

Oracle® Cloud

Using Oracle Real-Time Integration Business Insight

Release 12c (12.2.1)

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Documentation, for application users with various user roles, that provides detailed information and instructions about how to use Oracle Real-Time Integration Business Insight.

Oracle Cloud Using Oracle Real-Time Integration Business Insight, Release 12c (12.2.1)

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Preface

The *Using Oracle Real-Time Integration Business Insight* document provides information and instructions about using the various features of the product.

Audience

This book is intended for the business users who use the Oracle Real-Time Integration Business Insight application for their business needs.

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>.

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Related Documents

For more information, see these Oracle Resources:

- *Understanding Oracle Real-Time Integration Business Insight*
- *Getting Started with Oracle Real-Time Integration Business Insight*
- *Administering Oracle Real-Time Integration Business Insight*.

Conventions

The following text conventions are used in this document:

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

Introduction

Oracle Real-Time Integration Business Insight (*Insight*) is an application designed for business users. This application is business-user friendly and allows users to get visibility into the currently running business processes from a business perspective. The application integrates with existing Oracle products like Oracle SOA Suite and Oracle Service Bus.

The Real-Time Integration Business Insight REST API enables you to collect metrics from non SOA Suite components and products. Every invocation of the API publishes a business event to Insight with milestone information and metrics that are correlated in the Insight console. You can then gain Insight into your business through pre-configured dashboards as well as create your own dashboards based on your requirements.

The application allows business users to model, collect, and monitor business-level metrics using web-based dashboards and reports, without the need to modify their already-deployed integrations and applications.

1.1 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](#).

1.2 Preferences

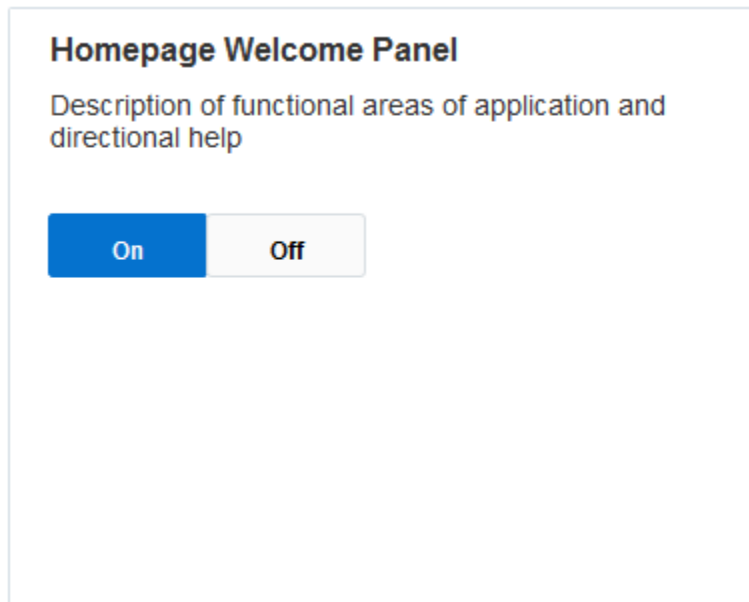
The Preferences you set in Insight govern the features and the way you see the product. The preferences you update here are per user and they do not propagate to other users who log in to the application.

Homepage Welcome Panel

This preference is **On** by default. You can switch it Off using the toggle button. If you switch off the Welcome panel, you cannot see the Welcome Panel containing the navigational shortcuts on the Home page.

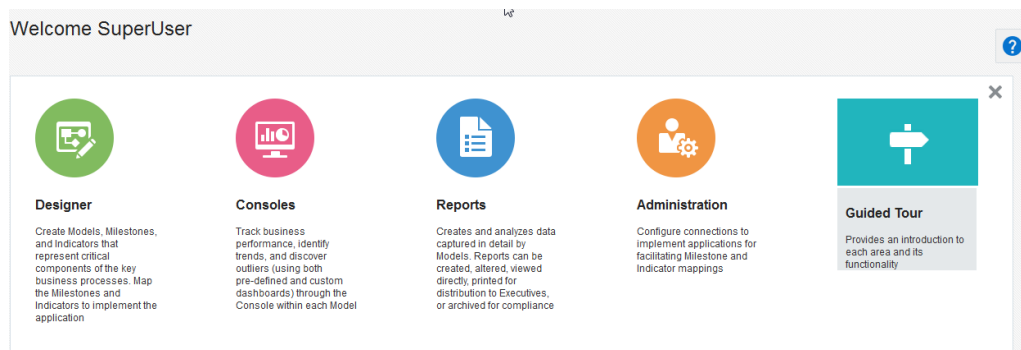
Click **Save** to save the preference.

Figure 1-1 Welcome Panel Preference



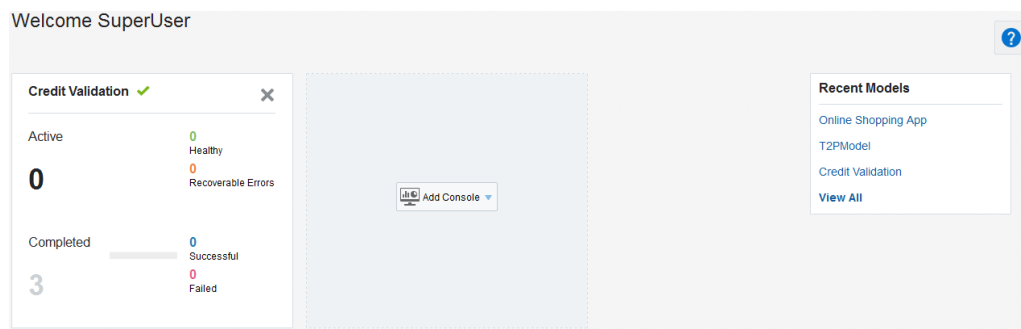
With this preference **On**, the **Welcome Panel** looks like the screen below.

Figure 1-2 Welcome Panel



When the Homepage Welcome Panel preference is set to OFF, the Home page looks like the following screen:

Figure 1-3 Home Page without the Welcome Panel



External Dashboard

This preference is Off by default. You can switch it On using the toggle button. If you switch On this preference, you can see the **External Dashboards** button on the **Consoles** page.

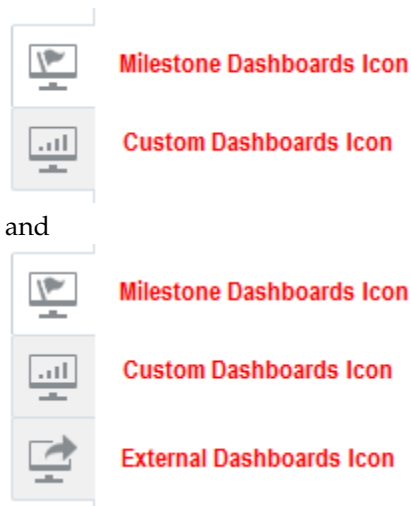
Figure 1-4 External Dashboard Preference

External Dashboard

External dashboards tab in console page



The appearance of the Dashboards page is as follows when the External Dashboard preference is **On** and **Off**.



Click **Save** to save the preference.

Default Start Time Filter

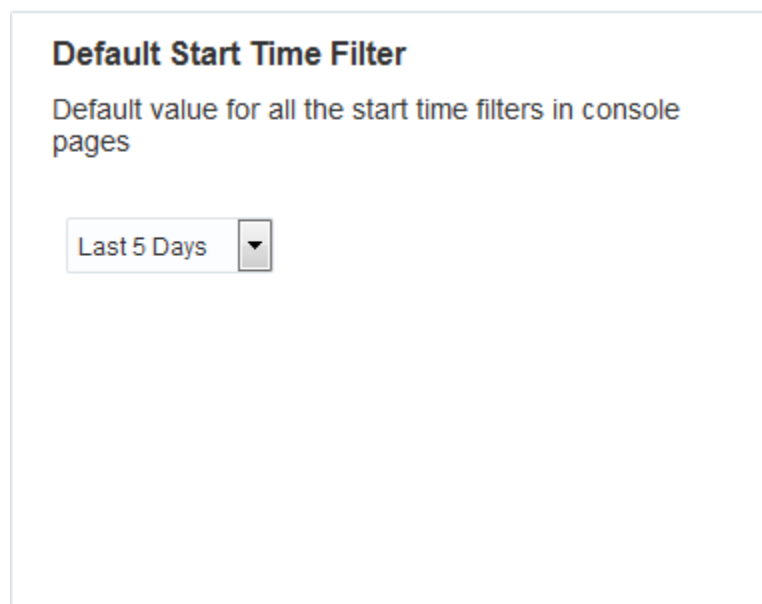
This preference indicates the default value for all the start time filters on the **Console** page. The available options are:

- *Last 1 Day*
- *Last 5 Days*

- *Last 30 Days*
- *Last 90 Days*.

Note: The time filter only changes what individual console pages show rather than the list of consoles.

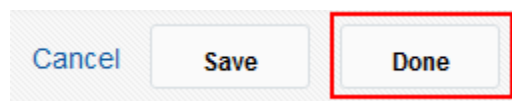
Figure 1-5 *Default Start Time Filter Preference*



Last 5 Days is the default option you see in the drop-down list, on your first visit to the **Preferences** page. Once you change the filter and save the preference, you will see the selected filter as default option in the drop-down list on your subsequent visit to this page. However, *Last 5 Days* is the default filter applied to all consoles unless you choose a different filter.

Click **Save** to save the preference.

Figure 1-6 *Preference Page Buttons*



Click **Done** to go back to the **Home** page.

Click **Cancel** to abort setting the preferences at any time.

Note: If the preferences have already been applied, the **Cancel** button cannot undo the changes.

1.3 User Personas

Oracle Real-Time Integration Business Insight supports six user personas. The screens, features, and options that you see depend on the user profile with which you are logged in to the application. The product ships with application roles corresponding to

each persona. It is important to note that users can be assigned to more than one role (persona).

For example, a user can be assigned to both the *InsightBusinessUser* and *InsightModelCreator* roles.

The available user personas are:

- [InsightBusinessUser](#)
- [InsightIntegrationArchitect](#)
- [InsightExecutive](#)
- [InsightAdmin](#)
- [InsightModelCreator](#)
- [InsightConnectionCreator](#).

The role permissions of each of these users are discussed in detail in the subsequent sections.

1.3.1 InsightBusinessUser

The tasks that a user with the *InsightBusinessUser* role can perform are listed in the following table:

Table 1-1 Role Permissions of InsightBusinessUser

Can...	Cannot...
<ul style="list-style-type: none"> • Access Models • Update Models • Discard Draft Models • Export Models 	<ul style="list-style-type: none"> • Create Models • Map Milestones and Indicators • Delete Models • Create Connections • View/Create/Update Dashboards • Configure Reports

1.3.2 InsightIntegrationArchitect

The user with the role *InsightIntegrationArchitect* can perform the tasks listed in the following table:

Table 1-2 Role Permissions of InsightIntegrationArchitect

Can...	Cannot...
<ul style="list-style-type: none"> • Access Models • Update Models • Activate Models • Deactivate Models • Discard Draft Models • Delete Models • Export Models • Map Milestones and Indicators • Use Connections 	<ul style="list-style-type: none"> • Create Models • Create Connections • View/Create/Update Dashboards • Configure Reports

1.3.3 InsightExecutive

The user with the role *InsightExecutive* can perform the tasks listed in the following table:

Table 1-3 Role Permissions of InsightExecutive

Can...	Cannot...
<ul style="list-style-type: none"> • View Dashboards • Create Custom Dashboards • Update Dashboards • Configure Reports 	<ul style="list-style-type: none"> • Create Models • Map Milestones and Indicators • Discard Draft Models • Delete Models • Create Connections

1.3.4 InsightAdmin

The user with the role *InsightAdmin* can perform the tasks listed in the following table:

Table 1-4 Role Permissions of InsightAdmin

Can...	Cannot...
<ul style="list-style-type: none"> • Create Connections • View Dashboards • Create Custom Dashboards • Update Dashboards • Create Models • Access Models • Update Models • Import Models • Map Milestones and Indicators • Discard Draft Models • Delete Models • Export Models • Activate Models • Deactivate Models • Configure Reports 	NA

Note: *InsightAdmin* role has all the privileges. A user with this role acts as a Super User.

1.3.5 InsightModelCreator

The user with the role *InsightModelCreator* can create models and perform all actions on those models. This user is also the owner of the model. The tasks that a user with this role can perform are listed in the following table:

Table 1-5 Role Permissions of InsightModelCreator

Can...	Cannot...
<ul style="list-style-type: none"> • Create Models • Access Models • Update Models • Activate Models • Deactivate Models • Map Milestones and Indicators • Discard Draft Models • Delete Models • Import Models • Export Models • Use Connections • View Dashboards • Create Custom Dashboards • Update Dashboards • View Console • Configure Reports 	<ul style="list-style-type: none"> • Create Connections

1.3.6 InsightConnectionCreator

The user with the role *InsightConnectionCreator* can perform the tasks listed in the following table:

Table 1-6 Role Permissions for InsightConnectionCreator

Can...	Cannot...
<ul style="list-style-type: none"> • Create Connections • Delete Connections • Configure Connections 	<ul style="list-style-type: none"> • Create Models • Access/Update Models • View/Create/Update Dashboards • Map Milestones and Indicators • Configure Reports

1.4 Tasks A User Can Perform in Insight

Oracle Real-Time Integration Business Insight users can perform the following tasks based on their user roles. For more information about the users and their role permissions, see [User Personas](#).

1. Create a model. Only users with the role [InsightModelCreator/InsightAdmin](#) can create models.
2. Create milestones for the model, an initial milestone and a terminal milestone at the minimum. Only users with the role [InsightModelCreator/InsightIntegrationArchitect/InsightBusinessUser/InsightAdmin](#) can create milestones.
3. Define indicators for each of the milestone. Though indicators are not mandatory for the milestones, each indicator needs to be associated with a milestone. Only users with the role [InsightBusinessUser/InsightIntegrationArchitect/InsightModelCreator/InsightAdmin](#) can create/define indicators.
4. Create and test data connections. Only users with the role [InsightConnectionCreator/InsightAdmin](#) can create connections. Users with all the roles can test connections except for [InsightBusinessUser/InsightExecutive](#).
5. Map the milestones to implementation. Only users with the role [InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can create implementation mapping.
6. Define extraction criteria for the indicators. Only users with the role [InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can define extraction criteria for the indicators.
7. Save and activate the model. Only users with the role [InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can activate a model. However, a user with the role [InsightBusinessUser](#) can save the model though cannot activate the model.
8. Discard, deactivate and delete a model. Only users with the role [InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can deactivate/delete a model. However, a user with the role [InsightBusinessUser](#) can discard the draft of a model though cannot deactivate/delete a model.
9. View, create, and manage dashboards (use and view default dashboards; create and manage custom dashboards). Only users with the role [InsightModelCreator/InsightExecutive/InsightAdmin](#) can view, create, and manage dashboards.
10. View or run the reports. Only users with the role [InsightModelCreator/InsightExecutive/InsightAdmin](#) can view or run the reports.

Insight Home

Oracle Real-Time Integration Business Insight **Home** page varies based on the user's privileges logged in to the application.

A super user can see the following tabs or navigational shortcuts on the **Home** page:

- **Home** — used to navigate to the Home page.
- **Designer** — used to create models, milestones, and indicators that represent critical components of key business processes. This tab is visible only to users with the roles *InsightBusinessUser / InsightIntegrationArchitect / InsightAdmin / InsightModelCreator*.
- **Console** — allows business performance tracking, trend identification, and the discovery of outliers using both custom and pre-defined dashboards. This tab is visible only to users with the roles *InsightExecutive / InsightAdmin / InsightModelCreator*.
- **Reports** — creates and analyzes detailed data captured by models. This tab is visible only to users with the roles *InsightExecutive / InsightAdmin / InsightModelCreator*.
- **Administration** — configures connections to application implementations to facilitate milestone and indicator mappings. This tab is visible only to users with the roles *InsightAdmin / InsightConnectionCreator*.
- **Guided Tour** — walks you through the product using a set of videos. This tab is visible to all user roles.
- **Help Drawer** — helps you to quickly access the documentation, videos, and tutorials of the product. This tab is visible to all user roles.

The **Home** page also displays [Model Summary Cards](#), [Reports](#), and [Recent Models](#).

For more information about the role privileges of the users, see [User Personas](#).

2.1 Welcome Panel

The Welcome Panel contains the navigational shortcuts, an alternative way to navigate to the **Designer**, **Consoles**, **Reports**, or **Administration** pages. You can configure whether to display the Welcome Panel on the Home page or not from the [Preferences](#).

Apart from the navigational shortcuts, the Welcome Panel also has links to **Guided Tour** and **Help Drawer**.

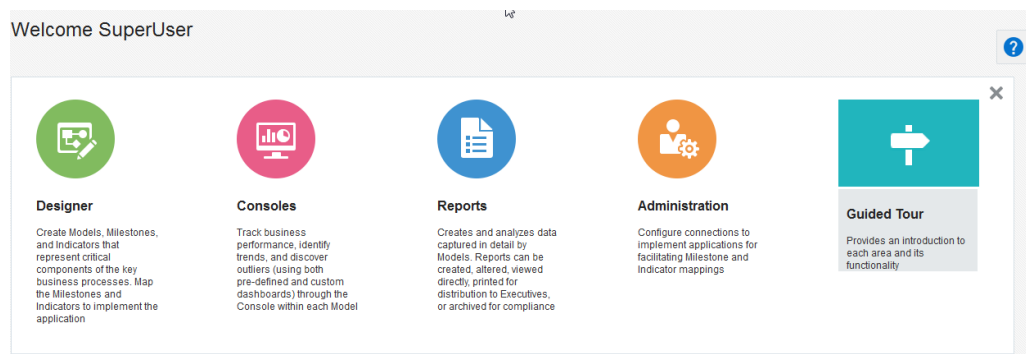
Guided Tour

The **Guided Tour** is a set of introductory videos that provide a very high-level overview of the product. These videos help you to get familiarized with various areas of the product.

Help Drawer

The Help Drawer is a quick toolbar that allows you to get a high-level overview of the features in the product. This drawer also helps you to troubleshoot some commonly faced issues. You can also see links to the documentation sections from this drawer.

Figure 2-1 Welcome Panel



2.2 Model Summary Cards

The **Model Summary Cards** provide high-level details about the available models in the application. The summary cards provide details about:

- State of the model
- Total number of active instances for the last five days

Note: There is a difference between how the **Last 5 days** filter behaves on the **Home** page and in the dashboard filters. On the **Home** page, data for each of the last five days is shown separately. For example, if today is February 15, then data will be shown for February 15, 14, 13, 12, and 11. For each day the data will be from the start of the day to the end of the day as per the server time zone.

