

To enable access to remote data sources in an on-premises network from Oracle BI Cloud Service, you must deploy and configure BI Cloud Service Remote Data Connector in your on-premises network for secure access to your data. This document introduces you to Remote Data Connector and provides instructions for downloading, deploying, and configuring it to access on-premises data sources.

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### **Audience**

The intended audience for these instructions is administrators who want to set up Oracle Business Intelligence Cloud Service Remote Data Connector to enable secure access from the cloud to on-premises relational data sources for analysis.

### **About Business Intelligence Cloud Service Remote Data Connector**

Business Intelligence Cloud Service Remote Data Connector (BICS RDC) enables secure connection to on-premises data sources for analysis in the cloud.

BICS RDC works with the BI Server Data Gateway running in the BI Cloud Service environment to provide secure access to on-premises data using private/public key pairs and SSL communication.

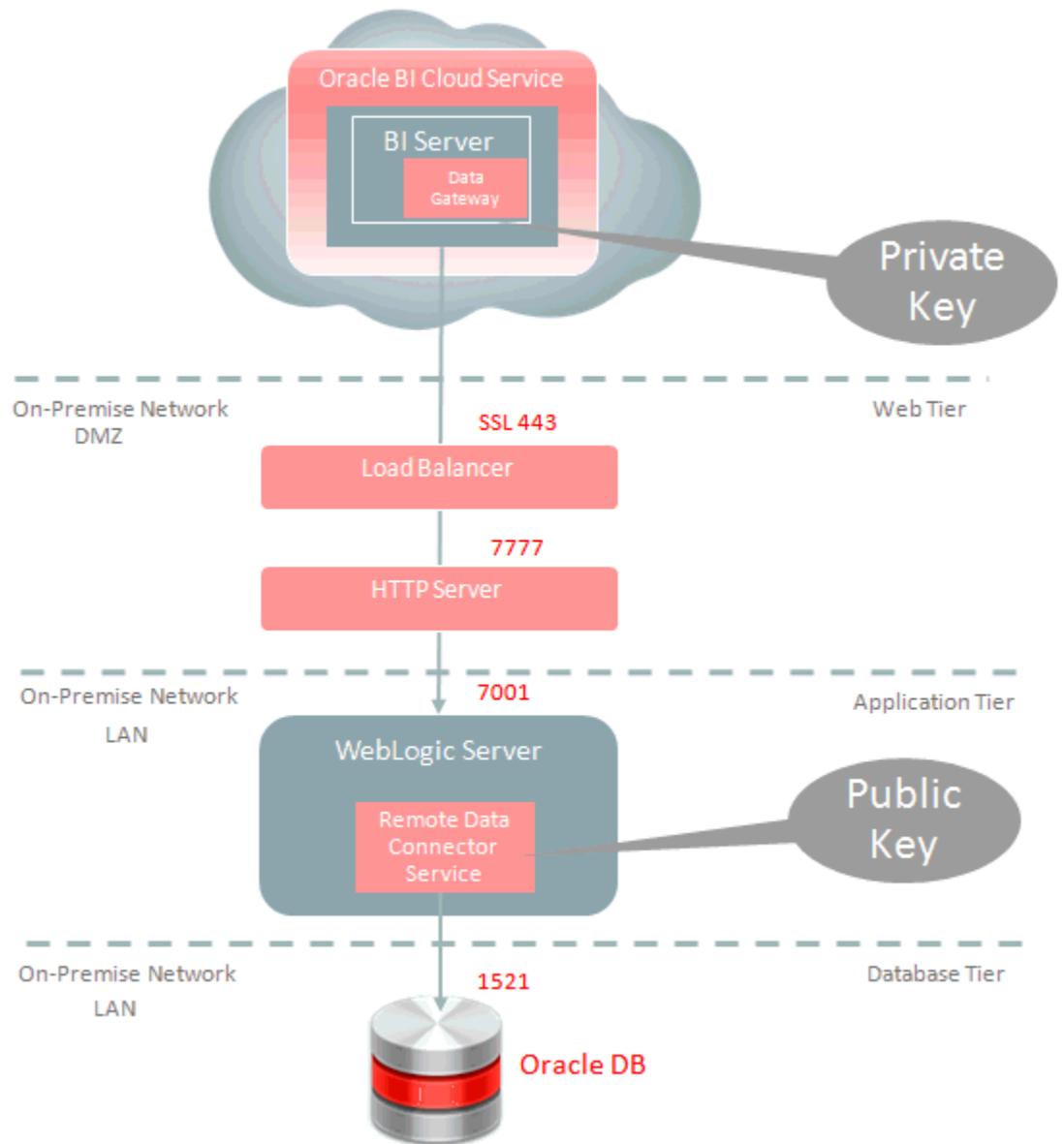
### **Supported Datasources**

BICS RDC supports querying on-premises data in Oracle databases.

### **Architecture**

Each BI Cloud Service instance is provisioned with a unique private key. A public key is available for download from BICS Console. This public key when deployed on-premises in BICS RDC enables RDC to verify the authenticity of a query received from a BI Server in BI Cloud service. SSL configured on-premises at Load Balancer or HTTP servers provides secure access to on-premises data.

The diagram below shows a typical on-premises network architecture. It is recommended that you contact your network administrator for additional details about your network configuration.



## Prerequisites

The following requirements must be met in your environment with the assistance of your network administrator before setting up the BI Cloud Service Remote Data Connector.

- Download and install WebLogic. Any version available as a download from Oracle Technology Network (OTN) can be installed.

- Obtain the public IP and domain name.
- Download BICS RDC WAR file (obi-remotedataconnector.war) from OTN.
- Configure SSL communication at load balancer or HTTP server.
- Download and install Oracle Business Intelligence Developer Client Tool (12.2.1.0.0) from OTN.

## Configure Secure Access to On-Premises Data

This topic describes the steps required to configure secure access to on-premises data by deploying RDC on an application server, setting up and testing connections to the data source you want to query for analysis, and updating the Oracle BI data model file to include the new connection information in the appropriate connection pool.

