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Getting Started with Oracle Real-Time Integration Business Insight
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Documentation for application users with various user roles that provides steps to get started using Oracle Real-Time Integration Business Insight.
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Preface

The Getting Started with Oracle Real-Time Integration Business Insight gives you a high-level overview of the concepts and processes you’ll find in the Oracle Real-Time Integration Business Insight application. The application is referred to in abbreviated form as “Insight” throughout this book.

You can use this guide as a starting point for working with the product, however it is not intended to be comprehensive guidance to Insight’s behaviors or features, nor is it a hands-on tutorial. Rather this guide gives you a quick, easy-to-read overview of how Insight can be used to help you understand your business.

Audience

The audience for this guide is the architects, administrators and business users who will be working with Insight.

It is assumed that you have basic knowledge of the following:

- Service Oriented Architecture (SOA)
- Service Bus Architecture (SB).

Documentation Accessibility

For information about Oracle’s commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Documents

For more information, see these Oracle Resources:

- Using Oracle Real-Time Integration Business Insight
- Understanding Oracle Real-Time Integration Business Insight
- Administering Oracle Real-Time Integration Business Insight.
## Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td><strong>monospace</strong></td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
Introduction and Background

An introduction to the business drivers behind Oracle Real-Time Integration Business Insight and its background is explained.

Differences Between Using this Component in the Cloud and On-Premises Environments

There may be differences between using this component in the cloud and on-premises environments that impact the information described in this guide.

For information about differences, see Differences Between the Cloud and On-Premises Environments and Known Issues for Oracle SOA Cloud Service.

Need for Accessible Business Metrics

More than ever before, software is the backbone of business. Today’s competitive market demands that stakeholders be able to understand, monitor, and react to changing market conditions.

In fact, business analytics are driving the evolution and growth of every industry as never before. Businesses need flexible, dynamic, detailed insight – and they need it as it happens.

Challenges of Traditional Methods for Collecting Business Metrics

Collecting, storing, visualizing, and reporting on business metrics in real-time has traditionally been a costly undertaking, requiring significant investment of capital and engineering resources.

Often, proprietary software must be written that is specific to each application and each business. In today’s sophisticated enterprise software environment, many businesses use multiple integrated systems, provided by a variety of vendors, further complicating the task of collecting business metrics.

Oracle Real-Time Integration Business Insight, used in conjunction with Oracle integration products such as Oracle SOA Suite and Oracle Service Bus, can dramatically simplify the process of modeling and extracting meaningful business metrics.

You can use the Real-Time Integration Business Insight REST API to collect metrics for integrations that are not implemented using compatible versions of SOA Suite or Service Bus.

Overview of Process

Oracle Real-Time Integration Business Insight (Insight) simplifies the process of collecting business metrics.
First, you create a model of the business. The model defines what characteristics stakeholders care about, and includes abstractions such as **milestones** and **indicators**. Milestones indicate progression through business activities such as “Problem Received”, “Ticket Created”, or “Problem Resolved”. Indicators represent metrics that are useful for tracking the business, for example “Total Resolution Cost”, “Country”, “Region”, or “Customer Status”.

The work of creating a model is done using simple web-based tooling that makes the process easy for business users.

**Figure 1-1  Model Editor**

[Image of Model Editor]

**Note:**

See [Modeling Your Business Application](#) or the [Understanding Oracle Real-Time Integration Business Insight](#) for more details on milestones and indicators.

Once you have defined a model of the business, you map that model to services and components in the Oracle integration infrastructure. For example, invocation of a service named `submitTicket` in a SOA Suite composite might indicate that the `TicketCreated` milestone has been passed. Architects, using simple web-based tooling, perform these mapping tasks.
Finally, once your model is defined and mapped, you activate it. When a model is activated, Insight monitors the Oracle integration infrastructure for business data, recording when business milestones are passed and extracting indicators from messages. These metrics are immediately available in pre-configured interactive dashboards, tables, reports, and timelines.
A detailed description of the components of your model and how to map and activate the model is available.

