Oracle® Database Oracle Autonomous Database Data Share Quick Start Guide



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Oracle Database Oracle Autonomous Database Data Share Quick Start Guide, Release 24.1

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1 Welcome to Oracle Data Sharing

This Quick Start Guide familiarizes you with Data Share technology background, some of its benefits, and includes step-by-step How To's on using Oracle Autonomous Database as a data share provider and a data share recipient.

- What is Data Sharing?
 Data Sharing allows customers to improve their business and open up new opportunities.
 Examples are provided.
- Traditional ways to share data Sharing data is nothing new. Some examples of how users used to share data are given.
- The modern way of sharing data Modern data sharing must be open, secure, real-time, vendor-agnostic, and avoid the pitfalls of extracting and duplicating data for individual consumers of data in a collaborative environment.
- Modern data sharing how it works The high level sequence of events is explained, for users consuming data made available through the delta sharing protocol.
- How to Access and Enable the Data Share Tool The Data Share tool is used to provide data shares and to consume data shares. This tool

is included in the Oracle Autonomous Database Data Studio.

What is Data Sharing?

Data Sharing allows customers to improve their business and open up new opportunities.

Data Sharing scenarios:

- One organization shares data across lines of business (LOBs)
 For example, an HR department can share statistical employee data with the Financial department for cost analysis.
- Business to Business (B2B)
 For example, a retailer shares regional sales and inventory data with a supplier to help improve the supplier's production line and locations.
- Business to Customers (B2C)
 For example, a restaurant shares historical time-based pattern of busyness to allow customers to plan for their reservations.

Oracle Data Sharing offers the following sharing options:

- Versioned Data Sharing
 In this type of share, data is shared and published as well-defined, known, as-of-snapshots. At the time of publication, the tool generates and stores the data share as parquet files in the specified bucket. The recipient can directly access the share in the object store. See Share Data Versions Using Object Storage.
- Live Data Sharing



In this type of share the recipient accesses data directly from the remote Oracle table or view owned by the producer. This type of share gives the recipient the latest data. The advantage of this mode is that the data is up to date as of the time of query. See Share Live Data Using Direct Connection.

For further information on the Data Share tool usage and limitations, see The Data Share Tool.

Traditional ways to share data

Sharing data is nothing new and users did this before. Some examples of how users used to do data sharing in the past are:

- Send data via email
- Share data through an FTP server
- Use application-specific APIs for data extraction
- Leverage vendor specific tools to copy relevant data

While these methods work in general, they come with certain drawbacks:

- Managing separate processes for data extraction, preparation or remote access are laborintensive.
- Extracting and duplicating data is prone to data staleness.
- Architectures and processes can become very difficult to maintain and hard to scale.
- Redundant data extraction can introduce format compatibility issues.
- Data extraction and preparation must handle sensitive information properly.

The modern way of sharing data

Modern data sharing must be open, secure, real-time, vendor-agnostic, and avoid the pitfalls of extracting and duplicating data for individual consumers of data in a collaborative environment. Delta Sharing is an open protocol for secure real-time data exchange of large datasets that satisfies all these criteria, supported by multiple clients and program languages, and vendor agnostic.





The following graphic gives an overview of the open eco system as of June 2023 that supports delta sharing:

The open Delta Sharing protocol is aimed to solve the following problems:

- Share data without copying it to another system
- Producer controls the state of data (version of data)
- Be an open cross-platform solution
- Support a wide range of clients such as Power BI, Tableau, Apache Spark, pandas and Java
- Provide flexibility to consume data using the tools of choice for BI, machine learning and AI use cases
- Provide strong security, auditing, and governance
- Scale to massive data sets

Modern data sharing - how it works

You can share and consume versioned data, or live data.

