goal and risk preference of the customer, financial planner or wealth manager recommends investment option to the customer.</p> <p>For example, WealthManagementFinancialPlan EBO can be used by a wealth management system to send financial planning summary data to CRM application for further analysis. This EBO can also be used for transfer of financial plan proposal, financial plan goal and financial plan risk to the CRM application.</p>
AnnuityInsuranceApplication (Insurance industry)	An annuity insurance application is a request to an insurance company to provide an annuity contract that guarantees a stream of future payments in return for a premium or series of premiums. The AnnuityInsuranceApplication EBO covers the data elements that would be gathered by the insurer prior to issuing an annuity contract.
AnnuityInsurancePolicy (Insurance industry)	The AnnuityInsurancePolicy EBO represents the Annuity contract with the Insurance company which guarantees a stream of future payments in return for a premium or series of premiums.
InsuranceAgentParty (Insurance industry)	An Insurance Agent object contains specific information defining the properties of a party that is licensed and contracted to sell insurance. An insurance agent may be a person or an organization for example a producer, an agent, agency, broker, broker dealer, or distributor.
InsurancePlan (Insurance industry)	InsurancePlan contains key features and specifications required to describe a life and annuity insurance product including the allowable ages, minimum and maximum amounts of coverage, jurisdiction, premium classes, risk classes, additional coverage's, benefits and additional product features.
LifeInsuranceApplication (Insurance industry)	A Life insurance application provides the insurance company with specific information necessary to underwrite a given risk. The LifeInsuranceApplication EBO covers data elements that would be captured in the application and during the requirements and underwriting stages, until the policy is issued.

Enterprise Business Object	Description
LifeInsurancePolicy (Insurance industry)	The LifeInsurancePolicyEBO represents the contract between an insurance company and the policy owner or owners. It contains detailed information about the policy, for example, the policy's coverage's, insured's, and financial activity.

Updated Enterprise Business Objects

In AIA Foundation Pack 11gR1 (11.1.1.2.0), the following updates were made to EBOs:

Enterprise Business Object	Updates
AssignmentGrade	Changed the data type of AssignmentGradeStep.SequenceNumber from PositiveInteger to Numeric.
AssignmentGradeLadder	Changed the data type of AssignmentGradeLadderGrade.SequenceNumber from PositiveInteger to Numeric.
AssignmentGradeRate	Changed the data type of AssignmentGradeRateValue.SequenceNumber from PositiveInteger to Numeric.
BusinessUnit	Added the following to BusinessUnit: <ul style="list-style-type: none"> CustomerInteractionOriginationBusinessUnit Description AuditHistory
ChartOfAccounts	Changed the data type of GLElementValue.SequenceNumber from PositiveInteger to Numeric.
CustomerInteraction	Added the following to CustomerInteraction: <ul style="list-style-type: none"> FinancialAccountReference (BankingAndWealthManagement Industry) PriorityCode CustomerInteractionOriginationBusinessUnit
CustomerParty	Added the following to CustomerPartyCreditProfile: <ul style="list-style-type: none"> CreditScore RiskCategoryCode TotalUtilizedLineOfCreditAmount CustomerPartyLineOfCredit (BankingAndWealthManagement Industry) Added CustomerPartyFinancialServiceProfile to CustomerParty (BankingAndWealthManagement Industry)

Enterprise Business Object	Updates
	<p>Added CustomerPartyFinancialPortfolio to CustomerParty (BankingAndWealthManagement Industry).</p> <p>Added CustomerPartyFinancialAccount to CustomerParty</p> <p>Changed the following data types:</p> <ul style="list-style-type: none"> • RelatedCustomerParty.PriorityRanking from Integer to Numeric • RelatedCustomerPartyAccount.PriorityRanking from Integer to Numeric • RelatedCustomerPartyAccountContact.PriorityRanking from Integer to Numeric
ClinicalStudy	<p>Changed the following data types: (HealthSciences Industry)</p> <ul style="list-style-type: none"> • ClinicalStudy.PriorityRanking from NonNegativeInteger to Numeric • ClinicalStudySiteGroup.PlannedSubjectEnrollmentCount from NonNegativeInteger to Integer • ClinicalStudySiteGroup.SubjectStudyCompletionCount from NonNegativeInteger to Integer
DrugSafetyReport	<p>Changed the following data types: (HealthSciences Industry)</p> <ul style="list-style-type: none"> • DrugSafetyReport.PriorityRanking from PositiveInteger to Numeric • DrugSafetyReport.Name from Text to Name • DrugSafetyReportPastDrugTherapy.PriorityRanking from PositiveInteger to Numeric • DrugSafetyReport.CauseOfDeath from String to Text • DrugSafetyReportPrimarySource.PriorityRanking from PositiveInteger to Numeric • DrugSafetyReportReaction.PriorityRanking from PositiveInteger to Numeric • DrugSafetyReport.UOMCode from String to Code
FulfillmentOrder	<p>Changed the following data types:</p> <ul style="list-style-type: none"> • FulfillmentOrderLine.GrossWeightMeasure from Quantity to Measure • FulfillmentOrderSchedule.GrossWeightMeasure from Quantity to Measure
Invoice	<p>Added InsurancePolicyReference to InvoiceEBO (Insurance Industry).</p>
InstalledProduct	<p>Changed the following data types:</p>

