Oracle® Application Integration Architecture - Foundation Pack 2.2.1: Release Notes

Release 2.2.1

Part No. E12967-01

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Contents

About Oracle Application Integration Architecture 2.2.1 Preface

This preface discusses:

- Oracle release information publications
- Additional resources

Oracle Release Information Publications

This section discusses publications that provide in-depth technical and functional information about the Oracle products prior and immediately after their release.

1. Statement of Direction
2. Release Value Proposition
3. Release Content Document
4. About Document

Statement of Direction

The statement of direction is published six to nine months before a release. It provides a high-level overview of the major focus of product development efforts, enabling high-level business decision makers to begin preliminary upgrade planning.

Release Value Proposition

The release value proposition provides more functional details than the statement of direction, identifies major enhancements, and articulates the expected business benefit. This document is designed to help you determine whether new product features warrant upgrading from an old release or embarking on a new implementation. With this information, you will be able to initiate preliminary budget planning and begin putting together a project team to further evaluate specific Oracle products. The release value proposition is published three to six months before a release.

Release Content Document

The Release Content Document provides a greater level of detail on new functionality than the Release Value Proposition. This added level of detail should enable project teams to answer the following questions:

- What out-of-the-box functionality will change?
- What customizations may be affected?
- How will an upgrade or new implementation affect other systems?

- How will these changes affect the organization?

After the project team has reviewed and analyzed the release content document, business decision makers should be in the position to determine whether to allocate budget and initiate implementation plans.

The Release Content Document is published approximately one month before a release.

About Document

The About Document contains release notes and is published at release. It validates the final scope of the release, and outlines the features and enhancements that are available with the release of each product, describing the finalized functional and technical details that will enable project teams to confirm budgets and complete implementation plans.

Additional Resources

There are many additional resources that will help your organization determine the affects of upgrading to this release.

Visit the Oracle Metalink website frequently to keep apprised of ongoing changes. This table lists the types of resources that are available on Oracle Metalink:

Resource	Navigation
User guides	Top Tech Docs > Online Documentation > Applications Knowledge Home > Oracle Applications > Integrations > Applications Integration Architecture
Data models	Top Tech Docs > Applications Electronic Technical Reference Manuals (eTRM)
Installation guides	Knowledge Home > Oracle Applications > Integrations > Applications Integration Architecture
Upgrade guides	Knowledge Home > Oracle Applications > Integrations > Applications Integration Architecture

For all other documentation, reference:

http://www.oracle.com/technology/documentation/applications.html

For Training opportunities, reference:

http://education.oracle.com/web_prod-plq-dad/plsql/show_desc.redirect?redir_type=3

About Oracle Application Integration Architecture Foundation Pack 2.2.1

The new features and enhancements that are included in this release are grouped by release themes, then by product area. Our goal is to help organizations leverage technology to its fullest and increase the efficiency and effectiveness of operations. Please note that the final release may not have every feature that is discussed in this document, and a specific feature may become part of a different application or have a product name that is different from those cited in this document.

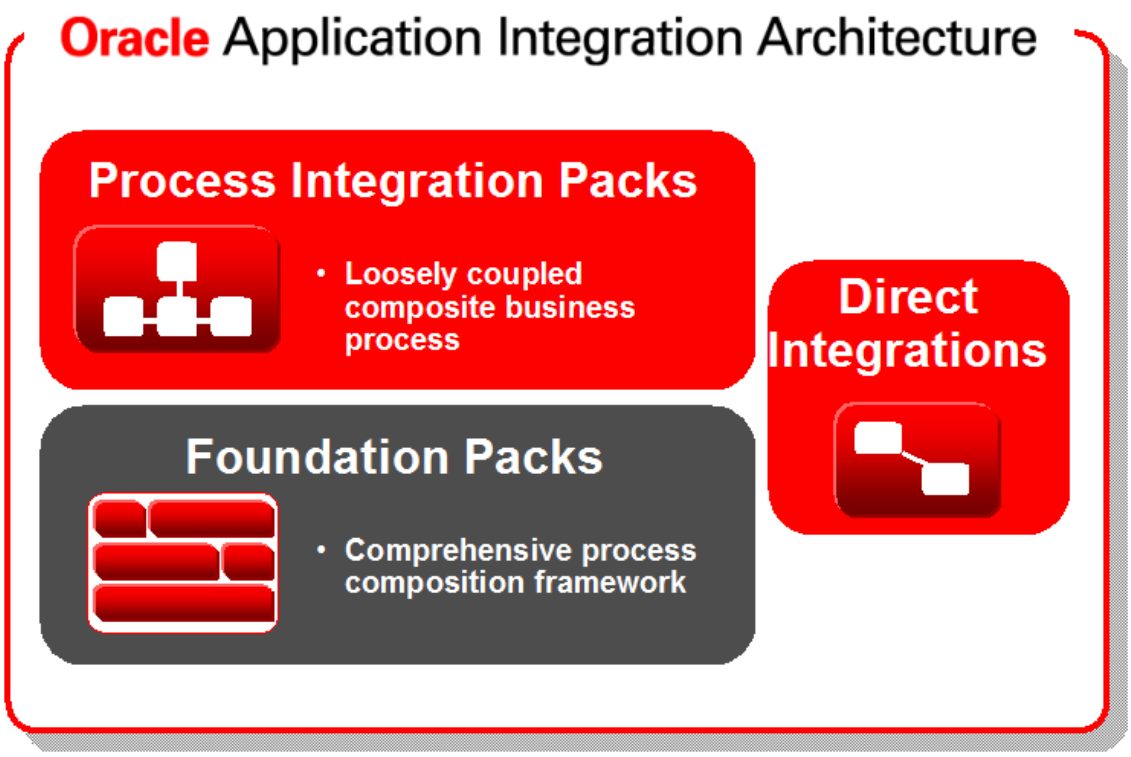
Oracle proudly announces Oracle Application Integration Architecture Foundation Pack 2.2.1. This new release demonstrates Oracle's commitment to:

- Unifying your application portfolio on a standardized framework.
- Minimizing integration costs and risk.
- Adapting business processes to changing business needs.