Share Versioned Data Using Object Storage - how it works

At the high level, when a user consumes data made available through the delta sharing protocol, the following happens:

- The Delta Sharing Server creates a data share that consists of files from an object store.
- The Delta Sharing Server grants recipients access to the data share, and sends an invitation subscription email to Delta Sharing Clients.
- The Delta Sharing Client issues a request to the Delta Sharing Server and provides a bearer token. If the token is valid, the Delta Sharing Server authenticates the user and provides pre-authenticated links for the Delta Sharing Client.
- The Delta Sharing Client directly accesses the shared data files in the object store that correspond to the shared data, e.g., a table, using the pre-authenticated links from the Delta Sharing Server.



Share Live Data Using Direct Connection - how it works

At the high level, when a user consumes live data, the following happens:

- The live share producer, creates a share consisting of selected tables and views to be shared.
- The producer associates the data share with consumers and grants access to the data share.
- The consumer browses a list of available live shares, selects the live share they want to receive data from and subscribes to it.
- The consumer derives views from the tables in the selected share and queries the views to access to the underlying data.

How to Access and Enable the Data Share Tool

The Data Share tool is used to provide data shares and to consume data shares. This tool is included in the Oracle Autonomous Database Data Studio.

Before you can share or consume data using the Data Share tool, navigate to the Oracle Autonomous Database Data Studio, launch the Data Share tool and enable sharing.

Follow these steps:

- Navigate to the Data Studio on your Autonomous Database instance. See Data Studio Overview Page for further instructions.
- 2. Select Data Share.

	i -	Search Database (Ctrl+K)	ৎ 📀
			226.00
Pinned & Recently Visited	Development Data Studio Administration Downloads Mon	itoring Related Services	
لم Data Studio Overview	Data Share		\$
ë↑ Data Load	Quickly and securely share tables in your Autonomous Database with o	other users and Databases	- 11
-K Catalog	Provider and Consumer		- 11
$\mathcal{P}_{\mathbf{q}}$ Data Insights	See the Quick Start Quick for details on how to share data sets with multiple incidents Quick Start Qui	*	- 11
🕀 Data Transforms	Try the weekeloop() is Like on how to show data sets with multiple incipients PLSQ. Data Studies (Wee + Share Usage Report	0	- 11
瞫 Data Analysis	Top 3 accessed Shares C Top 3 accessed Tables	0	- 11
∝ Data Share			•

3. On the Data Share home page, click **Enable Sharing**.



Provider and Consumer		
PROVIDE SHARE	C O N S U M E	S H A R E
See the Quick Start Guide for details on how to share data sets with multiple	recipients	Quick Start Guide
Try the workshop(Live Lab) on how to share data sets with multiple recipients	PLSQL	Data Studio (Web UI)
Users should have enabled sharing permision to provider share. Control whic	ch users can provide shares	Enable Sharing

4. From the Available Schemas column, select the user schema you want to enable and move it to the Selected Schemas column. Click **Save**.

Enable Sharing	
Available Schemas	Selected Schemas
TEST	ADMIN
	>
	<
	«
Logged-in user privileges are being modified. You should logout and	login to have updated privileges
Show code	Save

- 5. Log out and log in again to update privileges.
- 6. Repeat previous steps to navigate to the Data Share tool. You can expand the tool on the left navigation menu to drill down to see details regarding provided shares and consumed shares.
 - To create a data share, select **Provide Share** at the top of the page. For instructions, see Use Oracle as a Share Provider for Versioned Data, and Use Oracle as a Data Share Provider for Live Data.
 - If you want to be the recipient of a data share, select **Consume Share**. For instructions, see Use Oracle as a Data Share Recipient for Versioned Data, and Use Oracle as a Data Share Consumer of Live Data.

≡	ORACLE	Database Actions Data Share	Search Database (Ctrl+K) Q	오 ADMIN 🗸
ŵ	Overview	Provider and Consumer		1
e,	Data Load 🕨			
R	Analysis	PROVIDE SHARE	CONSUME SHARE	
ዲ	Insights	· ·	•	
-⊀	Catalog			
œ	Data Share ▶	See the Quick Start Guide for details on how to share data sets with multiple recipients	Quick Start	Guide
		Try the workshop(Live Lab) on how to share data sets with multiple recipients	PLSQL Data Studio (M	/eb UI)
		Sharing permission should be enabled to allow user to proceed with creating share.	Enable Sha	iring
		▲ Share Usage Report		
		No share usage data available		Refresh



2 Share Data Versions Using Object Storage

Share data as a set of distinct versions, such as at the end of each day. The recipient will only see changes to the data when you publish a new version.