Enterprise Business Object	Updates
	<ul style="list-style-type: none"> InstalledProduct.SerialNumber from String to Identifier InstalledProduct.AlternateTrackingNumber from String to Identifier RelatedInstalledProduct.SequenceNumber from PositiveInteger to Numeric InstalledProductMeterRegister.SequenceNumber from PositiveInteger to Numeric (Utilities Industry)
Item	Changed the data type of RelatedItem.PriorityRanking from PositiveInteger to Numeric.
MeterReading	Changed the following data types: (Utilities Industry) <ul style="list-style-type: none"> MeterReading.HighLimitMeasure from Quantity to Measure MeterReading.LowLimitMeasure from Quantity to Measure
Person	Changed the data type of PersonName.DisplayName from String to Name.
PriceList	Changed the following data types: <ul style="list-style-type: none"> PriceListDailyRateDataRestriction.Name from Text to Name PriceListWeeklyRateDataRestriction.Name from Text to Name
ProvisioningOrder	Changed the following data types: <ul style="list-style-type: none"> ProvisioningOrderLine.GrossWeightMeasure from Quantity to Measure ProvisioningOrderSchedule.GrossWeightMeasure from Quantity to Measure
SalesOpportunity	Added BusinessUnitReference and ParentBusinessUnitReference to SalesOpportunitySource.
SalesOrder	Changed the following data types: <ul style="list-style-type: none"> SalesOrderLine.GrossWeightMeasure from Quantity to Measure SalesOrderSchedule.GrossWeightMeasure from Quantity to Measure
SalesQuote	Changed the data type of SalesQuote.Name from Text to Name.
ServiceRequest	Added ServiceRequestOriginationBusinessUnit to ServiceRequest.
ServiceUsage	Changed the data type of ServiceUsage.Multiplier from Integer

Enterprise Business Object	Updates
	to Numeric. (Utilities Industry)
Specification	Changed the data type of Specification.DefaultValue from String to Text.
SupplierParty	Added the following to SupplierParty: <ul style="list-style-type: none"> SupplierPartyFinancialAccount Added the following to SupplierPartyTradingLocationProfile: <ul style="list-style-type: none"> PaymentMethodCode PaymentFormatCode
TalentProfile	Changed the data type of TalentProfileTypeSection.DisplaySequenceNumberID from Integer to Identifier.
TimeSheet	Changed the data type of TimeSheet.Name from Text to Name.
TransportationSalesOrder	Changed the following data types: <ul style="list-style-type: none"> TransportationSalesOrderLine.GrossWeightMeasure from Quantity to Measure TransportationSalesOrderSchedule.GrossWeightMeasure from Quantity to Measure

Updated Common Components

In AIA Foundation Pack 11gR1 (11.1.1.2.0) the following updates were made to common components:

Common Component Name	Update
Beneficiary	Added new common component to Core and Industry of BeneficiaryType which contains, TypeCode, SplitPercent, BeneficiaryPersonParty and BeneficiaryOrganizationParty.
BeneficiaryOrganizationParty	Added new common component to Core and Industry of BeneficiaryOrganizationPartyType which contains OrganizationPartyReference.
BeneficiaryPersonParty	Added new common component to Core and Industry of BeneficiaryPersonPartyType which contains PersonPartyReference.
Contact	Added elements PreferredCommunicationChannelCode, BirthDateTime. And ContactTelexCommunication to Core and Industry.
ContactEmailCommunication	Added the attribute PreferredMediaFormatCode to Core and Industry.
ContactPhoneCommunication	Added the attribute PreferredMediaFormatCode to Core and Industry.

Common Component Name	Update
ContactTelexCommunication	Added new common component to Core and Industry of ContactTelexCommunicationType which contains, Identification, PreferredMediaFormatCode and Status.
CreditAnalystContact	Added new common component to Core and Industry of CreditAnalystContactType which contains PreferredCommunicationChannelCode, BirthDateTime. And ContactTelexCommunication.
CustomerPartyAccountContactAddressCommunication	Added elements PreferredMediaTypeCode and PreferredMediaFormatCode to Core and Industry.
Dependent	Added new common component to Core and Industry of Dependent Type which contains DependentPersonParty.
DependentPersonParty	Added new common component to Core and Industry of DependentPersonPartyType which contains PersonPartyReference.
DesignatedAgentContact	Added elements PreferredCommunicationChannelCode, BirthDateTime and ContactTelexCommunication to Core and Industry.
DestinationFinancialAccount	Added elements AccountNumber, Name, TypeCode, JointHoldingIndicator, JointOperationTypeCode, CurrencyCode, Description, FinancialAccountIdentification, FinancialInstitutionReference and FinancialAccountHolder to Core and Industry.
EmployedIndicator	Added new common component to Core and Industry of IndicatorType.
EmploymentRecord	Added elements PositionTypeCode and EmploymentDuration to Core and Industry.
FinancialAccountBalance	Added common component to Core and Industry of FinancialAccountBalanceType, which contains TypeCode, Amount, and BalanceDateTime as attributes.
FinancialAccount	Added elements JointHoldingIndicator, JointOperationTypeCode. FinancialAccountIdentification and FinancialAccountHolder to Core and Industry.
FinancialAccountHolder	Added elements Description, OwnershipPercent, Identification, FinancialAccountPersonHolder and FinancialAccountOrganizationHolder to Core and Industry.
FinancialAccountIdentification	Added new common component to Core and Industry of FinancialAccountIdentificationType, which contains Identification and IBANNumberID.
FinancialAccountOrganizationHolder	Added new common component to Core and Industry of FinancialAccountOrganizationHolderType, which contains OrganizationPartyReference.
FinancialAccountPersonHolder	Added new common component to Core and Industry of

