

# Oracle Cloud Test Drive for PaaS and IaaS

## Lab 1.0

### Integration Cloud Service \ ICS Basic Mapping Lab

#### 1 Contents

2	Lab Scenario .....	2
2.1	Logging in to ICS .....	2
2.2	The ICS Environment.....	3
2.2.1	Connections .....	4
2.2.2	Integrations .....	4
2.2.3	Dashboards .....	4
2.2.4	Lookups.....	4
2.2.5	Packages .....	4
2.2.6	Agents .....	4
3	Creating Connections .....	5
3.1.1	Create Service Cloud connection .....	5
3.1.2	Create REST Connection .....	9
4	Creating Integrations.....	12
4.1	Create the Basic Map Data Integration.....	14
4.1.1	Map Request Data for Create Organization .....	21
4.1.2	Map Response Data for Create Organization .....	23
4.1.3	Add Tracking Information .....	25
4.2	Activate the Integration .....	26
4.3	Test the Integration .....	27

# Introduction to the Lab and Logging-in

## 2 Lab Scenario

Our fictional company is using Oracle Service Cloud (RightNow) as their Field Service SaaS application. Business has requested that IT delivers a mobile application for the field service personnel – one that will enable them to quickly query and create customer records in RightNow whilst on the road.

Note that in RightNow customers are known as “organizations”. To achieve their goal, our developers require a simple REST interface which masks the complexity of the “organization” data structure in Service Cloud. To this end, we will leverage Oracle Integration Cloud Service (ICS) to create a basic **Map Data** pattern integration between Rightnow and a mobile REST connection.

We will then use that to connection to create a new “organization” (i.e. customer) in Oracle Service Cloud.



### 2.1 Logging in to ICS

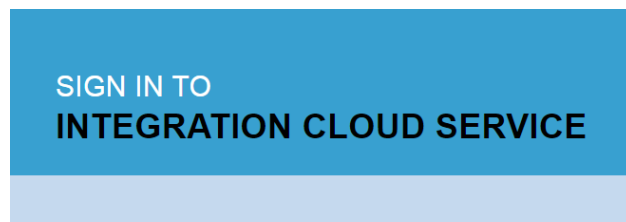
Your instructor will assign you a URL and a username with a password to login. Please view the relevant “Access Credentials for all Labs” document.

Your instructor will also assign a Prefix – you will not need it for now, only for later.

To avoid any possible cache issues:

- In Chrome - Select New Incognito Window
- In Mozilla - Select New private window
- In Safari – Select File > New Private Window

Login with the credentials assigned to you



User01

\*\*\*\*\*





Sign In

ORACLE

## 2.2 The ICS Environment

Here is what you will see as soon as you login into Integration Cloud Service:

Integration Cloud Service

 niall.commiskey@o...


[Home](#) | [Designer](#) | [Monitoring](#) | [Administration](#)

# Welcome niall.commiskey@oracle.com!

Create an integration to connect your cloud and on-premise applications in a continuous business flow. A great integration starts with creating connections to the applications you want to use, and then mapping information between those applications.

[Show Me How](#)

### Start Here




Create Connections

**Connections**  
Define connections to the cloud and on-premise applications you want to integrate.

[Learn More](#)

[Show Me](#)




Create and Activate your Integrations

**Integrations**  
Connect two cloud applications, and define how they interact with each other.

[Learn More](#)

[Show Me](#)




Monitor Integrations on the Dashboard

**Dashboard**  
View the current state of your running integrations and fix any errors that occur.

[Learn More](#)

[Show Me](#)

### Also Learn About




Create Lookups

**Lookups**  
Map the different values used by your applications to describe the same things, like country or state codes.

[Learn More](#)

[Show Me](#)




View Packages

**Packages**  
Group related integrations into a single package to make them easy to import and export. You create a package when you create an integration.

[Learn More](#)

[Show Me](#)




Create Agents

**Agents**  
Connect to on-premise applications.

[Learn More](#)

[Show Me](#)



View Adapter

3

Cloud Test Drive for PaaS and IaaS - ICS Basic Map Data Lab

Let's go through each component quickly. There is nothing to do here yet.

### 2.2.1 Connections

Connections connect you to the apps with which you want to integrate. In our case, we will need two connections, one for the REST interface, the other for Service Cloud (RightNow).

Connections are based on Adapters. ICS provides 40+ adapters out of the box. Some of these are for SaaS apps such as Sales Cloud or Salesforce. Others are technical adapters such as SOAP and REST. ICS also provides on-premise adapters for E-Business Suite, Oracle DB, file etc.

### 2.2.2 Integrations

Integrations connect applications to each other, in our case, the mobile interface to Service Cloud.

Integrations leverage connections and usually involve some mapping of data. In many cases, where we have App A connecting to App B, both may have the same logical business object e.g. Customer. However, the actual object field names may differ greatly.

### 2.2.3 Dashboards

Dashboards provide us with the ability to monitor our integrations. Through the use of payload Tracking fields, we can see, for example, when a specific customer got created in Service Cloud.

### 2.2.4 Lookups

Lookups help us address where different apps use different values for the same things e.g.

Sales Cloud - AddressType	Service Cloud - AddressType
1	Billing
2	Shipping

### 2.2.5 Packages

Packages allow us to group related integrations and their artefacts to make it easier to import and export them.

### 2.2.6 Agents

The ICS on-premise agent allows us to create secure hybrid integrations between cloud and on-premise. A possible use case includes sales account synchronization between Sales Cloud and on-premise Siebel.

Next, let's start to implement our scenario.

# Lab Execution

## 3 Creating Connections

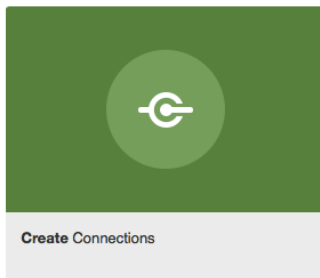
As already mentioned, you will need 2 connections for this lab. You will create them now. Ensure you are logged in as per the instructions above.

### 3.1.1 Create Service Cloud connection

You will create a connection called **<Your\_Prefix>ServiceCloud** such as **AA1ServiceCloud**.

- Click **Create Connections**, then **New Connection**

Start Here



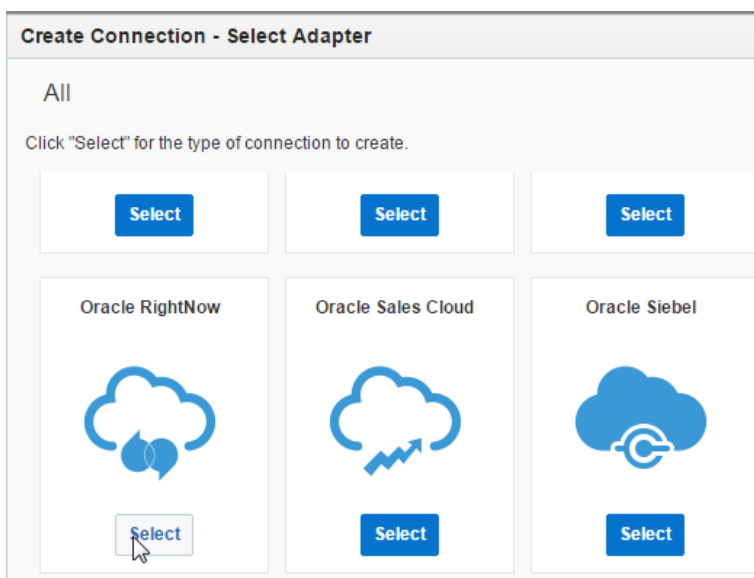
#### Connections

Define connections to the cloud and on-premise applications you want to integrate.