- Use Oracle as a Share Provider for Versioned Data
 Use the Create Share wizard to define data shares, and associate them with recipients.
- Use Oracle as a Data Share Recipient for Versioned Data Several simple steps are required to make shared data available to you within the Oracle Autonomous Database.

Use Oracle as a Share Provider for Versioned Data

Use the Create Share wizard to define data shares based on object storage data, and associate them with recipients. A single data share can consist of multiple shared objects that are shared with one or multiple recipients.

- High-Level Steps for Producing Shares for Versioned Data Providing access to shared data involves defining data shares and inviting recipients to consume from them.
- How-To Instructions for Producing Shares for Versioned Data Use the Data Share wizard to create and publish data shares for versioned data.

High-Level Steps for Producing Shares for Versioned Data

Providing access to shared versioned data involves defining data shares from object storage, selecting tables to include in the share, and inviting recipients to consume from them.

The high-level steps for providing data shares include:

High-Level Step	Description
1. Define general data share details	Provide a name and an optional description for the data share.
2. Specify the Object Storage location	Select the Object Storage for this data share from a drop down of available cloud locations.
3. Select the tables to share	Select the tables you want to share.
4. Associate the data share with recipients	Grant recipients access to the data share. Send an invitation subscription email to recipients.

How-To Instructions for Producing Shares for Versioned Data

Use the Data Share wizard to create and publish shares for versioned data.

Follow these steps:

- 1. Define general data share details.
 - a. Go to the Data Share Tool. See How to Access and Enable the Data Share Tool, for instructions.



b. Click Provide Share.

PROVIDE SHARE	CONSUME SHARE
•	•

c. Click Provider Identification.

≡	ORACLE	Database Actions Data Share	Search Database (Ctrl+K)	۹ (② R admin ~
ଜ	Overview	Data Share > Provide Share			
₽,	Data Load 🕨				
R	Analysis	Set Provider Identification		Provider Id	lentification
ዲ	Insights	Provider Identification should be set before data can be shared. Share Provider Identification will be av any share is granted.	ailable to the recipients with whom		
K	Catalog				
ж	Data Share ⊳				

- d. Enter a name for the share provider, the share provider email address and a description, then click **Save**. This example has the following entries:
 - Name: Reviews
 - Email: <obscured>
 - Description: Hotel reviews

Provider Identification	
General	SMTP Configuration (Optional)
Give a name and a description to iden the database user currently logged in.	tify how recipients will see you. This description is specific to
Name *	
Reviews	
Email *	
(WHERE)	
Description *	
Hotel reviews	
	1
	Save Cancel

e. Click Create Share.



0		
SHARES	RECIPIENTS	
•	•	

f. Enter the Name for the data share on the Create Share dialog, then click **Next**. This example uses **Reviews** for the Name.

Create Share						
1	2	3		- 4		
General	Publish Details	Select Tables		Recipier	nts	
Name *						^
Reviews						
Description						
						¥
0		Back	Next	Create	Cancel	

2. Specify the Object Storage location.

Select **SHARE VERSIONS USING OBJECT STORAGE**. Use the **Select Cloud Location** drop down to find the bucket you want to share. Select the bucket and click **Next**.

Note:

Data Share only supports OCI Native Credentials for Cloud Locations. To learn more about creating an OCI Cloud Store Location and the credential object needed to access the location, see Managing Cloud Storage Connections, and Create Oracle Cloud Infrastructure Native Credentials respectively.