However, in the dashboard filters last 5 days means all the data between current timestamp and 5 days before the current timestamp (current timestamp - 5 days). The behavior is similar for the other filter options last 1 day, last 30 days and last 90 days. The behavior on the Consoles home page is same as that of the Home page except that the Home page displays data for five days while the Consoles page displays data for one day.

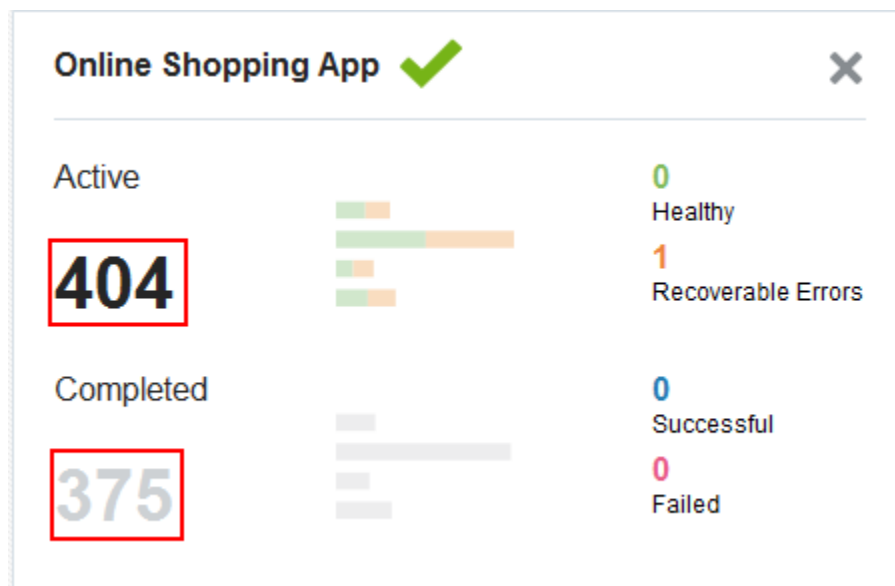
- Total number of completed instances for the last five days
- Number of instances in each of the states: *Healthy*, *Recoverable Errors*, *Successful*, and *Failed*, for one day. By default they are for the last day but you can click any of the bars to see this information for that day.

Instance States

The instances can be in either *Active* or *Completed* state.

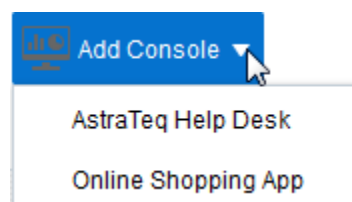
- Active — either *Healthy* or *Recoverable*
 - A Healthy instance is the one that has last passed a milestone which is neither terminal nor error.
 - A Recoverable instance is the one that has last passed a milestone which is error but not terminal.
- Completed — either *Successful* or *Failed*
 - A Successful instance is the one that has last passed a milestone which is terminal but not error.
 - A Failed instance is the one that has last passed a milestone which is both terminal and error.

Figure 2-2 Model Summary Card



When you click the model name or the number of instances (active or completed), you navigate to its **Dashboards Page**. Here you can see the five-day history chart of the model.

If you do not see any **Model Summary Cards** on the **Home** page, click **Add Console** at the bottom of the screen and select the model that you want to add. The consoles you add are specific to you are not propagated to other users who log in to the application.

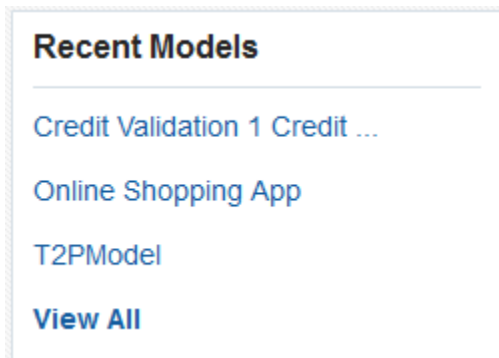


Note: You can add a maximum of six consoles using the **Add Console** button. When you reach the limit of six consoles, instead of the **Add Console** button you will see the **View All** link. When you click that link, you navigate to the **Consoles** page.

2.3 Recent Models

The **Recent Models** card in the bottom right of the screen displays the recent models defined in the application up to a maximum of five models. The models which have been recently updated or activated appear in this list. This pane also has a **View All** link that takes you to the **Designer** page. When you click any individual model, you navigate to the model details page. This reduces the number of clicks to reach the model details page.

Figure 2-3 Recent Models Card

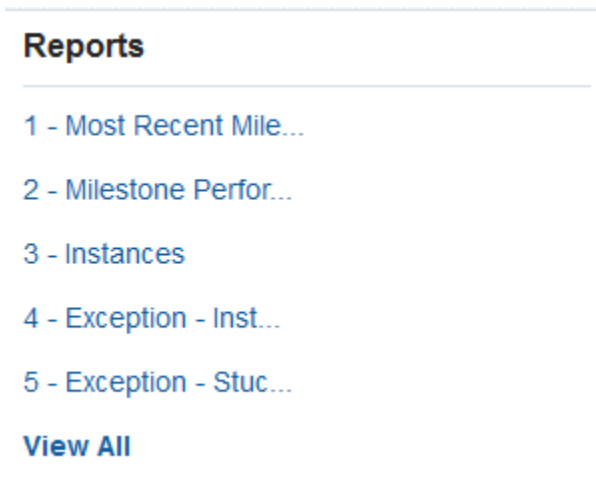


2.4 Reports

The **Reports** card in the bottom right of the screen displays the available reports in the application up to a maximum of 5 reports. The pane also has a **View All** link that takes you to the **Reports** page.

When you click each of the report link in the report card, you are navigated to the **Reports** page and that particular is displayed.

Figure 2-4 Reports Card



Working with Models

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 generally describes the high-level concepts associated with an integration application, whereas the architect refines those concepts and maps them to an application implementation. Once the model is defined and mapped, the system starts collecting metrics associated with instances of the business model. The metrics are used to render dashboards and reports.

Creating a model involves collaboration between users that have different personas: business users and architects. Business users define the abstract model, including milestones and indicators, while architects map those abstractions to underlying artifacts such as services and components.

A model includes:

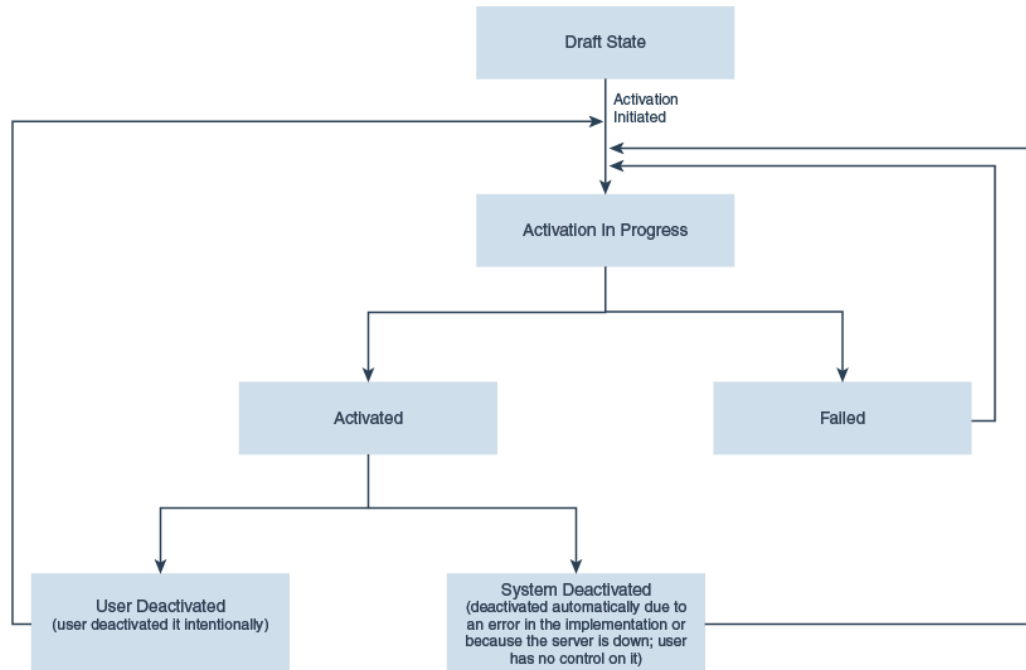
- Basic metadata
- Identifier — this is the unique identifier which identifies an instance of the model and it is mandatory to define it
- Set of ordered milestones and their associated indicators.

For detailed description about milestones, indicators, and identifiers, see *Understanding Oracle Real-Time Integration Business Insight*.

3.1 Model Lifecycle and Activation

A newly created model is in **Draft** state until the model is **activated**. Only activated models collect metrics. While a model is being activated, it is temporarily in the state of **Activation in Progress**. If activation is unsuccessful, the state is updated to **Activation Failed**. If the activation is successful, the state changes to **Activated**. A model can be deactivated as a result of a change to the underlying implementation, or a user can deactivate it – in either case the model is in **Deactivated** state with additional information available on hover.

To make changes to an active model, a new **Draft** is created, which can be activated after the changes have been completed.

Figure 3-1 Model Lifecycle State Transition

Sometimes, a model moves into an **Unknown** state. This happens when the runtime cannot determine the state of the model as **Activated** or **Deactivated**. You can perform all the lifecycle actions on a model in such state.

For more information, see [Model Lifecycle States](#).

3.1.1 Model Lifecycle States

Any model passes through the following lifecycle states:

- **Draft:** In this state, changes can be made to the model and no metrics are collected. A draft model supports an **Export** option which allows you to export the model and use the exported model to import into the application.
- **In Progress:** A model is in this state when activation has been initiated
- **Activated:** When a model is in this state, metrics are now being collected, changes are not possible. An activated model supports an **Export** option which allows you to export the model and use the exported model to import into the application.
- **Failed:** A model falls into this state when it encounters issues during activation
- **Deactivated:** A model moves into this state when a change occurs in the underlying implementation or you deactivate it specifically.
 - **System Deactivated:** when the integration application is altered due to either deactivation/undeployment/systemic errors like loss of connectivity/retries exceeding threshold/application redeployment to a different path/application changes. Insight agent automatically deactivates the model and the user has no control on it.
 - **User Deactivated** if you specifically deactivate the model.

3.1.2 Model Lifecycle Actions

You can execute the following actions on a model, depending on the current state of the model:

- **Activate:** Activates a model. The model definition must be 100% complete to activate it. A draft can be activated to replace the existing active model.

Note: Only users with the role [InsightModelCreator](#) / [InsightIntegrationArchitect](#) / [InsightAdmin](#) can activate a model.

- **Deactivate:** Deactivates an activated model.

Note: Only users with the role [InsightModelCreator](#) / [InsightIntegrationArchitect](#) / [InsightAdmin](#) can deactivate a model.

- **Delete:** Deletes an activated model. This action is permanent and cannot be reversed.

Note: Only users with the role [InsightModelCreator](#) / [InsightIntegrationArchitect](#) / [InsightAdmin](#) can delete a model.

Apart from the lifecycle actions, you can also perform some other actions on the models. See [Other Model Actions](#).

3.2 Creating a Model

Only users with the role [InsightModelCreator](#) or [InsightAdmin](#) can create models.

To create a model:

1. Click the **Designer** tab or the navigational shortcut on the **Home** page.

The **Insight Models** page opens. This page lists all the Models, irrespective of the state they are in. You can perform various actions on the models listed on this page. For more information, see [Other Model Actions](#).

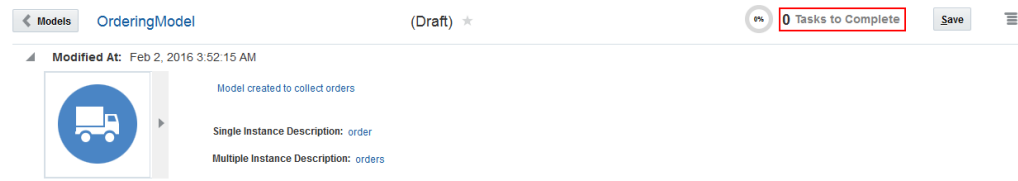
2. Perform step 3 or 4.
3. Click **Create Model**.
4. Click the **Draft** version of the model if you already have a draft model.
5. Enter the following details:
 - a. **Name:** a suitable name for the model
 - b. **Description:** an appropriate description for the model
 - c. **Icon:** select any icon of your choice. The icon you choose here appears next to the model on the **Insight Models** page.
 - d. **Single Instance Description:** an appropriate description to be used for the single instance of the model. For example, order.

- e. **Multiple Instance Description:** an appropriate description to be used for multiple instances of the model. For example, orders.
6. Click **Save** to save the model.
- A confirmation message appears.

The model is created and is in **Draft** state.

For more information about the various states of the models, see [Model Lifecycle States](#).

Figure 3-2 Draft Model



Note: The model displays the number of **Tasks to Complete** at the top. You must complete all these tasks before you can activate a model.

Click the **Models** button on the top-left corner of the page to back to the **Designer** page.

3.3 Creating Milestones

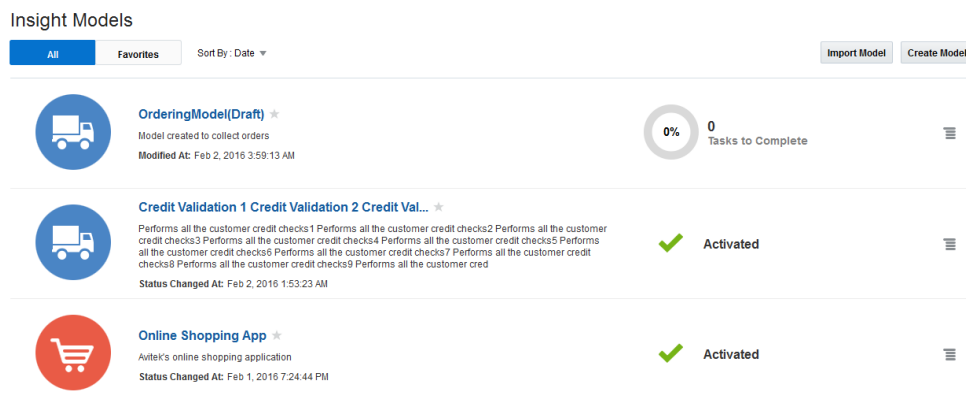
After you create a model, the next important step is to create milestones for the model. The milestones are points in the business process that help you in monitoring the business progress. Generally, milestones are created iteratively. For more information, see *Types of Milestones* in *Understanding Oracle Real-Time Integration Business Insight*.

Only users with the role [InsightBusinessUser](#)/[InsightIntegrationArchitect](#)/[InsightModelCreator](#)/[InsightAdmin](#) can create milestones.

To create a milestone:

1. Click the draft version of the model for which you want to create milestones on the **Designer** page, generally known as the **Models** page.

Figure 3-3 Designer Page



2. Click **Create Milestone**.

Note: Only users with the role [InsightBusinessUser](#)/
[InsightIntegrationArchitect](#)/[InsightModelCreator](#)/[InsightAdmin](#) can create milestones.

3. Provide a suitable name for the milestone.

The milestone expands.

4. Enter an appropriate description for the milestone.

5. Select the appropriate **Milestone Type**. The available types are: *Initial Milestone*, *Standard Milestone*, *Error Milestone*, *Terminal Milestone*, and *Terminal/Error Milestone*.

The bar which lists the type of milestones is known as **Milestone Toolbar**. If you accidentally close this toolbar, you must log in again to the application to see the **Milestone Toolbar**.

For more information about the types of milestones, see the *Understanding Oracle Real-Time Integration Business Insight*.

6. Either map the milestone to an implementation , described in [Mapping Milestone to an Implementation](#), or select the **Enable API Invocation** option to enable this milestone to receive events from the REST API.

Note: Only users with the role [InsightModelCreator](#)/
[InsightIntegrationArchitect](#)/[InsightAdmin](#) can create the implementation mapping.

Note: Milestone mapping is not available for pipelines/Business services with a service type of Messaging Request/Response XML which do not have a schema.

7. (Optional) Define indicators for the milestone. See [Defining Indicators](#).

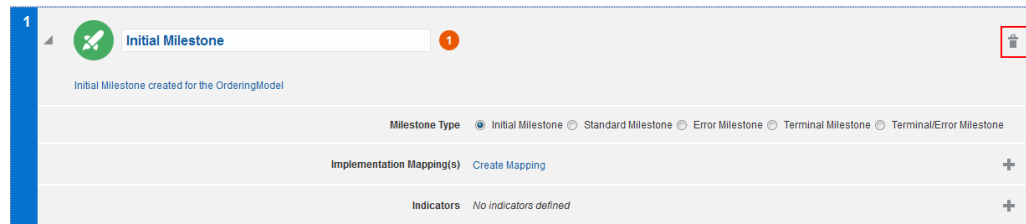
Note: Only users with the role [InsightBusinessUser](#)/
[InsightIntegrationArchitect](#)/[InsightModelCreator](#)/[InsightAdmin](#) can create/define indicators.

8. Repeat steps 2 to 7 to create all the required milestones for the model.

9. Click the **Delete** icon if you want to delete any milestone.

Note: Only users with the role [InsightBusinessUser](#)/[InsightModelCreator](#)/
[InsightIntegrationArchitect](#)/[InsightAdmin](#) can delete a milestone.

Milestones are created for the model.

Figure 3-4 Milestone Details

3.4 Mapping Milestone to an Implementation

Note:

This is not required if you have selected the **Enable API Invocation** option when creating your milestone.

When you define a milestone for a model, it is essential to map the milestone to an existing implementation. If the mapping is not done, a warning message appears next to the milestone stating that **Milestone Mapping is Missing**.

Only users with the role [InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can create implementation mapping.

There are different types of implementation mapping supported by the product, including SOA and Service Bus:

- [Mapping to a SOA BPEL Component](#)
- [Mapping to SOA Services/References/Components](#)
- [Mapping to Service Bus Pipelines](#)
- [Mapping to Service Bus Business Services](#)

Note: Milestone mapping is not available for pipelines/Business Services with a service type of Messaging: Request/Response XML, which do not have a schema. See [Mapping to Service Bus Pipelines](#) and [Mapping to Service Bus Business Services](#).

3.4.1 Mapping to a SOA BPEL Component

Only users with the role [InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can create implementation mapping.

To create an implementation mapping to a SOA BPEL Component:

1. Click **Create Mapping** within the milestone for which you are creating the implementation mapping.

The **Implementation Mappings** page opens.

2. Select a SOA connection from the **Data Connection** drop-down list. If you do not see any connections in the drop-down list, you must create a data connection. See [Creating a Data Connection](#).

This selection loads information about all the composites deployed in that domain.

3. Expand the required component and drill down to the required level.
4. Select the required entry and click the **BPEL Structure** icon to drill down further.