[Learn More](#)

[Show Me](#)

- Select the **Oracle RightNow** adapter (RightNow is the legacy name of Oracle Service Cloud).



- Use the code assigned to you as the prefix of the connection name to give it a name of **<Your\_Prefix>ServiceCloud**
  - In my case below, I used **AA1** to give my connection the name **AA1ServiceCloud**


**New Connection - Information**

Enter information that describes the connection. Use a meaningful name and description to help others find your connection when they create their own integrations. The Identifier must be unique and can be set only when the connection is created.

\* Connection Name

\* Identifier

Connection Role

Trigger and Invoke ▼


Description

Create

Cancel

- Click **Create**

You will now see the following:



**Connection Administrator**  
 You can receive email notifications when problems or changes occur in this connection. Enter the email address to receive these notifications.

Email Address

Connection Properties

Configure Connectivity


Click Configure Connectivity to specify information to connect to your application/endpoint and process requests.



 WSDL URL


Security

Configure Security

Click Configure Security to specify the login credentials to access your application/endpoint.


 Security Policy   Username Password Token


 Username


 Password

- Click **Configure Connectivity**.
- This will allow us to specify the enterprise WSDL. This contains a list of Service Cloud public business objects and the operations that can be performed on them e.g. to **create Organization**.
- Use the following:

[https://gsefmwr11.rightnowdemo.com/cgi-bin/integration\\_test.cfg/services/soap?wsdl](https://gsefmwr11.rightnowdemo.com/cgi-bin/integration_test.cfg/services/soap?wsdl)

Connection Properties

Enter information so we can connect to your application/endpoint and process requests.

Property Name	Property Value
* WSDL URL	https://gsefmwr11.rightnowdemo.com/cgi-bin/integration_test.cfg/services/soap?wsdl

OK

Cancel

- Click **Configure Security**.
  - Here we will specify the Service Cloud user and password, which will be used to connect.

Configure Connectivity

ion/endpoint and process requests.

cgi-bin/integration\_test.cfg/services/soap?wsdl

Configure Security

ation/endpoint.

- Enter **Admin1/gaudyVideo7%**

Credentials

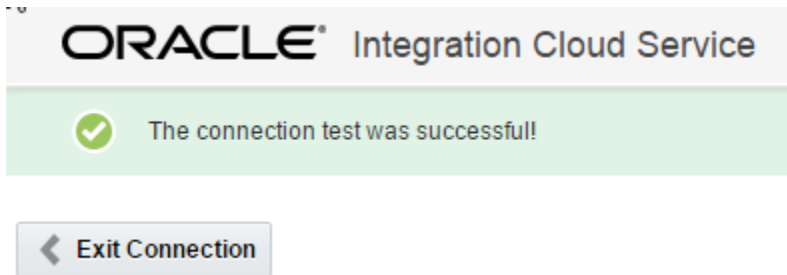
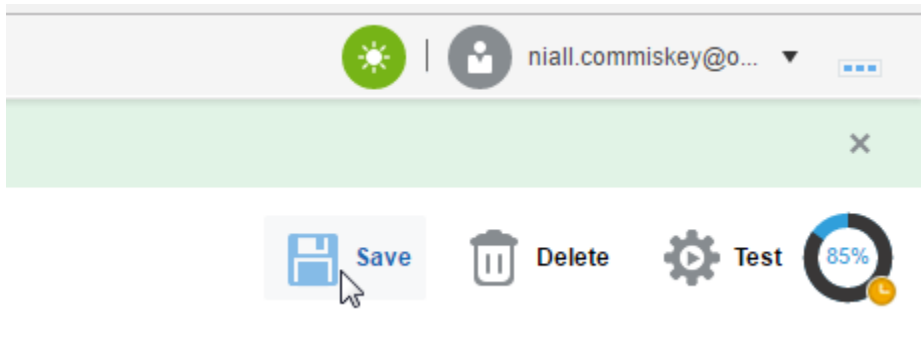
You can configure the Security Policy for this connection. Please select the Security Policy.

Security Policy Username Password Token

Your application/endpoint requires that users and services provide security credentials for access. S

Property Name	Property Value
* Username	Admin1
* Password	*****
* Confirm Password	*****

- Click **Save** and then, **Test**.



- Click **Save** and **Exit Connection**.









### 3.1.2 Create REST Connection

- Click **New Connection**
- Select the **REST** adapter.

**Create Connection - Select Adapter**

All

Click "Select" for the type of connection to create.

 <b>Select</b>	 <b>Select</b>	 <b>Select</b>
<b>REST</b>  <b>Select</b>	<b>Salesforce</b>  <b>Select</b>	<b>SAP</b>  <b>Select</b>
<b>SOAP</b>	<b>Successfactors</b>	<b>SurveyMonkey</b>

**New Connection - Information**

Enter information that describes the connection. Use a meaningful name and description to help others find your connection when they create their own integrations. The Identifier must be unique and can be set only when the connection is created.

\* Connection Name

\* Identifier

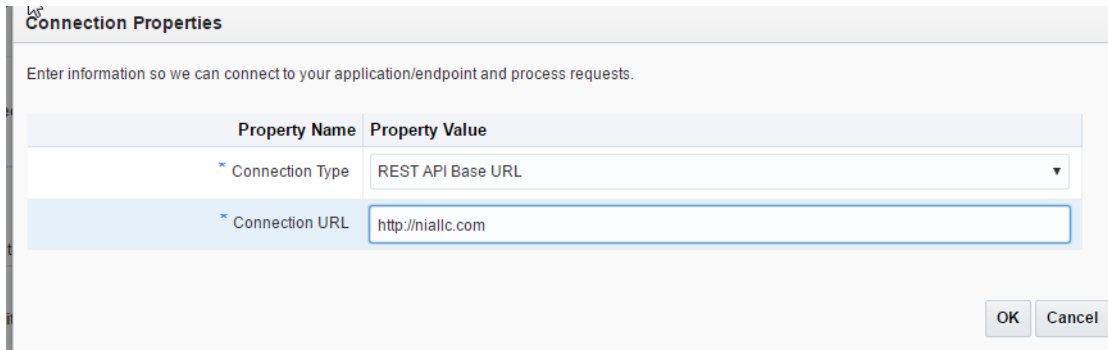
Connection Role

Description

**Create** **Cancel**

- Enter the relevant **Connection Name**, again, using the prefix allocated to you.