Unifying Your Application Portfolio on a Standardized Framework

Oracle Application Integration Architecture Foundation Pack is a prebuilt integration solution that provides the programming model, best practices, application independent data-model as well as supporting tools to implement, test, diagnose, and govern your service oriented architecture (SOA).
Oracle Application Integration Architecture unifies your application portfolio on a standardized framework by enabling you to:

- 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



Oracle Application Integration Architecture

Oracle Application Integration Architecture's robust, open standards based platform enables your disparate applications to communicate with each other regardless of where they reside. Through its application independent environment, your many applications—Oracle, legacy, even third party—are free to interact utilizing a service-oriented architecture (SOA) and a common object and service model. The result is a looser, more flexible coupling of applications that helps you increase the value of your current investments and create a more responsive and effective environment.

To quickly implement proven cross-application business processes, Oracle Application Integration Architecture also offers packaged business process integrations across best of breed Oracle applications, like Siebel CRM and Oracle E-Business Suite. Use these pre-packaged Process Integration Packs (PIPs) to significantly reduce development times. Ensure seamless business process integrations across your Oracle applications that will not break with upgrades or when inserting new applications into the mix.

Developed by Oracle, Process Integration Packs come with Oracle's full development methodology, including a robust testing process, as well as the full resources of Oracle Support, with maintenance and upgrades to protect the value of your integration over time.

Minimizing Integration Costs and Risk

Minimizing integration costs and risk enables you to:

- Speed time to value with pre-built business objects and services.
- Develop flexible integrations using an application independent model.

Oracle Application Integration Architecture enables you to mitigate the potential pitfalls of integration so you can focus less on developing and managing your integrations and more on new projects that help transform your business.

Oracle Application Integration Architecture's pre-built SOA provides the foundation for SOA design, extensibility, and reuse. Using industry standard common objects and services to facilitate the flow of information across different applications, Oracle Application Integration Architecture helps reduce the number of mappings across applications, minimizing the need for complex, custom developments. Quickly deploy and manage business processes effectively over time. Easily mix and match capabilities and implement new business process functionality from existing applications without the risk or cost of modifying existing applications. Even replace components, insert new components, and change business logic quickly and efficiently when needed.

Adapting Business Processes to Changing Business Needs

At the core of an agile enterprise is an application environment that allows for the adaptability and reusability of core business processes as rapidly as possible. Oracle Application Integration Architecture provides the flexibility to easily modify existing processes, allowing IT to become more efficient and highly aligned with the business over time.

With Oracle Application Integration Architecture you can:

- Reconfigure business processes using reusable objects and services without worrying about the underlying applications.
- Substitute different applications in an existing business process without recoding your integrations or sacrificing future upgrades and support.
- Protect your changes across upgrades. When an upgrade is performed on your integrations, your changes will be carried forward.

Additionally, by providing you with documented best practices, like our Industry Reference Models, you can quickly optimize business processes with specific industry functionality that would otherwise take years to define, design and deploy. The result is longer lasting, adaptable integrations that align with the needs of the business today and can be quickly redesigned as conditions change.

Product Enhancements for Oracle Application Integration Architecture (AIA) Foundation Pack 2.2.1

This section discusses new enhancements for the AIA Foundation Pack. These enhancements fall into six main areas:

- Certification of Foundation Pack on WebLogic Server
- Industry Foundation Packs
    - Insurance
    - Utilities
- New and updated Enterprise Business Objects
- Business Process Models
- Business Service Repository
- New features of the Installer

Certification with WebLogic Server

Starting with AIA Foundation Pack 2.2.1, you can now choose whether you want to run Foundation Pack on Oracle Application Server or Oracle WebLogic Server. While Oracle continues to support Oracle Application Server, Foundation Pack is now also certified to run on WebLogic Server 9.2 MP3.

WebLogic Server provides capabilities unique in the application server market including:

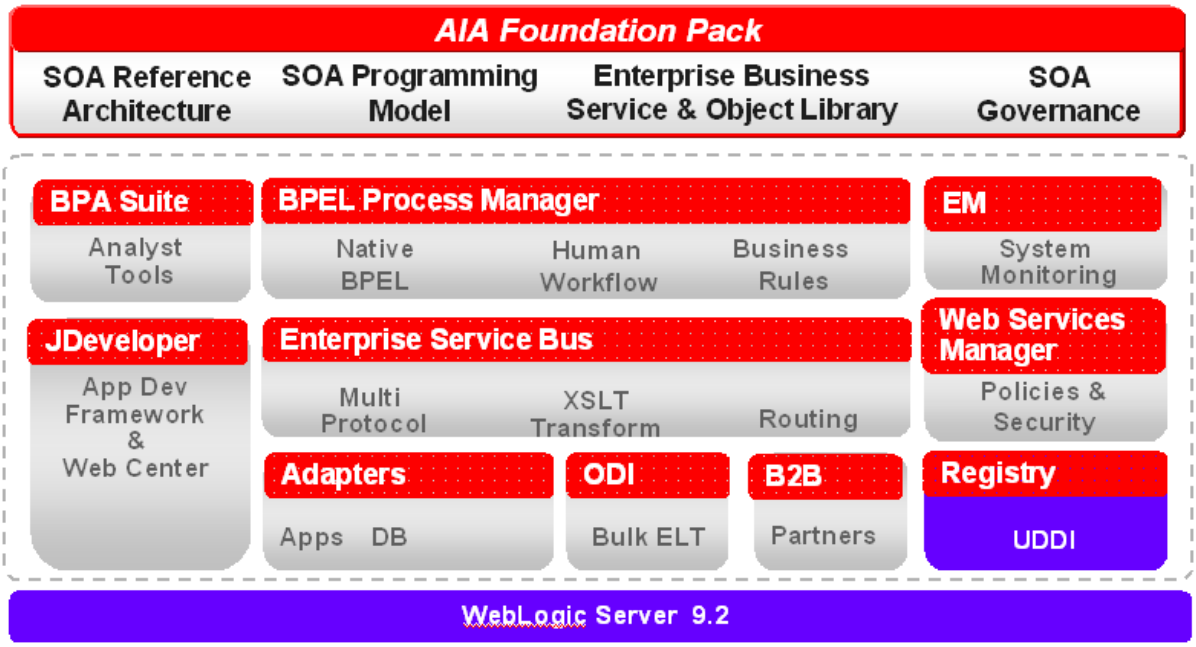
- High performing Java runtime called jRockit
- Sophisticated scalability and clustering techniques
- Unique high availability features
- Powerful server administration console

With AIA Foundation Pack, your organization can now leverage both the advantages of AIA and of the WebLogic Server platform.

Architecture Changes

Running AIA Foundation Pack on WebLogic Server impacts the overall technical architecture.