Common Component Name	Update
	FinancialAccountPersonHolderType, which contains PersonPartyReference.
IncorporationCountryCode	Added new common component to Core and Industry of CodeType.
IncorporationDate	Added new common component to Core and Industry of DateType.
IncorporationLocation	Added new common component to Core and Industry of TextType.
IncorporationYear	Added new common component to Core and Industry of YearType.
MarketingOfferIdentification	Added new common component to Core and Industry of IdentificationType.
MarketingOfferTreatmentIdentification	Added new common component to Core and Industry of IdentificationType.
MarketingTreatmentIdentification	Added new common component to Core and Industry of IdentificationType.
MinorIndicator	Added new common component to Core and Industry of IndicatorType.
Organization	Added elements ShortName, Salutation, IncorporationDate, IncorporationYear, IncorporationLocation, and IncorporationCountryCode to Core and Industry.
Owner	Added elements OwnershipTypeCode, OwnerPersonParty, and OwnerOrganizationParty to Core and Industry.
OwnerPersonParty	Added new common component to Core and Industry of OwnerPersonPartyType, which contains PersonPartyReference.
OwnerOrganizationParty	Added new common component to Core and Industry of OwnerOrganizationPartyType, which contains OrganizationPartyReference.
Party	Added element PartyRelatedParty to Core and Industry.
PartyRelationship	Added elements Identification and Preference to Core and Industry.
PartyRelatedHouseholdParty	Added new common component to Core and Industry of PartyRelatedHouseholdPartyType, which contains HouseholdPartyReference.
PartyRelatedOrganizationParty	Added new common component to Core and Industry of PartyRelatedOrganizationPartyType, which contains OrganizationPartyReference.
PartyRelatedParty	Added new common component to Core and Industry of

Common Component Name	Update
	PartyRelatedPartyType, which contains Identification, PartyRelationship, PartyRelatedPersonParty, PartyRelatedOrganizationParty, and PartyRelatedHouseholdParty.
PartyRelatedPersonParty	Added new common component to Core and Industry of PartyRelatedPersonPartyType, which contains PersonPartyReference.
Payer	Added new common component to Core and Industry of PayerType, which contains PayerPersonParty and PayerOrganizationParty.
PayerOrganizationParty	Added new common component to Core and Industry of PayerOrganizationPartyType, which contains OrganizationPartyReference.
PayerPersonParty	Added new common component to Core and Industry of PayerPersonPartyType, which contains PersonPartyReference.
Person	Added elements EmployedIndicator, TotalDependentCount and MinorIndicator to Core and Industry.
PersonAffiliation	Added element PriorityRanking to Core and Industry.
PositionTypeCode	Added new common component to Core and Industry of CodeType.
PrimaryContact	Added elements PreferredCommunicationChannelCode, BirthDateTime and ContactTelexCommunication to Core and Industry.
RequesterContact	Added elements PreferredCommunicationChannelCode, BirthDateTime and ContactTelexCommunication to Core and Industry.
SalesContact	Added elements PreferredCommunicationChannelCode, BirthDateTime and ContactTelexCommunication to Core and Industry.
Salutation	Added new common component to Core and Industry of TextType.
ServiceContractCoverageTemplatelIdentification	Added new common component to Core and Industry of IdentificationType.
ServiceContractSubscriptionTemplatelIdentification	Added new common component to Core and Industry of IdentificationType.
ShortName	Added new common component to Core and Industry of NameType.
SignatureNote	Added new common component to Core and Industry of NoteType.

Common Component Name	Update
SourceFinancialAccount	Added new common component to Core and Industry of SourceFinancialAccountType, which contains AccountNumber, Name, TypeCode, JointHoldingIndicator, JointOperationTypeCode, CurrencyCode, DescriptionFinancialAccountIdentification, FinancialInstitutionReference, and FinancialAccountHolder.
TotalDependentCount	Added new common component to Core and Industry of NonNegativeIntegerType.
Collateral	Added new common component to BankingAndWealthManagement industry of CollateralType, which contains CollateralID, TypeCode, and Amount attributes.
Contact	Extended Core Contact common component in BankingAndWealthManagement industry by adding ContactTelexCommunication and ContactSWIFTCommunication under Contact.
ContactTelexCommunication	Added new common component to BankingAndWealthManagement industry.
ContactSWIFTCommunication	Added new common component to BankingAndWealthManagement industry.
DocumentaryCollectionIdentification	Added new common component to BankingAndWealthManagement industry.
DocumentaryCreditIdentification	Added new common component to BankingAndWealthManagement industry.
FinancialAccount	Extended Core FinancialAccount common component in BankingAndWealthManagement industry by adding FinancialAccountFinancialInstitutionBranchBusinessUnit, ItemReference and Status under FinancialAccount.
FinancialAccountFinancialInstitutionBranchBusinessUnit	Added new common component to BankingAndWealthManagement industry.
FinancialAccountHolder	Extended Core FinancialAccountHolder common component in BankingAndWealthManagement industry by adding SignatureID, SignatureNote, Status, EffectiveTimePeriod, FinancialAccountSigningAuthority, and so forth under FinancialAccount.
FinancialAccountFinancialInstitutionBranchBusinessUnitLocation	Added new common component to BankingAndWealthManagement industry.
FinancialAccountSigningAuthority	Added new common component to BankingAndWealthManagement industry of FinancialAccountSigningAuthorityType, which contains TypeCode, LimitAmount, Status, and EffectiveTimePeriod attributes.
FinancialGoal	Added new common component to