- Click **Create**
- Click **Configure Connectivity**.
- Select Connection Type as **REST API Base URL**
- This will allow us to specify a dummy URL for connection definition purposes. Enter a dummy URL. We will specify the actual URL details, when we leverage this connection at design time.
- Click **OK**



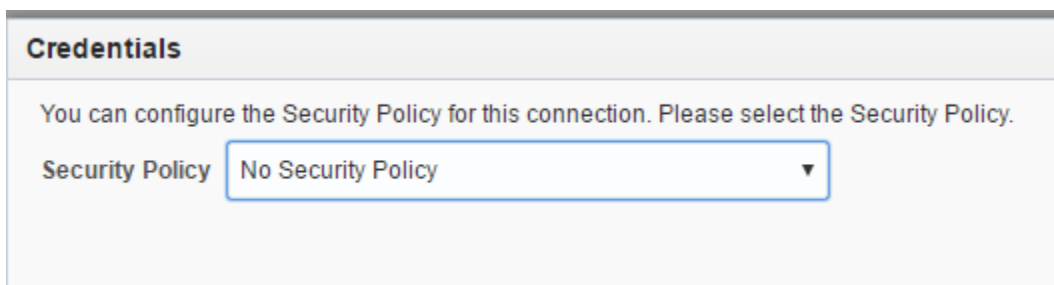
**Connection Properties**

Enter information so we can connect to your application/endpoint and process requests.

Property Name	Property Value
* Connection Type	REST API Base URL
* Connection URL	http://niallc.com

OK Cancel

- Click **Configure Security** to set the security credentials.
- Set Security to **No Security Policy**, then **OK**.

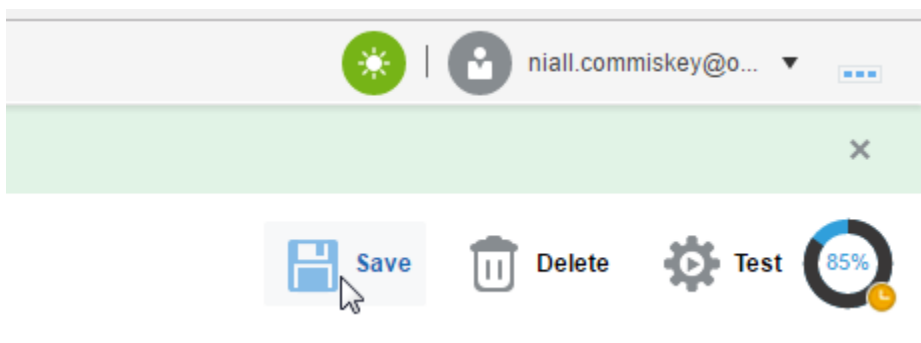


**Credentials**

You can configure the Security Policy for this connection. Please select the Security Policy.

Security Policy No Security Policy

- Click **Save** and then **Test**.



Toolbar showing icons for Save, Delete, Test, and a progress indicator (85%).



The connection test was successful!

← Exit Connection

- Click **Save** and **Exit Connection**.

The two connections are now ready for use:

New Connection >

Oct 3, 2016 1:02:06 PM UTC

Connections

AA1

Filter by

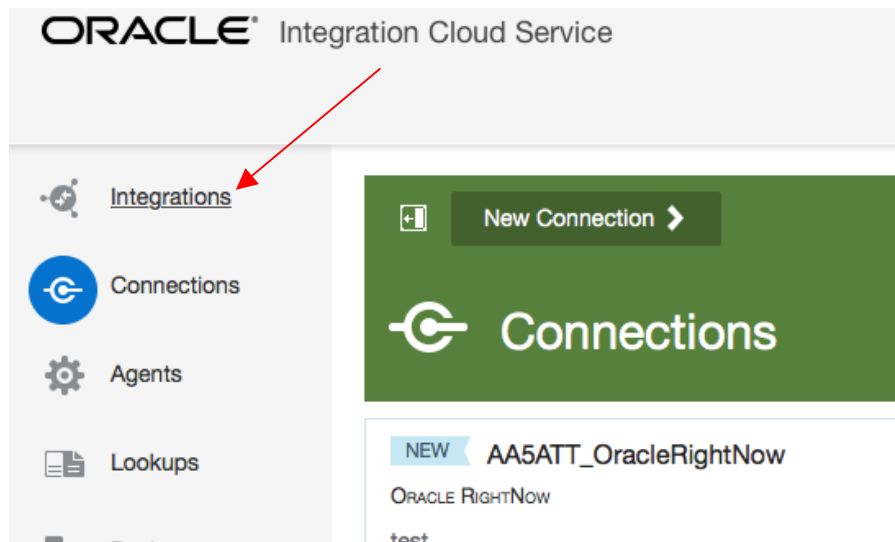
Sort by: Last Update

CONNECTION NAME contains  
AA1

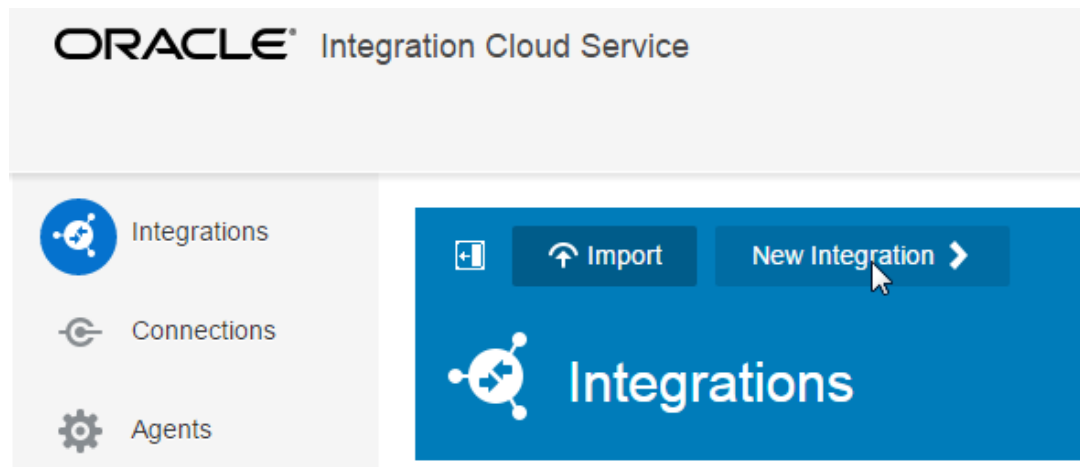
AA1REST REST NiallC.	 Trigger and Invoke	 CONFIGURED
AA1ServiceCloud ORACLE RightNow NiallC	 Trigger and Invoke	 CONFIGURED

## 4 Creating Integrations

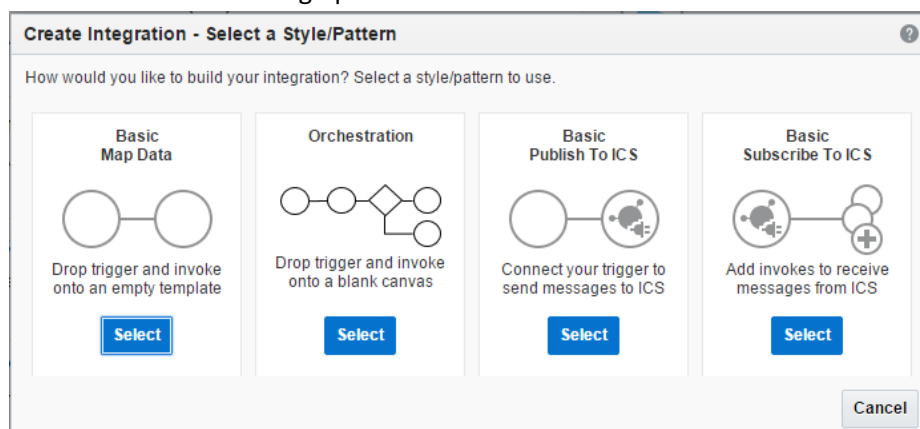
As already mentioned, we will do a simple data mapping integration. Begin by clicking on the **Integrations** icon.