Create Share			
Ø	2	3	4
General	Publish Details	Select Tables	Recipients
SHARE VERSIONS U Share data as a set of distinc day. The recipient will only se	SING OBJECT STORAGE t versions, such as end of each ee changes to the data when 1	SHARE LIVE DATA VIA Share data as of the latest data Autonomous Databases in the	DIRECT CONNECTION abase commit with same region. The recipient
Choose an OCI native crede	ential based cloud location where t	the share will be published *	
Select Cloud location		•	Create Cloud location
AMS_BUCKET	2		
0		3 Back	Next Create Cancel

3. Select the table to include in the share.

Select the table or tables you want to add to the data share and click **Next**. In the following screenshot the **HOTEL_REVIEWS** table and **Medicare** table is added to the data share.

Publish Det	ails Shared Tables ADMIN	3 Select Tables		(4) Recipients
Publish Det	ails Shared Tables ADMIN	Select Tables		Recipients
*	Shared Tables			
*	ADMIN			
0				
N	From ADMIN.HOTEL_REVIEWS	3 VS		
unt	I MEDICARE			
	from ADMIN.MEDICARE			
>>				
<				
«				
			Back	levt Creste Cone
	vunt »»	Trom ADMIN.HOTEL_REVIEW MEDICARE Trom ADMIN.MEDICARE	from ADMIN.HOTE_REVIEWS MEDICARE Tom ADMIN.MEDICARE	from ADMIN HOTEL_REVIEWS MEDICARE from ADMIN MEDICARE

- 4. Associate the share with recipients.
 - a. Click New Recipient to add recipients to the data share.

Create Share						
0	0	0		_	4	
General	Publish Details	Select Tables		Re	cipients	
No recipient available					New R	ecipient
	•					
Notify Recipients When Availab	le					
0			Back	Next	Create	Canaal

b. Enter the recipient's Name, Description (optional), Email, and click Create.

create Share Recipient			×
Name *			
marketing_team			
Description			
share data with marketing division			
Email *			
marketing@oracle.com			
Show Advanced Options			
Show code	Crea	ite Ca	ancel

c. The new recipient is displayed in the list of recipients for this data share. Click the email icon next to the new recipient to email the activation link to the recipient. Click **Create** to finish creating the data share.

Create Share			
0	0	0	4
General	Publish Details	Select Tables	Recipients
Il recipients are granted			New Recipient
MARKETING_TEAM mg@oracle.com			6 🖂 🛍
Notify Recipients When Available			
0			Back Next Create Cancel

d. The Provide page is displayed and shows the number of data shares created and lists the data share details. When the data share is published, an email is sent to the recipient's email. In the example REVIEWS data share, the email is sent to the marketing email.

	1 SHARES		1 RECIPIENTS
Search Shares + Create Shar entities	e Provider Identification		↓† Sort By ▼ Page size: 25 ▼ IC C > > > C 20 00 00 00 00 00 00 00 00 00 00 00 00
R	REVIEWS Entity type: SHARE A ADMIN Share Type: VERSIONED Shared Charter 9:	÷	
Unpublished	Recipients: 1 Description:		•

Use Oracle as a Data Share Recipient for Versioned Data

Several simple steps are required to make shared versioned data available to you within Oracle Autonomous Database.

- High-Level Steps for Receiving Shares for Versioned Data
 Data shared with you through Delta Sharing is not automatically available and discoverable
 in your Autonomous Database. You need to perform several basic steps to subscribe and
 access the provided data shares.
- How-To Instructions for Receiving Shares for Versioned Data Step-by-step instructions for accessing available shares for versioned data is described.

High-Level Steps for Receiving Shares for Versioned Data

Data shared with you through Delta Sharing is not automatically available and discoverable in your Autonomous Database. You need to perform several basic steps to subscribe and access the provided data shares.

The basic steps are described here. For step-by-step instructions, see How-To Instructions for Receiving Shares for Versioned Data

Here are the high-level steps you need to perform:

High-Level Step	Description
1. Download your share profile.	Profile files are JSON files containing a user's credentials to access a Delta Sharing Server. This enables you to authenticate yourself with the delta sharing server and to discover the data shares you are eligible to access. Download the profile using the URL included in the invitation email sent by the data share provider.
2. Subscribe to the data share provider.	Upload the JSON profile file and create a share provider subscription.
3. Register shares made available to you.	After successful authentication with the delta sharing server you can select individual or all available shares and register them as visible data objects.