Common Component Name	Update
	BankingAndWealthManagement industry of FinancialGoalType which contains TypeCode, PlannedFinancedIndicator, Amount, TimePeriod, and other attributes.
FinancialPortfolio	Added new common component to BankingAndWealthManagement industry of FinancialPortfolioType, which contains TypeCode, JointOperationTypeCode, FinancialPortfolioInvestmentModel, actioncode, and other attributes.
FinancialPortfolioInvestmentModel	Added new common component to BankingAndWealthManagement industry of FinancialPortfolioInvestmentModelType, which contains EffectiveTimePeriod and InvestmentPortfolioModelReference.
FinancialPortfolioRelatedOrganizationParty	Added new common component to BankingAndWealthManagement industry.
FinancialPortfolioRelatedParty	Added new common component to BankingAndWealthManagement industry of FinancialPortfolioRelatedPartyType, which contains FinancialPortfolioRelatedPartyRole and a choice between FinancialPortfolioRelatedPersonParty and FinancialPortfolioRelatedOrganizationParty.
FinancialPortfolioRelatedPartyRole	Added new common component to BankingAndWealthManagement industry.
FinancialPortfolioRelatedPersonParty	Added new common component to BankingAndWealthManagement industry.
FinancialTransactionIdentification	Added new common component to BankingAndWealthManagement industry.
FinancialTransactionSchedule	Added new common component to BankingAndWealthManagement industry of FinancialTransactionScheduleType, which contains multiple FinancialTransactionScheduleLine.
InterestSchedule	Added new common component to BankingAndWealthManagement industry of InterestScheduleType, which contains InterestRate, EffectiveTimePeriod, OutstandingInterestAmount, and so forth.
InvestmentPortfolioModelIdentification	Added new common component to BankingAndWealthManagement industry.
InvestmentRestriction	Added new common component to BankingAndWealthManagement industry of InvestmentRestrictionType, which contains InstructionTypeCode, PortfolioTypeCode, Effectivity, and so forth.
LineOfCreditIdentification	Added new common component to BankingAndWealthManagement industry.

Common Component Name	Update
LoanAccountComponentIdentification	Added new common component to BankingAndWealthManagement industry.
UsanceTimePeriod	Added new common component to BankingAndWealthManagement industry
InsuranceApplication	Added new common component to Insurance industry of InsuranceApplicationType, which contains Supplementalinquiry, Beneficiary, and Authorization.
InsuranceApplicationAuthorization	Added new common component to Insurance industry of type InsuranceApplicationAuthorizationType, which contains Name and Jurisdiction Code.
InsuranceApplicationBeneficiary	Added new common component to Insurance industry of InsuranceApplicationBeneficiaryType, which contains Beneficiary information.
InsuranceApplicationRelatedParty	Added new common component to Insurance industry of type InsuranceApplicationRelatedPartyType, which contains InsuranceApplicationPersonParty and InsuranceApplicationOrganizationParty.
InsuranceApplicationRelatedPartyRoleRelationship	Added new common component to Insurance industry of type InsuranceApplicationRelatedPartyRoleRelationshipType, which contains InsuranceApplicationRelatedPartyRoleIdentification.
InsuranceApplicationSignatory	Added new common component to Insurance industry of type InsuranceApplicationSignatoryType that contains RoleCode, identification and signed date.
InsuranceApplicationSupplementalInquiry	Added new common component to Insurance industry of type InsuranceApplicationSupplementalInquiryType, which contains Name, supplemental inquiry item, carrier Id.
InsuranceApplicationSupplementalInquiryItem	Added new common component to Insurance industry of type InsuranceApplicationSupplementalInquiryItemType, which contains identification, question number, question text, and response.
InsurancePolicy	Added new common component to Insurance industry of type InsurancePolicyType, which contains identification, payment related attributes, billing attributes, Status and effective time period
InsurancePolicyBeneficiary	Added new common component to Insurance industry of type InsurancePolicyBeneficiary that contains identification and beneficiary details.
InsurancePolicyPremiumAllocation	Added new common component to Insurance industry of type InsurancePolicyPremiumAllocationType, which contains Identification, Allocation percent, and allocation amount.
InsurancePolicyInvestmentSubAccount	Added new common component to Insurance industry of type InsurancePolicyInvestmentSubAccountType that contains

Common Component Name	Update
	Identification, Holding percent and amount, and ItemReference among others.
InsurancePolicyArrangement	Added new common component to Insurance industry of type InsurancePolicyArrangementType, which contains Transaction details, paymentmethod and arrangement source, and destination information.
InsurancePolicyArrangementDestination	Added new common component to Insurance industry of type InsurancePolicyArrangementDestinationType that contains Identification, Transfer attributes, and Bank details.
InsurancePolicyArrangementSource	Added new common component to Insurance industry of type InsurancePolicyArrangementSourceType, which contains transfer type information and bank details. Changed the reference element name from Payor to Payer.
InsurancePolicyRelatedParty	Added new common component to Insurance industry of type InsurancePolicyRelatedPartyType, which contains InsurancePolicyPersonParty and InsurancePolicyOrganizationParty.
InsurancePolicyRelatedPartyRoleRelationship	Added new common component to Insurance industry of type InsurancePolicyRelatedPartyRoleRelationshipType, which contains InsurancePolicyRelatedPartyRoleIdentification.
InsurancePlanIdentification	Added new Identification component to Insurance industry.
InsurancePolicyIdentificationType	Added new Identification component to Insurance industry.
InsurancePolicyInvestmentSubAccountIdentification	Added new Identification component to Insurance industry.
InsuranceRejectionReason	Added new common component to Insurance industry of type ReasonType.
SpecialTermsPolicyReason	Added new common component to Insurance industry of type ReasonType.