In this diagram, the impacted areas are highlighted in blue:



AIA Foundation Pack on Oracle WebLogic Server

WebLogic replaces the Oracle Application Server Java container (OC4J) to host all components of the Oracle SOA Suite including BPEL Process Manager, Enterprise Service Bus, etc. and also the AIA components such as Business Service Repository (BSR) etc. As both SOA Suite and the AIA components are J2EE based applications, running AIA Foundation Pack on WebLogic Server provides the same set of functionalities and also the same user experience.

Aqualogic Service Registry plays the role of the UDDI Registry on WebLogic and has the same set of features as Oracle Service Registry on Oracle Application Server. In fact, they rely on the identical base product.

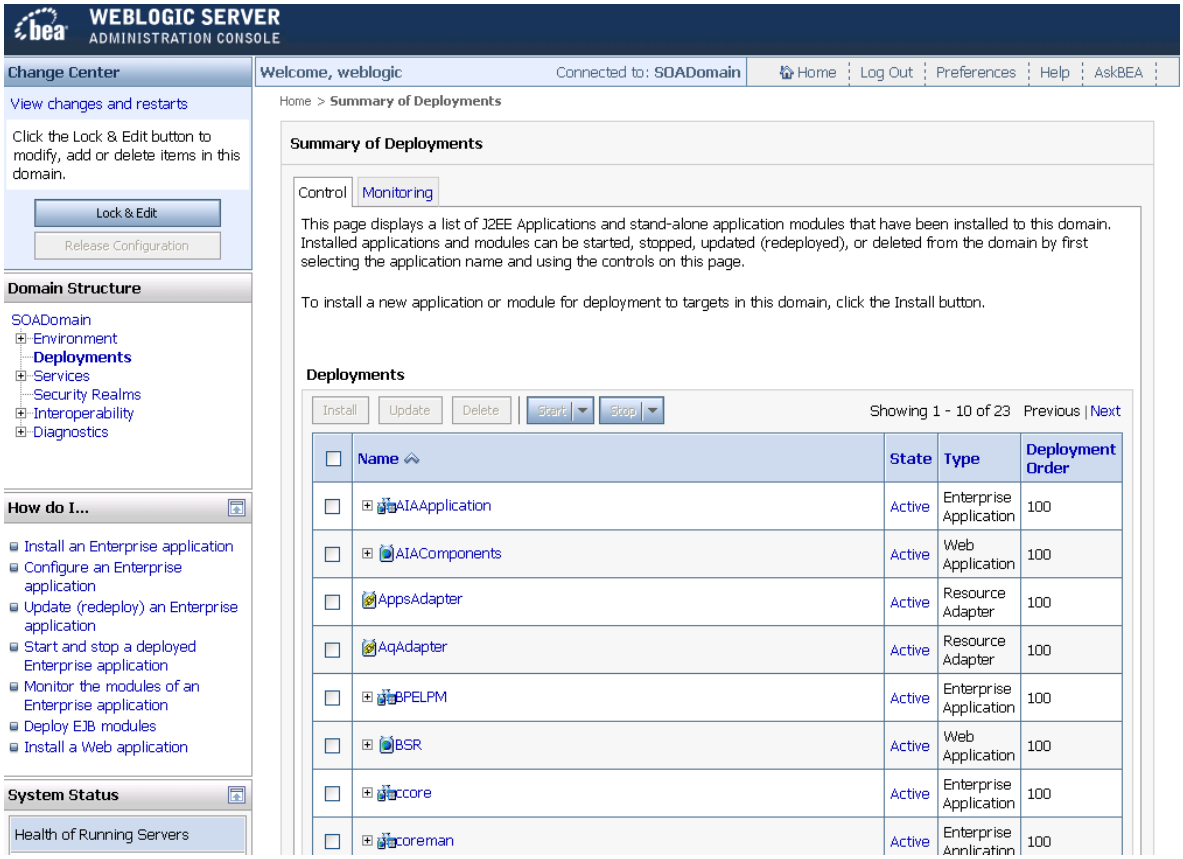
With these replacements, AIA Foundation Pack on WebLogic provides exactly the same set of features as on Oracle Application Server while being able to exploit the particular advantages of the WebLogic platform at the same time.

AIA Foundation Pack Deployment on WebLogic Server

The installation experience with WebLogic is very similar to installing AIA Foundation Pack on Oracle Application Server.

The AIA Foundation Pack installer provides a user interface to collect information about where to extract the Foundation Pack content on the server.

You can provide instance specific details describing your environment and you only need to run one deployment script in order to automatically deploy all AIA Foundation Pack components to the WebLogic Server.



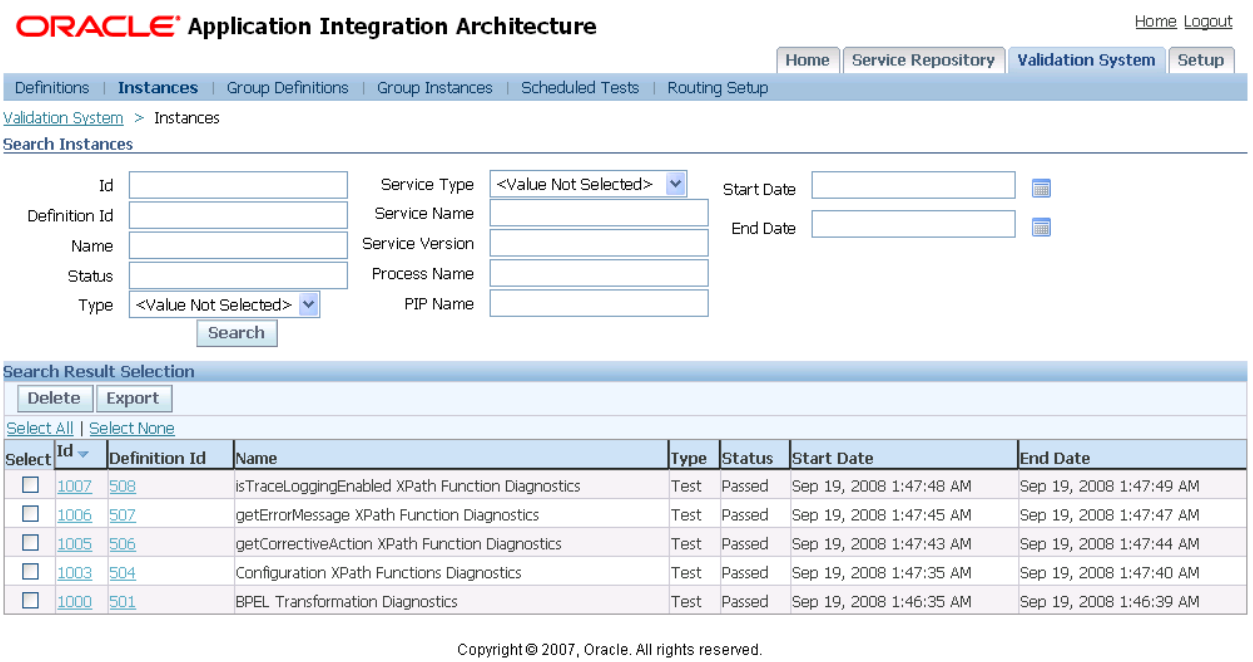
Foundation Pack deployed on WebLogic Server

