Real-Time Integration Business Insight 12.2.1.1.0

AstraTeq Help Desk Tutorial

Hardware and Software
Engineered to Work Together

ORACLE

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Overview of the tutorial

Oracle Real-Time Integration Business Insight (or short Insight) is designed for business users to model, collect and monitor business level metrics. It comes fully integrated with Oracle SOA Suite and Oracle Service Bus.

Oracle Real-Time Integration Business Insight puts the business owner in control of the content, timing and format of metrics they need to make informed decisions daily. By simply identifying the key points within their business integrations, stakeholders immediately have access to detailed and actionable data, in real-time, with no costly engineering engagements or production redeployments.

For more information, please visit the Oracle Real-Time Integration Business Insight product page.

In the detailed tutorial 01: Oracle Real-Time Integration Business Insight: Designing Insight Models, the user takes on the role of a **Business User** to create a model with business milestones and indicators, which represents AstraTeq's new HelpDesk application.

In 02: Oracle Real-Time Integration Business Insight: Mapping Models to Implementation, the previously created milestones and indicators are mapped to the integration implementation as an **Integration Architect**.

In the third tutorial, to be released soon, the user steps into the role of a **Business Owner** to view the preconfigured dashboards and create custom dashboards for the Help Desk model to gain valuable insight into their business.

The current document is a shorter form of the tutorial and focuses on the **Business Owner** persona. It describes the import of an already nearly completed model, with only a few milestones and indicators left to define and map.

Before we begin, let's have a look behind the scenes to see how the Help Desk application is implemented, on which you will define your model and analyze metrics.

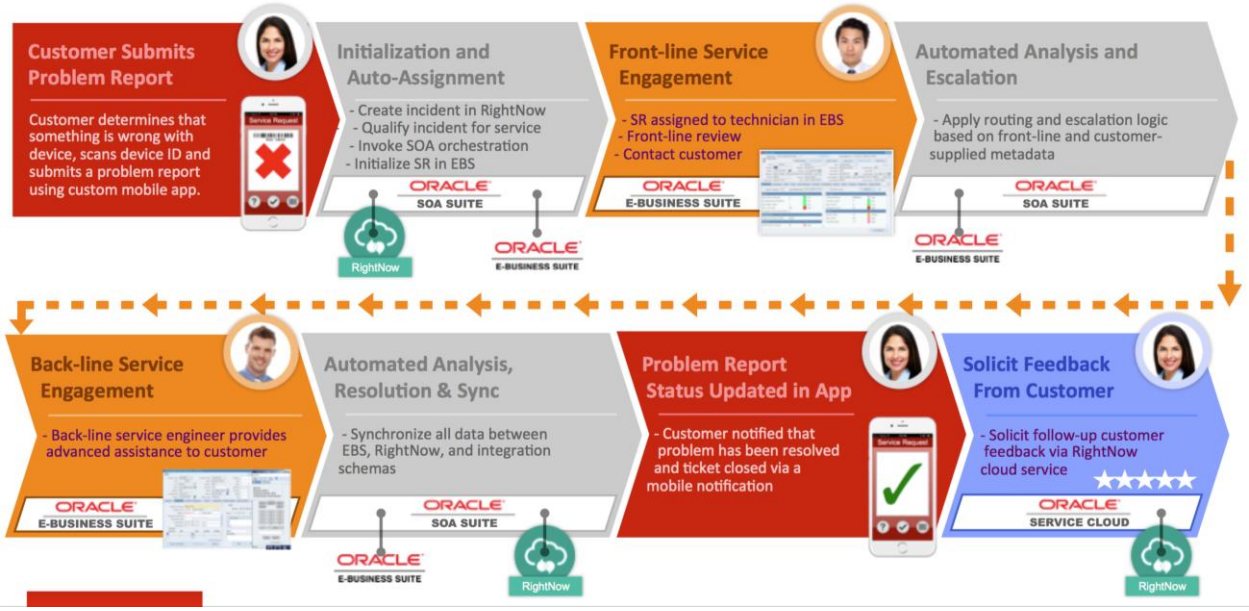
Setting the scene

The help desk service company AstraTeq has created a new solution for its customers. Their proprietary help desk application has been implemented using Oracle SOA Suite, including Oracle Service Bus, and integrates AstraTeq's consumer mobile application, Oracle E-Business Suite and Oracle RightNow Cloud Service (which is part of Oracle Service Cloud). A key goal in creating the new help desk application was to improve operational efficiency, avoid integration hot spots and minimize escalations.

The picture below shows the flow of steps in this integration application.

- A customer submitting a problem report in their mobile application triggers the application.
- An incident is created in Oracle RightNow and the issue is qualified for service.
- If service is required, a service request (SR) is initialized in Oracle E-Business Suite and assigned to a front-line technician, unless the customer is part of a priority program (has gold status), in which case the SR is escalated immediately to backline support.
- The support engineer analyzes the issue and escalates if there is a security issue or high risk.

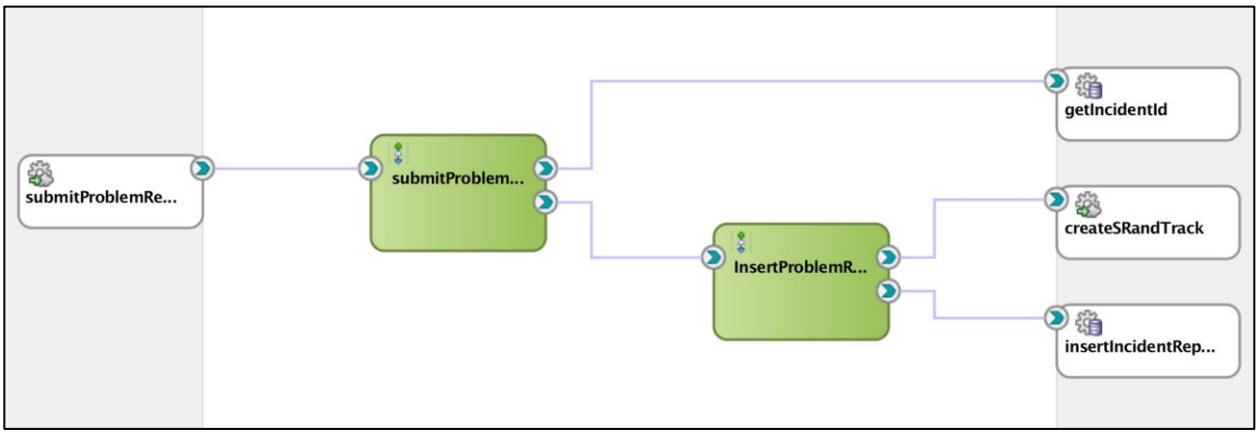
- If the problem cannot be reproduced, and more data is needed from the customer, the SR is **suspended** until the customer provides the missing information.
- If the issue can be successfully **resolved** or the SR is **rejected**, the customer is notified and the SR and incident are closed.



The following sections describe the implementation of the underlying help desk application, which consists of a Service Bus project and a SOA composite.

HelpDesk Service Bus Project

The receipt of an xml message through a web service call (from the mobile application) triggers the Service Bus project.



The input message looks similar to the following:

```
<hel:issue xmlns:hel='http://www.oracle.com/helpdesk'>
    <hel:customerID>444</hel:customerID>
    <hel:category>1</hel:category>
    <hel:problemDescription>My ear buds need cleaning so I would like them serviced</hel:problemDescription>
    <hel:product>Service</hel:product>
    <hel:deviceID>36522447658419300</hel:deviceID>
    <hel:retailValue>122</hel:retailValue>
</hel:issue>
```

and includes:

- Customer ID
- Product Category
- Problem Description
- Product Type (Phone, tablet, service, accessory)
- Device ID
- Retail Value of product

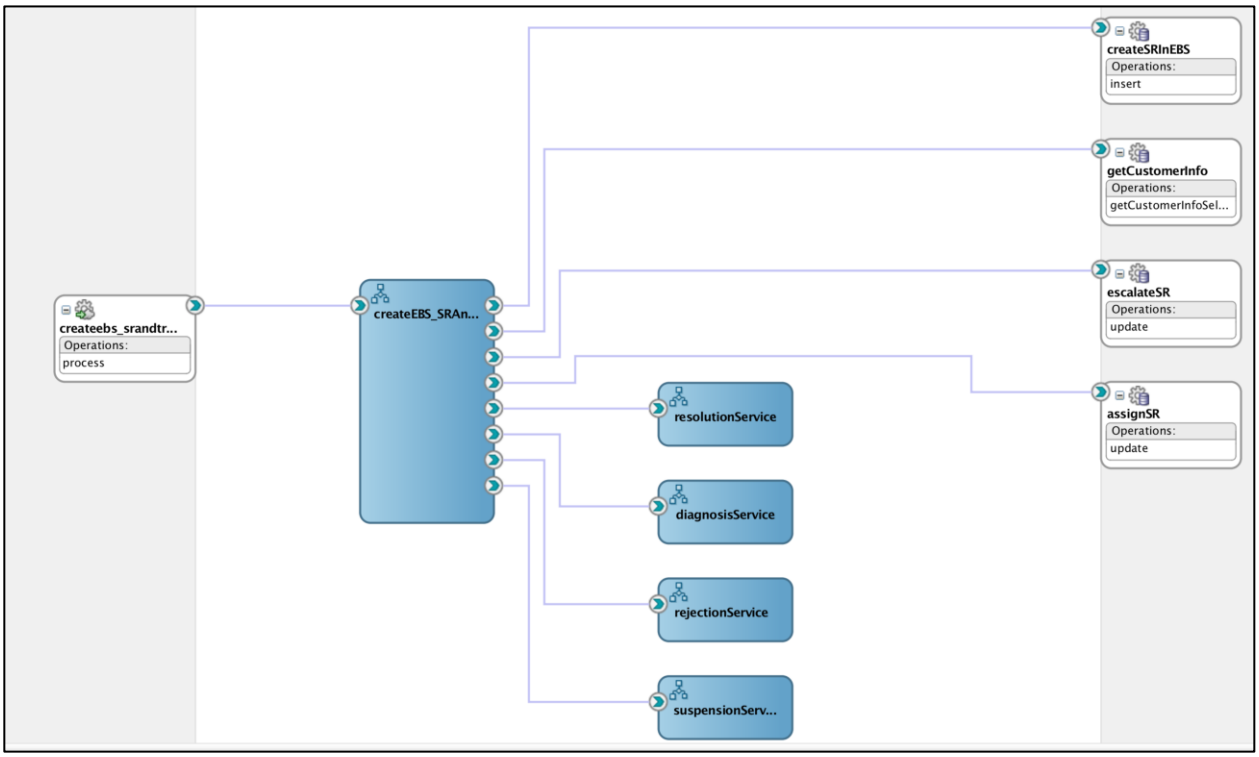
The Service Bus pipeline **submitProblemReport** executes the following high-level steps:

- Create a unique incident ID (this is necessary as we don't have access to a real RightNow application during the demos)
- Invoke pipeline **insertProblemReport**

The Service Bus pipeline **insertProblemReport** executes the following high-level steps:

- Create the incident in RightNow (we simulate this in through a database table)
- Call the SOA composite for further processing

HelpDesk SOA composite



The composite is triggered by the Service Bus pipeline and consists of the following services, references and components:

- Web Service receiving the input message from Service Bus
- **createEBS_SRAndTrack** BPEL process:
    - Qualifies the problem for technical support
    - Retrieves customer information from E-Business Suite
    - Creates Service Request in E-Business Suite
    - If Gold Customer
        - Assigns SR to tier 2 (backline) technician (== escalate issue)
        - Diagnoses the issue (invokes diagnosisService BPEL process)
    - Else
        - Assigns SR to tier 1 (frontline) technician
        - Diagnoses the issue
        - If issue is high profile or security risk
            - Escalate (assign to backline technician)
            - Diagnoses the issue (invokes diagnosisService BPEL process)

- diagnosisService BPEL process: diagnoses the issue
- resolutionService BPEL process: notifies customer of resolution
- rejectionService BPEL process: notifies customer of rejection and reason
- suspensionService BPEL process: notifies customer of suspension and reason
- createSRInEBS reference: simulates E-Business Suite application to create SR
- getCustomerInfo reference: simulates E-Business Suite application to retrieve customer info
- escalateSR reference: assigns SR to backline technician
- assignSR reference: assigns SR to frontline technician

Why Real-Time Integration Business Insight?

A key goal in creating the new help desk application was to improve operational efficiency, avoid integration hot spots and minimize escalations.

Rather than writing a custom set of dashboards to track business performance when the new application goes live, AstraTeq has decided to implement Oracle Real-Time Integration Business Insight due to the pre-configured dashboards and bundled reports. The business directors also are interested in establishing real time metrics to track paid support programs, measure resolution velocity and technician performance, identify high-maintenance products and surface regional support hotspots.

Introduction and Concepts

Before diving into the tutorial, please make yourself familiar with the concepts of Insight, described in the following documentation sections:

Getting Started with Oracle Real-Time Integration Insight

Understanding Oracle Real-Time Integration Business Insight

Prepare for the tutorial

Download the tutorial resources

Download **AstraTeqHelpDeskTutorial.zip** from the Insight AstraTeq Help Desk tutorial OTN page, after accepting the license agreement, and extract into a folder of your choice. Let's call this folder ***AstraTeqHelpDeskTutorialROOT*.**

Setup the Insight domain

In order to work through this tutorial, you have the following options:

- Native Install (on your own laptop or server):
  - Install Oracle Real-Time Integration Business insight natively and configure a compact domain, following the steps in the Real-Time Integration Business Insight Quick Start Guide.
  - Setup your environment for the tutorial by following the steps in the Real-Time Integration Business Insight Tutorial setup for native install.
- Pre-configured VirtualBox image:
  - Download and import the SOA Suite plus Insight 12.2.1.1.0 VirtualBox image, following the steps outlined in the README document.
  - Setup your environment for the tutorial by following the steps in the Real-Time Integration Business Insight Tutorial setup for VirtualBox image.

Once your environment is set up, start the Insight Server as described in the corresponding document.

You are now ready to start the **AstraTeq Help Desk** Tutorial!

Tutorial Instructions: AstraTeq Help Desk

This chapter describes step-by-step how to define your first Insight model with milestones and indicators, test the application to start collecting metrics, analyze the out of the box dashboards and create custom dashboards.

Tutorial Users

The following users have been created for the tutorial. Please refer to User Personas in the product documentation for a description of the personas used within Insight.

- **Susan - Model Creator:** The person creating the model. In reality, Susan would assign model permissions the other users. We skipped this step in the tutorial for simplicity.
- **Nina - Business User**: The business user has the functional knowledge of the business use case and will create milestones and indicators using business language, irrespective of the implementation.
- **Karl - Integration Architect**: The integration architect has an understanding of the implementation of the application. He defines the mapping of milestones to the appropriate location in the implementation and the extraction of indicators.
- **John - Business Owner**: The business owner has access to the real-time business data provided by the consoles and defines custom dashboards for a tailored view of the data.
- **Emily - Administrator**: The administrator manages the Insight application itself and creates connections to the implementation to enable mapping of the models.

We also gave Nina and Karl Business Owner privileges, so that they can test the consoles of the model they are creating. They may not have those permissions in a production system.

Import the AstraTeq Help Desk Model

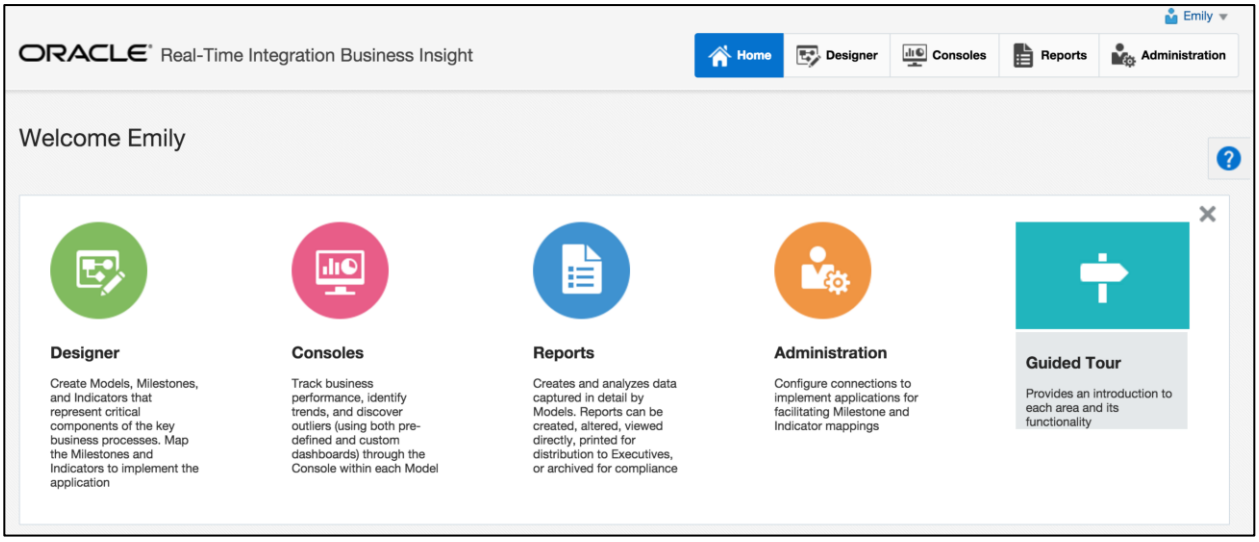
Locate **AstraTeq Help Desk_partialModel.zip** in ***AstraTeqHelpDeskTutorialROOT/model.***

This zip file includes a partial implementation of the AstraTeq Help Desk model as a starting point for this tutorial.

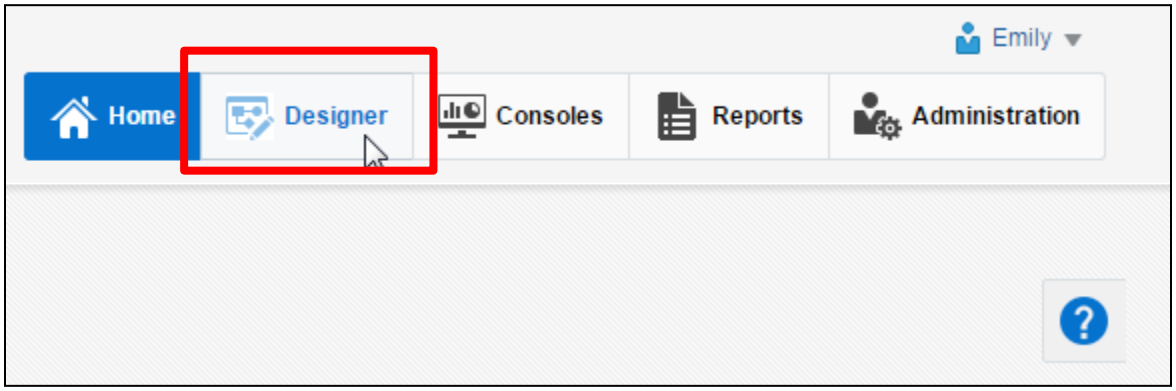
A model can be imported by a user of type **Model Creator**, but before it can be activated, the data connections to the SOA and Service Bus servers have to be defined and tested by an **Administrator**.

Emily, the administrator, also has model creator privileges: Sign in as **Emily** (password "**welcome1**")

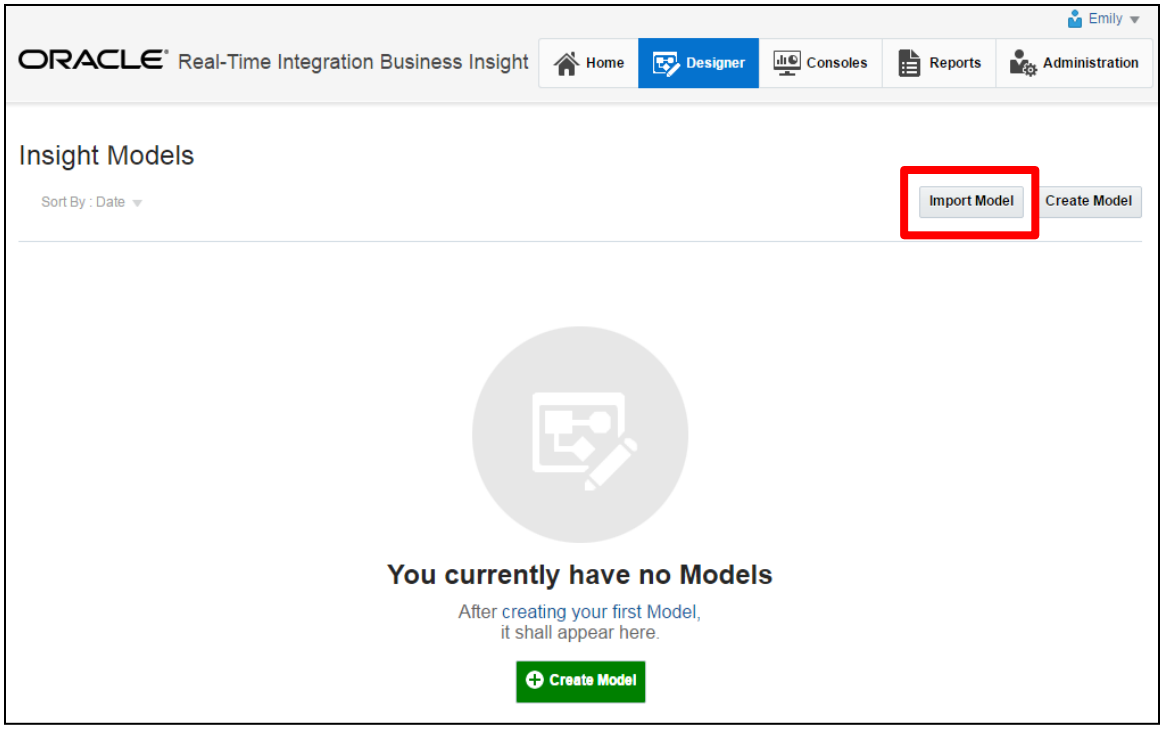
If the home screen doesn't look like the below after signing in, sign out and sign back in.



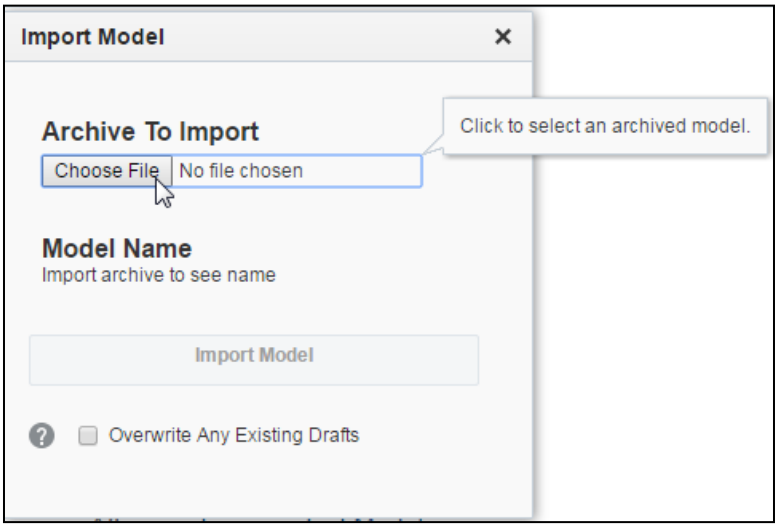
- Select the **Designer** tab on top



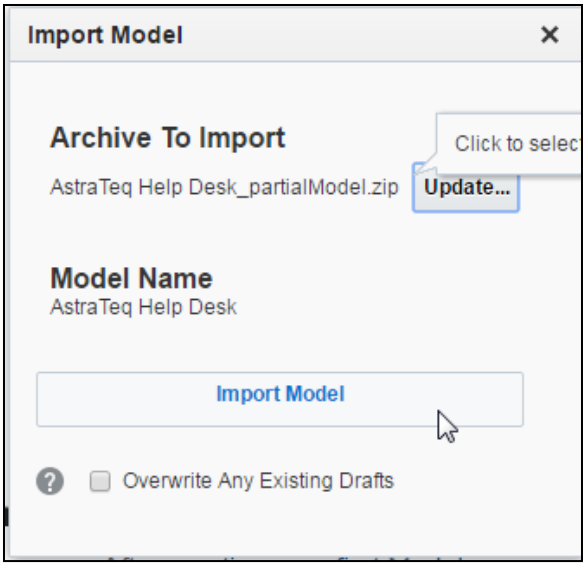
- If you haven't created any models yet, you will see a message "You currently have no Models".



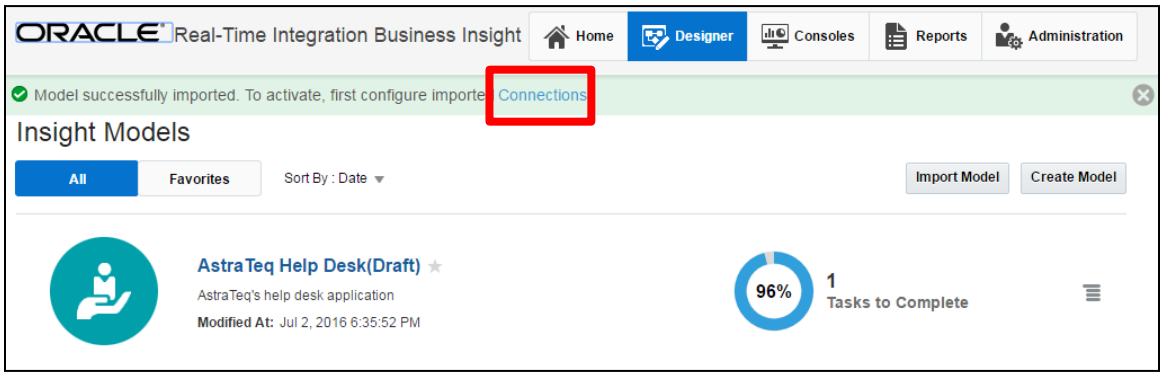
- You can either create a new model or import a model that was provided to you
- Click the button **Import Model** on top.
- Click **Choose File** in the **Import Model** dialog



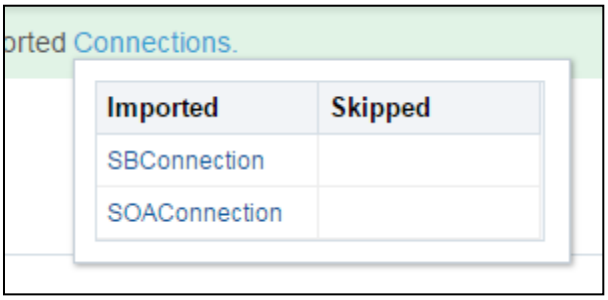
- Locate **AstraTeq Help Desk_partialModel.zip**
- Click **Open**



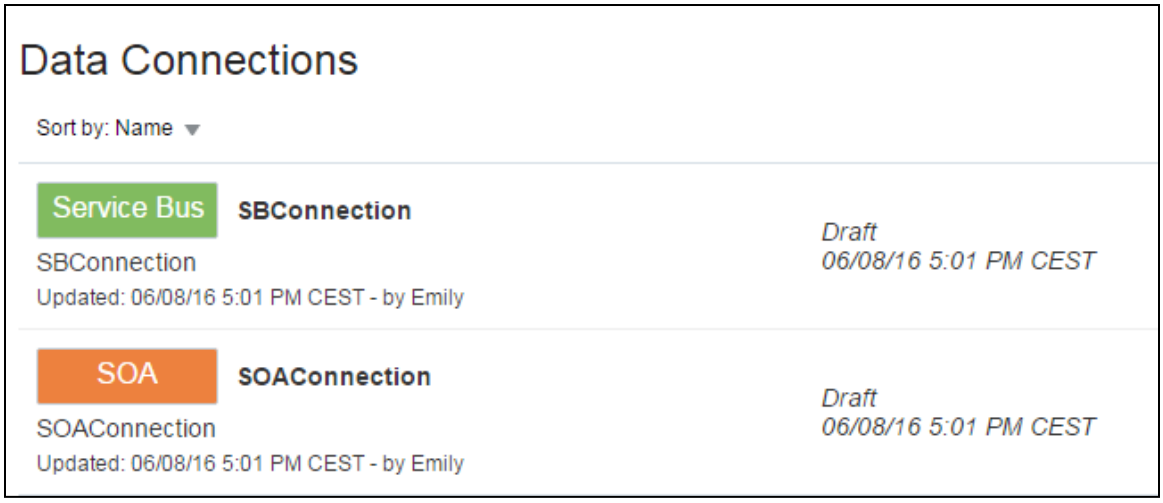
- Click **Import Model**
- You should see a message "**Model successfully imported. To activate, first configure imported Connections.**"



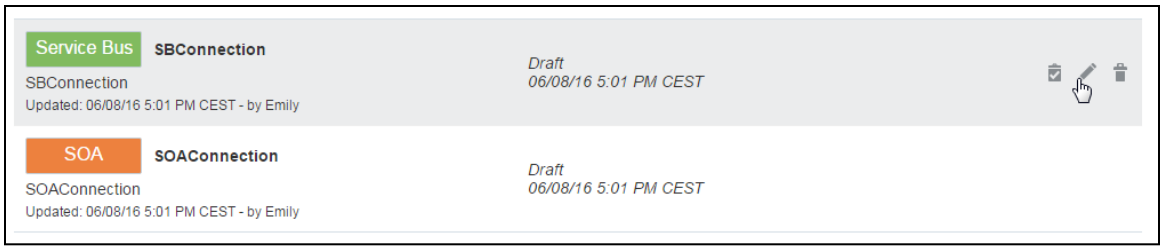
- Click on the **Connections** hyperlink to see the list of connections that have been imported. You should see **SBConnection** and **SOAConnection**.



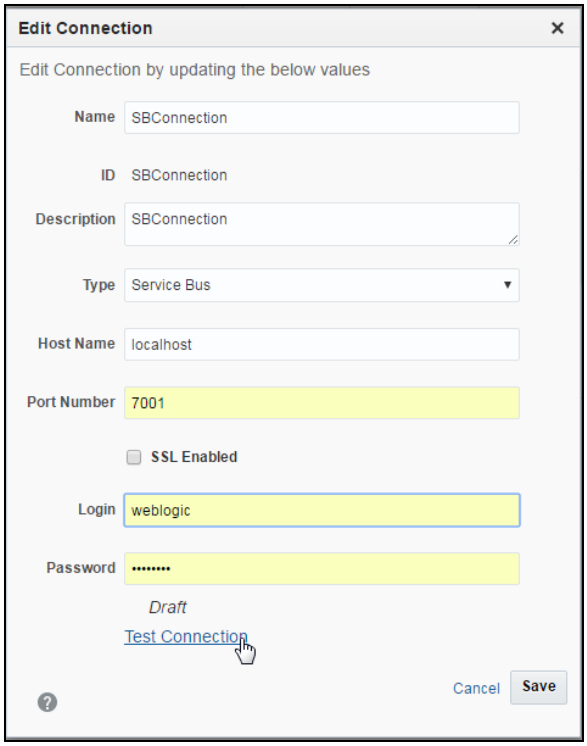
- Click on either one of the connections to open the Admin page



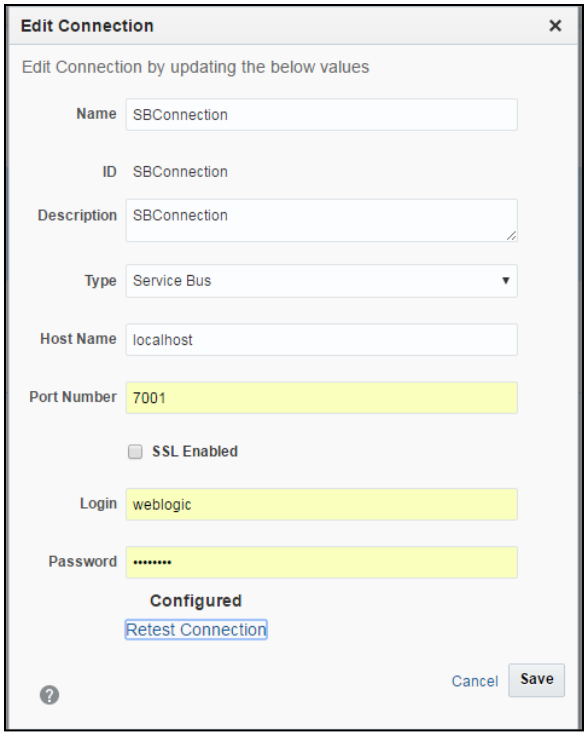
- You can see both data connections in draft state. They have to be configured for your environment before they can be activated.
- Hover with your mouse over the **SBConnection** and click the edit button



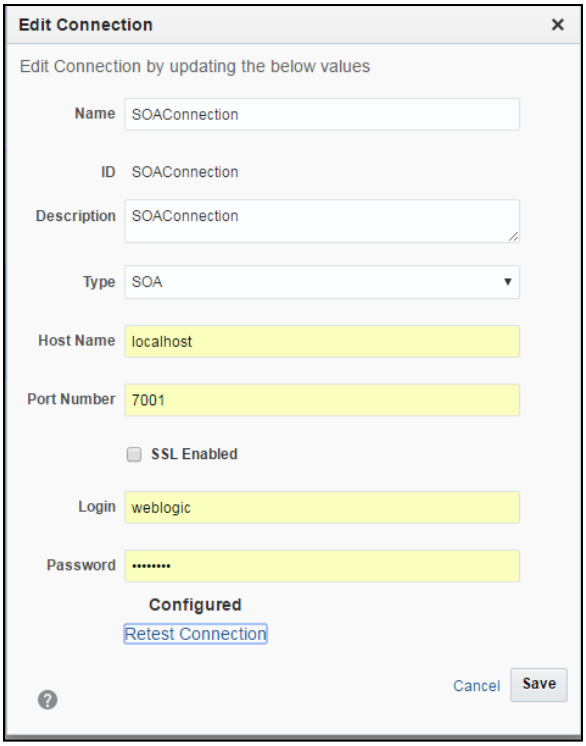
- In the **Edit Connection** dialog, enter the values for host, port, admin user and admin password for your environment where Service Bus is running
- Click **Test Connection**



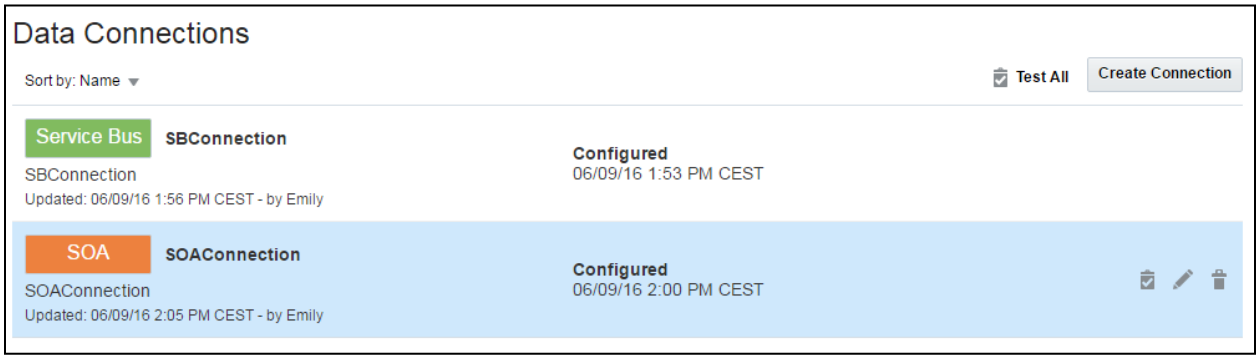
- If the result is not **Configured**, correct the values you entered



- Click **Save**
- Repeat the same steps for the **SOAConnection**



- Both connections should now be configured



You have now completed the import of the partial model and the data connections setup.

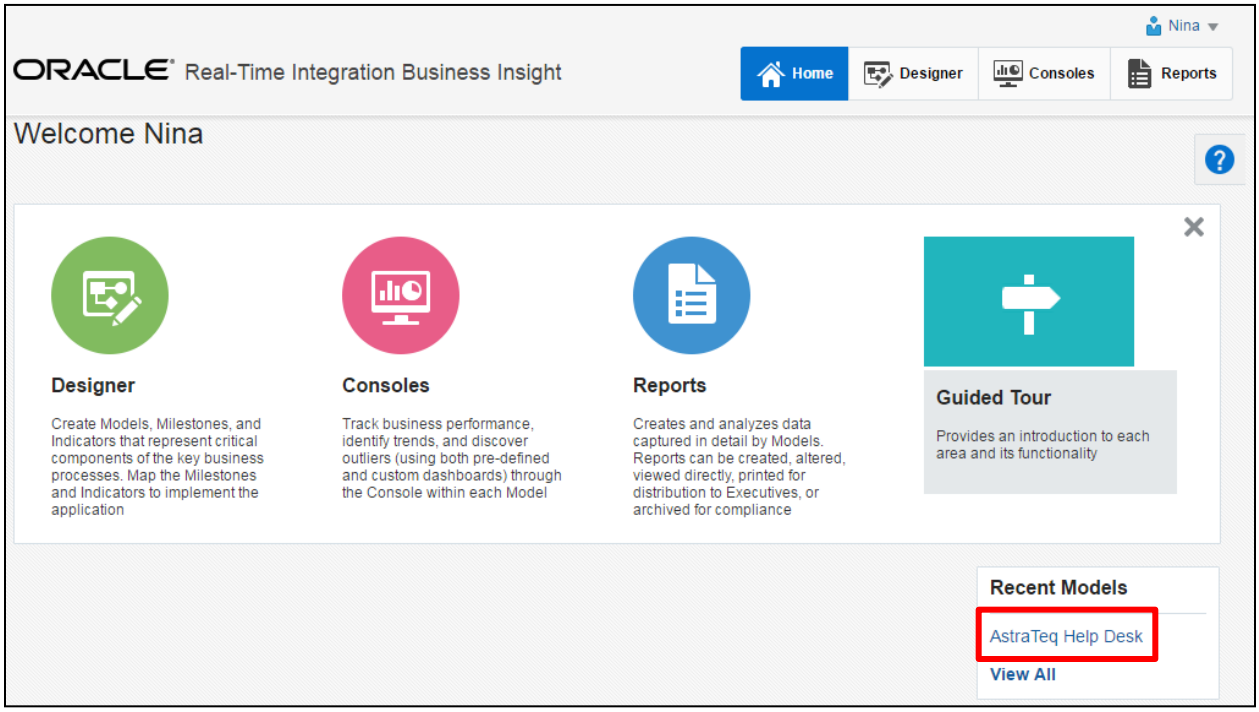
Log out from the Insight UI.