New Reference Components

In AIA Foundation Pack 11gR1 (11.1.1.2.0), the following reference components were created:

- AffiliatedInsuranceAgentPartyReference (Insurance industry)
- InsurancePolicySubAccountReference (Insurance industry)
- AnnuityPolicyReference (Insurance industry)
- InsuranceAgentPartyReference (Insurance industry)
- LifeInsurancePolicyReference (Insurance industry)
- InsurancePlanReference (Insurance industry)
- DocumentaryCollectionReference (BankingAndWealthManagement industry)

- DocumentaryCreditReference (BankingAndWealthManagement industry)
- RelatedDocumentaryCreditReference (BankingAndWealthManagement industry)
- FinancialInstitutionBranchBusinessUnitReference (BankingAndWealthManagement industry)
- FinancialTransactionReference (BankingAndWealthManagement industry)
- InvestmentPortfolioModelReference (BankingAndWealthManagement industry)
- LineOfCreditReference (BankingAndWealthManagement industry)
- ParentLineOfCreditReference (BankingAndWealthManagement industry)

Oracle AIA Foundation Pack Extension for Banking and Wealth Management

The Oracle AIA Foundation Pack Extension for Banking and Wealth Management provides an integration toolkit that provides users with a comprehensive 360-degree customer view by increasing the effectiveness of their customer relationship management and core processing systems. The Foundation Pack uses a best-practice, documented methodology that can jumpstart the transition to a service-oriented architecture.

It enables integration of front-office applications with core processing systems and third-party applications using a standards-based integration solution. The Foundation Pack includes level 1 and 2 business processes. It also includes EBO and EBS components, including a repository of web services, to build integrations between Oracle, third party, and internally developed applications.

Customers can use the Oracle AIA Foundation Pack Extension for Banking and Wealth Management to build integrations that maximize IT effectiveness and de-risk future investments.

New Enterprise Business Objects

Oracle AIA Foundation Pack Extension for Banking and Wealth Management includes the following new EBOs.

For more information, see [Enterprise Business Objects](#).

Bank Guarantee

A bank guarantee guarantees a sum of money to a beneficiary. The sum is only paid if the opposing party does not fulfill the stipulated obligations under the contract. Bank guarantees insure a buyer or seller from loss or damage due to non-performance by the other party in a contract.

The Bank Guarantee is a new EBO that contains basic details at root level with attributes such as description, type code, currency, and contract amount.

The bank guarantee EBO includes approximately 25 attributes for managing bank guarantees.

Deposit Account

A deposit account is a checking/current or savings account at a banking institution that allows money to be deposited and withdrawn by the account holder. Deposit accounts can differ by product type such as fixed, demand, or term deposits.

This EBO contains attributes and components to support these product types of deposit accounts.

Documentary Credit

A documentary credit is a written undertaking by the issuing bank on behalf of the buyer, promising to pay the seller a stated sum of money within a prescribed time limit and against stipulated documents.

Examples of documentary credits are bills of lading and customs clearance documents.

This documentary credit EBO is a new EBO that contains approximately 70 attributes that maintain details about documentary credits including descriptions, amounts, time limits, and other information necessary to maintain and audit documentary credits.

Documentary Collection

A documentary collection is a process by which a bank in the importer's country (also known as the presenting bank) acts on behalf of an exporter to collect and remit payment for a shipment.

The exporter presents the shipping and collection documents to a bank in the originating country, which sends them to the presenting bank in the importer's country. The presenting bank provides shipping and title documents to take delivery of the shipment to the importer in exchange for payment or a commitment to pay on a fixed date.

The banks involved in the transaction have a fiduciary duty to collect the payment, but do not issue guaranties. They are liable for carrying out the exporter's collection instructions and may, if instructed, sue the non-paying or non-accepting importer on the exporter's behalf.

This EBO contains approximately 60 attributes for tracking documentary collections, such as information to identify, effective date, categorize, and store information about the documentary collection details.

Financial Transaction

A financial transaction is an event that records a change in the status of the finances of two or more businesses or individuals, such as tracking account balance increases and decreases.

The financial transaction contains approximately 30 attributes.

Line of Credit

A line of credit is a loan facility that can be activated by the customer at any time. Interest is only paid on the funds actually drawn down.

The line of credit EBO contains approximately 30 attributes that can be used to capture lines of credit by customer or account.

Loan Account

A loan is a contractual promise where the institution provides a sum of money to a customer who promises to return the money to the institution over a fixed period in time. The Loan Account EBO captures details of secured and unsecured loans for both retail and corporate customers.

This EBO contains approximately 50 attributes to support loan management.

Marketing Offer

A marketing offer is a proposition or message to sell products or services to prospects or existing customers, or to change customer behaviors or habits. A marketing offer may be delivered through different channels such as direct mail, outbound calls, or teller interactions.