Using AIA Foundation Pack on WebLogic Server

Once AIA Foundation Pack is deployed to a WebLogic Server instance, you can use all deployed AIA Foundation Pack components in the usual way. These are in particular:

- Enterprise Object and Service Library
- Composite Application Validation System (CAVS)
- Business Service Repository (BSR)
- Error Handling Framework
- Diagnostics
- Foundation Pack Demo

From an end user experience, the application server does not have any visible impact. For instance, you will use the usual URL http://<server>:<port>/AIA to access BSR and CAVS and the application behaves in exactly the same way as on Oracle Application Server.



Composite Application Validation System (CAVS) on WebLogic Server

Developing and Executing AIA Artifacts on WebLogic Server

Choosing to run Foundation Pack on WebLogic will have little effect on your developers as the AIA artifacts are still mainly based on Oracle BPEL Process Manager and Oracle Enterprise Service Bus. Developers continue to create and extend BPEL processes and ESB services using the integrated, powerful JDeveloper IDE. From JDeveloper, they can either directly deploy their artifacts such as Enterprise Business Services (EBS) or Application Business Connector Services (ABCS), to the WebLogic Server or they can also choose to deploy via ant based scripts.

Industry Foundation Packs

This section discusses support for the:

- Insurance industry
- Utilities industry

The Insurance Industry

With 2.2.1, we introduce our AIA Insurance Foundation Pack. Insurance companies face the challenge of both general business processes (invoicing, payables, receivables, etc.) and Insurance specific (claims, subrogation, etc.). Those companies that attempt to leverage common business management systems coupled with insurance specific claims and policy administration systems often end up with point-to-point integrations that are difficult, and costly to maintain.

The AIA Insurance Foundation Pack brings a holistic approach to modeling business processes while supporting the specific needs of the Insurance industry. AIA Insurance Foundation Pack 2.2.1 updates certain common or horizontal business objects to support a super-set of insurance information and provides new vertical business objects to support claims.

New Enterprise Business Object

- Claim:

  Includes over 100 attributes for managing claims related information.

Updated Enterprise Business Objects

- Invoice:

  Added the *SubrogationCaseNumber* attribute to support the subrogation of a claim from one company to another.

- Payable Invoice:

  Added the *Claim Number Reference*, *PolicyNumberReference*, and *EndorserPartyReference*.

The Utilities Industry

With 2.2.1, we introduce our AIA Utilities Foundation Pack. This first release of Oracle AIA Utilities Foundation Pack includes new industry-specific enterprise business objects, a complete set of activity based industry process models, and other modified horizontal enterprise business services and objects.

Utilities customers can easily leverage AIA Utilities Foundation Pack to facilitate integration design and enable composite business processes including Concept to Launch, Order to Bill, Meter to Cash, and Customer Self Service. These processes span a variety of applications, including CRM for sales, marketing and service; customer care and contact center; customer eBilling, ePayment and eSupport; meter data management; rating, billing and collections; and financials ERP.

New Enterprise Business Objects

- Utilities *MeterReading*

  The Meter Reading document is used for querying or sending meter reading (i.e. Consumption, time of use, or interval) data.

- Utilities *ServiceUsage*

  Used for querying or sending billed usage information for a service.

Updated Enterprise Business Objects

For a complete list of Enterprise Business Objects updated for Utilities, see Updated Enterprise Business Objects in AIA Foundation Pack 2.2.1.

Enterprise Business Objects

With each release of the foundation pack approximately 20 Enterprise Business Objects (EBO) are introduced or updated. The design of our EBOs begins with industry standards (OAGIS, etc) and is augmented with commonalities found in our best of breed application portfolio. Our Enterprise Business Objects 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 2.2.1

In AIA Foundation Pack 2.2.1, the following Enterprise Business Objects were added:

- SalesOpportunity
- AccountGLElementValueSet
- GLElementValueSet
- AccountingPeriod
- Classification
- Specification
- SpecificationGroup
- SpecificationValueSet
- Insurance Claim
- ServiceRequest
- Utilities MeterReading
- Utilities ServiceUsage

Updated Enterprise Business Objects in AIA Foundation Pack 2.2.1

In AIA Foundation Pack 2.2.1, the following Enterprise Business Objects were updated:

- AccountBalanceAdjustment
- CurrencyExchange
- CustomerParty
- Item
- AccountingEntry
- DisbursedPayment
- InstalledProduct
- Invoice

- PayableInvoice
- ReceivedPayment
- SalesQuote
- SalesOrder

Updated Common Components

In AIA Foundation Pack 2.2.1 the following changes were made to common components:

- StatusHistory
- InstalledProductReference
- PaymentInstrument
- BillToPartyReference and DeliverToPartyReference
- TaxExemption
- Specification
- Status
- AddressCommunication
- Address
- AuditHistory

New Reference Components

In AIA Foundation Pack 2.2.1, the following reference components were created:

- CustomerPartyAccountReference
- RelatedCustomerPartyReference
- ParentCustomerPartyReference
- ServiceUsageLineReference (Reference Component) in FP 2.2.1. This is visible to Utilities only.

Business Process Models

Business Process Management (BPM) 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. And they serve as a baseline for modifications resulting from business activity monitoring results.

The published models include hyperlinks to entries in the Business Service Repository (BSR) where technical details are described for Oracle AIA integration artifacts.