Figure 3-5 Mapping Icons



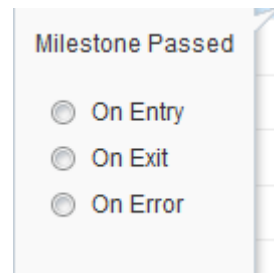
5. Navigate to the required BPEL activity in the BPEL structure tree and click the **Edit Mapping** icon.

Figure 3-6 Edit Mapping Icon




6. Select a suitable entry from the **Milestone Passed** popup.

Figure 3-7 Milestone Passed Popup



- **On Entry** indicates activation
- **On Exit** indicates completion
- **On Error** indicates fault.

The mapping is done and the first mapping on the **Implementation Mappings** page opens in an expanded form.

 **MAPPED TO activation**

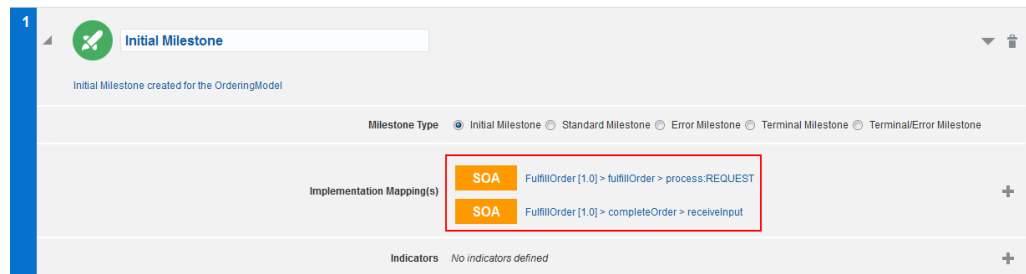
Note: Insight does **not** support mapping to the *OnMessage* and *OnAlarm* BPEL constructs. These elements are branches of the `Pick` and `EventHandlers` activities and can only be mapped as such, and **not** as independent activities themselves.

7. Select **Delete** or **Reset** from the **Mapping Actions** menu if you want to either delete or reset the defined mapping.
8. Click **Add Mapping** (at the top-right corner of the page) and repeat steps 2 to 6 to define additional mappings for the milestone.

- Click **Return to Editor** to go back to the Model Editor.

The milestone is mapped to an implementation.

Figure 3-8 Milestone Mapped to Implementation



3.4.2 Mapping to SOA Services/References/Components

Only users with the role [InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can create implementation mapping.

To create an implementation mapping to a SOA Composite services/references:

- Click **Create Mapping** within the milestone for which you are creating the implementation mapping.

The **Implementation Mappings** page opens.

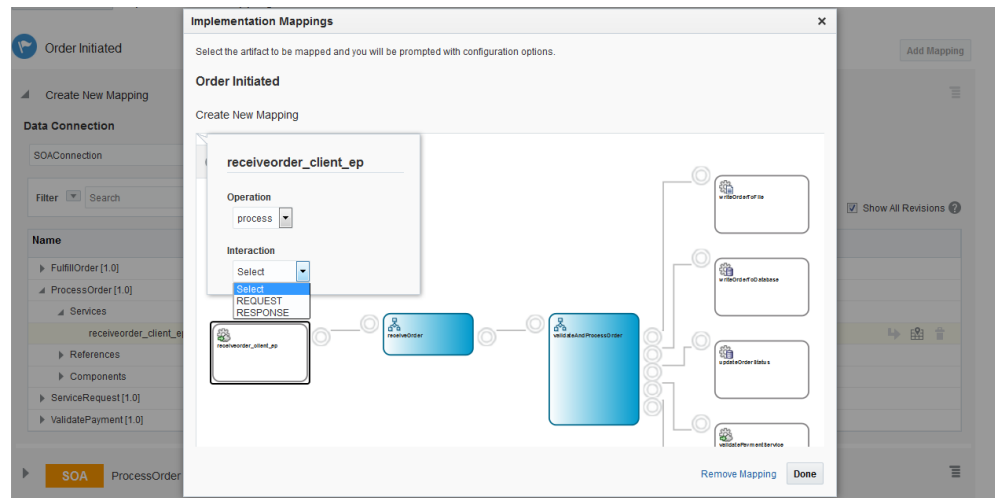
- Select a SOA connection from the **Data Connection** drop-down list. If you do not see any connections in the drop-down list, you must create a data connection. See [Creating a Data Connection](#).

This selection loads information about all the composites deployed in that domain.

- Expand the required artifact and drill down to the required **Services/References/Components**.
- Select the required entry and click the **Edit Mapping** icon to define the mapping.
- Select an appropriate value from the **Operation** drop-down list.
- Select an appropriate value from the **Interaction** drop-down list.

Note: This field does not appear unless you select a value in the **Operation** drop-down list.

The visual representation will not be available for composites built in 11g version of SOA. In that case, only the popup containing the **Operation** and **Interaction** drop-down will be visible.

Figure 3-9 Mapping to SOA Services/References

7. Click **Remove Mapping** to remove the existing mapping and create a new mapping.
8. Click **Done** to complete the process of mapping.

The mapping is done and the first mapping on the **Implementation Mappings** page opens in an expanded form.

3.4.3 Mapping to Service Bus Pipelines

Only users with the role [InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can create implementation mapping.

Note: The mapping page will only show service bus pipelines and business services that are WSDL based or Messaging Service with a request or response type of XML. For a complete list of Service Bus constructs supported for mapping, see [Supported and Unsupported Features in Oracle Service Bus](#).

To create an implementation mapping to Pipelines:

1. Click **Create Mapping** within the milestone for which you are creating the implementation mapping.

The **Implementation Mappings** page opens.

2. Select a Service Bus connection from the **Data Connection** drop-down list. If you do not see any connections in the drop-down list, you must create a data connection. See [Creating a Data Connection](#).

This selection loads all the service bus projects deployed in that domain.

Note: You will see that only the projects that conform to the supported Service Bus feature set (for example, WSDL services) are loaded and available. For a complete list of Service Bus constructs supported for mapping, see [Supported and Unsupported Features in Oracle Service Bus](#).

3. Expand the desired project and drill down to the required **Pipeline**.
4. Click the **Edit Mapping** icon for the pipeline to map.

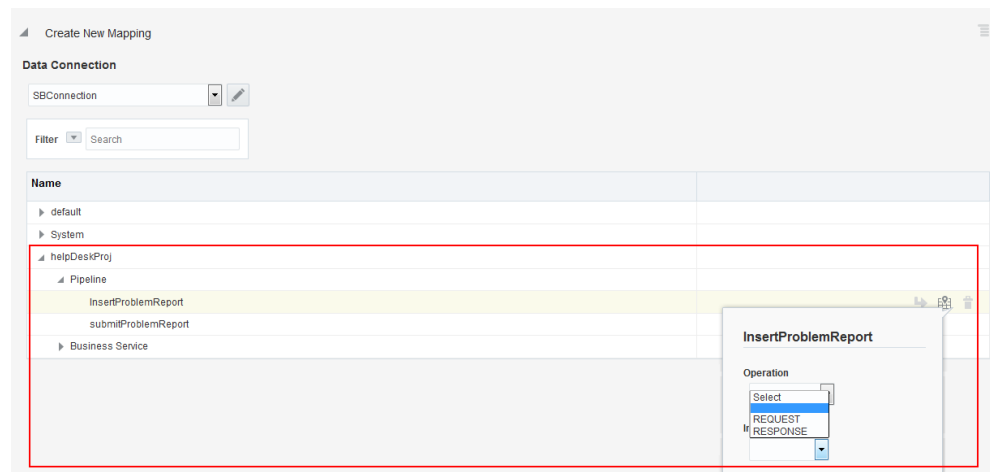
The service type can be:

- *WSDL*: both **Operation** and **Interaction** appear in the pop-up window. Possible values for **Interaction** are **REQUEST**, **RESPONSE**, and **FAULT**.
 - *Message Service*: only **Interaction** appears in the pop-up window as a drop-down list with the values **REQUEST** and **RESPONSE**.
5. Select the **Operation** in the drop-down list that opens in a pop-up window.
 6. Select the **Interaction** in the drop-down list that opens in a pop-up window. The possible values for **Interaction** are:
 - **REQUEST**
 - **RESPONSE**
 - **FAULT**.

Important: Any business service referencing artifacts (like WSDL, XSD, etc) that has a circular dependency or any cyclic references, then such a business service will not be available for mapping within Mapping Editor. The only way to map to such a business service is to remove the cyclic references from the artifacts.

When you select a value for **Interaction**, the window disappears and you can see an indication of mapping created. A green icon appears while editing a mapping.

Figure 3-10 Mapping to Service Bus Pipelines



The mapping is done and the first mapping on the **Implementation Mappings** page opens in an expanded form.

3.4.4 Mapping to Service Bus Business Services

Only users with the role [InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can create implementation mapping.

To create an implementation mapping to Business Services:

1. Click **Create Mapping** within the milestone for which you are creating the implementation mapping.

The **Implementation Mappings** page opens.

2. Select a Service Bus connection from the **Data Connection** drop-down list. If you do not see any connections in the drop-down list, you must create a data connection. See [Creating a Data Connection](#).

This selection loads information about all the projects deployed in that domain.

Note: You will see that only the projects that conform to the supported Service Bus feature set (for example, WSDL services) are loaded and available. For a complete list of Service Bus constructs supported for mapping, see [Supported and Unsupported Features in Oracle Service Bus](#).

3. Expand the desired project and drill down to the required **Business Service**.

The service type can be:

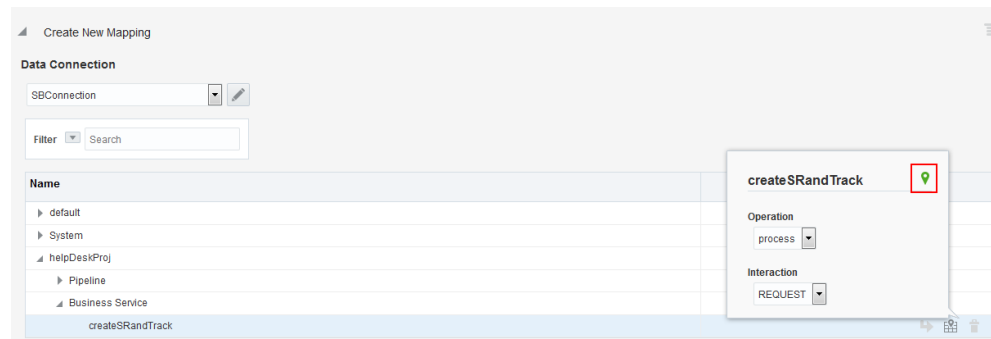
- *WSDL*: both **Operation** and **Interaction** appear in the pop-up window. Possible values for **Interaction** are **REQUEST**, **RESPONSE**, and **FAULT**.
- *Message Service*: only **Interaction** appears in the pop-up window as a drop-down list with the values **REQUEST** and **RESPONSE**.

4. Click the **Edit Mapping** icon for the business service to map.
5. Select the **Operation** in the drop-down list that opens in a pop-up window.
6. Select the **Interaction** in the drop-down list that opens in a pop-up window.

Note: This drop-down list appears only if you select a value for **Operation**.

Important: Any business service referencing artifacts (like WSDL, XSD, etc) that has a circular dependency or any cyclic references, then such a business service will not be available for mapping within Mapping Editor. The only way to map to such a business service is to remove the cyclic references from the artifacts.

When you select a value for **Interaction**, the window disappears and you can see an indication of mapping created. A green icon appears while editing a mapping.

Figure 3-11 Mapping to Service Bus Business Service

The mapping is done and the first mapping on the **Implementation Mappings** page opens in an expanded form.

3.5 Editing the Milestone Mapping

Only users with the role [InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can edit the implementation mapping.

To edit mapping of a milestone:

1. Expand the required milestone in **Model Editor**.
2. Click the defined mapping to open the **Implementation Mappings** page.
3. Click the **Edit Mapping** icon for Service Bus based mappings (pipelines and business services), and drill down to the BPEL structure for SOA BPEL based mappings.

The existing mapping opens.

4. Make the required changes.

The mapping is updated.

5. Click **Return to Editor** to go to the **Model Editor**. In the **Model Editor**, you can see the changes you have made to the mapping.

3.6 Selecting the API Data Type for Indicators

You can choose the data type for indicators associated with milestones that allow API invocations.

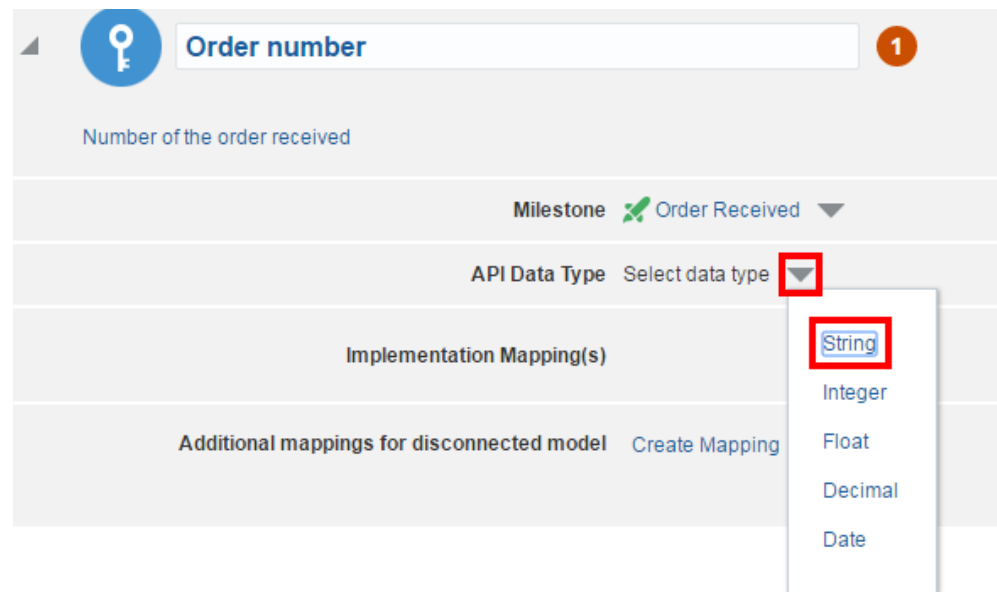
To select the API data type:

1. Expand the indicator you want to edit (the unique instance identifier, dimension, or measure).
2. In the **API Data Type** field, click the **Click to set the API data type** icon, and then select the data type of the indicator.

The data types available differ depending on the indicator type:

- **Unique Identifier:** String, Integer, Float, Decimal, and Date
- **Dimensions:** String, Integer, Float, Decimal, and Date

- **Measures:** String, Integer, Float, and Decimal



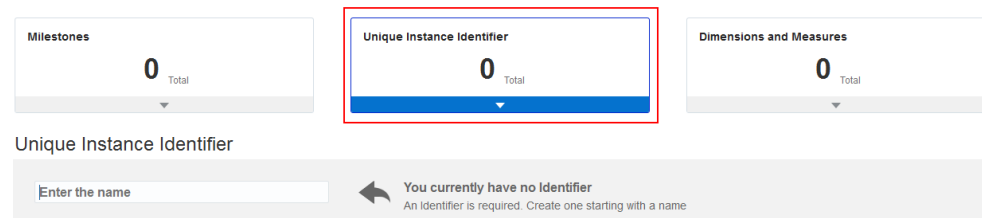
3.7 Defining Unique Identifier

Defining a unique instance identifier for a model is mandatory. The identifier must be unique from all other instances. Only users with the role [InsightBusinessUser](#)/[InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can create/define a unique instance identifier.

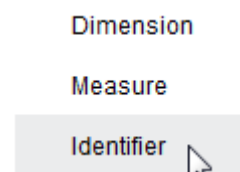
To define a unique instance identifier for a model:

1. Expand the milestone to which you want to associate the unique instance identifier.
2. Perform step 3 or 4.
3. Click the **Unique Instance Identifier** tile.

Figure 3-12 Unique Instance Identifier Tile



4. Click **Create Indicator** and select **Identifier**.

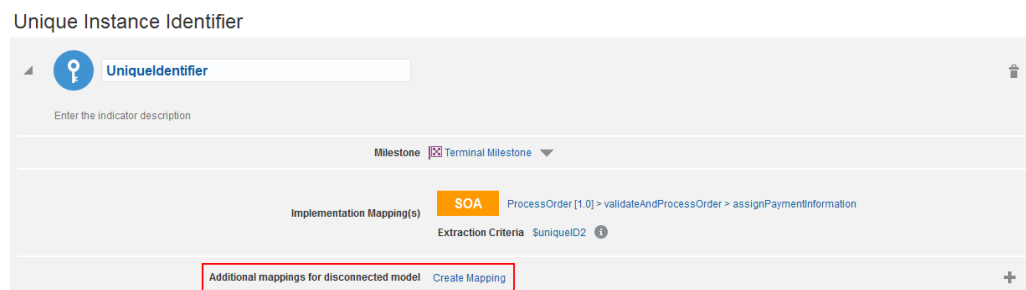


Note: If you perform step 3 first, then **Identifier** option in this step will be disabled, as you can define only one unique instance identifier.

5. Enter the following in the **Unique Instance Identifier** area:
 - a. Name
 - b. Description
6. Associate the identifier with a milestone. For more information, see [Mapping Milestone to an Implementation](#).
7. Define extraction criteria for the implementation mapping. For more information, see [Defining Extraction Criteria](#). **This is required if you have not selected the Enable API Invocation option.** Set the data type for the indicator instead. See [Selecting the API Data Type for Indicators](#).

A unique identifier is defined for the model. You can only create one unique identifier. Once you create the unique identifier, the **Identifier** option shown in step 2 will be disabled. You can add additional mappings for the identifier.

Figure 3-13 Unique Instance Identifier Defined



3.8 Defining Indicators

Indicators represent metrics that are unique to your application. These indicators quantify the performance of your business, and are used to create dashboards and reports used for tracking your business. There are two types of indicators: dimensions and measures.

Dimensions are used to categorize your instances. For example, in the case of a help desk system, you might want to be able to group your help tickets by geographic region (e.g., state or province), or by customer type (e.g., gold, silver, or bronze support). Dimensions allow you to slice and dice your business data.

Measures, on the other hand, represent values associated with each specific instance. For example, you might use a numerical measure to represent the cost associated with each help ticket, or a date measure to represent the date that the ticket was submitted.

Note: Only users with the roles [InsightIntegrationArchitect](#)/[InsightModelCreator](#)/[InsightBusinessUser](#)/[InsightAdmin](#) can create/define indicators.

Important: Oracle Real-Time Integration Business Insight does not support duplicate indicators.