The marketing offer EBO contains approximately 40 attributes that can be used to store information such as the description, effective dates, products, and identity of marketing offers.

Wealth Management Financial Plan

The purpose of financial planning is to obtain a future goal by proper utilization of current and future financial resources. Based on the nature of the goal and risk preference of the customer, a financial planner or wealth manager recommends investment options to the customer.

A wealth management financial plan defines the plan of a customer or contact to achieve one or more financial goals in a certain time period.

The wealth financial management plan EBO includes attributes for capturing goals, risks, assets, liabilities, inflows, and outflows.

The wealth management financial plan EBO can be used to integrate financial planning information between applications such as to transfer financial plan proposal, goal, and risk information between applications.

Enhancements to Existing EBOs

Oracle AIA Foundation Pack Extension for Banking and Wealth Management includes the following enhancements to existing EBOs.

For more information, see [Enterprise Business Objects](#).

Business Unit

A business unit is a part of an enterprise. It describes a collection of resources that complete one or more organization functions. A business unit can be classified using managerial and legal hierarchies.

This is an existing EBO that has been enriched to hold descriptive and audit history attributes.

Customer Interaction

A customer interaction describes communication between the customer and the organization. The communication may be through a number of different channels, such as face-to-face, phone, email, or web collaborations.

The customer interaction EBO provides a historical view of the communications that have taken place.

This is an existing EBO that has been enriched to hold information about the originating business unit from the communication, the ability to hold prioritization information, and cross-reference to financial accounts.

Customer Party

A customer party is an individual or company with whom the bank has sold or intends to sell products or services.

This is an existing EBO that has been enriched to support bank account, financial portfolio, and house holding information.

Sales Opportunity

A sales opportunity is a potential revenue-generating event that can be forecast.

Organizations may use sales opportunities to track leads that are qualified where there is a probability of closing a sale.

This is an existing EBO that has been enriched to include references to business unit and parent business unit, which can be used to hold information to indicate the originating branch of the sales opportunity.

Service Request

A service request contains details about a request for a service that a customer makes to a service provider, typically under the coverage of a preexisting service contract or a service-level agreement.

The service request EBO can be used, for example, to expose CRM customer service histories, including complaints, to the core processing systems.

Worker

A worker is a person acting on behalf of an enterprise, typically distinct from a customer or vendor. Worker is defined by each organization. For example, it could be an employee, contingent employee, pensioner, or a different role.

The worker EBO is enhanced to include additional attributes for identifying employees, their status, and audit information, such as their last log-in details.

Business-to-Business Integration

Business-to-business (B2B) integrations require the ability to exchange business information with trading partners using a variety of B2B document protocols. Customers expect the following key features from a B2B solution:

- Prebuilt support for popular B2B document protocols.
- Unified SOA-based integration architecture and infrastructure with seamless integration between internal application-to-application (A2A) and external B2B processes.
- An integration architecture that enables them to rapidly build support for new B2B document protocols and customize shipped B2B integration artifacts to meet trading partner-specific requirements.

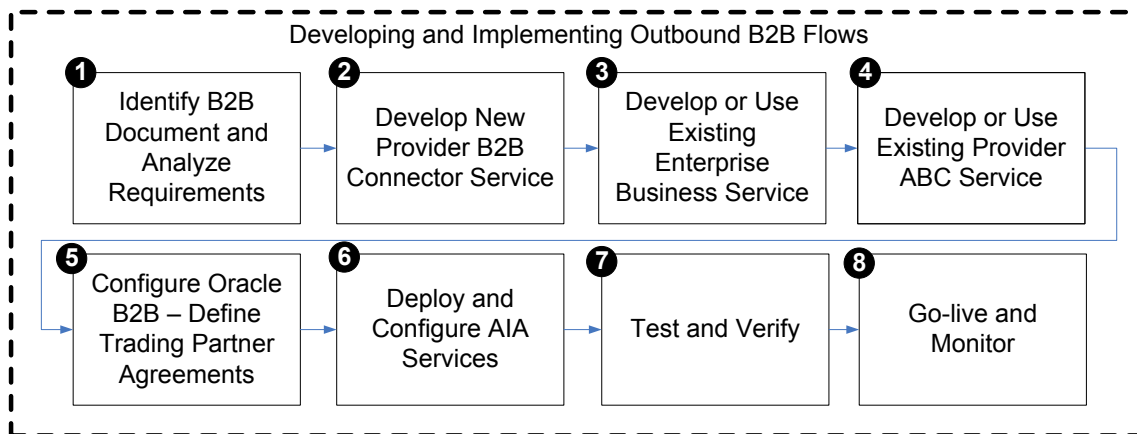
AIA Foundation Pack 11gR1 (11.1.1.2.0) addresses these key B2B requirements. The B2B features being delivered in AIA Foundation Pack 11gR1 (11.1.1.2.0) are discussed below.

