

Oracle® Data Studio

Oracle Data Studio User's Guide



G59960-01
September 2026



Oracle Data Studio Oracle Data Studio User's Guide,
G59960-01

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Preface

This document explains how to access and use Oracle Data Studio in an AI Lakehouse environment.

- [Audience](#)
This document is intended for users of Data Studio.
- [Documentation Accessibility](#)
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- [Conventions](#)

Audience

This document is intended for users of Data Studio.

It is designed for data analysts, business users, data engineers, data scientists, and IT administrators who need to work with data.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

Related Documents

For more information, see these Oracle resources:

- [Oracle Autonomous AI Database](#)
- [Database Actions](#)
- [Licensing Information User Manual for Oracle Data Studio](#)
- [Data Studio Legacy Documentation](#)

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	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.

Convention	Meaning
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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What's New in Oracle Data Studio

This section highlights new features and enhancements in Oracle Data Studio.

Data Studio Release

Data Studio provides a unified workspace for working with databases, data assets, and AI-enabled workflows.

- **Unified home page and access**

Open Data Studio and explore available capabilities before selecting a database. Select or connect to a database when the task that you want to perform requires one. See [Access and Navigate Data Studio](#).

- **Catalog Navigator**

Use the new Catalog Navigator to browse database and cloud-storage assets, inspect their details, and continue directly to available data workflows. See [Catalog Navigator](#).

- **Unified database and connection management**

Browse, create, connect to, and manage databases from Data Studio. You can also connect to a database instance by using a Database Actions URL when required. See [Work with Database Connections and Resources](#).

- **Expanded cloud-source access**

Use data-load and data-link workflows with cloud object stores such as Oracle Cloud Infrastructure Object Storage, Amazon S3, Azure Blob Storage, and Google Cloud Storage. See [Load, Link, and Feed Data](#).

- **AI Data Catalog enhancements**

Create or connect to an AI Data Catalog and use governance controls to manage access to catalog objects. See [Create and Connect to AI Data Catalog](#).

- **AI Assistant**

Use AI Assistant in Data Studio for contextual guidance, guided workflow preparation, and natural-language SQL generation after the required setup is complete. See [Use AI Assistant](#).

- **Access diagnostics for AI workflows**

Use **OCI Permissions** to identify whether the connected database or your signed-in identity lacks the Oracle Cloud access required for AI workflows. See [Prepare to Use Data Studio](#).

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About Data Studio

- [Overview of Data Studio](#)

Data Studio is a web-based interface for working with databases, data assets, and AI-enabled workflows in an AI Lakehouse environment.

Overview of Data Studio

Data Studio is a web-based interface for working with databases, data assets, and AI-enabled workflows in an AI Lakehouse environment.

How Data Studio Supports Your Work

Data Studio organizes capabilities around the work that you want to do with data. It is designed for data analysts, business users, data engineers, data scientists, and IT administrators who need to discover, load, query, and share data.

By bringing related data tasks together in one interface, Data Studio helps you move from discovering data to loading, querying, or sharing it without switching to a separate product interface for each activity.

Key Capabilities

- **Unified Home Page**

Start common workflows, access tutorials and product links, and move between Data Studio capabilities. See [Access and Navigate Data Studio](#).

- **Databases and Connections**

Browse, connect to, and manage existing Autonomous Databases in the selected compartment. Create new databases and manage connections. Select a database or compute context when a workflow requires it. See [Work with Database Connections and Resources](#).

- **Data Discovery and Governance**

Search, discover, inspect, and manage local or connected data assets in Catalog Navigator, including Oracle AI Data Catalog capabilities. Use catalog assets in load, link, or query workflows. See [Catalog Navigator](#).

- **Data Ingestion**

Load data into tables, link external data, review available data structure, and create load jobs. Bring data from various sources into your data workflows by loading or linking data, or through Livefeed data streams. See [Load, Link, and Feed Data](#).

- **SQL and Natural Language Queries**

Use SQL Worksheet to write and run queries, inspect and visualize query results, and generate queries from natural-language requests. See [Query Data with SQL Worksheet](#).

- **Data Sharing**

Discover and query curated Marketplace data sets, publish your own data sets, and share data with other users or services through data sharing workflows. See [Share Data](#).

- **Jobs**

Monitor data loads, Livefeed activity, and other workflow jobs, and review their status, reports, and execution history. See [Monitor and Manage Jobs](#).

- **AI-enabled Assistance**

Use AI Assistant in Data Studio for AI-enabled services and tasks. Complete the required AI setup and get guidance for tasks, prepare supported workflows, and generate SQL from natural language. See [Use AI Assistant](#).

- **OCI Permissions**

Review the Oracle Cloud Infrastructure access required for AI-ready database workflows and identify missing access. See [Prepare to Use Data Studio](#).

- **Database Settings**

Manage database users, credentials, AI profiles, and other database-specific settings. See [Configure Database Settings](#).

You can begin with the data that you need and continue to the next relevant task. For example, after locating data in a catalog, you can load or link it, query it, or share it with other users through a sharing workflow.

You can explore Data Studio capabilities before selecting a database. Select a database or compute resource when the task that you want to perform requires it. The capabilities and resources available to you depend on your access and the services configured for your environment.

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Get Started

- [Prepare to Use Data Studio](#)
Verify the access and configuration required for Data Studio workflows.
- [Access and Navigate Data Studio](#)
Open Data Studio and explore the capabilities before selecting or connecting to a database or compute resource.

Prepare to Use Data Studio

Verify the access and configuration required for Data Studio workflows.

Before You Begin

Ensure that you have the access required for the sign-in method and workflows that you plan to use. The access and configuration depend on the workflow that you want to perform. The capabilities and resources available depend on your assigned roles and permissions.

Note

Before using database tools, ensure that you have the database user name and password required to connect. For a direct database connection, also ensure that you have the Database Actions URL.