Business User: Define Milestones

The model you imported in the previous section has a number of milestones and indictors already configured and mapped. This section will lead you through the creation of a few additional milestones, followed by a section focusing on creation of additional indicators.

Once those are complete, you will map the milestones and define the extraction criteria for the indicators to complete the model creation.

Sign in as **Nina** with password **welcome1**.



Nina doesn't have access to any administration task, which is why the **Administration** tab is not shown for her

- Select the **AstraTeq Help Desk** model under **Recent Models**

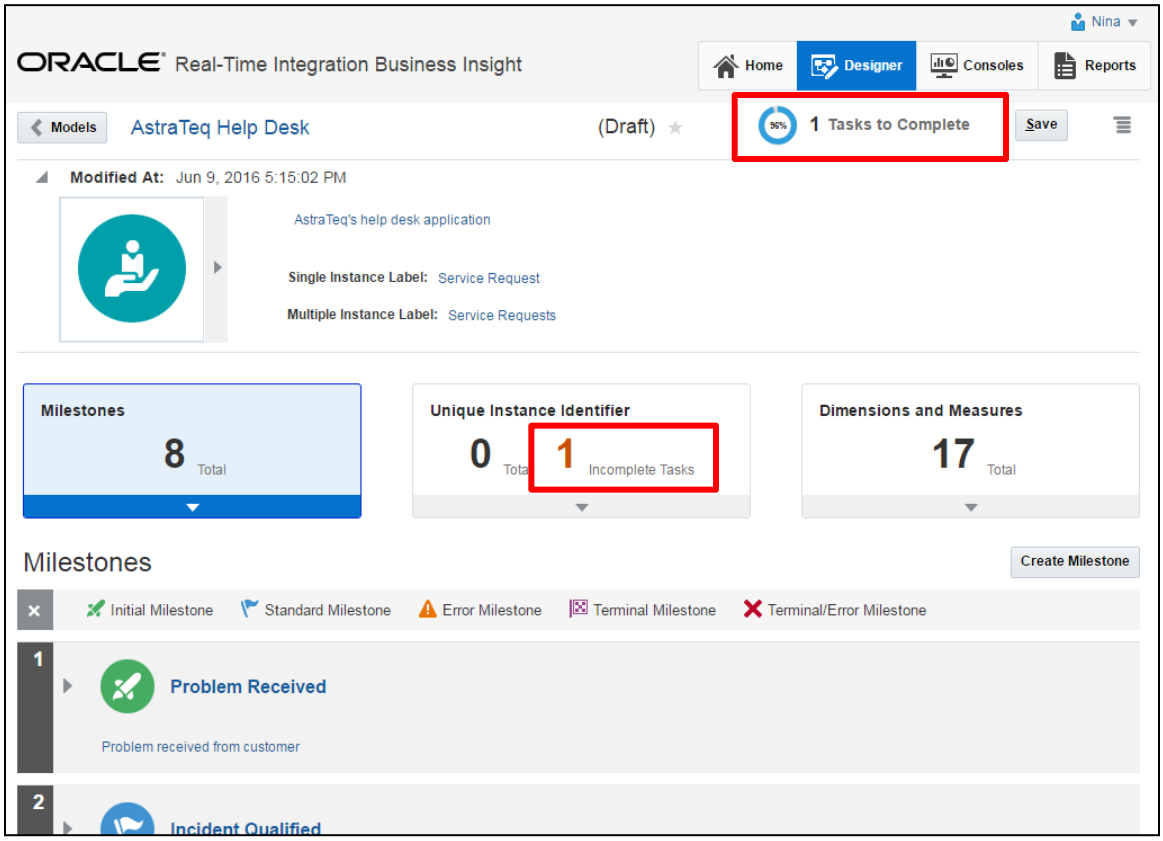
Note:

> If you want to create a new model from scratch and define and map additional milestones and indicators, feel free to follow the steps in the 01: Oracle Real-Time Integration Business Insight: Designing Insight Models and 02: Oracle Real-Time Integration Business Insight: Mapping Models to Implementation tutorials.
> You can even just delete a few milestones and indicators from the model you imported and re-create them, following the steps in the tutorials mentioned above.

The imported model is in daft state and is missing

- Four milestones (**Incident Created**, **Analysis Started**, **Ticket Suspended** and **Problem Resolved**)
- The unique instance identifier **Incident ID**
- Three indicators (**Reason for Suspension**, **Total Resolution Cost**, **Resolution**)

The unique instance identifier is mandatory and you will only be able to activate the model once you created and mapped it and also mapped al milestones and indicators.
This is visualized as 26 mandatory task to complete.



You can see on top of the model definition that the Single **Instance Label** is set as **Service Request**.

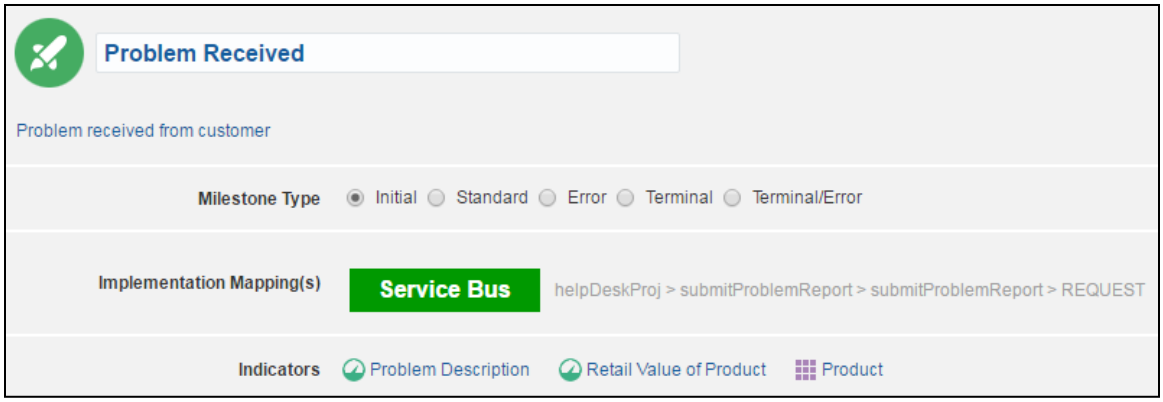
Feel free to make yourself familiar with the milestones that have already been created. This includes the initial milestone "**Problem Received**".

Three indicators are extracted when this milestone is passed: **Problem Description**, **Retail Value of Product** and **Product**.

The completed model will consist of the following milestones:

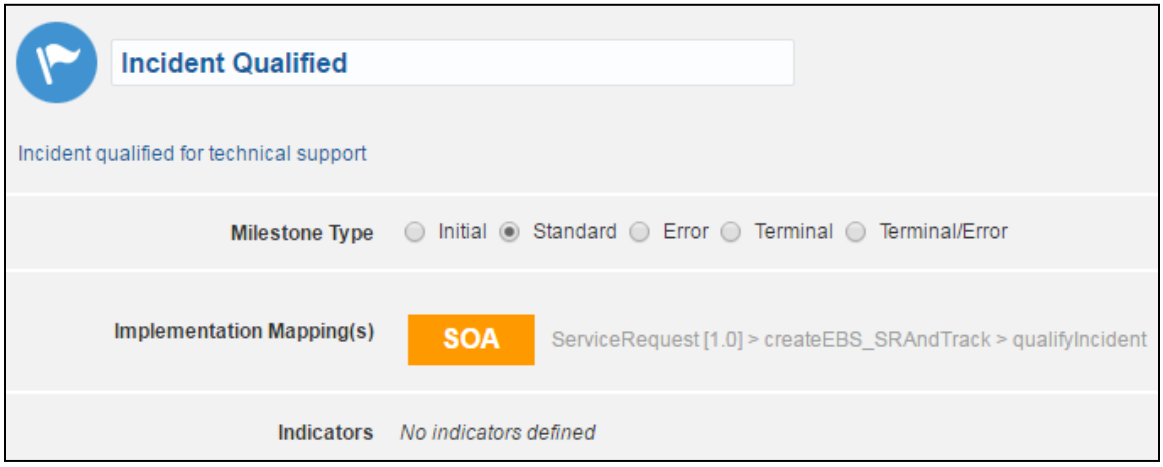
Initial milestone

- **Problem Received**
  - Once this milestone has been passed, a new instance, or rather a new **service request**, is created in Insight.
  - Three indicators are extracted when this milestone is passed: **Problem Description**, **Retail Value of Product** and **Product**.

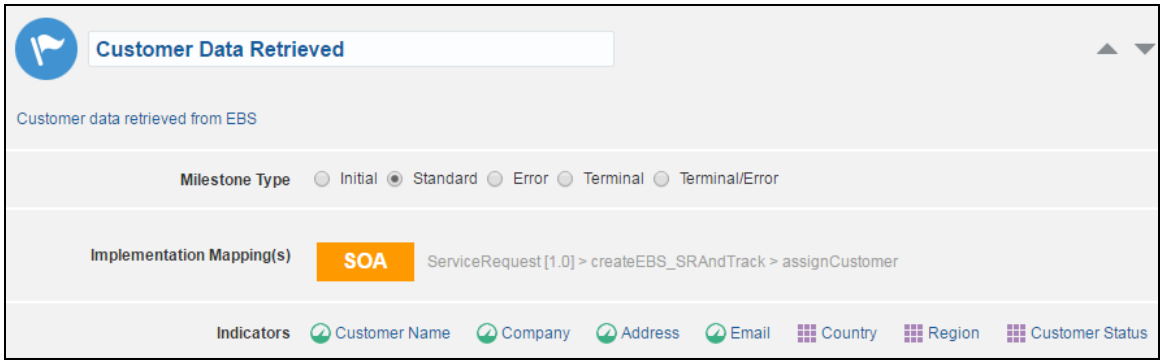


Standard milestones

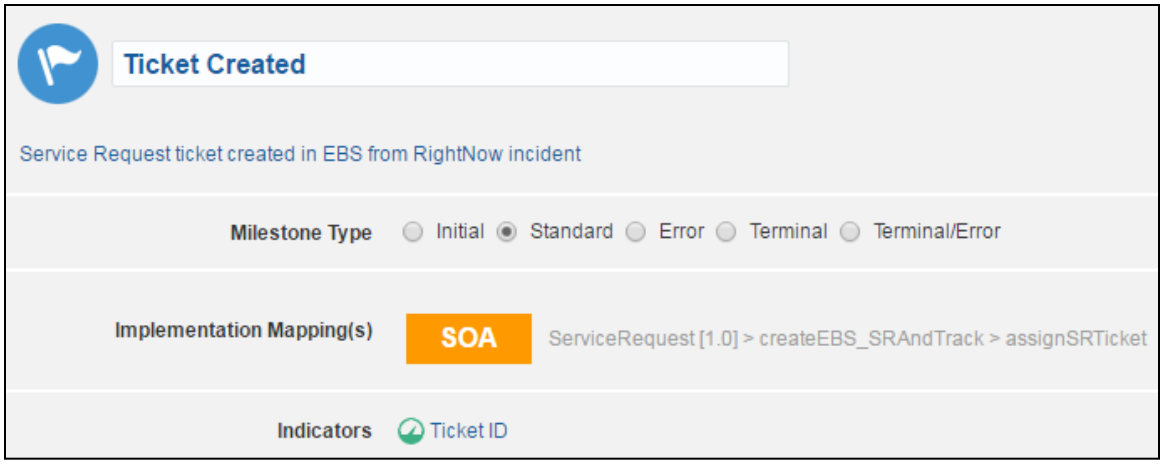
- **Incident Qualified**
  - After the incident has been created, the issue is qualified for technical support
  - No indicators are assigned to this milestone



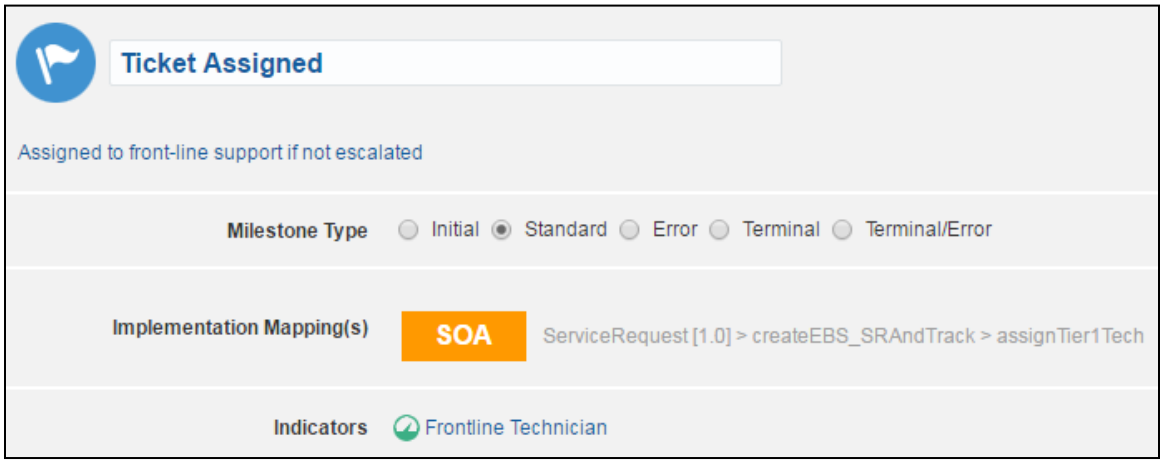
- **Customer Data Retrieved**
  - E-Business Suite contains data related to the customer who reported the problem, like name, address and status. This information is retrieved using the customer ID that was included in the problem description. You will be extracting the data at this milestone and use it for your dashboards.
  - Several customer data related indicators are extracted when this milestone is passed



- **Ticket Created**
  - This milestone marks the creation of the ticket in E-Business Suite. It is used to extract the EBS ticket ID.

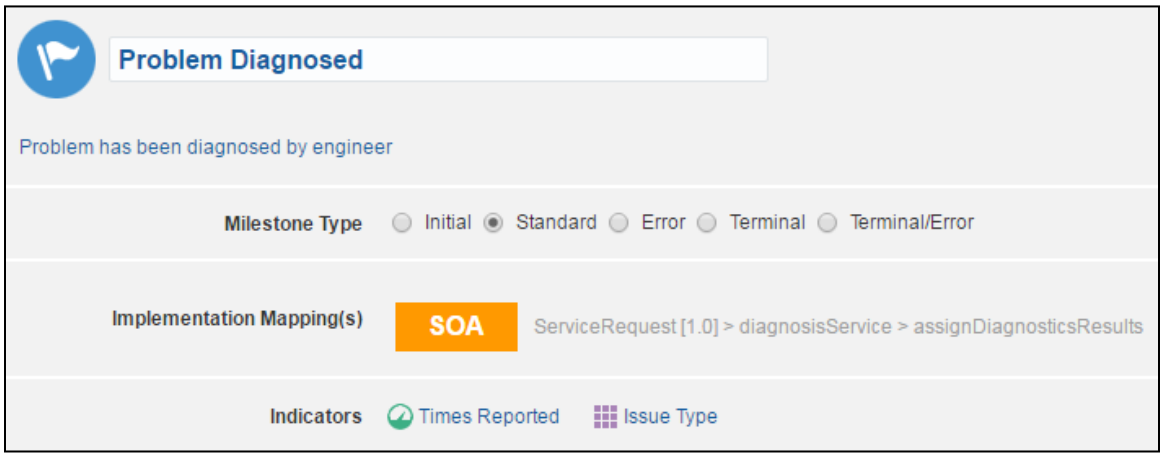


- **Ticket Assigned**
  - After the ticket has been created, it is assigned to a front-line engineer unless the customer is a premium (= gold) customer, in which case the ticket is escalated right away.
  - The name of the frontline technician is extracted when this milestone is passed.

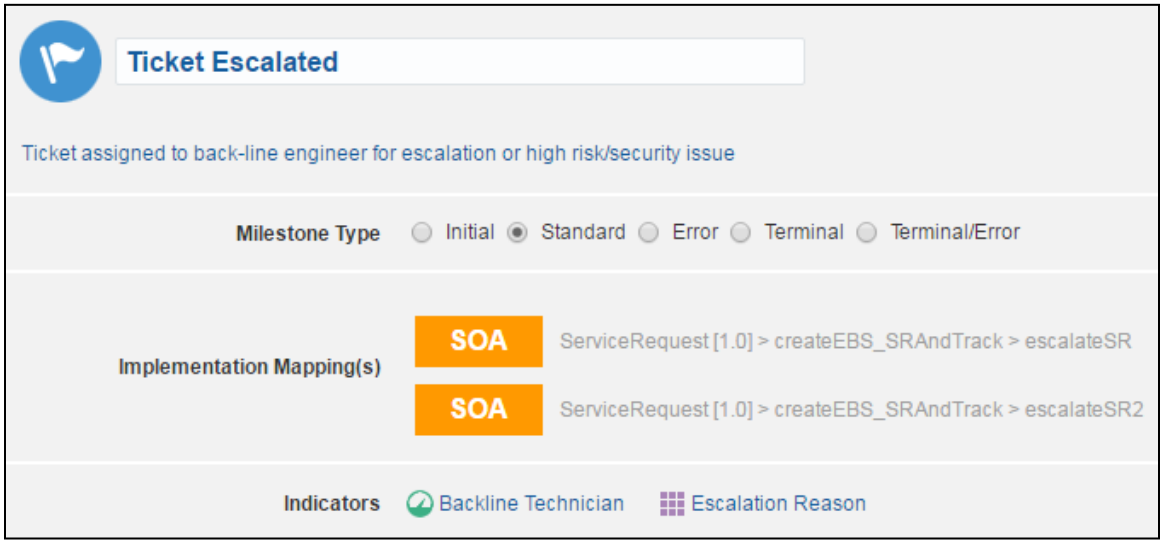


- **Problem Diagnosed**

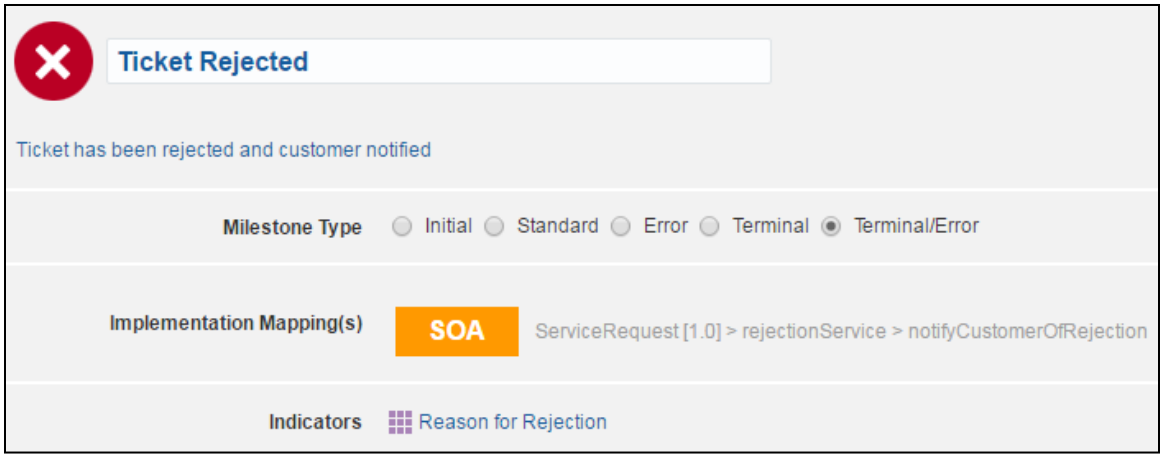
- This milestone is passed when the problem has been diagnosed. You will extract the issue type here and an indicator showing how many times the same issue has been reported before.



- **Ticket Escalated**
  - If the customer reporting an issue is a premium (=gold) customer or the analysis shows a high risk or security issue, the ticket is escalated to a backline support engineer.
  - The name of the backline support engineer and the reason for escalation are extracted at this milestone.
  - The milestone is mapped to 2 different locations in the implementation.



- **Ticket Rejected**
  - This milestone is passed if the engineer rejects the ticket. The reason for rejection will be extracted.
  - From a business perspective, this is an error state, and as it cannot be revoked, it is also a terminal state.
  - The reason for rejection is extracted when the milestone is passed.



- **Problem Resolved**
  - This milestone is passed if the reported problem has been successfully resolved. The problem resolution will be extracted.
  - You will create this milestone yourself and define indicators for resolution and total resolution cost.

Follow the steps below to create the missing milestones:

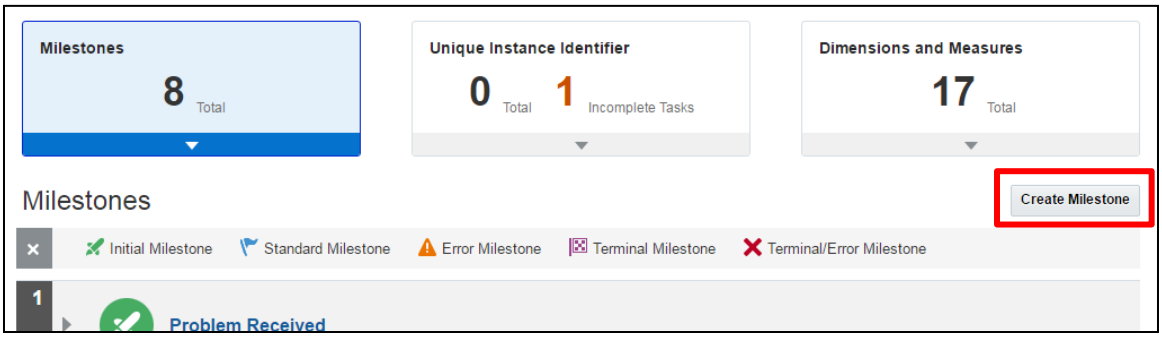
Incident Created

This milestone will be passed after the incident has been created in the RightNow application, and will be used to extract the unique instance identifier **Incident ID**.

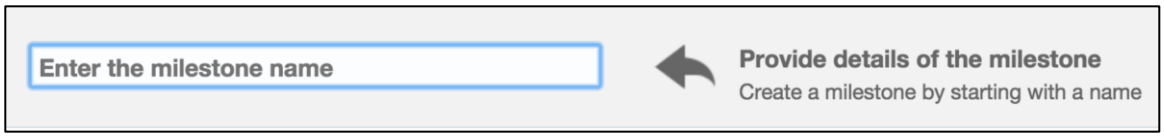
Note:

> It is extremely important that the unique instance identifier is indeed **unique** across all instances. If that is not the case, unexpected behavior will be noticed.

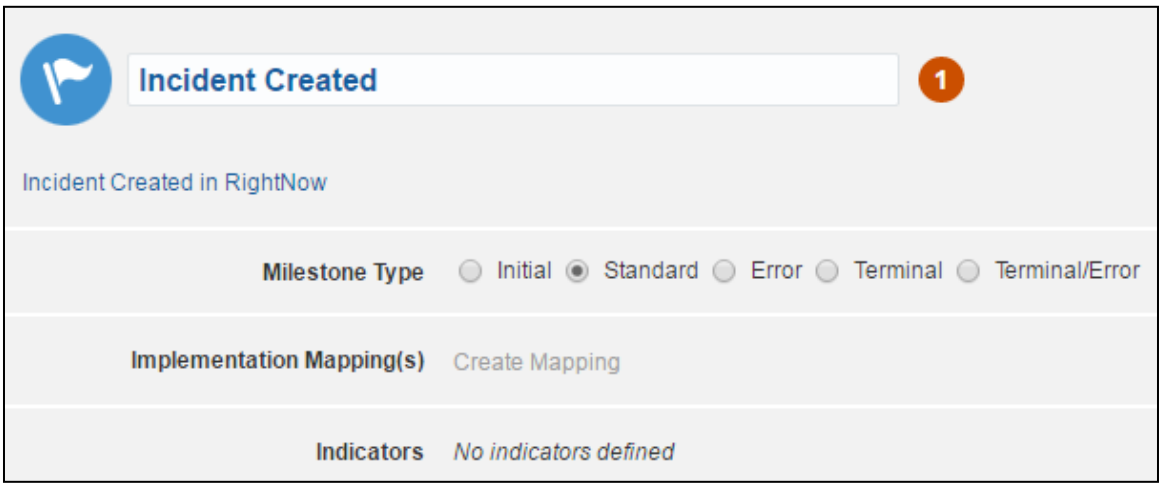
- Select **Create Milestone**.



- Select the **Milestone Name** field and enter "**Incident Created**".

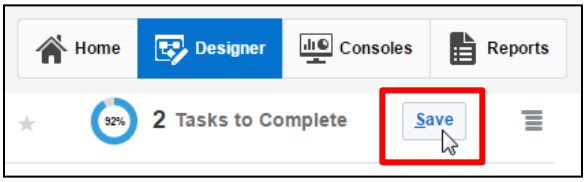


- Use the tab key or click in the area outside of the milestone, so that the area expands.
- In the expanded milestone, enter "**Incident Created in RightNow**" into **Description**.



- The behind the milestone name indicates that a mandatory task has to be completed before the model can be activated and start collecting metrics. In this case, the milestone has to be mapped to the implementation. This is a task for the architect though and will be done in a later section.
- Keep the milestone type as **Standard Milestone**

- The milestone has been created.
- Save the model by hitting **Save** on top of the designer page.



- You can also use the following keyboard short cuts to save the model:
  - Use "Alt S" on Chrome/IE browsers
  - Use "Alt + Shitft S" on Firefox browsers.

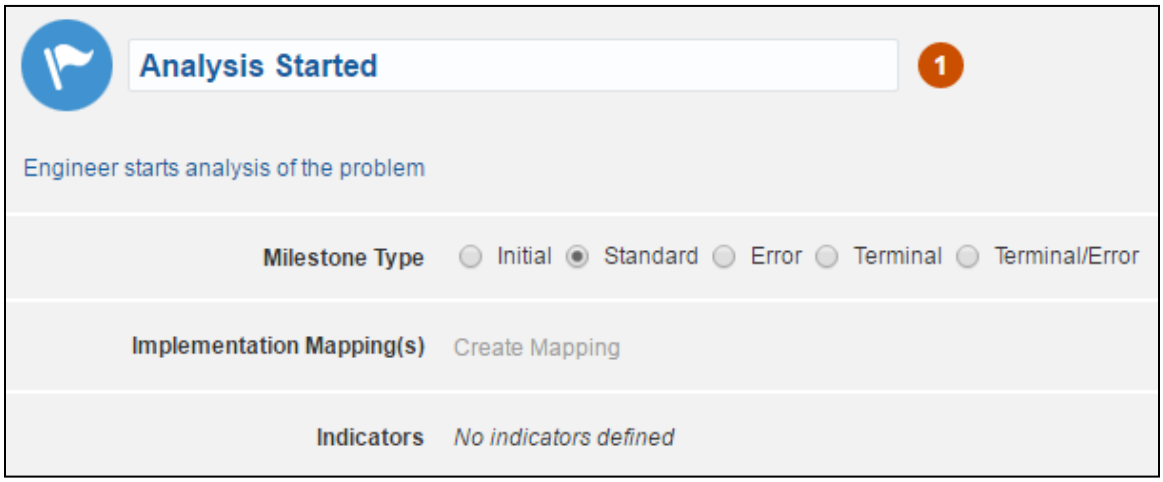
- You will see the following message:

Insight model AstraTeq Help Desk has been successfully saved.

Analysis Started

After the ticket has been assigned, the analysis is started.

- Select **Create milestone**.
- Enter "**Analysis Started**" into **Milestone Name.**
- Use the tab key to expand the milestone definition.
- Enter "**Engineer starts analysis of the problem**" into **Description.**

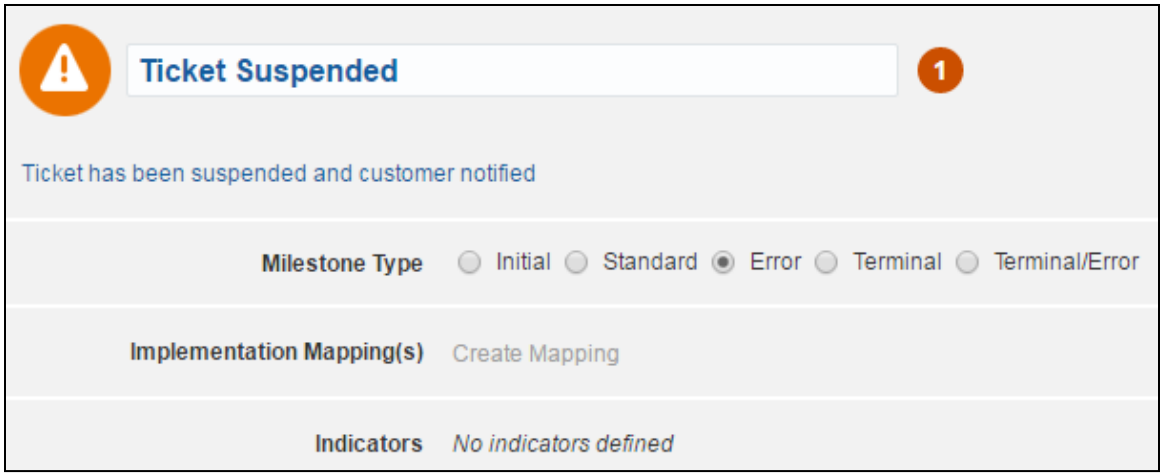


- **Save** the model.

Ticket Suspended

This milestone is only passed if the ticket is suspended due to insufficient information. It is an error milestone as this puts the service request into an unsuccessful state. It's not a terminal milestone as the service request will be resumed once the missing information has been received from the customer. The reason for suspension will be extracted in this milestone.

- Select **Create milestone**.
- Enter "**Ticket Suspended**" into **Milestone Name.**
- Use the tab key to expand the milestone definition.
- Enter "**Ticket has been suspended and customer notified**" into **Description.**
- Select **Error** as Milestone Type.



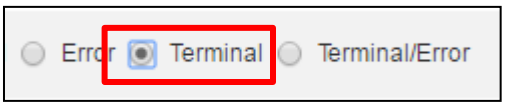
- **Save** the model.

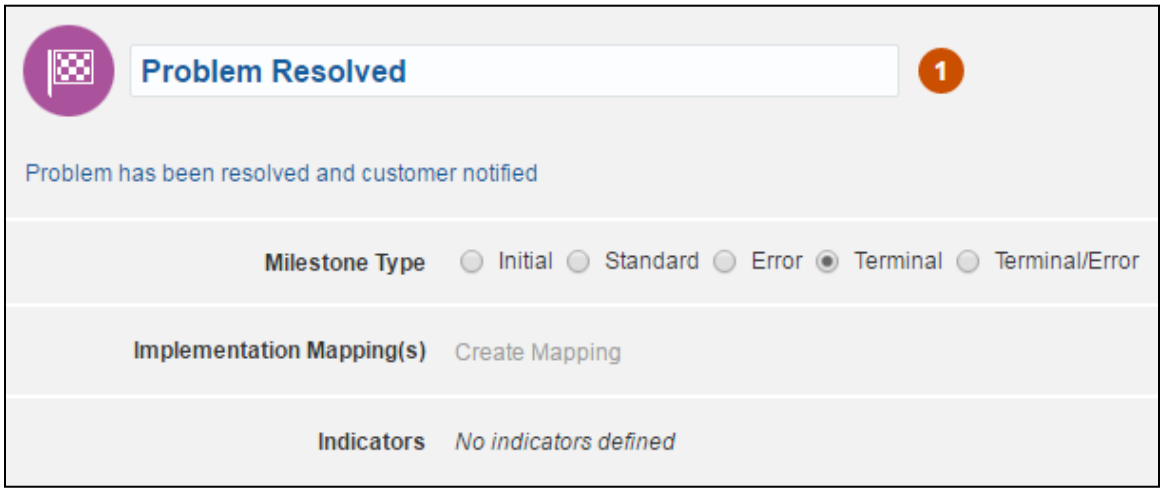
Problem Resolved

This milestone is passed if the reported problem has been successfully resolved. The problem resolution will be extracted.

- Select **Create milestone**.
- Enter "**Problem Resolved**" into **Milestone Name.**
- Use the tab key to expand the milestone definition.
- Enter "**Problem has been resolved and customer notified**" into **Description.**

- Select **Terminal** as Milestone Type.





- **Save** the model.

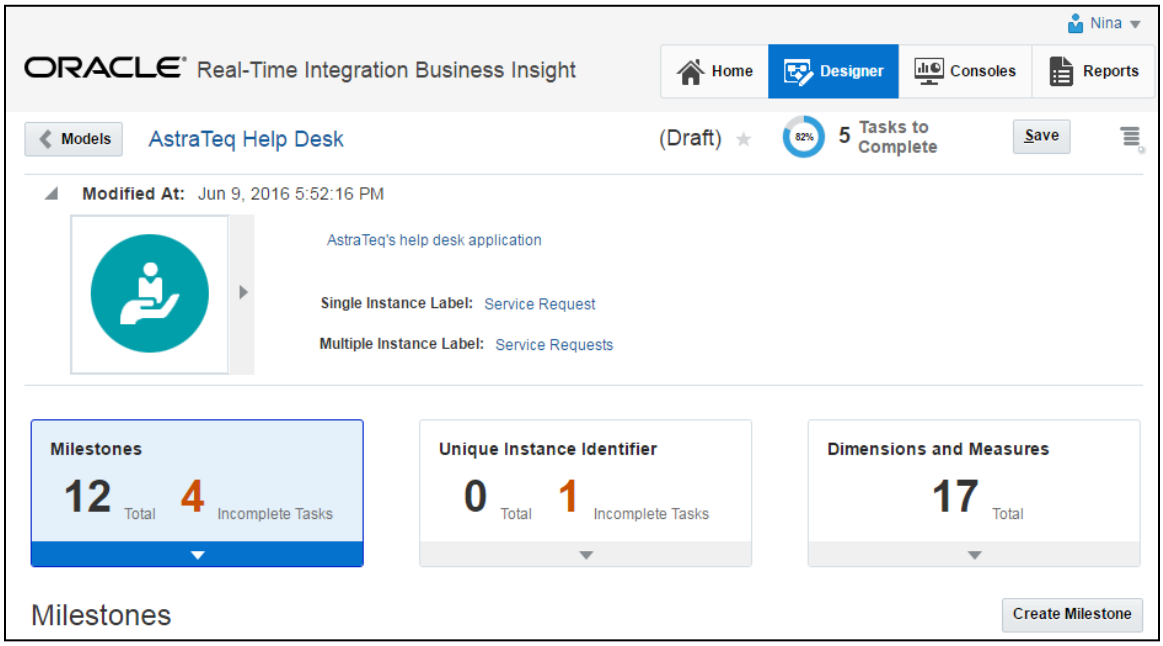
Re-order Milestones

All milestones have now been defined, but they are out of order. You can leave it like this, but it's sometimes easier to have the milestones in "natural order", i.e. the order in which they normally happen.

- Highlight the milestone you would like to move and click on the appropriate arrow to move it up or down.

- Move the **Incident Created** milestone under the initial milestone **Problem Received**
- Move the **Analysis Started** milestone under the milestone **Ticket Assigned**
- Move the **Ticket Suspended** milestone under the milestone **Ticket Escalated**

The model now looks like this:



This concludes the creation of the milestones. In the next section, you will define the unique instance identifier.

Business User – Define Unique Instance Identifier

Now that all milestones have been defined, you will – still in the role of Nina, the business user - create the corresponding indicators: **Unique Instance Identifier**, **Dimensions** and **Measures**.

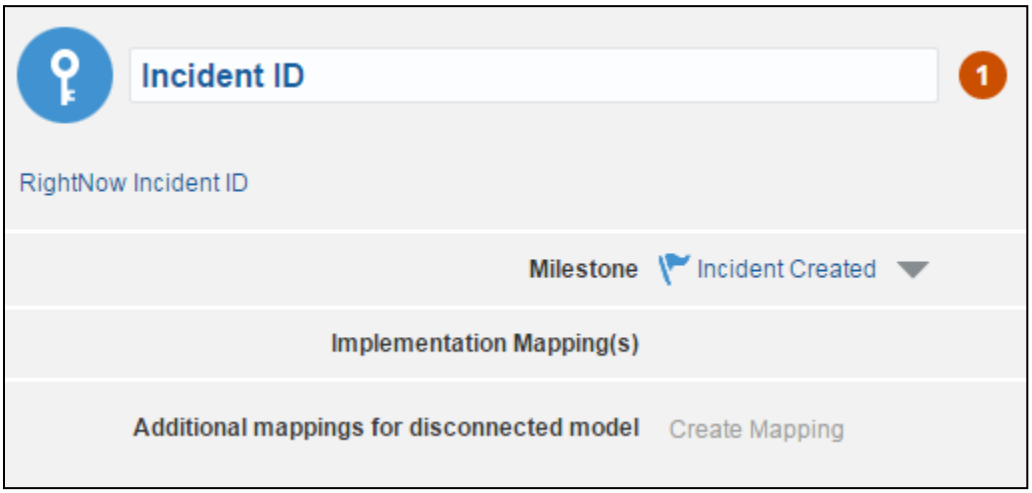
As previously mentioned, the RightNow incident ID is used as the identifier for the help desk model. This ID is available in the Service Bus project as well as the SOA composite.