Programming Model

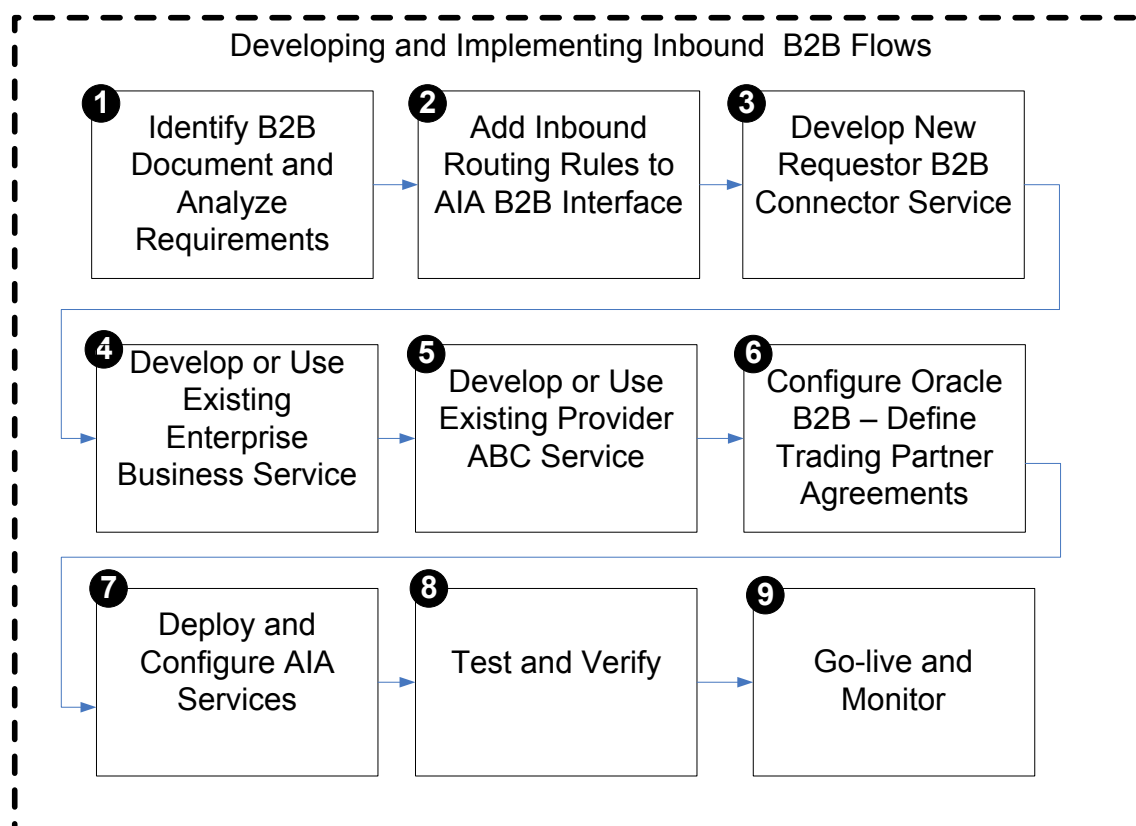
The programming model used to develop B2B integrations using AIA is included in the *Oracle Application Integration Architecture Foundation Pack: Development Guide*. This B2B programming model covers usage of AIA to develop inbound and outbound B2B integration flows using a newly introduced AIA integration concept – B2B Connector Services (B2BCSs).

The B2BCS is similar to the ABCS and provides integration between the AIA canonical EBO and EBS layer and B2B document formats. The programming model highlights reuse of integration artifacts in A2A and B2B use cases and addresses key B2B considerations such as trading partner-specific document variations.

The B2B programming model fully leverages the functionality offered by the Oracle B2B component in Oracle Fusion Middleware to meet end-to-end B2B integration needs.



High-level steps to develop and implement a simple outbound B2B flow



High-level steps to develop and implement a simple inbound B2B flow

Infrastructure

Along with programming model support in the AIA architecture, the following infrastructure components have been developed to support AIA B2B integrations.

AIAB2BInterface

The AIAB2BInterface is a reusable utility service shipped with the Foundation Pack that interfaces B2BCSs with the Oracle B2B component of Oracle Fusion Middleware. The AIAB2BInterface can be invoked by requester B2BCSs to send B2B documents to trading partners using Oracle B2B. Similarly, inbound B2B documents received by Oracle B2B are automatically de-queued by the AIAB2BInterface and routed to the correct requester B2BCS that can process the inbound B2B document.

