

# Connecting Oracle Analytics Cloud to a Remote Data Source

To enable secure access to data in an on-premises environment from Oracle Analytics Cloud, you deploy and configure Remote Data Connector.

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## Audience

The intended audience for these instructions is administrators who want to set up Remote Data Connector to enable secure access to on-premises data sources for analysis.

## About Remote Data Connector

Remote Data Connector enables you to deploy Oracle Analytics Cloud with large on-premises data sets without migrating the data to the cloud. Users can analyze the data in reporting dashboards and analyses.

You deploy Remote Data Connector in the on-premises web server (Apache Tomcat or Oracle WebLogic Server). Remote Data Connector sends SQL requests from Oracle Analytics Cloud to the on-premises database, and sends the query results back to Oracle Analytics Cloud.

## Supported Data Sources

Remote Data Connector supports these on-premises database types:

- DB2
- Essbase
- Oracle
- SQL Server
- Teradata

## Prerequisites

Make sure that your on-premises environment meets these requirements.

- Java Development Kit (JDK) version 7 or greater.
- If you're deploying Remote Data Connector with Essbase, you need Essbase on-premises version 11.1.2.4 deployed with the default port 1423.
- To deploy Remote Data Connector, you use one of the following web servers:
  - Oracle WebLogic Server
  - Apache Tomcat
- Download and install the latest version of Oracle Analytics Cloud Remote Data Connector.
- Download and install the latest version of Oracle Analytics Cloud Developer Client Tool.
- Download the Public Key for your Oracle Analytics Cloud instance.

## Download Remote Data Connector

You download the Remote Data Connector installer from Oracle Technology Network (OTN) to an on-premises machine where you want to install Remote Data Connector.

1. Navigate to the Oracle Technology Network download page for Oracle Analytics Cloud.

```
http://www-content.oracle.com/technetwork/middleware/oac/downloads/index.html
```

2. Click **Accept License Agreement**.
3. Click **OAC Remote Data Connector <version>**.

The `obi-remotedataconnector-<version>.zip` file is downloaded to your system.

4. Unzip the `obi-remotedataconnector-<version>.zip` file to your web server machine, and deploy the appropriate WAR files:
  - For Oracle WebLogic Server, deploy the `obi-remotedataconnector-weblogic-<version>.war` file.
  - For Apache Tomcat, deploy the `obi-remotedataconnector-tomcat-<version>.war` file.

- If you're using Remote Data Connector with an Essbase data source, deploy the `essbase-remotedataconnector-v1-0.war` file.

## Download and Install Oracle Analytics Developer Client Tool

Download Oracle Analytics Developer Client Tool if you want to edit data models in the cloud or configure connections to on-premises databases for Remote Data Connector. You install Oracle Analytics Developer Client Tool on a Windows machine on the same network as your database. The download pack also includes Catalog Manager.

1. Download the latest Oracle Analytics Developer Client Tool.
  - a. Navigate to:  
<http://www.oracle.com/technetwork/middleware/oac/downloads/oac-tools-4392272.html>
  - b. Click **Accept license agreement**.
  - c. To start the download, click the latest **Oracle Analytics Developer Client Tool** link.


If you're not sure which version to download, ask your Oracle Analytics administrator.

2. Install Oracle Analytics Developer Client Tool.
  - a. From the downloaded ZIP file, extract the `setup_bi_client-<version number>-win64.exe` file.
  - b. In the local download area, double-click the `setup_bi_client-<version number>-win64.exe` file to start the installer.
  - c. Follow the on-screen instructions.

To start the applications, from the Windows Start menu, click **Oracle Business Intelligence Client**, click `<BI Client Home Name>`, and then click **Administration**, or **Catalog Manager**.

## Download the Public Key for Your Cloud Service

You download your public key from Oracle Analytics Cloud so that you can deploy it in your web server in a later step.

1. Sign-in to Oracle Analytics Cloud.
2. Click **Navigator**  to display the navigator bar, and then click **Console**.
3. Click **Service Administration**, and then click **Manage Connections**.
4. From the menu, click **Get Public Key**.

This downloads the key file `oracle_bics_rdc.pem` to your local system.

## Typical Workflow to Set Up Remote Data Connector With Apache Tomcat

Here're the common tasks to set up Remote Data Connector with Apache Tomcat.

