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HOCHSCHULE DARMSTADT  
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**Robert Marz**  
**DATABEE**  
Die IT-Architekten

# Oracle Database Actions Loading Data

Montag, 26. März 13:00



# Robert Marz – Independent Consultant

## Primary Role

Senior Technical Architect  
with database centric view of the world

## DOAG (German Oracle User Group)

Active Member of Database Community  
Responsible for Cloud Topics



**Databees.**



**DATABEE**  
Die IT-Architekten



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# Oracle Database Actions



WATCH  
LIVE



# Demo Database Actions / SQL Developer Web 00

ORACLE Cloud Search resources, services, documentation, and Marketplace

Overview > Autonomous Database > Autonomous Database details

AVAILABLE

### Announcements

- New Feature: Introducing a new disaster recovery option - Backup-Based Disaster Recovery. [Learn more.](#)
- New Feature: You can now export data to object storage in Parquet format using DBMS\_CLOUD. [Learn more.](#)
- Learn about other [new features in Autonomous Database here.](#)

ADB-19c-TP-AFree-01 Always Free

Database actions Database connection Performance hub Manage scaling More actions

Autonomous Database information Tools Tags

#### General information

**Database name:** ADB19cAdree01

**Workload type:** Transaction Processing

**Compartment:** robertdatabee (root)/Always-Free-Stuff

**OCID:** ...67562a [Show](#) [Copy](#)

**Created:** Sun, Mar 26, 2023, 18:38:29 UTC

**OCPU count:** 1

**OCPU auto scaling:** Disabled ⓘ

**Storage:** 20 GB

**Storage auto scaling:** Disabled ⓘ

#### Infrastructure

**Dedicated infrastructure:** No

#### Disaster recovery ⓘ

**Role:** -

#### Backup

**Last automatic backup:** Sun, Mar

**Next long-term backup:** -

Navigate to your Autonomous Database and Cclick „Database Actions“

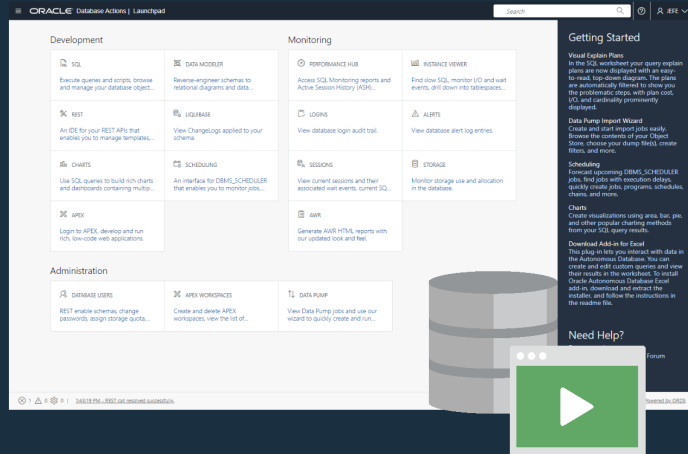


# Demo Database Actions / SQL Developer Web 01

## SQL Developer Web

The power of SQL Developer...in your browser

- SQL Worksheet – SQL, PLSQL, MLE/JS
- Charts & Dashboarding
- Schema Browser
- Performance & Instance Management
- Diagramming/Dictionary Reports
- JSON Document Management
- REST Workshop
- User Management
- Data Loading / Data Pump
- DBMS Scheduler
- APEX Workspace Management



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Source: @thatjeffsmith <https://speakerdeck.com/thatjeffsmith/oracle-sql-developer-web-2022-features>



# Demo Database Actions / SQL Developer Web 02

## Database Actions

- “Launchpad”/Home
- Access to features determined by:
  - Environment
  - Version of Oracle
  - Database USER privs

ORACLE Database Actions | Launchpad

Development

- SQL: Execute queries and scripts, and create database objects
- REST: Deploy REST APIs for your database
- CHARTS: Visualize data from your database
- DATA MODELER: Create relational diagrams for database objects
- JSON: Manage your JSON Document Database
- APEX: Build web applications rapidly