B2B Error Handling

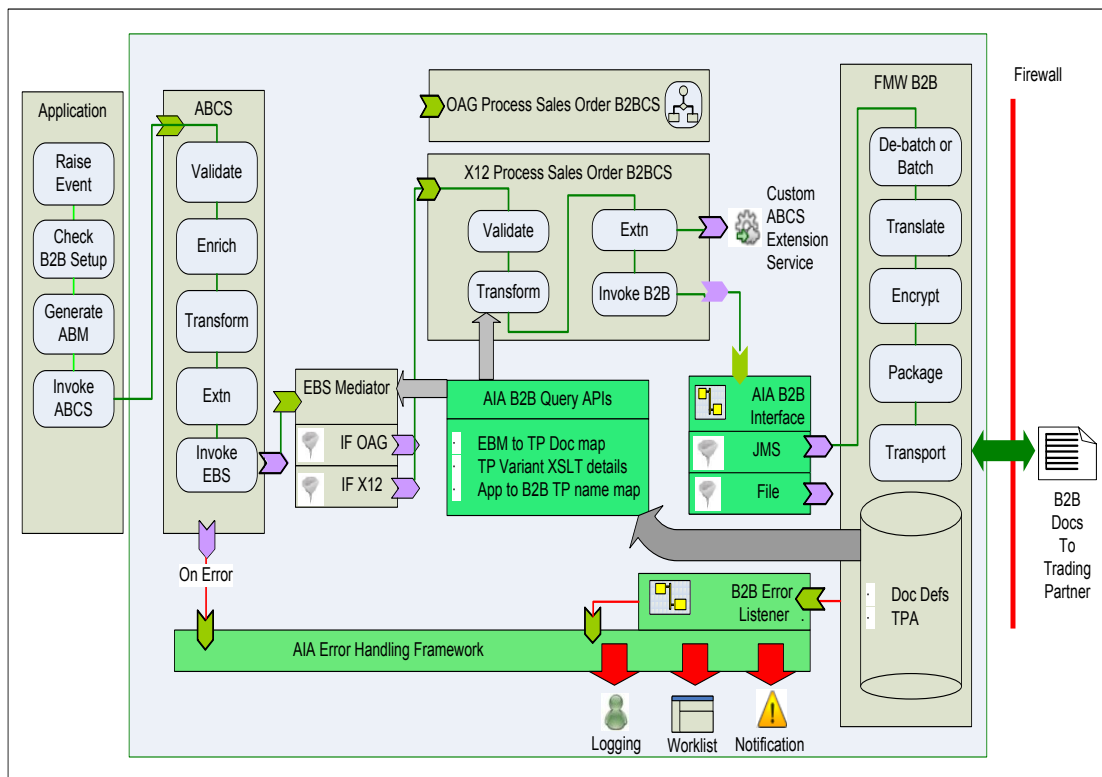
The AIA Error Handling Framework has been enhanced to support B2B-related error use cases. Errors generated in Oracle B2B are captured by the AIA Error Handling Framework. Also, the AIA canonical fault message has been enhanced to capture B2B-specific context information. All of the functionality offered by the AIA Error Handling Framework is also available for B2B-related errors.

Prebuilt Connector Services

The following B2BCSs are shipped with Foundation Pack to demonstrate the implementation of the B2B programming model and infrastructure.

- **X12ProcessSalesOrderReqB2BCSImpl**
Supports inbound integration of Electronic Data Interchange (EDI) X12 standard 850 (Order) documents.
- **X12UpdateSalesOrderProvB2BCSImpl**
Supports outbound integration of EDI X12 standard 855 (Order Acknowledgements) documents.

Both of these B2BCSs are integrated with the AIA Demo.



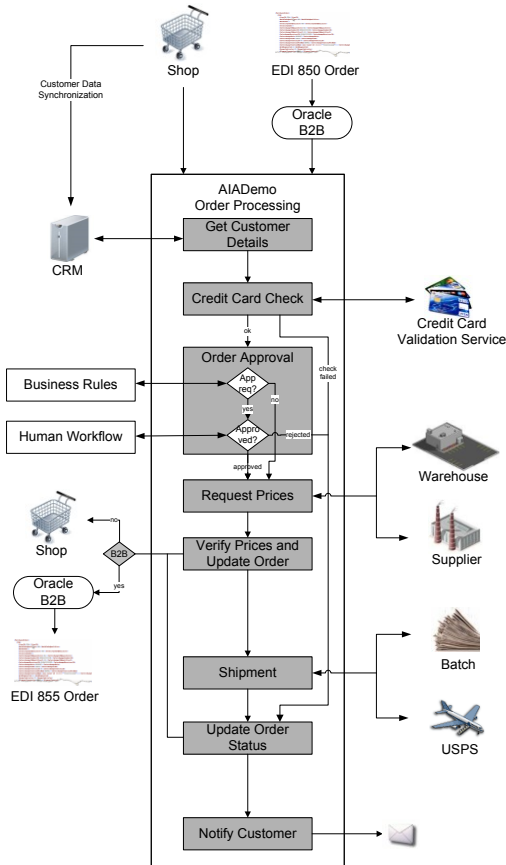
AIA B2B architecture and infrastructure

For more information about B2B functionality in AIA, see *Oracle Application Integration Architecture Foundation Pack: Development Guide*, "Introduction to B2B Integration Using AIA."

AIA Demo

The AIA Demo is a sample integration process leveraging the entire AIA Foundation Pack 11gR1 (11.1.1.2.0) reference architecture, as well as the AIA Foundation Pack 11gR1 (11.1.1.2.0) infrastructure components. It is mainly targeted toward people who want to learn AIA concepts and technologies or just want to see AIA Foundation Pack 11gR1 (11.1.1.2.0) in action. The AIA Demo is shipped as a part of the Foundation Pack and can be easily deployed and run on top of any AIA Foundation Pack 11gR1 (11.1.1.2.0) environment by simply running a single deployment script.

The AIA Demo implements an order processing flow in the context of a fictitious company called Global Company. The main AIA Demo flow looks like this:



AIA Demo flow

This orchestration of various heterogeneous services and applications is a typical use case for the adoption of AIA. The AIA Demo implementation illustrates how an AIA-based integration works and how it leverages AIA infrastructure components such as:

- Project Lifecycle Workbench
- Service Constructor
- Error handling and logging, including extensibility
- Deployment Plan Generator and AIA Installer
- CAVS

- B2B infrastructure and implementation guidelines
- AIA extensibility features

Furthermore, the AIA Demo contains sample implementation for various key design patterns in the integration space, such as cross referencing, different styles of message exchange patterns, all typical AIA service types, and much more.

For more information about AIA concepts and the implementation details of the AIA Demo, see *Oracle Application Integration Architecture Foundation Pack: Getting Started with the Oracle AIA Foundation Pack and Demo*.