- Click **New Integration**



You will see the following options to choose from.



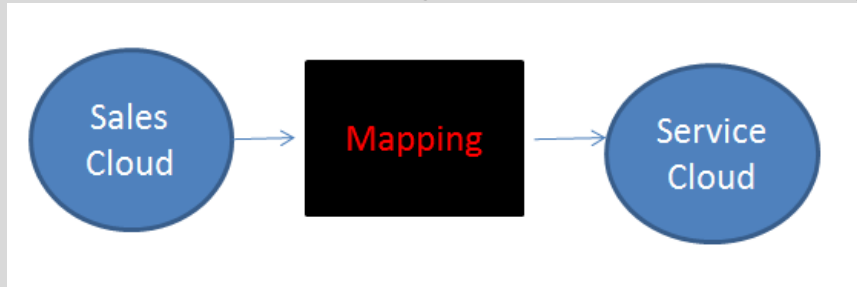
Let's look at each of the above:

FYI (**no steps to follow here**)

### Basic Map My Data Pattern

This is the pattern we will choose for this lab.

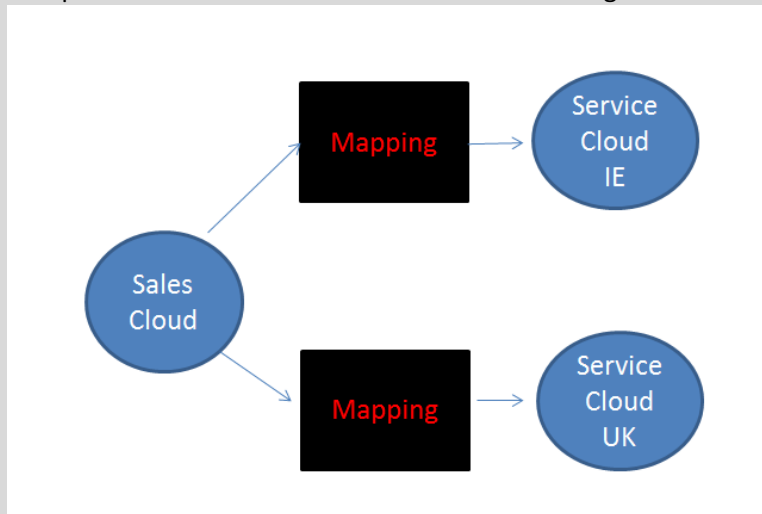
Use this for doing basic synchronisation between application business objects, e.g. syncing Sales Accounts from Sales Cloud with Organizations from Service Cloud. This pattern has the format:



We read the diagram above from left to right:

- ICS is called(Triggered) with a Sales Cloud Sales Account Business Object.
- This is transformed into a Service Cloud Organization Business Object via the Mapping.
- Service Cloud is called(Invoked) to create the new Organization.

This pattern can also include content based routing as shown in the next page



### Orchestration Pattern

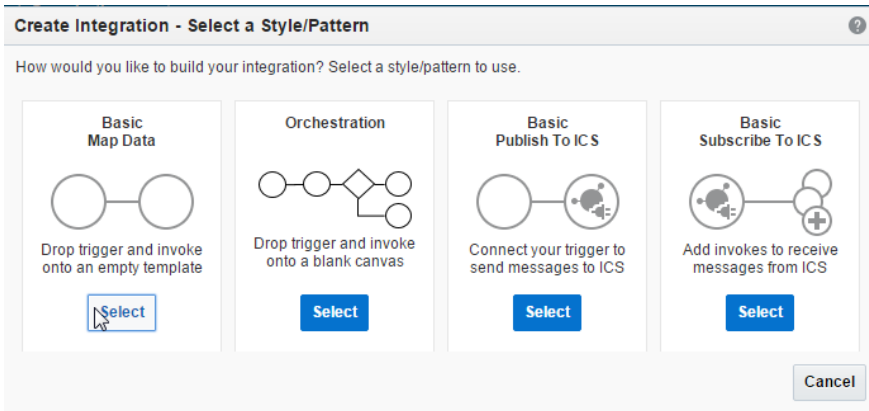
Allows us to do more complex processing, such as checking whether the organization exists, before we attempt to create it.

### Basic Publish/Subscribe to ICS Patterns

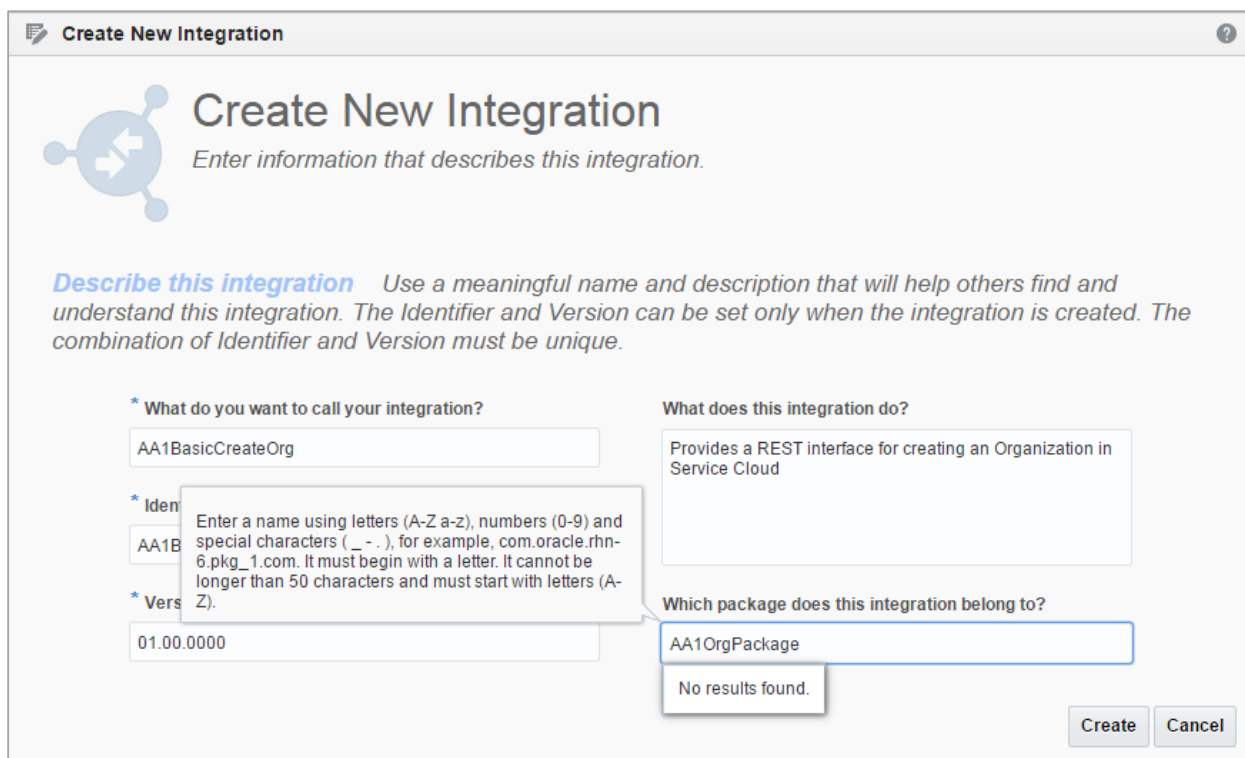
Allows us to implement Pub/Sub style integrations.