Choose the **Designer** tab and select the **AstraTeq Help Desk** model.

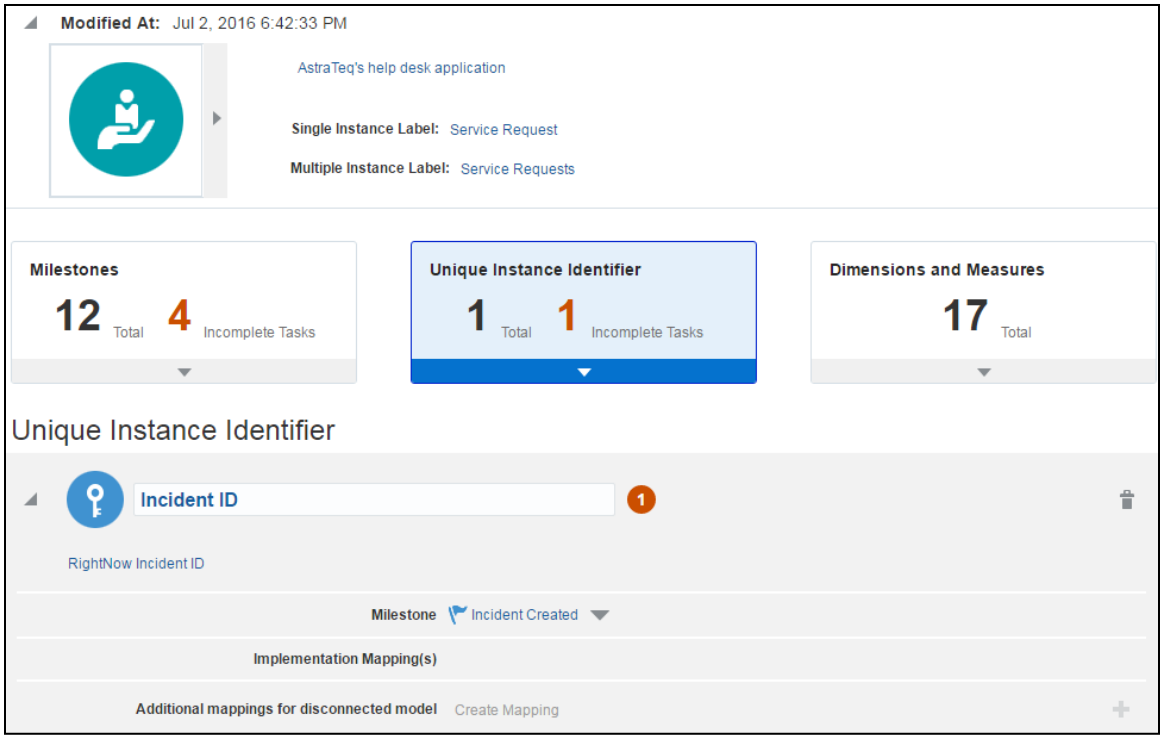
Select the **Unique Instance Identifier** tile:

This opens the **Unique Instance Identifier** definition:

- Enter the **Name** "**Incident ID**".
- Use the tab key to expand the indicator definition.
- Enter the **Description** "**RightNow Incident ID**".
- Select milestone "**Incident Created**".

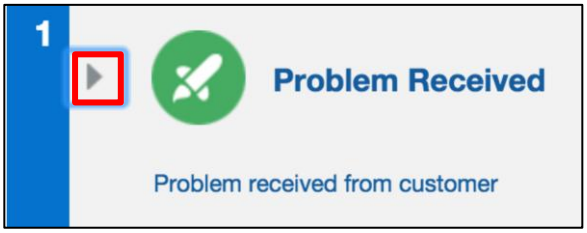


- **Save** the model


Modified At: Jul 2, 2016 6:42:33 PM
AstraTeq's help desk application
Single Instance Label: Service Request
Multiple Instance Label: Service Requests
Milestones
12 Total
4 Incomplete Tasks
Unique Instance Identifier
1 Total
1 Incomplete Tasks
Dimensions and Measures
17 Total
Unique Instance Identifier
Incident ID
1
RightNow Incident ID
Milestone Incident Created
Implementation Mapping(s)
Additional mappings for disconnected model Create Mapping

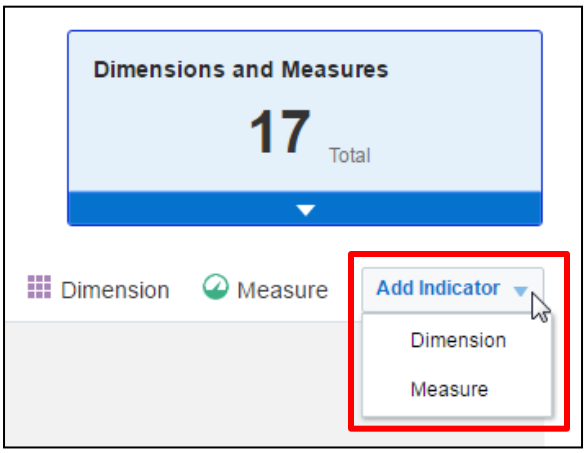
Business User - Define Dimensions and Measures

Both Dimensions and Measures can be created within the milestone they are associated with, by selecting the **Create a new indicator** button within the expanded milestone definition. You may have to expand the milestone first, clicking the small arrow on the left.



- Click on the "**+**" sign at the bottom right of the milestone

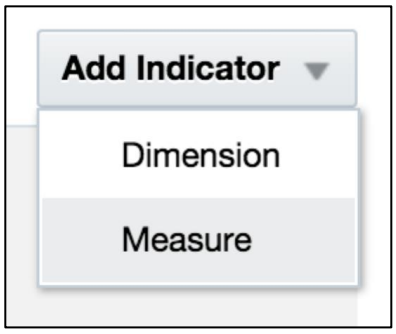
Alternatively, you can select the **Dimensions and Measures** tile on top of the designer and select the **Add Indicator** button.



As a reminder, **Measures** identify values, which allow the state of the application to be quantified. **Dimensions** provide a type of grouping and categorization of applications, allowing for "slicing and dicing" of aggregate measures.

In this tutorial, you only need to define indicators **Reason for Suspension**, **Total Resolution Cost** and **Resolution**.

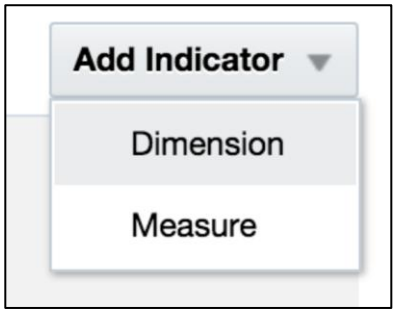
- Select the **Dimensions and Measures** tile
- Select the **Add indicator** button on top and select **Measure**



- Enter the name "**Total Resolution Cost**"
- Use the tab key to expand the indicator definition
- Enter the description "**Total resolution Cost of Issue**"
- Filterable: **No**
- Select milestone **Problem Resolved**
- **Save** the model

The next two indicators to be defined are dimensions:

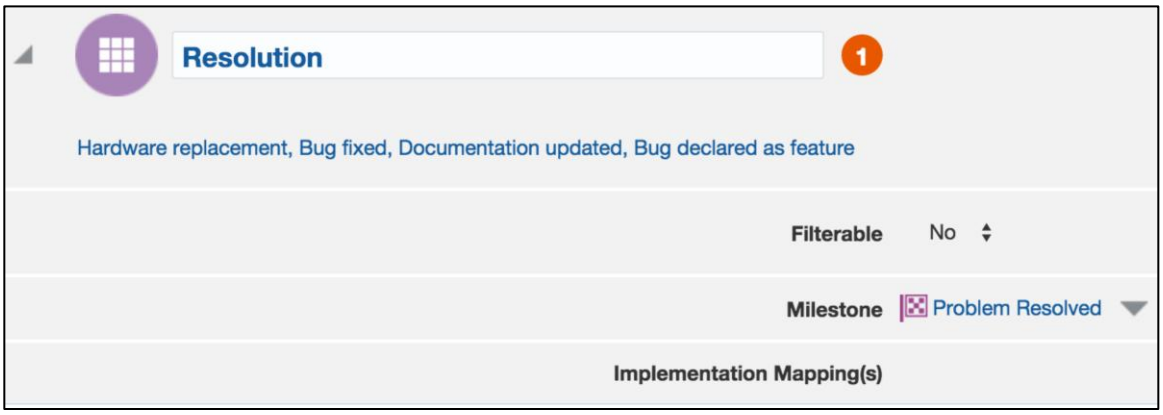
- Select the **Add indicator** button on top (or at the bottom) and select **Dimension**



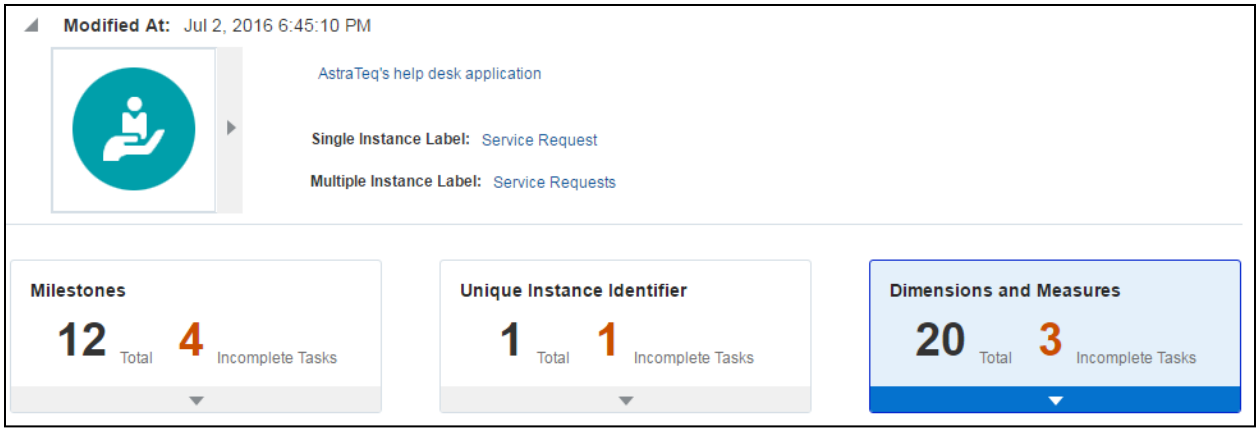
- Enter the name "**Reason for Suspension**"
- Use the tab key to expand the indicator definition
- Enter the description "**Insufficient information or not reproducible**"

- Filterable: **No**
- Select milestone **Ticket Suspended**
- **Save** the model

- Select the **Add indicator** button on top (or at the bottom) and select **Dimension**
- Enter the name "**Resolution**"
- Use the tab key to expand the indicator definition
- Enter the description "**Hardware replacement, Bug fixed, Documentation updated, Bug declared as feature**"
- Filterable: **No**
- Select milestone **Problem Resolved**
- **Save** the model



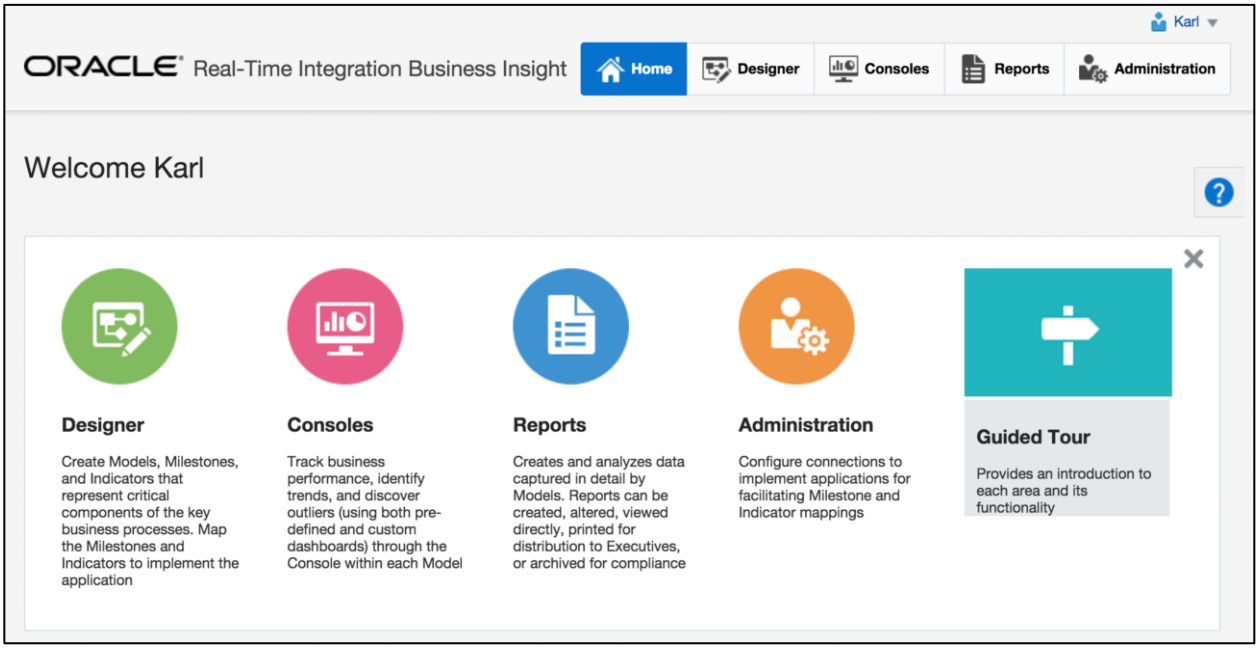
Remember to **save** the model.


Modified At: Jul 2, 2016 6:45:10 PM
AstraTeq's help desk application
Single Instance Label: Service Request
Multiple Instance Label: Service Requests
Milestones
12 Total
4 Incomplete Tasks
Unique Instance Identifier
1 Total
1 Incomplete Tasks
Dimensions and Measures
20 Total
3 Incomplete Tasks

Integration Architect – Map Milestones to Implementation

In this section, you will map the previously created milestones to the implementation in the role of **Karl**, the integration architect.

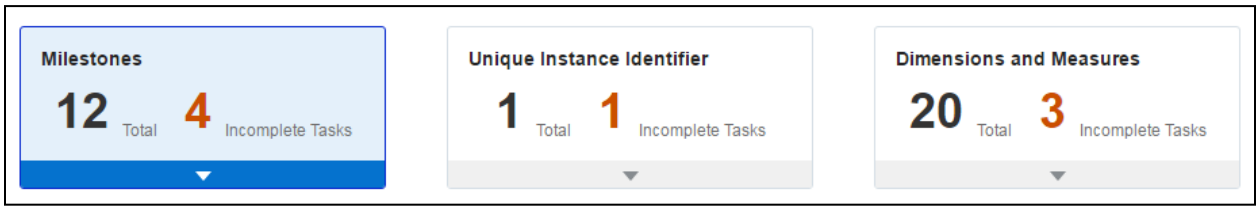
Sign out and sign back in as **Karl**, the integration architect (password: **welcome1**).



Click on the **Designer** tab and select the **AstraTeq HelpDesk(Draft)** model:

33 tasks have to be completed before the model can be activated.

After selecting the model, you can see that 4 milestones have to be mapped and extraction criteria for the Unique Instance Identifier and 3 indicators have to be defined.

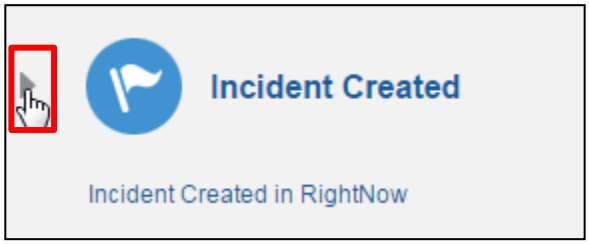


Let's get started with the milestone mapping.

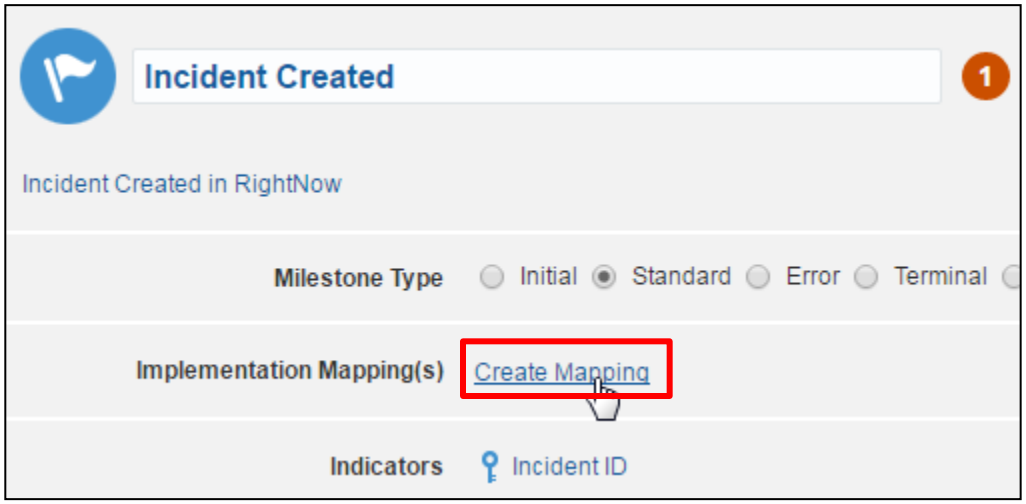
Incident Created

This milestone is mapped at the invocation point for the SOA composite **HelpDesk**, at the **REQUEST** of operation **process** of the **createSRandTrack** business service.
At this point, the incident has been created and the **incidentID** is available.

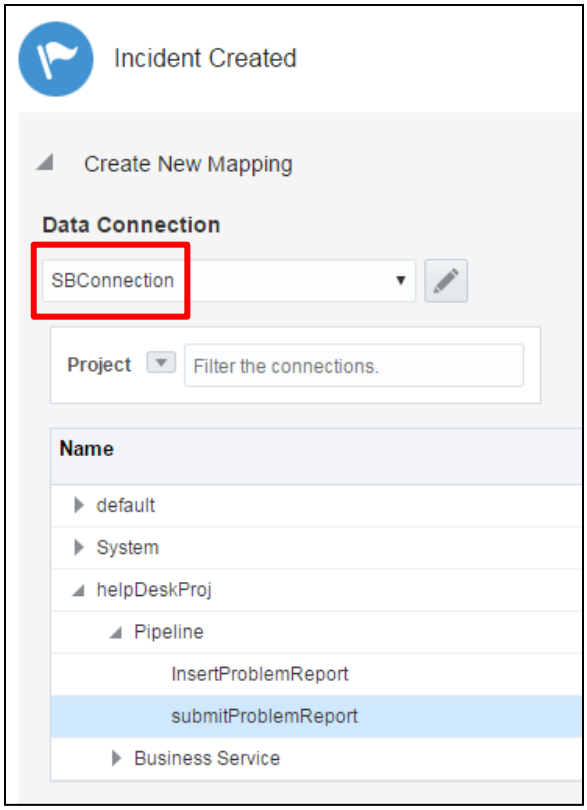
- Expand milestone **Incident Created** by clicking on the arrow left of the milestone icon.



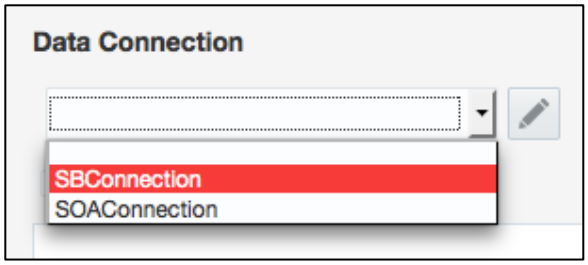
- Select **Create Mapping** to open the **Implementation Mappings** page.



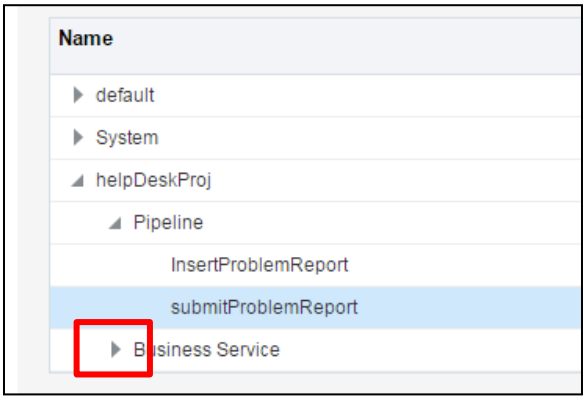
- Before you can start mapping, you need to select the data connection to the deployed application, to which you will define the mapping.
- Because the previous milestone has been mapped within the Service Bus domain, the **Service Bus Data Connection (SBConnection)** is already selected.



- You can switch to a different data connection in the dropdown box

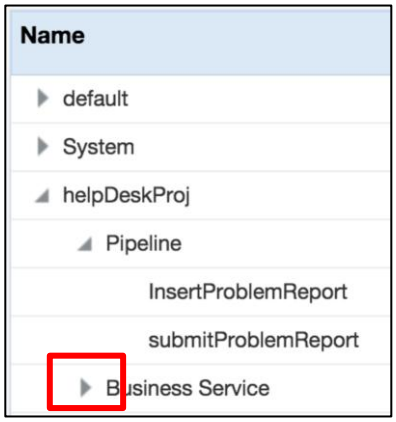


- Selecting the connection (and as such the server to which the Service Bus application is deployed), loads information about all pipelines and business services deployed in that server, as long as the component interface is supported by Insight:

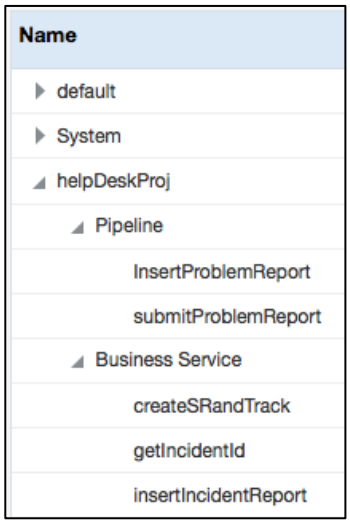


If you have a large number of artifacts in your domain, you can filter the view.

- You can see both Service Bus pipelines in this project: **insertProblemReport** and **submitProblemReport.** The latter pipeline is invoked when the problem report is received from the mobile application.

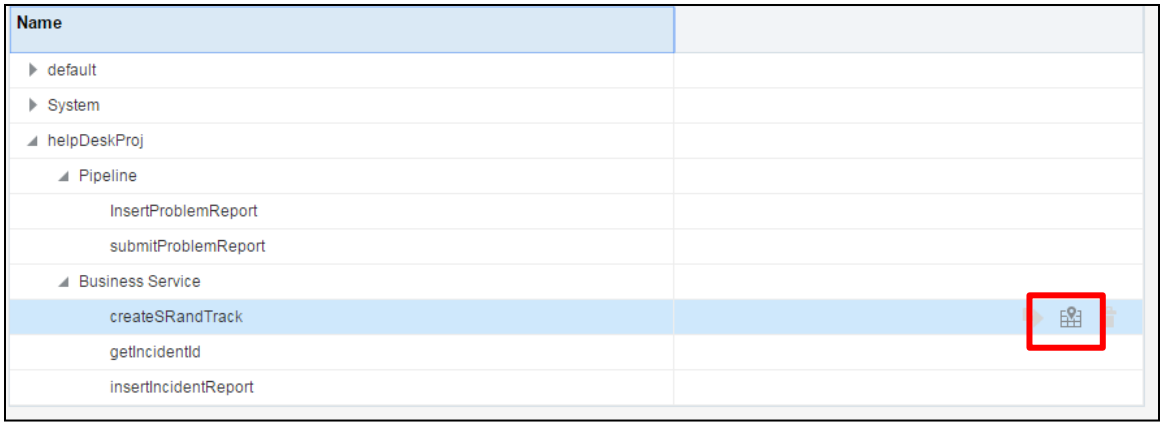


- Expand Business Service to see the list of business services in this project



- The project includes three business services:
  - **createSRAndTrack:** invokes the SOA composite
  - **getIncidentId**: internal implementation
  - **insertIncidentReport**: invokes incident creation in RightNow

- Select the **createSRandTrack** business service and you will see an icon to map the milestone to the pipeline:

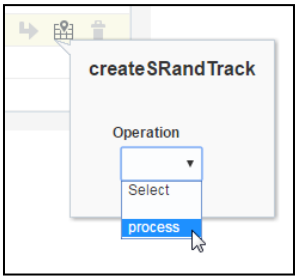


- You can see two disabled icons to the left and the right of the mapping icon. The icon on the left is only used when a BPEL process is selected to drill down into the BPEL structure.
- The icon on the right can be used to remove a mapping and will be enabled as soon as a mapping has been defined.

- Click the **mapping** icon.
- This opens a dialog where you select the Operation for the business service.

Note:
Operation defines which operation within the business service the milestone is mapped to.

- Select **process**, the only operation available

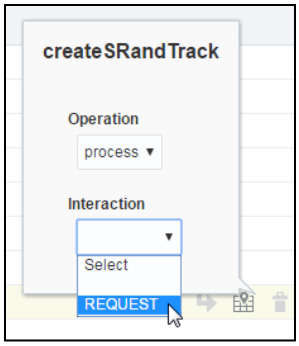


- In the next step, select the Interaction.

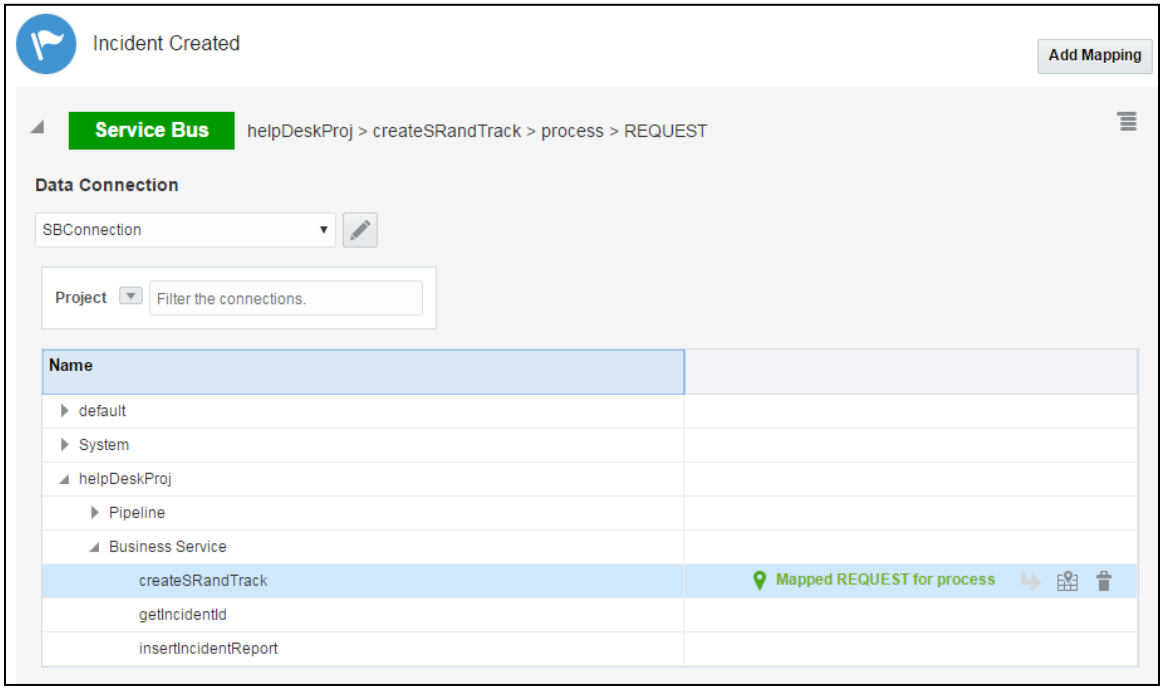
Note:
Interaction gives you a choice between REQUEST and RESPONSE.

a) **REQUEST**: The milestone will be passed when the pipeline is invoked
b) **RESPONSE**: The milestone is passed when the pipeline is complete. For pipelines without a response part, RESPONSE will not be available.

- Select **REQUEST** as this milestone is passed when the business service is invoked.

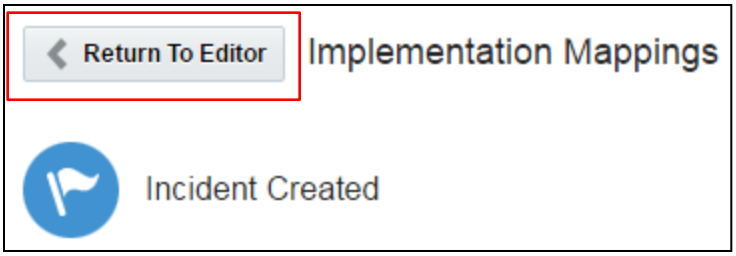


- The mapping is confirmed and the mapping string is displayed on the top of the page and next to the pipeline:
  helpDeskProj > createSRandTrack > process > REQUEST
  (the string has been concatenated from Service Bus project name > Business Service name > operation name > interaction)

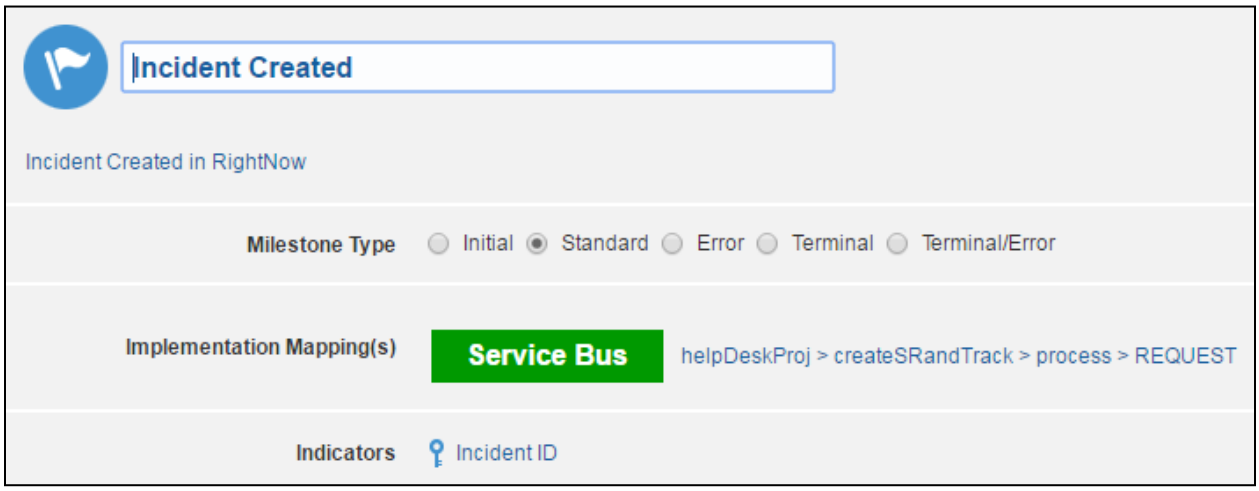


- Now that the mapping has been defined, the **Clear Mapping** icon is also enabled.

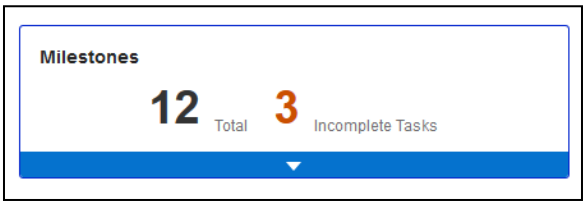
- Select **Return to Editor** on top of the page to get back to the milestones page.



- The **Incident Created** milestone has been successfully mapped to the entry point of the **createSRandTrack** business service.



- The number of incomplete tasks has been reduced by one:

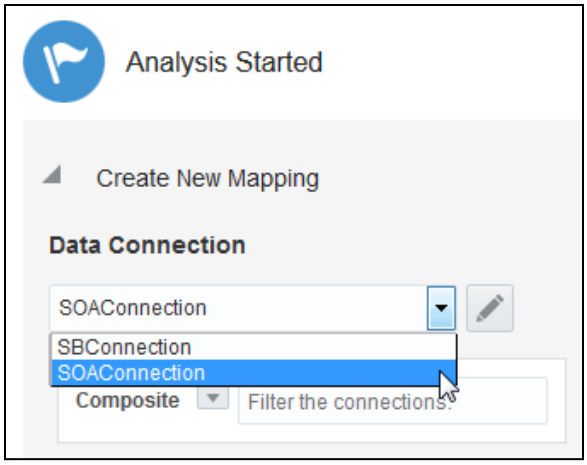


- **Save** the model.

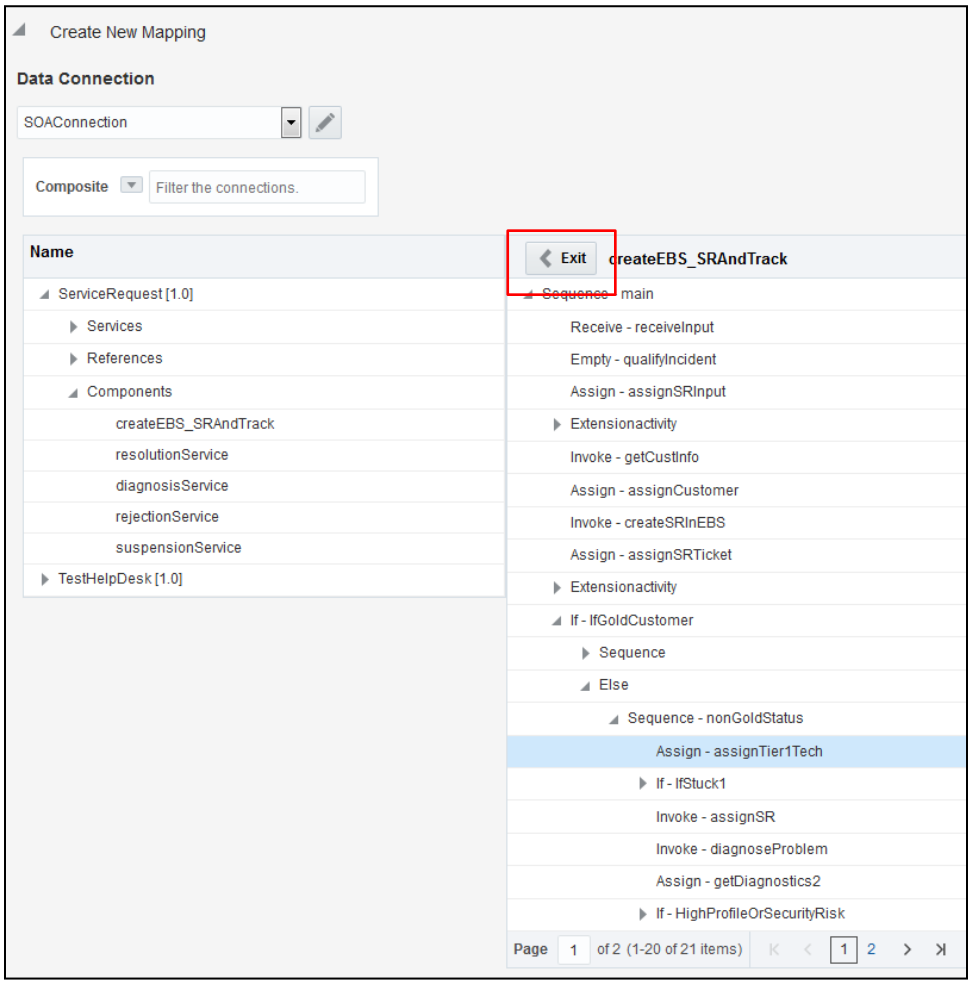
Analysis Started

The problem analysis is handled by the BPEL process **diagnosisService**. You will map this milestone to the **REQUEST** of this BPEL process.

On the Implementation Mappings page, select **SOAConnection** if it's not already selected**:**

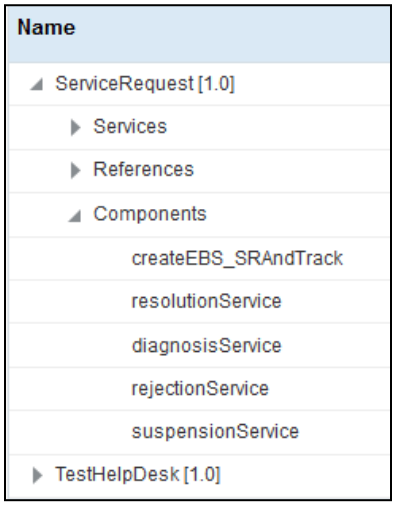


The mapping screen shows what has been mapped for the previous milestone. This has been done, so that the user doesn't have to continue expanding the same notes in case of similar milestone mappings.