Monitoring

- PERFORMANCE HUB: View consolidated performance data for the database
- LOGS: Monitor login and logoff statistics in the database
- SESSIONS: Monitor open sessions in the database
- INSTANCE VIEWER: View real time database performance graphically
- ALERTS: Monitor alerts logged in the database
- STORAGE: Monitor storage use and allocation in the database

Administration

- DATABASE USERS: Create, edit privileges and other parameters, and REST-enable

Data Tools

- DATA PUMP: Import and export data quickly with data pump
- DATA LOAD: Load or access data from local files or remote databases
- CATALOG: Understand data dependencies and the impact of changes
- DATA INSIGHTS: Discover anomalies, outliers and hidden patterns in your data
- BUSINESS MODELS: Create business models for performance and analysis

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

Autonomous Exclusive

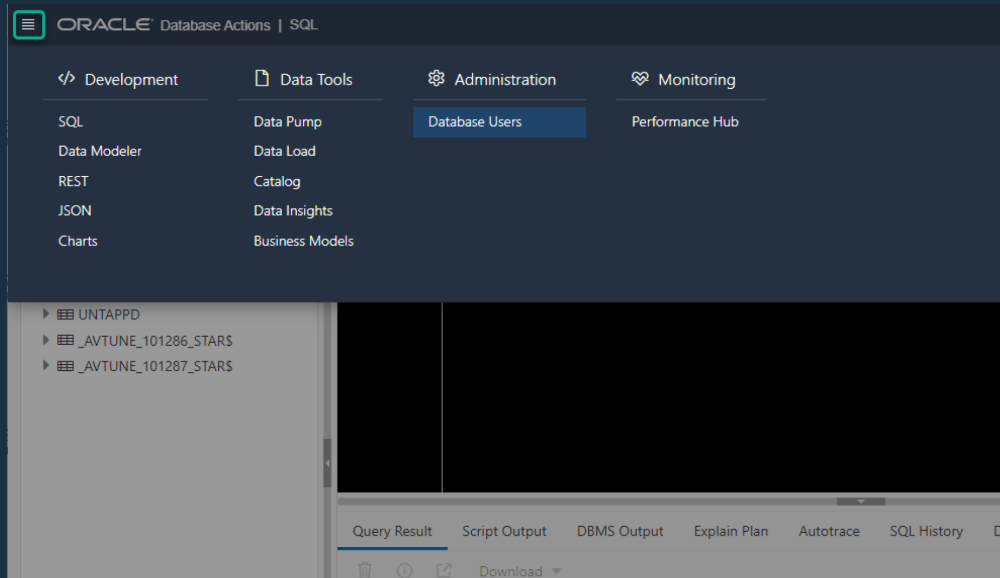
8

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Source: @thatjeffsmith <https://speakerdeck.com/thatjeffsmith/oracle-sql-developer-web-2022-features>



## Usability Features: Mega Menu



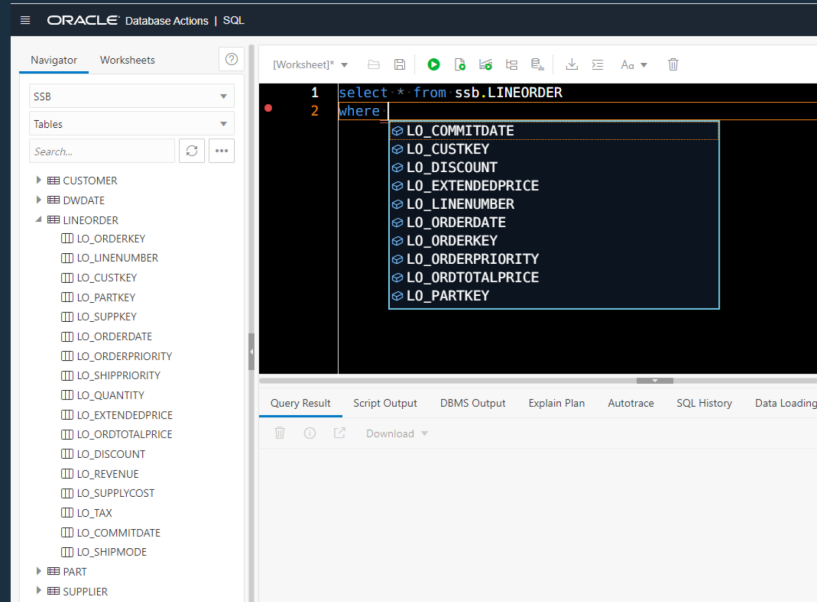
Source: @thatjeffsmith <https://speakerdeck.com/thatjeffsmith/oracle-sql-developer-web-2022-features>