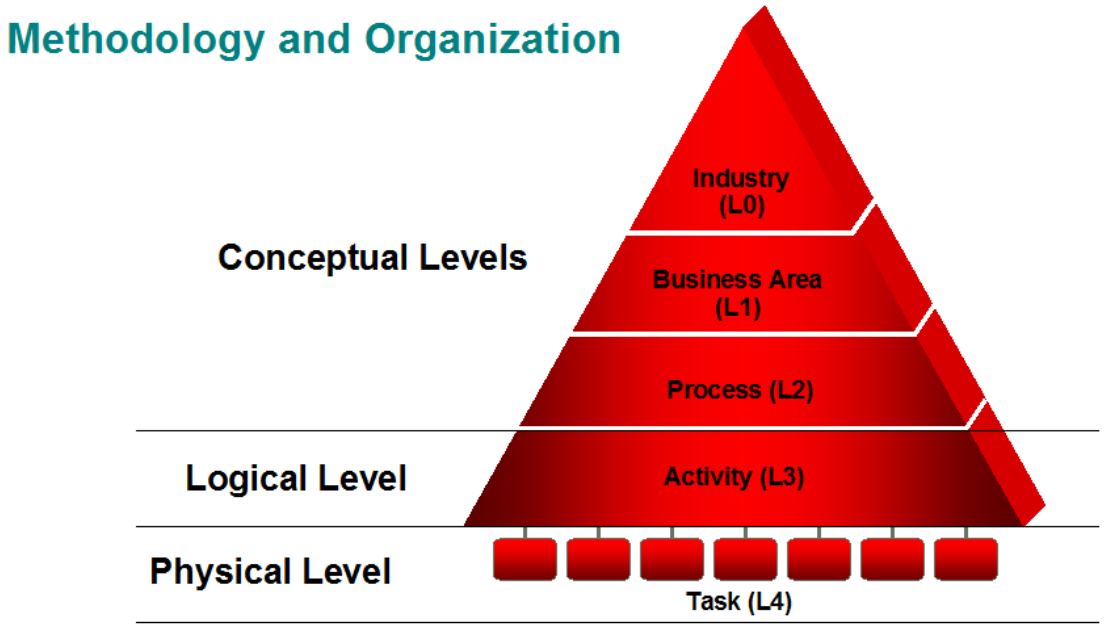
Modeling Approach and Methodology

We use accepted standard modeling methods and notation and add Oracle-specific information on the most detailed level of the models.
Characteristics of our models include:

- Horizontal role-based swimlane workflow modeling method based on the Rummler-Brache diagramming technique
- BPMN compliance at the lowest level
- Both human and system lanes

We have organized our model content using four hierarchical levels of decomposition

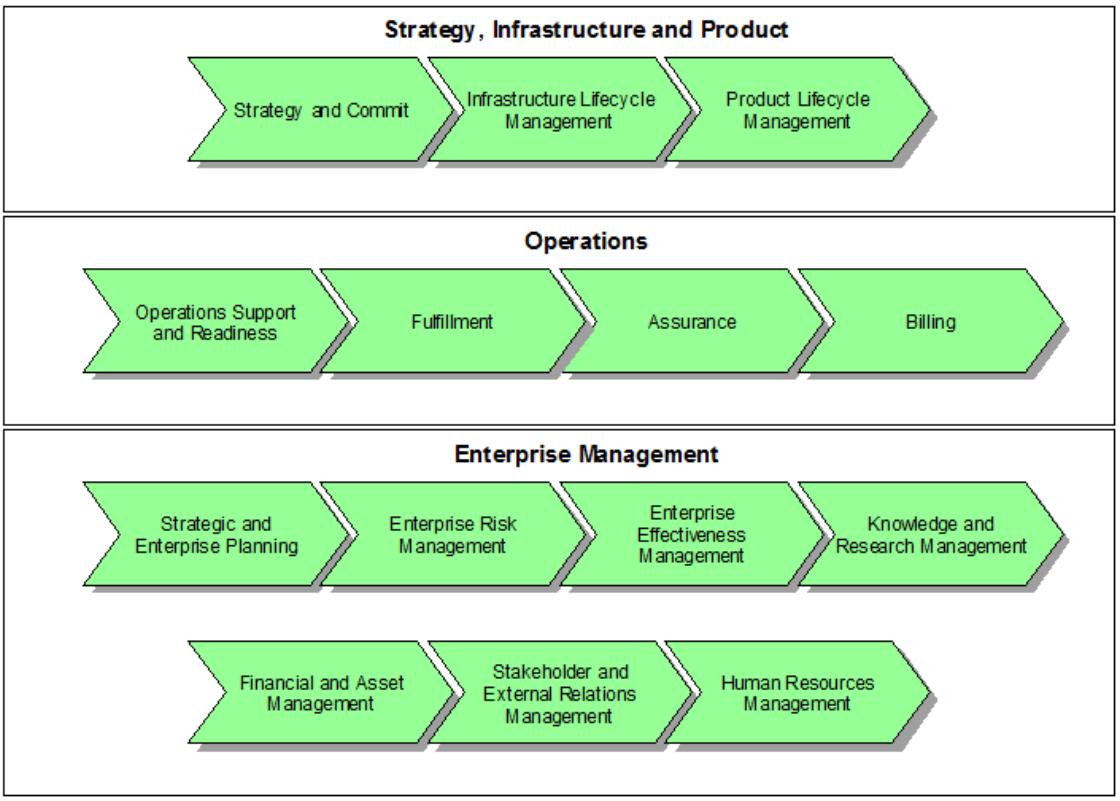
- Top three levels are conceptual
- Conceptualization of SOA services can be observed on third level
- Fourth level is implementation specific
- Process integration points and AIA artifacts appear on lowest level