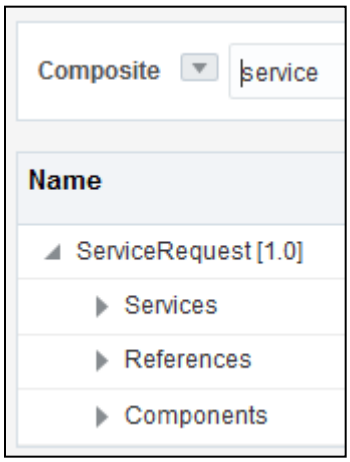


- In the implementation mapping screen, exit the previous drill-down into the **createEBS_SRAndTrack** BPEL process

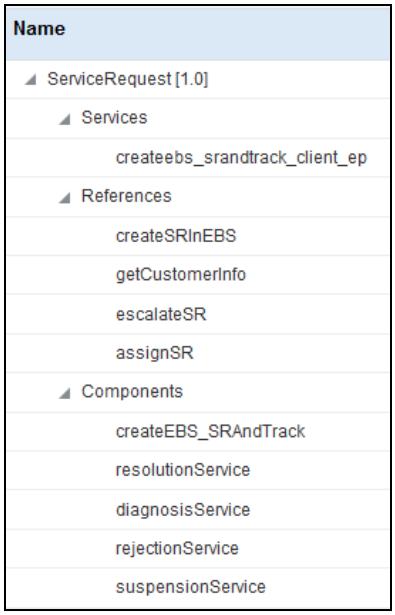
You can see all composites deployed to this server (your list may look slightly different, dependant on your domain).



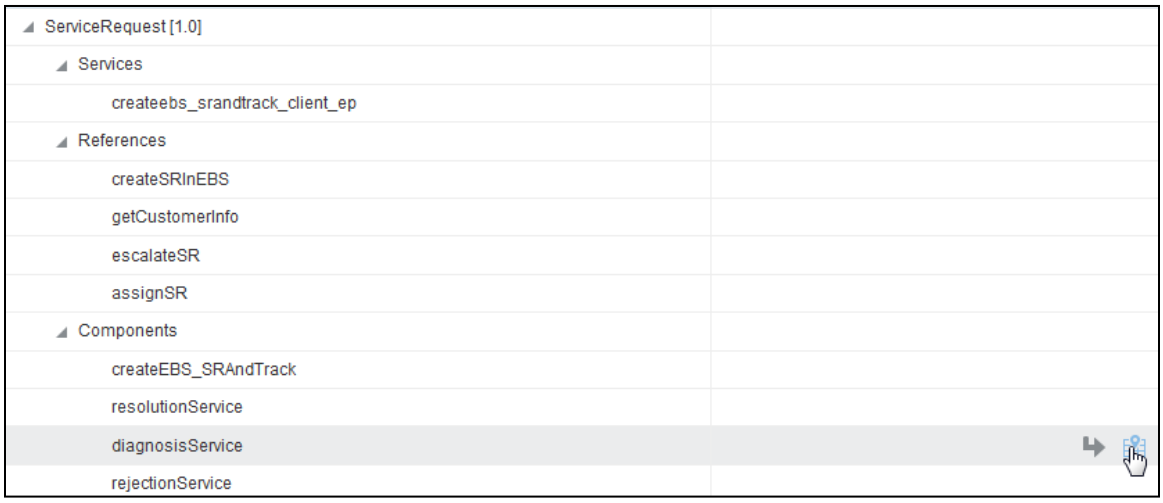
Filter for "**service**" in "**composite**" filter to restrict the list to the **ServiceRequest** SOA composite:



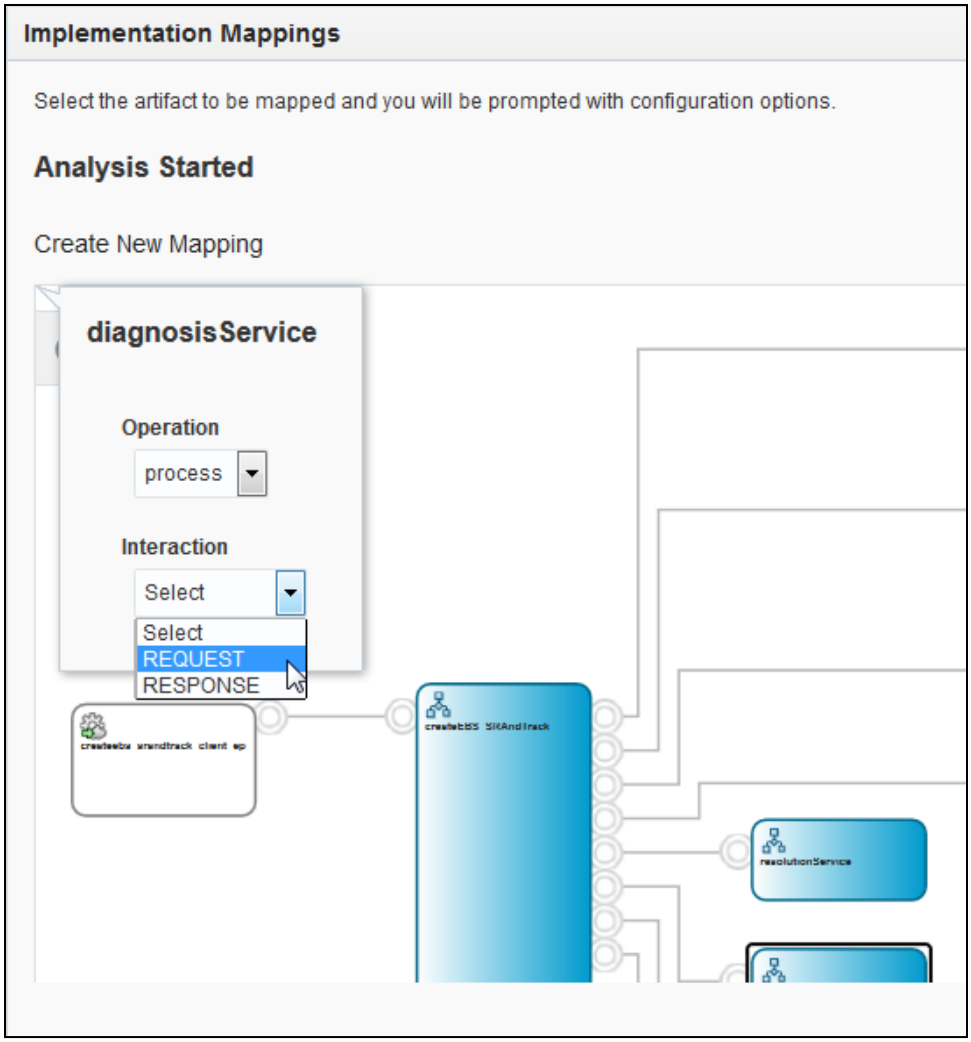
Expand "**Services**", "**References**" and "**Components**":



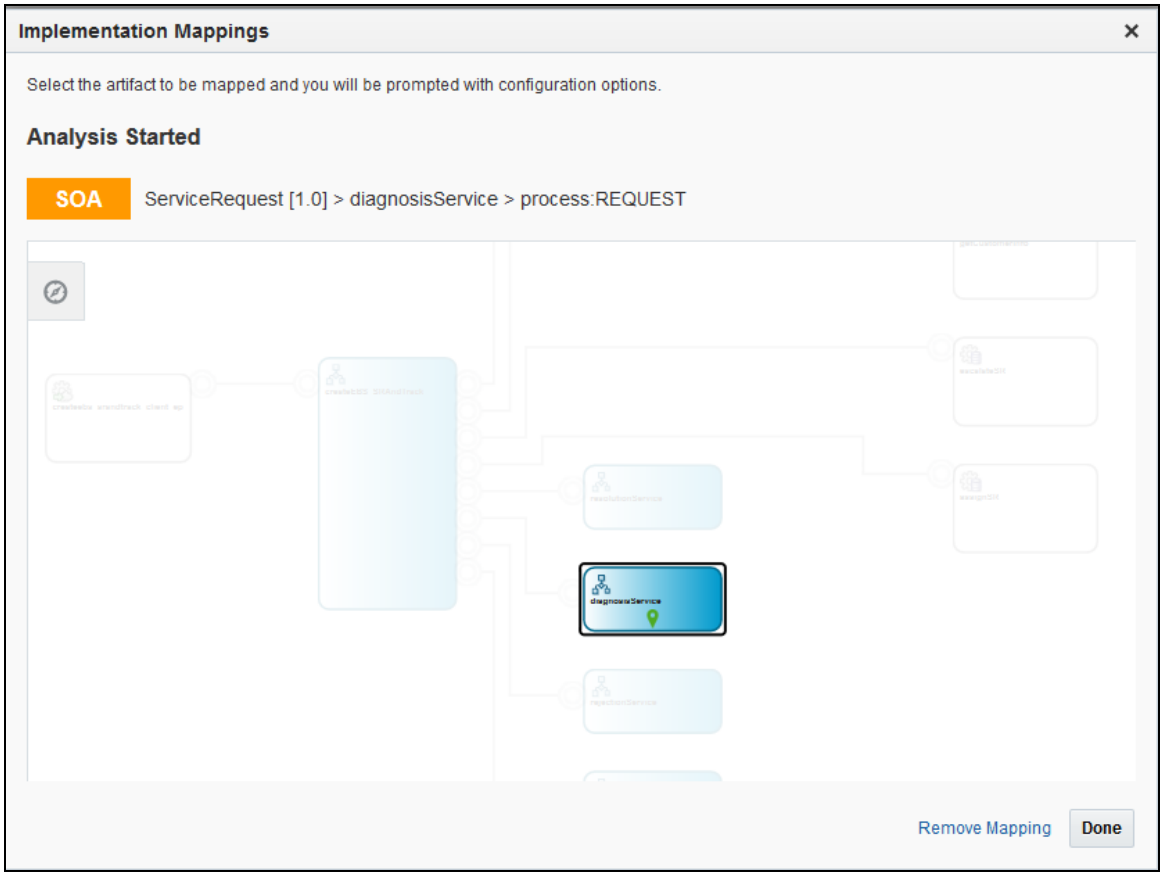
- Highlight the **diagnosisService** component and click the map icon



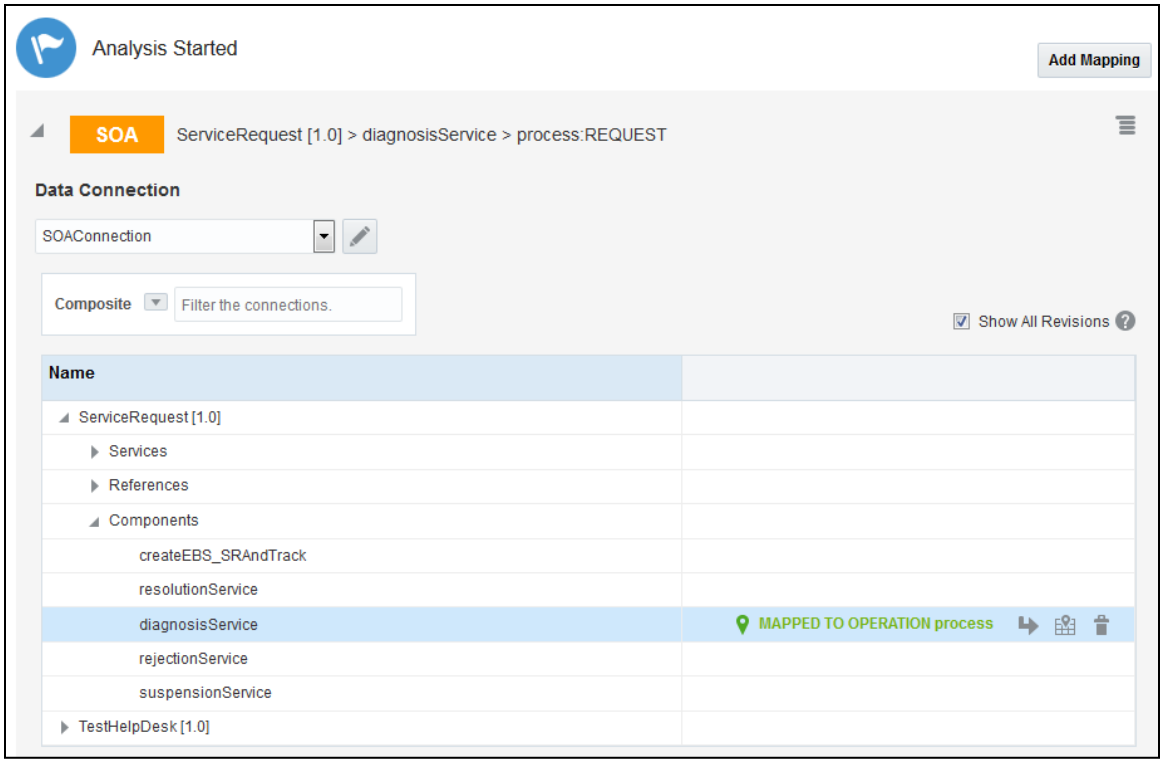
- Select operation **process**



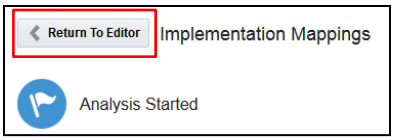
- Select Interaction **REQUEST**
- The view changes and highlights the mapped BPEL process.
- If the BPEL process is visible just at the bottom of the screen, pull it up with your mouse.



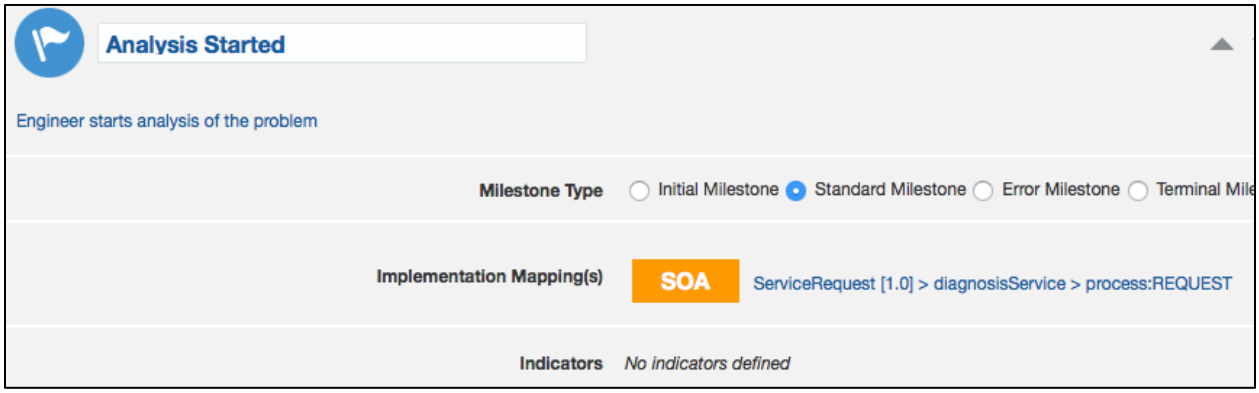
- Click **Done**
- The mapping string should look like this: **ServiceRequest [1.0] > diagnosisService > process:REQUEST**



- **Return** to the editor



- The milestone should look like this:



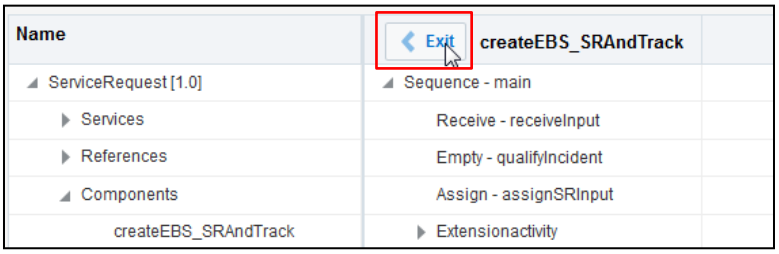
- **Save** the model

Ticket Suspended

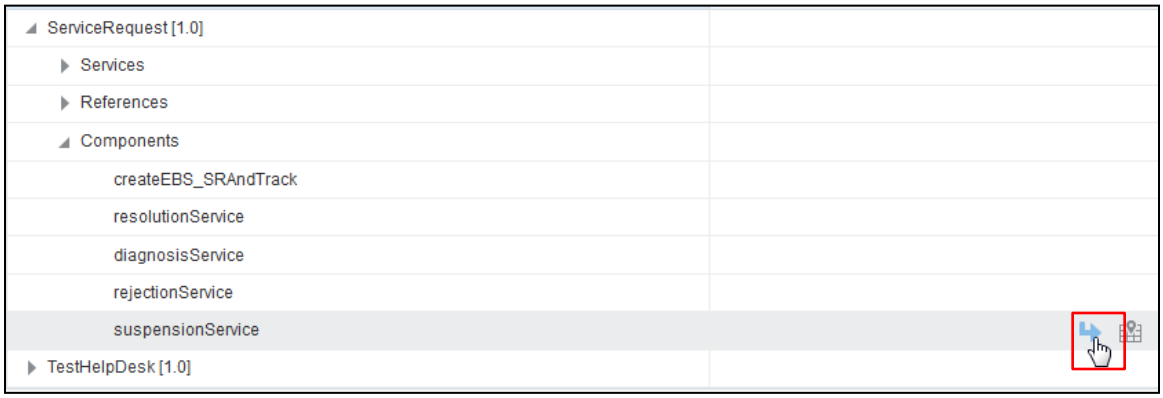
A ticket is **suspended** if more information is needed from the customer to continue the analysis.

The milestone will be mapped within the **suspensionService** BPEL process, which handles the steps necessary in case of a suspension. The mapping will be done to the entry point of the **notifyCustomerOfSuspension** activity. At this point, the suspension reason is available and can be extracted.

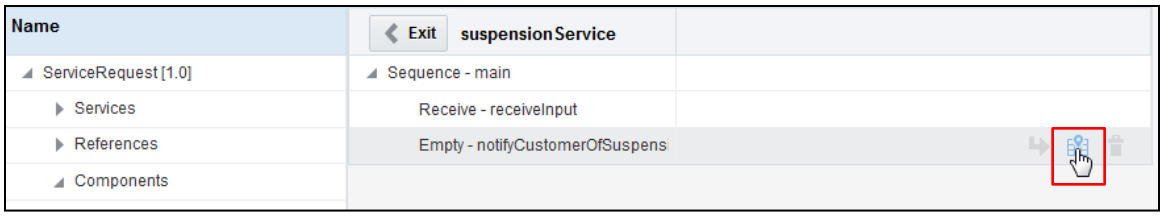
- On the Implementation Mapping screen, exit the previous BPEL drill-down



- Select the **suspensionService** BPEL process and select the "**drill down**" button **BPEL Structure**



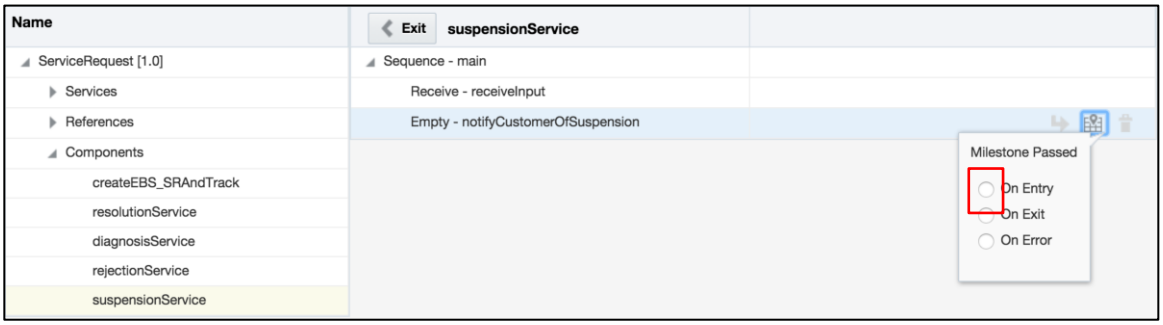
- This opens the structure of the BPEL process
- Select the **notifyCustomerOfSuspension** activity and the **Edit Mapping** button



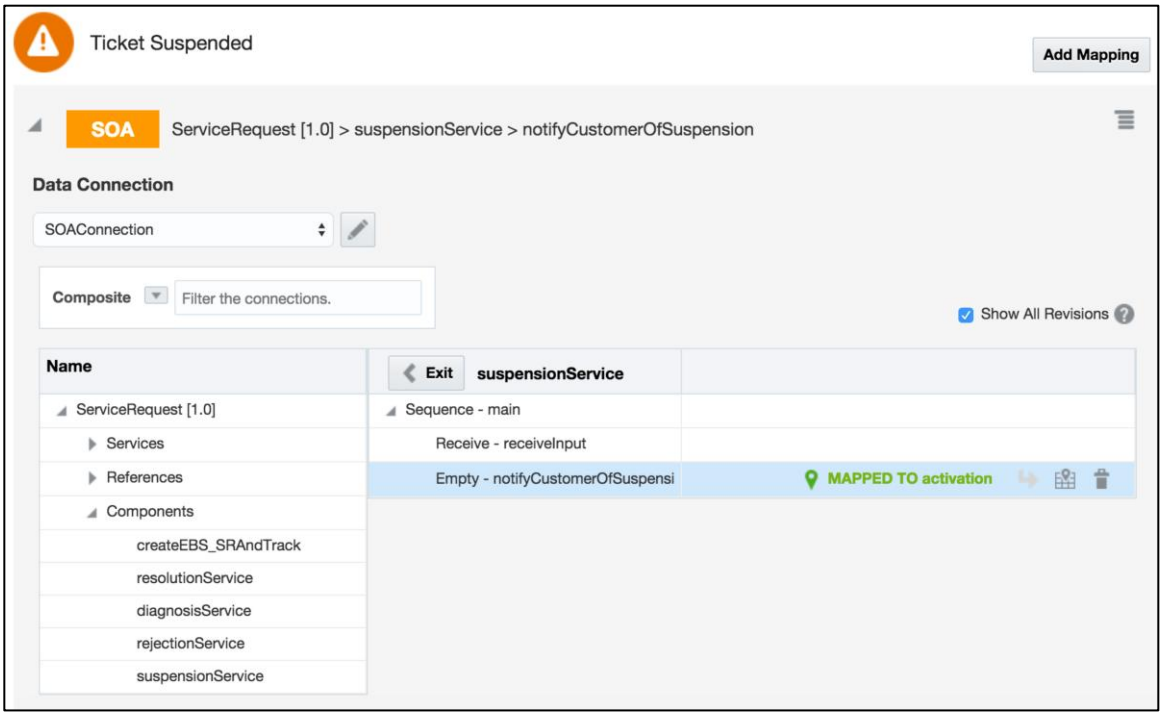
- Select **On Entry**: this defines the milestone is passed as the activity is entered, also called **activation**.

Note:

When mapping to a BPEL activity, you have a choice to define the mapping at the beginning of the activity (**On Entry**), the end of the activity (**On Exit**) or in case of a fault during the execution of the activity (**On Error**).

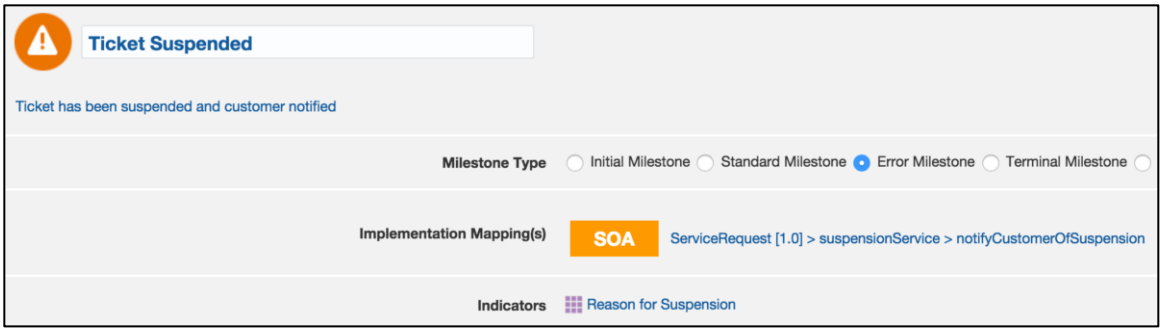


- This defines the mapping string as **ServiceRequest [1.0] > suspensionService > notifyCustomerOfSuspension**



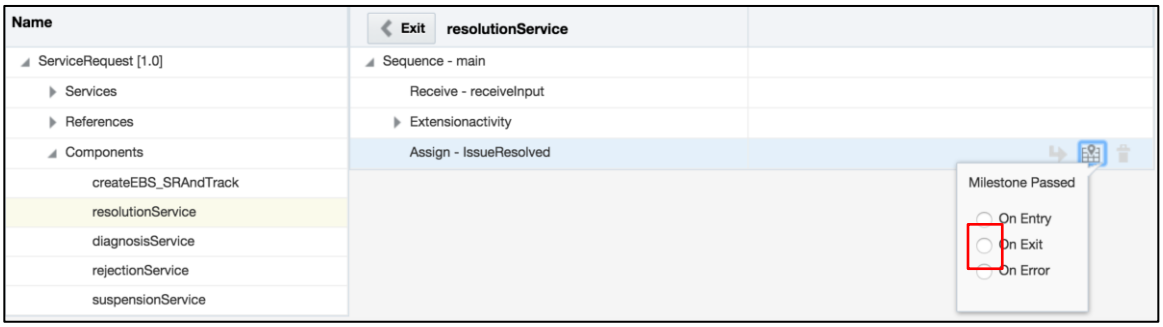
Return to the editor and **save** the model.

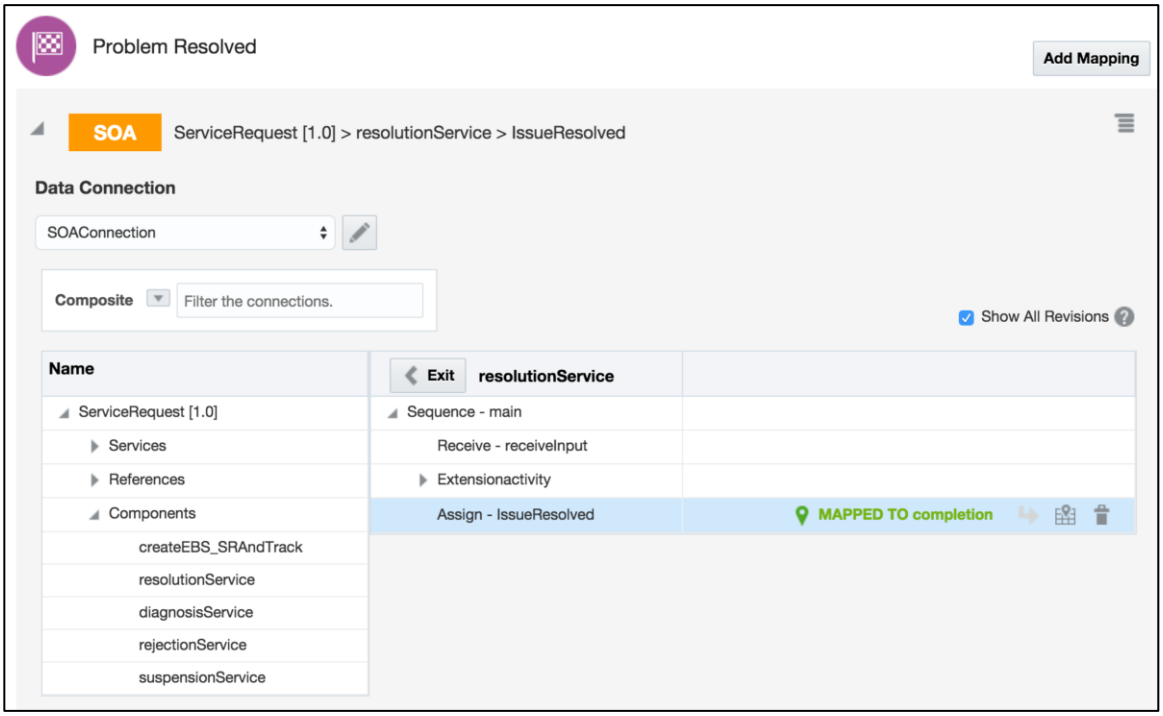
The milestone should now look like this:



Problem Resolved

And finally, the **Problem Resolved** milestone is mapped to the end of the **resolutionService** BPEL process, at the activity **Assign – IssueResolved** (On Exit):



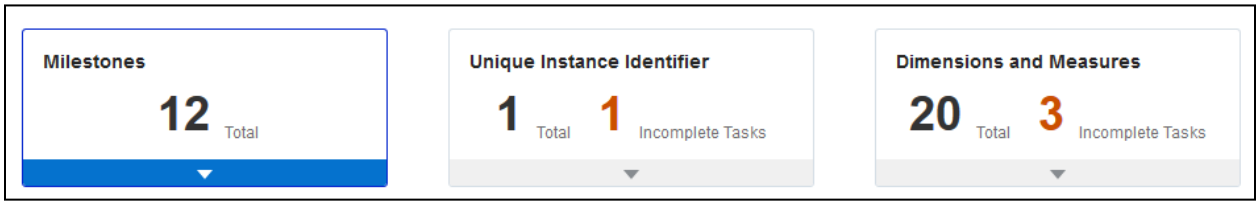


The mapping string looks like this: **ServiceRequest [1.0] > resolutionService > IssueResolved**

The milestone should now look like this:

Save the model.

All milestones have now been mapped, 4 tasks still need to be completed: the mapping of the **Unique Instance Identifier** and three additional indicators.



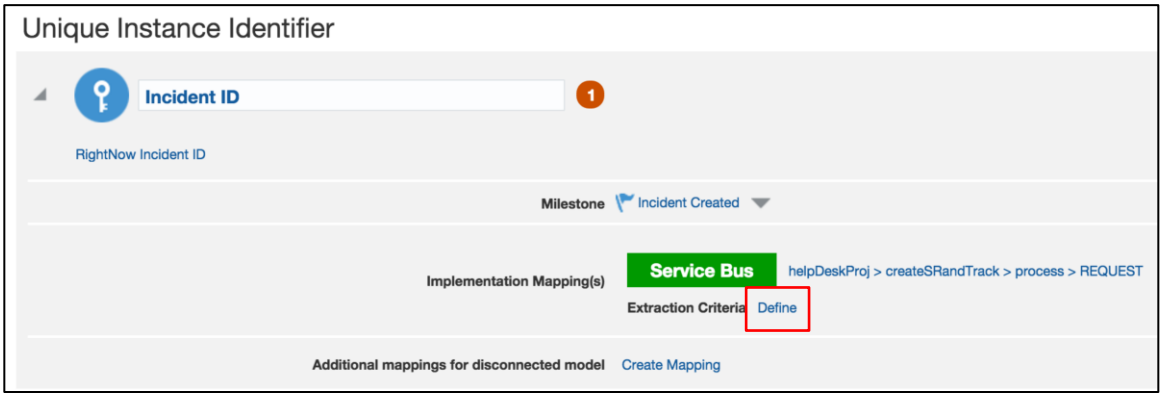
Integration Architect – Define extraction criteria for Unique Instance Identifier

Now that the milestones have been mapped, you are ready to define the extraction criteria for the indicators.

First, you will define the **Unique Instance Identifier,** the **Incident ID**.

Both the Service Bus project and the SOA composite are part of the same integration flow, which means that the model is connected from beginning to end and you only have to define one mapping for the identifier.

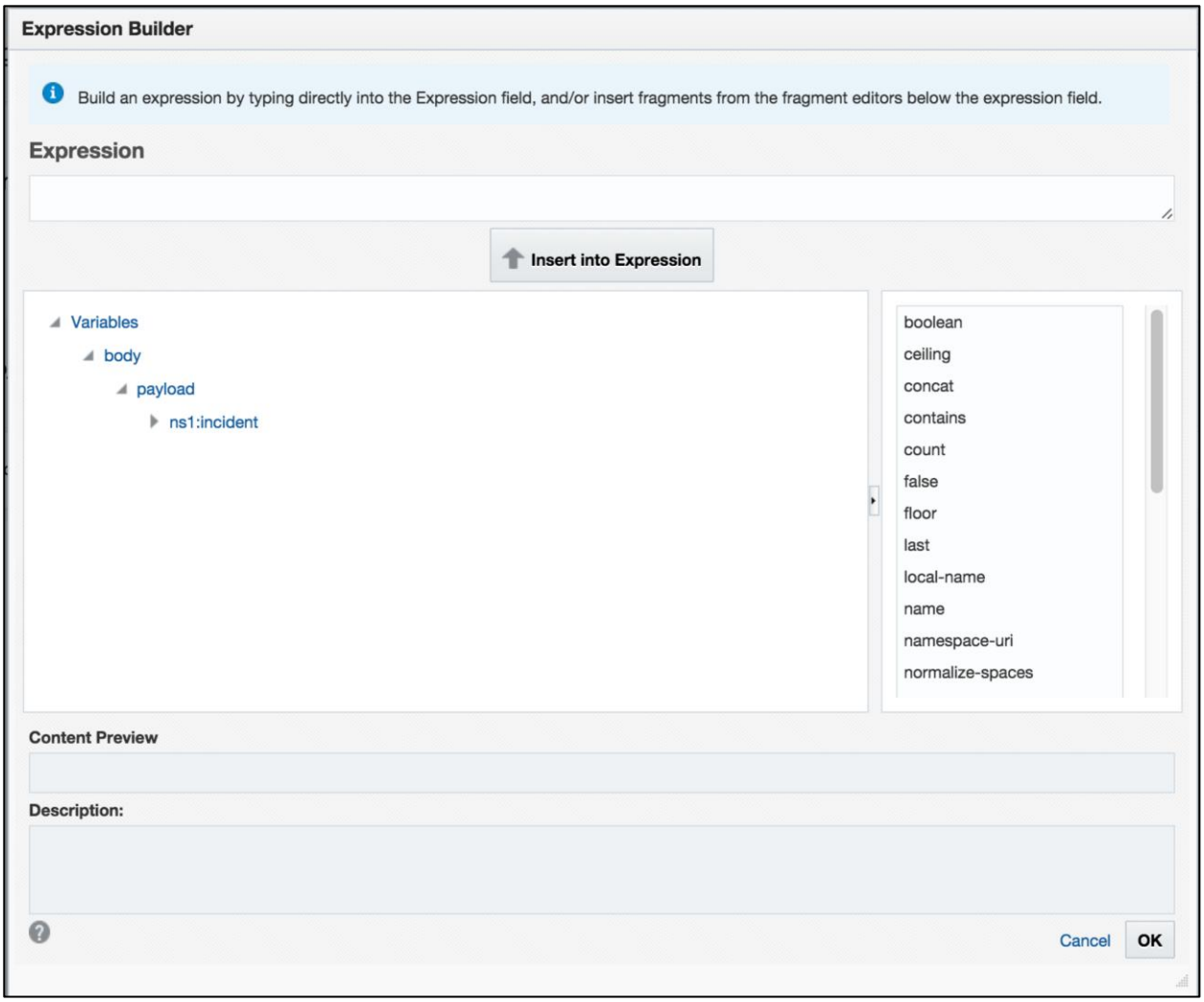
Select the **Unique Instance Identifier** tile:



The Identifier has been assigned to the **Incident Created** milestone and the mapping for that milestone is shown.

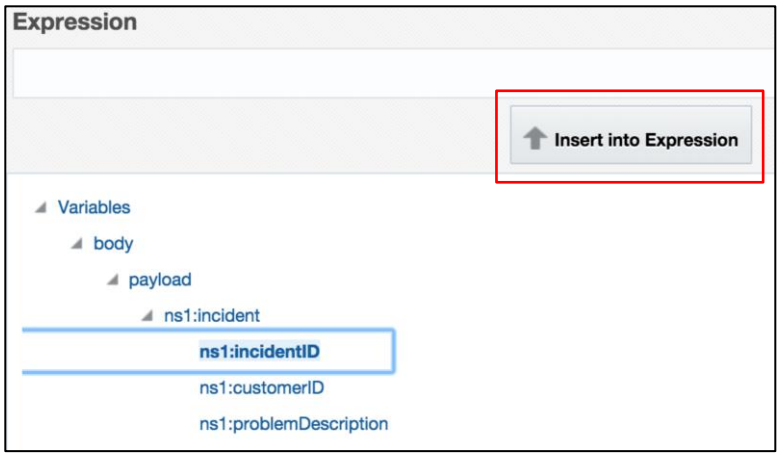
- Click the **Define** link next to **Extraction Criteria**. This opens the **Implementation Mappings** page.
- Click on the **Edit Extraction Criterion** pencil icon:

This opens the expression builder:



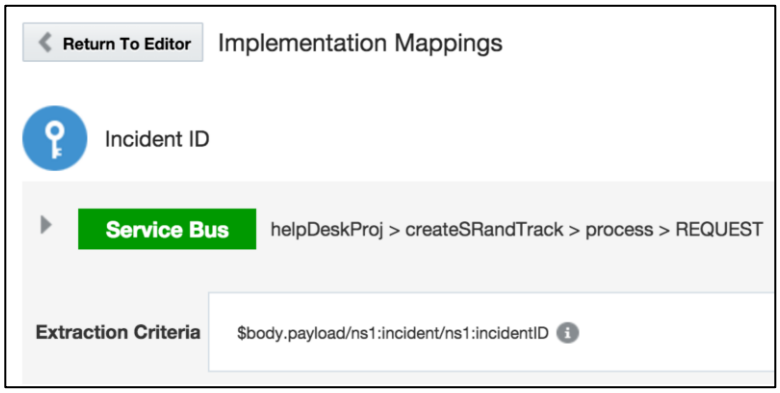
The expression builder shows all variables that are available at the point where the milestone has been mapped. As this milestone has been mapped to the service bus business service **createSRAndTrack**, only one variable is available.