High-Level Step	Description
4. Create external tables on top of your shares.	External tables derived from the selected shares are created. These tables allow SQL access to the underlying data.

How-To Instructions for Receiving Shares for Versioned Data

You need to perform several basic steps to subscribe to and access the provided versioned data shares.

Follow these steps:

- Download your share profile. For the data share you want to receive, download your profile sent from the share provider.
 - **a.** Open the invitation email you received from the data share provider, when the data share was published.
 - b. Copy the profile URL from the email.

To: marketing@oracle.com ~						
Cc:						
Subject: Oracle Autonomous Database Data Sh	are					
From:			Signature	None		٢
To access the data in Reviews, you need to register th your personal authorization profile. You can download http://phoenix155088.dev3sub3phx.databasede3phx.o key=	e shared objects in this profile raclevcn.com:708	n your Ora 0/ords/_a	acle Autonor	nous Data	abase us wnload	sing ?
To access the data in Reviews, you need to register th your personal authorization profile. You can download http://phoenix155088.dev3sub3phx.databasede3phx.o key=	e shared objects in this profile raclevcn.com:708	n your Ora 0/ords/_a	acle Autonor	nous Data	abase us wnload	sing ?
To access the data in Reviews, you need to register th your personal authorization profile. You can download http://phoenix155088.dev3sub3phx.databasede3phx.o key====================================	e shared objects in this profile raclevcn.com:708 Unsure what to do developer-web/so	n your Ora 0/ords/_a next? The	acle Autonor dpshr/delta- en check ou html) to get	nous Data sharing/do	abase us wnload wnload	sing ? Start
To access the data in Reviews, you need to register th your personal authorization profile. You can download http://phoenix155088.dev3sub3phx.databasede3phx.o key= New to Oracle Autonomous Database Data Sharing? I Guide (https://docs.oracle.com/en/database/oracle/sql To learn more about the open protocol used for secure visit the github repository: Delta Sharing open protocol	e shared objects in this profile raclevcn.com:708 Unsure what to do developer-web/so data sharing with (https://github.cor	n your Ora 0/ords/_a next? The twfd/index Oracle A n/delta-io	acle Autonor dpshr/delta- en check ou . html) to gel utonomous I /delta-sharin	nous Data sharing/do t our short t you rollin Database g)	abase us winload t Quick S g. Data Sh	sing ? Start haring,
To access the data in Reviews, you need to register th your personal authorization profile. You can download http://phoenix155088.dev3sub3phx.databasede3phx.o key====================================	e shared objects in this profile raclevcn.com:708 Unsure what to do -developer-web/so data sharing with (https://github.cor	n your Ora 0/ords/_a next? Thi wfd/index Oracle A n/delta-io	acle Autonor dpshr/delta- en check ou .html) to get utonomous l idelta-sharin	nous Data sharing/dc t our short t you rollin Database g)	abase us winload Quick S g. Data Sh	sing ? Start baring,
To access the data in Reviews, you need to register th your personal authorization profile. You can download http://phoenix155088.dev3sub3phx.databasede3phx.o key====================================	e shared objects in this profile raclevcn.com:708 Unsure what to do developer-web/so data sharing with (https://github.cor	n your Ora 0/ords/_a next? The wfd/index Oracle A n/delta-io	acle Autonor dpshr/delta- en check ou .html) to gel utonomous I /delta-sharin	nous Data sharing/dc t our short you rollin Database g)	abase us winload Quick S g. Data Sh	sing ? Start haring,

c. Paste the URL into your browser and click Get Profile Information.





d. Your profile has been downloaded to your local machine. The Profile information downloaded message page is displayed.