# Demo Database Actions / SQL Developer Web 04

## SQL

- Queries & Scripts
- Tuning
- Imports & Exports
- Editor Assistance
  - Formatting
  - Insight
  - Parser
  - SQL History
  - Command Palette



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Source: @thatjeffsmith <https://speakerdeck.com/thatjeffsmith/oracle-sql-developer-web-2022-features>



# Demo Database Actions / SQL Developer Web 05

## SQL

### Query Execution

- Same Keyboard Shortcuts, e.g., CTRL+ENTER
- Grid or text presentation
- SQL\*Plus Script Engine Support
- Quick Download Popular Formats
  - CSV, JSON, XML, TEXT

```
1  
2  
3  
4 select * from ssb.LINEORDER  
5 fetch first 100 rows only;
```

Query Result | Script Output | DBMS Output | Explain Plan | Autotrace | SQL History | Data Loading

Download | Execution time: 0.166 seconds

	lo_orderkey	lo_linenumber	lo_custkey	lo_partkey	lo_suppley
1	5926214917	5	24881477	1204683	1630
2	5926214917	6	24881477	305071	640
3	5926214917	7	24881477	512840	1054
4	5926214950	1	12970552	890822	1421



Source: @thatjeffsmith <https://speakerdeck.com/thatjeffsmith/oracle-sql-developer-web-2022-features>



# Demo Database Actions / SQL Developer Web 06

## SQL: full featured editor

The screenshot shows the SQL Developer Web editor interface. The main window displays a SQL script with the following content:

```
1 BEGIN
2   DBMS_SCHEDULER.CREATE_JOB (
3     job_name => 'TEST_BREAKS',
4     job_type => 'PLSQL_BLOCK',
5     job_action => 'begin
6     null;
7     dbms_output.put_line(sysdate - 'He
8 end;',
9     number_of_arguments => 0,
10    start_date => NULL,
11    repeat_interval => NULL,
12    end_date => NULL,
13    enabled => FALSE,
14    auto_drop => FALSE,
15    comments => 'jeffs job');
16
17
18
19
20   DBMS_SCHEDULER.SET_ATTRIBUTE(
21     name => 'TEST_BREAKS',
22     attribute => 'store_output', value => TRUE);
23   DBMS_SCHEDULER.SET_ATTRIBUTE(
24     name => 'TEST_BREAKS',
25     attribute => 'logging_level', value => DBMS_SCHEDULER.LOGGING_OFF);
26
27
```

A context menu is open over the script, listing various editing actions with their keyboard shortcuts:

- Replace (Ctrl + H) recently used
- Add Cursor Above (Ctrl + Alt + UpArrow) other commands
- Add Cursor Below (Ctrl + Alt + DownArrow)
- Add Cursors To Bottom
- Add Cursors To Line Ends (Shift + Alt + I)
- Add Cursors To Top
- Add Line Comment (Ctrl + K) (Ctrl + C)
- Add Selection To Next Find Match (Ctrl + D)
- Add Selection To Previous Find Match
- Blur (Mac Only)

Source: @thatjeffsmith <https://speakerdeck.com/thatjeffsmith/oracle-sql-developer-web-2022-features>