- Expand **ns1:incident** and select **ns1:incidentID**



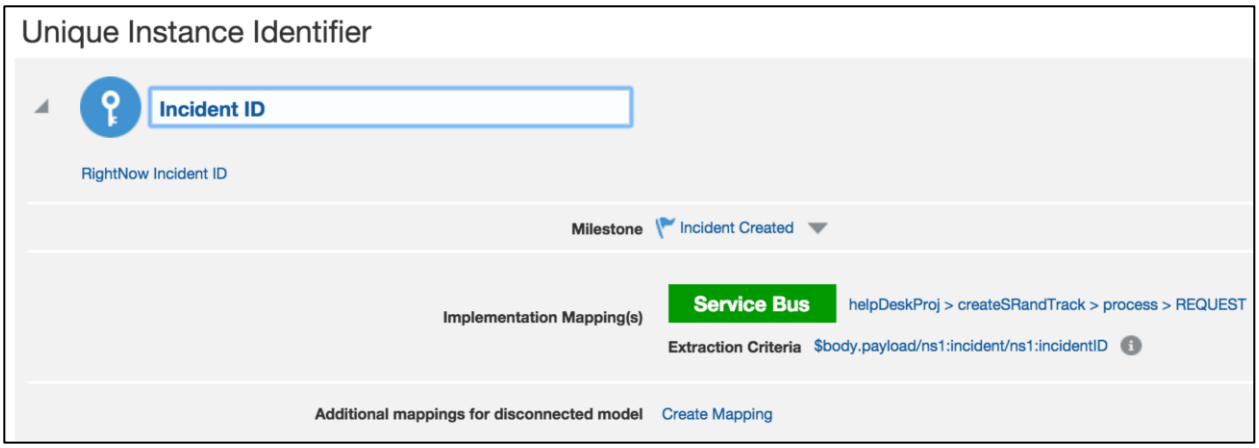
- Push "**Insert into Expression**"

- Click **OK**



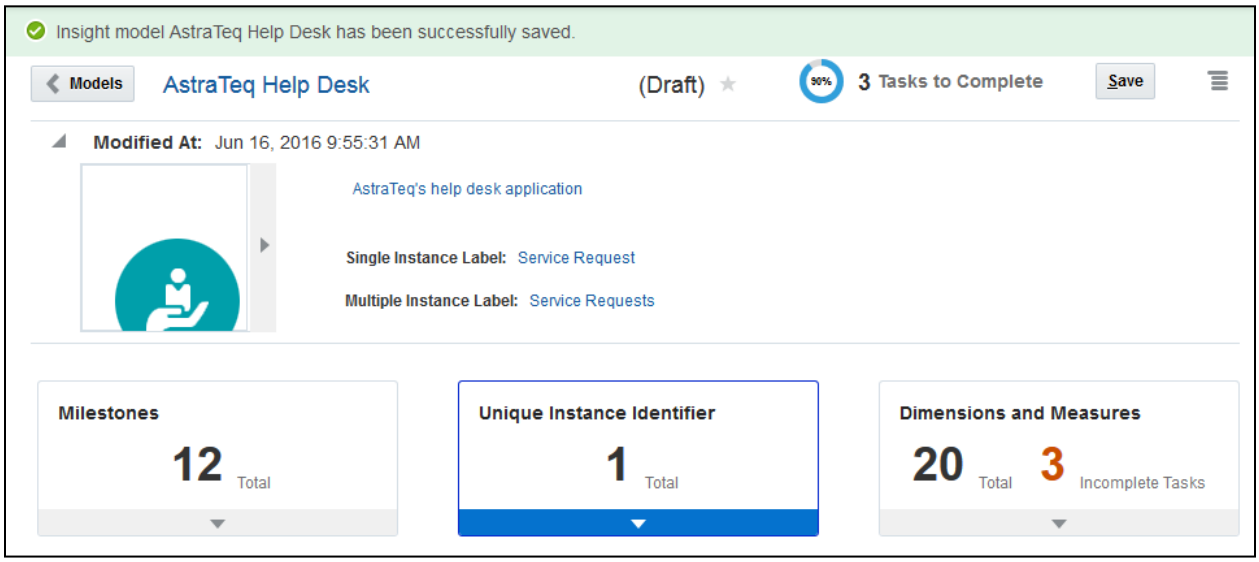
- Click **Return To Editor**

The **Unique Instance Identifier** should now look like this:



If an instance of the help desk spanned several domains or integration flows (so called disconnected flows), additional mappings would be necessary for correlation. As that is not the case with this application, the Unique Instance Identifier is now complete.

Save the model.



3 tasks are yet to be completed before the model can be activated.

Integration Architect – Define extraction criteria for Indicators

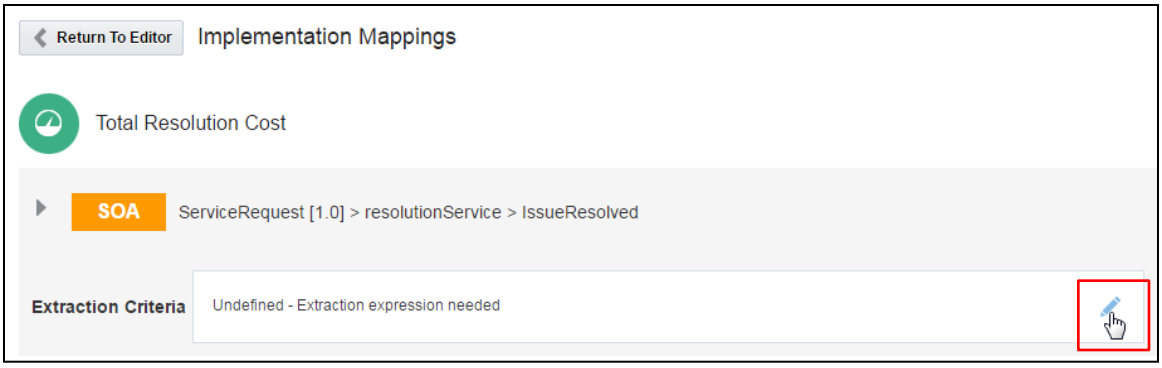
Select the **Dimensions and Measures** tile:

Most indicators have already been completed, only **Total Resolution Cost**, **Reason for Suspension** and **Resolution** are left to be mapped.

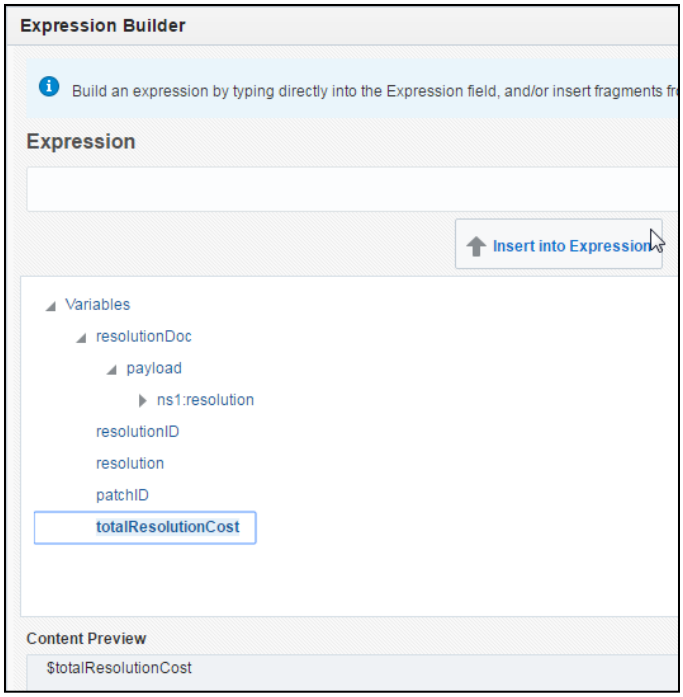
Total Resolution Cost

This indicator will be mapped to the variable **totalResolutionCost** in the BPEL process **resolutionService**.

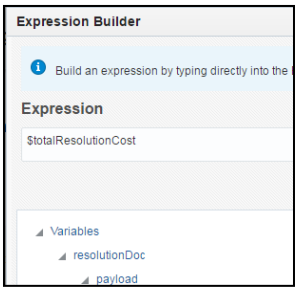
- Click the **Define** link next to **Extraction Criteria**. This opens the **Implementation Mappings** page.



- Click on the **Edit Extraction Criterion** pencil icon to open the expression builder:



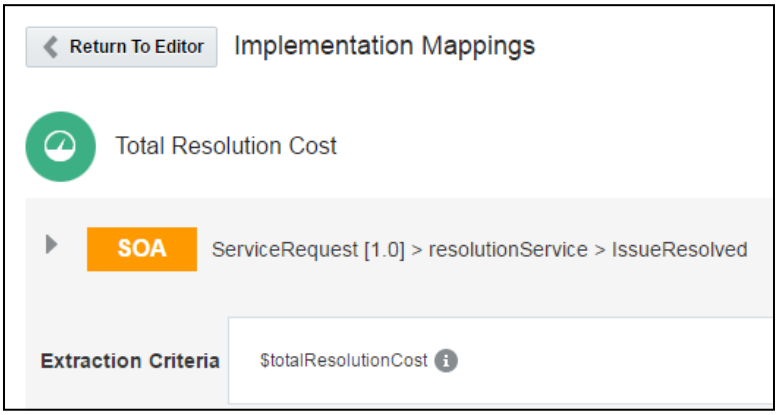
- Select the variable **totalResolutionCost** and push the button **Insert into Expression**



- The expression is now complete: **$totalResolutionCost**
- Press **OK**

Note:

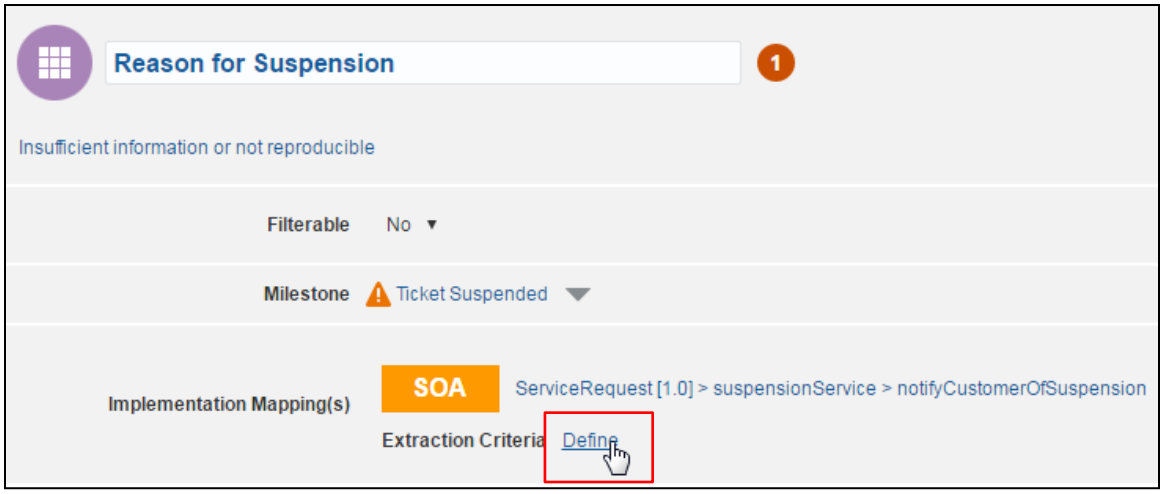
- When defining extraction criteria for an indicator assigned to a SOA composite milestone, you can use XPath variables for building the expression.
- XPath expressions are not supported for mappings within a BPEL process at this point.



- Click **Return To Editor**
- The Indicator now looks like this:

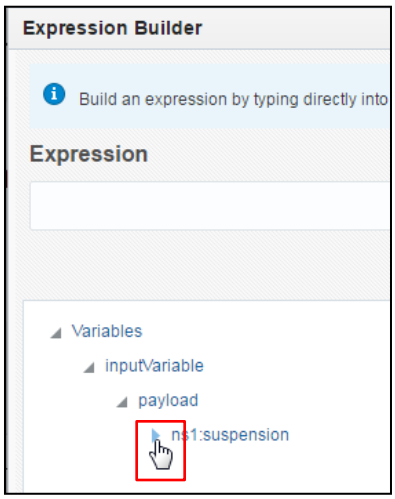
Reason for Suspension

This indicator will be mapped to the element **suspensionReason** in the variable **suspensionReason**

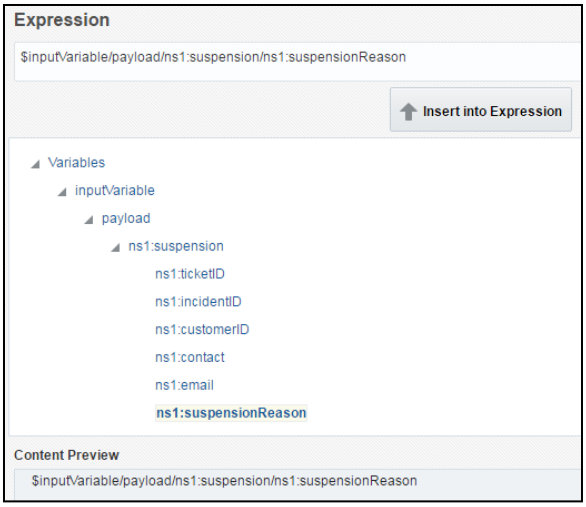


- Click the **Define** link next to **Extraction Criteria**. This opens the **Implementation Mappings** page.

- Click on the **Edit Extraction Criterion** pencil icon to open the expression builder
- Extract the variable **suspension**

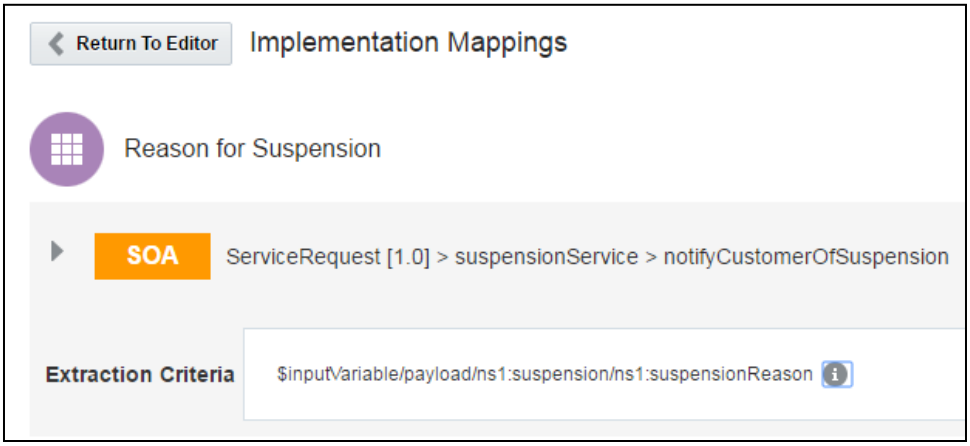


- Select the element **suspensionReason** and push the button **Insert into Expression**

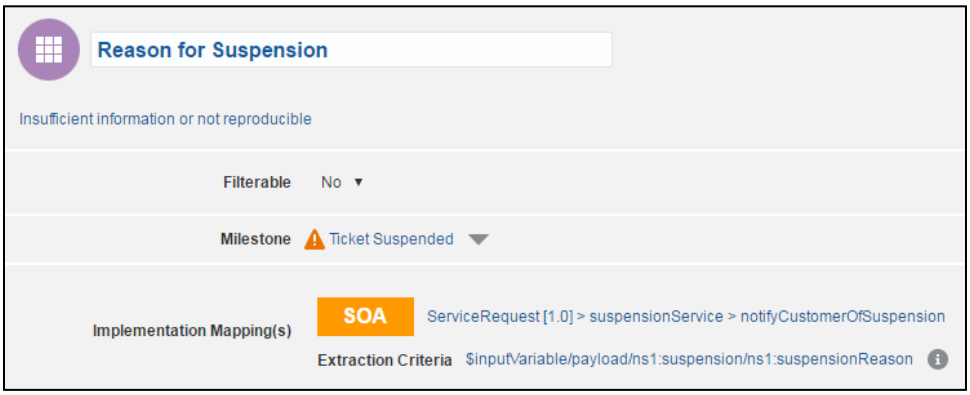


The expression is now complete: **$inputVariable/payload/ns1:suspension/ns1:suspensionReason**

- Press **OK**

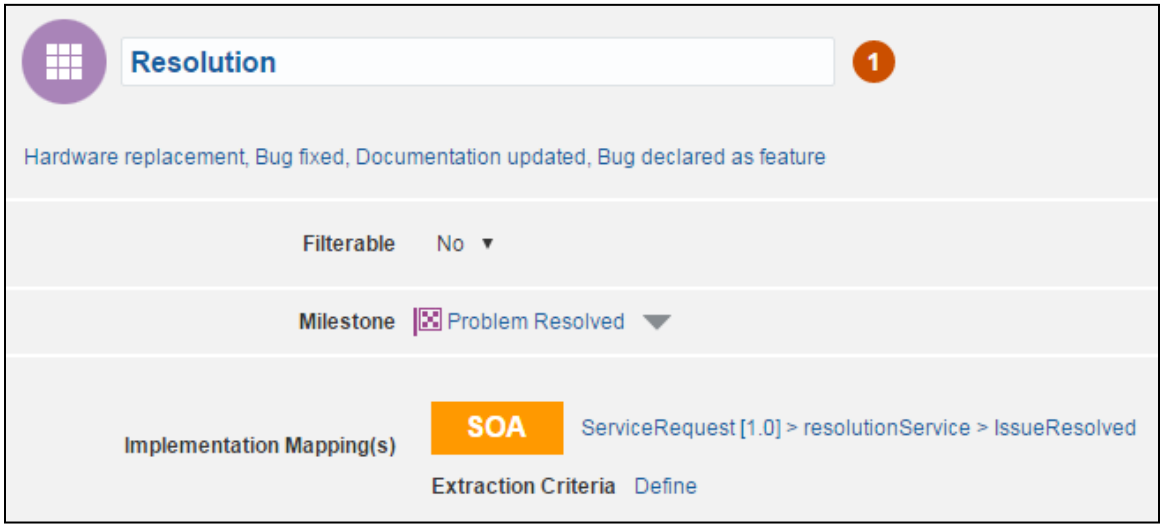


- Click **Return To Editor**
- The Indicator now looks like this:



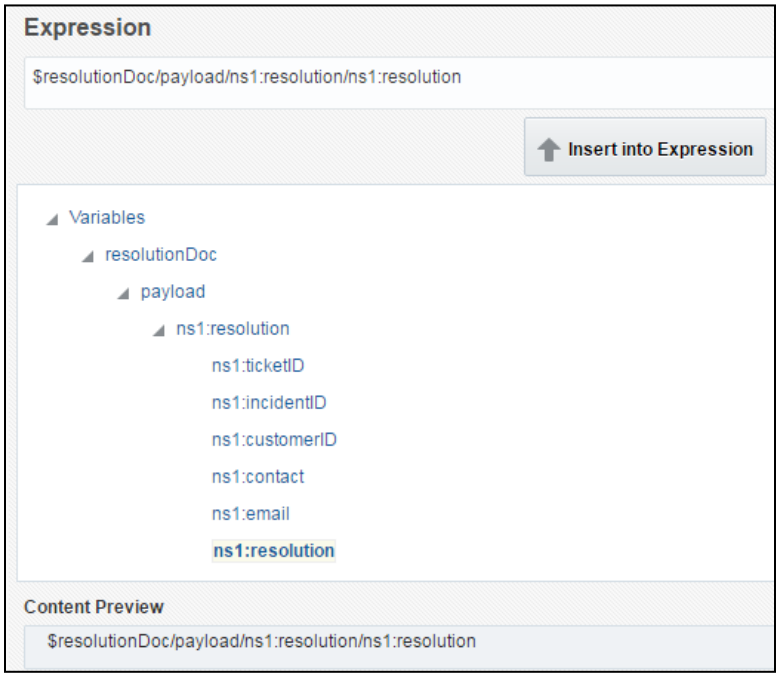
Save the model.

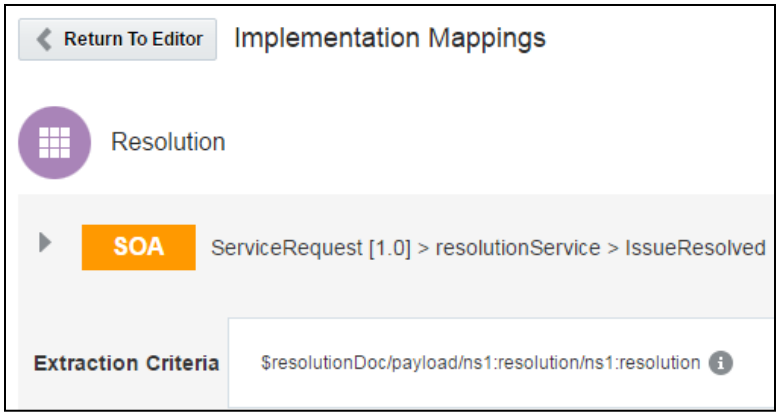
Resolution

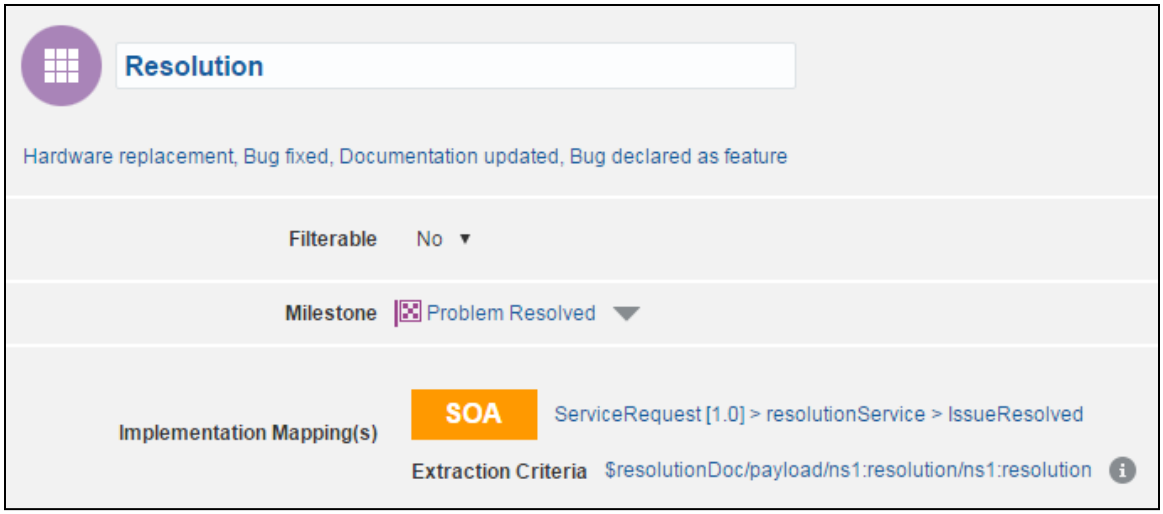


Extraction criteria:

$resolutionDoc/payload/ns1:resolution/ns1:resolution



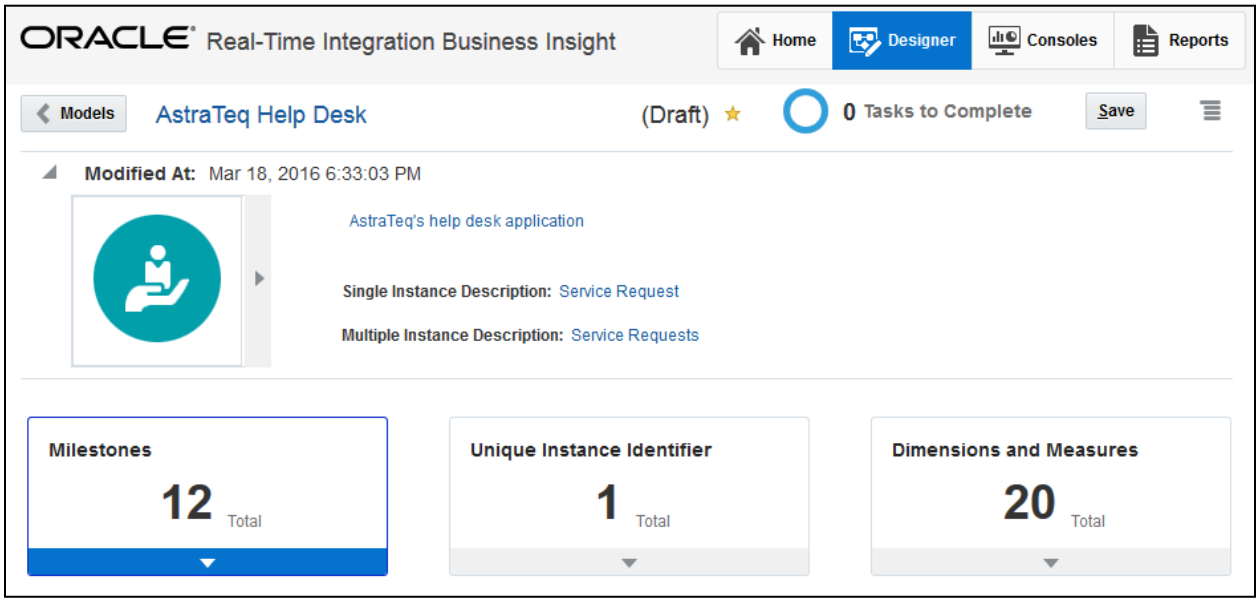




Save the model.

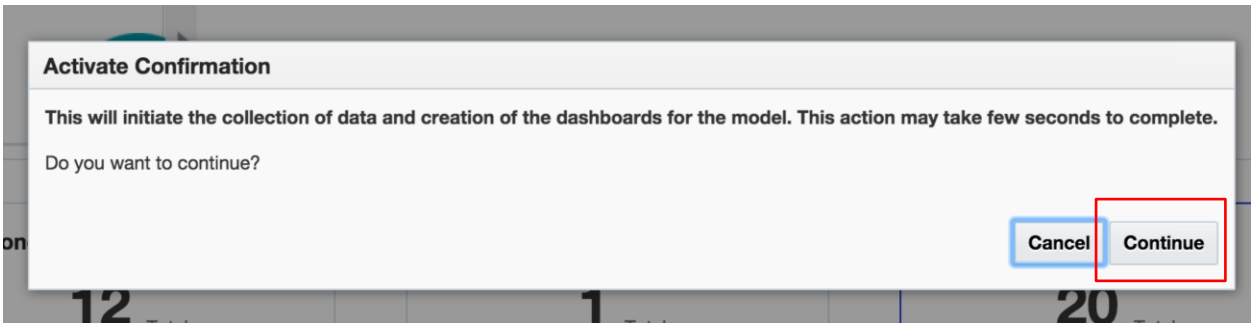
Integration Architect - Activate the AstraTeq Help Desk model

With all milestones mapped and indicator extraction criteria defined, there are 0 tasks to be completed. The model can now be activated.

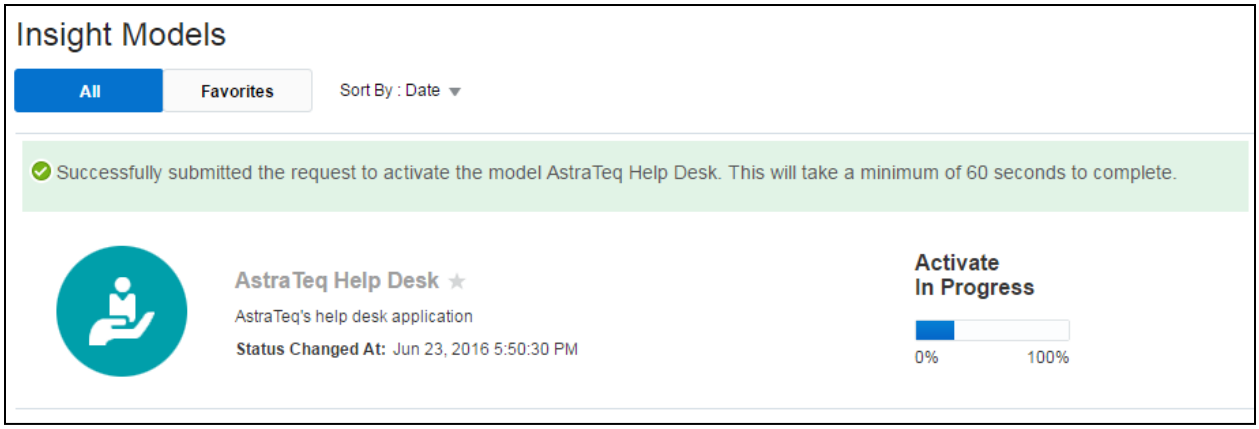


Select **Activate** from the "hamburger" menu on the top right of the page:

Click **Continue** to confirm activation.

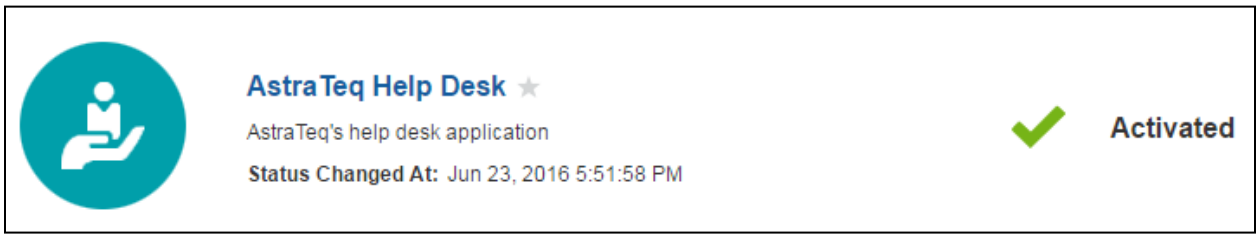


The view is switched to the **Designer** home page.



Activation will take at least one minute.

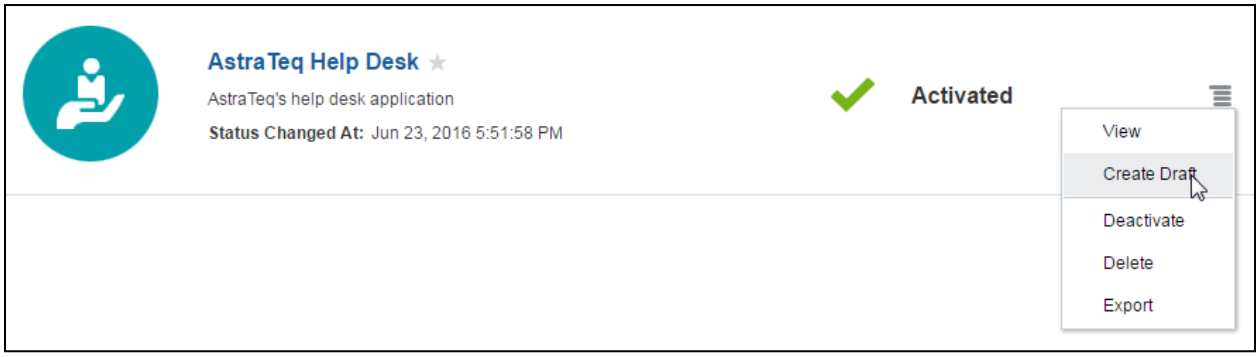
The model is **activate** when you see the green check mark and is now ready to start collecting metrics:



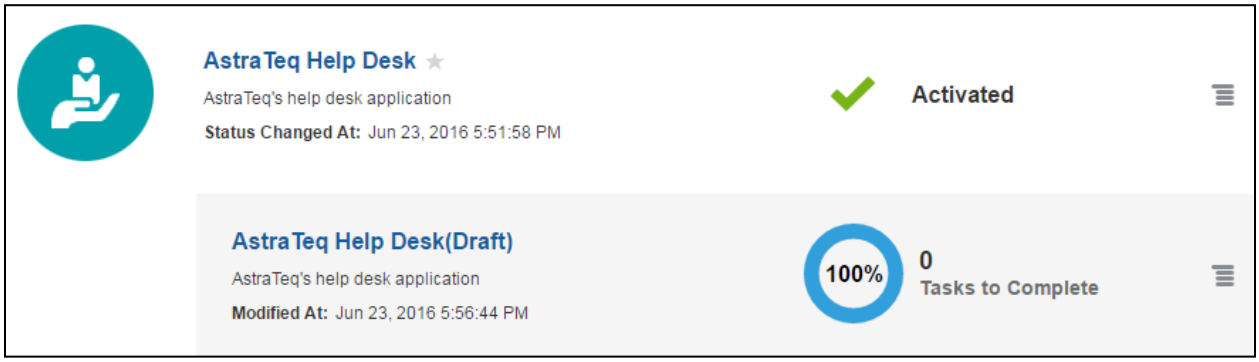
Change an activated model

If you want to make further changes or corrections to your model, follow these steps:

- Click on the model actions menu and select "**Create Draft**"



- This creates a **draft** model and opens the model page
- If you **save** the draft model and go back to the Designer home page, you see the activated model and the draft model



Making changes to the draft will not affect the currently active model until you activate the draft:

- Complete your changes.
- **Save** the model.
- **Activate** the draft.
- This will overwrite the active model with the changes you've just made.
- If you decide not to go forward with the changes, you can **discard** the draft.

Note: Refer to Model Lifecycle States for more details on the different states of a model.

Test the AstraTeq Help desk application to start collecting metrics

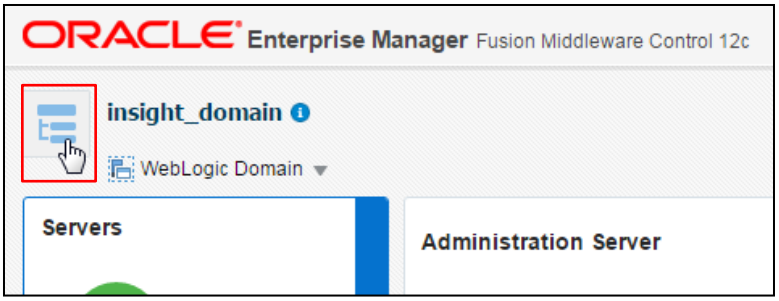
Perform the same test as previously.

- Copy one of the test files, e.g **customerReport1.txt,** into **/home/oracle/Insight/problem** (or the folder you defined earlier)
- A successful test will show a server output similar to the below, or you can just check for a new instance in Enterprise Manager Fusion Middleware Control, following the steps below.

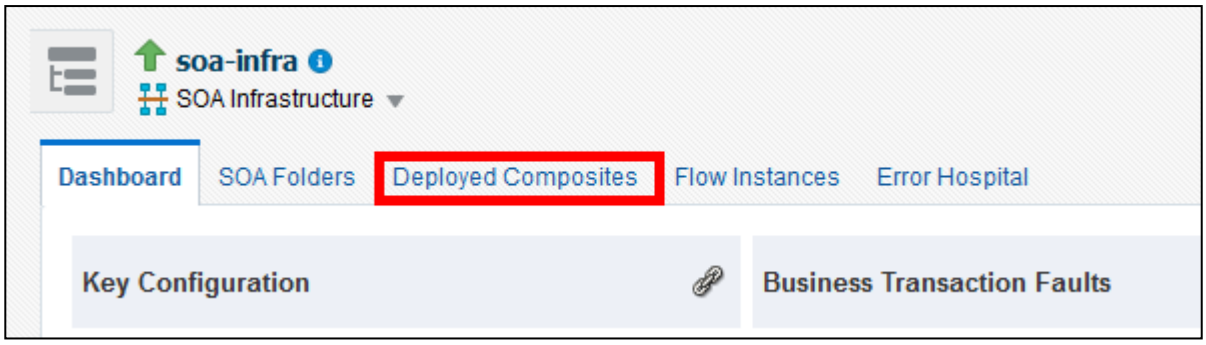
```
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX Incident ID XXXXXXXXXXXXXXXXXXXXXXXX
276841
XXXXXXXXXXXXXXXXXXX Customer ID XXXXXXXXXXXXXXXXXXXXXXXX
1
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
******************************
***************T1TechID***************
3
***************T1Tech***************
Scott Harper
***************T2Tech***************
7
***************T2Tech***************
Marc Sutter
******************************
***************Stuck***************
0
******************************
***********Category: Software***********
***********High profile bug***********
***********Ticket approved***********
******************************
***************category***************
Software
***************ranIssueType***************
high profile
***************ticketStatus***************
approved
******************************
***************Times Reported***************
0
***********Ticket resolved***********
***********Resolution: Bug declared a feature***********
***********Total resolution cost***********
0
```

Now let's double check **Enterprise Manager Fusion Middleware Control**:

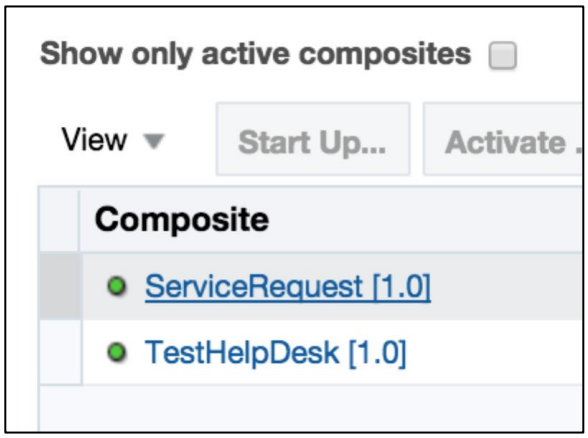
- Open **Enterprise Manager Fusion Middleware Control** using http://<hostname>:<port>/em, e.g http://localhost:7001/em
- Log in with your admin user
- Click on **Target Navigation** on top left



- Expand **SOA,** then click **soa-infra (AdminServer)**
- Click the **Deployed Composites** tab.