## 4.1 Create the Basic Map Data Integration

- Select the **“Basic Map Data”** option from the list of options

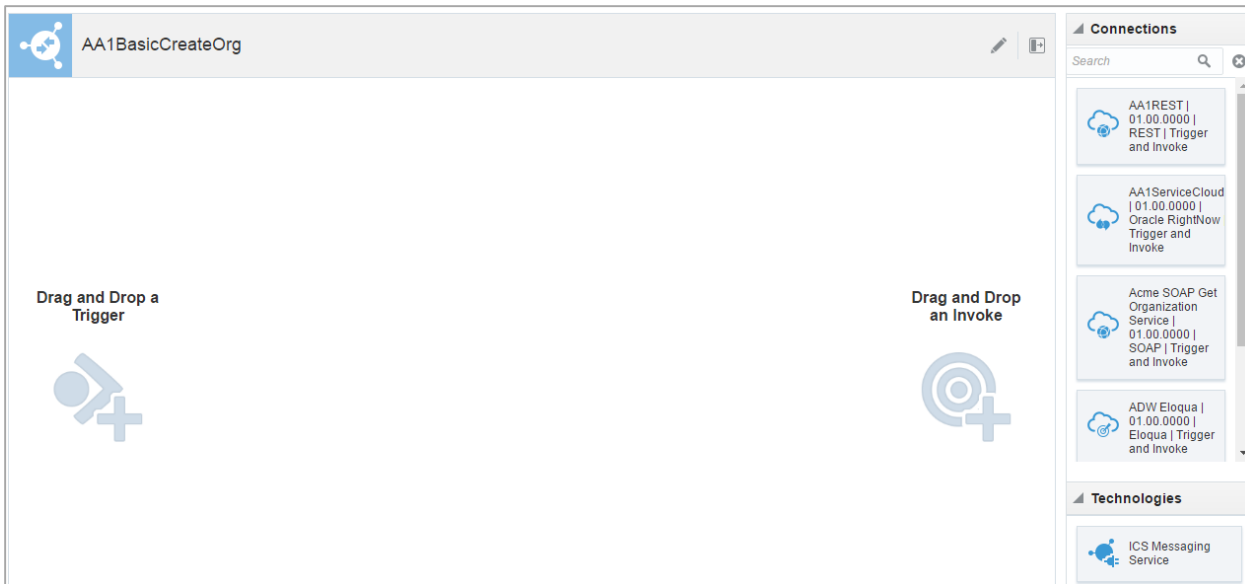


- Enter a name for your integration using your prefix and “BasicCreateOrg” or anything else you wish.
  - Example: **AA1BasicCreateOrg**
- Type in a package such as **<Your\_Prefix>OrgPackage**



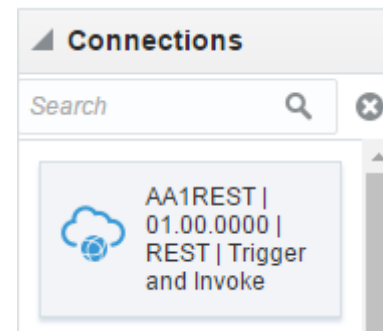
- Click **Create**

You will now see the integration canvas where you can drag and drop your connections.



On the far-right side, we see the connections available e.g. your REST and Service Cloud connections. We will drop the REST connection as the **Trigger** and the Service Cloud connection as the **Invoke**.

- Select your **REST** connection and drag and drop it on the Trigger icon. A popup wizard will appear




- Provide the following information on the wizard's Basic Info page:

Field	Enter
What do you want to call your endpoint	CreateOrg
What does this endpoint do?	Receive REST request to create an organization in RightNow.
What is the endpoint's relative resource URI	/createOrg
What action does the endpoint perform	GET
Add and review parameters for endpoint.	Check this box
Configure this endpoint to receive the response	Check this box

Your screen should look like the screenshot in the next page.

- If your screen looks like the below, click **Next**

### Configure Oracle REST Endpoint



**Welcome to the Oracle REST Endpoint Configuration Wizard**  
This wizard helps you configure an endpoint using the Oracle REST Cloud adapter.

Basic Info

Request Parameters

Request

Request Headers

CORS Configuration

Response

Response Headers

Summary

Describe the endpoint's purpose and detail

**\* What is the endpoint's relative resource URI?**  
/createOrg

**\* What action does the endpoint perform?**  
GET

Based on your selections, you can add parameters or configure a request and/or response for this endpoint.

Select any options that you want to configure:

☒ Add and review parameters for this endpoint

☐ Configure a request payload for this endpoint

☒ Configure this endpoint to receive the response


Configure Request Headers? ☐ Standard ☐ Custom

Configure Response Headers? ☐ Standard ☐ Custom

☐ Configure CORS (Cross Origin Resource Sharing)

- Click the **+** and provide a parameter **Name** "orgName" **Data Type** "string" as per the screenshot below.
- Click **Next**.

### Configure Oracle REST Endpoint



**Configure the Request Query Parameters**  
Configure the request query parameters for this endpoint.

Basic Info

Request Parameters

Request

Request Headers

CORS Configuration

Response

Response Headers

Summary

**\* Resource URI** /createOrg

Specify Query Parameters

Name	Data Type
orgName	string

Template Parameters

Displays the template parameters in the relative resource URI. Template parameters are determined by details you specified on the Basic Info page and cannot be edited.



You should now be in the Response panel:

- Select the **JSON Sample** radio button.
- Click on the [<<<< inline >>>>](#) link as shown below

**Configure Oracle REST Endpoint**

Help ▾ < Back Next > Cancel

**Configure the Response Payload**  
Specify the response payload details for this integration.

**Basic Info**  
**Request Parameters**  
Request  
Request Headers  
CORS Configuration  
**Response**  
Response Headers  
Summary

Select the response payload file

☐ XML Schema ☒ JSON Sample

? Sample Location [Choose File](#) No file chosen --OR-- enter sample JSON [<<<< inline >>>>](#)

Select the type of payload with which you want the endpoint to reply

☒ XML  
☐ XML(text)  
☐ JSON  
☐ Other Media Type

? Media Type For example, application/oracle.cloud+json

- Copy and paste in the **JSON** code below

```
{
  "OrgID": "orgID",
  "OrgName": "orgName"
}
```