To define indicators:

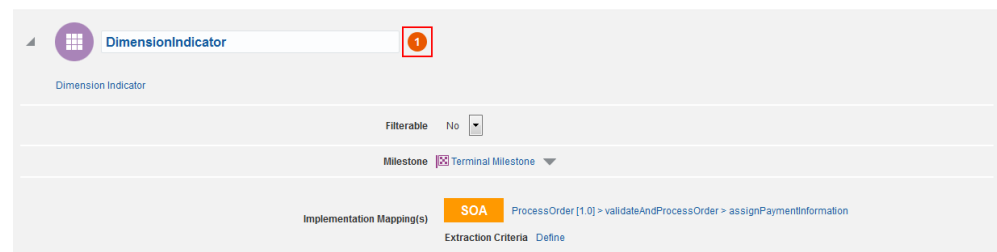
1. Expand the milestone for which you want to create indicator.
2. Click **Create Indicator**.
3. Select the type of indicator, either a **Dimension** or a **Measure**.

A dimension is indicated by  and a measure is indicated by .

4. Enter the following:
 - a. Name
 - b. Description
5. Indicate if you want the indicator to be filterable or not by selecting an appropriate value from the **Filterable** drop-down list. If you make the indicator filterable it appears in the graph. But, be careful with the number of indicators you mark as **Filterable**, as too many filterable indicators slows down the performance.
6. [Defining Extraction Criteria](#) for the Implementation Mapping or [Selecting the API Data Type for Indicators](#) if **Enable API Invocation** is selected for the indicator's associated milestone. Only the users with the roles [InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can define the extraction criteria.

Till you define the extraction criteria, a warning message appears next to the indicator's name.

Figure 3-14 *Extraction Criteria Warning*



7. Repeat the steps 2 to 6 to create as many indicators as you want.

3.9 Defining Extraction Criteria

Note:

Skip this section if you have selected the **Enable API Invocation** option when creating your milestone. See [Selecting the API Data Type for Indicators](#) instead.

Only users with the role [InsightModelCreator](#)/[InsightIntegrationArchitect](#)/[InsightAdmin](#) can define extraction criteria for the indicators.

To define extraction criteria for an indicator:

1. Expand the indicator for which you want to define the extraction criteria.
2. Ensure that you have defined the implementation mapping for the milestone. If the mapping is not yet done, complete the mapping first.
3. Click **Define** next to the **Extraction Criteria** field.

The **Implementation Mappings (s)** page opens.

4. Click the **Edit Extraction Criterion** (the pencil icon) for each of the implementation mapping.

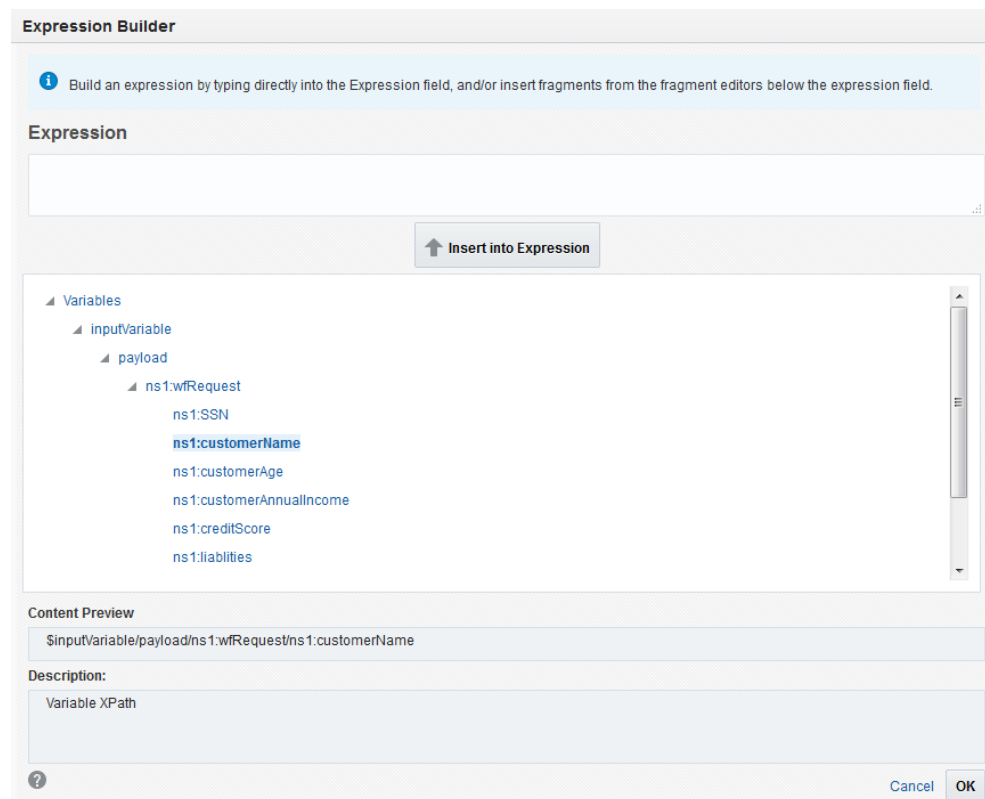
The **Expression Builder** dialog opens.

5. Insert fragments from the fragment editor using the **Insert into Expression** button.

Note: If you use a complex data type in the expression for defining the extraction criteria, the identifier value does not appear in the runtime metrics data. Use simple data types to overcome this issue.

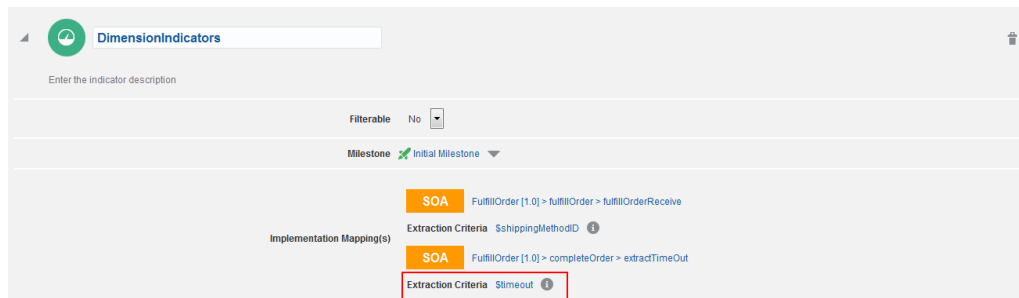
6. Click **OK** to complete defining the expression.
7. Click **Cancel** to abort the operation.

Figure 3-15 Expression Builder



8. Repeat steps 3 to 7 for each implementation mapping.

Extraction criteria is defined for all the implementation mappings. The information icon next to the XPath string displays the data type when you hover your mouse.

Figure 3-16 Extraction Criteria Defined

3.10 Viewing API Invocation Details

You can view a manifest with API invocation details for all of a model's milestones that allow API invocations. You can also view API invocation details for an individual milestone. This provides you with templates you can use to create the request payloads sent to the Real-Time Integration Business Insight REST API for events corresponding to each milestone.

Topics

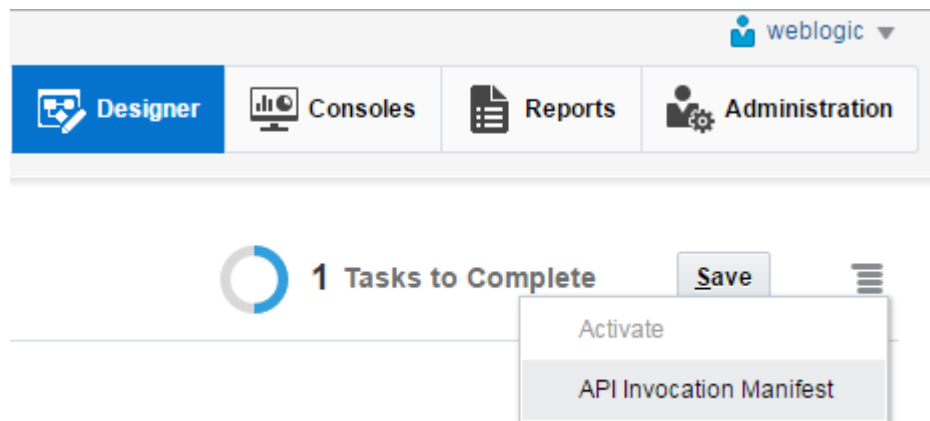
- Download a Model's API Invocation Manifest
- Viewing a Milestone's API Invocation Details

3.10.1 Download a Model's API Invocation Manifest

You can download a manifest with API invocation details for all of a model's milestones that allow API invocations. The manifest is a text file that lists all milestones where the Enable API Invocation option is selected. A sample JSON payload is provided for each milestone. Use this manifest as a template to create REST calls for each business event from your application to Real-Time Integration Business Insight.

To view a model's API invocation manifest:

1. Ensure that you're viewing the model containing the milestone you want to view details for. If you're not, click the **Designer** tab, and then click the model.
2. Click the **Model Actions** menu, and then click **API Invocation Manifest**.



The manifest is downloaded to your local disk.

3. Open the manifest text file you downloaded in the previous step. Use the templates provided to generate JSON payloads to send with Insight REST API invocations for each business event.

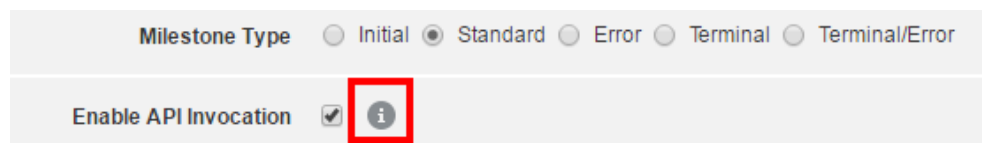
When generating the JSON payload for each milestone, ensure you replace the `eventTime`, `identifierValue`, and `correlationValue` values. Also add dimension and measure values if the milestone requires them.

3.10.2 Viewing a Milestone's API Invocation Details

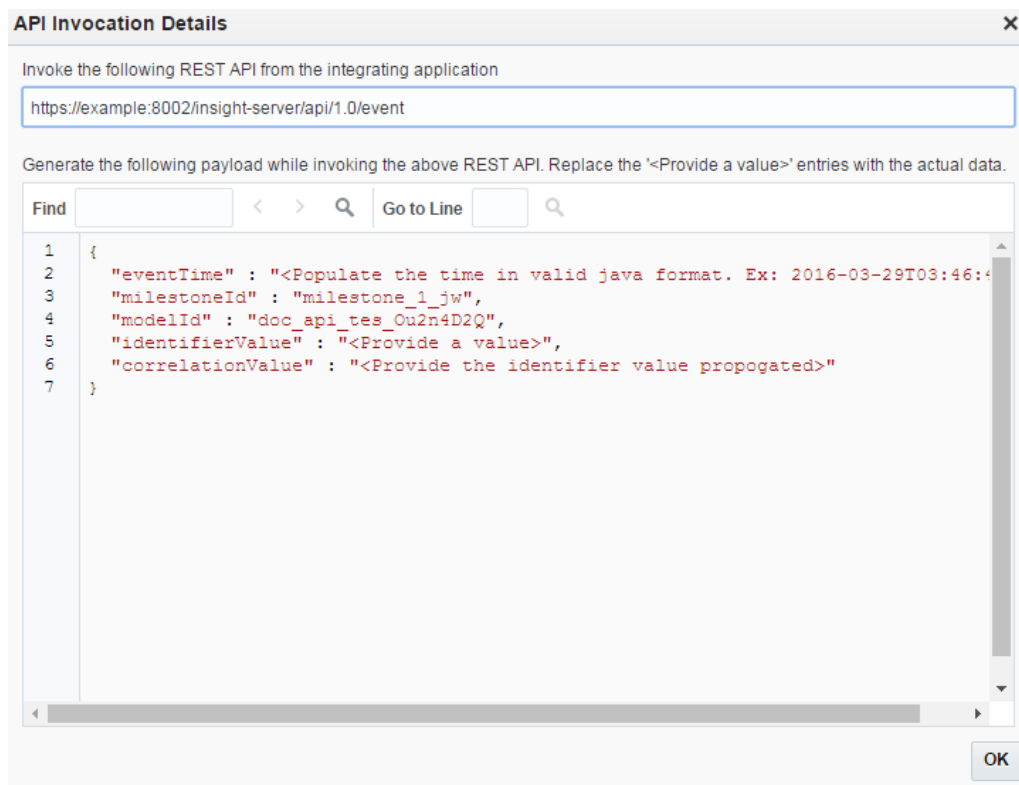
View a milestone's API invocation details to view the Real-Time Integration Business Insight's REST API endpoint URL and a sample JSON request payload. Use the template to generate the request payload for each event of this milestone you want to send from an external application to Real-Time Integration Business insight for processing.

To view a a milestone's API invocation details:

1. Ensure that you're viewing the model containing the milestone you want to view details for. If you're not, click the **Designer** tab, and then click the model.
2. Expand the milestone you want to view details for. In the **Enable API Invocation** section, click the **Click to see the details of API integration (?)** icon.



The API Invocation Details dialog appears.



When generating the JSON payload, ensure you replace the `identifierValue` and `correlationValue` values. If you do not include an `eventTime` Insight automatically populates it. Also add dimension and measure values if the milestone requires them.

3.11 Activating a Model

After you have defined milestones, unique identifier, indicators, mappings, and extraction criteria, it is now time to activate the model. Activating a model will push the model definitions out to the appropriate runtime engines, where monitoring will be initiated.

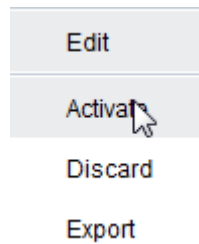
After activation has completed, you will immediately have access to dashboards that allow you to monitor your application. See [Working with Dashboards \(Consoles\)](#). Only users with the role `/InsightModelCreator/InsightIntegrationArchitect/InsightAdmin` can activate a model.

To activate a model:

1. Click the **Designer** tab or the **Designer Tile** on the Home page.

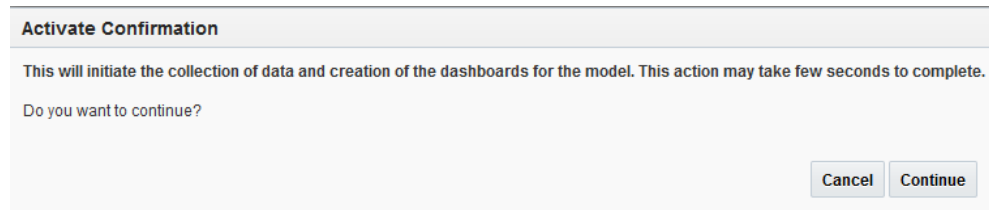
The **Insight Models** page opens.

2. Ensure that the model you want to activate is 100% complete and has no tasks to complete.
3. Select **Activate** from the **Model Actions** menu.

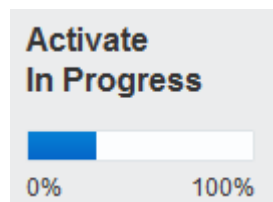


A confirmation dialog appears. Click **Continue**.

Figure 3-17 *Activation Confirmation Dialog*



A message appears that the activation is in process and the progress is indicated by a progress bar.



The model is activated.

3.12 Importing a Model

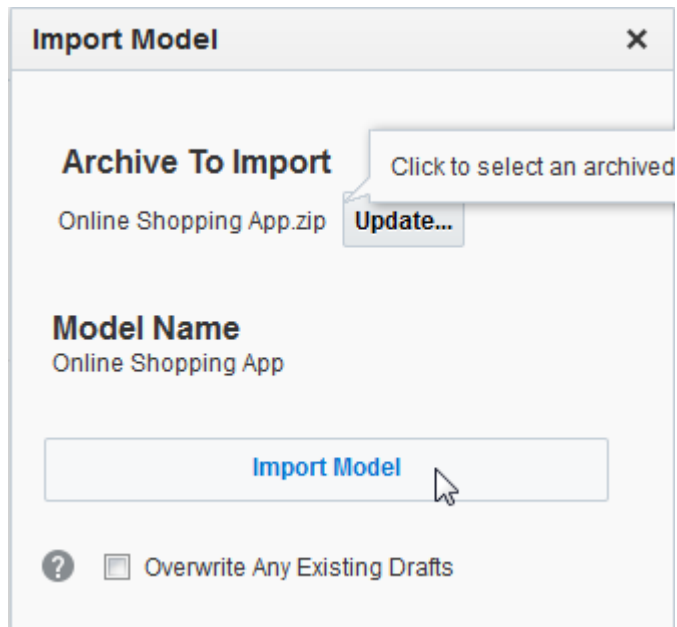
Only users with the role [InsightModelCreator](#)/[InsightAdmin](#) can import a model.

To import a model into the Oracle Real-Time Integration Business Insight application:

1. Navigate to **Insight Models** page.
2. Click **Import Model**.

The **Import Model** dialog opens.

Figure 3-18 Import Model Dialog



3. Click **Browse** to select an archive of a previously exported model to import.

The name of the model in the archived model is populated on the screen under the **Model Name** field.

4. Select **Overwrite Any Existing Drafts** if you want to overwrite the existing drafts with the model being imported.
5. Click **Import Model**.

The model gets imported as a Draft.

6. Configure the connections before you activate the imported model. Click **Connections** within the confirmation message that appears at the top of the screen.

Note: When you import a model from one system to another, the connections will need to be re-configured by a user with an *InsightAdmin* role. Generally, connections from one environment may be invalid in another environment (e.g., firewall issues, different network segments, development vs. production environments). Thus, importing a model only creates *stubs* (name only) of the connections used in the imported model, if connections with the same ID do not exist already. The user with the *InsightAdmin* role will subsequently need to fill in the details for these stubbed connections before the imported model can be activated.

You can see the imported and skipped connections. You must configure the connections that appear under the **Imported** cell. Click the connection under the Imported cell to navigate to the **Administration** page.

Figure 3-19 Imported Connections

The screenshot shows the Oracle Real-Time Integration Business Insight Designer interface. At the top, there is a navigation bar with 'Home', 'Designer', and 'Consoles' tabs. A green notification banner states: 'Model successfully imported. To activate, first configure imported Connections.' Below this, the 'Insight Models' section is visible, with tabs for 'All' and 'Favorites', and a 'Sort By: Date' dropdown. A table titled 'List of imported and skipped connections.' is shown, with columns 'Imported' and 'Skipped'. The 'Imported' column contains a link for 'SOA Connection'. Below the table, a model card for 'grading (indicator dash test)(Draft)' is displayed, including a truck icon, the text 'tracy test with chris composite', the modification date 'Feb 12, 2016 11:16:40 AM', and a progress indicator showing '100%' completion and '0 Tasks to C'.

If a connection of the same internal name has already been defined, the following message appears.

