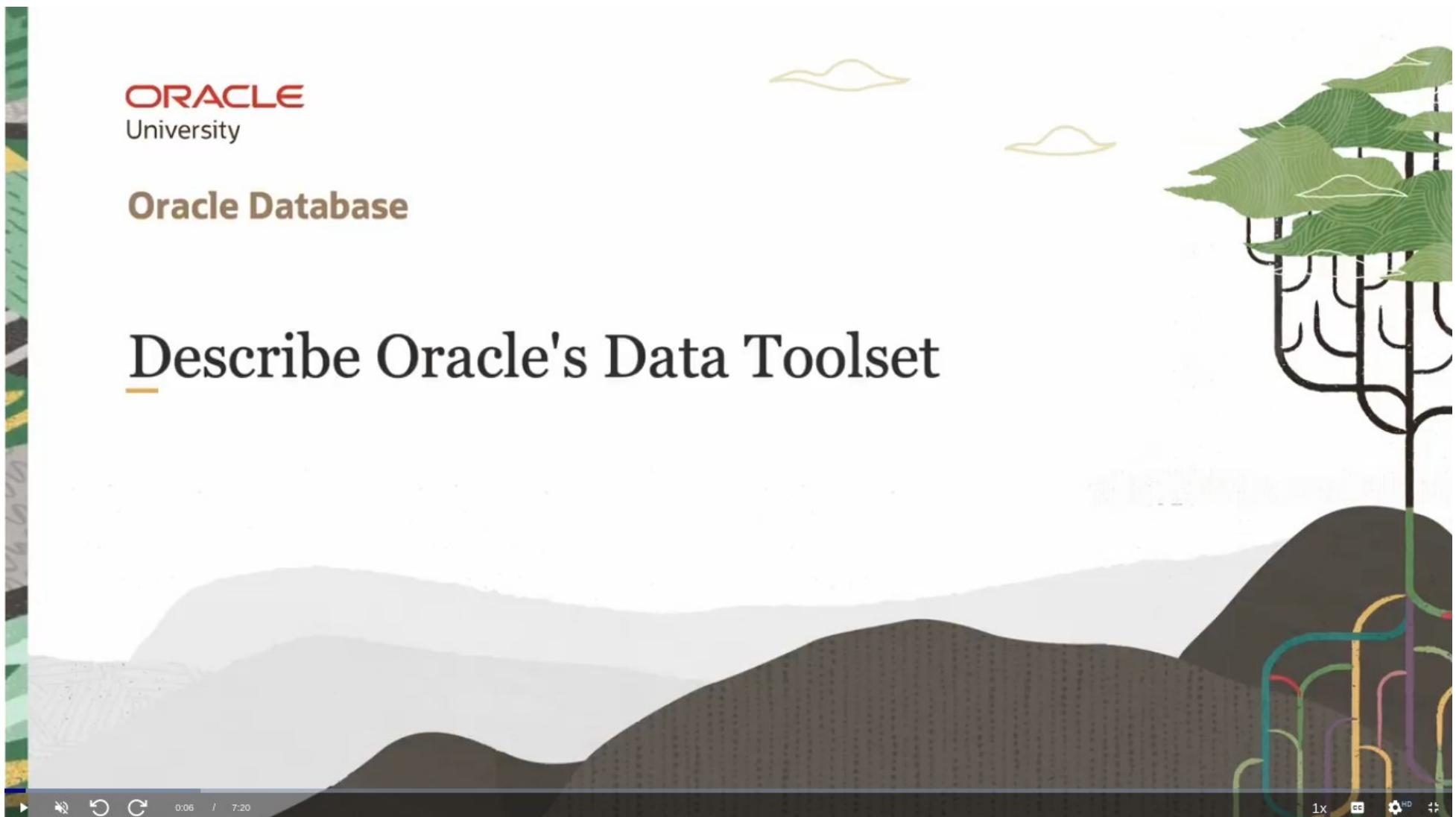


Oracle Database

Describe Oracle's Data Toolset



Autonomous Database with Built-In Tools Benefits All Players



Data Analysis in the Traditional Market

Best-of-breed, enterprise-class tools, tailored for the specialist

Oracle Data Integrator

Data load

Oracle Enterprise Data Quality

Data prep



Semantic modeling

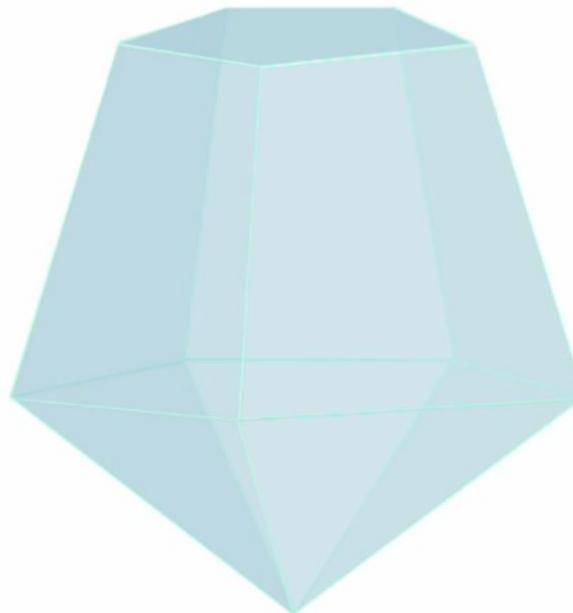


Data analysis

Whole > Sum (Parts)

Benefits of integration are multifaceted

- Integrated toolset
 - Preassembled
 - Preconfigured
 - Pre-deployed
 - Consistent UX
 - Best practices instantiated
- Common components
 - Business model
 - Catalog