Task	Description	More Information
Download the software	Make sure you have the required software and version, and download the Public Key for your Cloud instance.	<a href="#">Prerequisites</a>
Configure the connection details	Configure the database connection details in Apache Tomcat.	<a href="#">Configure Connection Details in Apache Tomcat</a>
Enable access	Enable access to Remote Data Connector in Apache Tomcat.	<a href="#">Enable Access to Remote Data Connector</a>
Deploy Remote Data Connector	Deploy the Remote Data Connector WAR file.	<a href="#">Deploy the Remote Data Connector WAR File in Apache Tomcat</a>
Deploy Essbase	If you're using an Essbase data source, deploy the Essbase WAR file.	<a href="#">Deploy Essbase on Apache Tomcat</a>
Deploy your Public Key	Deploy the Public Key that you downloaded from your Oracle Analytics Cloud instance.	<a href="#">Deploy the Public Key for Your Cloud Service</a>
Start Apache Tomcat	Start the Apache Tomcat Server using the startup.sh/bat command.	See Apache Tomcat documentation.
Configure the connection pool	Configure the connection pool for the data model.	<a href="#">Update the Connection Pool for the Data Model</a>

## Configure Connection Details in Apache Tomcat

When you set up Apache Tomcat, you specify your database connection details and context details.

1. Configure the server.xml file:
  - a. Open the file `<Tomcat_installation_directory>/conf/server.xml` in a text editor.
  - b. Create a resource named `jdbc/myoracle` under the `GlobalNamingResources` element.

```
<Resource
name="jdbc/myoracle"
global="jdbc/myoracle"
auth="Container"
type="javax.sql.DataSource"
driverClassName="oracle.jdbc.OracleDriver"
url="jdbc:oracle:thin:@<database_hostname>:1521:orcl"
username="Database username"
password="n"
maxActive="15"
maxIdle="1"
maxWait="-1" />
```

- c. Configure `url`, `username`, and `password` to match the connection details for your on-premises database.

## 2. Configure the context.xml file:

- a. Open the file `<Tomcat_installation_directory>/conf/context.xml` in a text editor.
- b. Add a context named `myjdbcdatasource`.

```
<Context>
<ResourceLink name="myjdbcdatasource"
global="jdbc/myoracle"
auth="Container"
type="javax.sql.DataSource" />
<!-- Default set of monitored resources -->
<WatchedResource>WEB-INF/web.xml</WatchedResource>
</Context>
```

## Enable Access to Remote Data Connector

When you set up Apache Tomcat, you enable access to Remote Data Connector by disabling metadata security.

To disable metadata security, set the Java property `oracle.bics.rdc.disable_metadata_security` in the `<Tomcat installation folder>\bin\catalina.sh/bat` file, as shown in the following snippet:

```
if [ -z "$LOGGING_MANAGER" ]; then JAVA_OPTS="$JAVA_OPTS -
Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager" else
JAVA_OPTS="$JAVA_OPTS $LOGGING_MANAGER" fi JAVA_OPTS="$JAVA_OPTS -
Doracle.bics.rdc.disable_metadata_security=1"
```

The final line in the snippet disables metadata security to display the Remote Data Connector application status page and enable connection from Oracle Analytics Developer Client Tool.

## Deploy the Remote Data Connector WAR File in Apache Tomcat

When you deploy Remote Data Connector on Apache Tomcat, you deploy the WAR file `obi-remotedataconnector-tomcat-1.2.war`.

1. In your Remote Data Connector application's root folder, navigate to the `\webapps` folder.
2. Create a sub-folder named `\obiee`.
3. Copy the WAR file `obi-remotedataconnector-tomcat-<version>.war` into the sub-folder `\obiee`.
4. Start the Apache Tomcat server.

## Deploy Essbase on Apache Tomcat

Deploy the Essbase WAR file on your Apache Tomcat web server.

1. In `$CATALINA_HOME\conf\Catalina\localhost`, create a file named `essbase.xml`.
2. In `essbase.xml`, add:  

```
<Context docBase="/scratch/temp/essbase-remotedataconnector-v1-0.war"/>
```
3. In an Internet browser, log into Apache Tomcat Server.  
For example, go to `http://example.com:8899` and enter administrator credentials.
4. Click **Manage App**.
5. In section "Deploy directory or WAR file located on server", select **XML Configuration file URL:** and specify the path of `essbase.xml` file that you created in Step 1.
6. Click **Deploy**.