Figure 3-20 Skipped Connections

Imported	Skipped
	SOAConnection

3.13 Other Model Actions

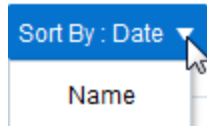
Apart from the lifecycle actions (see [Model Lifecycle Actions](#)), there are other actions that you can perform on a model. You can perform the following actions from the **Model Actions** menu:

- **Create Draft** — creates a draft version of an activated model and enables you to continue editing a model without interrupting metrics collection. Only users with the role [InsightBusinessUser/InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can create a draft version of a model.
- **Edit** — edits a model that is not activated yet. Only users with the role [InsightBusinessUser/InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can create edit/update a model.
- **Discard** — discards any changes made to the model. Only users with the role [InsightBusinessUser/InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can discard the changes made to the draft version of a model.
- **Export** — exports the model to a zip file. Only users with the role [InsightBusinessUser/InsightModelCreator/InsightIntegrationArchitect/InsightAdmin](#) can export an activated model.

You can mark any model as a favorite by clicking the **Favorite** icon next to the model. This icon is a toggle icon. The models marked as favorites appear under the **Favorites** tab of the **Insight Models** page.

You can sort the models by **Date** or **Name** using the options in the **Sort By** drop-down list on the **Designer** page.

Figure 3-21 *Sorting Options for Models*



Working with Dashboards (Consoles)

A console associated with a model gives a business owner visibility into details on how a business is performing. As soon as a model is activated, a console is created for the model. The console contains useful tables, visualizations, and dashboards that can be used immediately to understand business performance. Business owners may also quickly create custom dashboards based on their model's indicators that give aggregated business insight on key metrics.

It is possible to drill down into the detailed single-instance data from any dashboard to understand what milestones have been passed, and to inspect extracted indicators.

Note: Only users with one or more of the following roles can access consoles and the associated dashboards:

- [InsightExecutive](#)
 - [InsightModelCreator](#)
 - [InsightAdmin](#).
-

Finally, you can choose to display *external* dashboards in Insight that were created using the Oracle Business Activity Monitoring Composer. You need to enable external dashboards using the appropriate setting in [Preferences](#).

Note: If you use Oracle HTTP Server, you must point Oracle Business Activity Monitoring Composer to the same location as that of Insight with same server and port number for the dashboards to work correctly.

4.1 Console Overview

The **Consoles** page lists all the activated models.

You can mark any model as favorite. You can also sort the models either by Date or Name.

The **Consoles** page includes a high-level visualization of the metrics collected over the past day for an activated model. These metrics include the number of instances for the model that are:

- Healthy
- Recoverable Errors
- Successful

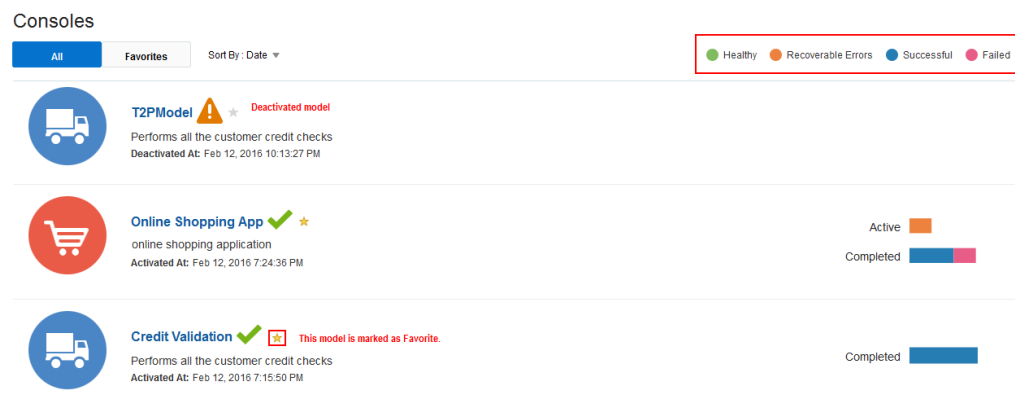
- Failed.

On the consoles list page, instances for the previous 24 hours are represented as bars at the end of each console's row. Active instances (Healthy and Recoverable) are stacked together as one bar and completed instances (Successful and Failed) are stacked as the other. Hover over the desired section of either bars to see the number of instances that bar represents. For detailed information about these instance states, refer to [Instance States](#).

Note: The active/inactive status and instance bars will always show the state at which the page was first loaded even if you use the browser's refresh button. You must navigate away from this page and come back to see the updated data..

The **Consoles** page appears as follows:

Figure 4-1 Consoles Page



Click a model's name to navigate to the **Dashboards** page of that model.

4.2 Understanding Dashboards

The main console shows information about the milestone performance of an integration application. For example, once the model of the application has been created and activated, business owners can identify bottlenecks in the application and track key metrics immediately and in real time.

The default dashboards are also known as *Milestone Dashboards* as they show metrics based on milestones defined in the model. These dashboards display the aggregate state of the business model based on milestones alone. To see the aggregate state of the model's *indicators*, you need to create custom dashboards.

The status area is a collapsible section of the **Dashboards** page that always displays the last time the model changed to/from active/inactive state. This area also displays the search tool. You can see the model's icon, model description, and the descriptions for Single and Multiple Instances (that were defined while creating the model).

See also:

- [Milestone Dashboards](#)
- [Custom Dashboards](#)
- [External Dashboards](#).

The **Dashboards** page for a model looks like the below screen.

Figure 4-2 Dashboards of the Model

The screenshot shows the 'Milestone Dashboards' page for the 'Online Shopping App' model. The page includes a 'Consoles' button, a status indicator 'Activated', and a search field for orders. The main content is a table with the following data:

Milestone	Count	Avg. Time To Following Milestone (Minutes)	Avg. Time From Previous Milestone (Minutes)
Order Received	20	0.2.0704125	
Order Initiated	20	0.0.0036475	0.2.0704125
Payment Check Initiated	20	0.0.508465	0.0.0036475
Payment Approved	15	0.0.039542222	0.0.679284444
Payment Declined	5		0.2.02188

The **Dashboards** page has the following elements:

- The **Consoles** button takes you back to the list of Consoles and updates the data on that page.
- The title area contains the model name and a **Favorites** toggle icon. This icon lets you mark a model as favorite.
- The **Import Dashboards** button allows you to import dashboards that were previously exported with this particular model. See [Importing Dashboards](#).
- The status indicator which indicates the status of the model
- The timestamp at which the model's status was last changed.
- The icons [Custom Dashboards](#) and [External Dashboards](#) enable you to view the dashboards.

4.2.1 Searching Instances

The **Search** field has the same label as that of the multiple instance description of the model. The field where you enter your search string uses the single instance description of the model as the placeholder text. The label of the search tool varies from one model to another.

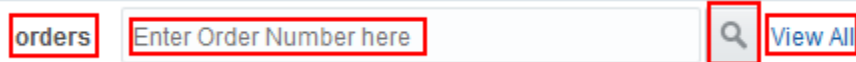
You can use this tool to search for various instances of the model. When you search for instances either from a milestone dashboard or a custom dashboard, the search result (s) open in a new tab. When you search for instances from the Business Transaction Dashboard, the search results appear on the same page.

Only users with the role [InsightModelCreator](#)/[InsightExecutive](#)/[InsightAdmin](#) can search for instances.

Note: Search is performed only based on the search strings and any of the [Filtering Instances](#) that have been applied earlier are ignored.

Note: Search is performed only on identifier values of instances. For example, if your identifier is a `Order Number`, you can only search for instances by order number.

The search tool is available at the top right-corner of the screen and appears as follows:



If you want to see all the instances of the model, click **View All** available in the search tool to navigate to the **Business Transaction Dashboard**. The **Business Transaction Dashboard** opens in a new tab.

When you search for an instance, if the identifier is of type `numeric/date`, you must enter the search string that exactly matches the identifier. If the identifier is of type `string`, you can enter a partial string, an automatic wildcard mapping is done and all the instances that contain the partial string entered are retrieved. The supported SQL wildcards are:

- % (percentage)
- _ (underscore).

4.2.2 Filtering Instances

The **Filters** allow you to control the data you can see on the dashboard. You can filter the instances by Lifecycle Filters or Indicator Filters or both. The lifecycle filters are uniform across models.

Only users with the role [InsightModelCreator](#)/[InsightExecutive](#)/[InsightAdmin](#) can filter instances.

Note: The filters work on the set of instances available at the time the page was loaded or when the **Refresh Data** was clicked. If you click **Refresh Data** while filters are in use, the page will update to show only the refreshed set of instances that match the existing filters.

The available filters for milestone dashboards, custom dashboards, and instance list are as given below:

- For milestone dashboards, only filtering by lifecycle filters is supported.
- For custom dashboards, indicator filtering is also available apart from filtering by lifecycle filters.
- For instance list, indicator filtering is also supported apart from filtering by lifecycle filters.

Note: The external dashboards do not support filters.

Lifecycle Filters

The milestone dashboards support only lifecycle filters. The available lifecycle filters are listed below:

- *Start Date* — filters for instances started in your chosen time range of either one of the preset ranges or a custom range. The default value is `Last 5 Days`. The possible values are:
 - `Last 1 Day` - when you select this option all the instances of the model started within last 1 day are displayed
 - `Last 5 Days` - when you select this option, all the instances of the model started within the last 5 days are displayed
 - `Last 30 Days` - when you select this option, all the instances of the model started within the last 30 days are displayed
 - `Last 90 Days` - when you select this option, all the instances of the model started within the last 90 days are displayed
 - `Custom` - when you select this option, you need to enter a time range including the date which includes the from and to values to see the instance started in this range.
 - `Clear` - use this option to clear the option you have selected.
- *End Date* — filters for instances ended in your chosen time range of either one of the preset ranges or a custom range. The possible values are:
 - `Last 1 Day` - when you select this option all the instances of the model completed within last 1 day are displayed
 - `Last 5 Days` - when you select this option, all the instances of the model completed within the last 5 days are displayed
 - `Last 30 Days` - when you select this option, all the instances of the model completed within the last 30 days are displayed
 - `Last 90 Days` - when you select this option, all the instances of the model completed within the last 90 days are displayed
 - `Custom` - when you select this option, you need to enter a time range including the date which includes the from and to values to see the instance completed in this range.
 - `Clear` - use this option to clear the option you have selected.
- *Duration* — filters for the length of time an instance took to complete from a number of seconds to days. Click this drop-down to define a value. Enter a numerical value in the text box and select the appropriate unit of time. The possible units are:
 - `Days`
 - `Minutes`
 - `Hours`
 - `Seconds`.
- *Milestones* — filters for either instances with particular milestones or for instances that finished with a particular milestone. Click this drop-down to select `Any` or `Last`.

- Any - Select this option to filter by any milestone. You can filter by any milestone passed by an instance. When you select this option, you can select specific milestones. You can also select multiple milestones.
- Last - Select this option to filter by the last milestone. When you select this option, you can select specific milestones. You can also select multiple milestones.

Note: When you select this option, the dashboards populate the data related to only the last milestone actions.

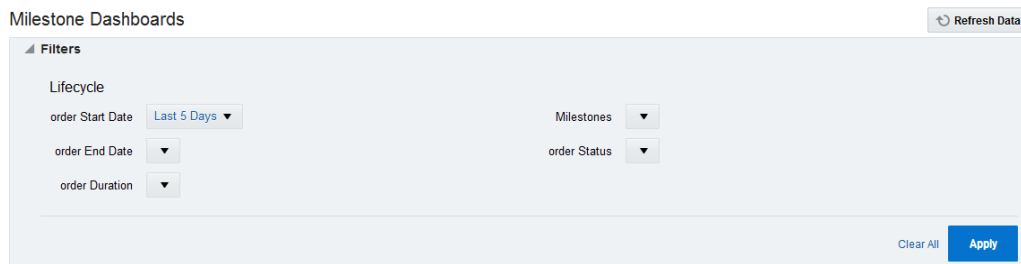
- *Status* — filters for instances that were in the selected status choice(s) at the time when the data was loaded. The possible values are:
 - Running - indicates the instances that are running
 - Completed - indicates the instances that have completed
 - Faulted - indicates the instances that are in faulted state
 - Failed - indicates the instances that have failed
 - All - indicates all the instances, which is a combination of all the above statuses.

Note: When you change the filters, click **Apply** to refresh the data without explicitly clicking **Refresh Data**.

NOT_SUPPORTED: Oracle Real-Time Integration Business Insight does not support filtering by NULL string values.

The following screen displays the lifecycle filters.

Figure 4-3 Lifecycle Filters for Milestone Dashboards



Lifecycle and Indicator Filters

Custom dashboards and instance list also support indicator filters apart from the lifecycle filters. The indicator filters available vary from model to model. Only the indicators that you have marked as filterable appear as filters.

For example, the screen below has only two indicator filters, which implies that only two indicators have been marked as filterable in the model. The following screen displays both the lifecycle filters and indicator filters.

Figure 4-4 Lifecycle and Indicator Filters for Custom Dashboards and Instance List

When you filtering on numeric indicators, a numeric range of values to return. Filtering on text strings requires a case-sensitive exact match. The SQL wildcards % and _ are supported.

4.2.3 Drilling Across Dashboards

The milestone dashboards and custom dashboards support a feature of drill across. When you drill across a dashboard, you can go deeper into the instance details and see specific instances that relate to the dashboard.

Only users with the role [InsightModelCreator](#)/[InsightExecutive](#)/[InsightAdmin](#) can drill across the dashboards.

Note: The external dashboards do not support drill across.

NOT_SUPPORTED: Oracle Real-Time Integration Business Insight does not support drilling across by NULL string values.

To drill across a dashboard:

1. Navigate to the desired dashboard.
2. Drill across the dashboard. If the dashboards is:
 - *Milestone Timings Dashboard* - click any bubble on the bubble chart (when the dashboard is in diagrammatic format) or anywhere on this dashboard (when the dashboard is in tabular format) to drill across. When you click the dashboard, the **Business Transaction Dashboard** opens in a new tab. You can observe that not all instances of the model are available in the **Business Transaction Dashboard** page. Only specific instances based on the parameters of the dashboard appear here.
 - *Passed Milestones Dashboard* - drill across is not supported for this dashboard.
 - *Active Instances Dashboard* - right-click any bar on the bar chart to drill across. When you right-click, you see the **Business Transaction Dashboard** button. Click this button to open the **Business Transaction Dashboard** in a new tab. You can observe that not all instances of the model are available in the **Business Transaction Dashboard**. Only specific instances based on the parameters of the dashboard appear here.
 - *Instance Errors Dashboard*- right-click any slice on the pie chart to drill across. When you right-click, you see the **Business Transaction Dashboard** button.

Click this button to open the **Business Transaction Dashboard** in a new tab. You can observe that not all instances of the model are available in the **Business Transaction Dashboard**. Only active instances represented by the bar you selected appear here..

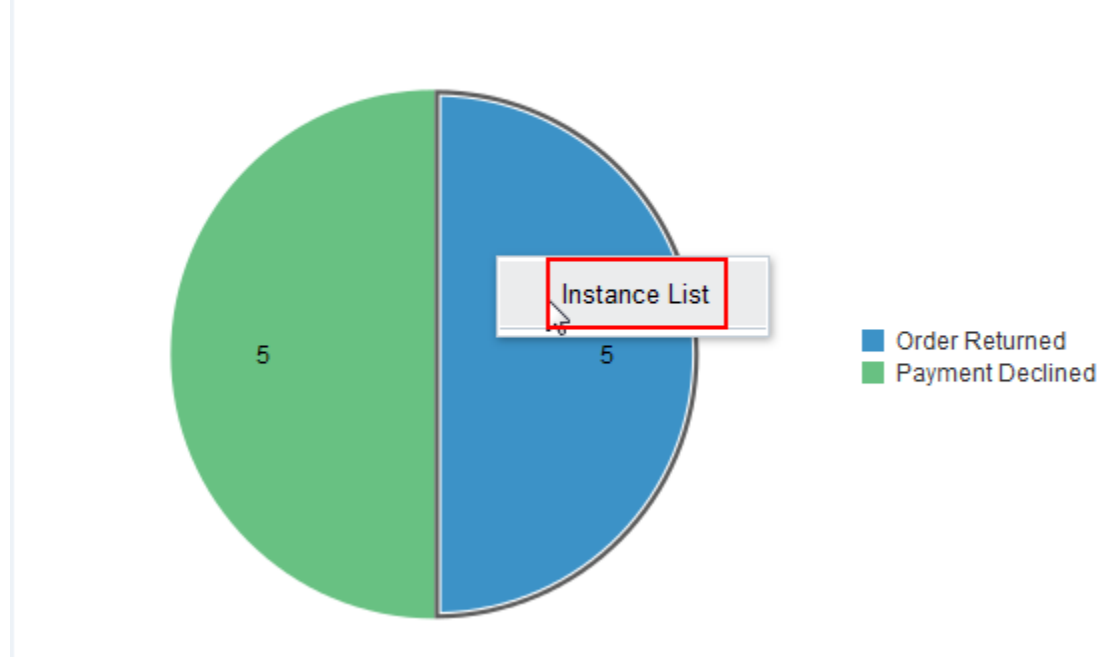
- *Avg Instance Completion Time Dashboard* - right-click any bubble on the bubble chart to drill across. When you right-click, you see the **Business Transaction Dashboard** button. Click this button to open the **Business Transaction Dashboard** in a new tab. You can observe that not all instances of the model are available in the **Business Transaction Dashboard**. Only specific instances based on the parameters of the dashboard appear here.
- *Custom Dashboard* - right-click any sector/bar/bubble on the dashboard to drill across when the dashboard uses pie/bar/bubble charts respectively. When you right-click, you see the **Business Transaction Dashboard** button. Click this button to open the **Business Transaction Dashboard** in a new tab. You can observe that not all instances of the model are available in the **Business Transaction Dashboard**. Only specific instances based on the parameters of the dashboard appear here.

Note: You cannot drill across from a custom dashboard that uses an area chart.

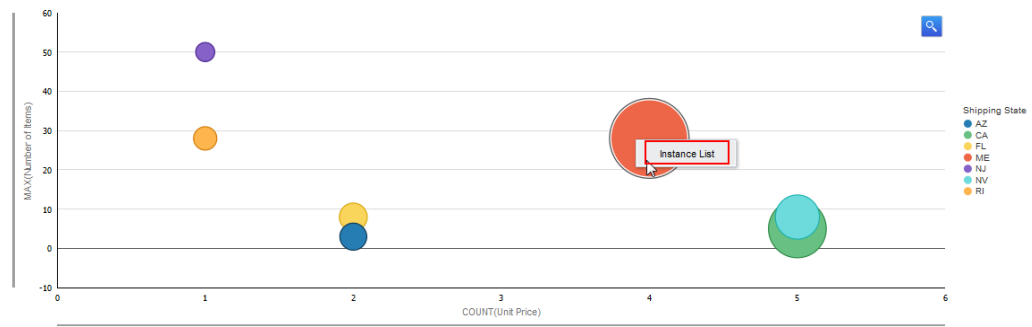
The following screen shows an example of how you can drill across from a milestone dashboard. The milestone dashboard in this example is an Instance Errors Dashboard..