Overview

A model provides a grammar for describing the aspects of an application that are key for tracking business performance and mapping those concepts to existing software application implementation.

In general, models of a high-level application are defined through an iterative collaboration between a **business user** and an **architect**. The business user describes the high-level concepts associated with an application, whereas the architect refines those concepts and maps them to an application implementation. These personas are encapsulated using **roles** that are shipped with Insight. Your administrator assigns you to the appropriate role(s) based on how you will use the product.

Every model includes:

- Basic metadata
  
  For more information see Model Metadata in the *Understanding Oracle Real-Time Integration Business Insight*.

- Milestones and associated indicators
  
  For more information see Milestones and Indicators in the *Understanding Oracle Real-Time Integration Business Insight*.

- Unique Instance Identifier
  
  For more information, see Unique Instance Identifier in the *Understanding Oracle Real-Time Integration Business Insight*.

Modeling Your Business Application

The details about how to create your model, define milestones, and create indicators is available.

Creating Your Model

Work on models is done using the **Model Designer**. When you open the Model Designer and click the Create Model button, you create a new model in **Draft** state.
Only drafts of models can be edited. When a new model is created, it is by definition a draft, but you can also create drafts of models that are already activated (see Activating Your Model for more information on what “activated” means). This allows you to modify drafts of models that are active without affecting the actual active model.

Once all changes to a draft are finalized, you activate the draft. This pushes a new model (or changes to an existing model) out to the system and triggers the collection of metrics that conform to the model.

Every model includes some basic descriptive metadata, including:

- Name
- Icon
- Description
- Single Instance Description
- Multiple Instance Description

Of these fields, only the model name is required. For details on all basic project metadata, see Creating a Model in Using Oracle Real-Time Integration Business Insight.
Milestones

After you create a model, the next step is to create milestones for the model. You create a new milestone by clicking the Create Milestone button in the Designer.

Milestones are a key abstraction in an application model. They are points in an application that represent business progress and map to at least one point in the application implementation. Generally, a business user defines the milestones iteratively and creates the milestones with appropriate metadata. An architect then refines the milestones and maps them to appropriate points in the application implementation (see Mapping Your Model to Your Application for details on mapping).

There are several different types of milestones, including Initial, Standard, Error, Terminal, and Terminal/Error. Every model is required to have at least one Initial Milestone, and at least one Terminal Milestone.

Initial Milestones are special because once passed, the process instance with which they are associated is assumed to be valid. This concept is key to filtering out instances that may already be in flight when Insight starts monitoring a runtime engine. An instance that has passed an Initial Milestone at least once is considered “Active”.

A Terminal Milestone is important as well, because it represents an expected end to the instance associated with the business model. Once a Terminal Milestone is passed, the instance is no longer active. For example, a milestone representing the completion of an order, "Order Complete" might be modeled as a Terminal Milestone.

See Types of Milestones in Understanding Oracle Real-Time Integration Business Insight for details on the different types of milestones and their semantics.

Notice the task hint depicted as an orange bubble next to the milestone name. As you work with a model, the designer provides guidance on the remaining tasks required to successfully complete the definition of the model. Hovering over the task hint shows a description of what needs to be done to complete the task.
In this example, the newly created milestone has not been mapped to an implementation artifact (such as a SOA composite service or Service Bus pipeline). Once you create the mapping, the task hint will no longer be shown.

Figure 2-6  Missing implementation Mapping

Indicators

In addition to Milestones, Indicators can also be defined for a model. Indicator values are extracted from application messages when milestones are passed. For example if indicators have been associated with a milestone that is mapped to a service invocation, when that associated service is invoked, the indicators will be extracted.

Indicators allow business users to gain insight into the proper functioning of the application, and also allow comparisons between application instances.

There are two types of indicators: Measures and Dimensions.