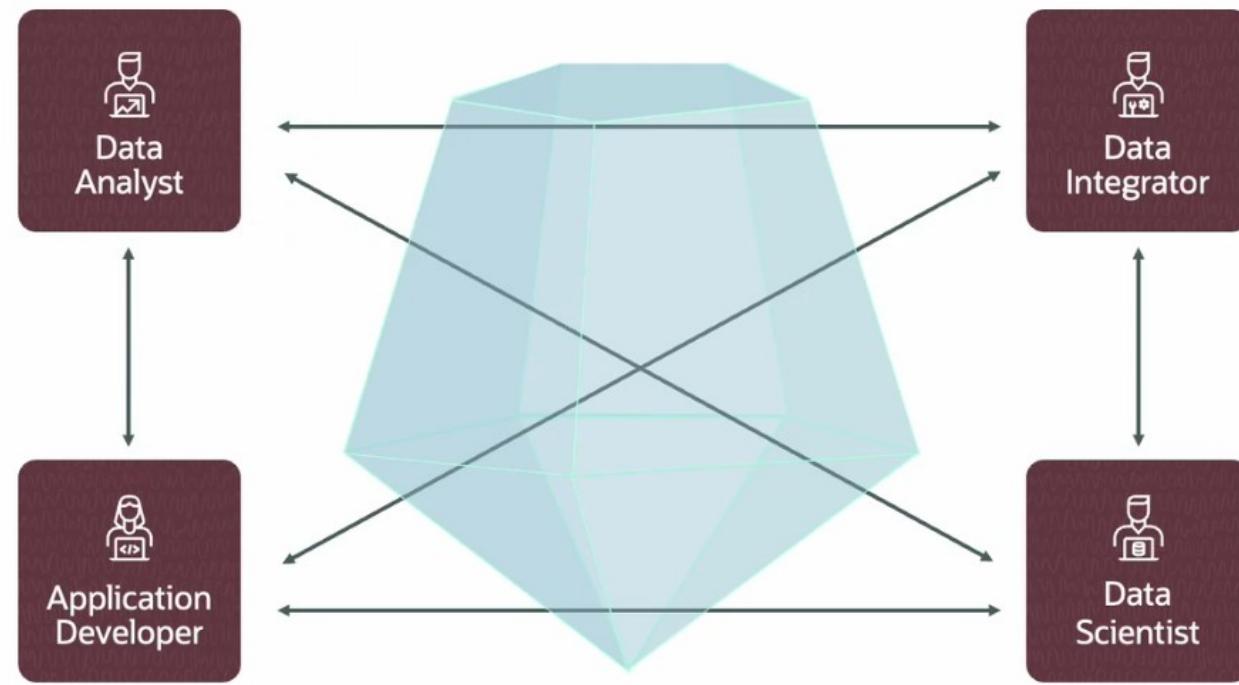


- Integrated data
 - Federated model
 - Common catalog
 - Silos eliminated
 - Common data sources
 - Confidence in lineage
 - Impact analysis

Collaboration by design

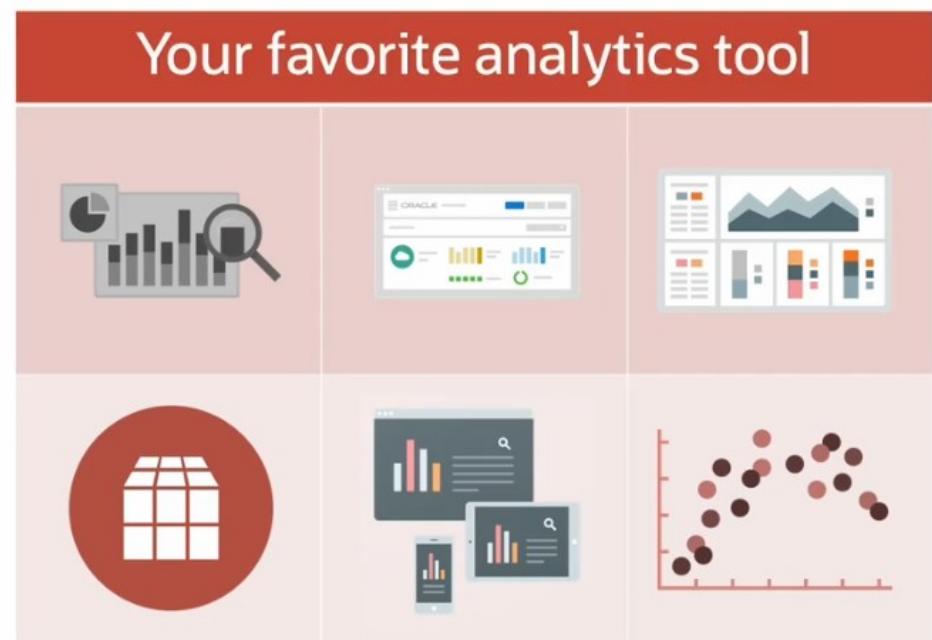
Whole > Sum (Parts)

Collaboration by design



Derive Insights from Data

Open platform – nothing new to learn



Built-In Tool Suite

Nothing more to buy or install

The screenshot shows the Oracle Cloud interface for an Autonomous Database named 'MOVIFESTREAM_PGW'. The top navigation bar includes 'ORACLE Cloud', a search bar, and account information for 'US West (Phoenix)'. Below the header, the page title is 'Overview > Autonomous Database > Autonomous Database Details'. A large green box on the left displays 'ADW' and the status 'AVAILABLE'. The main content area is titled 'Autonomous Database Information' and features several tool sections:

- Oracle Application Express**: Described as a low-code development platform for building scalable, secure enterprise apps. Includes a 'Learn more' link and a 'Open APEX' button.
- Oracle ML User Administration**: A development environment for data analytics and visualizations. Includes a 'Learn more' link and a 'Open Oracle ML User Administration' button.
- SODA Drivers**: APIs for working with JSON documents in Oracle Database. Available for REST, Java, Node.js, Python, PL/SQL, and C. Includes a 'Learn more' link and a 'Download SODA Drivers' button.
- Graph Studio**: For creating property graph databases and automating graph model creation. Includes a 'Learn more' link and a 'Open Graph Studio' button.