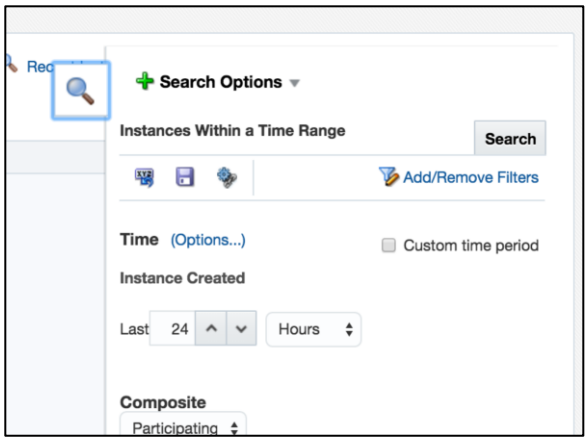


- Click on **ServiceRequest [1.0]**



- Click on **Flow Instances**

- Click on the **Search** button on the right



- You should see one instance for the one test message you had copied over or several if you ran more than one test

Flow ID	Initiating Composite	Flow State	Created	Last Updated
1	ServiceRequest [1.0]	Completed	Feb 29, 2016 1:57:52 PM	Feb 29, 2016 1:57:54 PM

- Click on the **Flow ID** to bring up the Flow Trace

Instance	Type	Usage	State	Time	Composite
ServiceBus	ServiceBus			Feb 29, 2016 1:57:52 PM	
createebs_srandtrack_client_ep	Web Service	Service	Completed	Feb 29, 2016 1:57:52 PM	ServiceRequest [1.0]
createEBS_SRAndTrack	BPEL		Completed	Feb 29, 2016 1:57:52 PM	ServiceRequest [1.0]
getCustomerInfo	JCA Adapter	Reference	Completed	Feb 29, 2016 1:57:53 PM	ServiceRequest [1.0]
createSRInEBS	JCA Adapter	Reference	Completed	Feb 29, 2016 1:57:53 PM	ServiceRequest [1.0]
escalateSR	JCA Adapter	Reference	Completed	Feb 29, 2016 1:57:53 PM	ServiceRequest [1.0]
diagnosisService	BPEL		Completed	Feb 29, 2016 1:57:53 PM	ServiceRequest [1.0]
resolutionService	BPEL		Completed	Feb 29, 2016 1:57:53 PM	ServiceRequest [1.0]

- It should look similar as the above

You should start seeing metrics in the Insight console right away. Work through the following sections to learn more about the console, dashboards and metrics.

If the test is successful, copy all 499 messages. It will take a while to process all messages.

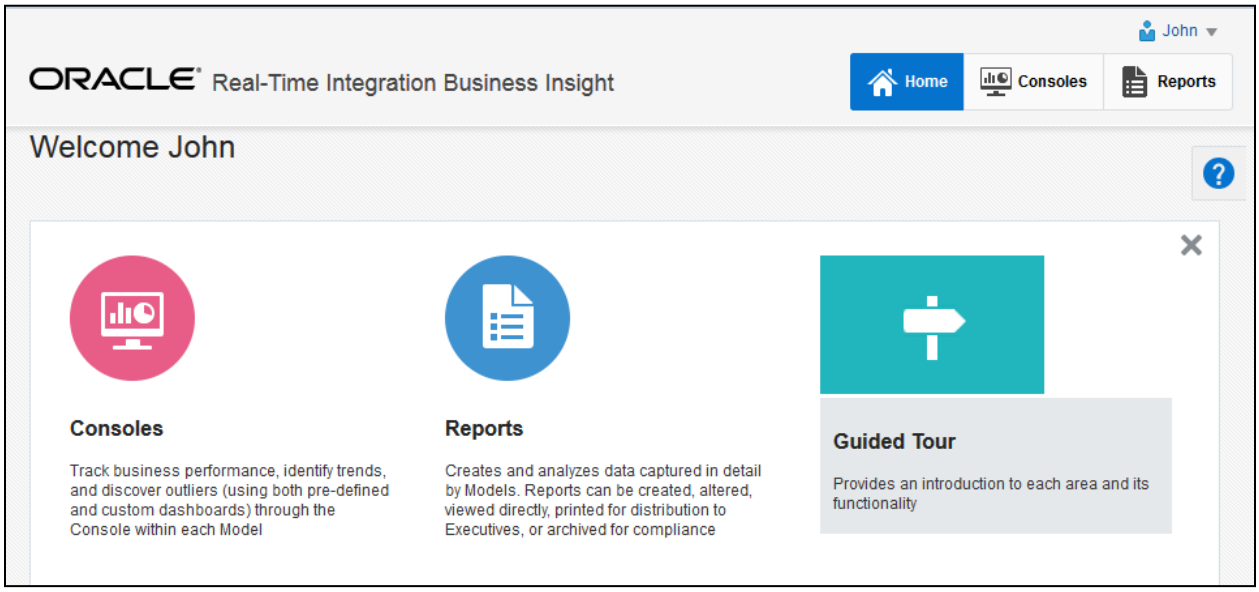
The more test messages you process, the better the metrics will be.

Work with the Console – pre-configured/out of the box dashboards

Push all test messages through, following the steps in the previous section. Feel free to continue testing, while you discover the console functionality to get more varied results.

Nina and **Karl** both have business owner privileges in the test system, so that they can check the consoles while running test messages through. You can do the following exercises with either one of those users or you can log in as **John**, the Business Owner.

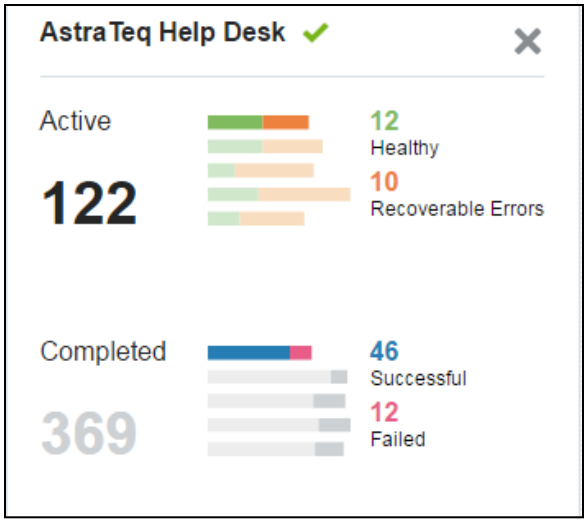
John does not have permission to design models; his activities in Insight are restricted to the consoles and reports:



When John logs in for the first time, his home page is empty.

Add the **AstraTeq Help Desk** console summary card to the home page by selecting "**Add Console**" -> "**AstraTeq Help Desk**":

The summary card on your setup will differ from the below screenshot dependant on the test data in your system. You will most likely only see data for one day instead of five.

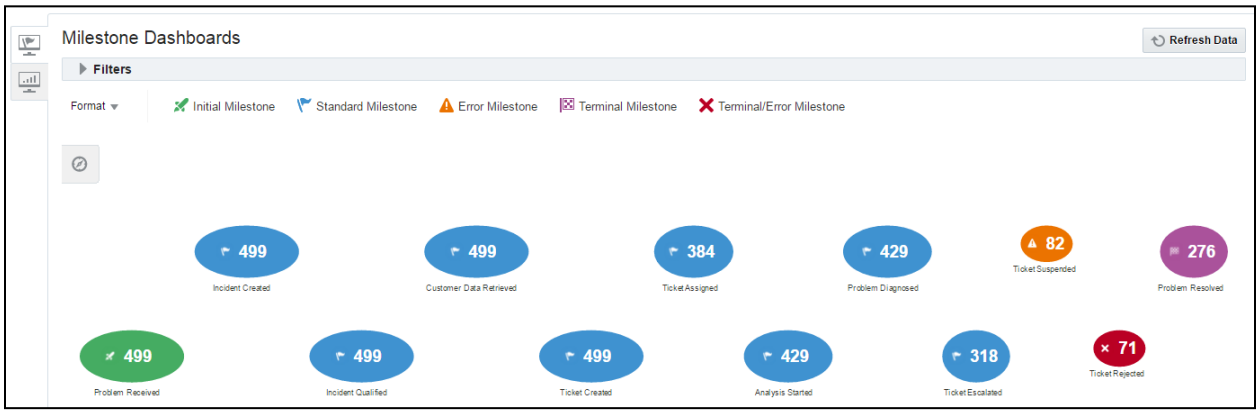


Follow the steps below to open the **AstraTeq Help Desk** console:

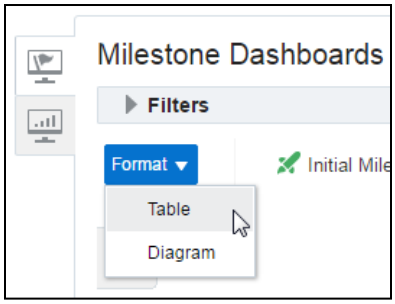
- Click on the **Consoles** tab on top of the page or choose the **Consoles** tile

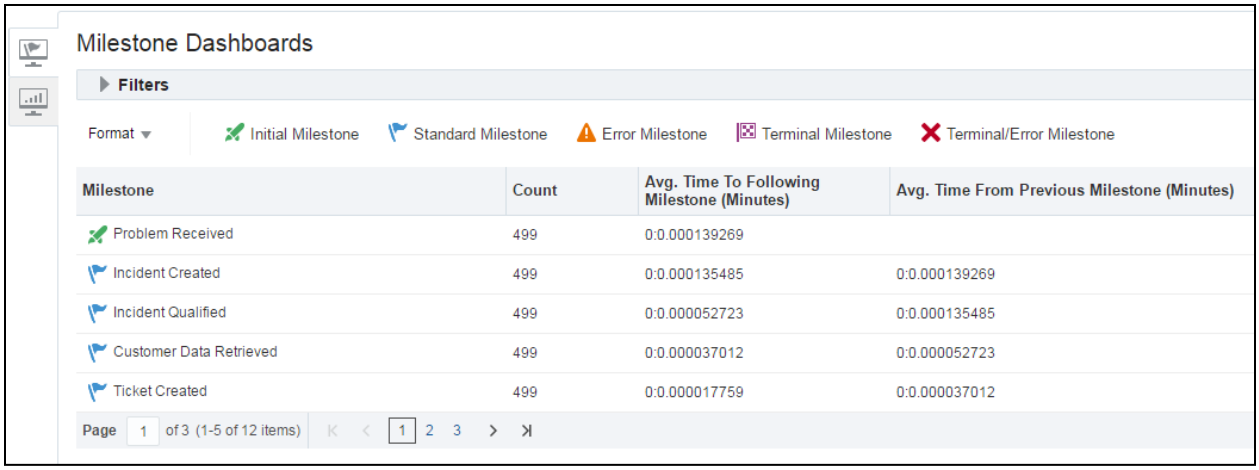
- You can see the distribution of service requests for the different states: **Healthy**, **Recoverable Errors**, **Succesful**, **Failed**.
- Select the **AstraTeq Help Desk** model

This opens the Milestone Status Dashboard (yours may look slightly different than the screenshot below):



Change the view from **Diagram** to **Table**:

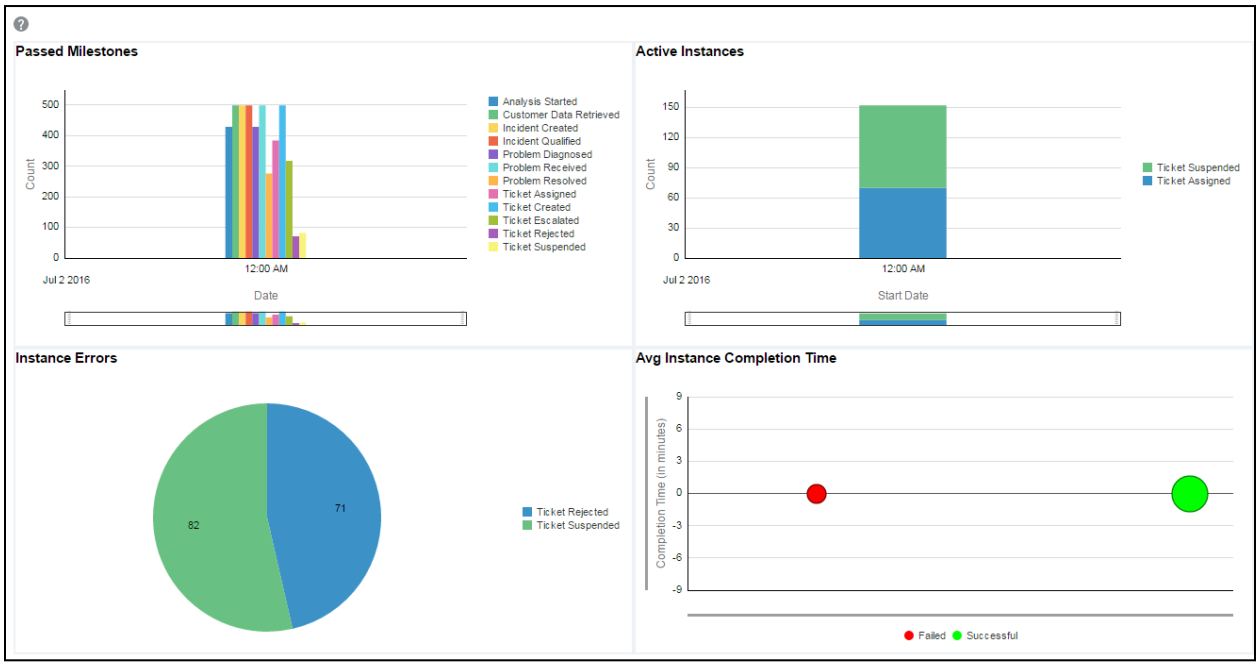




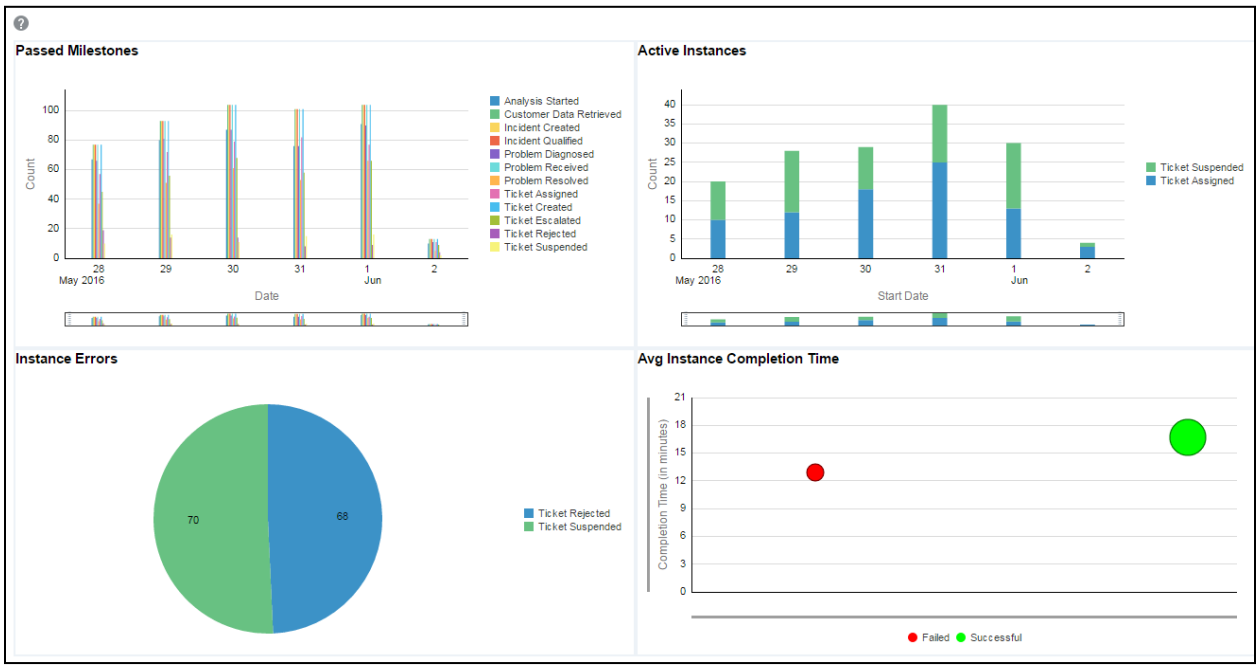
Milestone	Count	Avg. Time To Following Milestone (Minutes)	Avg. Time From Previous Milestone (Minutes)
Problem Received	499	0:0.000139269	
Incident Created	499	0:0.000135485	0:0.000139269
Incident Qualified	499	0:0.000052723	0:0.000135485
Customer Data Retrieved	499	0:0.000037012	0:0.000052723
Ticket Created	499	0:0.000017759	0:0.000037012

The table form of this view is paginated for performance and space reasons. You can use the page numbers or arrows at the bottom to move between pages.

The below screenshot shows an example of the four preconfigured (or out of the box) dashboards on the console page:



This is the view if metrics are available for five days:



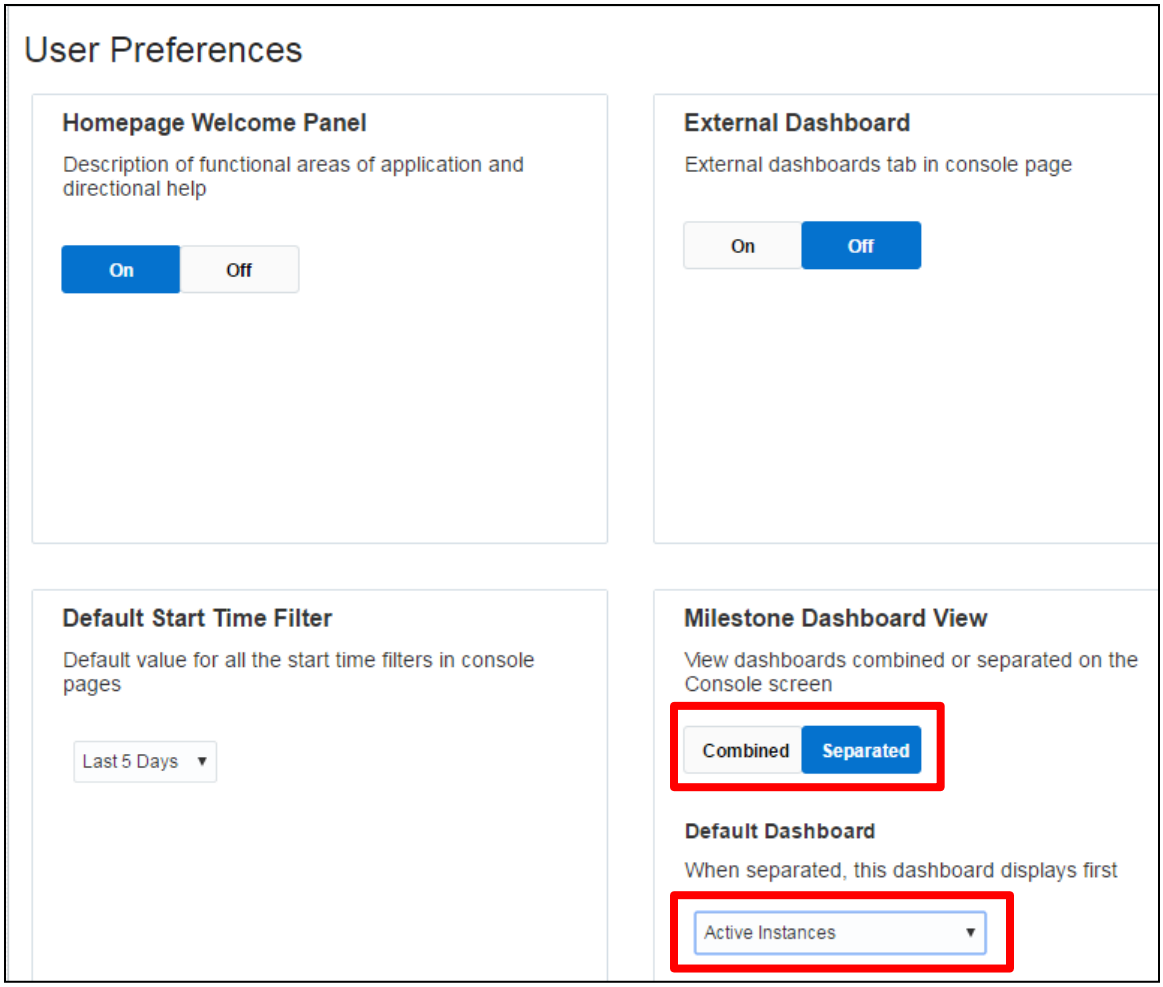
New in release 12.2.1.1.0

Dependant on the number of instances in the system, loading of the four dashboards can be slow.

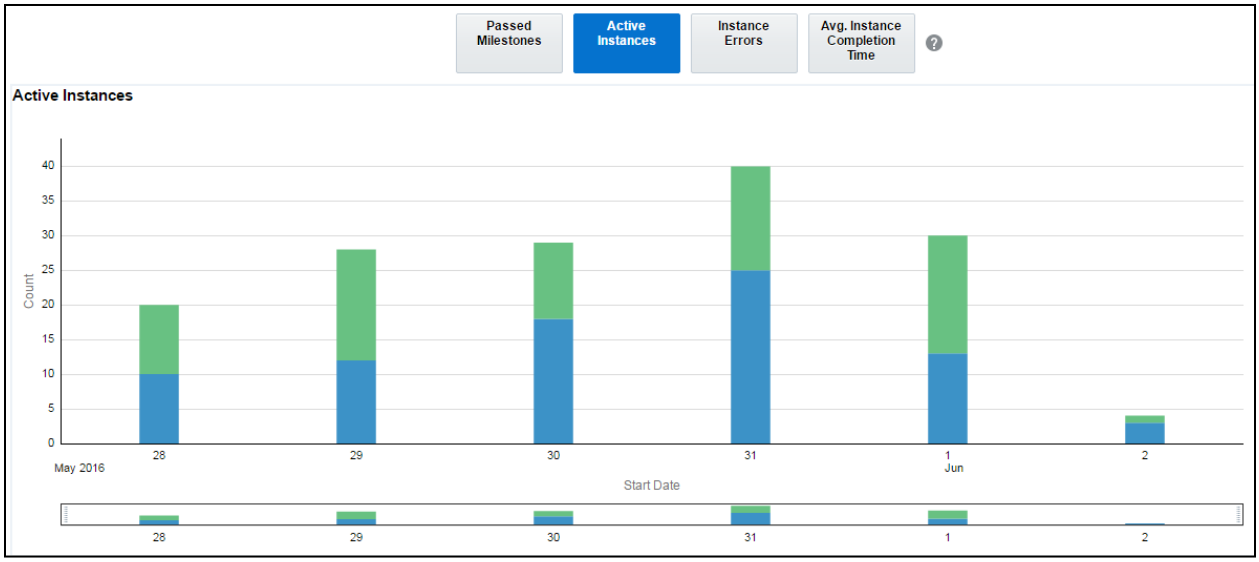
Release 12.2.1.1.0 provides a user preference that lets you change the console view to only show one of the four dashboards:

- Click the user name on top of the page select **Preferences**

- Change the Milestone Dashboard View to **Separated**
- Select the dashboard you want to see when entering the page, e.g. **Active Instances**



- Click **Save** on top of the page
- Click **Done**
- You will now only see one dashboard, with a legend on top to select any of the three other dashboards.



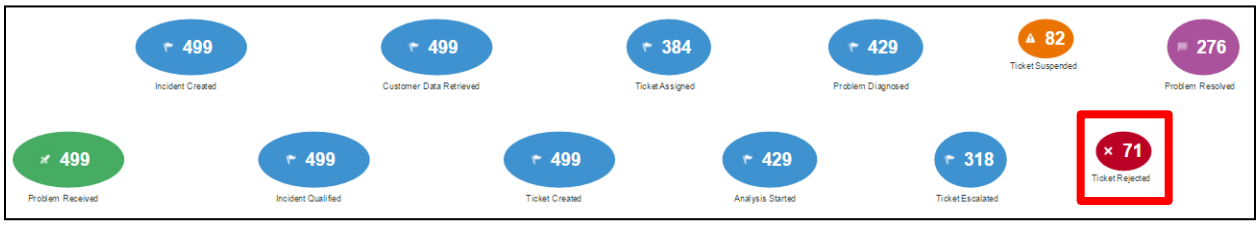
For more details on user preferences, consult the Preferences chapter in Oracle® Fusion Middleware Using Oracle Real-Time Integration Business Insight**.**

Exercise: Use the Milestone Status Dashboards on the Console

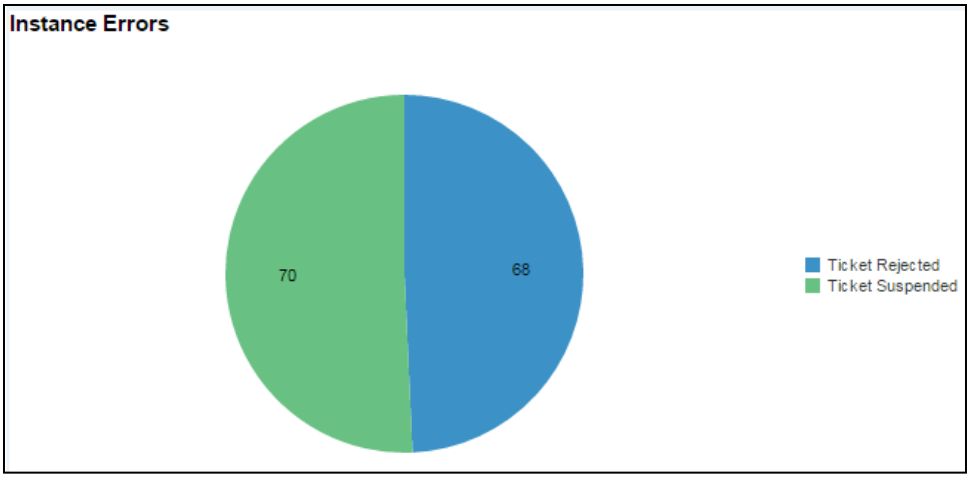
As an example of the type of information that can be gleaned from the default console, try and answer the following questions using the capabilities of the Insight console, such as the milestone status table and the pre-configured dashboards.

- Q: How many **failures** have happened over the past five days?
- A: By default, the console shows activity over the last five days, so you will not need to change the filter criteria.

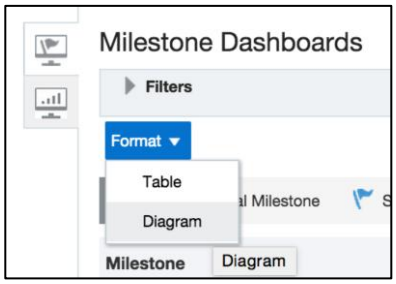
- Looking at the milestone status diagram, there is one failure (also known as "terminal/error") milestone: **Ticket Rejected**.
    - **Ticket Suspended** is not terminal and can still be recovered, so an instance that has most recently passed this milestone does not count as failed.
    - The count for the **Ticket Rejected** milestone will tell you the total number for **failures** for the application over the past five days.

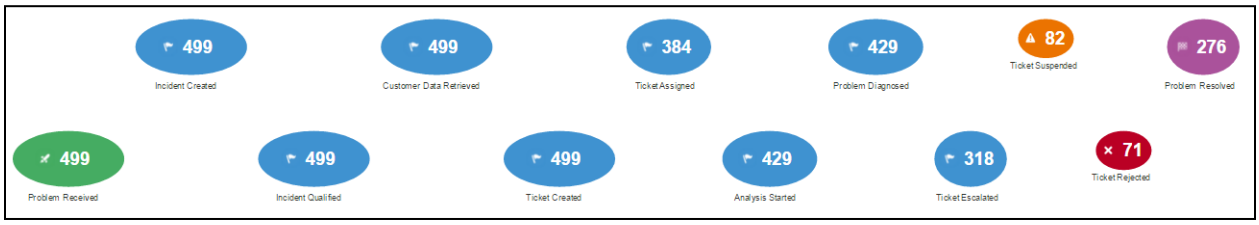


Note: you can also see details of the failures by looking at the "Instance Errors" chart.



- Q: Do any milestones appear to be bottlenecks over the past five days?
- A: Milestones with a count that is significantly larger than other milestones can be an indication of application slowdown at that milestone.
- You can use the "**Diagram**" view of milestone status to aid in identifying milestones that are potential bottlenecks. In the diagram view, the size of each milestone is determined by the milestone traversal count.





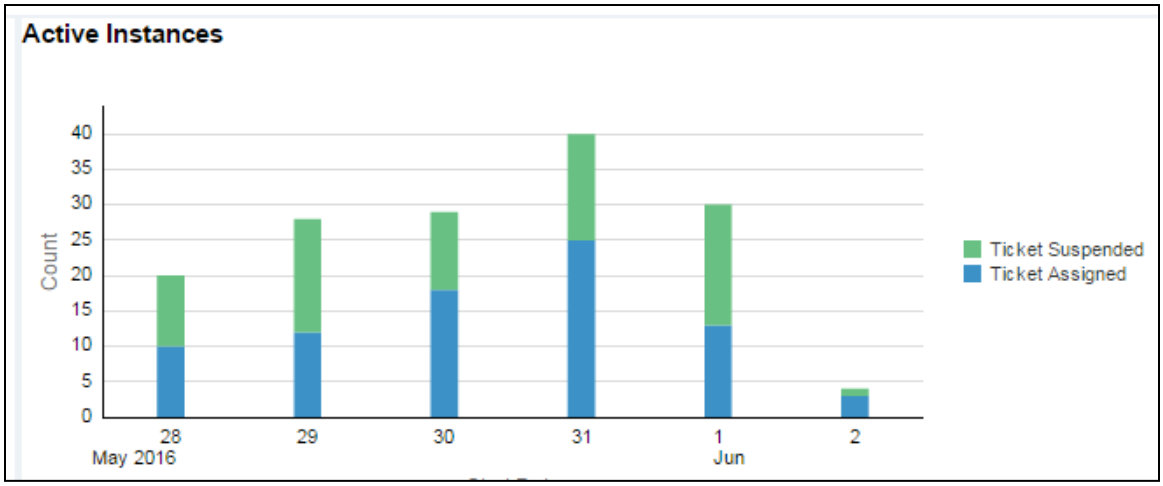
- Q: Over the past 30 days, which milestone has been taking the **longest** to complete?
- A: Milestones are atomic and instantaneous in nature, in that they do not have a "begin" or an "end" time, just a "time that the milestone was passed". Therefore, the question "how long did a milestone take to complete" doesn't really make sense. We *can* however determine how long it takes on average to get from one milestone to another.
- In the milestone status table, this information is aggregated in two columns: "Avg Time To Following Milestone" and "Avg Time From Previous Milestone". It's reasonable to assume that for any given milestone, the time spent after passing the previous milestone was used to accomplish the tasks required to mark the next milestone as complete.

- Take a look at the milestone status table and identify the entry with the largest value in the "Avg Time From Previous Milestone" column. This is the milestone that is taking the most time (on average) to reach, and therefore could be a bottleneck in the application.

Milestone	Count	Avg. Time To Following Milestone (Minutes)	Avg. Time From Previous Milestone (Minutes)
Ticket Assigned	376	0:0.410272224	0:0.226270951
Analysis Started	429	0:0.562999859	0:0.404753946
Problem Diagnosed	429	0:0.553184035	0:0.560223896
Ticket Escalated	341	0:0.539183676	0:0.767273596
Ticket Suspended	75		0:0.198413333

Page 2 of 3 (6-10 of 12 items) 1 2 3

- Q: How many instances that were started today are still running?
- A: The "**Active Instances**" chart shows how many instances are still active, grouped on the x-axis by the day on which they were started. For each day, you can also see what the most recently passed milestone is.



- You would expect active instance that most recently passed "Ticket Suspended", but the high number of instances that most recently passed the "Ticket Assign" milestone are alarming.

Business Transactions (or Instance Listing) Page

Recall that Insight collects metrics and data about applications for which an abstract model has been defined (i.e., milestones and indicators). Each time that an initial milestone is passed, a new **instance** (i.e. service request) is created to track the details associated with that particular execution flow throughout the integration application. You can inspect the details of groups of service requests using the **Business Transaction** or **Instance Listing Page**, as well as drill into fine-grained details on individual service requests.

There are a number of different ways that you can inspect groups of service requests in Insight, including:

- Searching for service requests using a portion of the unique instance identifier (incident ID)
- Drilling into entries on the milestone table or the milestone diagram
- Drilling into elements of either preconfigured dashboards or custom dashboards

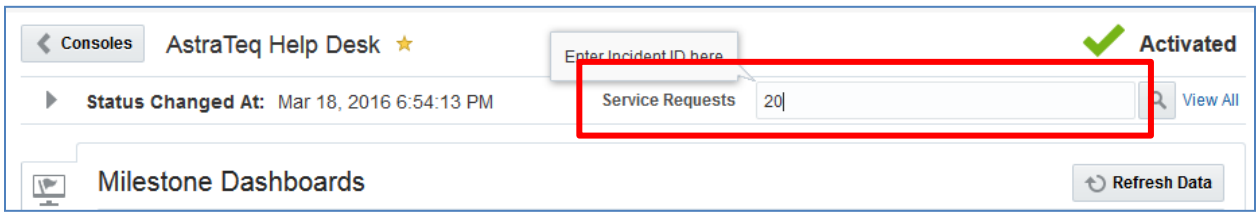
Note: every time that you perform a search, Insight opens a new tab in your browser.

Make sure that the **popup blocker** on your browser is **disabled** for this new tab to open.

Searching for Instances

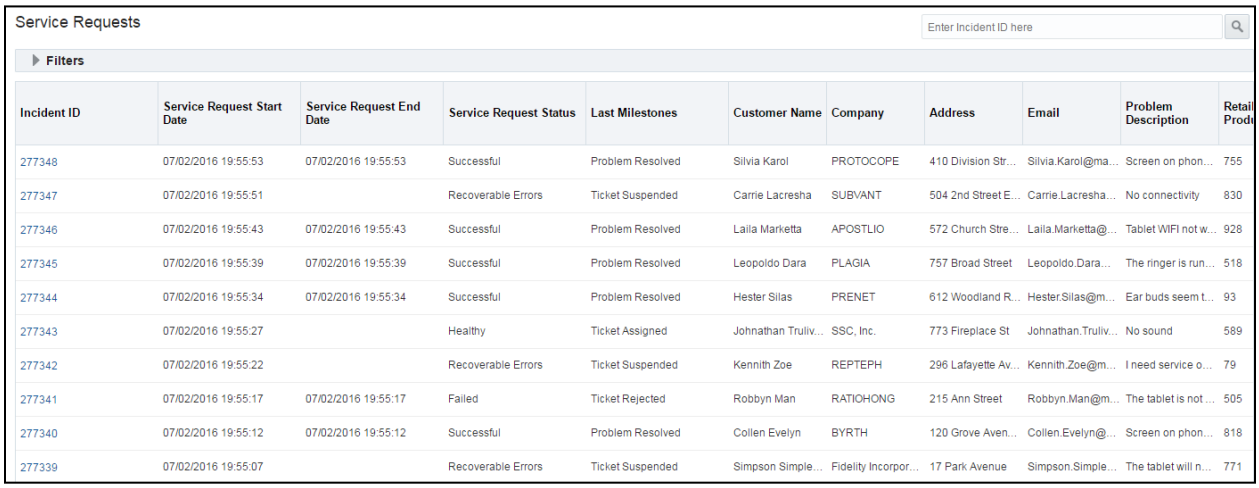
Use the search box at the top-right of the console page to search for instances from the console. You can enter a partial or a complete identifier string – in this case the Incident ID - , and Insight will find the instance that has an identifier that matches your string.

Try searching for an Incident ID.



Hit “enter”.

The result shows all service requests where the incident ID includes “20”.



Incident ID	Service Request Start Date	Service Request End Date	Service Request Status	Last Milestones	Customer Name	Company	Address	Email	Problem Description	Retail Prod
277348	07/02/2016 19:55:53	07/02/2016 19:55:53	Successful	Problem Resolved	Silvia Karol	PROTOCOPE	410 Division Str...	Silvia.Karol@ma...	Screen on phon...	755
277347	07/02/2016 19:55:51		Recoverable Errors	Ticket Suspended	Carrie Lacresha	SUBVANT	504 2nd Street E...	Carrie.Lacresha...	No connectivity	830
277346	07/02/2016 19:55:43	07/02/2016 19:55:43	Successful	Problem Resolved	Laila Marketta	APOSTLIO	572 Church Stre...	Laila.Marketta@...	Tablet WIFI not w...	928
277345	07/02/2016 19:55:39	07/02/2016 19:55:39	Successful	Problem Resolved	Leopoldo Dara	PLAGIA	757 Broad Street	Leopoldo.Dara...	The ringer is run...	518
277344	07/02/2016 19:55:34	07/02/2016 19:55:34	Successful	Problem Resolved	Hester Silas	PRENET	612 Woodland R...	Hester.Silas@m...	Ear buds seem t...	93
277343	07/02/2016 19:55:27		Healthy	Ticket Assigned	Johnathan Truliv...	SSC, Inc.	773 Fireplace St	Johnathan.Truliv...	No sound	589
277342	07/02/2016 19:55:22		Recoverable Errors	Ticket Suspended	Kennith Zoe	REPTEPH	296 Lafayette Av...	Kennith.Zoe@m...	I need service o...	79
277341	07/02/2016 19:55:17	07/02/2016 19:55:17	Failed	Ticket Rejected	Robbyn Man	RATIOHONG	215 Ann Street	Robbyn.Man@m...	The tablet is not ...	505
277340	07/02/2016 19:55:12	07/02/2016 19:55:12	Successful	Problem Resolved	Collen Evelyn	BYRTH	120 Grove Aven...	Collen.Evelyn@...	Screen on phon...	818
277339	07/02/2016 19:55:07		Recoverable Errors	Ticket Suspended	Simpson Simple...	Fidelity Incorpor...	17 Park Avenue	Simpson.Simple...	The tablet will n...	771

Drilling Into Milestone Status Entries

You can drill into milestone status entries on either the milestone status table or the milestone status diagram.