**Configure Oracle REST Endpoint**

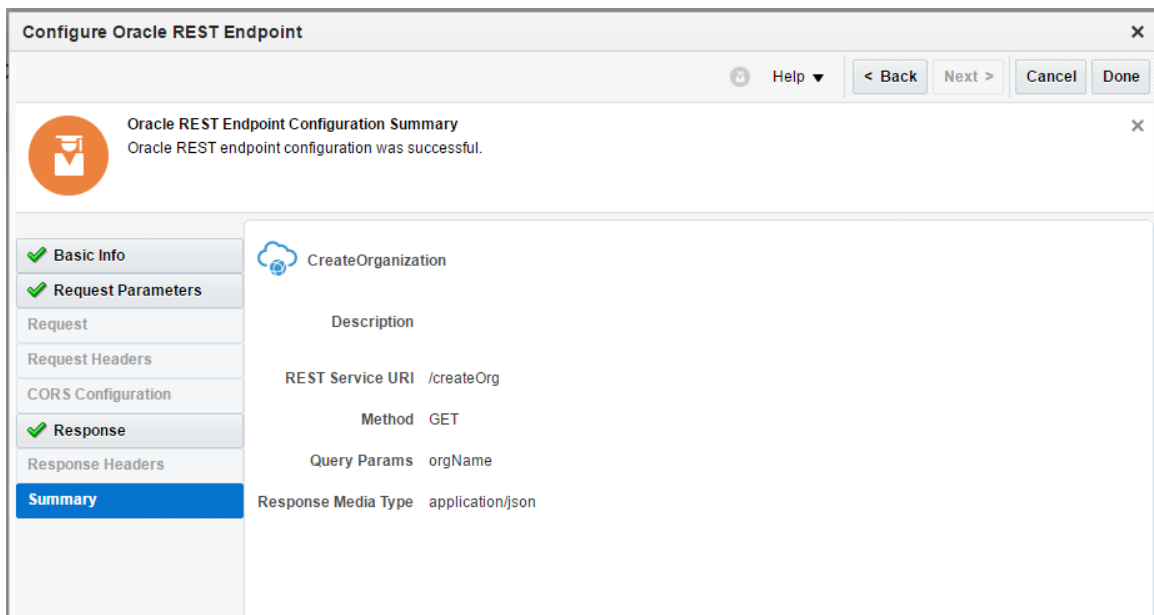
Help ▾ < Back Next > Cancel

**Response Sample Json Payload**  
Enter the sample JSON that describes the HTTP message payload.

JSON value entered here will be used to define the payload type for this service.

```
{
  "OrgID": "orgID",
  "Created": true
}
```

- Click **Ok**, then click **Next**.
- On the Summary screen, click **Done**.



Your **Integration** now should look like this:



Next, we will leverage the Service Cloud (Rightnow) connector. **Drag and drop the Service Cloud connection** from the right panel and onto the **Invoke** area to the right.

- Provide the following information on the Basic Info page:

Field	Enter
What do you want to call your endpoint	CreateOrgServiceCloud
What does this endpoint do?	Create organization in Service Cloud.

Your screen should look like the below. If so, click **Next**

Configure Oracle RightNow Endpoint

Help
< Back
Next >
Cancel
Done

**Welcome to the Oracle RightNow Endpoint Configuration Wizard**

This wizard helps you configure an endpoint using the Oracle RightNow Cloud connection. You will be asked to specify configuration parameters for performing a business task in Oracle RightNow Cloud.

Basic Info
Operations
Summary

\* What do you want to call your endpoint?

CreateOrgServiceCloud

What does this endpoint do?

Create organization in Service Cloud.

Describe the endpoint's purpose and detail

- Provide the following information on the Operations page, and click **Next**.

Field	Enter
Select an Operation Mode	<b>Single Operation</b>
Select an Operation Type	<b>CRUD</b> , then <b>Create</b> .
Your Selected Business Objects	Select <b>Organization</b> from Select Business Objects (RightNow 1_3 API) and use the right-arrow button to move it to the right listbox.

Configure Oracle RightNow Endpoint

Help
< Back
Next >

**Configure the Operations to Perform in the Target Oracle RightNow Application**

Select the target operation and the business objects on which to perform the operation in the Oracle RightNow application.

Basic Info
Operations
Summary

? Select an Operation Mode
Single Operation
Batch Operation

? Select an Operation Type
CRUD
Create

Filter by object name
All

Select Business Objects (RightNow 1\_3 API)
Your Selected Business Objects

Your screen should look like the below:

? Select an Operation Mode ☒ Single Operation ☐ Batch Operation

? Select an Operation Type CRUD ▼ Create ▼

Filter by object name All ▼

Select Business Objects (RightNow 1\_3 API)

- Oracle\_Cti.RightNow1\_3 API
- Oracle\_Cti.Oracle\_Cti2
- PurchasedProduct
- SalesProduct
- SalesTerritory
- ServiceCategory
- ServiceDisposition
- ServiceMailbox
- ServiceProduct

Your Selected Business Objects

- Organization

- Click **Next** and then review your selections on the Summary page.
- Click **Done**.

Configure Oracle RightNow Endpoint

Help ▼ < Back Next > Cancel Done

Oracle RightNow Endpoint Configuration Summary  
Oracle RightNow endpoint configuration was successful.

Basic Info Operations Summary

CreateOrgServiceCloud

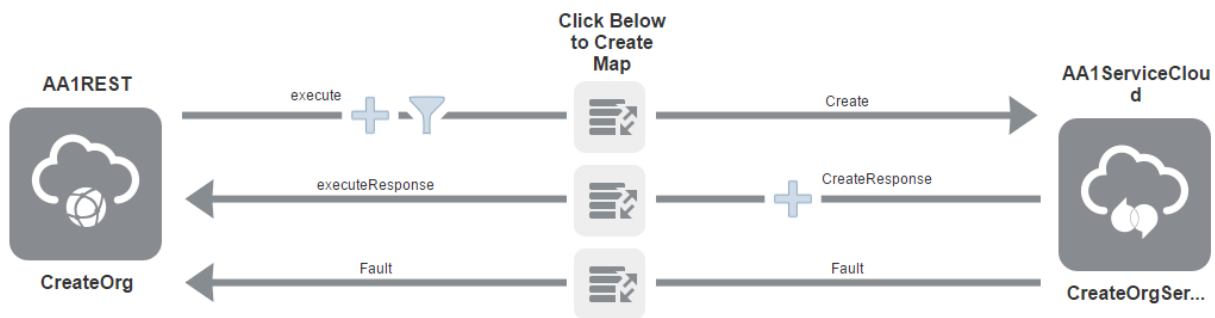
Description  
Create organization in Service Cloud.