Figure 4-5 Drilling Across from a Milestone Dashboard

Instance Errors



The following screen shows an example of how you can drill across from a custom dashboard. The custom dashboard in this example uses a bubble chart.

Figure 4-6 Drilling Across from a Custom Dashboard

The following screens show the list of instances that you see when you drill across from the milestone dashboard shown in [Figure 4-5](#).

Figure 4-7 Drilled Instances from a Milestone Dashboard

orders

Filters

Order Number	order Start Date	order End Date	order Status	Last Milestones	Unit Price	Number of Items	Total order amount
2016222195300	02/22/2016 19:53:00	02/22/2016 19:54:01	Failed	Order Returned	20	8	160
2016222195277	02/22/2016 19:52:07	02/22/2016 19:53:10	Failed	Order Returned	8	28	224
201622219511515	02/22/2016 19:51:15	02/22/2016 19:52:16	Failed	Order Returned	55	5	275
201622219502222	02/22/2016 19:50:22	02/22/2016 19:51:25	Failed	Order Returned	55	5	275
201622219492828	02/22/2016 19:49:28	02/22/2016 19:50:32	Failed	Order Returned	100	10	1000

Page 1 (1-5 items) < > 1 ... >

NOT_SUPPORTED: The list of instances that you see here is not the complete list. For a complete list of instances of a model, see [Instance Listing Page](#).

The following screens show the list of instances that you see when you drill across from the custom dashboard shown in [Figure 4-6](#).

Figure 4-8 Drilled Instances from a Custom Dashboard

orders

Filters

Order Number	order Start Date	order End Date	order Status	Last Milestones	Unit Price	Number of Items	Total order amount
2016222195277	02/22/2016 19:52:07	02/22/2016 19:53:10	Failed	Order Returned	8	28	224
201622219492828	02/22/2016 19:49:28	02/22/2016 19:50:32	Failed	Order Returned	100	10	1000
2016222194922	02/22/2016 19:49:02		Faulted	Payment Declined	8	28	224
201622219482121	02/22/2016 19:48:21		Faulted	Payment Declined	100	10	1000

Page 1 (1-4 items) < > 1 ... >

4.3 Milestone Dashboards

After a model is defined and activated, Insight collects metrics on running instances immediately. Within a few moments, you (a user with the role-permission of *InsightExecutive*) can evaluate the state of the integration application using the default dashboards. There are several major functional areas on the console.

The content of the console can be filtered using the **Filters** section. This area is collapsed by default. See [Filtering Instances](#).

By default, the console shows activity for the last five days. You can filter by a number of different criteria, including when an instance started or ended, how long the instance took to complete, any milestones passed and which milestones have most recently been passed.

Insight provides default dashboards. The default dashboards are also known as *Milestone Dashboards*. Milestone dashboards on a console associated with a model give a business owner visibility into details on how a business is performing.

Note: Only users with the role [InsightModelCreator/InsightExecutive/InsightAdmin](#) can view milestone dashboards.

Viewing Dashboard

To view data on the milestone dashboards:

1. Click the model for which you want to see the dashboards (on the **Consoles** page).
2. Expand the **Filters** area and select the required filters. See [Filtering Instances](#).
3. Click **Apply** to apply the filters or **Clear All** to clear all the selected filters.
4. Select the **Format** of the data to be displayed. This is applicable only for the Milestone dashboard.
 - **Table:** displays the data in a tabular format. This format is applicable only to the Milestone Timings Dashboard.
 - **Diagram:** displays the data in a graphical format. This format is applicable to all the milestone dashboards (includes Milestone Timings Dashboard, Passed Milestones Dashboard, Active Instances Dashboard, Instance Errors Dashboard, Avg Instance Completion Time Dashboard).

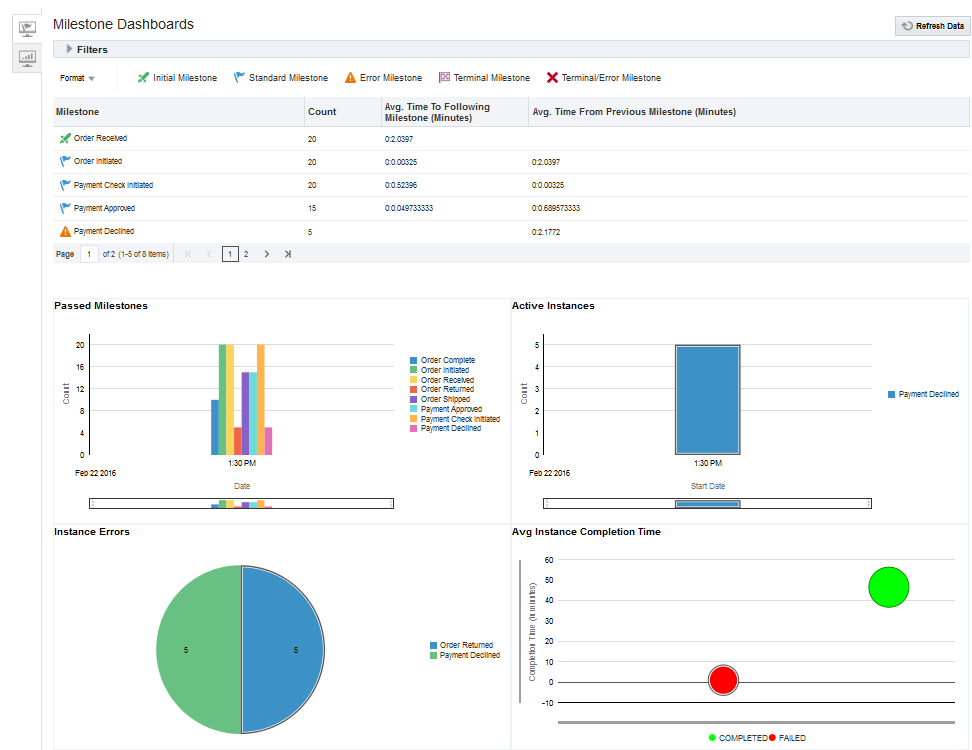
The dashboard displays the model data based on the milestones. The Milestone Timings Dashboard appears at the top, with the following four dashboards below it:

- *Passed Milestones* — bar view of the count of milestones passed for a given date grouped by the start of each day. You can click any milestone color box or name in the legend to see those milestones on the dashboard. The boxes in the legend are toggle icons, which when clicked either show or hide that milestone on the dashboard. You can use `Ctrl+mouse wheel` on the dashboard to zoom in or out. To return to the normal view, wheel out or expand the selection area on the bar beneath the dashboard.
- *Active Instances* — stacked bar view of the count of currently active instances by the date they were started and grouped by the start of each day. You can click any milestone color box or name in the legend to see those milestones on the dashboard. The boxes in the legend are toggle icons, which when clicked either show or hide that milestone on the dashboard. You can use `Ctrl+mouse wheel` on the dashboard to zoom in or out. To return to the normal view, wheel out or expand the selection area on the bar beneath the dashboard.
- *Instance Errors* — pie view of the count of instances where the final milestone was defined to be an *Error* milestone. You can click any milestone color box or

name in the legend to see those milestones (slices) on the dashboard. The boxes in the legend are toggle icons, which when clicked either show or hide that milestone on the dashboard. You can use `Ctrl+mouse wheel` on the dashboard to zoom in or out. To return to the normal view, wheel out or expand the selection area on the slice beneath the dashboard.

- *Avg Instance Completion Time* — bubble view of the completed and failed instances. The completion time is on Y Axis. The average time an instance takes to complete and the number of instances in each category determine the bubble size. You can click the categories in the legend to either show or hide that data in the dashboard. You can also use the Marquee zoom tool to zoom in and out. To return to the normal view, wheel out or expand the selection area on the slice beneath the dashboard.
5. Click **Refresh Data** to see the latest data without changing the filters.

Figure 4-9 Milestone Dashboard



Hover over any of the dashboards to view details about the milestone and execution time. You can also drill across the milestones to view specific instances. See [Drilling Across Dashboards](#).

Note: Milestone count increase for each retry of a faulted instance. This is because BPEL fault policy tries to commit before every retry.

6. Click **Consoles** to go back to the **Dashboards** page.
7. After you are done with viewing the dashboards, click **View All** at the top-right corner of the page to navigate to the **Instance List** page.

4.4 Custom Dashboards

You can track metrics, ratios, and trends on the console that are important to the business through custom dashboards. 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 helps you to view indicator data along with the milestone data. 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).

By default, the custom dashboards show data for instances created during the last five days. You can filter by a number of different criteria, including when an instance started or ended, how long the instance took to complete, and which milestones have most recently been passed.

Custom dashboards allow you to choose the indicators based on which you want to monitor the progress of a process.

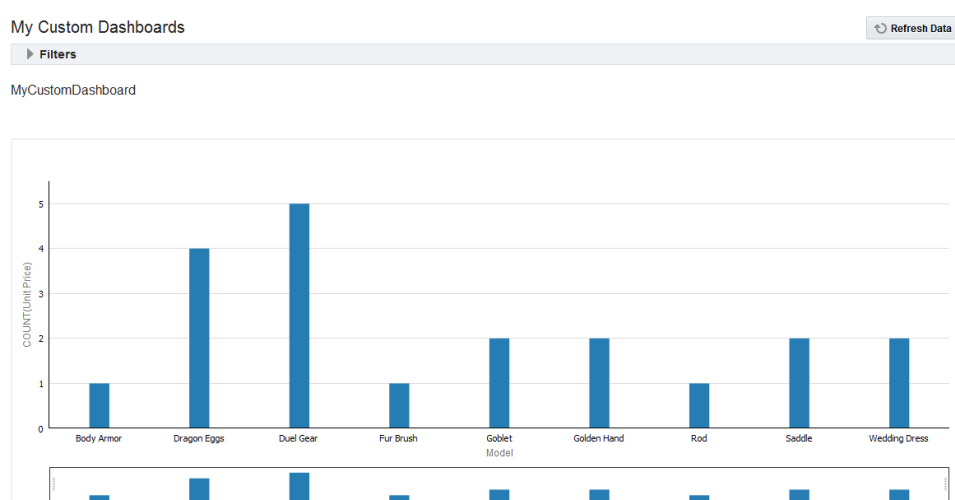
To view data on **Custom Dashboards**:

1. Click the model for which you want to monitor the performance on the **Consoles** page.
2. Click **My Custom Dashboards** icon.
3. Expand the **Filters** area and select the required filters.
4. Click **Apply** to apply the filters or **Clear All** to clear all the selected filters.

You can see the data visually in the form of a chart that was selected for the dashboard.

5. Click **Refresh Data** each time you change the filters to view the refreshed model data on the dashboard.

Figure 4-10 Custom Dashboard



You can drill across the dashboard to view specific instances. See [Drilling Across Dashboards](#).

4.4.1 Chart Types

The available chart types for custom dashboards are:

- *Pie Chart*
- *Bar Chart*
- *Bubble Chart*
- *Area Chart*.

For more information, see *Types of Charts* in *Understanding Oracle Real-Time Integration Business Insight*.

4.4.2 Creating Custom Dashboards

You can also create custom dashboards for models that have indicators defined. Models need indicators to be defined because the visualization charts in the custom dashboard use the dimensions or measures to be represented in the chart.

Only users with the role [InsightModelCreator](#)/[InsightExecutive](#)/[InsightAdmin](#) can create custom dashboards.

To create custom dashboards:

1. Click the model for which you want to monitor the progress on the **Consoles** page.
2. Ensure that the model has indicators defined. If not, create/define indicators.
3. Click **My Custom Dashboards** icon.
4. Click **Create Dashboard**.

The **Create Dashboard** dialog opens.

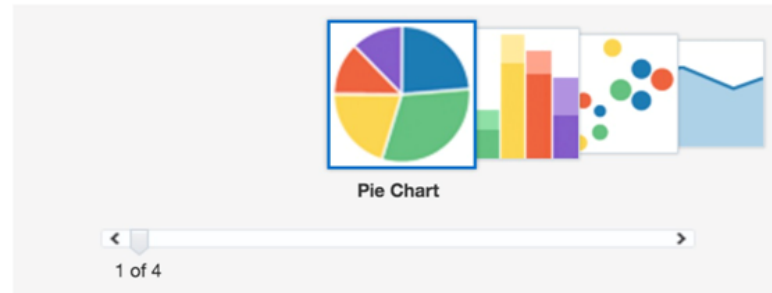
Figure 4-11 Create Dashboard Dialog

5. Enter a suitable **Title** for the dashboard.
6. Choose an appropriate icon.
7. Choose a **Visualization**, the chart through which the data is visualized. Based on the type of the chart you choose, the parameters vary. The charts available are listed below:
 - *Pie Chart*
 - Slice Size - select the values to be represented by the slice size. This is a mandatory field.
 - Measure - select the measure for the slice size. This is a mandatory field.
 - Aggregating Function - select the aggregating function for the slice size. This is a mandatory field.

- Grouping - select the value based on which the grouping needs to be done. This is a mandatory field.

Figure 4-12 Create Dashboard — Pie Chart

Visualization



Slice Size

Measure

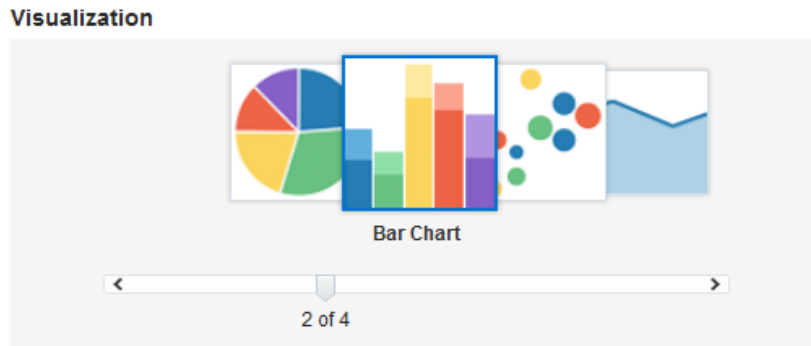
Aggregating Function

Grouping

- *Bar Chart*

- Y Axis - select the values to be represented on the Y Axis.
 - Measure - select the appropriate measure. This is a mandatory field.
 - Aggregating Function - select the appropriate aggregating function. This is a mandatory field.
- X Axis - select the values to be represented on the X Axis. It is typically a dimension.
- Grouping - select the value based on which the grouping needs to be done. This is an optional field.

Figure 4-13 Create Dashboard — Bar Chart



Y Axis

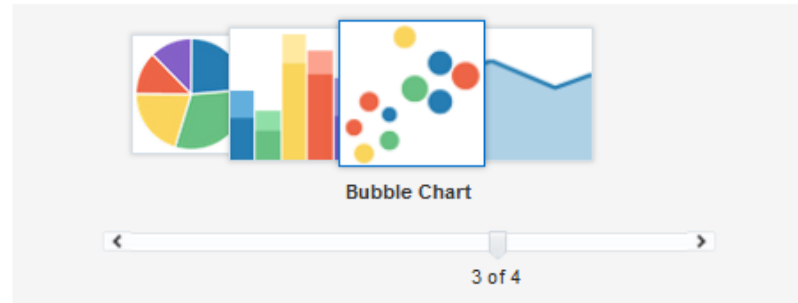
Measure

Aggregating Function

X Axis

Grouping

- *Bubble Chart*
 - X Axis - select the values to be represented on the X Axis.
 - Measure - select the appropriate measure. This is a mandatory field.
 - Aggregating Function - select the appropriate aggregating function. This is a mandatory field.
 - Y Axis - select the values to be represented on the Y Axis.
 - Measure - select the appropriate measure. This is a mandatory field.
 - Aggregating Function - select the appropriate aggregating function. This is a mandatory field.
 - Bubble Size - select the values to be used to determine the bubble size.
 - Measure - select the appropriate measure. This is a mandatory field.
 - Aggregating Function - select the appropriate aggregating function. This is a mandatory field.
 - Grouping - select the value based on which the grouping needs to be done. This is a mandatory field.

Figure 4-14 Create Dashboard — Bubble Chart**Visualization****X Axis****Measure**

Aggregating Function

Y Axis**Measure**

Aggregating Function

Bubble Size**Measure**

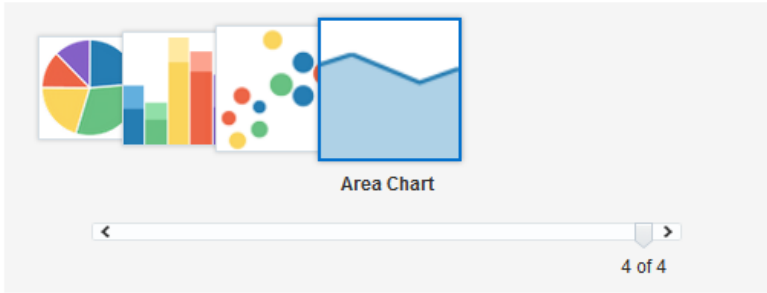
Aggregating Function

Grouping

- *Area Chart*
 - Y Axis - select the values to be represented on the Y Axis.
 - Measure - select the appropriate measure. This is a mandatory field.
 - Aggregating Function - select the appropriate aggregating function. This is a mandatory field.
 - X Axis - select the value to be represented on the X Axis. This is a mandatory field.

Figure 4-15 Create Dashboard — Area Chart

Visualization



Y Axis

Measure

Aggregating Function

X Axis

8. Select appropriate values for each of the fields in **Create Dashboard** dialog.
9. Click **Ok** to create the dashboard.

4.4.3 Editing Custom Dashboards

Only users with the role [InsightModelCreator](#)/[InsightExecutive](#)/[InsightAdmin](#) can edit/update custom dashboards.

When you try to edit a dashboard, all the fields are populated with the current values. You can change any of the fields if required.

To edit a custom dashboard:

1. Click the model for which you want to monitor the performance on the **Consoles** page.
2. Click **My Custom Dashboards** icon.
3. Click the **Edit** icon (the pencil icon) on the Custom Dashboard tile.
The **Create Dashboard** dialog opens.
4. Make the required changes and click **Ok**. Click **Cancel** to discard your changes.
You can see the changes you have made.
5. Click the **Delete** icon on the Custom Dashboard tile if you want to delete the custom dashboard for any reason.

4.4.4 Importing Dashboards

You can import dashboards from other applications into the Oracle Real-Time integration Business Insight application. You can import custom dashboards from one installation of Oracle Real-time Integration Business Insight into another.