Before using AI-assisted workflows, ensure that the database is AI-ready or can be configured for AI access. If setup is required, check the required Oracle Cloud access in OCI Permissions.

OCI Permissions

OCI Permissions helps you check whether the connected database and your signed-in identity can access the Oracle Cloud Infrastructure resources required for the AI workflows. The results indicate whether additional access is required for the database or for your user account.

Use OCI Permissions when a database status shows Setup needed, or when AI Assistant, AI profiles, or AI-assisted SQL cannot access the required Oracle Cloud services.

Open OCI Permissions

1. Click the user profile in the header.
2. Select **OCI Permissions**. The page displays the following:
 - **Database access:** Displays the Oracle Cloud resources that the connected database can access. You must be connected to a database to view these details.
 - **Your access:** Displays the operations that your signed-in identity can perform.

- **Show missing only:** This option displays the requirements that are not currently allowed. After the required access is updated, select **Refresh** to run the check again.

Note

If access is missing, identify whether the requirement is listed under **Database access** or **Your access**. Contact your system administrator for further assistance.

Database access

Database access is schema-based. To use database features in Data Studio, connect as a database user whose schema has the access required for the task.

For non-ADMIN users, verify that:

- The database user exists.
- The user can connect through Data Studio.
- Web or REST access is enabled.
- The user has the database roles required for the Data Studio tools.

The ADMIN user can create users, enable Web and REST access, configure credentials, and grant database roles to other users.

Go to [Configure Database Settings](#) to manage users, credentials, AI profiles, and other configuration for the connected database. For more information, see .

For more information, see [About Privileges and Roles](#).

Your access

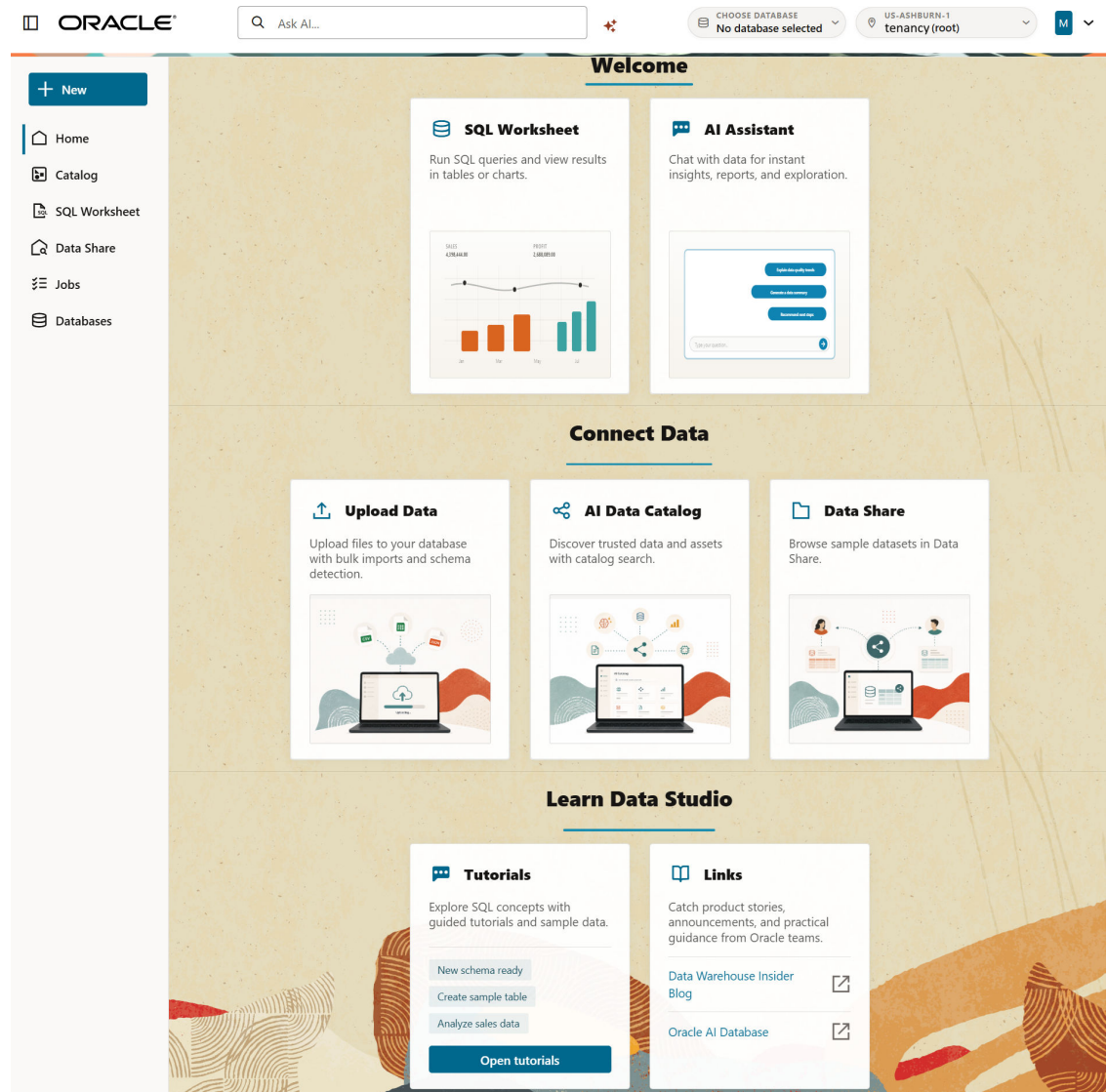
When you sign in with Oracle Cloud, your signed-in identity must have the required Oracle Cloud Infrastructure Identity and Access Management (IAM) policies for the selected tenancy, region, and compartment.

Required permissions vary by workflow. For example, listing or creating Autonomous Databases, reading Oracle Cloud Infrastructure Object Storage files, using Generative AI, and managing credentials can require different Oracle Cloud permissions.