Operation Category  
CRUD

Operation  
Create

Business Objects  
Organization

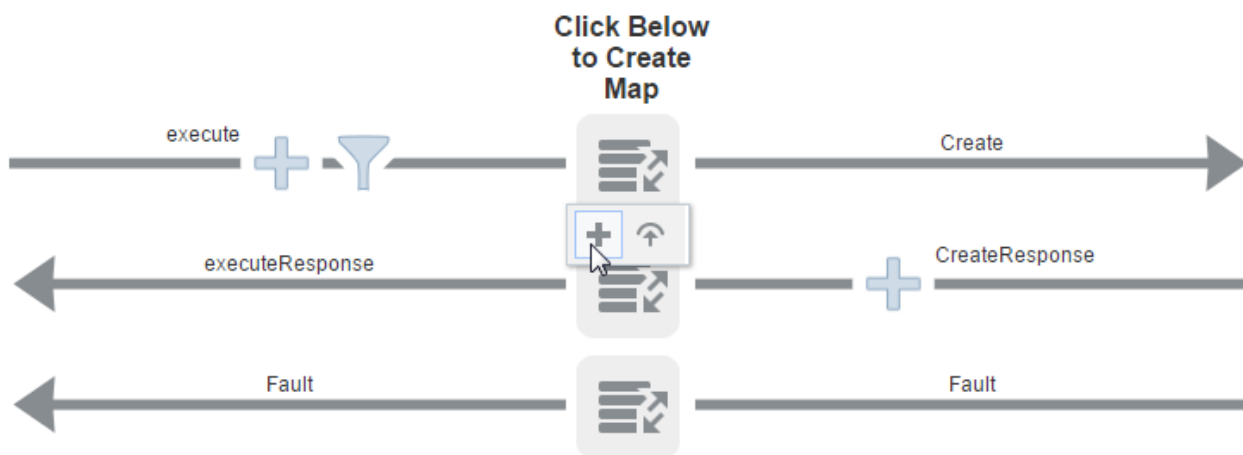
Your **Integration** should look as follows:



#### 4.1.1 Map Request Data for Create Organization



Click on the map icon so that a small plus button appears. Choose that to go into the data mapper.



Here we map the **orgName** from the direction of the REST request to the Organization name in Service Cloud.

- Drag and drop the **orgName** to **Name**

The screenshot shows the 'Mappings' tool interface. On the left, the 'Source' pane lists the available fields: `*execute`, `QueryParameters`, and `orgName`. The `orgName` field is highlighted with a green checkmark. On the right, the 'Target' pane lists the fields of the `*Create` operation, including `ID`, `LookupName`, `CreatedTime`, `UpdatedTime`, `Addresses`, `Banner`, `CRMModules`, `CustomFields`, `ExternalReference`, `FileAttachments`, `Industry`, `NamedReadOnlyID extends Industry`, `NamedIDDelta extends Industry`, `Login`, `Name`, and `NameFurigana`. The `Name` field is highlighted with a green checkmark. A green arrow points from the `orgName` field in the Source pane to the `Name` field in the Target pane, indicating the mapping. The 'Mapping' column on the right shows the mapping `orgName` for the `Name` field.

- Click **Save** and then click **Exit Mapper**.



Note: the color of the mapping icon has changed to green, indicating it has been implemented.

### 4.1.2 Map Response Data for Create Organization

Here we will map things in the opposite direction, from the direction of the Service Cloud application towards the REST connection. **Click again on the correct map icon** and select the plus button.



- Expand **CreateResponse->Organization->ID**
  - Then map **id** to **OrgID**

Source	Find...	Mappings	Target	Find...	Mapping
▲ <> *CreateResponse			● ▲ <> *executeResponse		
▲ <> Organization			● ▲ <> *response-wrapper		
▲ <> ID			● <> *OrgID		@id
id			● <> *OrgName		

Now we will map the OrgName and for this we will use the orgName value from the REST request. It is still available to us in the Response Mapping.

- Collapse the **CreateResponse** data structure.
- Expand **\$SourceApplicationObject->execute->QueryParameters** so that you see **orgName**

Exit Mapper Editing Map: CreateResponse to executeResponse

View	Filter	Detach	Map	Source	Find...	Target	Find...	Mapping
▲ <> *CreateResponse				● ▲ <> *executeResponse				
▶ <> Organization				● ▲ <> *response-wrapper				
▲ <> \$SourceApplicationObject				● <> *OrgID		@id		
▲ <> *execute				● <> *OrgName				
▲ <> QueryParameters								
<> orgName								

Drag and drop source to target to create a mapping.

Click a checkmark on source or target to see mappings.

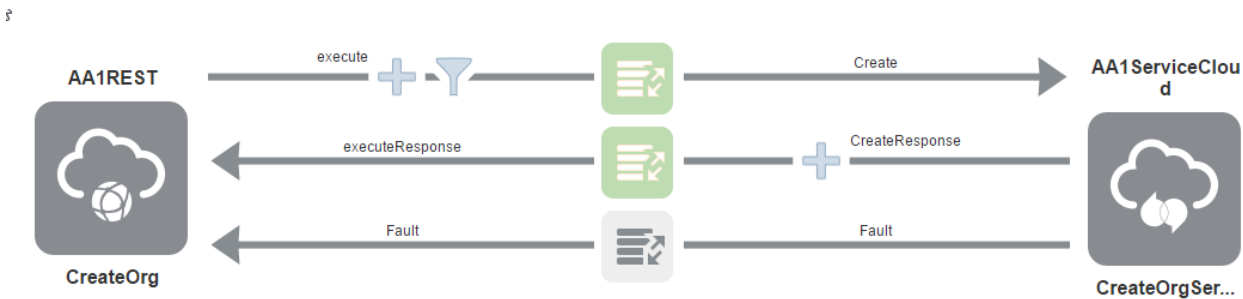
- Map **orgName** to **OrgName**

View	Filter	Detach	Map
Source	Find...		
<ul style="list-style-type: none"> <li>&lt;&gt; *CreateResponse</li> <li>Organization</li> <li>&lt;&gt; \$SourceApplicationObject</li> <li>&lt;&gt; *execute</li> <li>QueryParameters</li> <li>orgName</li> </ul>			

View	Filter	Detach	
Target	Find...		Mapping
<ul style="list-style-type: none"> <li>&lt;&gt; *executeResponse</li> <li>*response-wrapper</li> <li>&lt;&gt; *OrgID</li> <li>&lt;&gt; *OrgName</li> </ul>			<ul style="list-style-type: none"> <li>@id</li> <li>orgName</li> </ul>

- Click **Save** and then click **Exit Mapper**.





### 4.1.3 Add Tracking Information

Setting Tracking field(s) allows us to track integration instances as they pass through ICS. Usually this will be a business-related key from the payload. We will use the orgName as our tracking field.

- Click **Tracking** from the top menu to bring up the relevant screen



- Now drag **orgName** to **Tracking Field**

**Business Identifiers For Tracking**

View ▾ Filter Filter Detach

Source Find...

- \*execute
  - QueryParameters
    - orgName

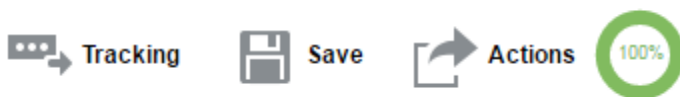
Business identifiers enable runtime tracking on messages. Specify up to three tracking fields. / across integration flows and is always available.

Additional business identifier fields are optional. At runtime, they are available for tracking only

Primary	Tracking Field	Tracking Name
✓	orgName	org Name
	Drag a trigger field here	What to call it?
	Drag a trigger field here	What to call it?

- Click **Done**.
- Click **Save**.