At the bottom, there are sections for 'Resources' and 'Metrics', along with standard browser controls and a footer with copyright information.

Built-In Tool Suite

Nothing more to buy or install

The screenshot shows the Oracle Database Actions Launchpad interface. At the top, there's a navigation bar with the Oracle logo, "Database Actions | Launchpad", a search icon, and an "ADMIN" dropdown. Below the navigation is a grid of tool cards categorized into Development, Data Tools, Administration, Monitoring, and Getting Started.

- Development:**
 - SQL: Execute queries and scripts, and create database objects.
 - REST: Deploy REST APIs for your database.
 - APEX: Build web applications rapidly.
- Data Tools:**
 - DATA MODELER: Create relational diagrams for database objects.
 - DATA LOAD: Load or access data from local files or remote databases.
 - DATA INSIGHTS: Discover anomalies, outliers and hidden patterns in your data.
 - DATA TRANSFORMS: Prepare data for analysis with transforms and blending.
 - CATALOG: Understand data dependencies and the impact of changes.
 - BUSINESS MODELS: Create business models for performance and analysis.
- Administration:**
 - DATABASE USERS: Create, edit privileges and other parameters, and REST-enable database users.
- Monitoring:**
 - PERFORMANCE HUB: View consolidated performance data for the database.
- Getting Started:**
 - Charts:** Create visualizations using area, bar, pie, and other popular charting methods from your SQL query results.
 - RESTful Web Services:** Deploy REST APIs for your Oracle database - GET, PUT, POST and DELETE securely using HTTPS with your Oracle data and stored procedures.
 - Load Data:** Populate existing tables or build new ones from local files (Avro, JSON, XML, CSV, or Excel) using our data loading wizard.
 - JSON:** Create collections, documents, add, edit, delete, and browse your documents, and visualize your JSON Data Guides.
- Need Help?**
 - Documentation
 - SQL Developer Community Forum
 - SQL Developer on Twitter

At the bottom of the interface, there are playback controls (rewind, play, fast forward), a progress bar (4:26 / 7:20), and a message: "0 0 0 0 | 9:55:14 PM - REST call resolved successfully." On the far right, there are zoom and settings icons.

Data Load

What do you want to do with your data?

- LOAD DATA Import data into your autonomous database.
- LINK DATA Leave your data in place and let your autonomous database access it.
- FEED DATA Setup an on going feed of new data into your autonomous database.

Where is your data?

- LOCAL FILE Select text or Excel files from your local device.
- DATABASE Select tables from your remote databases.
- CLOUD STORAGE Select buckets from cloud storage (Oracle, S3, Azure, Google).

Explore and Connect

- EXPLORE Inspect data in your autonomous database.
- DATA LOAD JOBS Check your Data Load Jobs.
- CLOUD LOCATIONS Manage connections to your cloud storage (Oracle, S3, Azure, Google).

Getting Started

Setup an Ingest Job
Select how you want to analyze your data and where it is. Link and Feed data are only available for network sources.

Explore
Explore data in your autonomous database.

Manage
Manage your cloud storage locations.

Need Help?