Modeling methodology and organization

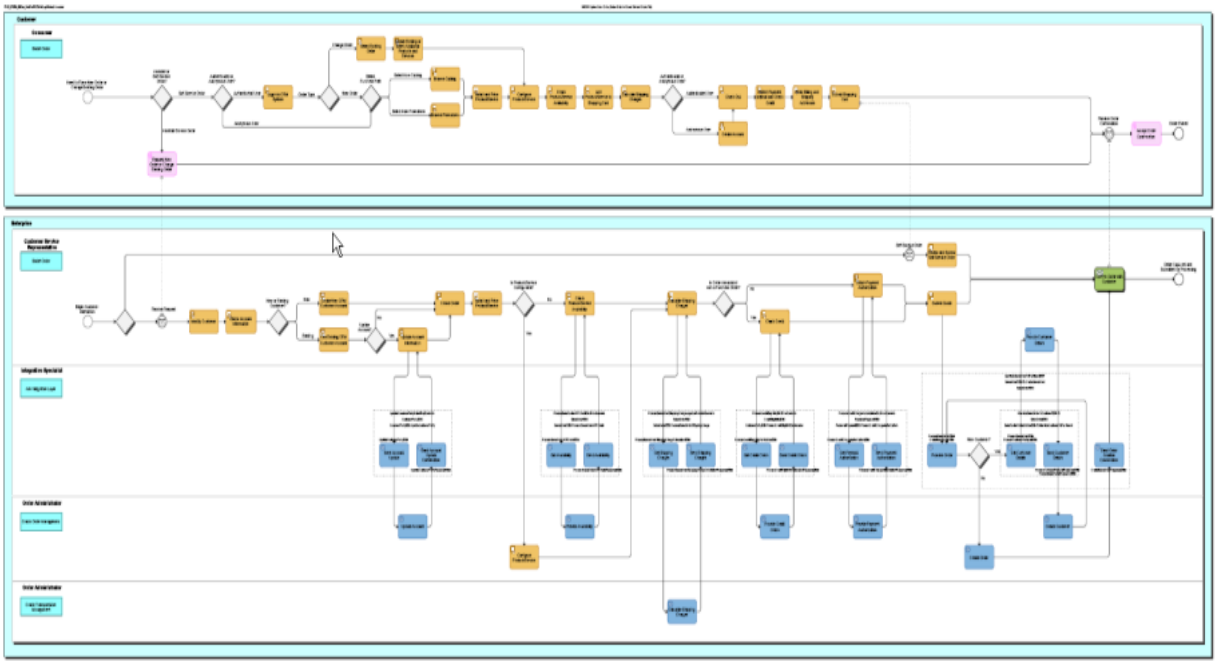
Modeling Standards and Notations

We use a Value-Added Chain modeling standard and notation for the top model level.



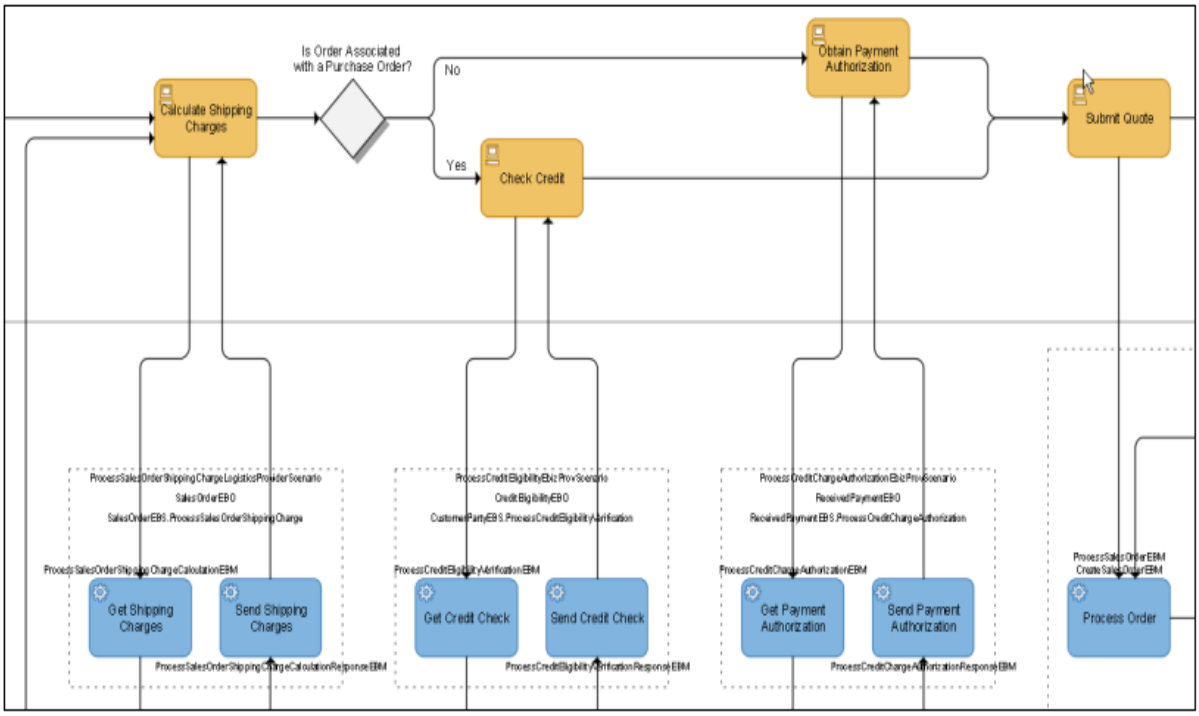
Value-Added Chain modeling standard and notation

We use the BPMN modeling standard and notation for the lower model levels.



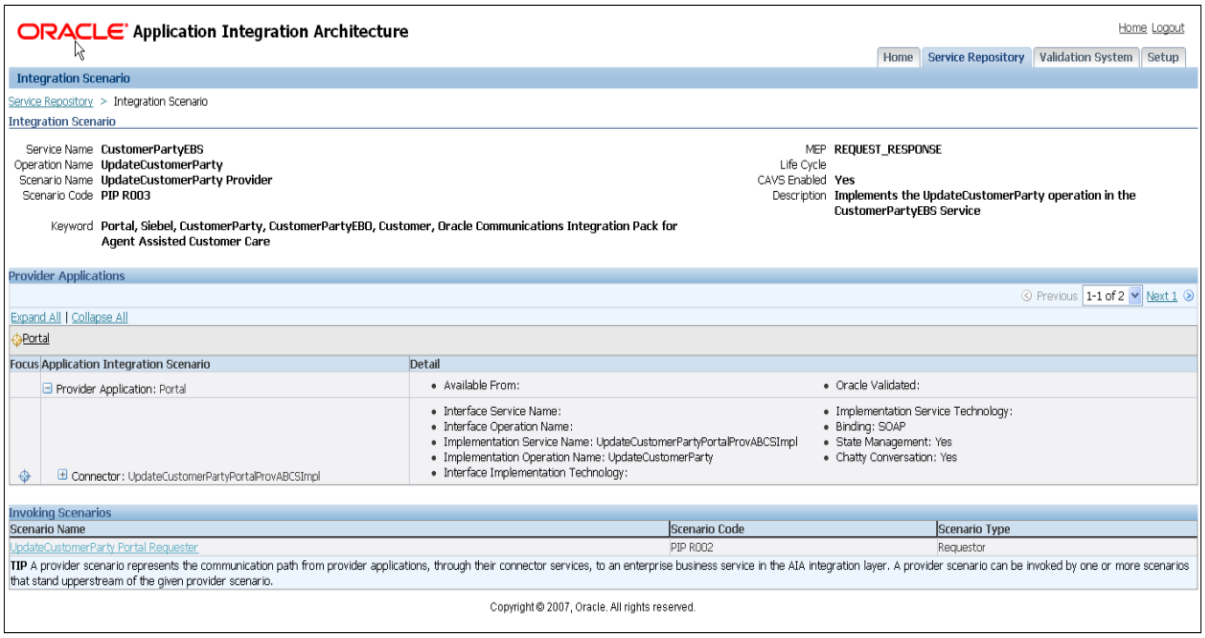
BPMN modeling standard and notation

Then we add Oracle-specific AIA integration artifact references to the lowest model level.