To configure secure access to on-premises data:

1. Deploy the RDC WAR file.
  - a. Log in to WebLogic and, in the Change Center pane, click **Lock & Edit**.
  - b. In the Domain Structure, select **Deployments**.
  - c. In the Deployments list, click **Install**.
  - d. 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.war` file you downloaded.
  - e. Click **Next**.
  - f. Click **Next**.
  - g. Confirm that the **Install this deployment as an application** radio button is selected and click **Next**.
  - h. Select the appropriate server target.
  - i. Click **Next**.
  - j. Verify the deployment summary.
  - k. Click **Finish**.
 

You should now see a message indicating that "The deployment has been successfully installed".
  - l. On the left-hand side Change Center pane, click **Activate Changes**.
  - m. On the right-hand content pane, select the radio button next to the EAR just deployed.
  - n. Click **Start** to view the drop-down list and select **Servicing all requests**.
  - o. In the content pane of the new page, click **Yes**.

- p. Test the deployment by navigating to `http(s)://<weblogic-server>:<weblogic-port>/obiee/javads?status`.

You should see an XML file.

This XML file does not appear to have any style information associated with it. The d

```
▼<JavaDSServer>
  ▼<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" versi
      <Connector name="JDBC (Direct Driver)" uuid="5e9ffb28-b5ce-4201-b1a6-8
        <Connector name="JDBC (JNDI)" uuid="b41b07f5-7c55-4adf-8c51-ebe9a09b37
      </Connector>
    </Cartridge>
  </Cartridges>
  ▼<ConfigSources>
    ▼<ServiceProperties>
      ▼<![CDATA[
        #DatascServer/src/jdbc-only-serviceprocessor.properties
        oracle.bi.datasource.service.DatasourceService=oracle.bi.datasource.
      ]]>
    </ServiceProperties>
    ▼<CartridgeProperties>
      ▼<![CDATA[
        #DatascServer/src/jdbc-only-cartridges.properties jdbc=oracle.bi.da
      ]]>
    </CartridgeProperties>
  </ConfigSources>
</JavaDSServer>
```

2. Add the JDBC data source.
  - a. Log in to WebLogic and, in the Domain Structure, select **Services** .
  - b. In the Summary of Services list, click **Data Sources**.
  - c. In the Configuration tab, under Data Sources, click **New** and select the **Generic Data Source** option.
  - d. Enter the Name and JNDI Name fields and click **Next**. To avoid confusion, use the same name. The JNDI Name forms a component of the URL used to access this data source after the setup is complete.