For more information, see [IAM Policies Overview](#).

Access and Navigate Data Studio

Open Data Studio and explore the capabilities before selecting or connecting to a database or compute resource.



How to Access Data Studio

You can open Data Studio using either of the following methods:

- **Sign in with Oracle Cloud**

Sign in with your Oracle Cloud Infrastructure identity. After authentication, you can select the region, compartment, and database that you want to use.

- **Connect to a Database**

Use a Database Actions URL and provide your database user name and password to connect directly to a database without signing in to Oracle Cloud Infrastructure.

Note

If you open Data Studio from an external link, the sign-in page might have a tenancy name, Database Actions URL, or intended destination already filled in.

Sign in with Oracle Cloud

Access Data Studio with your Oracle Cloud Infrastructure identity:

1. Open the Data Studio URL in a web browser.

`https://datastudio.oracle.com`

2. Sign in with your Oracle Cloud Infrastructure identity.

You can explore Data Studio without connecting to a database.

Use Data Studio With or Without a Database

When you sign in with Oracle Cloud, you can open Data Studio without selecting a database. In this state, you can access the home page and database inventory.

When you connect to a database, Data Studio provides only the capabilities supported by that connection. Some actions require Oracle Cloud authentication. If Data Studio indicates that Oracle Cloud authentication is required, select **Sign in with Oracle Cloud**.

Select a database or compute resource when you begin a task that requires one, such as querying data, loading data, or executing a data flow. When you select a capability that requires a database, Data Studio prompts you to select or connect to one.

After you connect to a database, Data Studio displays the selected database in the header. The database status indicates whether the database is connected, ready for AI workflows, or requires setup. If setup is required, open **OCI Permissions** to check the required access, or open database settings to complete the required database configuration. See [Prepare to Use Data Studio](#).

You can switch databases when you want to work in a different database environment.

The Home Page

The home page provides a central starting point for Data Studio. Use it to understand the available capabilities and begin a task.

Depending on the capabilities available in your environment, the home page can provide links to relevant resources and workflows.

Start a Task

You can start a common workflow from the home page.

- **Welcome:** Click **New** and select **SQL Worksheet** or **AI Assistant**.
- **Connect Data:** Access data ingestion, discovery, catalog, and sharing workflows using **Upload Data**, **AI Data Catalog**, or **Data Share**.
- **Learn Data Studio:** Explore guided tutorials and sample data.

Navigate Data Studio

Data Studio uses task-oriented navigation to organize common data activities. Use the navigation to switch between working with databases, discovering data, loading or connecting data, querying data, sharing data, and monitoring jobs.

You can open the tools from the left navigation panel:

- **Home:** Return to the Data Studio home page.

- **Catalog:** Use Catalog Navigator to browse, inspect, query, load, or link database and Object Storage assets. See [Catalog Navigator](#).
- **SQL Worksheet:** Write SQL, run queries, view results, and visualize result sets. See [Query Data with SQL Worksheet](#).
- **Data Share:** Discover and publish curated data sets. See [Share Data](#).
- **Jobs:** Monitor data loads and other workflow jobs. See [Monitor and Manage Jobs](#).
- **Databases:** View, create, connect to, and manage Autonomous Databases. See [Work with Database Connections and Resources](#).

Use Tutorials

Data Studio provides guided tutorials in a side panel.

Tutorials can help you work through product tasks, such as creating sample data, joining tables, summarizing rows, filtering data, and visualizing sales trends.

1. On the home page, scroll down to **Learn Data Studio**.
2. Click **Open tutorials**.
3. Select a tutorial from the panel.

Follow the tutorial steps and switch to the relevant product area when prompted.

Manage Databases and Connections

- [Work with Database Connections and Resources](#)
Create new databases in Data Studio, browse and connect to existing databases, and manage lifecycle operations.

Work with Database Connections and Resources

Create new databases in Data Studio, browse and connect to existing databases, and manage lifecycle operations.

Before You Begin

Ensure that:

- You selected the target Oracle Cloud Infrastructure region and compartment.
- You have OCI permission to inspect, use, or manage Autonomous AI Database resources.
- You have the administrator password or database user name and password required to connect to the database.
- The Database Actions URL is available when you add an external or existing database connection.

Create a new database or connect to an existing database when the workflow that you want to use requires one.

View Available Databases

Click **Databases** in the left navigation panel to open the Databases page. It displays the available databases and their connection and lifecycle status. This page opens and you can browse even when no database is connected.

The **Cloud provider** indicates whether a database belongs to Oracle Cloud Infrastructure or a multicloud environment, such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform. Use the search field to locate a database.

Create an Autonomous AI Database

Open the Databases page and do the following:

1. Click **Create Autonomous AI Database** and specify the following:
 - **Database name**
 - **Administrator password**
2. Under **Advanced options**, you can review or change additional settings, such as the compartment, workload type, and compute resources. For Workload type, select Transaction Processing or Lakehouse.
3. Click **Create** to provision a new database.

The page displays the database state as provisioning progresses. When the **State** displays **Available**, the new database is ready to use.

For more information, see [Provision an Autonomous AI Database Instance](#).

Connect to a Database

Data Studio provides different ways to connect to your database, such as:

- the **Choose Database** option in the header
- the **Databases** page
- the **Catalog** page

If no database is selected, Data Studio displays an option to connect when you open a workflow that requires a database.

Open the Databases page and do the following:

1. Select the database that you want to connect to.
2. Click the three dots for the selected database to open the **Actions** menu.
3. Select **Connect** to open the schema credentials window.
4. Enter the database user name and password.
5. Click **Connect** to connect to the database.

After the connection succeeds, the header displays the selected database.

Add a Database Actions URL

You can use a Database Actions URL to connect to a database, for example, to work with an on-premises database.

Open the Databases page and do the following:

1. Click the **Cloud** button next to Create Autonomous AI Database.
2. Enter a valid Database Actions URL in the provided space.