Oracle-specific AIA integration artifact references

Finally, we add links to the Oracle AIA Business Services Repository definitions for the integration artifacts.



Links to the Oracle AIA Business Services Repository definitions

Modeling Tool and Viewer

The modeling tool is the Oracle Business Process Analysis (BPA) Suite. The BPA Suite has the following components:

- Business Process Architect

  Standards-based tool for process modeling. Uses various standards-based notations and templates such as BPMN, EPC, etc.

- Business Process Repository Server

  Server component for sharing the process repository across multiple users in a collaborative environment.

- Business Process Simulator

  Tool for simulating the process models based on a set of discrete events to do "what if" analysis.

- Business Process Publisher

  Publishes process models to a large audience outside of the core team designing the process models.

- Oracle Extensions for SOA

  Allows bi-directional integration with Oracle SOA Suite.

We use the Business Process Architect and the Business Process Repository Server components to create the models. We then use the Business Process Publisher component to publish the models in HTML format. We provide the Business Process Publisher along with the AIA product for you to be able to view the read-only published set of models. Once installed and implemented, you can allow business and technical analysts in your entire enterprise to view the models with a simple web browser.

The published models include hyperlinks to entries in the Business Services Repository (BSR) where technical details are described for the AIA integration artifacts

Delivered Models

Oracle AIA 2.2.1 includes business process models for Oracle AIA Foundation Pack, Oracle AIA Utilities Foundation Pack, and Oracle AIA Insurance Foundation Pack. Delivered model content includes the Level 0, Level 1, Level 2 and Level 3 models for those processes supported by Oracle AIA 2.2.1.

Model content is cumulative and includes models delivered with prior AIA releases as well. Up to and including Oracle AIA 2.2.1, integration artifacts and corresponding business process models were delivered for portions of the following business processes:

Communications Industry

- Product Lifecycle Management
- Fulfillment
- Assurance
- Billing

Insurance Industry

- Claims

Utilities Industry

- Product Lifecycle Management
- Sales
- Order Fulfillment
- Billing and Revenue Management
- Customer Service

Cross-Industry

- Marketing
- Sales
- Order Fulfillment
- Customer Service

- Supply Chain Planning
- Product Management
- Procurement
- Materials Management and Logistics
- Project and Grant Management
- Financial Control and Reporting
- Cash and Treasury Management
- Asset Lifecycle Management
- Enterprise Information Management
- Workforce Deployment

Cross-Industry Composite Business Processes

- Order to Cash (Siebel Order/Siebel Opportunity to Oracle Order Management/Oracle Transportation Management)
- Design to Release (Agile Product Lifecycle Management to Oracle Product Information Management)

Business Service Repository (BSR)

The Business Service Repository (BSR) is a Service-Oriented Architecture (SOA) repository. In support of SOA governance, the BSR provides visibility into the entire SOA portfolio across AIA's SOA integration layer. The BSR is an integral part of your SOA evolution. It provides you with pre-built, best-in-class, reusable SOA contents that jumpstart your SOA uptake. Specifically, the BSR contains the following as its first-class contents:

- Services:

  Enterprise Business Services and Application Business Connector Services

- Objects:

  Enterprise Business Objects and Enterprise Business Messages

- Integration Scenarios:

  Cross-application message flows that traverse through multiple hops of AIA services BSR captures the assets' metadata, relationships, and runtime invocation dependencies in context of business process logics. It mirrors AIA's SOA architecture and reflects the end-to-end process implementation across heterogeneous applications.

As a SOA repository, the BSR complements and augments the Universal Description, Discovery, and Integration (UDDI) functionality provided by Oracle Service Registry (OSR). It consistently synchronizes contents between the repository and the registry. By combining the repository and the registry, the BSR offers comprehensive visibility coverage to AIA's SOA landscape throughout the SOA lifecycle, from abstract contents during design-time to concrete assets at runtime.

The primary features of the BSR include:

- Mechanisms to publish and remove contents into the BSR and the UDDI registry in bulk or single modes.
- A user interface to search and to browse individual SOA assets in AIA's ecosystems.
- A user interface to locate integration scenarios, and thus to discover and to learn the invocation dependencies across the SOA assets in context of business process logics.
- Service-based functional impact analysis.
- A user interface to annotate the SOA portfolios via flex-fields.

  The BSR covers needs for a wide spectrum of users throughout SOA lifecycle, including functional and business analysts, architects, developers, system integrators, and system administrators.

- Integration with the BPA Publisher to render the SOA portfolio in the context of supporting process models