Measures identify values, which allow the state of the application to be quantified. A single measure can change over the lifecycle of an instance. For example, a typical order application might define measures for Total Order Value or Item Count.

Dimensions, on the other hand, provide a type of grouping and categorization of instances, allowing for slicing and dicing of aggregate measures. For example, a typical order application might define dimensions for Geographic Region, Sales Channel, or Product Category.

You create indicators for a milestone in the Milestones tab of the model editor.

Figure 2-7  Milestone Area

Once you add an indicator to a milestone, you must define the indicator by selecting a name, and specifying whether the indicator is filterable (can be used as filter criteria for finding instances in the console).
An architect defines extraction criteria for the indicator (see Extracting Indicators), as indicated by the task hint next to the indicator’s name.

Figure 2-8  Indicators

Unique Instance Identifier

You must define exactly one unique instance identifier for every Insight model. The identifier guarantees uniqueness among all instances of the process. Furthermore, once an identifier value has been extracted for an instance, a different value cannot be extracted, that is, you cannot change the value of the identifier for an instance.

For example, you might choose IncidentID as a unique instance identifier for a help desk application. You would not want to use something like user badge number, because the same user can submit more than one incident.

Mapping Your Model to Your Application

Once a business user has defined the abstract model for a business application using milestones and indicators, it is then up to the architect to map these abstractions to concrete implementation artifacts.

Mapping milestones involves identifying execution points that best represent when a milestone has been passed. You can map milestones to a number of different technologies including SOA services, references, and components, as well as Service Bus pipelines and business services.

For example, an architect might determine that invocation of a service called placeOrder best represents passage of a milestone called OrderReceived.

You must also define extraction criteria for indicators, as part of the mapping process. Extraction criteria defines the rules that the system uses to extract information from runtime messages, and is expressed using XPath expressions.

Mapping Milestones

Architects use the Designer to modify a draft model that has been defined by a business user. Insight provides additional UI controls that allow the architect role to create mappings for each milestone.

Figure 2-9  Milestone Area
Creation of a new mapping involves the architect first choosing a data connection. Data connections provide a view into the deployed projects on a functioning runtime engine, either Oracle SOA Suite or Oracle Service Bus. The Insight administrator creates and maintains the data connections.

Different types of data connections show different types of artifacts. For example, if you’re mapping a milestone to a SOA composite service, choose an available SOA data connection, and then browse the list of deployed composites to find the service that best corresponds to the milestone.

Service Bus data connections show a list of Oracle Service Bus projects.

For both Oracle SOA Suite and Oracle Service Bus, only artifacts to which Insight supports mapping are listed for the architect. See Mapping Milestone to an Implementation in the Using Oracle Real-Time Integration Business Insight for details on what kinds of technologies and artifacts are supported for mapping milestones.

**Figure 2-10  Create Mapping**

![Create Mapping](image)

The architect identifies a SOA connection and a SOA composite and then drills down to a specific service or reference using a graphical composite browser.

**Figure 2-11  Tree Structure**

![Tree Structure](image)

The composite browser can then be used to select a specific composite or component service/reference to which to map the milestone. The specific operation and interaction type must also be specified.
Extracting Indicators

Similar to milestone mapping, architects must also specify extraction criteria for indicators. The extraction criteria define the rules (in the form of an XPath expression) for pulling business data off a runtime message at the point that a milestone is passed.

The extraction criteria tooling automatically uses the schema of the service to which the indicator’s milestone is mapped. You can drill down into the message shape, in addition to using a variety of XPath functions.
Activating Your Model

After a model has been defined by the business user, and then mapped by an architect, you activate the model.

What Happens When Your Model is Activated

Activating a model pushes the model definition, including mapping metadata, out to the runtime engines used during the mapping process. Mapping metadata is used by the runtime engines to monitor for execution patterns indicating that milestones have been passed.

The process of validating a model, distributing it to the runtime engines, and then beginning the process of active monitoring for extracting metrics takes some time to complete.