An Oracle REST Data Services (ORDS) URL usually ends with `/_sdw/`.

3. Click **Save** to store the URL.

After you add the connection, the page displays the connected database.

Disconnect a Database

You can disconnect from a database in the following ways:

- Click the database name in the header and select **Disconnect**.
- Go to the Databases page, hover over the database name, and select **Disconnect**.

Lifecycle Operations

In Data Studio you can perform basic lifecycle operations for a database.

On the Databases page, click the three dots for the selected database to open the **Actions** menu and select the operation to perform.

- **Connect**: To connect to the selected database.
- **Start**: To start the database instance.
- **Stop**: To stop the database instance.
- **Restart**: To restart the database.

- **Clone:** To clone the selected database.
- **Manage Resources:** To manage the resource configuration, for example compute, storage, and so on.
- **Change admin password:** To modify the password. The password must meet the required validation criteria.
- **Terminate:** To stop and delete the database.

 Note

Use caution when you select **Terminate** because the database and its data are permanently deleted.

- **Open in OCI Console:** To open the database in the Oracle Cloud Infrastructure Console to perform advanced operations that are not available in Data Studio.

For more information, see [Manage Lifecycle Operations](#).

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Discover and Manage Data

- [Catalog Navigator](#)
Browse the catalog and manage your data using Catalog Navigator.
- [Query Data with SQL Worksheet](#)
Use SQL Worksheet to explore database objects, run SQL, interpret query results, and generate AI-assisted queries from natural language.
- [Load, Link, and Feed Data](#)
Load data into an Oracle Autonomous AI Database table, link to data from an external source, or create a Livefeed data stream.
- [Share Data](#)
Use Data Share to discover, publish, share, load, link, and query curated data sets in Marketplace.

Catalog Navigator

Browse the catalog and manage your data using Catalog Navigator.

- [Explore Data with Catalog Navigator](#)
Use Catalog Navigator to browse and explore data assets, view their details, and use them in Data Studio workflows.
- [Create and Connect to AI Data Catalog](#)
Create an AI Data Catalog and connect Data Studio to use catalog assets in data workflows.
- [Manage AI Data Catalog Access](#)
Use governance controls with Oracle AI Data Catalog to manage access to catalog objects.

Explore Data with Catalog Navigator

Use Catalog Navigator to browse and explore data assets, view their details, and use them in Data Studio workflows.

Before You Begin

Ensure that:

- You selected or connected to an Autonomous AI Database when the workflow requires a database.
- Your database user has the required privileges for the schemas and objects that you want to inspect.
- You selected the target Oracle Cloud Infrastructure region and compartment.
- The required OCI permissions and credentials are configured if you want to browse Oracle Cloud Infrastructure Object Storage.

The Catalog Navigator

Click **Catalog** in the left navigation to open Catalog Navigator. Even when no database is connected, you can perform the following activities:

- Browse files and folders in OCI Object Storage.
- Select an object or a file to view its details.
- Load data and link data.
- Connect to a database.
- Connect to an AI Data Catalog.

After you connect to an Autonomous AI Database, you can perform additional tasks, such as:

- Browse and view details of database objects, schemas, tables, and views.
- Browse and manage existing Data Catalog entities.
- View data asset details.
- Browse locally mounted catalogs.
- Mount an Iceberg catalog.

Browse Database Objects

On the Catalog page, do the following:

1. Go to the connected database and select a schema.

The page displays the database objects, such as tables, views, analytic views, hierarchies, and so on.

2. Expand a table or view and select a corresponding object to view its details.

View Data Asset Details

Use table details to inspect structure and activity before you query or use a table.

- **Overview:** View the description, tags, columns, table details, and ownership information.
- **Sample Data:** Preview rows from the selected table.
- **Statistics:** Gather or refresh table statistics and review table size, row count, column count, distinct values, null counts, and value distribution.
- **Data Definition:** Review the table definition, when available.
- **Lineage:** View source-to-target relationships for supported data flows and loads.
- **Impact:** Identify downstream objects or workflows that depend on the selected object, when that information is available.

Use a Catalog Asset

You can use catalog assets in workflows that accept catalog sources or destinations, such as querying, loading, and linking data.

From a table or view details page, you can select the following options:

- **Query:** Opens the table or view in SQL Worksheet. See [Query Data with SQL Worksheet](#).

Note

To load or link to a source object, use **Load data** or **Link data**.

To run queries on tables and views, use **SQL Worksheet**.

- **AI Enrichment:** Review AI-generated descriptions and tags so natural language queries have clearer table and column context.

For more information, see [Manage Catalogs](#).

Create and Connect to AI Data Catalog

Create an AI Data Catalog and connect Data Studio to use catalog assets in data workflows.

Before You Begin

Ensure that:

- You have the Oracle Cloud Infrastructure permissions or catalog credentials required by the catalog.
- The database that you plan to use is configured to connect to the catalog.
- You have administrator permissions if the database or catalog connection must be configured.

Create an AI Data Catalog

Data Studio displays the catalogs available in your Oracle Cloud tenancy and region. You can select the catalog that you want to use. If a catalog is not available, you can create a new AI Data Catalog.

Open the Databases page and do the following:

1. Click **Create AI Data Catalog** and specify the following:
 - **Database name**
 - **Administrator password**
2. Under **Advanced options**, you can review or change additional settings, such as the compartment, workload type, and compute resources. For Workload type, select Transaction Processing or Lakehouse.
3. Click **Create** to provision a new AI Data Catalog.

Data Studio manages the catalog connection separately from the database connection. When you switch databases, the selected catalog does not change.

Depending on the catalog authentication configuration, Data Studio uses your Oracle Cloud Infrastructure identity or prompts you for catalog credentials. Catalog credentials are separate from database credentials.