## Deploy the Public Key for Your Cloud Service

You deploy the public key from Oracle Analytics Cloud that you downloaded in an earlier step.

1. Copy the key file (PEM) that you downloaded earlier into a folder in the `/scratch` area:  

```
/scratch/apache-tomcat-<version>.M17/rdc_keys
```

Don't copy the key file into the `/webapps` folder.
2. If you're using Remote Data Connector with an Essbase data source, set the `rdc_keys` variable using this command:  

```
export PUBLIC_KEY_FOLDER=/scratch/apache-tomcat-9.0.0.M17/rdc_keys
```
3. Re-start the Apache Tomcat server on the same terminal where you installed the key file.

## Update the Connection Pool for the Data Model

You use Oracle Analytics Developer Client Tool to connect to the on-premises database for your data model through Remote Data Connector.

1. In Oracle Analytics Developer Client Tool, from the **File** menu, select **Open**, then **In the Cloud**, and enter connection details for your Oracle Analytics Cloud instance.
2. From the **File** menu, select **Load Java Datasources**.  
If you do not see the **Load Java Datasources** option, upgrade Developer Client Tool.
3. In the Connect to Java Datasource Server dialog, specify the hostname, port and username/password of the Tomcat server (including https if you are using a secure transfer protocol).

Wait for the Java data sources to load.

4. In the Physical pane, navigate to the **Connection Pool** area of the connection that you would like to use remotely.

In the Connection Pool dialog, you'll see two new interfaces in the **Call interface** list.

5. In the **Call interface** field, select **JDBC (JNDI)**.

6. In the **Data source name** field, specify:

```
http(s)://<server-name>:<port>/obiee/javads/<JNDI connection name>
```

For the JNDI, specify:

```
jdbc/myoracle
```

The Java Naming and Directory Interface (JNDI) connection name that you specify must match the ResourceLink name that you specified in the context.xml in the task *Configure Connection Details in Apache Tomcat*.

7. On the Miscellaneous tab, make sure that the **SQL over HTTP** value is set to `true`.
8. Save the data model and publish it to Oracle Analytics Cloud.

## Typical Workflow to Set Up Remote Data Connector With Oracle WebLogic Server

Here are the common tasks to set up Remote Data Connector with Oracle WebLogic Server.

Task	Description	More Information
Download the software	Make sure you have the required software and version.	<a href="#">Prerequisites</a>
Deploy Remote Data Connector	Deploy the Remote Data Connector WAR file.	<a href="#">Deploy the Essbase WAR File on Oracle WebLogic Server</a>
Deploy Essbase	If you're using an Essbase data source, deploy the Essbase WAR file.	<a href="#">Deploy the Essbase WAR File on Oracle WebLogic Server</a>
Configure your data source	Configure Your On-Premises Database as a JDBC Data Source (see <a href="#">Configure Your On-Premises Database as a JDBC Data Source</a> ).	<a href="#">Configure Your On-Premises Database as a JDBC Data Source</a>
Deploy the public key	Download and deploy the Oracle Analytics Cloud public key.	<a href="#">Deploy the Public Key for Your Cloud Service</a>
Make Remote Data Connector Available to Oracle Analytics Cloud	Make Remote Data Connector Available to Oracle Analytics Cloud.	<a href="#">Make Remote Data Connector Available to Your Service</a>

Task	Description	More Information
Deploy your Public Key	Deploy the Public Key that you downloaded from your Oracle Analytics Cloud instance.	<a href="#">Deploy the Public Key for Your Cloud Service</a>
Update the data model	Update the connection pool for the data model.	<a href="#">Update the Connection Pool for the Data Model</a>
Test the URL	Test that the URL entered in the <b>Data source name</b> of the Connection Pool is accessible through the internet.	<a href="#">Verify that Your Data Connection Is Secure</a>
Upload the data model	Upload the data model file to your Cloud Service.	<a href="#">Upload Your Data Model to the Cloud</a>

## Deploy the Remote Data Connector WAR File on Oracle WebLogic Server

You deploy the Remote Data Connector WAR file (`obi-remotedataconnector-weblogic-<version>.war`) in its own domain in Oracle WebLogic Server in your on-premises environment.