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**Note:** Make a note of the name you enter, which you will reuse later when you are setting the URL for the remote data connection. For example, you could use `mysalesdatasource` as a name for your sales database.

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- e. In the next screen of the wizard, select **Oracle's Driver (Thin) for Service connections: Versions:Any** in the Database Driver drop-down list and click **Next**.

- f. Accept defaults in the next wizard screen and click **Next**.
  - g. Enter your database connection details in the next wizard screen and click **Next**.
  - h. In the next screen, click **Test Configuration** to test your database connection.
  - i. Once you receive the Connection test succeeded message, click **Next**.
  - j. In the Targets tab under the settings, select appropriate target server for the JDBC Datasource.
  - k. Verify that you can see the newly created JDBC Datasource in the list of Data Sources.
3. Download and deploy the public key.
    - a. Log in to BI Cloud Service.
    - b. Navigate to the BICS Console.
    - c. Click **Connections**
    - d. Click the **Get Public Key** to download the public key.
    - e. When downloading the public key, in the Save dialog box, rename the file to `oracle_bics_rdc.pem` and save it to your local machine.
    - f. Copy `oracle_bics_rdc.pem` to the WebLogic server in the `DOMAIN_HOME` folder. The `DOMAIN_HOME` path is the directory in which WebLogic Domain is installed.
    - g. Navigate to the URL: `<BICS_URL>/biserviceadministration`. Select the **Database Connections** tab and click **Get Public Key**.
    - h. In the Save dialog box, rename the file to `oracle_bics_rdc.pem` and save this file in the `DOMAIN_HOME` folder. The `DOMAIN_HOME` path is the directory in which WebLogic Domain is installed.
  4. Make BICS RDC available to BICS with the help of a network administrator.
    - a. Configure the load balancer/reverse proxy for SSL communication and to route requests to the HTTP Server.
    - b. Configure the HTTP server to direct requests to the WebLogic server.
    - c. Test BICS RDC with a public IP address/domain URL, for example `https://<Public IP or Domain Name>:<port>/obiee/javads?status`.
  5. Update the data model file connection pool.
    - a. Open the Oracle Business Intelligence Developer Client Tool.
    - b. In the **File** menu, select **Load Java Datasources...** to obtain the properties of Remote Data Connector.

- c. In the Connect to Java Datasource Server dialog box, enter the public IP address or domain name for Hostname and the Port where BICS RDC is running. User and Password are not required.
  - d. Click **OK**.
  - e. A message is displayed indicating, “Successfully loaded javads metadata from `https://<Public IP or Domain Name>:<Port>`”
  - f. Open the data model file (.rpd) in Offline mode.
  - g. In the Physical layer, edit the connection pool.
  - h. In the Connection Pool dialog box, change the call interface to **JDBC (JNDI)** .
  - i. Change the Data source name to the Remote Data Connector URL.  
  
This is the endpoint URL that was created earlier. It is of the form: `https://<Public IP or Domain Name>:<port>/obiee/javads/<JNDI connectionname>`. Note that myjdbcdatasource was specified above when adding the JDBC data source.
  - j. Click **OK**.
  - k. Save the data model file.
6. Upload the data model file to Oracle BI Cloud Service. For information about uploading the data model, see “About Uploading Data Models to the Cloud” in the *Using Oracle Business Intelligence Cloud Service* guide.

You have now configured secure access to relational data sources.

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Oracle® Cloud Getting Started with Remote Data Connector for Oracle® Business Intelligence Cloud Service, E67875-01

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