If the selected database is not connected to the selected catalog, Data Studio indicates the mismatch. Depending on your permissions, you can switch to the catalog associated with the database or configure the database to use the selected catalog.

Connect to an AI Data Catalog

Open the Catalog page and do the following:

1. Select the **Connect** option next to AI Data Catalog. It displays a list of AI Data Catalogs available in your environment.
2. Enter the AI Data Catalog name to search or select the displayed AI Data Catalog.
3. Enter the user name and set the password for the AI Data Catalog.
4. Click **Connect**.

After connecting to an AI Data Catalog, you can explore and use its assets in Catalog.

For more information, see [Oracle AI Data Catalog](#).

Manage AI Data Catalog Access

Use governance controls with Oracle AI Data Catalog to manage access to catalog objects.

Configure Governance and Access Control

An authorized AI Data Catalog administrator can use governance controls in Data Studio to manage groups, roles, privileges, object ownership, and access to catalog objects.

Connect to an AI Data Catalog and select **Governance** to configure the following:

- **Principals**
Search for users, groups, clients, and other principal types. Open a principal to review its identity details and assigned roles.
- **Groups**
Search and review groups. Create and delete AI Data Catalog-managed groups. Identity-provider groups are read-only.
Open a group to review its details, add or remove members, review object privileges, and assign or revoke roles.
- **Roles**
Create and delete reusable roles. Assign object-scoped privileges to a role and assign or revoke the role for users, groups, or clients.
Open a role to review its details, granted privileges, and assigned principals.
- **Privileges**
View the read-only privilege dictionary. Search for a privilege and filter by object type. You cannot create, edit, or delete system-defined privileges.

Manage Object Access and Ownership

From a catalog object's details, use the following options:

- **Grants:** Review direct grants and use Grant access or Revoke to manage access.
- **Owner:** Review the current owner and transfer ownership when permitted.
- **Ownership History:** Review ownership transfers.
- **Check My Access:** Test your own access to a selected table or view. Results show whether access is allowed or denied and, when available, whether access comes directly or through a group.

Select the object scope that matches your requirement. For example, grant access at the table level when access to a single table is narrower than access to the entire schema.

For more information, see [Oracle AI Data Catalog](#).

Query Data with SQL Worksheet

Use SQL Worksheet to explore database objects, run SQL, interpret query results, and generate AI-assisted queries from natural language.

Before You Begin

Ensure that:

- You selected or connected to an Autonomous AI Database.
- Your database user has permission to query the objects that you want to use.
- The selected database shows **Connected** in the SQL Worksheet header.
- An **AI Profile** is ready if you want to generate SQL from natural language.

Browse SQL Worksheet

On the Data Studio home page:

1. Open the SQL Worksheet card or select **SQL Worksheet** in the left navigation. If prompted, connect to a database by entering a database user name and password.
SQL Worksheet includes **Catalog** and **Worksheets** tabs so that you can browse database objects while you work with queries.
2. Enter your query in the editor.
3. Click **Run SQL** to execute the query.

Query a Table or View from Catalog

The **Catalog** tab is useful when you want to find a table before writing a query.

1. In **SQL Worksheet**, open the **Catalog** tab.
2. Expand the connected database and schema.
3. Click the table or view to enter the query. You can also manually write or edit queries in the editor.
4. Click **Run SQL** to execute the query.

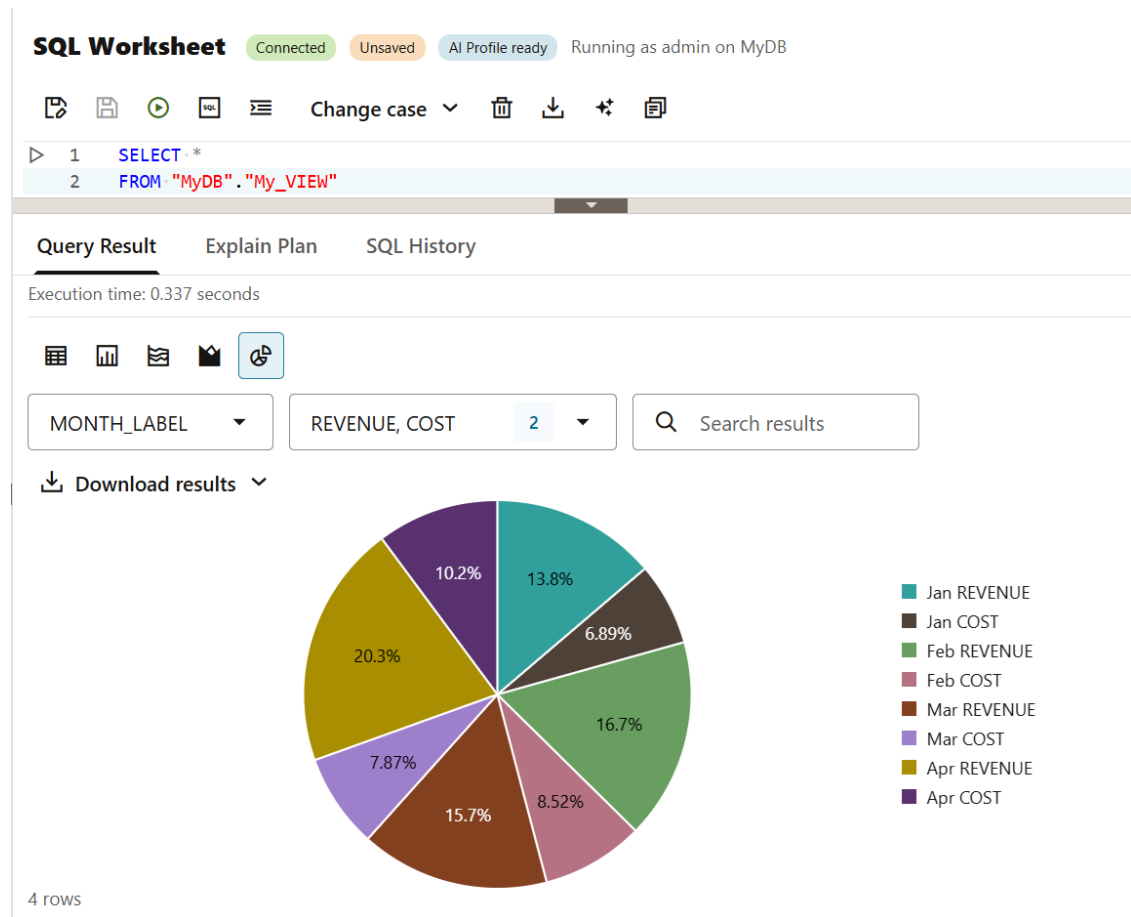
View Query Result

After you run the query, you can view the result and related details in the results panel:

- **Query Result:** Displays the returned data.
The result area can provide a table view, a search field, a download action, and visualization options when the result can be charted. It also provides additional details, such as execution time and row count.
Click **Download results** to save the returned data in CSV, JSON, XML, or plain text format for offline reference and analysis.
- **Explain Plan:** Runs explain plan to inspect the query plan.
- **SQL History:** Records the previously run SQL statements. You can insert the same query in the editor or rerun it directly.

Visualize Query Results

SQL Worksheet can display supported query results as charts or graphs. Select a visualization option in the result toolbar, then select the columns and settings that you want to use.



For more information, see [The SQL Page](#).

Load, Link, and Feed Data

Load data into an Oracle Autonomous AI Database table, link to data from an external source, or create a Livefeed data stream.

Before You Begin

Ensure that:

- You selected or connected to an Autonomous AI Database.
- The source file or object is available in the selected location, and you have permission to read it.
- The target schema exists and your database user can create or update the target table.
- You have information about the target table, whether it is a new or an existing table.

Cloud-storage sources also require:

- You have permission to browse the storage resource containing the source file.
- You have a valid credential for the selected cloud provider.

If the load or link workflow provides a credential-creation option, create the credential within that workflow; otherwise, configure the credential before starting.

Work with Cloud Storage Sources

Data Studio supports loading and linking data from cloud object stores, including OCI Object Storage, Amazon S3, Azure Blob Storage, and Google Cloud Storage.

When you select a cloud-storage source, Data Studio displays the storage resources and labels for the selected provider. Select a file to preview its contents and continue with a load or link workflow.

The storage resources and actions depend on the selected cloud provider, your access, and the capabilities supported for that provider.

Start a Data Load or Data Link Workflow

Open Catalog Navigator and do the following:

1. Go to the storage provider that contains your source data.
2. Select the bucket and the file or folder and click **Add data**.

The Add data wizard helps you to specify the source and target details, preview the data, review the generated SQL, and create a data load or data link job.

1. Select the Operation

- **Load data**

Copies the source data into a database table. For more information, see [Loading Data](#).

- **Link data**

Creates a reference to the source data without actually copying it. The source data remains in its original location and is available through database objects such as external tables or views. For more information, see [Linking Data](#).

Select the required operation and click **Next** to proceed.

2. Configure Data Structure

Review the **Source** path and edit it as needed.

- **Target settings**

Specify the target action and target table details. For example, for load data you can select **Create Table**, select the **Target schema**, and enter the **Target table** name. Similarly, for link data you can specify table action as **Create External Table**.

- **Parsing settings**

For delimited files, review the parsing settings: **Encoding**, **Delimiter**, and **Header rows**.

- **Column mapping**

Review the column mapping to verify source columns, target columns, data types, length or precision, and format masks. Select or clear columns to include or exclude them from the operation.

3. Preview the Data

Use **Preview** to verify how Data Studio parses the source data before you create the load or link job.

- Select **Table** to view the parsed rows and columns.

- Select **Raw** to inspect the source data as raw text, when available.

4. Review and Create the Workflow

Review the data flow details, such as source, selected mode, target information, and action.

You can click **Show code** to preview the generated SQL.

Note

You can go back to a previous step to change settings or switch between Load data and Link data.

Finally, click **Create data load** or **Create data link** depending on the selected operation.

After creating the data load or link workflow, you can monitor the progress and error information on the **Jobs** page. See [Monitor and Manage Jobs](#).

Start a Livefeed Workflow

Set up a data stream to load data automatically into a table in your database from Object Storage.

Data Streams: A data stream can load data at a specified interval or when a new file is added to the source location. You can continue using other Data Studio features while the data stream completes.

For more information, see [Feeding Data](#).

Create a Livefeed

Open Catalog Navigator and do the following:

1. Go to the storage provider that contains your source data.
2. Select the bucket and the file or folder and click **Create Livefeed**.
3. Specify the **Data Source** details, such as storage link, folder, file type, and credentials. Review the matching files in the selected source.
4. Review the **Source** path and specify **Target settings**, **Parsing settings**, and **Column mapping** as needed.
5. Select the file to preview the data.
6. Select the notification preferences and scheduling information.

You can click **Show code** to preview the generated SQL or go back to a previous step to change any setting.

7. Click **Create** to create the Livefeed data stream.

You can monitor the progress and manage the Livefeed from the **Jobs** page. See [Monitor and Manage Jobs](#).

Share Data

Use Data Share to discover, publish, share, load, link, and query curated data sets in Marketplace.

Data Share is the Data Studio area for marketplace-style data set discovery and publishing. Use **Delta Sharing** in Data Share to share curated data sets with internal or external consumers, including recipients who do not use Oracle Cloud Infrastructure.

About Data sets

A data set is a unit of shared data. A published data set can include a name, namespace, description, owner, link, tags, sample data, statistics, and a listing image.

Note

Use Data Share as a producer to publish data sets and manage published listings.

Use it as a consumer to browse available data sets, review listing details, and load, link, or query shared data.