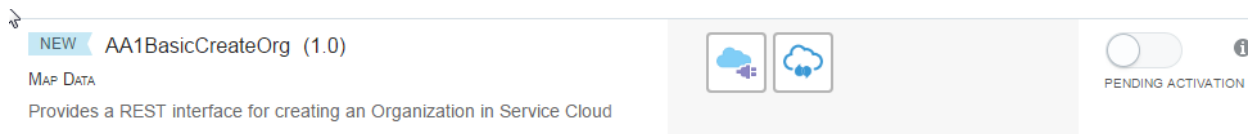
Note the Integration shows as 100% complete.



- Click **Save** and then **Exit Integration**.

## 4.2 Activate the Integration

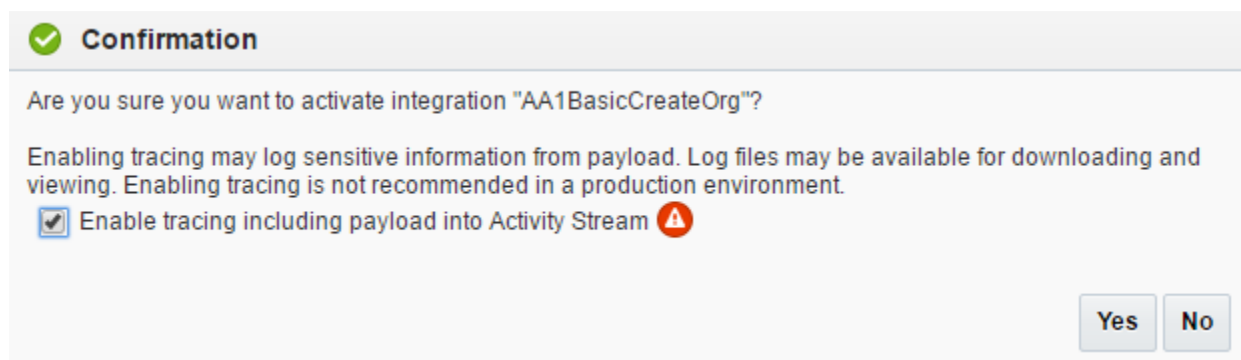
You should now be at the integrations list page where you should see the integration you just created. Note: status is “Pending Activation”.



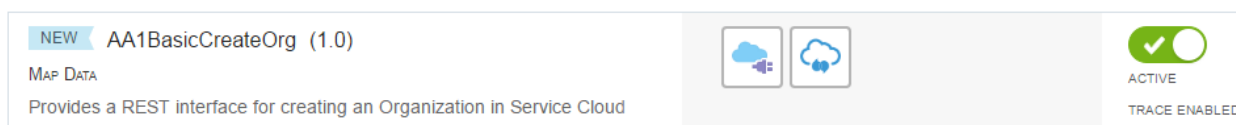
- Click the relevant button to **Activate**



- You will see a confirmation dialog. Before selecting **yes**, make sure to **enable tracing**. This is useful for test purposes.

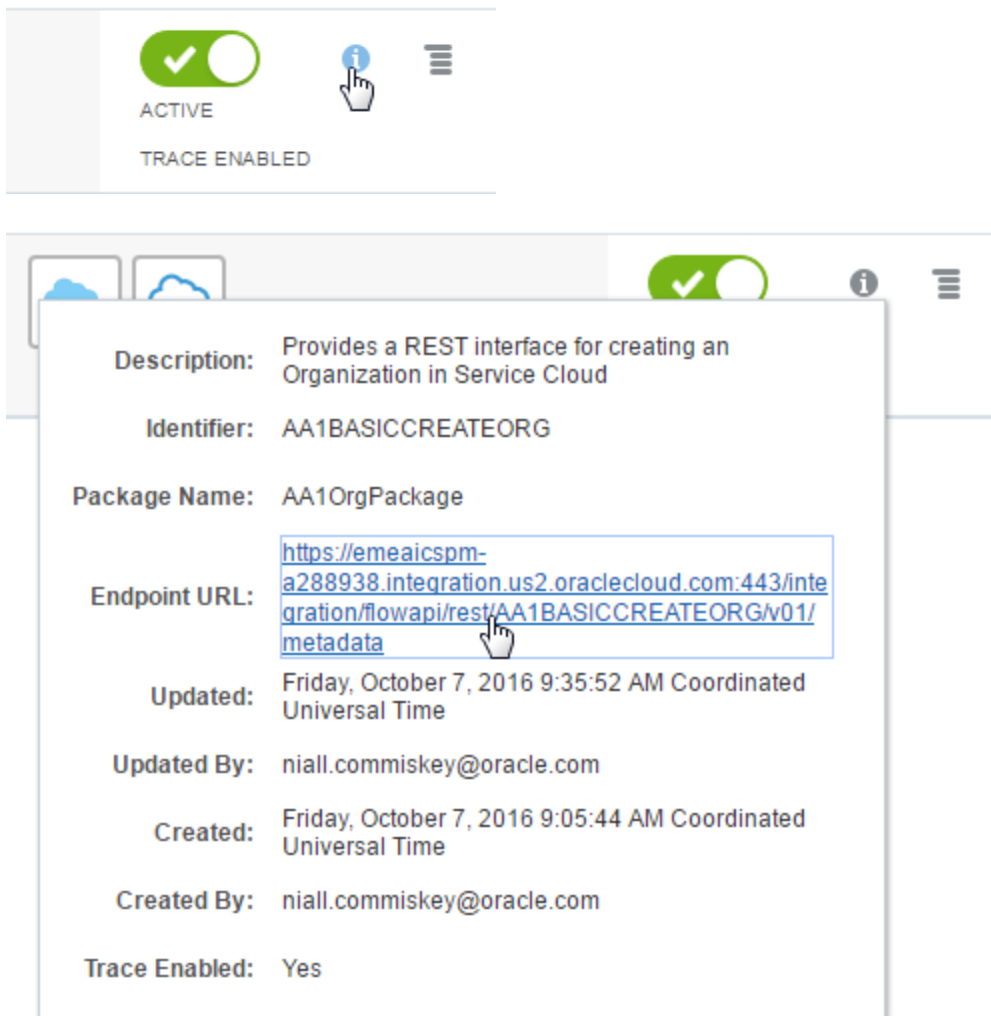


You will see your integration now as “Active”



### 4.3 Test the Integration

- Click on the **info** icon – this will bring up a popup screen. Copy the **Endpoint URL**



- Open another window in your browser and visit that URL
  - You will be asked to enter your **ICS** username and password - **UserXX/Paudge2009**
- You should see something like the below

## ~~Resource~~ /createOrg

### Method GET

#### Query Parameters

- orgName

#### Response

#### Response Media Type

- application/json

#### Response sample

```
{"OrgID":"orgID", "OrgName":"orgName" }
```

Amend the URL as follows:

- Replace **metadata** in URL with **createOrg?orgName=MyNewOrgYourPrefix**
- e.g <https://emeaicspm-a288938.integration.us2.oraclecloud.com/integration/flowapi/rest/AA1BASICCREATEORG/v01/createOrg?orgName=MyNewOrgAA1>
- Now visit the new URL
- The response is as follows

```
{  
  "OrgID" : "1797",  
  "OrgName" : "MyNewOrgAA1"  
}
```

What you have done is to call the REST connection with the new information and in turn call ICS to create the new organization in Oracle Service Cloud (RightNow).

LAB COMPLETE