1. In Oracle WebLogic Server, create a new domain for Remote Data Connector.

Oracle recommends that you create a new domain for Remote Data Connector to ensure that you don't have other applications deployed with Remote Data Connector.

### Note:

Only use an existing domain if no other applications are deployed on the domain. Deploying other applications on the same domain as Remote Data Connector creates a security risk in the other applications deployed on that domain.

2. In Oracle WebLogic Server, log into the domain on which you're deploying Remote Data Connector, and in the Change Center pane click **Lock & Edit**.
3. In the Domain Structure, select **Deployments**, and display the **Control** pane.
4. In the Deployments list, click **Install**.
5. In the Install Application Assistant, click the **upload your file(s)** link, click the **Choose File** button for the Deployment Archive, and select the `obi-remotedataconnector-weblogic-<version>.war` file you downloaded.
6. Click **Next**.
7. Confirm that the **Install this deployment as an application** option is selected and click **Next**.
8. On the Select deployment targets page, under **Clusters**, select the target server, for example, **AdminServer**.



9. Click **Next**.
10. On the Settings page, specify this:
  - In the **Name** field, specify a name to identify your deployment, for example, `obi-remotedataconnector`.
  - In the **Security** section, select **DD Only: Use only roles and policies that are defined in the deployment descriptors**.
  - In the **Source accessibility** section, select **Use the defaults defined by the deployment's targets**.

11. Click **Finish**.

You see a message that indicates that the deployment has been successfully installed.

12. On the left-hand side Change Center pane, click **Activate Changes**.
13. On the right-hand content pane, select the option next to the EAR just deployed.
14. Click **Start**, and select **Servicing all requests** from the drop-down list.
15. In the content pane of the new page, click **Yes**.

The deployment status changes from **Prepared** to **Active**.

16. Temporarily disable Remote Data Connector's Metadata security:

If Node Manager is installed, navigate to **Environment**, and click **Servers**. Select the server on which you deployed Remote Data Connector, click **Server Start**, and in the **Arguments** edit box, enter:

```
-Doracle.bics.rdc.disable_metadata_security=1
```

**Note:** If this variable is not set to 1, the status URL (provided in the next step) is blocked. After setting this property, restart Oracle WebLogic Server using Node Manager.

If Node Manager is not installed, then before starting Oracle WebLogic Server (in the same command prompt or script that starts Oracle WebLogic Server), execute one of the following commands to set this environment variable:

On Linux:

```
export DISABLE_RDC_METADATA_SECURITY=1
```

On Windows:

```
set DISABLE_RDC_METADATA_SECURITY=1
```

17. Restart Oracle WebLogic Server.
18. Test the deployment by navigating to `http(s)://<weblogic-server>:<weblogic-port>/obiee/javads?status`.

If the connection is valid, the browser displays XML code for the JavaDSServer.

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0" encoding="UTF-8" />
<JavaDSSEServer>
  <Services>
    <Service name="oracle.bi.datasource.service.DatasourceService"
      processor="oracle.bi.datasource.service.DatasourceServiceProcessor"/>
  </Services>
  <Cartridges>
    <Cartridge name="JDBC" uuid="fd35144d-26f1-491e-936e-17039604fec6" version="12.1">
      <Connector name="JDBC (Direct Driver)" uuid="5e9ffb28-b5ce-4201-b1a6-8f9f585389ea" version="12.1"/>
      <Connector name="JDBC (JNDI)" uuid="b41b07f5-7c55-4adf-8c51-ebe9a09b37f7" version="12.1"/>
    </Cartridge>
  </Cartridges>
  <ConfigSources>
    <ServiceProperties>
      <![CDATA[
        #DatasrcServer/src/jdbc-only-serviceprocessor.properties
        oracle.bi.datasource.service.DatasourceService=oracle.bi.datasource.service.DatasourceServiceProcessor
      ]]>
    </ServiceProperties>
    <CartridgeProperties>
      <![CDATA[
        #DatasrcServer/src/jdbc-only-cartridges.properties jdbc=oracle.bi.datasource.jdbc.JDBCCartridge
      ]]>
    </CartridgeProperties>
  </ConfigSources>
</JavaDSSEServer>
```

## Deploy the Essbase WAR File on Oracle WebLogic Server

You deploy the Essbase WAR file in your WebLogic Server web server.

1. In Oracle WebLogic Server, log into the domain on which you're deploying Remote Data Connector, and in the Change Center pane click **Lock & Edit**.
2. In the Domain Structure, select **Deployments**, and display the **Control** pane.
3. In the Deployments list, click **Install**.
4. In the Install Application Assistant, click the **upload your file(s)** link, click the **Choose File** button for the Deployment Archive, and select the `essbase-remotedataconnector-v1-0.war` file that you downloaded from Oracle Technology Network.
5. Click **Next**.
6. Confirm that the **Install this deployment as an application** option is selected and click **Next**.
7. On the left-hand side Change Center pane, click **Activate Changes**.
8. On the **Configuration** tab, verify that the **Context Root:** value is `/essbase`. If the **Context Root:** value isn't `/essbase`, change the value to `/essbase`.
9. Restart Oracle WebLogic Server.

Using the following URL to verify that you get a CAPI HTTP v1.0 message:

```
http://<rdc-server-host>:<rdc-server-port>/essbase/capi/
<Essbaseserver-Name>/essbase-port
```

For example, `http://exampleRDC.com:7001/essbase/capi/exampleEssbase.com/1423`.

## Configure Your On-Premises Database as a JDBC Data Source

Configure a JDBC data source for your on-premises database.

1. Sign in to Oracle Service Cloud where you deployed Remote Data Connector, navigate to Domain Structure, and select **Services**.
2. In the Summary of Services list, click **Data Sources**, and display the **Configuration** tab.
3. In the Change Center pane click **Lock & Edit**.
4. Under **Data Sources**, click **New**, and select **Generic Data Source**.
5. Specify values for the **Database Type**, **Name**, and **JNDI Name** fields, then click **Next**.

For example, you might use **mysalesdatasource** as a name for your sales database. To avoid confusion, use the same name for **Name** and **JNDI Name**. The JNDI Name forms a component of the URL used to access this data source after the setup is complete.

6. In the next screen, for an Oracle database, select **Oracle's Driver (Thin) for Service connections: Versions:Any** in the Database Driver drop-down list and click **Next**.
7. Accept defaults in the next screen and click **Next**.
8. Enter connection details for your on-premises database, and click **Next**.
9. In the next screen, click **Test Configuration** to test your database connection.
10. At the `Connection test succeeded` message, click **Next**.
11. In the Targets tab under the settings, select the server where you deployed Remote Data Connector.

 **Note:**

You must disable metadata security on the server where you deployed Remote Data Connector. To navigate to the server, click **Environment**, and then **Servers**. Click the name of the server, click **Server Start**, and in the **Arguments** field, enter the value:

```
-Doracle.bics.rdc.disable_metadata_security=1
```

12. Verify that you can see the newly created JDBC data source in the list of data sources.

## Make Remote Data Connector Available to Your Service

With the help of a network administrator, give your cloud service access to Remote Data Connector and verify that Remote Data Connector can connect through the on-premises firewall.

Before you start, work with your network administrator to:

- Configure the load balancer or reverse proxy for SSL communication and to route requests to the HTTP server.
- Configure the HTTP server to direct requests to Oracle WebLogic Server.

1. Using a browser, enter the public IP address or domain URL for Oracle WebLogic Server in the browser's address bar using the following URL format:

`https://<Public IP or Domain Name>:<port>/obiee/javads?status`

For example `https://10.200.5.1:7007/obiee/javads?status`

If the connection is valid, the browser displays XML code for the JavaDSServer.