While the activation is occurring, you see a progress dialog tracking the activation of the model.
For more details on activating a model, see Activating a Model in Using Oracle Real-Time Integration Business Insight.
Description of the consoles, dashboards and widgets available to the business executive using Oracle Real-Time Integration Business Insight is listed.

Overview

Oracle Real-Time Integration Business Insight provides executive-level metrics using consoles, dashboards, and home page widgets.

When a model is activated, Insight automatically creates a console, giving the business executive immediate visibility into the details of business performance. This console shows detailed metrics collected by Insight, focusing specifically on the milestones.

Consoles are intended for users acting only as business executives. Business executive users are assigned to the appropriate role in Insight, giving them access to the console and dashboard features of the product. Users not assigned to the business executive role are not able to view consoles, dashboards, or summary cards.

You can also create your own dashboards based on the indicators defined in the model. This allows you to track metrics specific to your business using custom visualizations that work for you.

Default Milestone Dashboards

Description of the consoles and dashboards delivered with Oracle Real-Time Integration Business Insight is listed.

Finding Your Console (Console Listing)

Clicking the Consoles tab takes you to the Console List page. Here, you can view all active models along with a summary of their current runtime activity over the past 24 hours. Clicking a model name opens the console for that model.

Figure 3-1 Consoles Page
Filtering In the Console

The first part of the console is the filter criteria, which is collapsed by default. When considering trends in the aggregate metrics shown on the console, or when trying to find specific sets of instances, it is often important to restrict instances to those that match specified criteria. The criteria that you specify here determines which instances are included in the various charts and tables on the console.

Figure 3-2 Filters

Only milestone-related filter criteria can be specified, including instance start date, end date, duration, passed milestones, and so on. Note that for the Instance List and Custom Dashboards, you can also specify criteria based on indicators in the model that have been marked as filterable.

Milestone Timings Dashboard

The milestone table in the console shows how long it took, on average, to move between milestones. This information is very useful for identifying hotspots in a business process.

For example, if over the past week it has taken an average of six hours to move from the “Problem Received” milestone to the following milestone, which is generally “Incident Created”, you can easily recognize whether this is within the company’s target for handling new problems at the help desk.

Figure 3-3 Milestone Timings Dashboard

To make things easier to process visually, Insight also provides a diagrammatic visualization of the milestone performance table. By changing the format from “Table” to “Diagram”, you can use a graphic representation to quickly identify milestones that have been passed most frequently.
Note how much smaller the red “Ticket Rejected” icon is than the “Problem Received” icon. The more times a milestone has been passed, the larger the icon bubble will be. If, for example, there were an abnormally large number of ticket rejections, you would see a large red “Ticket Rejected” icon.

Milestone Dashboards

The console also includes four out-of-the-box milestone dashboards that are available immediately after a model is activated. Each dashboard shows a different view of the current status of the business application, based on aggregate milestone performance.

The dashboards are interactive, allowing the executive user to zoom, modify the legend, among other operations.

The Passed Milestones dashboard allows you to see number of passed milestones everyday.

The Active Instances dashboard shows information on the aggregate status of instances that are still active, that is instances that have not completed.

The Instance Errors dashboard shows the instances which have last passed an error milestone and have not progressed beyond that point.

Finally, the Average Instance Completion Time dashboard depicts the number of successful completions and the number of failures, along with how long each category took, on average.
Drilling to the Details

Description of the console functionality including search, drill across and navigation is explained.

Searching

Executives can find specific instances of a model, for example a particular order or a specific help ticket using the search functionality of the console. Search is only supported on indicators’ values.

Drilling From Charts and Tables

Dashboards support the ability to “drill across” into the underlying set of instances that comprise the values in an aggregate dashboard. For example, if you want to see the set of instances that passed the “Ticket Rejected” milestone, right-clicking on the...
appropriate pie slice in the **Instance Errors** dashboard and selecting “Business Transaction Dashboard” shows you the list of instances.

