

# Oracle® Cloud

## Integrate Oracle MICROS Reporting and Analytics with ATP



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Primary Author: Oracle Corporation

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# Preface

This document describes how to install, configure, and run this recipe in Oracle Integration Generation 2.

**Topics:**

- [Documentation Accessibility](#)
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- [Related Resources](#)
- [Conventions](#)

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## Related Resources

For more information, see these Oracle resources:

- Oracle Integration documentation in the Oracle Cloud Library on the Oracle Help Center.
- Oracle Cloud at <http://cloud.oracle.com>.

## Conventions

The following text conventions are used in this document.

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

# 1

## About This Recipe

Use this recipe to export restaurant sales and operational data from Oracle MICROS Reporting and Analytics to Oracle Autonomous Database for Transaction Processing (ATP).



### Note:

This recipe is available as **Oracle MICROS R&A — Oracle ATP | Export Sales Data** in the Integration Store. Oracle provides this recipe as a sample only. The recipe is meant only for guidance, and is not warranted to be error-free. No support is provided for this recipe.

## Overview

This recipe integrates Oracle MICROS Reporting and Analytics with Oracle ATP.

This is a scheduled integration recipe that extracts sales and dimensions data from Oracle MICROS Reporting and Analytics using its Business Intelligence APIs and imports the data into Oracle Autonomous Database for Transaction Processing (ATP).

For the purpose of the recipe integration, sample tables are created in Oracle ATP and the integration is configured to run SQL statements based on those tables. See Support note [Supplemental Code for Oracle MICROS – ATP – Accounting Hub Oracle Integration Cloud Recipes](#) for the SQL scripts that you must run to create the tables. Note that the recipe can be extended to extract any available data points from Reporting and Analytics, with the integration adapter configuration and mapping updated accordingly.

To use the recipe, you must install the recipe package and configure the connections and other resources within the package.

The recipe package contains three integration flows:

- **Oracle MICROS RnA to ATP Export Process:** This integration calls Oracle MICROS RnA Dimensions to ATP and Oracle MICROS RnA Sales to ATP to be executed consecutively. It acts as a scheduler integration.
- **Oracle MICROS RnA Dimensions to ATP:** This integration fetches all the location information from Reporting and Analytics and inserts it into a dimensions table in ATP. Then, for each location, it inserts all the location dimension details (Tender Media Dimensions, Service Charge Dimensions, Order Type Dimensions, Discount Dimensions, Revenue Center Dimensions, Menu Item Dimensions, and Tax Dimensions) into the corresponding tables in ATP. For the list of tables, see [Configure ATP](#).
- **Oracle MICROS RnA Sales to ATP:** This integration fetches all the location dimensions from Reporting and Analytics. Then, for each location, it gets the latest business date and for that particular date, inserts sales and operational data (Menu Item Daily Totals, Service Charge Daily Totals, Tax Daily Totals, Tender Media Daily Totals, and Discount Daily Totals) into the corresponding tables in ATP. For the list of tables, see [Configure ATP](#).

### Assumptions

- You have created all the tables for the dimensions, and sales and operational data, as described in Support note [Supplemental Code for Oracle MICROS – ATP – Accounting Hub Oracle Integration Cloud Recipes](#).
- The table and view names are used as defined in [Supplemental Code for Oracle MICROS – ATP – Accounting Hub Oracle Integration Cloud Recipes](#). If any change is made to the table or view names, you must modify the connector configuration in the integration accordingly.
- Recipe integration includes only sample error handling and notifications. Robust error handling based on customer needs must be implemented by the recipe consumer.
- The recipe include a set of chosen dimensions, and sales and operational data points to enable the Oracle Financials integration. Recipe consumers can choose to extend the recipe by using additional API invokes, which means that corresponding ATP tables must be added/modified accordingly.

## System and Access Requirements

- Oracle Integration, Version 22.1.3.0.0 or higher
  - An account in Oracle Integration with the Service Invoker role to configure the recipe
- Oracle ATP, Version 19c
- Oracle MICROS Reporting and Analytics, Version 20.1 or higher
  - Oracle MICROS Symphony Cloud Service, Business Intelligence Interface (BI API)

# 2

## Before You Install the Recipe

Perform the following configuration tasks to successfully install and run the recipe.