Documentation
SQL Developer Community Forum
SQL Developer on Twitter

1x 5:15 / 7:20

Simple “drag-and-drop” data loading

- Files on local computer
- Files in Cloud Storage (including AWS S3 and Azure Blob Storage)
- Oracle Databases (on premises and in cloud)

Data Load

The screenshot shows the Oracle Database Actions interface with the title "Data Load / Load Cloud Object". On the left, there's a sidebar with a dropdown set to "MOVIE_SALES" and a search bar. Below the search bar is a list of CSV files: Countries.csv, Days.csv, Devices.csv, Months.csv, and Movie_Sales_2020.csv. The main panel displays a configuration for a data load job. It shows a "Source" section with "Movie_Sales_2020.csv (38429244B)" and a "Target" section with "MOVIE_SALES_2020". A trash can icon is visible next to the source entry. At the bottom of the main panel, there's a message: "12:58:05 AM - REST call resolved successfully." The bottom of the screen shows a standard browser toolbar with icons for back, forward, search, and refresh.

Drag-and-drop data load:

- From local files
- From Object Storage

Data Load

The screenshot shows a user interface for data loading. On the left, there are three storage source boxes: 'AWS S3' (green), 'Azure Blob Storage' (purple), and 'GCP' (grey). A vertical line connects them to a central 'Target' area. In the 'Target' area, a file named 'Movie_Sales_2020.csv' is shown with a trash can icon and a pencil icon. Below this, a message says 'Source: Movie_Sales_2020.csv (38429244B)' and 'Target: MOVIE_SALES_2020'. At the bottom of the interface, a status bar displays '12:58:05 AM - REST call resolved successfully.' The video player controls at the bottom indicate the video is at 6:10 of 7:20.

Drag-and-drop data load:

- From local files
- From Object Storage

OCI object store

Data Load

The screenshot shows the Oracle Database Actions | Data Load interface. The main area displays the following steps:

- What do you want to do with your data?**
 - LOAD DATA**: Import data into your autonomous database.
 - LINK DATA**: Leave your data in place and let your autonomous database access it.
 - FEED DATA**: Setup an on-going feed of new data into your autonomous database.
- Where is your data?**
 - LOCAL FILE**: Select text or Excel files from your local device.
 - DATABASE**: Select tables from your remote databases.
 - CLOUD STORAGE**: Select buckets from cloud storage (Oracle, S3, Azure, Google).
- Explore and Connect**
 - EXPLORE**: Inspect data in your autonomous database.
 - DATA LOAD JOBS**: Check your Data Load Jobs.
 - CLOUD LOCATIONS**: Manage connections to your cloud storage (Oracle, S3, Azure, Google).

A blue **Next** button is located at the bottom center of the main content area. To the right, a sidebar titled **Getting Started** contains the following sections:

- Setup an Ingest Job**: Select how you want to analyze your data and where it is. Link and Feed data are only available for network sources.
- Explore**: Explore data in your autonomous database.
- Manage**: Manage your cloud storage locations.
- Need Help?**: Documentation, SQL Developer Community Forum, SQL Developer on Twitter.

At the bottom of the interface, there is a toolbar with icons for search, refresh, and other navigation functions. The status bar at the bottom shows the time as 11:04:19 PM - REST call resolved successfully.

Profile data after loading.

- Click the **Explore** card.
- Select the table.
- Press **Statistics**.

Data Load

The screenshot shows the Oracle Database Actions Catalog interface. The search bar at the top contains the query: "owner: QTEAM AND (type: TABLE OR type: VIEW)". The filters on the left are set to show 5 entities. The main area displays five tables:

- MOVIE_SALES_2020**: Entity type: TABLE, Application: DATABASE, Path: "DB"."MOVIE_SALES_2020", Updated on: 9/30/2021, 3:57:36 PM, 1+ rows.
- DEVICES**: Entity type: TABLE, Application: DATABASE, Path: "DB"."DEVICES", Updated on: 9/30/2021, 3:37:24 PM, 1+ rows.
- MONTHS**: Entity type: TABLE, Application: DATABASE, Path: "DB"."MONTHS", Updated on: 9/30/2021, 3:37:23 PM, 1+ rows.
- DAYS**: Entity type: TABLE, Application: DATABASE, Path: "DB"."DAYS", Updated on: 9/30/2021, 3:37:22 PM, 1+ rows.
- COUNTRIES**: Entity type: TABLE, Application: DATABASE, Path: "DB"."COUNTRIES", Updated on: 9/30/2021, 3:37:20 PM, 1+ rows.