Before You Begin

Ensure that:

- You selected the target region and compartment.
- You selected or connected to an Autonomous AI Database when the workflow requires a database.
- Your database user has the privileges required for the objects that you want to publish or consume.
- Marketplace or sharing access is enabled when required.

Browse Shared Data sets

Open the Data Share page and do the following:

1. Go to **Marketplace** and select the **Datasets** tab.
2. Search for a data set or browse the available data set cards.
3. Select a data set card to view its listing details before you use it.

A data set card can contain the data set name, description, owner, tags, and listing image.

4. Click **Add data** and select the required operation, **Load data** or **Link data**.

See [Load, Link, and Feed Data](#).

Note

Use Catalog when discovery starts from database objects or Object Storage.

Use Load data or Link data when you already know the source object that you want to use.

Publish a Data set

Open the Data Share page and do the following:

1. Go to **Marketplace** and select the **Datasets** tab.
2. Click **Publish Dataset** and specify the following:
 - Select **Schema** and the **Source** object.
 - Enter the data set **Namespace**, **Name**, and **Description**.
 - Select the sharing target, such as the current compartment, tenancy, pool, or OCID.
 - Select **Listing options**, such as including sample data or statistics or marking the listing as restricted, and enter **Owner (email)**.
 - Optionally, you can enter **Link** and **Tags**, and select a listing image.
3. Preview the listing.
4. Click **Publish** to publish the data set.

View and Manage Published Datasets

Go to the **My Published Datasets** tab to view the data sets that you have published and manage their listings.

For more information, see [The Data Marketplace Tool](#).

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Work With AI Assistant

- [Use AI Assistant](#)
AI Assistant is a Data Studio capability that answers your questions, guides you to workflow actions, generates SQL from natural language requests, and helps you with data enrichment.

Use AI Assistant

AI Assistant is a Data Studio capability that answers your questions, guides you to workflow actions, generates SQL from natural language requests, and helps you with data enrichment.

Before You Begin

Before using AI Assistant for database or data workflows, ensure that:

- You selected the target region and compartment.
- You selected or connected to an Autonomous AI Database when the workflow requires a database.
- The database is AI-ready for the task that requires AI services.
- Required credentials and AI Profile are configured for database-specific AI workflows.
- OCI Permissions allow the signed-in user and the connected database to access the required OCI resources.

About AI Assistant

AI Assistant opens in a side panel, so you can continue working in Data Studio while you review its response.

The assistance available to you depends on your access, configured services, and the Data Studio area where you are working. Some tasks require the connected database to be AI-ready and configured with OCI access, database credentials, and an AI Profile.

Some of the AI-enabled workflows and tasks are explained here.

When to Use AI Assistant

Use AI Assistant when you want to:

- Ask questions about Data Studio tasks and database workflows.
- Create an Autonomous AI Database by submitting a provisioning request.
- Prepare for data-loading or data-linking workflows.
- Generate SQL from natural language for selected catalog objects.
- Get help deciding which Data Studio tool to open next.

Note

For workflows that are not supported by AI Assistant, use the corresponding Data Studio pages to inspect and perform the task manually.

How AI Assistant Works

AI Assistant uses the current Data Studio context when it prepares a response. Context can include the selected region, compartment, connected database, selected catalog objects, and available tool state.

For tasks that make changes, AI Assistant prepares a confirmation form or action panel.

Note

Review the generated values before confirming the action. Data Studio does not make changes, such as creating a database or starting a load, until the workflow reaches its confirmation step.

Open AI Assistant

1. Select the **AI Assistant card** on the home page.

You can also click the **AI Assistant** icon or use the **Ask AI** text box in the header from any page in Data Studio.

2. Enter a question or a request in the AI Assistant chat window.
3. Review the response, action form, generated SQL, or next-step guidance.

Note

Confirm an action only after you verify the generated values.

Create an Autonomous Database with AI Assistant

You can ask AI Assistant to provision an Autonomous AI Database.

Consider the following example.

1. Open AI Assistant.
2. Enter a request, such as provision a new database named analyst.
3. Review the generated **Create an Autonomous Database** form.
4. Enter the administrator password.

You can select **Advanced settings** if you want to review or change the values.

5. Click **Create database** to provision the database.

After creation starts, Data Studio displays the new database on the Databases page with its lifecycle state, such as Provisioning or Available.

Generate SQL with AI

Data Studio provides an option in SQL Worksheet for generating AI-assisted SQL queries. You can enter a plain-language prompt, generate the equivalent SQL, review or edit the generated SQL, and run the query to display the results in a Query Result.

To use natural language queries for SQL statements, ensure that your AI Profile is configured and ready. See [Configure Database Settings](#).

On the **SQL Worksheet** page, do the following:

1. In the SQL Worksheet toolbar, click **Generate SQL with AI**.
2. Select one or more tables to provide context.
3. Enter your request in natural language in the text box for AI.

Note

The text box for entering AI prompts is different from the query editor.

4. Click **Generate SQL** to insert the SQL in the query editor.
5. Review the AI-assisted SQL statement and edit it as needed.
6. Click **Run SQL** to display the result.

AI Assistant Setup

To use AI Assistant in Data Studio, ensure that the following configurations are complete:

- **Databases:** Connect to a database or add a Database Actions URL to perform the required setup. See [Work with Database Connections and Resources](#).
- **OCI Permissions:** Check whether the connected database and signed-in user can access OCI resources required for AI workflows. See [Prepare to Use Data Studio](#).
- **Credentials:** Open **Database Settings** and go to the **Credentials** tab. Create credentials for secure service access if they are not already created. See [Configure Database Settings](#).
- **AI Profiles:** Open **Database Settings** and go to **AI Profiles**. Create an AI profile to use AI-specific services if one is not already created. See [Configure Database Settings](#).

Data Studio indicates that your database is AI-ready in various locations, such as in the header next to the database name and in SQL Worksheet.