### Configure Oracle MICROS Reporting and Analytics

1. Configure a Business Intelligence API account in Reporting and Analytics to be used in the Oracle Integration connections, as described in [Business Intelligence API](#) in the *Reporting and Analytics User Guide*.
2. Configure the Reporting and Analytics OAuth server to send a callback response to the Oracle Integration Cloud instance where this recipe is being installed.
  - This requires the Oracle consultant to open an internal ticket and request configuring multiple redirect URLs.
  - The following information needs to be provided:
    - a. Customer Environment Name
    - b. Enterprise Name and Enterprise Short Name
    - c. Client\_ID of the BI API Account
    - d. Custom redirect URL to be configured. For example: `https://oic-dev-abcdefghijklm1234.integration.us-phoenix-1.ocp.oraclecloud.com/icsapis/agent/oauth/callback`
3. Collect the following information from Reporting and Analytics to configure the Oracle Integration connections. For details, see [Send Requests](#) in the *Business Intelligence API Guide*.
  - Account name
  - Password
  - Enterprise short name (`orgIdentifier`)
  - `client_id`
  - `rest_server` URLs for the Authentication APIs and the Business Intelligence data APIs

Besides the above, generate a code verifier and code challenge.

- The `code_challenge` is a Base64-encoded SHA-256 hash of the `code_verifier`. The `code_verifier` is a cryptographically random string.
- Both `code_verifier` and the `code_challenge` are generated by the client (in this case by the OIC recipe).
- The `code_challenge` and `code_verifier` are used to perform a challenge-response validation in OAuth PKCE Flow.
- `code_challenge_method` is fixed S256

For more information, see [Authenticate](#) in the *Business Intelligence API Guide*.



## Configure ATP



To access ATP from Oracle Integration, perform the following configuration tasks on your ATP database:

1. Obtain the Cloud Wallet and the Credentials of the ATP instance to be used in the Oracle Integration connections
2. Create the following tables, which are required for collecting dimension and sales data. The DDL statements to create these tables are provided in Support note [Supplemental Code for Oracle MICROS – ATP – Accounting Hub Oracle Integration Cloud Recipes](#):
  - FNB\_DIM\_LOCATION
  - FNB\_DIM\_DISCOUNT
  - FNB\_DIM\_MENUITEM
  - FNB\_DIM\_ORDERTYPE
  - FNB\_DIM\_REVENUECENTER
  - FNB\_DIM\_SERVICECHARGE
  - FNB\_DIM\_TAX
  - FNB\_DIM\_TENDERMEDIA
  - FNB\_MENUITEMDAILYTOTALS
  - FNB\_SERVICECHARGEDAILYTOTALS
  - FNB\_TAXDAILYTOTALS
  - FNB\_TENDERMEDIADAILYTOTALS
  - FNB\_DISCOUNTDAILYTOTALS

# 3

## Install and Configure the Recipe

On your Oracle Integration instance, install the recipe package to deploy and configure the integration and associated resources.

1. On the Oracle Integration Home page, scroll to the **Accelerators & Recipes** section.
2. Click **Search All**.  
The list of available recipes is displayed.
3. Find and select the recipe package that you want to install, then click **Install** .  
A message confirms that the recipe was successfully installed, and the recipe card shows **In use**.
4. After the package is installed, click **Configure**  on the recipe card.  
The Configuration Editor opens, displaying all the resources of the recipe package. Configure the following resources before you activate and run the recipe.

### Configure the Oracle REST OIC API Connection

1. In the Configuration Editor, click the connection name.
2. In the Connection Properties section, enter the following details:

Field	Information to Enter
<b>Connection Type</b>	Leave <b>REST API Base URL</b> selected.
<b>Connection URL</b>	Enter the host name of the Oracle Integration instance where you installed the recipe.

3. In the Security section, enter the following details:

Field	Information to Enter
<b>Security Policy</b>	Select <b>Basic Authentication</b> .
<b>User Name</b>	Enter the user name of the Oracle Integration user account with the Service Invoker role. See <a href="#">System and Access Requirements</a> .
<b>Password</b>	Enter the password of the Oracle Integration user account with the Service Invoker role.

4. Click **Save**. If prompted, click **Save** again.
5. Click **Test** to ensure that your connection is successfully configured. In the resulting dialog, click **Test** again.

A message confirms if your test is successful.

6. To return to the Configuration Editor, click **Back** . Click **Save** again if prompted.

## Configure the Oracle MICROS Reporting and Analytics BI API Connection


- In the Configuration Editor, click the connection name.  
To learn more about the configuration, see [Authenticate](#) in the *Business Intelligence API Guide*.
- In the Connection Properties section, enter the following details:

Field	Information to Enter
<b>Connection Type</b>	Leave <b>REST API Base URL</b> selected.
<b>Connection URL</b>	Enter the domain used to log into the Reporting and Analytics instance. For more information, see <a href="#">Send Requests</a> in the <i>Business Intelligence API Guide</i> .