ORACLE Autonomous Database Data Sharing
Profile information downloaded
New to Oracle Autonomous Database Data Sharing? Unsure what to do next? Then check out our short Quick Start Guide to get you rolling.
To learn more about the open protocol used for secure data sharing with Oracle Autonomous Database Data Sharing, visit the github repository: Delta Sharing open protocol
Need to ask a question? Do it in a slack channel #datashare-la
Put your shared data at work!

2. Subscribe to the data share provider.

To subscribe, you need to use the information contained in the uploaded JSON profile you received from the share provider. From the Consume Share feature of the Data Share tool, you upload the JSON profile and follow the subscribe wizard.

a. Go to the Data Share tool, and click **Consume Share**. See How to Access and Enable the Data Share Tool, for instructions.

rovider and Consumer	
PROVIDE SMARE	CONSUME SHARE
	Consume Share. To activate click.

b. Click Subscribe to Share Provider drop down arrow, and select Subscribe to Delta Share Provider menu item.



Data Share > Consume Share	
Available Live Share Providers in t No Live Share Providers availab	the last 7 days le
Search Subscribed Share Provider.	
Subscribe to Share Provider 💌	My Sharing ID
Subscribe to Live Share Provid	der
Subscribe to Delta Share Prov	ider

c. Select Delta Share Provider JSON, accept the From File default option, and click the Delta Share Profile JSON field.

Provider Settings Add Shares Share Source * Select from Live Share Providers Image: Delta Share Provider JSON From File JSON Delta Share Profile JSON	1	2	
hare Source * Select from Live Share Providers Delta Share Provider JSON hare Provider JSON From File JSON Delta Share Profile JSON 	Provider Settings	Add Shares	
Select from Live Share Providers Delta Share Provider JSON From File JSON Delta Share Profile JSON	nare Source *		
hare Provider JSON *	Select from Live Share Providers 💿 Delta Share Provider JSON		
From File JSON Delta Share Profile JSON	nare Provider JSON *		
Delta Share Profile JSON	From File 🔿 JSON		
	Dalta Shara Brafila ISON		
Select or drop delta_share_profile.json or config.share file here	Select or drop delta_share_profile.json or config.share file here		

d. Navigate to and select the **JSON profile** you downloaded in a previous step. Click **OPEN**.

💽 Open)
$\leftarrow \rightarrow \checkmark \uparrow \checkmark$ This PC >	Downloads	・ じ Search Down	loads
Organize • New folder			• 🔳 🕜
Le Contacts	▲ Name ▲ Today (1)	Date modified	Туре
 Documents Downloads 	() delta_share_profile.json	7/31/2023 2:27 PM	JSON Source
Dropbox	✓ <		>
File <u>n</u> ame: de	lta_share_profile.json	V JSON File (* json)	∼ Cancel

- e. Enter the **Provider Name**, under Share Provider Details and click **Next**. In this example, **Review_provider** is entered for the Provider Name.
- f. Select the level of network access you want to allow from your database to the host with the Share REST endpoint, and click Run.
 In this example, Allow access to Host Only is selected.

Network ACL Script	×
 Allow access to Host Only Allow access to all Oracle Autonomous Databases within your region 	
You need to run the script below to grant network access from your database to the host with the Share REST endpoint. You can run this as a user that has EXECUTE privilege on DBMS_NETWORK_ACL_ADMIN	ne
<pre>BEGIN SYS.DBMS_NETWORK_ACL_ADMIN.APPEND_HOST_ACE(HOST => ' LOWER_PORT => 443, UPPER_PORT => 443, ACE => XS\$ACE_TYPE(PRIVILEGE_LIST => XS\$NAME_LIST ('http','http_proxy'), PRINCIPAL_NAME => UPPER('DWROLE'), PRINCIPAL_TYPE => XS_ACL.PTYPE_DB)); END:</pre>	Ō
Run Clo	se

- 3. Register shares made available to you.
 - a. Move shares from Available Shares to Selected Shares and click Subscribe. The screenshot below shows the REVIEWS share moved from Available Shares to Selected Shares before clicking Subscribe.