Only users with the role [InsightModelCreator](#)/[InsightAdmin](#) can import custom dashboards. Though a user with the role [InsightExecutive](#) can view and edit dashboards, this user is not permitted to import dashboards.

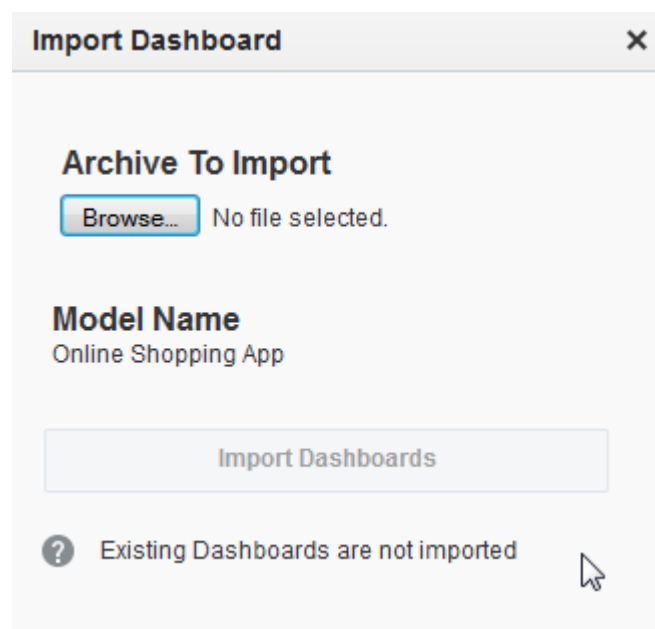
Note: You can import dashboards only into an activated model.

To import dashboards:

1. Click the model for which you want to monitor the progress on the **Consoles** page.
2. Click **My Custom Dashboards** icon.
3. Click **Import Dashboards**.

The **Import Dashboard** dialog opens.

Figure 4-16 *Import Dashboard Dialog*



4. Click **Browse** and select the archive file of the dashboard to import.
The model name is the name of the model for which you are viewing the dashboard.
5. Click **Import Dashboards**.

Note: Existing dashboards are not imported. The existing dashboards appear as skipped dashboards. The imported dashboards appear on the **Dashboards** page sorted by date.

Note: Insight does not copy/import instances when you import dashboards. To copy the instances of the dashboards, you must clean up the Data Objects in Oracle Business Activity Monitoring Composer. See *Cleaning BAM Data Objects and Projects in Administering Oracle Real-Time Integration Business Insight*.

4.5 External Dashboards

Occasionally, detailed dashboards beyond the capabilities of custom dashboards are needed to track business progress. If this is the case, you can create dashboards using the Oracle Business Activity Monitoring (BAM) Composer, and add the dashboards as an external dashboard.

The dashboards created in BAM must be added to the project that is provisioned in BAM by Oracle Real-time Integration Business Insight when the model is activated.

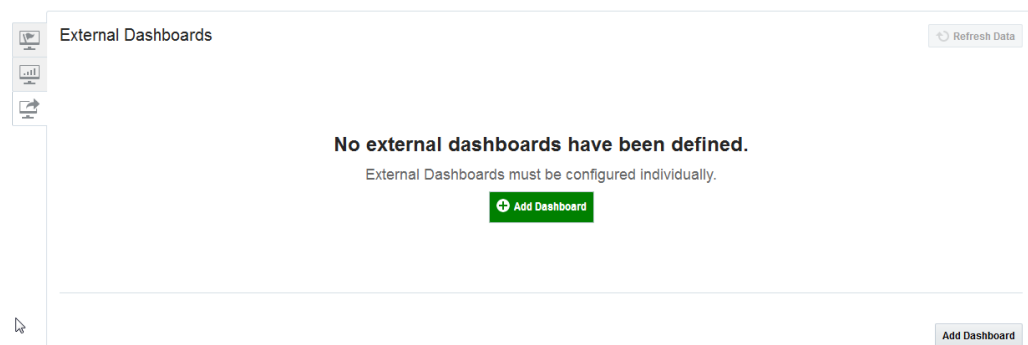
Note: External dashboards are available only if that option is set in the [Preferences](#).

There are no filters for external dashboards. They provide flexibility in choosing measures and dimensions for the charts compared to the custom dashboards which use a fixed set of templates which largely have only indicators as measures and dimensions. The dashboards have a link to open the dashboard in a new tab. This link takes you to the BAM dashboard, which opens in a new tab. The dashboard in BAM has tools that allow you to change dimensions, set runtime filters and active data properties (if allowed by the BAM source views), and choose parameters if any are involved. If parameters are used, they appear in a collapsible pane on the right side of the dashboard.

If any of the external dashboards have been added to the Oracle Real-Time Integration Business Insight application, you can see them here. If there are any BAM dashboards available in the model's BAM project and not yet added to Insight, you can add them. If you do not see any dashboards in **External Dashboards**, you can add external dashboards by using the **Add Dashboard** button.

Note: Only users with the role [InsightModelCreator](#)/[InsightExecutive](#)/[InsightAdmin](#) can add/integrate external dashboards.

Figure 4-17 External Dashboard



4.5.1 Creating an External Dashboard

To add an external dashboard in Insight, it must be created in BAM Composer first. Each Insight business model has exactly one BAM project associated with it. The display name of that BAM project is `Insight-<Model Name>`. All the external dashboards related to a particular business model must be created in the corresponding BAM project. These dashboards can be created using either the top down or the bottom up approach supported by BAM.

The business query for the view(s) in a dashboard makes use of the data object that is called `<Model-Name> metrics view` and is already added to the project. Although, other data objects also work, this data object contains all the relevant columns that you could be interested in. Thus, you have the flexibility to display the information as desired.

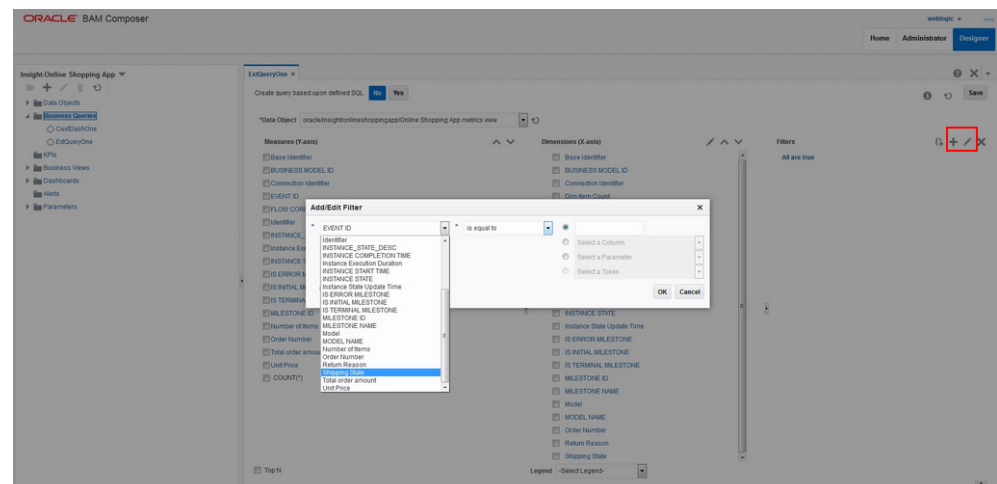
1. Pick the required columns.

Typically, these would be the columns for the various indicators for the model. The column display names are the same as the names of the indicators.

2. Click **Add/Edit Filter**. Create Filters for these business queries as is the case with any BAM business queries.

These filters can make use of one or more parameters that are already present in this project.

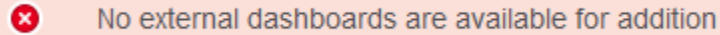
Figure 4-18 Creating External Dashboards in Oracle BAM Composer



3. If you need a similar drill across experience as is there for the milestone dashboards and custom dashboards, you can configure the business views in the external dashboard on similar lines with the instance list being the target page to display.
4. Leave the title of the dashboard as blank in BAM Composer if you do not want to see the BAM title of the dashboard in Insight and want only the title entered for the dashboard in the Insight **Add Dashboard** dialog.
5. Decide the look and feel and include/exclude the various features supported by BAM in dashboards.

4.5.2 Adding an External Dashboard

If the model's BAM project does not have any dashboards that can be added to Insight, you see an error message at the top of the screen. The error message like:

A red square icon with a white 'x' is followed by the text "No external dashboards are available for addition" in a light blue font, all contained within a light orange rectangular background.

✖ No external dashboards are available for addition

To add an external dashboard:

1. Click **Add Dashboard**

The **Add Dashboard** dialog opens.

2. Click **Browse** and select the dashboard you want to add.

Note: Before you add the external dashboards, you must create them in Oracle Business Activity Monitoring Composer.

3. Click **OK**

The external dashboard displays data and appears at the bottom of the **Dashboards** page as a new tile.

4.6 Instance Listing Page

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

The search tool at the top lets you search for case-insensitive partial matches of unique identifiers. You can also filter by various life-cycle filters or by filterable indicators to narrow or expand your results. For more information see [Searching Instances](#) and [Filtering Instances](#).

Users with appropriate role privileges can inspect lists of instances that match search criteria from the Instance List. From this list, you can drill across into instances and inspect detailed metadata (e.g., milestone audit, etc.).

You can navigate to the **Instance List** using the **View All** link on the dashboards page.

You can navigate to the **Instance List** page in any of the following ways:

- Click **View All** link on the Dashboards page
- Drill across from most the of the milestone dashboards or any of the custom visualization views with a right-click. In this case, only the list of instances specific to the dashboard appear on this page. See [Drilling Across Dashboards](#).
- Drill across any row of the *Milestone Timings Dashboard* with a click. In this case, only the list of instances specific to the dashboard appear on this page.

Figure 4-19 Instance List

orders

Filters

Order Number	order Start Date	order End Date	order Status	Last Milestones	Unit Price	Number of Items	Total order amount	Shipping Stat
20162219442828	02/02/2016 19:44:28	02/02/2016 21:15:29	Completed	Order Complete	20	8	160	TX
201622194477	02/02/2016 19:44:07	02/02/2016 21:15:09	Completed	Order Complete	20	8	160	NV
20162219434646	02/02/2016 19:43:46	02/02/2016 21:14:48	Completed	Order Complete	3	50	150	MN
20162219432626	02/02/2016 19:43:26	02/02/2016 21:14:27	Completed	Order Complete	8	28	224	ME
201622194355	02/02/2016 19:43:05	02/02/2016 21:14:07	Completed	Order Complete	8	28	224	ME
20162219415858	02/02/2016 19:41:58	02/02/2016 19:42:58	Failed	Order Returned	55	5	275	CA
201622194155	02/02/2016 19:41:05	02/02/2016 19:42:06	Failed	Order Returned	20	8	160	FL
20162219401313	02/02/2016 19:40:11	02/02/2016 19:41:14	Failed	Order Returned	55	5	275	CA
20162219391919	02/02/2016 19:39:19	02/02/2016 19:40:23	Failed	Order Returned	8	28	224	ME
20162219382626	02/02/2016 19:38:26	02/02/2016 19:39:26	Failed	Order Returned	50	3	150	AZ

A maximum of 15 rows appear on a page. Scroll down to the end of the page to see the navigational arrows that allow you to navigate to further pages.

Click any of the row headers to sort the instance list by that header.

4.7 Instance Details Page

The basic use of the instance details page is to give a chronological detailed record of the passage of milestones of any particular instance that you wish to view.

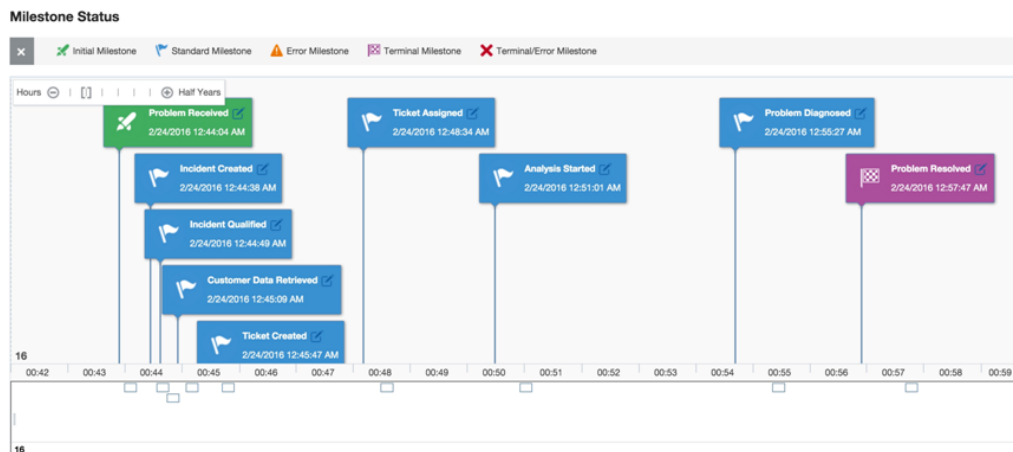
A user looking for failed instances, or running instances or any other filtered list of instances on the instance listing page may as a consequence want to delve into each of these instances to investigate the causes for the same. The last column for each instance on the instance listing page contains a side arrow to drill down into the instance details page, which shows details for that particular instance in the form of a time line depicting which milestones were hit and when. You can also click the Identifier.

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.

Click any instance on the **Instance Listing Page** to navigate to the **Instance Details Page**.

When the instance details page opens, by default, all milestones passed are shown in the timeline, with a master-details list below it (where headers are milestones and on expansion indicators are shown associated with that milestone) with all the headers collapsed. If you click anywhere outside the timeline item, the selected milestone gets deselected and the default state of the master-detail list is restored.

Click **Expand All** on the top-right corner of the page to expand all the milestones.

Figure 4-20 Instance Details Page

Note: If you face any problems with this page, you can send an e-mail with the flowtrace link to the Support team using the **Report A Problem** link either at the milestone level or the instance level. When you click this link, an e-mail editor opens with a link to the flowtrace. You can also add other details that you want to report to the Support team.

Reports

Reports are not supported in Oracle Real-Time Integration Business Insight Cloud instances.

The Reports tab remains visible, but you can't configure reports on this page.



Working with Data Connections

One of the key features of Oracle Real-Time Integration Business Insight is the ability to create models of running integrations and then monitor those models in real time for business activity. These integrations are hosted on various Middleware technologies such as SOA Suite and Service Bus.

To discover, model and monitor the applications running on these Middleware services, Insight maintains metadata describing how to connect and discover deployed applications. This metadata is maintained in structures called *connections*. Connections encapsulate details such as the URL and login information of a running Middleware service.

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.

Only users with the role [InsightConnectionCreator/InsightAdmin](#) can create/test/delete connections.

6.1 Creating a Data Connection

Only users with the role [InsightConnectionCreator/InsightAdmin](#) can create connections.

To create a data connection:

1. Click the **Administration** tab or the navigational shortcut on the **Home** page.

The **Data Connections** page opens.

2. Click **Create Connection**.

The **Create Connection** dialog opens.

3. Enter the following details:

- a. **Name:** an appropriate name for the connection
- b. **ID:** enter a unique ID for the connection. By default, this field is populated by the value you entered in the **Name** field.
- c. **Description:** enter a suitable description for the connection
- d. **Type:** select the type of connection, SOA or Service Bus
- e. **Host Name:** the host name for the connection

Note: You can create a connection to a SOA Suite Server or Service Bus running within the same domain or on a different domain . The SOA Suite / Service Bus Insight Agents should be running on the SOA Suite/Service Bus servers for the Insight data connections to connect to them .Also note that this version of Insight does not support multiple instances of Insight that are mapped to a single agent.

- f. **Port Number:** an appropriate port number for the connection
- g. Select **SSL Enabled** if you want the connection to be enabled with SSL.

Note: When creating a connection to SOA Suite/Service Bus SOA Cloud Service instances, you must use the Public IP address of the instance, select **SSL Enabled**, and use port 443, regardless of the port you normally use to access the instance.

- h. **Login:** the user name to be used for the connection
 - i. **Password:** the password to be used for the connection
4. Click **Test Connection** to test if a successful connection is established to the Server with the provided parameters.

If the connection is established successfully, you see a **Configured** message.

For more information, see [Testing a Data Connection](#).

5. Click **Create**.

Figure 6-1 Create Connection Dialog

After a connection is created, there are 3 states a connection can be in.

- *Draft* state if the connection has not been tested yet
- *Configured* state if the connection has been tested either while creating or editing it, and the test has passed
- *Disconnected* state if the connection has been tested either while creating or editing it, and the test has failed.

6.2 Editing a Data Connection

Only users with the role [InsightConnectionCreator](#)/[InsightAdmin](#) can edit/update connections.

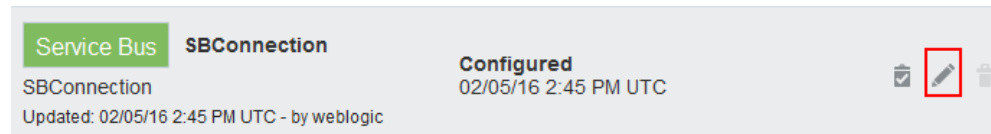
To edit a connection:

1. Click the **Administration** tab or the navigational shortcut on the **Home** page.

The **Data Connections** page opens.

- Click the **Edit** icon (the pencil icon) next to the connection you want to edit.

Figure 6-2 Edit Connection



The **Edit Connection** dialog opens.

Figure 6-3 Edit Connection Dialog

The 'Edit Connection' dialog box contains the following fields and controls:

- Name:** Text input field containing 'SOAConnection'.
- Description:** Text area containing 'SOAConnection'.
- Type:** Dropdown menu set to 'SOA'.
- Host Name:** Text input field containing 'slc03spf.us.oracle.com'.
- Port Number:** Text input field containing '7001'.
- SSL Enabled:** A checkbox that is currently unchecked.
- Login:** Text input field containing 'weblogic'.
- Password:** Password input field with masked characters (dots).
- Buttons:** 'Retest Connection' (blue text), 'Save' (grey button), and 'Cancel' (blue text with a question mark icon).

- Click **Retest Connection** to test the connection with the changes you have made.

The connection state changes to **Configured** if the test passes or **Disconnected** if the test fails.

- Make the required updates and click **Save**.

The data connection is edited with the changes you made.

6.3 Testing a Data Connection

Testing a data connection verifies that the credentials entered are valid and the connection can be used for implementation mappings in new models. Only users with the role [InsightConnectionCreator](#)/[InsightAdmin](#) can test connections.