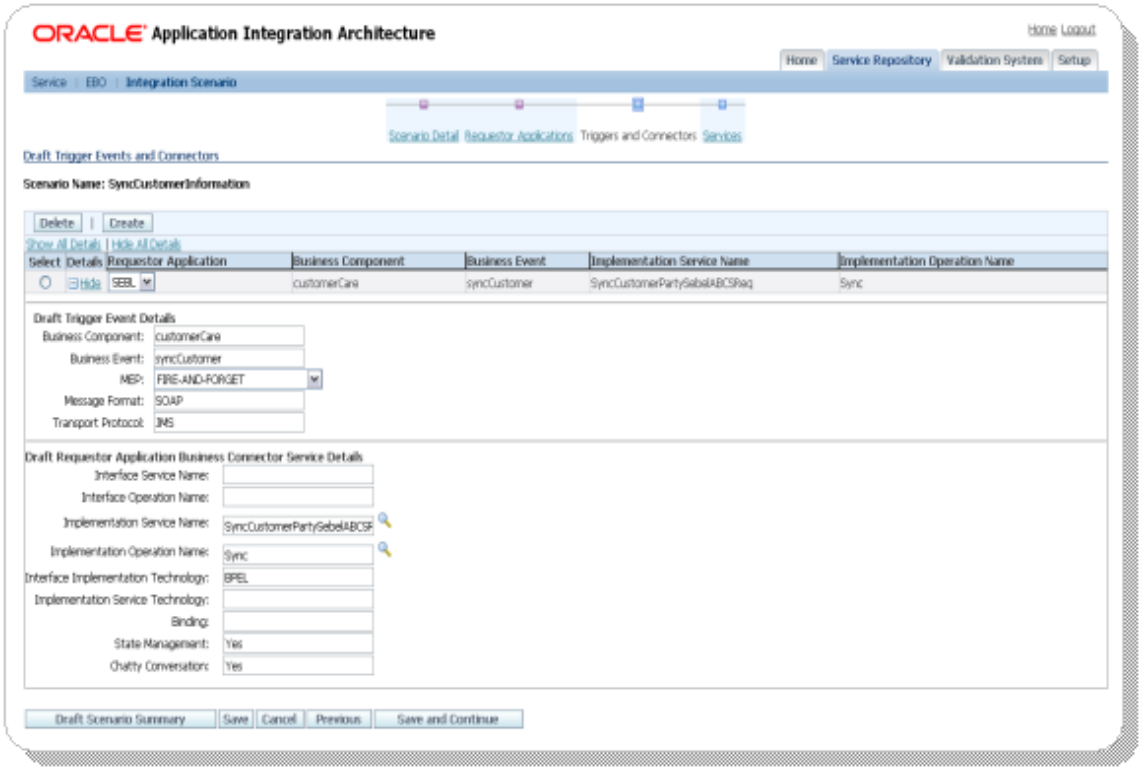
Features and Enhancements for the BSR

As part of the AIA Foundation Pack 2.2.1, the BSR delivers the following features and enhancements:

- A user interface to construct and edit integration scenarios
- Optional OSR installation

User Interface to Construct and Edit Integration Scenarios

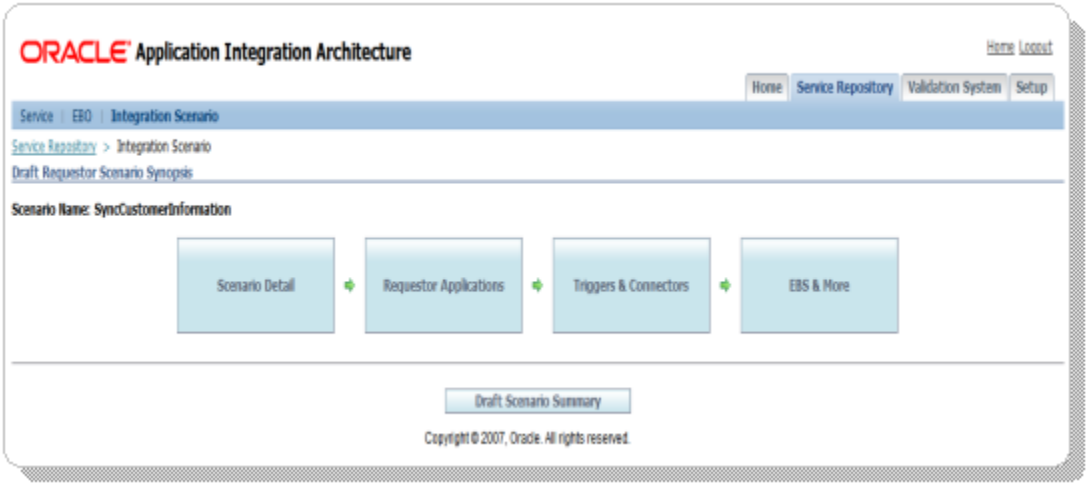
The user interface provides enhanced productivity to composite business process construction and modeling. As part of this feature, you can search, evaluate, and reuse the SOA assets already stored in the repository. Consequently it promotes asset reuse and maximizes return on your SOA investment.



User interface

The UI provides two modes for editing integration scenarios.

- Draft mode is applicable during development and extension stages. In draft mode, editing is allowed and you can stop and resume at any time.
- Active mode is applicable during the production stage. Active mode is view only.



Service repository

Role based access ensures that only the appropriate roles can switch modes and edit the scenarios.

Optional OSR Installation

Optional OSR installation offers you choices in terms of your runtime registry preferences. Customers can be at different maturity levels in their SOA evolution. As such, you may or may not have decided your runtime registry strategy and preferred vendor. By making OSR an optional component, we broaden your options when it comes to your SOA uptake progression and repository/registry deployment topology.

Oracle Service Registry

OSR installation modes enable you to:

- Co-locate repository and registry
  - Installing OSR and BSR in the same J2EE container

    This was the only mode prior to FP 2.2.1
  - AIA Installer populates both the BSR and OSR, and keeps them in-sync.
  - BSR asset page contains links to corresponding entries in UDDI

- Locate the registry somewhere else
  - Install OSR on a different machine than the BSR
  - Preserve all existing BSR features as-is
- Select no registry at all
  - BSR continues to function
  - No links to the OSR on the BSR asset page

New Features of the Installer

The Installer manages the installation and upgrade activities by laying down the software components, creating any necessary objects, and seeding configuration data. The Installer may also be used to perform an un-installation if necessary.

As part of the AIA Foundation Pack 2.2.1, the AIA Installer provides the following capabilities:

- Allows you to skip providing the Oracle Service Registry details during installation. When this information is not provided, the BSR content is still made available, however it will not link to the registry because you chose to skip the *Publish to Registry* step. However if you provide the registry information, then that information will be validated before allowing you to proceed further.
- Allows you to provide remote Oracle Service Registry details during installation. In previous releases, you had to install Oracle Service Registry (OSR) on the same server as Foundation Pack. Now you can use an OSR installation on any remote server. The significant advantages are that AIA content can now be published to an enterprise wide registry (that holds non-AIA artifacts also) and this allows the registry to be on a different operating system than the AIA installation itself.
- Allows a *Copy AIA software only* option. When you choose this option, only the AIA Home details will be collected and all AIA software will be laid to the specified location. This will be specifically used for installation of AIA on SOA Suite running on Weblogic server and can also be used for advanced installation (such as installation on clusters, etc).