- In the Security section, enter the following details:

Field	Information to Enter
<b>Security Policy</b>	Select <b>OAuth Custom Three Legged Flow</b> .
<b>Authorization Request</b>	Enter the authorization request format. <b>Example:</b> <code>https://BI_API_IDM_Server_HOST/oidc-provider/v1/oauth2/authorize?response_type=code&amp;client_id=client_id&amp;scope=openid&amp;redirect_uri=https://OIC_HOST/icsapis/agent/oauth/callback&amp;code_challenge=code_challenge&amp;code_challenge_method=S256</code>
<b>Access Token Request</b>	Enter the access token request format. <b>Example:</b> <code>-X POST -H 'Content-Type: application/x-www-form-urlencoded' -d 'grant_type=authorization_code&amp;code=\${auth_code}&amp;redirect_uri=https://OIC_HOST/icsapis/agent/oauth/callback&amp;code_verifier=code_verifier&amp;client_id=client_id' https://BI_API_IDM_Server_HOST/oidc-provider/v1/oauth2/token</code>
<b>Refresh Token Request</b>	Enter the refresh token request format. <b>Example:</b> <code>-X POST -H 'Content-Type: application/x-www-form-urlencoded' -d 'grant_type=refresh_token&amp;refresh_token=\${refresh_token}&amp;redirect_uri=https://OIC_HOST/icsapis/agent/oauth/callback&amp;code_verifier=code_verifier&amp;client_id=client_id' https://BI_API_IDM_Server_HOST/oidc-provider/v1/oauth2/token</code>
<b>\$auth_code</b>	code

Field	Information to Enter
\$access_token	access_token
\$refresh_token	refresh_token
\$expiry	expires_in
\$token_type	token_type
access_token_usage	-H Authorization: \${token_type} \${access_token}

- Click **Save**. If prompted, click **Save** again.
- Click **Test** to ensure that your connection is successfully configured. In the resulting dialog, click **Test** again.  
A message confirms if your test is successful.
- To return to the Configuration Editor, click **Back** . Click **Save** again if prompted.


## Configure the Oracle ATP Cloud Connection MICROS

- In the Configuration Editor, click the connection name.
- In the Connection Properties section, enter the Service Name.
- In the Security section, enter the following details:

Field	Information to Enter
Security Policy	Select <b>JDBC Over SSL</b> .
Wallet	Upload the wallet zip file.
Wallet Password	Enter the password for the wallet.
Database Service Username	Enter the service user name of the Database created for Oracle Integration on ATP.
Database Service Password	Enter the password of the Database created for Oracle Integration on ATP.

 **Note:**

These configurations indicate a wallet-based connectivity to ATP. This may vary depending on the type of ATP and its authentication mechanism used in your instance. Configure the connection accordingly.


- Click **Save**. If prompted, click **Save** again.
- Click **Test** to ensure that your connection is successfully configured. In the resulting dialog, click **Test** again.  
A message confirms if your test is successful.
- To return to the Configuration Editor, click **Back** . Click **Save** again if prompted.

## Configure the Lookup Table

Edit the **ORACLE-BRT-Micros\_ErrorNotification\_Config** lookup table and enter the necessary values.

1. In the Configuration Editor, click the lookup table name.
2. The **ORACLE-BRT-Micros\_ErrorNotification\_Config** lookup table contains the information needed to trigger the error handlers. Enter the required information for the following parameters:

Parameter	Information to Enter
<b>OIC</b>	The Oracle Integration Admin email address that must be notified on failures.
<b>ERP</b>	The Oracle Integration Admin email address that must be notified on failures.
<b>Micros</b>	The Oracle Integration Admin email address that must be notified on failures.

3. Click **Save**. If prompted, click **Save** again.
4. To return to the Configuration Editor, click **Back** . Click **Save** again if prompted.

# 4

## Activate and Run the Recipe

After you've configured the connections and other resources, you can activate and run the recipe.

1. In the Configuration Editor, click **Activate** in the title bar. In the Activate Package dialog, click **Activate** again.

A message confirms that the integration has been activated. Refresh the page to view the updated status of the integration.

2. Run the recipe.

- a. In the Configuration Editor, select the **Oracle MICROS RnA to ATP Export Process** integration flow.

- b. Click **Run** , then click **Submit Now**.


3. Log in to your ATP database:

- a. Navigate to the ATP schema.

- b. Under the corresponding tables, notice that the dimensions and sales data for the latest business date is inserted from Reporting and Analytics to ATP.

4. Monitor the running of the integration flow in Oracle Integration.

- a. In the Configuration Editor, select the integration flow.

- b. Click **Run** , then click **Track Instances**.

On the Track Instances page, observe the integration flow of the recipe being triggered and running successfully.

### Related Documentation

- [Using the REST Adapter with Oracle Integration Generation 2](#)
- [Using the Oracle Autonomous Transaction Processing Adapter with Oracle Integration Generation 2](#)
- [Business Intelligence API Guide](#)
- [Reporting and Analytics User Guide](#)