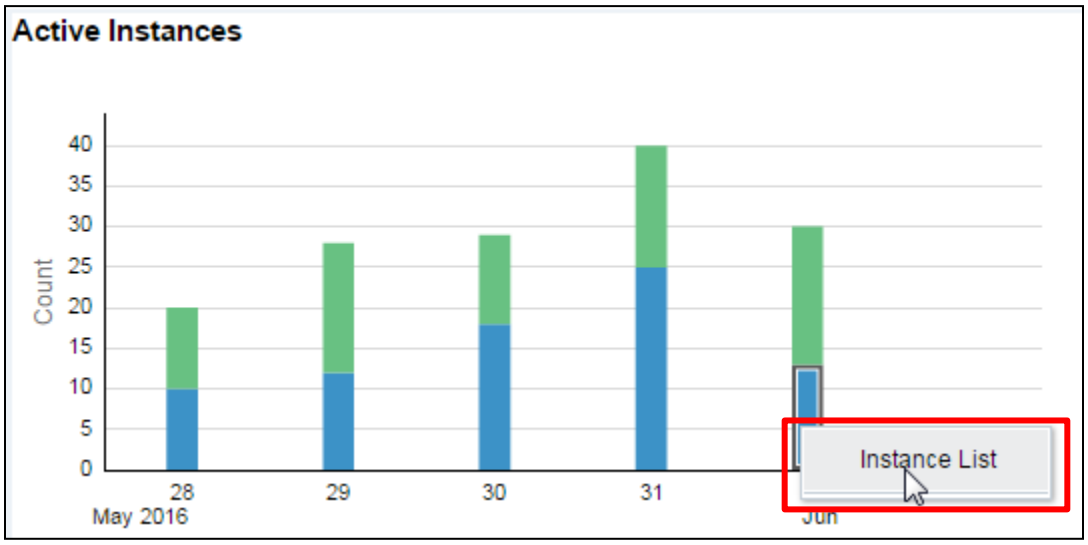
From the milestone status table, simply click on any row in the table and a search will be executed to show you all service requests that most recently passed that milestone.

From the milestone status diagram, click on the icon for any node in the diagram, and a search will be executed to show you all service requests that most recently passed that milestone.

Drilling Into Milestone Charts & Graphs

For charts and graphs on the milestone status portion of the console, as well as on custom dashboards, it is also possible to do a search for all instances that contribute to a particular chart element. To do this, right click on any chart element (e.g., a bar in a bar chart, or a slice in a pie chart) and select "Instance List". A search will be performed that will show all instances that are represented in that portion of the chart.

Right-click on the "Ticket Assigned" section of today's bar chart to see why so many instances are stuck at that milestone, and select "Instance List".



Scroll to the right in the list and you will see that all stuck instances are assigned to the same frontline technician, Victor Diaz. It may be a good idea to check if Joe is on vacation or sick and re-assign to a different engineer.

	Problem Description	Retail Value of Product	Ticket ID	Frontline Technician
ruliv...	No sound	589	277343	Victor Diaz
t@m...	Bluetooth heads...	44	277327	Victor Diaz
ma...	Bluetooth speak...	69	277325	Victor Diaz
ail....	The tablet is not ...	554	277308	Victor Diaz
sto...	Please service ...	81	277302	Victor Diaz
@m...	The tablet is not ...	890	277290	Victor Diaz
bast...	The phone no lo...	747	277288	Victor Diaz
@m...	My phone will o...	616	277287	Victor Diaz
usill...	No calls	1101	277286	Victor Diaz
ma...	The phone is ne...	538	277270	Victor Diaz
lita...	My headset nee...	84	277268	Victor Diaz

Indicators on the Business Transaction Page

Once a search has been performed (either an explicit identifier search, or a drill-down), the user is presented with a list of service requests that match the search criteria specified. All identifiers are listed in tabular form in the search results table.

Clicking on any value in the identifier column will drill into the details for a particular service request. See the next section for details on how to use the Business Transaction Details page.

The user can sort the list by clicking one of the arrows on one of the column headers:

Incident ID	Service Request Start Date
277551	03/18/2016 13:31:05
277594	03/18/2016 12:53:08
277729	03/18/2016 11:50:15

Note:

Some indicator columns may not have values for certain service request. This could be due to the fact that no values were present in the message when the extraction criteria was evaluated, or also due to the fact that the milestone at which the identifier was to be extracted was not passed by the instance.

For example, an indicator called "**Suspension Reason**" would likely not have a value if a service request was not suspended.

Completed service requests show the **Service Request End Date** while active service requests show no date in that column.

Incident ID	Service Request Start Date	Service Request End Date	Service Request Status	Last Milestones	Customer Name	Company
277348	07/02/2016 19:55:53	07/02/2016 19:55:53	Successful	Problem Resolved	Silvia Karol	PROTOCOPE
277347	07/02/2016 19:55:51		Recoverable Errors	Ticket Suspended	Carrie Lacresha	SUBVANT
277346	07/02/2016 19:55:43	07/02/2016 19:55:43	Successful	Problem Resolved	Laila Marketta	APOSTLIO
277345	07/02/2016 19:55:39	07/02/2016 19:55:39	Successful	Problem Resolved	Leopoldo Dara	PLAGIA
277344	07/02/2016 19:55:34	07/02/2016 19:55:34	Successful	Problem Resolved	Hester Silas	PRENET
277343	07/02/2016 19:55:27		Healthy	Ticket Assigned	Johnathan Truliv...	SSC, Inc.
277342	07/02/2016 19:55:22		Recoverable Errors	Ticket Suspended	Kennith Zoe	REPTEPH
277341	07/02/2016 19:55:17	07/02/2016 19:55:17	Failed	Ticket Rejected	Robbyn Man	RATIOHONG
277340	07/02/2016 19:55:12	07/02/2016 19:55:12	Successful	Problem Resolved	Collen Evelyn	BYRTH
277339	07/02/2016 19:55:07		Recoverable Errors	Ticket Suspended	Simpson Simple...	Fidelity Incorpor...
277338	07/02/2016 19:55:03	07/02/2016 19:55:04	Successful	Problem Resolved	Romana Beau	NECLES
277337	07/02/2016 19:54:57	07/02/2016 19:54:57	Successful	Problem Resolved	Sudash Welcom...	CCNF

The list also shows the status of each service request and the last passed milestone.

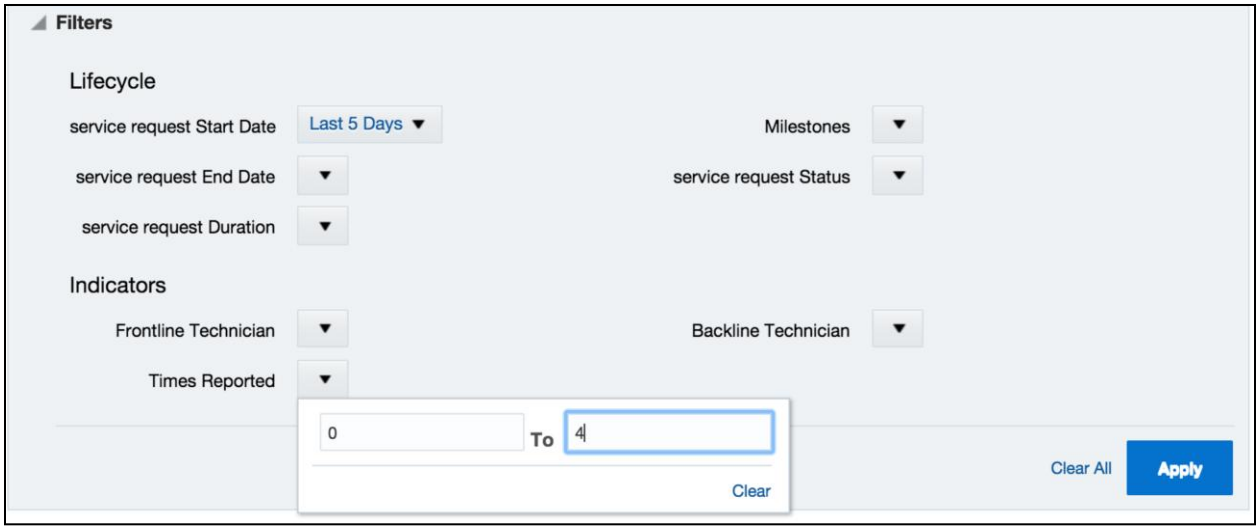
You can change the order of the columns to get a better view of the indicators that are most important to you.

Filtering the Business Transaction (Instance Listing) Page

The list of service requests can be refined using the filter criteria at the top of the page. There are two categories of filter criteria that can be specified: **Lifecycle** and **Indicators**.

Lifecycle criteria allow the user to filter by terms related to the progression of a service request through its lifecycle. For example, the user can limit by the date that a service request was created, or limit the matching service requests by the most recently passed milestone.

Indicator criteria allow a business owner to limit search results based on value ranges applied to the indicators that are unique to their model. For example, one might limit matching service requests to those issues that have been reported between 0 and 4 times.

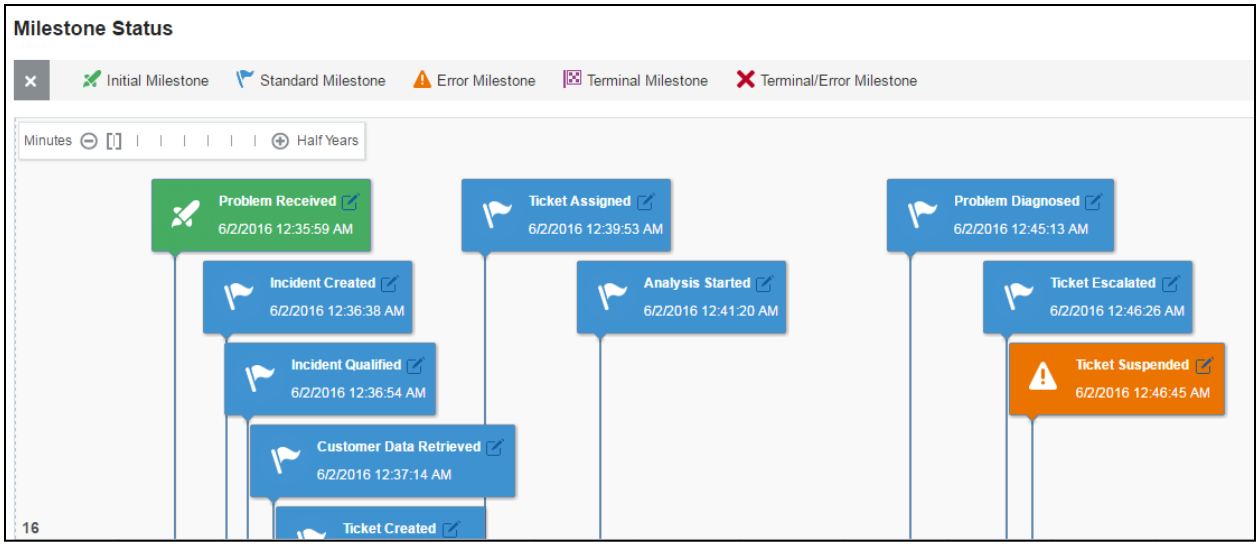


Business Transaction Detail Page

The business transaction details page gives a chronological view and detailed flow of any single service request that a user wishes to inspect.

A user looking for failed service requests, or active service requests, or any other filtered list of service requests on this page may as a consequence want to delve into each of these service requests to investigate the causes for the same. Business owners may drill into a specific service requests by clicking on the identifier value in the business transaction listing page.

277348	07/02/2016 19:55:53	07/02/2016 19:55:53	Successful
277347	07/02/2016 19:55:51		Recoverable Errors
277346	07/02/2016 19:55:43	07/02/2016 19:55:43	Successful
277345	07/02/2016 19:55:39	07/02/2016 19:55:39	Successful
277344	07/02/2016 19:55:34	07/02/2016 19:55:34	Successful
277342	07/02/2016 19:55:22		Recoverable Errors
277340	07/02/2016 19:55:12	07/02/2016 19:55:12	Successful
277339	07/02/2016 19:55:07		Recoverable Errors
277338	07/02/2016 19:55:03	07/02/2016 19:55:04	Successful



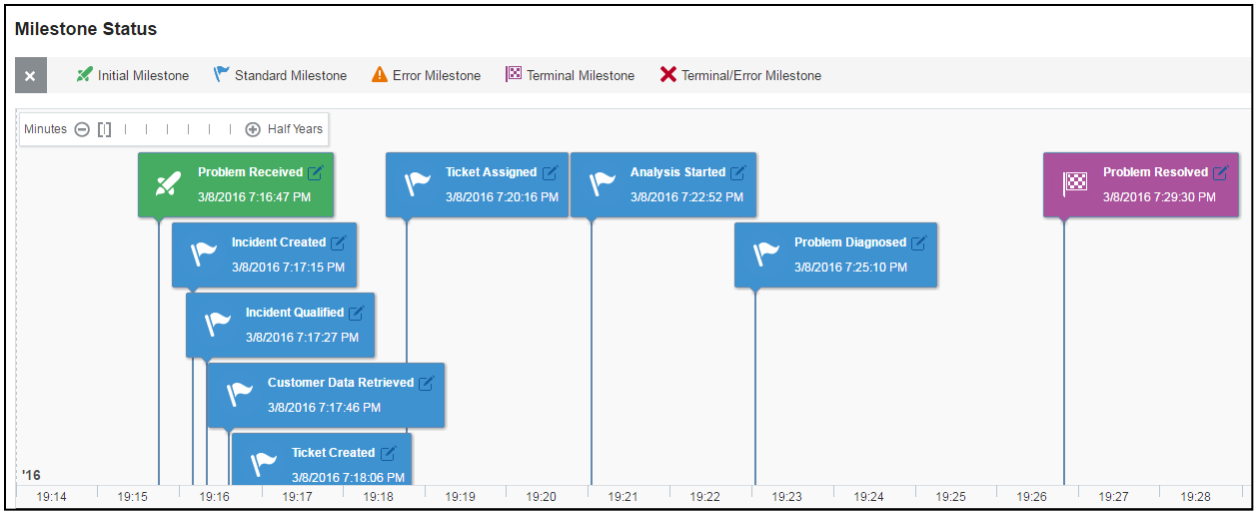
The details page also shows a list of indicators grouped according to the milestone with which they are associated, and the values of these indicators.

Just below the timeline is an expandable/collapsible list view component, showing all the milestone names (and the timestamp of reaching the milestone) as headers, which then can be expanded to view all indicators associated with the particular milestone along with indicator values captured.

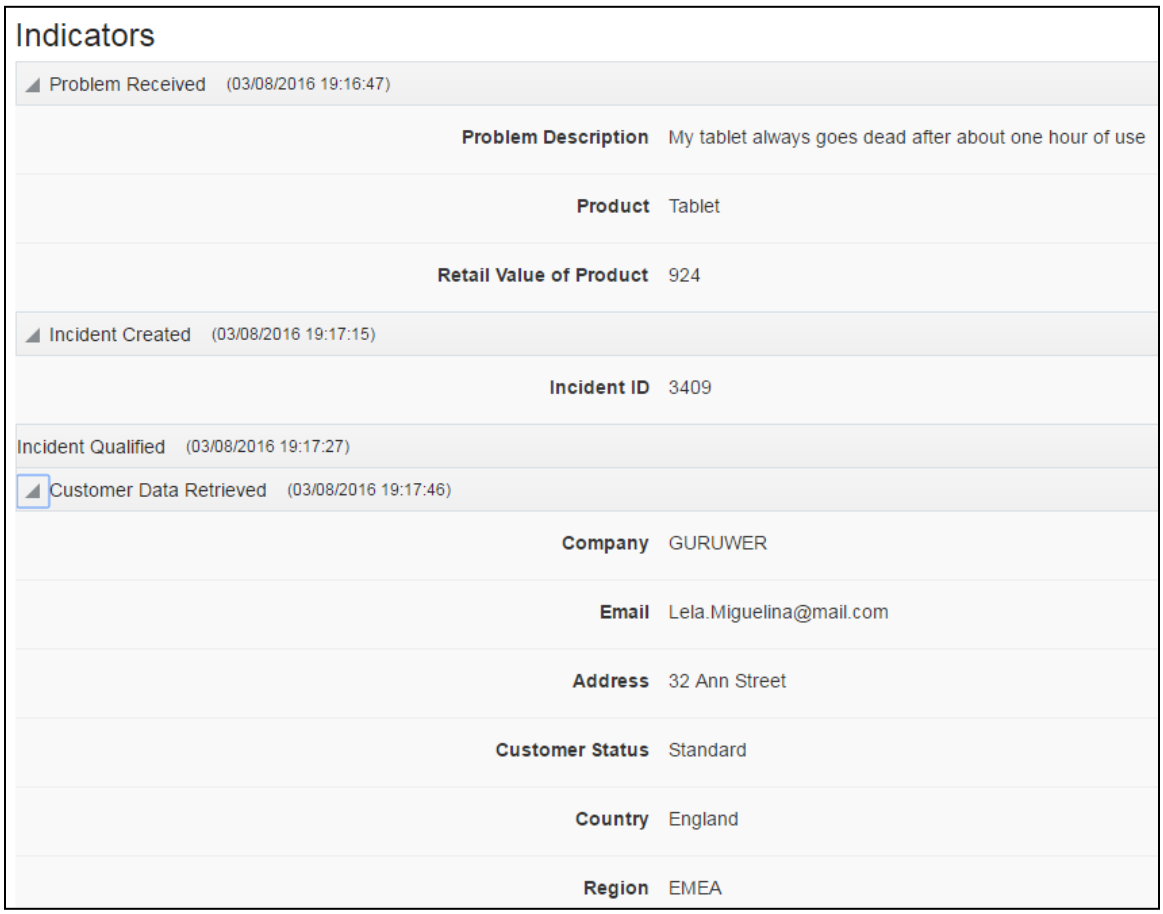
Problem Received (06/02/2016 00:35:59)	
Problem Description	Vibration not working
Product	Accessory
Retail Value of Product	65
Incident Created (06/02/2016 00:36:38)	
Incident ID	276871
Incident Qualified (06/02/2016 00:36:54)	
Customer Data Retrieved (06/02/2016 00:37:14)	
Company	VELVUSÂ
Email	Victoria.Shasta@mail.com
Address	630 Linden Avenue
Customer Status	Silver
Country	England
Region	EMEA
Customer Name	Victoria Shasta

Note that you can filter the indicators to those collected for a specific milestone by clicking on the milestone in the timeline. Click off of any milestone to see all indicators again.

Below is a screenshot of a successfully resolved service request:



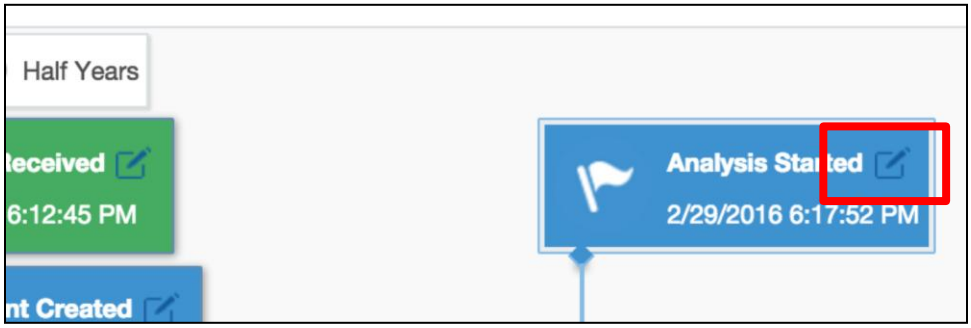
With the indicators for this instance:



Contacting Support Regarding a Milestone Status

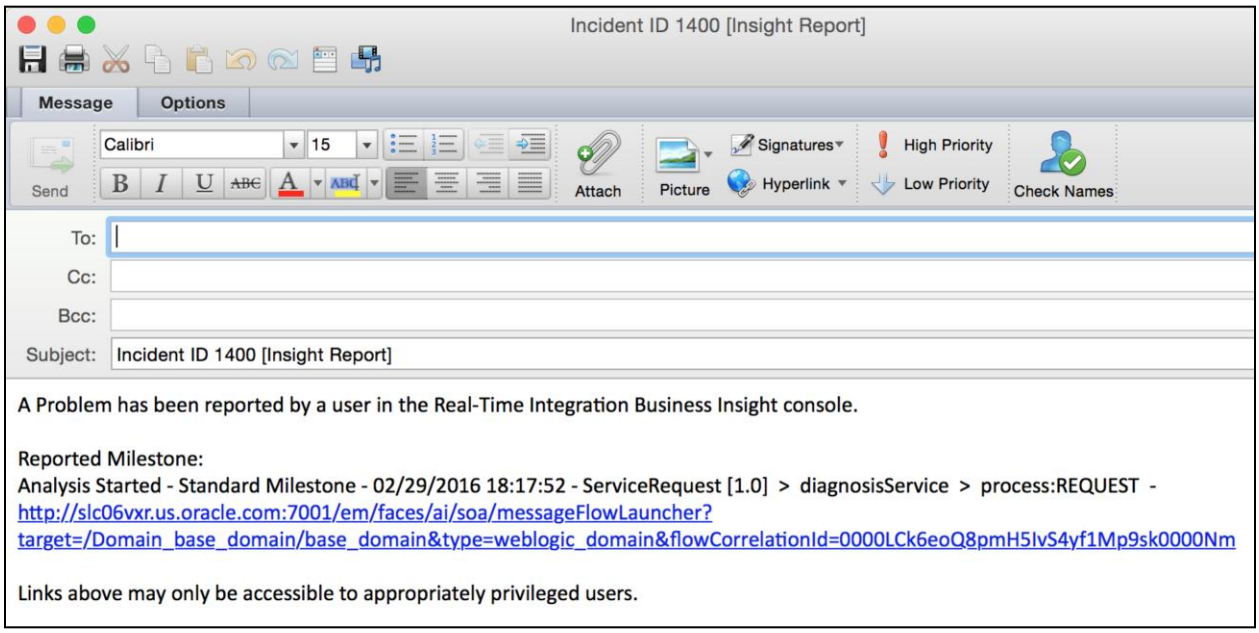
When viewing the status of a service request, there will be occasions when a business owner wishes to discuss the situation with technical support. For example, assume that a long period of time has elapsed since the **Analysis Started** milestone was passed, but the **Problem Diagnosed** milestone has not yet been passed. Why is the service request "stuck" at the **Analysis Started** milestone?

This could be a business problem, but the business owner may also want to exclude a technical problem.



In such cases, the business user can "**escalate**" the service request by clicking on the "**Report a Problem**" icon embedded in the milestone in which the error occurred. This will generate an email to a system administrator including information on where the problem was seen in Insight, as well as providing a link to the technical flow trace so that the administrator can view the associated technical objects in Enterprise Manager.

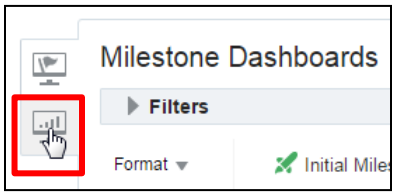
Note: Clicking the "Report a Problem" icon will launch your default email browser if one is defined.

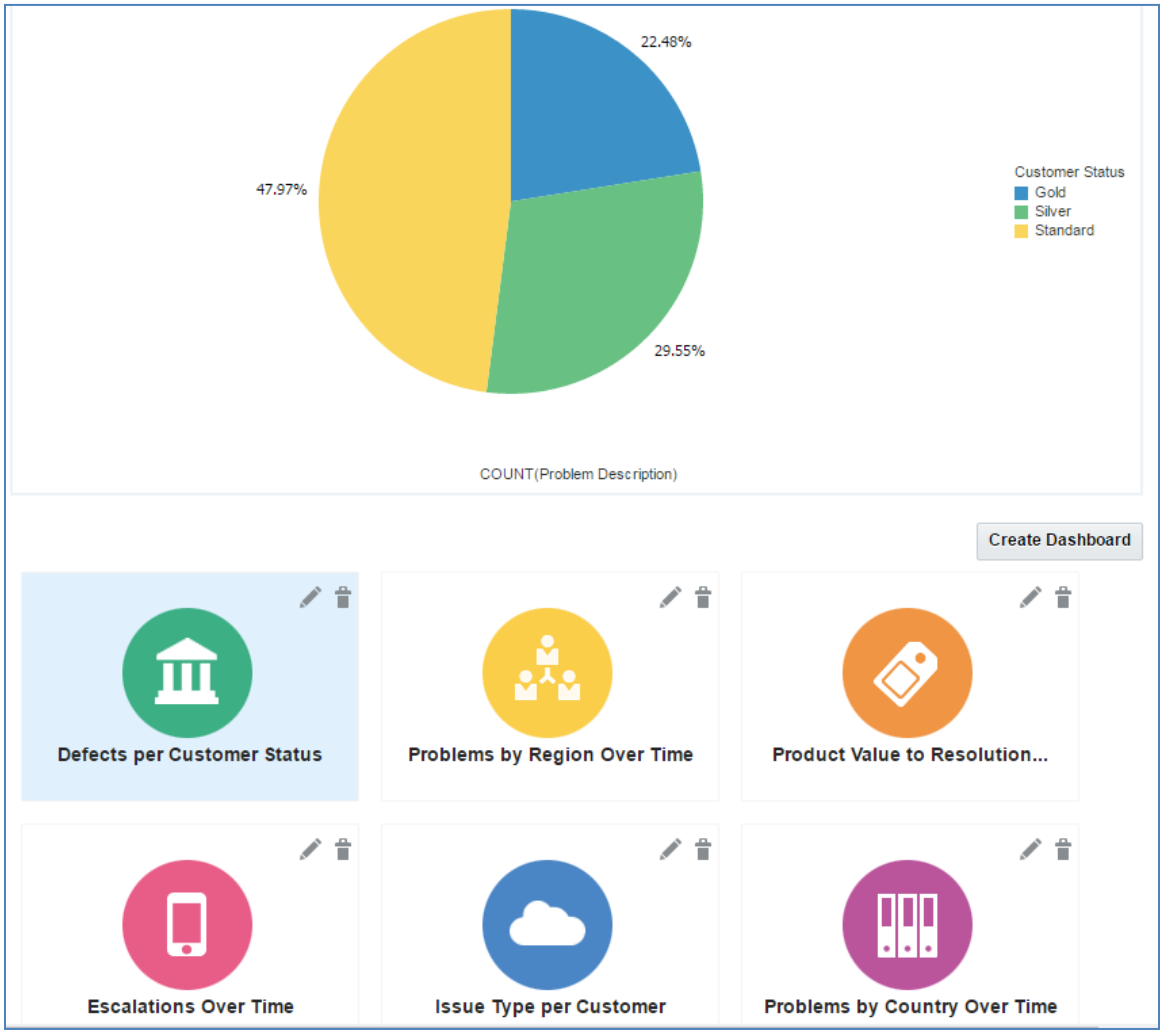


Create Custom Dashboards for “AstraTeq Help Desk” Model

Business owners often want to track metrics, ratios, and trends on their console that are important to their business, but for which the preconfigured dashboards do not provide clarity. Insight allows users to do this by creating **custom dashboards** that can be used to visualize indicators defined in the model and extracted as the application runs.

Custom dashboards are collected on the custom dashboard tab of the console. You can add as many as you like.

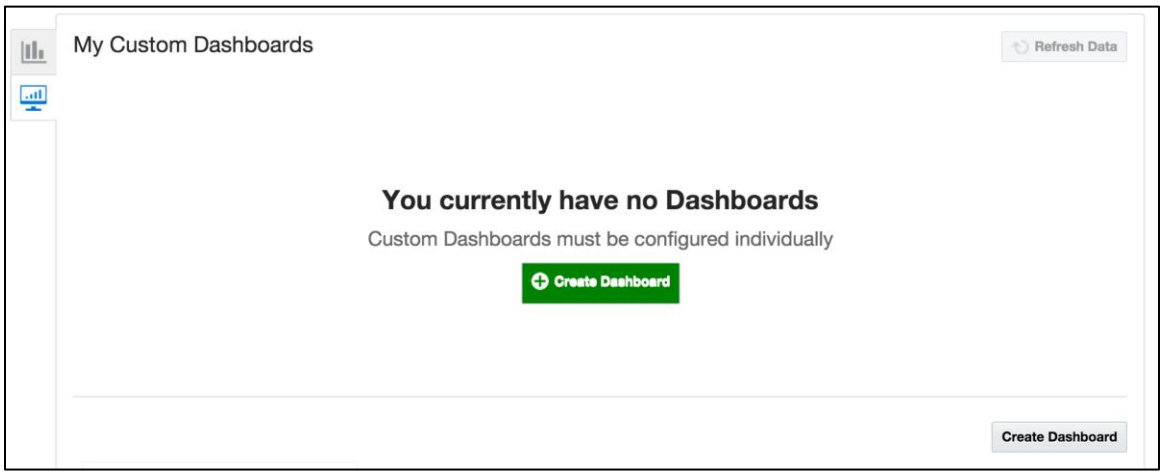




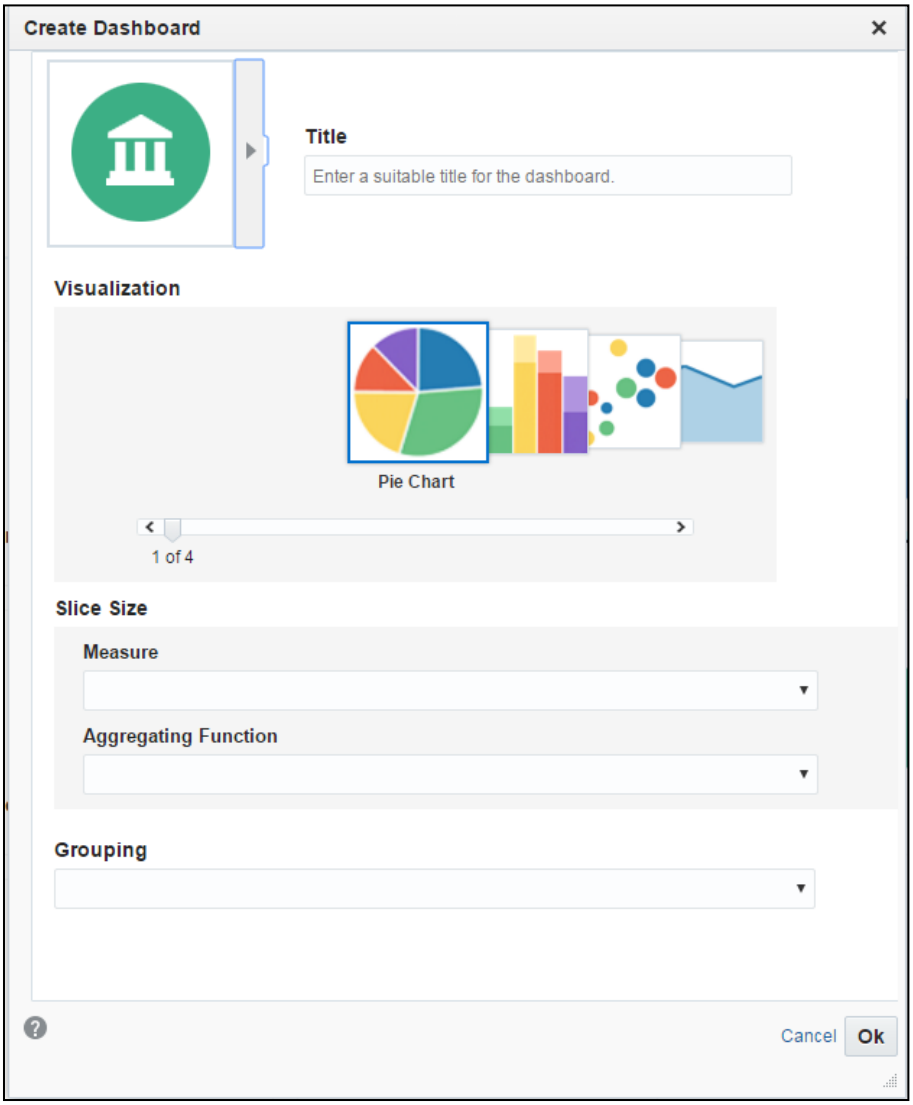
The best way to understand how custom dashboards work is to create a few for yourself! Try to create the following custom dashboards. Feel free to play around and create your own, too.

A few example dashboards are listed in the next section.

Note: when you first select the "Custom Dashboards" tab, you will have no custom dashboards defined. Simply click on the large green "**Create Dashboard**" button to get started creating your first dashboard.