```
This XML file does not appear to have any style information associated with it. The document tree is shown below.
<JavaDSServer>
  <Services>
    <Service name="oracle.bi.datasourc...
      processor="oracle.bi.datasourc...
    </Service>
  </Services>
  <Cartridges>
    <Cartridge name="JDBC" uuid="fd35144d-26f1-491e-936e-17039604fec6" version="12.1">
      <Connector name="JDBC (Direct Driver)" uuid="5e9ffb28-b5ce-4201-b1a6-8f9f585389ea" version="12.1"/>
      <Connector name="JDBC (JNDI)" uuid="b41b07f5-7c55-4adf-8c51-ebe9a09b37f7" version="12.1"/>
    </Cartridge>
  </Cartridges>
  <ConfigSources>
    <ServiceProperties>
      <![CDATA[
        #DatascServer/src/jdbc-only-serviceprocessor.properties
        oracle.bi.datasourc...service.DatasourceService=oracle.bi.datasourc...service.DatasourceServiceProcessor
      ]]>
    </ServiceProperties>
    <CartridgeProperties>
      <![CDATA[
        #DatascServer/src/jdbc-only-cartridges.properties jdbc=oracle.bi.datasourc...jdbc.JDBCCartridge
      ]]>
    </CartridgeProperties>
  </ConfigSources>
</JavaDSServer>
```

## Deploy the Public Key for Your Cloud Service

You deploy the public key from Oracle Analytics Cloud that you downloaded in an earlier step.

1. Copy the public key file you downloaded earlier to the folder that was created when you deployed the WAR file. For example, copy `oracle_bics_rdc.pem` to the folder: `DOMAIN_HOME/rdc_domains/rdc_keys/obi-remotedataconnector-weblogic-<version>`.
2. If you're using Remote Data Connector with an Essbase data source, run this command to configure the `PUBLIC_KEY_FOLDER` variable to the file location that you specified in Step 1:

```
export PUBLIC_KEY_FOLDER=/scratch/rdcuser/Oracle/Middleware/
Oracle_Home/user_projects/domains/rdc_domain/rdc_keys/obi-
remotedataconnector-weblogic-<version>
```

3. Start Oracle WebLogic Server using this command:

```
/scratch/rdcuser/Oracle/Middleware/Oracle_Home/user_projects/
domains/rdc_domain/.startWeblogic.sh
```

## Update the Connection Pool for the Data Model

You use Oracle Analytics Developer Client Tool to connect to the on-premises database for your data model through Remote Data Connector.

1. Open Oracle Analytics Developer Client Tool.
2. From the **File** menu, select **Open**, then **In the Cloud**, and specify the connection details for your Oracle Analytics Cloud instance.
3. From the **File** menu, select **Load Java Datasources**.
4. In the Connect to Java Datasource Server dialog, specify the **Hostname** and the **Port** where Remote Data Connector is running.
5. For **Username** and **Password**, enter the user name and password for the WebLogic Server administrator where Remote Data Connector is running.
6. Click **OK**.

A success message is displayed: Successfully loaded javads metadata from `https://Public IP or Domain Name:Port`.

If Remote Data Connector metadata security isn't disabled, then this URL fails with the message: 401-Unauthorized.

7. Open the data model file BI Metadata Repository in Offline mode.
8. In the Physical layer, double-click the data source, then display the **Connection Pools** tab.
9. Double-click the connection pool to display the Connection Pool dialog.
10. Change the **Call interface** to **JDBC (JNDI)**.
11. In the **Data source name** field, change the value of the Remote Data Connector URL.

The Remote Data Connector URL is the endpoint URL in the format:

```
https://Public IP or Domain Name:port/obiee/javads/  
JNDI_connectionname.
```

For the `JNDI_connectionname` value, use the JNDI name that you specified when you created a new data source in WebLogic Server (in the task [Configure Your On-Premises Database as a JDBC Data Source](#)).

12. Click the **Miscellaneous** tab.

This step is mandatory because the data model (RPD) isn't updated unless the **Use SQL over HTTP** variable is set to `true`. This is only saved on switching to this tab.

13. Click **OK**.
14. Save the data model file.

## Verify that Your Data Connection Is Secure

Verify that your connection is secure by testing that it's accessible only within your network.

Test Remote Data Connector using the URL that you specified in the **Data source name** field on the Connection Pool dialog.

 **Note:**

An easy way to test this is to use a smart phone with its mobile data turned on and its WiFi turned off. From the smart phone, in a browser enter the exact URL that you specified as the **Data source name** value in the previous setup task (Update the Connection Pool for the Data Model). If your connection is configured securely, the message "401--Unauthorized" is displayed. For other errors, double check the protocol (HTTP/HTTPS), URL, and port.

## Upload Your Data Model to the Cloud

Deploy your data model by uploading it to the cloud.

1. In Oracle Analytics Developer Client Tool, open your data model.
2. Click **File**, then **Cloud**, then **Publish**.
3. Specify the connection details for your cloud application, then click **OK**.

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