## Data Grids

- Click to Sort
- Single Record View
- Advanced Export
- Type Viewers

	lo_orderkey	lo_linenum	lo_custkey	lo_partkey	lo_suppkey	lo_orderdate	lo_orderpri
1	5926214917	5	24881477	1204683	1630074	11/10/1997, 12:00:C	4-NOT SPI
2	5926214917	6	24881477	305071	640630	11/10/1997, 12:00:C	4-NOT SPI
3	5926214917	7	24881477	512840	1054646	11/10/1997, 12:00:C	4-NOT SPI
4	5926214950	1	12970552	890822	1421154	1/1/1992, 12:00:00.	4-NOT SPI
5	5926214950	2	12970552	443805	1324268	1/1/1992, 12:00:00.	4-NOT SPI
6	5926214950	3	12970552	1221797	960958	1/1/1992, 12:00:00.	4-NOT SPI
7	5926214950	4	12970552	929345	806812	1/1/1992, 12:00:00.	4-NOT SPI
8	5926214950	5	12970552	1099730	80846	1/1/1992, 12:00:00.	4-NOT SPI
9	5926214951	1	16040209	1286907	80181	5/9/1997, 12:00:00.	5-LOW



Source: @thatjeffsmith <https://speakerdeck.com/thatjeffsmith/oracle-sql-developer-web-2022-features>



# Loading Exercise Data



## Loading Exercise Data - Sources



The Exercises will be based on Netflix  
GDPR Data.



You can request your own data here:  
<https://www.netflix.com/account/getmyinfo>  
This takes some time (usually a couple of  
hours)



In the meantime, I offer a set with my  
personal viewing data here:  
<https://my.hidrive.com/lnk/8jSiPSO5>

A glowing blue neon circle is centered on a dark blue brick wall. Inside the circle, the words "WATCH" and "LIVE" are written in a white, sans-serif font, stacked vertically. The circle and text have a soft blue glow that blends into the wall's texture.


WATCH  
LIVE



# Demo Loading Exercise Data 00

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**Role:** -

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**Next long-term backup:** -

Navigate to  
your  
Autonomous  
Database and  
Click  
„Database  
Actions“



# Demo Loading Exercise Data 01

ORACLE Database Actions | Launchpad Suchen

Entwicklung		Data Studio	
SQL Führen Sie Abfragen und Skripte aus, durchsuchen und verwalten Sie...	DATA MODELER Führen Sie Reverse Engineering für Schemas auf relationale Diagramm...	DATA STUDIO - ÜBERBLICK Data Studio-Tools	DATALOAD Daten aus lokalen Dateien oder Remotedatenbanken laden oder...
REST Eine IDE für Ihre REST-APIs, mit der Sie Vorlagen, Handler und OAuth-...	LIQUIBASE "ChangeLogs anzeigen" wurde auf Ihr Schema angewendet.	KATALOG Datenabhängigkeiten und die Auswirkungen von Änderungen...	DATEN-INSIGHTS Anomalien, Ausreißer und verborgene Muster in den Daten...
JSON Erstellen Sie Sammlungen, laden Sie Dokumente hoch, fragen Sie Ihre...	DIAGRAMME Verwenden Sie SQL-Abfragen, um umfassende Diagramme und...	DATENTRANSFORMATIONEN Daten für Analyse und andere Anwendungen transformieren.	DATENANALYSE Daten analysieren.
PLANUNG Eine Schnittstelle für DBMS_SCHEDULER, mit der Sie...	ORACLE MACHINE LEARNING Oracle Machine Learning stellt mehrere Komponenten bereit, die...		
APEX Melden Sie sich bei APEX an, entwickeln und führen Sie...	GRAPH STUDIO Mit Oracle Graph Studio können Sie Eigenschaftsgraphdatenbanken...		

Administration Überwachung

Click on „Dataload“

DATALOAD  
Daten aus lokalen Dateien oder Remotedatenbanken laden oder darauf



# Demo Loading Exercise Data 02

ORACLE Database Actions | Launchpad

Überblick

Dataload

Analyse

Insights

Katalog

Was soll mit Ihren Daten geschehen?

 DATEN LADEN

Importieren Sie Daten in die autonome Datenbank. ✓

 LINKDATEN

Belassen Sie die Daten an ihrem Speicherort, und lassen Sie die autonome Datenbank darauf zugreifen.