Subscribe to Share Provider	
9	2
Provider Settings	Add Shares
Available Shares	Selected Shares
No items to display.	REVIEWS
0	Back Next Subscribe Cancel

The Data Load page is displayed.

- 4. Create external tables derived from tables selected from the data share.
 - **a.** Drag and drop tables from the selected share. You can optionally click **settings** to view the table details.

In this example, the only table selected is **HOTEL_REVIEWS**.

Select Share		+ Create Cloud Store Location
REVIEW_PROVIDER		* I 0
Share	Start Stop 🗇	Consumer Group: HIGH + 88
환 ADMIN.HOTEL_REVIEWS	ADMIN.HOTEL_REVIEWS Create External Table: HOTEL_REVIEW3_1	/ Settings

b. You can optionally change the name of your table and click Close. In this example, the name is changed from HOTEL_REVIEWS to HOTEL_REVIEWS_SHARE.

Settings	Table					
Preview	Option			Name		
	Create External Table		Ψ.	HOTEL_REVIEWS_SHARE		
Table	Partition Column					
SQL	None		* 0			
ob Report	Properties					
	Mapping				Search	옷 😂 Bulk Ec
	Source column	Target column	Data Type	Length/Precision		
	HOTEL_ADDRESS	HOTEL_ADDRESS	VARCHAR2	4000		
	ADDITIONAL_NUMBER_OF_SCOR	ADDITIONAL_NUMBER_OF_SCOF	BINARY_DOUBLE			
	REVIEW_DATE	REVIEW_DATE	TIMESTAMP	6		
	AVERAGE_SCORE	AVERAGE_SCORE	BINARY_DOUBLE			
	HOTEL_NAME	HOTEL_NAME	VARCHAR2	4000		
	REVIEWER_NATIONALITY	REVIEWER_NATIONALITY	VARCHAR2	4000		
		NEGATIVE REVIEW	VARCHAR2	4000		
	NEGATIVE_REVIEW					

c. Create the external table by clicking **Start**, on the Select Share page, and then clicking **Run** on the Run Data Load Job dialog.





d. When the external table creation is complete, click on the external table name to view the table details.

Settings	Table					
Preview	Option			Name		
	Create External Table		6	HOTEL_REVIEWS_SHARE		
Table	Partition Column					
SQL	None		* ①			
Job Report	Properties					
a Definition	Mapping				Search	Q 🏻 🍣 Bulk
	Source column	Target column	Data Type	Length/Precision		
	HOTEL_ADDRESS	HOTEL_ADDRESS	VARCHAR2	4000		
	ADDITIONAL_NUMBER_OF_SCOR	ADDITIONAL_NUMBER_OF_SCOF	BINARY_DOUBLE			
	REVIEW_DATE	REVIEW_DATE	TIMESTAMP	6		
	AVERAGE_SCORE	AVERAGE_SCORE	BINARY_DOUBLE			
	HOTEL_NAME	HOTEL_NAME	VARCHAR2	4000		
	REVIEWER_NATIONALITY	REVIEWER_NATIONALITY	VARCHAR2	4000		
	NEGATIVE_REVIEW	NEGATIVE_REVIEW	VARCHAR2	4000		

- 5. View the created tables from Database Actions.
 - a. Click on Database Actions, in the breadcrumb.
 - b. Select Development and then click SQL.
 - c. Select the external table, then drag and drop it into the worksheet.

	Actions SQL							Search	۷ (۵	$^{\circ}$ admin $^{\sim}$
Navigator Files	0	[Worksheet]* 🔻	D. •	- 8 0		Q. ± Ξ	Ao 💌 🗊	▲ Consumer group: LOW	■ Data Load _k	≈ 68 ©
ADMIN	Ŧ	1 2								
Tables	Ŧ	3								- 1
Search	0	5								
HOTEL_REVIEWS_SH	HARE	7 8								
		9								
		11 12								
		13 14								
	1	15								
		17								
		Query Result S	cript Output	DBMS Outp	ut Explain Pla	an Autotrace	SQL History			0
	- 1	Í O Ľ	Download *							
	- 1									

A dialog displays offering the types of available insertions.

d. Choose **Select** as the type of insertion, and click **Apply**.