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Manage Jobs

- [Monitor and Manage Jobs](#)
View job status and history, review reports, and work with scheduled jobs.

Monitor and Manage Jobs

View job status and history, review reports, and work with scheduled jobs.

Before You Begin

Ensure that:

- You selected or connected to an Autonomous AI Database.
- You have access to view the job history for the selected database user or schema.

About Jobs

You can perform the following tasks with jobs:

- Create a job from a Data Studio page that supports the related task. For example, you can create a job for a data load or live feed workflow.
- Schedule a supported job based on an event, action, or time. Use the available job actions to run, stop, or edit a job when those actions are available.
- Review details about the job, such as the status and history, load report, and execution details.
- Update the job details or cancel a running or queued job when its state allows cancellation.

View Job Details

Open the Jobs page and do the following:

1. Go to **Data Loads** or **Live Feeds** to view the corresponding jobs.
2. Use search to find a specific job.
3. Click a **Job Name** to view its details.

Data Loads Jobs

For each data load job, the **Data Loads** tab displays the following information:

- **Job Name:** The generated or user-facing job name. Select a job name to view additional details.
- **Table Name:** The target table associated with the job.
- **Status:** The current job state indicating whether it is Queued, Running, Completed, or Failed.
- **Source:** The source location, catalog, directory, or cloud storage location.
- **Rows Loaded:** The number of rows loaded, when available.

- **Rows Rejected:** The number of rejected rows, when available.
- **Last Run:** The time of the most recent job execution.

Review the Load Report

For Data Loads, the job details page also displays the following:

- **Load Report**
 - Rows processed, loaded, and rejected
 - Rejected-row information
 - Source and load-mode information
 - Job status and progress
- **Execution History**

Use Execution History to review previous job runs. Execution history can show the last run time, status, and details such as loaded and rejected row counts.
- **Report Details**

View the job identifier and additional log entries when available.

Live Feeds Jobs

For each Live Feed job, the **Live Feeds** tab displays the following information:

- **Feed Name:** The generated or user-facing feed name. Select the name to open the live feed report.
- **Type:** The type is **Live Feed**.
- **Status:** The current job state indicating whether it is Queued, Running, Completed, or Failed.
- **Source:** The source location, catalog, directory, or cloud storage location.
- **Target:** The target table in the database.
- **Mode:** The mode, for example continuous.
- **Data Size:** The data size, when available.
- **Last Run:** The time of the most recent job execution.

For more information, see [The Jobs Feature](#).

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Manage Data Studio Settings

- [Configure Database Settings](#)
Configure database users, credentials, AI profiles, and other settings for the connected database.

Configure Database Settings

Configure database users, credentials, AI profiles, and other settings for the connected database.

Before You Begin

Ensure that:

- You selected or connected to an Autonomous AI Database.
- You are connected as ADMIN or as a database user with the required privileges.
- You have the information required for the credential or AI Profile that you want to create.
- The required **OCI Permissions** are available when a credential or AI profile must access Oracle Cloud services.

Access Database Settings

Connect to a database and click the gear icon next to the database name in the header to open **Database Settings**.

You can then view and configure the following:

- **General**
View information about the connected database, such as version, resources, and tags.
- **Users**
Create and manage database users. You can also search for users and review their access and REST status.
- **SMTP**
Configure email services, such as a local email client on your system.
- **Slack**
Configure notification settings when those options are available.
- **Credentials**
Create and manage connection information for authentication, services, and integrations.
- **AI Profiles**
Create and manage profiles for AI-assisted workflows and configure AI services. While creating an AI profile, you can select a mode, **Essential AI profile**, **NL2SQL profile**, or **RAG profile**.

For more information, see [Data Studio Settings](#).

Create users, credentials, and AI profiles as required for the workflows that you want to use. If an AI workflow still shows that setup is required, use **OCI Permissions** to check the required Oracle Cloud access. See [Prepare to Use Data Studio](#).

Create a Database User

Open the Database Settings page for the connected database and do the following:

1. Go to the **Users** tab and click **Create user**.
2. Enter a user name and set the password.
3. Assign a quota for the default tablespace.

Optionally, you can select whether **Password must change** or **Account locked** at the first sign-in.

Enable for Lakehouse determines whether the user can access external tools and services, such as REST, web access, Data Share, Graph, OML, and Spatial.

4. Under **Advanced options**, you can grant the required roles to the user.

You can click **Show code** to preview the generated SQL.

5. Click **Create user** to create the database user.

For more information, see [The Database Users Page](#).

Create a Credential

On the Database Settings page, do the following:

1. Go to the **Credentials** tab and click **Create credential**.
2. Enter a credential name and, optionally, a description.
3. Select the credential type. You can also use credentials for external providers, such as Azure, AWS, and Google.
4. Enter the required values for the selected credential type.

Note

The remaining fields depend on the credential type you select. Most credential types require a user name and password. For an OCI Signing Keys credential, the required values include the User OCID, Tenancy OCID, Fingerprint, and Private key.

You can select the option **Use as default credential**, if required.

5. Click **Create credential**.

For more information, see [Create Credentials](#).

Create an AI Profile

On the Database Settings page, do the following:

1. Go to the **AI Profiles** tab.
2. Click **Create AI profile** and select a mode:

- **Essential AI profile:** to create a basic AI profile with limited features.
- **NL2SQL profile:** to use object lists of table metadata for generating queries.
- **RAG profile:** to use Vector Index and Embedding Model for semantic search over unstructured data.

Specify the mandatory **Service settings** for the AI Profile.

3. Enter a **Profile name** and select the **AI provider**, **Credential**, **OCI region**, and **AI model**.
4. Under **Advanced settings**, you can review or change additional options, such as settings for cloud services and Generative AI Services that the AI Profile can use.
5. Click **Create AI profile**.

For more information, see [Create an AI Profile](#).

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