**Figure 3-7  Instance Errors**

![Instance Errors](image)

**Navigating the Instance List**

The Instance List shows information including the start date, the end date, the last milestone passed, and the values of various indicators, collected by Insight and associated with the model. The Instance List provides you with the ability to search for one instance by the unique identifier defined in the model.

Users with appropriate role privileges can inspect lists of instances that match search criteria from the Instance List. From this list, you can drill down into instances and inspect detailed metrics, by clicking on the identifier value for any row (contained in the left-most column).

**Figure 3-8  Instance List**

![Instance List](image)

**Note:** You can also further refine the list of instances shown in the Instance List by modifying the filter criteria. There are more options available in the Instance List filter criteria than there are in the filter criteria on the console, since you can also filter here by indicator values.
Milestone Details

Drilling into a single instance from the Instance List takes you to the Instance Details page. The Instance Details page shows a chronological detailed progression of the milestones that were passed for a single instance. The milestones for the instance are shown on a timeline, ordered from first (on the left) to last (on the right).

The Instance Details page also shows a list of indicators grouped according to the milestone with which they are associated, and the values of these indicators. Clicking on any milestone in the timeline will filter out only the indicators collected when that milestone was passed.

For more information, see the Instance Details Page in the Using Oracle Real-Time Integration Business Insight.

Submitting a Support Request

An important feature of Insight is the ability to report problems with individual instances to IT for support. Communication between IT and the business user is often impeded by differing vocabularies – business owners care about the performance of the business: “Where’s my order?”, while IT focuses on the technical performance of
applications and services: “What exception was thrown how many times by which service?”.

**Figure 3-11  Submitting a Support Request**

Insight helps bridge this gap by allowing the business executive to escalate business failures to IT with both business context and technical details.

Business owners can use the Report a Problem feature on the Instance Details page, either for the entire instance or for an individual milestone. This feature generates an e-mail that provides the IT administrator with both the business context (such as which milestones have been passed), and immediate access to the technical details for the instance. The technical details come in the form of a link to the runtime instance flow trace in Enterprise Manager Fusion Middleware Control.

**Custom Dashboards – Visualizing Your Indicators**

Using custom dashboards in the console, you can track metrics, ratios, and trends that are important to your business. If a model has indicators, you can create custom dashboards to capture the data related to the indicators. As the milestones dashboards capture only data related to the milestones, a custom dashboard allows you to visualize graphs and charts for indicators. You can visualize the indicators defined and extracted as the application runs.

You can add as many custom dashboards as you like. Each custom dashboard is represented by a title and an icon (chosen while creating the dashboard).
Home Page Model Summary Cards

The Home page is where the executive user lands after logging into Insight. On the Home page you’ll find a number of useful widgets, including descriptive shortcuts to other parts of the application, links to frequently used reports, and summary cards.

Summary cards are convenient for gaining a quick understanding of the current functioning state of a model, including how many instances of a model are active vs. completed over the last five days. You can add up to six summary cards to your Home page.
Figure 3-13  Model Summary Cards

![AstraTeq Help Desk](image-url)
What’s Next?

There are a number of other resources that you can use to learn about Oracle Real-Time Integration Business Insight. The list below contains links to other documentation, tutorials, and videos that you can use to get started.

**Tutorials**

You can find a series of tutorials that will guide you through hands-on exercises using rich projects that contain both SOA Suite and Service Bus components.

Related Topics:


**Videos**

A growing library of videos and Oracle By Example hands-on exercises are available.

Related Topics:


**Guides**

You will find a complete selection of Insight guides in the Oracle Help Center. All guides are available online and in PDF, Mobi (for Kindle) and ePub (for iBooks and mobile devices) formats.

- *Understanding Oracle Real-Time Integration Business Insight*
- *Using Oracle Real-Time Integration Business Insight*
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