The sidebar on the right is titled "Suggestions" and includes sections for "Recent objects", "User configured search", and "Tables owned by QTEAM".

Profile data after loading.

- Click the **Explore** card.
- Select the table.
- Press **Statistics**.

Data Load

The screenshot shows the Oracle Database Actions Catalog interface. The main title bar reads "MOVIE_SALES_2020". Below it, there's a preview section with the following details:

- Table Size (in bytes): 31391166
- Number of Rows: 541227

On the left, there are several filters:

- Status: Valid, Invalid
- Partitioned: Yes, No, Null
- External: Yes, No, Null
- Sharded: Yes, No

The main area displays data lineage for various entities:

Entity	Count	Description
COUNTRY	66380	United States (66380)
COUNTRY	41150	Japan (41150)
COUNTRY	38476	United Kingdom (38476)
COUNTRY	37778	Brazil (37778)
COUNTRY	29873	Mexico (29873)
COUNTRY	29760	France (29760)
DAY	88340	Sunday (88340)
DAY	83089	Saturday (83089)
DAY	75789	Monday (75789)
DAY	70603	Friday (70603)
DAY	68940	Tuesday (68940)
DAY	67758	Thursday (67758)
MONTH	53673	April (53673)
MONTH	53083	May (53083)
MONTH	50059	December (50059)
MONTH	47980	July (47980)
MONTH	46156	June (46156)
MONTH	44098	March (44098)
GENRE	62305	Adventure (62305)
GENRE	55971	Drama (55971)
GENRE	55751	Sci-Fi (55751)
GENRE	38982	Comedy (38982)
GENRE	35483	Thriller (35483)
GENRE	34519	War (34519)
CUSTOMER_SEGMENT	22	Distinct: 22, Null: 0
DEVICE	22	Distinct: 22, Null: 0

At the bottom, there are navigation icons and a status message: "12:08:26 AM - REST call resolved successfully."

Identify data quality problems.

Data Load

The screenshot shows the Oracle Database Actions Catalog interface. On the left, there are filters for Status (Valid, Invalid), Partitioned (Yes, No, Null), External (Yes, No, Null), and Sharded (Yes, No). The main area displays a histogram titled "MOVIE_SALES_2020" for the "DAY" column. The histogram shows the number of rows for each day of the week. The data is as follows:

Day	Number of Rows
FRIDAY	2725
Friday	70603
MONDAY	2923
Monday	75789
SATURDAY	3139
SUNDAY	3386
Saturday	82089
Sunday	88340
THURSDAY	2577
TUESDAY	2700
Thursday	67758
Tuesday	68949
WEDNESDAY	2595
Wednesday	67663

At the bottom of the histogram, it says "Number of rows". A "Close" button is located at the bottom right of the histogram panel.

On the bottom status bar, it says "12:08:26 AM - REST call resolved successfully."

On the far right, there is a list of bullet points under the heading "Identify data quality problems.":

- 12 months (we only want 3)
- 14 days in a week!
- Drill in to investigate:
 - Inconsistent letter case

Data Load

Summary of demonstration

The screenshot shows the Oracle Database Actions - Data Load interface. It includes sections for 'What do you want to do with your data?' (Load Data, Link Data, Feed Data), 'Where is your data?' (Local File, Database, Cloud Storage), and 'Explore and Connect' (Explore, Data Load Jobs, Cloud Locations). A sidebar on the right provides 'Getting Started' information, including 'Setup an Ingest Job' and 'Explore' options, and a 'Need Help?' section with links to documentation, forums, and social media.

Simple “drag-and-drop” data loading

- Files on local computer
 - Multiple locations
 - Different file types
- Files in Cloud Storage
- Inspect loaded data
 - Identify quality problems.