DATEN PER FEED ZUFÜHREN

Richten Sie eine fortlaufende Zufuhr von Daten per Feed in die autonome Datenbank ein.

Make sure. these are selected

Wo befinden sich Ihre Daten?

 LOKALE DATEI

Wählen Sie Text- und Excel-Dateien im lokalen Gerät aus. ✓

 DATENBANK

Wählen Sie Tabellen in den Remotedatenbanken aus.

 CLOUD-SPEICHER

Wählen Sie Objekte in URLs aus.

Weiter

Click

Administration



# Demo Loading Exercise Data 03

ORACLE Database Actions | Launchpad

Suchen



ADMIN

Überblick

Dataload

Analyse

Insights

Katalog

Dataload > Lokale Dateien



Start

Stopp



Drag all your  
downloaded \*.csv  
files here

Zum Hochladen hier per Drag-and-Drop ablegen  
oder

Dateien auswählen



# Demo Loading Exercise Data 04

ORACLE Database Actions | Launchpad  ADMIN

Dataload > Lokale Dateien

Start Stop

	kerg.csv (179 KB) Tabelle erstellen: KERG	⋮
	kerg2.csv (2 MB) Tabelle erstellen: KERG2	⋮
	Ratings.csv (8 KB) Tabelle erstellen: RATINGS_1	⋮
	IpAddressesStreaming.csv (10 KB) Tabelle erstellen: IPADDRESSESSTREAMING_1	⋮
	Profiles.csv (758 Bits) Tabelle erstellen: PROFILES_1	⋮
	MessagesSentByNetflix.csv (331 KB) Tabelle erstellen: MESSAGESENTBYNETFLIX_1	⋮
	ViewingActivity.csv (534 KB) Tabelle erstellen: VIEWINGACTIVITY_1	⋮

Click „Start“



# Demo Loading Exercise Data 05

ORACLE Database Actions | Launchpad  ADMIN

Dataload > Lokale Dateien

Start **Stopp** Status: Wird ausgeführt (4/7) - Gesamtzeit 00:26 Sekunden

	kerg.csv (179 KB) 320 Zeile(n) geladen Abgeschlo... Tabelle erstellen: KERG
	kerg2.csv (2 MB) 18824 Zeile(n) geladen Abgeschlo... Tabelle erstellen: KERG2
	Ratings.csv (8 KB) 119 Zeile(n) geladen Abgeschlo... Tabelle erstellen: RATINGS_1
	IpAddressesStreaming.csv (10 KB) 55 Zeile(n) geladen Abgeschlo... Tabelle erstellen: IPADDRESSESSTREAMING_1
	Profiles.csv (758 Bits) Tabelle erstellen: PROFILES_1
	MessagesSentByNetflix.csv (331 KB) 0 Zeile(n) geladen Tabelle erstellen: MESSAGESENTBYNETFLIX_1

Tables are created and Data is loading..  
When done, Click on „Ferig“



# Demo Loading Exercise Data 06

ORACLE Database Actions | Launchpad

Was soll mit Ihren Daten geschehen?

**DATEN LADEN**  
Importieren Sie Daten in die autonome Datenbank.

LINKDATEN

Überblick  
Dataload  
Analyse  
Insights  
Katalog

Suc

Click on „Database Actions“

Click on „SQL“

ORACLE Database Actions | Launchpad

Entwicklung

**SQL**  
Führen Sie Abfragen und Skripte aus, durchsuchen und verwalten Sie...

REST  
Eine IDE für Ihre REST-APIs, mit der Sie Verlagen, Handler und OAuth...

Führen Sie Abfragen und Skripte aus, durchsuchen und verwalten Sie Datenbankobjekte, laden Sie Dateien, erstellen Sie Diagramme, und optimieren Sie SQL-Abfragen mit grafischen Ausführungsplänen.

"ChangeLogs anzeigen" wurde auf Ihr Schema angewendet.



## Demo Loading Exercise Data 07

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Here are your new Tables,  
full with data

# Conclusion





# Oracle Database Actions & Loading Data

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