To test a data connection:

1. Click the **Administration** tab or the navigational shortcut on the **Home** page.

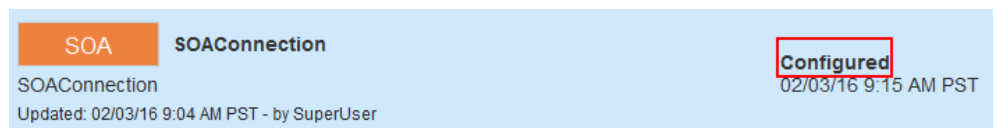
The **Data Connections** page opens.

2. Click the **Test Connection** icon against the connection you want to test.

The state of the connection changes to **Configured** if the test passes. Else the state changes to **Disconnected** if the test fails. The test may fail because of either of the following reasons:

- the provided credentials are incorrect
- the Server referred to in the connection is unavailable.

Figure 6-4 Connection Tested



3. Click **Test All** on the **Data Connections** page to test all the connections at a time.

Note: You cannot test the connections with the **Test All** button if the connections are in *Draft* state.

Security and Authorization Model

Oracle Real-Time Integration Business Insight ships with a sophisticated security and authorization model. This model allows the users to access only those features that they are entitled to use. An administrator can provide appropriate privileges to the roles and assign them to the users.

In general, organizations may choose to assign users with multiple roles. For example, an organization may choose to assign a class of users to *InsightBusinessUser* and *InsightIntegrationArchitect*, and *InsightModelCreator* giving such users the ability to participate in both design time and monitoring activities (via consoles).

The user with an *InsightAdministrator* role can manage user roles and permissions. For more information, see Understanding Users and Their Roles in *Administering Oracle Real-Time Integration Business Insight*.



Troubleshooting

When working with large applications, it is very common to encounter problems. You must be aware of the commonly faced problems and workarounds to overcome those issues.

Visit <http://www.oracle.com/technetwork/middleware/insight/customers/index.html#FAQ> for a list of Frequently Asked Questions.

8.1 Why Can't I See A Model on My Home Page?

Models that are created in Oracle Real-Time Integration Business Insight conform to the [model lifecycle](#). When models are created or edited, they are in **Draft** state until they are **Activated**. Activation is the action that pushes a model definition (including milestones, indicators, mappings, etc.) out to the various runtime engines (i.e., SOA Suite and Service Bus). There are other model states as well, representing deactivation, error, and other conditions.

Models are available to add to the **Home** page only when they are activated. If you are expecting to be able to add a model to your **Home** page, but it is not listed in the model selector, then the most likely cause is that the model has not been activated. Contact the appropriate architect or an administrator and request that the model be activated.

8.2 Why Did My Model Deactivate?

Models that are created in Oracle Real-time Integration Business Insight conform to the [model lifecycle](#). After models are activated, they remain activated until a business user, architect, or an administrator explicitly deactivates them. Models may also be deactivated **automatically** by the system if certain error conditions are detected by the system.

The system automatically deactivates a model when error conditions exist that could result in inaccurate collection of metrics for that model. Examples of such errors include an administrator deploying a new version of an application (a new revision of a composite) that is not compatible with the mappings defined in an activated mode, and network failure inhibiting recording of metrics from distributed components of an application.

8.3 Why Can't I Map My Model?

There are three reasons why you may not be able to create mappings for milestones and indicators in your model.

1. The most common reason is that a user may not be assigned to the appropriate persona, or role. A user must be assigned to the *InsightIntegrationArchitect*, *InsightAdmin*, or *InsightModelCreator* role in order to map milestones or indicators to implementation. If you are only assigned to the *InsightBusinessUser* role, you

will be able to define the abstract elements of milestones and indicators (e.g., name, type), but you will not be able to do mappings.

2. The second most common reason that a user may not be able to create mappings for a model is that it is not in draft mode. Only drafts of a model can be edited. If you are viewing an activated version of a model, you will not be able to modify it, including creating new mappings for a milestone or indicator.
3. The third most common obstacle to creating mappings is that the connections used to browse application artifacts (e.g., composites or service bus project) and mapping may not have been properly set up. In this case, contact your administrator to create, configure, and test the necessary SOA Suite or Service Bus connections so that you can create mappings for your model elements.

See also:

- [InsightBusinessUser](#)
- [InsightIntegrationArchitect](#)
- [InsightModelCreator](#)
- [InsightAdmin](#).

8.4 Why Is My Model Stuck?

Instances of a model may stop progressing through milestones for a number of different reasons. Use this information as a starting point to work with your administrator to understand why your instances are not hitting the milestones that you think they should.

The most likely reason instances for a model to stop progressing is that the model has been deactivated, either explicitly by a business user, architect or administrator, or automatically by the system. See [Why Did My Model Deactivate?](#)

The other likely reason that a model is not progressing is that milestones are improperly mapped to underlying implementation. For example if you are expecting a milestone representing “Order Shipped” to be passed frequently in your order processing application, but your orders seem to be “stuck” at the previous milestone, then it is possible that the Order Shipped milestone was associated with an incorrect service, BPEL activity, or Service Bus project artifact that does not really represent the order being shipped. Work with your business user and architect to verify the mappings.

8.5 Why Can't I Find My Instance?

In this release of Oracle Real-Time Integration Business Insight, you can only search for model instances by identifier values. For example, if you have modeled a Help Desk application, and used Incident ID as the identifier for the model, you would be able to search for a single Help Desk engagement by Incident ID.

It is worth noting that you can also *filter* a list of instances by criteria beyond just the identifier, and this can be helpful in finding instances. Any indicator that is marked as **filterable** in the model is available to use as filter criteria when viewing an instance list. For more information, see [Filtering Instances](#).

8.6 Why Can't I Use My Connections to Map Milestones?

When mapping your model to an underlying implementation, architects use connections to runtime engines such as SOA Suite and Service Bus. The connections are listed in the mapping user interface. These connections are created and configured by administrators. If a connection has not been completely configured or tested, it is possible that architects will not be able to browse the runtime engine associated with that connection. Work with your administrator to validate that connections are configured properly and have been tested.

Another reason might be that the runtime engine associated with a connection is offline. For example, if a SOA Suite server has been taken offline for maintenance, an architect will not be able to browse that server and map milestones until the server is brought back online.

8.7 Why Can't I See the Console Tab?

If you expect to see the **Consoles** tab, but it is not listed at the top of your screen, then you have not been assigned to the appropriate application role.

Users must be assigned to the *InsightExecutive*, *InsightAdmin*, or *InsightModelCreator* role in order to see the **Consoles** tab.

See also:

- [InsightExecutive](#)
- [InsightAdmin](#)
- [InsightModelCreator](#).

8.8 Why Are My Dashboards Empty?

After a model has been defined by a business user and mapped to implementation by an architect, the model must be activated to begin collecting metrics and observing the passage of milestones.

Depending on the activity level of your application, it may take some time to begin to see instances and indicators populated in the console. For example, if you have created a model of an order processing system and your application typically processes several orders per minute, you should start to see your consoles populate within a few minutes. However, if your application typically receives an order every hour, it may take several hours for your console to begin to show meaningful data.

There is very minimal delay between metrics being collected on runtime engines and information showing up in your consoles. The product has been optimized to minimize performance impact on runtime engines, so during times of heavy runtime load, you may see delay of a few minutes, but generally not more than this.

8.9 How Are My Metrics Impacted When I Change My Model?

The metrics being collected for a model are impacted when you either add/remove a milestone or an indicator to/from the model. The following is the impact in different scenarios:

1. If a milestone is added while metrics are being collected, new Insight instances created after activation, will start collecting data for the new milestone. The existing metrics are unaffected.

2. If a milestone is deleted while metrics are being collected, the existing metrics collected for the deleted milestone are lost. The existing instance depicts that the milestone was never reached. You will also get notified through a warning message about such changes upon re-activation of the model.
3. If an indicator is added while metrics are being collected, there is no impact on the existing metrics. The new Insight instances will start collecting metrics for the new indicator upon re-activation of the model.
4. If an indicator is removed while metrics are being collected, the existing metrics collected for the indicator will be lost. On activating the model with a deleted indicator, you will be presented with a list of consoles where the indicator is being used. You must remove such consoles or remove the usage of the indicator from those consoles to proceed with activation of model.

For more information, see *Impact of Reactivation of Model After Changes in Model Metadata* in *Understanding Oracle Real-Time Integration Business Insight*.

Cleaning BAM Data Objects and Projects

After completing T2P for Business Activity Monitoring in a new target environment, you must perform the cleanup actions listed in this section for smooth functioning of Oracle Real-Time Integration Business Insight. This cleanup ensures that model activation can be done without any issues following the cleanup.

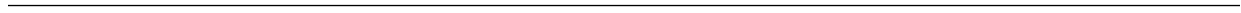
To clean-up data objects and projects:

1. Login to Oracle Business Activity Monitoring Composer.
2. Open the project for an Insight model. The display name of the Project will be similar to *Insight<Model Name>*.
3. Delete this project.
4. Click the **Administrator** tab.
5. Expand the data objects tree to the node *Data Objects -> oracle -> insight -> <Model Node Name>*.

You can see that the *<Model Node Name>* is in lower case and does not contain any whitespaces.

6. Delete this node. Be careful while selecting the node for the model.

WARNING: Do not delete the nodes for any other model or the internal node.



Supported and Unsupported Features in Oracle Service Bus

Oracle Real-Time Integration Business Insight integrates with Oracle Service Bus. It is important to know the features that Insight supports for Oracle Service Bus for a smooth use of the application.

You can see a comprehensive list of supported and unsupported features on Oracle Service Bus. Oracle Service Bus supports Pipeline and Business Services.

The following types of service bus references cannot be mapped in *Insight*:

- Proxy Service
- Split Joins.

Pipeline

The following table lists the supported and unsupported service types in Pipeline:

Table B-1 Supported/Unsupported Service Types in Pipeline

Service Type	Supported/Unsupported
WSDL Based Service	Supported
Messaging Service: Request Type: XML	Supported
Messaging Service: Response Type: XML	Supported
REST Service	Unsupported
Any SOAP Service: SOAP 1.1	Unsupported
Any SOAP Service: SOAP 1.2	Unsupported
Any XML Service	Unsupported
Messaging Service: Request Type: None	Unsupported
Messaging Service: Request Type: Text	Unsupported
Messaging Service: Request Type: Binary	Unsupported
Messaging Service: Request Type: Java	Unsupported
Messaging Service: Response Type: None	Unsupported
Messaging Service: Response Type: Text	Unsupported

Table B-1 (Cont.) Supported/Unsupported Service Types in Pipeline

Service Type	Supported/Unsupported
Messaging Service: Response Type: Binary	Unsupported
Messaging Service: Response Type: Java	Unsupported

Note: Milestone mapping is not available for pipelines/Business services with a service type of Messaging Request/Response XML which do not have a schema.

Business Service

The following table lists the supported and unsupported service types in Business Service:

Table B-2 Supported/Unsupported Service Types in Business Service

Transport Protocol	Service Type	Supported/Unsupported
bpel-10g	WSDL Based Service	Supported
dsp	WSDL Based Service	Supported
e-mail	Messaging Service: Request Type: XML	Supported
file	Messaging Service: Request Type: XML	Supported
ftp	Messaging Service: Request Type: XML	Supported
http	WSDL Based Service	Supported
http	Messaging Service: Request Type: XML	Supported
http	Messaging Service: Response Type: XML	Supported
jca	WSDL Based Service	Supported
jms	WSDL Based Service	Supported
jms	Messaging Service: Request Type: XML	Supported
jms	Messaging Service: Response Type: XML	Supported
sb	WSDL Based Service	Supported
sftp	Messaging Service: Request Type: XML	Supported
soa-direct	WSDL Based Service	Supported
tuxedo	Messaging Service: Request Type: XML	Supported
tuxedo	Messaging Service: Response Type: XML	Supported

Table B-2 (Cont.) Supported/Unsupported Service Types in Business Service

Transport Protocol	Service Type	Supported/Unsupported
dsp	Any SOAP Service: SOAP 1.1	Unsupported
dsp	Any SOAP Service: SOAP 1.2	Unsupported
dsp	Any XML Service	Unsupported
e-mail	Any XML Service	Unsupported
e-mail	Messaging Service: Request Type: MFL	Unsupported
e-mail	Messaging Service: Request Type: Text	Unsupported
e-mail	Messaging Service: Request Type: Binary	Unsupported
e-mail	Messaging Service: Response Type: None	Unsupported
file	Any XML Service	Unsupported
file	Messaging Service: Request Type: MFL	Unsupported
file	Messaging Service: Request Type: Text	Unsupported
file	Messaging Service: Request Type: Binary	Unsupported
file	Messaging Service: Response Type: None	Unsupported
ftp	Any XML Service	Unsupported
ftp	Messaging Service: Request Type: MFL	Unsupported
ftp	Messaging Service: Request Type: Text	Unsupported
ftp	Messaging Service: Request Type: Binary	Unsupported
ftp	Messaging Service: Response Type: None	Unsupported
http	REST Service	Unsupported
http	Any SOAP Service: SOAP 1.1	Unsupported
http	Any SOAP Service: SOAP 1.2	Unsupported
http	Any XML Service	Unsupported
http	Messaging Service: Request Type: MFL	Unsupported
http	Messaging Service: Request Type: Text	Unsupported
http	Messaging Service: Request Type: Binary	Unsupported
http	Messaging Service: Request Type: None	Unsupported

Table B-2 (Cont.) Supported/Unsupported Service Types in Business Service

Transport Protocol	Service Type	Supported/Unsupported
http	Messaging Service: Response Type: MFL	Unsupported
http	Messaging Service: Response Type: Text	Unsupported
http	Messaging Service: Response Type: Binary	Unsupported
http	Messaging Service: Response Type: None	Unsupported
jms	Any SOAP Service: SOAP 1.1	Unsupported
jms	Any SOAP Service: SOAP 1.2	Unsupported
jms	Messaging Service: Request Type: MFL	Unsupported
jms	Messaging Service: Request Type: Text	Unsupported
jms	Messaging Service: Request Type: Binary	Unsupported
jms	Messaging Service: Request Type: Java	Unsupported
jms	Messaging Service: Request Type: None	Unsupported
jms	Messaging Service: Response Type: MFL	Unsupported
jms	Messaging Service: Response Type: Text	Unsupported
jms	Messaging Service: Response Type: Binary	Unsupported
jms	Messaging Service: Response Type: Java	Unsupported
jms	Messaging Service: Response Type: None	Unsupported
sb	Any SOAP Service: SOAP 1.1	Unsupported
sb	Any SOAP Service: SOAP 1.2	Unsupported
sb	Any XML Service	Unsupported
sftp	Any XML Service	Unsupported
sftp	Messaging Service: Request Type: MFL	Unsupported
sftp	Messaging Service: Request Type: Text	Unsupported
sftp	Messaging Service: Request Type: Binary	Unsupported
sftp	Messaging Service: Response Type: None	Unsupported
tuxedo	Any XML Service	Unsupported
tuxedo	Messaging Service: Request Type: MFL	Unsupported

Table B-2 (Cont.) Supported/Unsupported Service Types in Business Service

Transport Protocol	Service Type	Supported/Unsupported
tuxedo	Messaging Service: Request Type: Text	Unsupported
tuxedo	Messaging Service: Request Type: Binary	Unsupported
tuxedo	Messaging Service: Request Type: None	Unsupported
tuxedo	Messaging Service: Response Type: MFL	Unsupported
tuxedo	Messaging Service: Response Type: Text	Unsupported
tuxedo	Messaging Service: Response Type: Binary	Unsupported
tuxedo	Messaging Service: Response Type: None	Unsupported

Note: Milestone mapping is not available for pipelines/Business services with a service type of Messaging Request/Response XML which do not have a schema.



Unsupported Features in Service Oriented Architecture (SOA) Suite

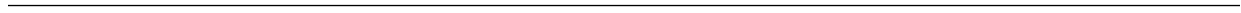
Though Oracle Real-Time Integration Business Insight integrates with Service Oriented Architecture (SOA) Suite, there a set of features that Insight does not support.

A comprehensive list of unsupported features in Insight on SOA Suite is listed in the table below.

The following table lists the various Insight mappings that are unsupported either for binding or activities:

Table C-1 *Unsupported Features in SOA Suite*

Component	Unsupported Activities
BPEL	<ul style="list-style-type: none"> • Un-named activities • onAlarm • onMessage • Multiple activities with same names • End-to-end JSON
BPEL Variables	When there are multiple variables with same name in different scope, only the current scope variable can be mapped for extraction. Parent/Outer scope variables with same name will not be available.
SOA	<ul style="list-style-type: none"> • EDN events - mapping on the wire where EDN is the source • Service/Reference with HTTP Binding • Service/References with Native Rest

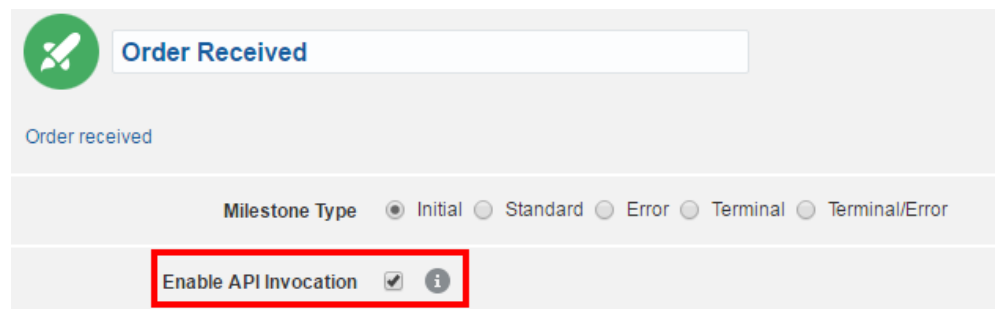


Publishing Business Events Using the REST API

With the REST API, you can publish business events from non-SOA Suite applications to Real-Time Integration Business Insight.

To publish business events to Insight using the REST API:

1. Design a model that corresponds to your business processes in the Real-Time Integration Business Insight UI. Make sure you select the **Enable API Invocation** option for each milestone that sends business events using the REST API. Then activate the model. See [Working with Models](#)



2. Download the API manifest for your model, or download the manifest for a specific milestone, as described in [Viewing API Invocation Details](#). The manifests contain sample JSON payloads for business events for your milestones. These payloads are populated with some required fields, such as modelId and milestoneId. Edit the payloads as instructed with details specific to your business events.
3. For each business event you want to publish, send a request to the Real-Time Integration Business Insight REST API event endpoint. Events are parsed and associated with the appropriate instances, based on correlated IDs. For example, when sending the request for the event corresponding to an initial milestone, a correlationValue is included in the payload. Include the same correlationValue in the payload for events from the same instance, such as the same order or the same support ticket.

See [REST API for Oracle Real-Time Integration Business Insight](#) for examples and detailed usage instructions for the REST API.
4. After you have published events, use consoles or custom dashboards to monitor business processes. See [Working with Dashboards \(Consoles\)](#).