This brings up the **Create Dashboard** page:

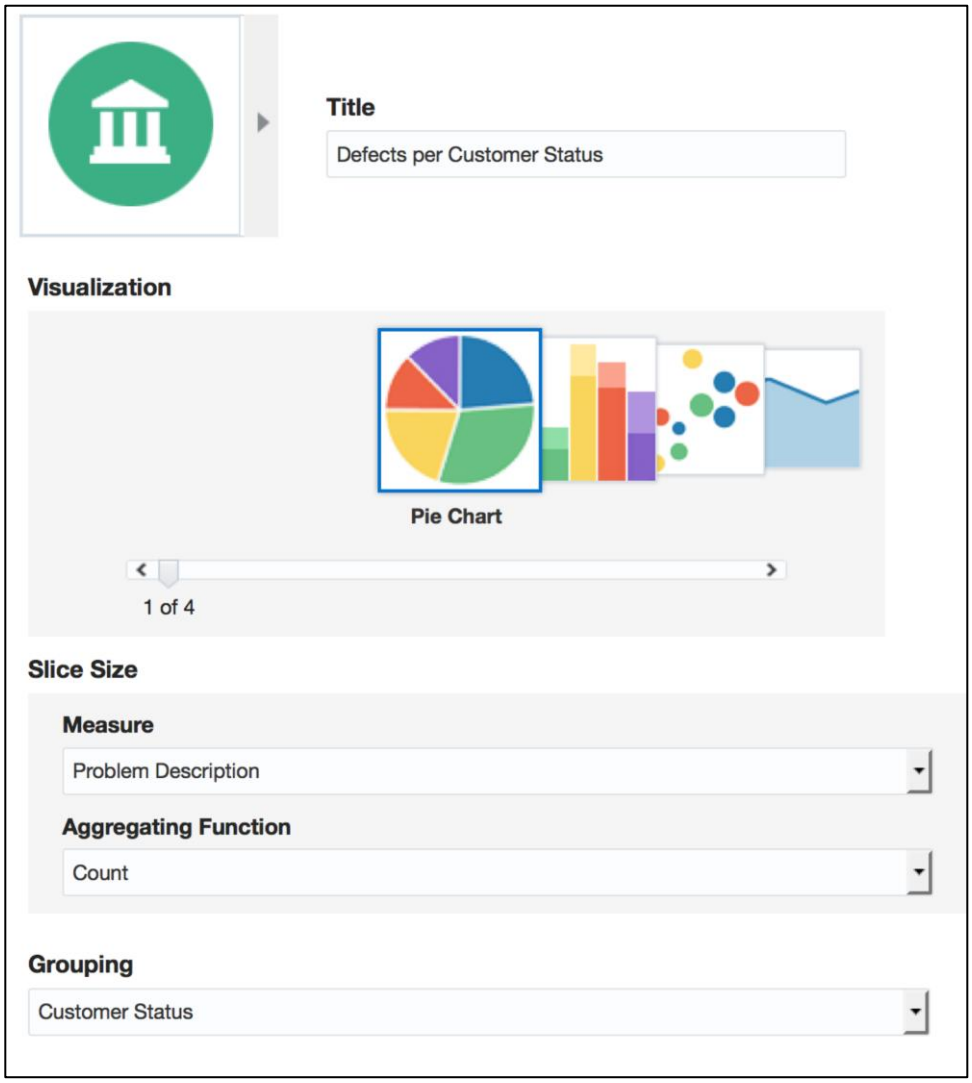


- Select an icon for the dashboard by clicking on the right arrow next to the default icon. Follow the same steps as when selecting an icon representing your model
- Enter a **title** for your model
- Select a chart type from **Pie Chart**, **Bar Chart**, **Bubble Chart** or **Area Chart**
- Select **measures** and **dimensions** to define what metrics are visualized in the charts

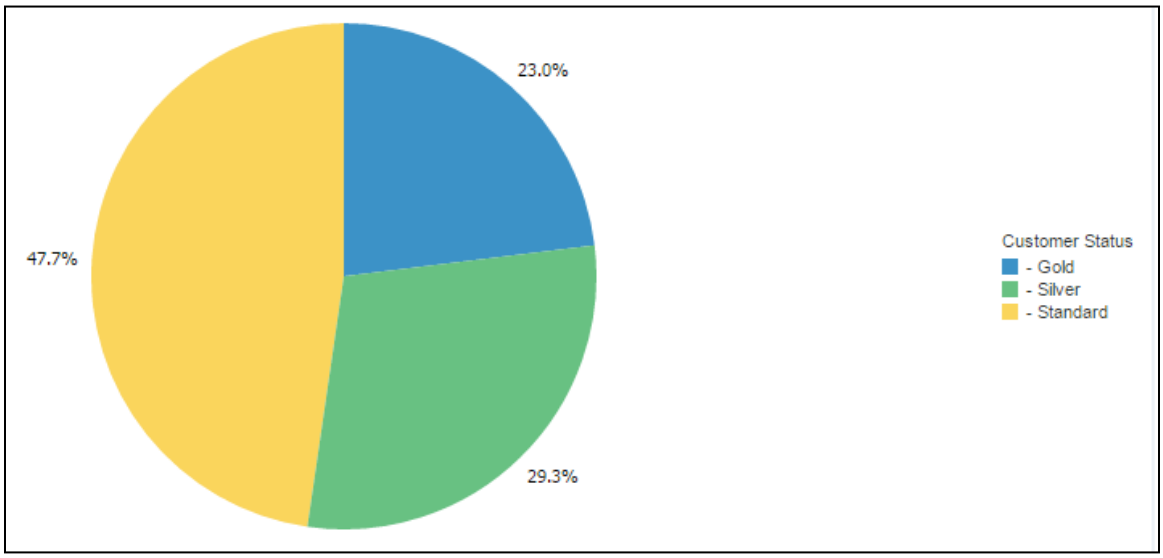
Defects per Customer Status

This chart shows the amount of issues per customer status (gold, silver, standard)

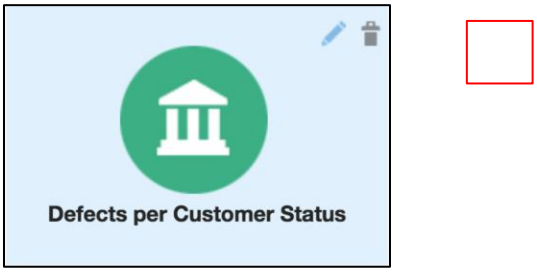
- Chart type: **Pie Chart**
- Slice Size:
    - Measure: **Problem Description**
    - Aggregating Function: **Count**
- Grouping: **Customer Status**



- Click **OK**
- You will see the metrics right away (your metrics will vary from the screenshots below, dependant on how many test messages you created):



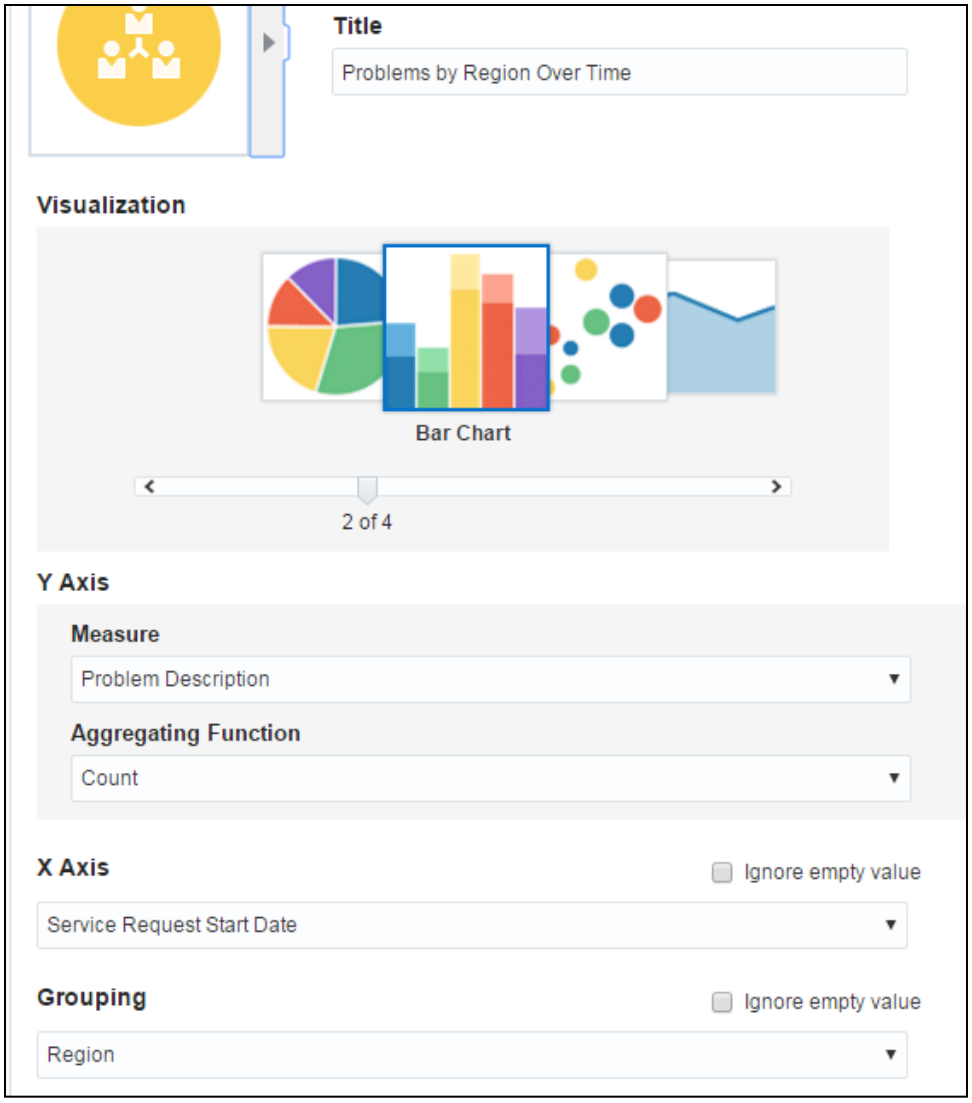
You can **edit** the dashboard by clicking the pencil button on the top right of the dashboard card at the bottom of the page:



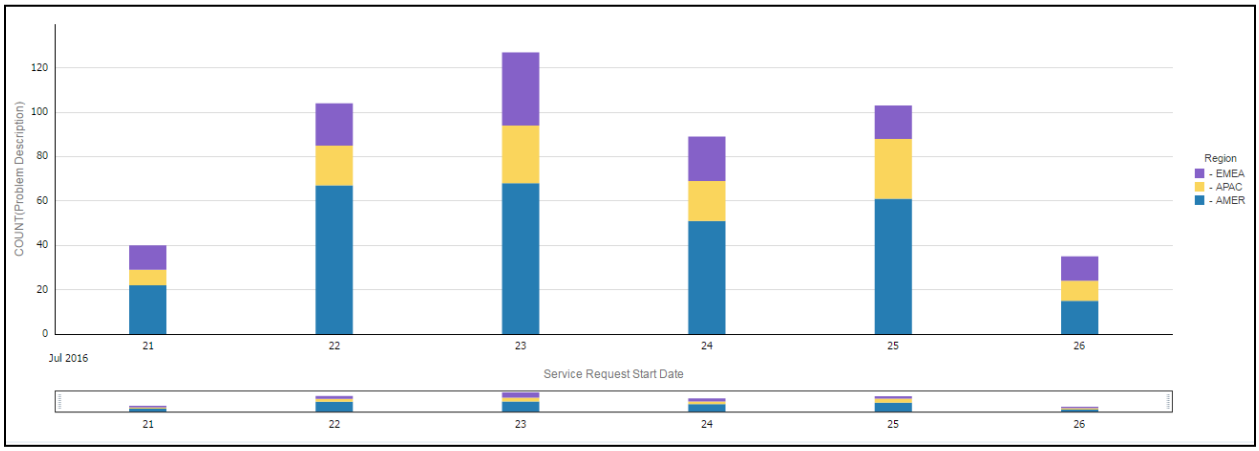
Problems by Region Over Time

This chart shows the distribution of issues across regions per day

- Chart type: **Bar Chart**
- Y Axis:
    - Measure: **Problem Description**
    - Aggregating Function: **Count**
- X Axis:
    - **Service Request Start Date**
- Grouping: **Region**



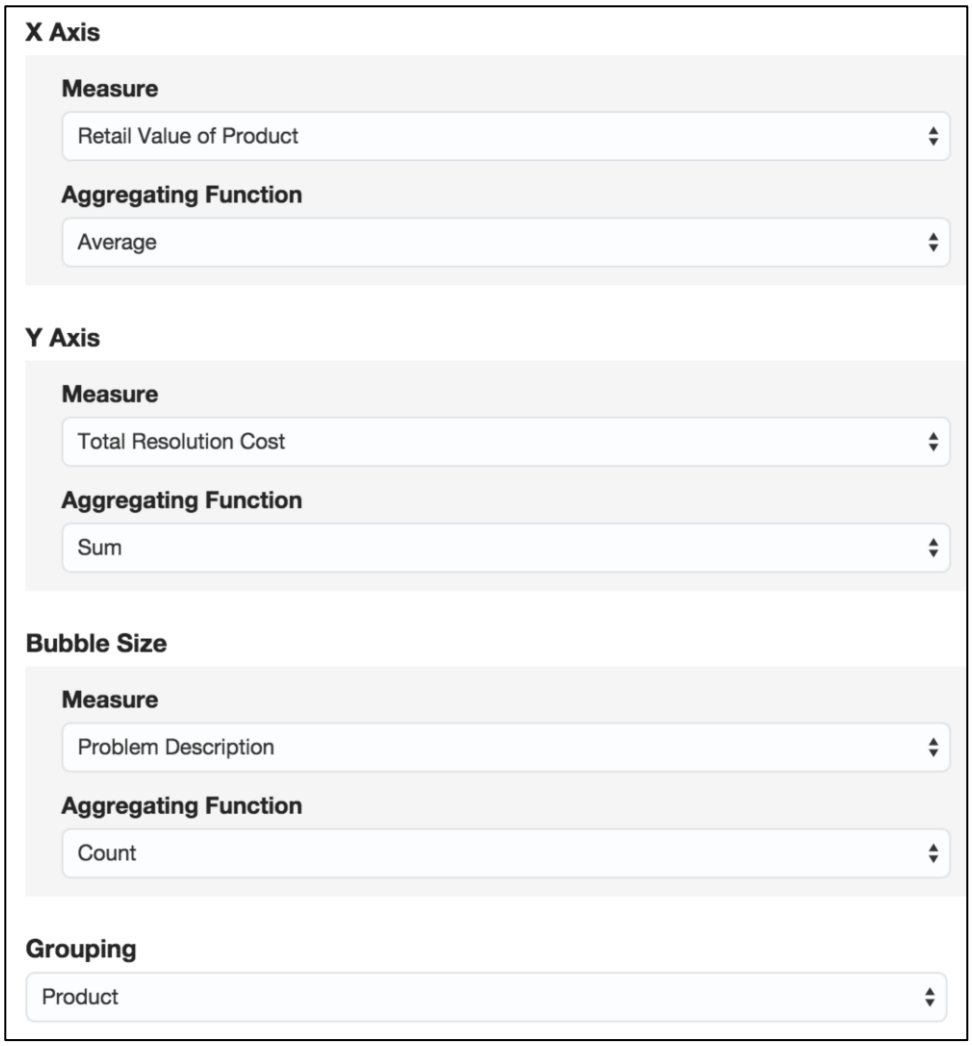
- Click **OK**
- Your metrics will vary from the screenshots below, dependant on your test data:



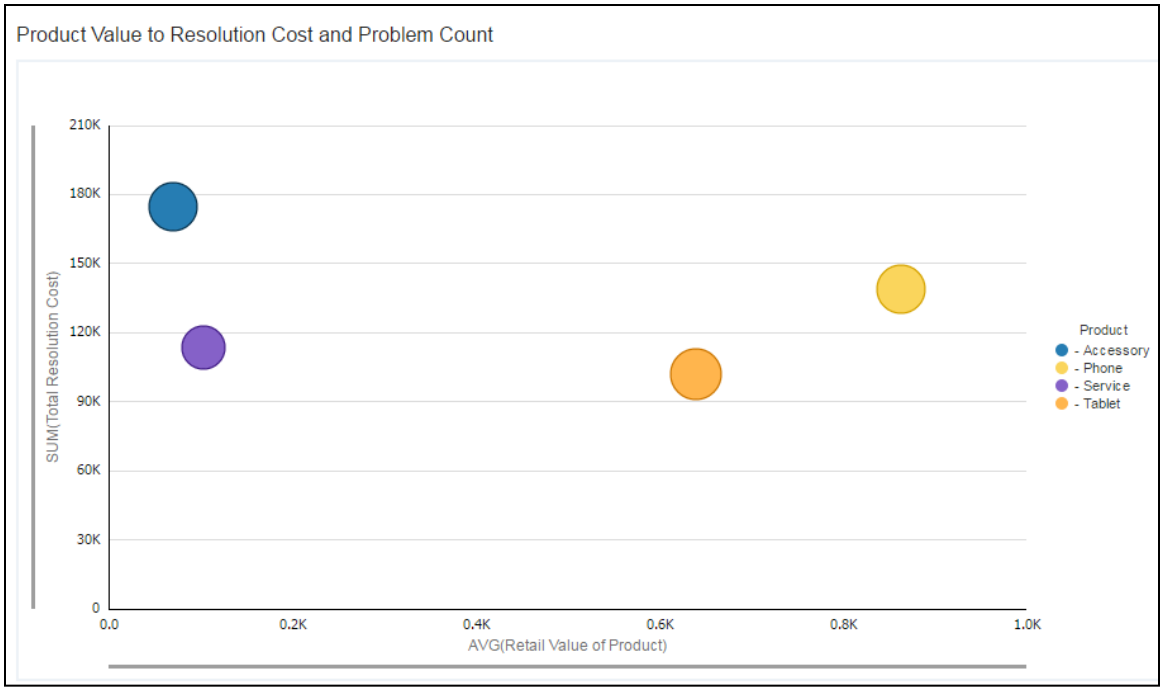
Product Value to Resolution Cost and Problem Count

This chart shows the relation between the retail value of the products on which issues have been reported, the total resolution cost of the problem, and how many times the same problem has been reported.

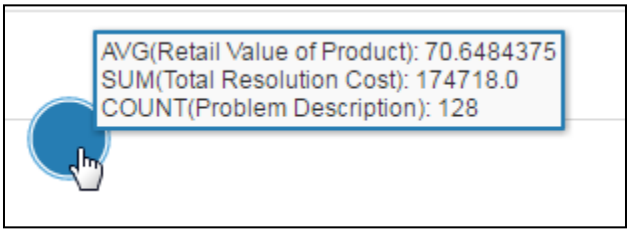
- Chart type: **Bubble Chart**
- X Axis:
    - Measure: **Retail Value of Product**
    - Aggregating Function: **Average**
- Y Axis:
    - Measure: **Total Resolution Cost**
    - Aggregating Function: **Sum**
- Bubble Size:
    - Measure: **Problem Description**
    - Aggregating Function: **Count**
- Grouping: **Product**



- Every bubble represents a different product type:



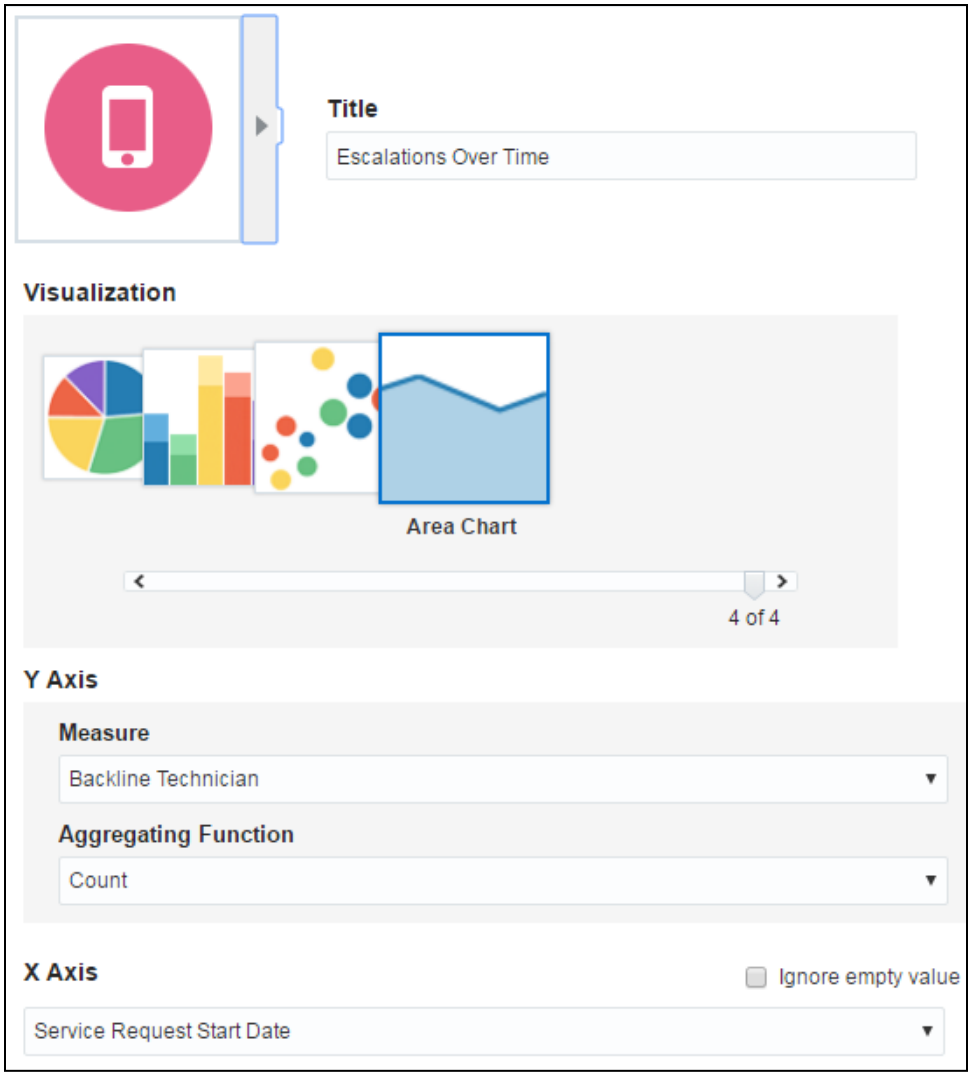
- The bubble color shows the product type, the bubble size shows how many problems have been reported for this product and the position on the Y axis shows the sum of the cost to resolve the issues.
- Mouse over a bubble to see the values

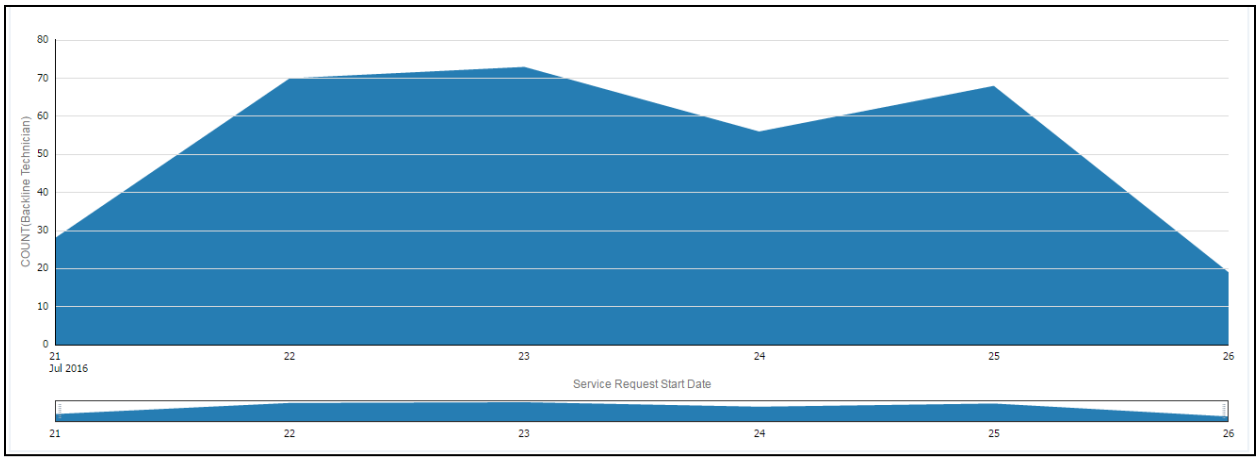


Escalations Over Time

This chart shows the number of escalations over time.

- Chart type: **Area Chart**
- Y Axis:
    - Measure: **Backline Technicians**
    - Aggregating Function: **Count**
- X Axis: **Service Request Start Date**



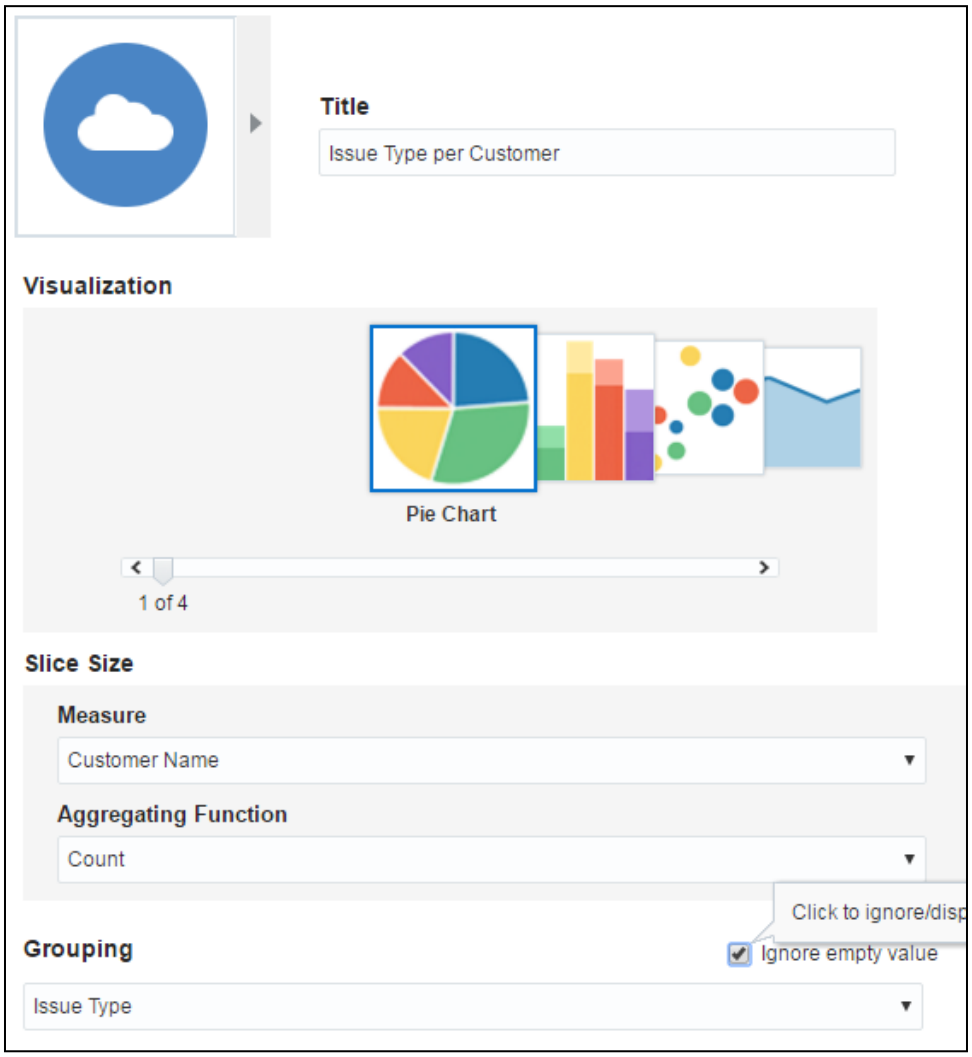


Issue Type per Customer

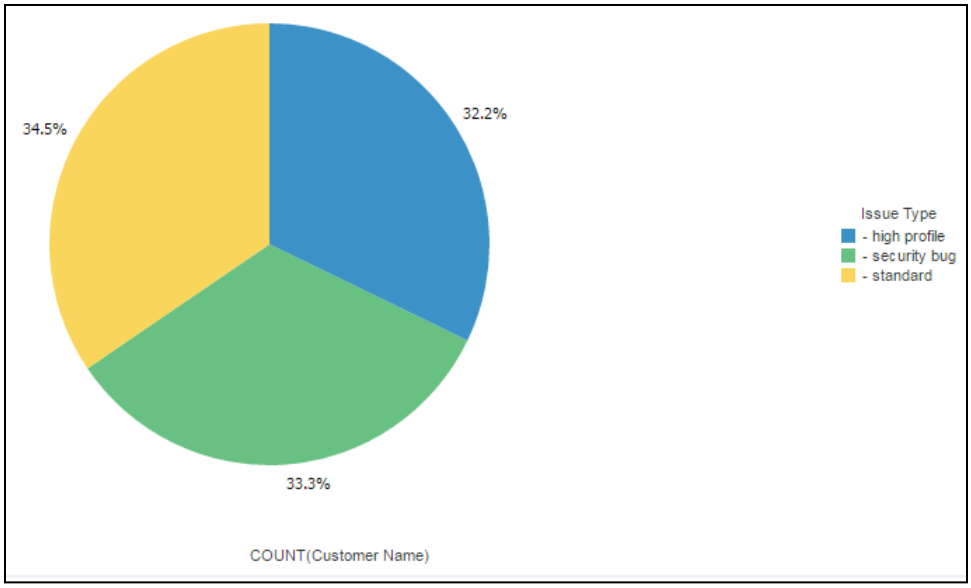
This chart shows the percentage of issues types per customer.

- Chart type: **Pie chart**

- Slice Size:
    - Measure: **Customer Name**
    - Aggregating Function: **Count**
- Grouping: **Issue Type**
- Check **Ignore empty value**
    - In some cases, the indicator Issue Type is not set, for example, if no issue has been identified. Checking this box excludes those service requests with empty issue type from the chart



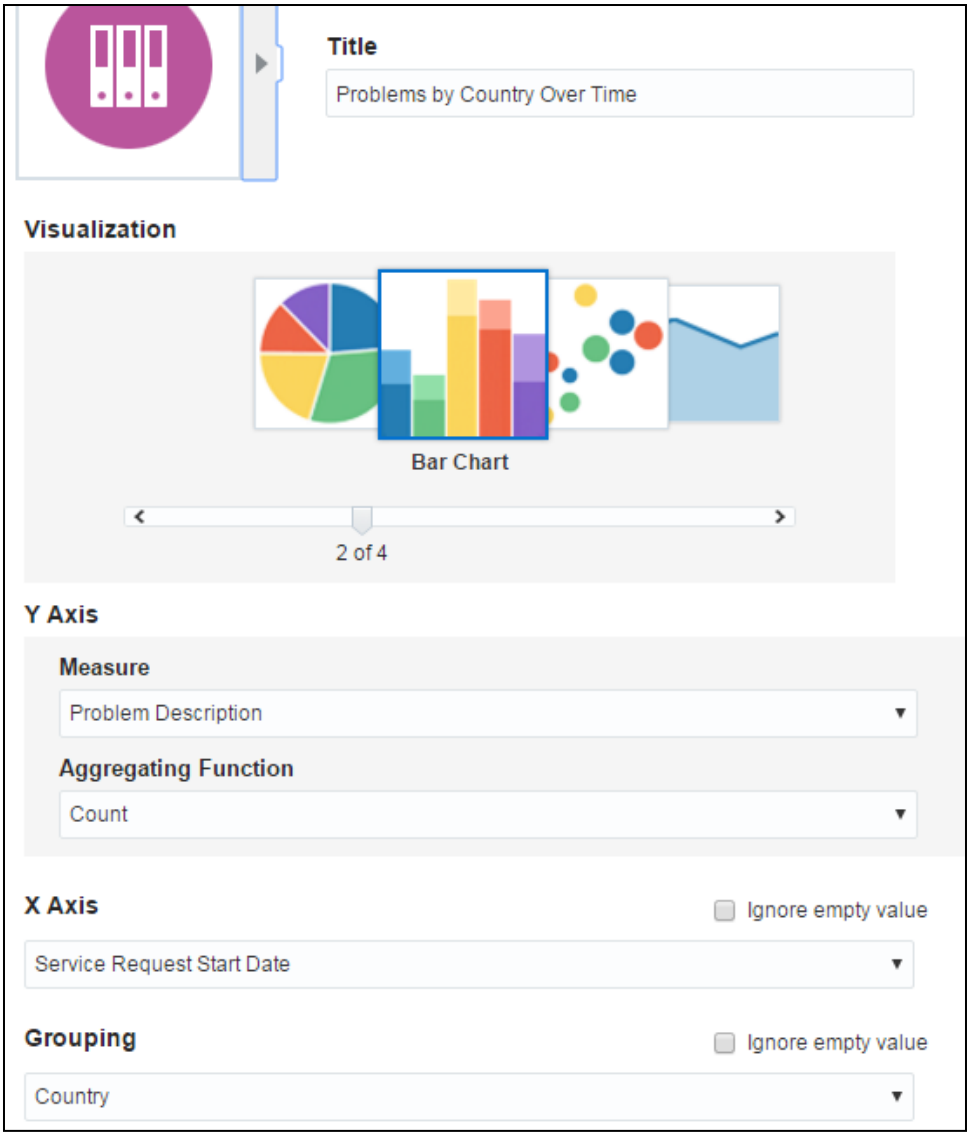
The chart should look something like this:



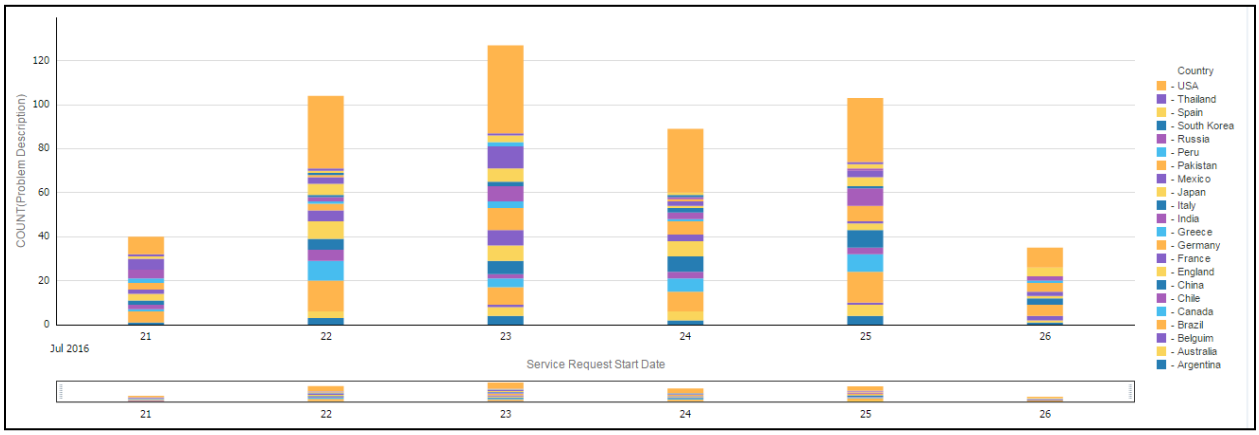
Problems by Country Over Time

Here you can see how many issues were reported per country every day.

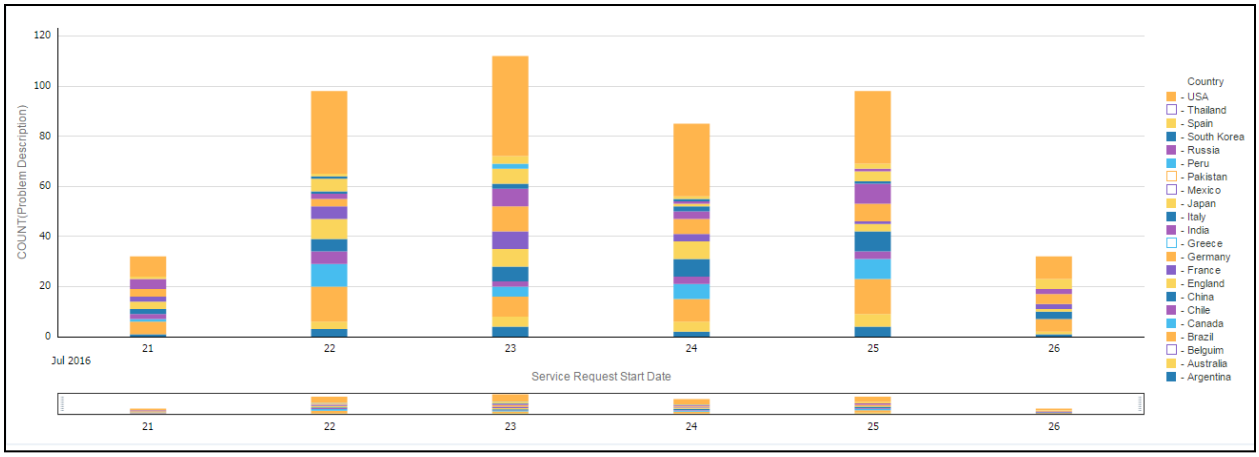
- Chart type: **Bar chart**
- Y Axis:
    - Measure: **Problem Description**
    - Aggregating Function: **Count**
- X Axis: **Service Request Start Date**
- Grouping: **Country**



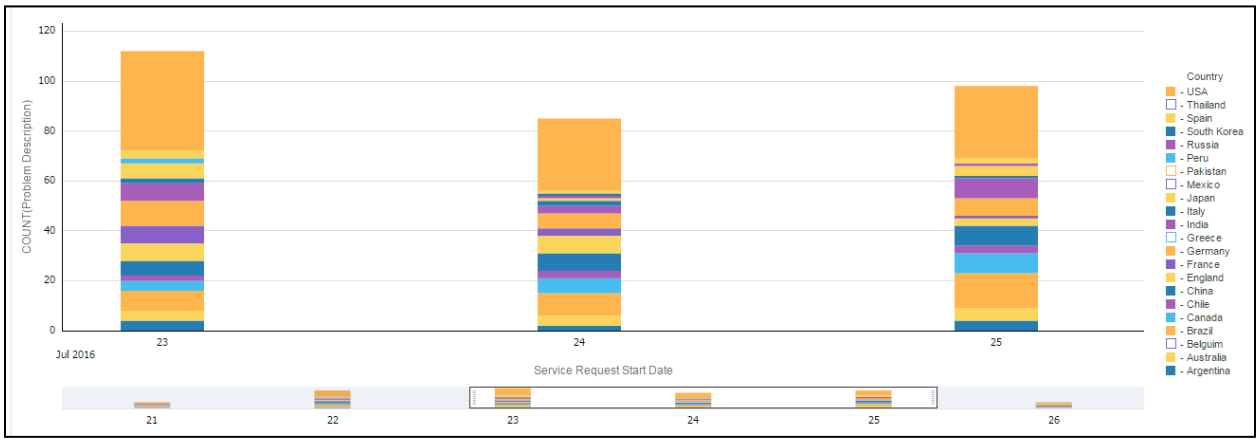
The chart should look something like this:



You can simplify the diagram by unchecking countries in the right legend. A diagram with less countries could look like this:



In addition to changing the filter for the dashboards, you can also limit the timeframe in the chart itself by moving the slider at the bottom:

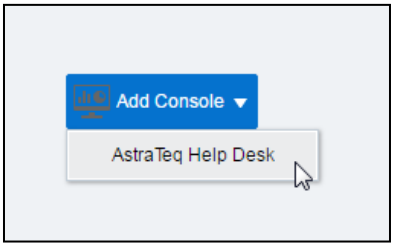


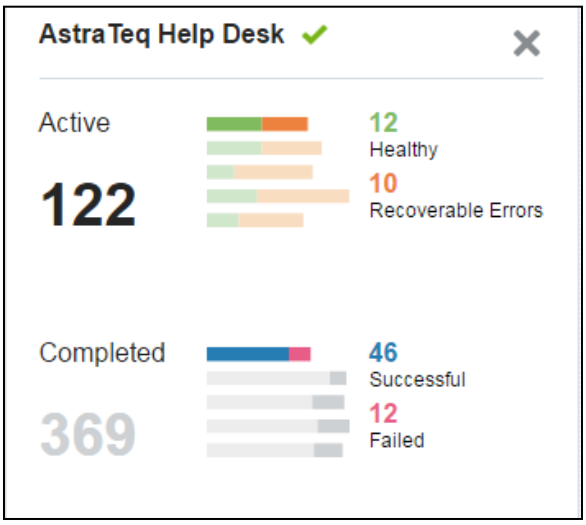
View of the last five days

Signed in as **John**, the business owner, go to the **Home** page (click on the **Home** tab).

You can add a "**console tile**" to this page for each model to get a view of the last five days if you haven't done so yet.

- Click **Add Console** and select "**AstraTeq Help Desk**" from the drop-down list:



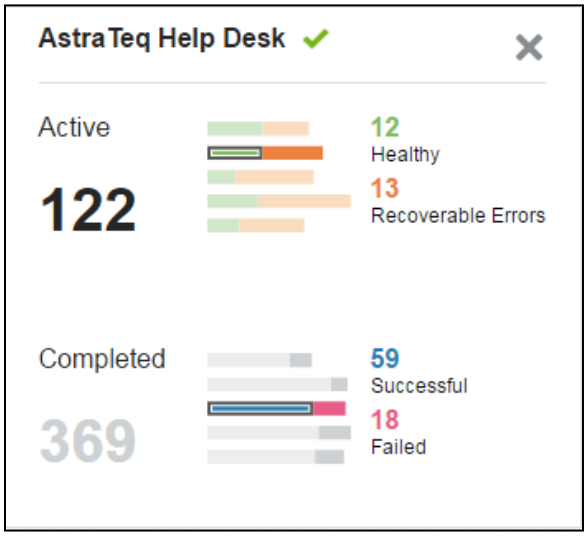


The metrics are grouped into

- **Active** orders (orders not passed a terminal milestones yet)
  - **Healthy:** last milestone passed was a standard milestone. Service Requests that have been started, but are not complete yet.
  - **Recoverable Errors:** last milestone passed was an error milestone, but not terminal. This service request can still be successful as it is not complete yet. If the service request has been suspended, it can still be recovered, for example if the customer provides additional information to the support engineer.
- **Completed** orders (orders that have passed a terminal milestone)
  - **Successful:** last milestone passed was terminal: service requests that have been resolved.
  - **Failed:** last milestone was a terminal error milestone: service requests that have been rejected.

The numbers on the left are a cumulating metrics for the last five days, numbers on the right represent the current day.

You can select bars in the middle from past days to retrieve the numbers from that day:



This concludes the **AstraTeq Help Desk** tutorial for Real-Time Integration Business Insight. We hope you enjoyed the experience. Please let us know any questions or comments you may have.