Choose the type of × insertion:							
 Object Name Insert Delete Update Select 							
Apply Cancel							

The SQL Select statement for the table appears in the worksheet.

e. Click **Run** (the arrow icon at the top of the worksheet).

	Search	
Worksheet]* * SELECT 1 SELECT 2 HOTEL_ADDRESS, 3 AgOTTOMAL_NUMBER, OF_SCORTING, 4 REVIEW_DATE, 5 AVERAGE_SCORE, 6 HOTEL_MARE, OF_RAVIEW, 7 REVIEW_MATING. MEATINE, NORD, COUNTS, 10 TOTAL_NUMBER, OF RAVIEWS, 11 POSTURY. REVIEW, 11 POSTURY. REVIEW, 12 OKTINE, REVIEW, 13 OKTINE, REVIEW, 14 OKTINE, REVIEW, 14 OKTINE, REVIEW, 15 OKTINE, REVIEW, 16 OKTINE, REVIEW, 17 OKTINE, REVIEW, 17 OKTINE, REVIEW, 18 OKTINE, REVIEW, 18 OKTINE, REVIEW, 19 OKTINE, REVIEW, 10 OKTI	Search ▲ Consumer group: LOW +	Q Ø A ADMIN ∨ Data Load u ^a θθ Ø
12 REVIEW_TOTAL_POSITIVE_MORE_COURTS, 13 TOTAL_NUMBER, OF REVIEWS, REVIEWS, GIVEN, 14 14 REVIEWS, SCORE, 15 TAGS, 16 17 LAT, LAT, Query Result Script Output DBMS Output Explain Plan Autotrace SQL History Image: Comparison of the point o		Ø

The returned data displays under Query Results.

3 Share Live Data Using Direct Connection

Share data as of the latest database commit with Autonomous Databases in the same region. The recipient will always see the latest data.

- Use Oracle as a Data Share Provider for Live Data Share data as of the latest database commit with Autonomous Databases in the same region.
- Use Oracle as a Data Share Consumer of Live Data You need to perform several basic steps before you can query data available through live data shares.

Use Oracle as a Data Share Provider for Live Data

Share data as of the latest database commit with Autonomous Databases in the same region. The recipient will always see the latest data.

- High-Level Steps for Producing Shares for Live Data Providing access to live shared data involves defining data shares and granting recipients access to consume them.
- How-To Instructions for Producing Shares for Live Data Use the Data Share wizard to create and publish shares for live data.

High-Level Steps for Producing Shares for Live Data

Providing access to live shared data involves defining data shares and granting recipients access to consume them.

The high-level steps for providing shares for live data include:

High-Level Step	Description
1. Produce a live data share	Provide a name and an optional description for the live data share.
2. Select the objects to share	Select the tables and views you want to share.
3. Associate the data share with recipients	Grant recipients access to the data share.

How-To Instructions for Producing Shares for Live Data

Use the Data Share wizard to create and publish shares for live data.

Follow these steps:

- **1.** Produce a live data share.
 - a. Go to the Data Share Tool. See How to Access and Enable the Data Share Tool, for instructions.
 - b. Click Provide Share.



ovider and Consumer	
PROVIDE SHARE	CONSUME SHARE
•	•
Provide Share. To activate click.	25-55 MMMMMS5-5200000000000000000000000000000000000
See the Quick Start Guide for details on now to snare data sets with multiple	recipients Quick Start Guide

c. Click Provider Identification.

≡	ORACLE	Database Actions Data Share	Search Database (Ctrl+K)	Q	0	R admin ∽
ଜ	Overview	Data Share > Provide Share				
₽,	Data Load 🕨					
R	Analysis	Set Provider Identification	Г	I		
ନ୍ଦ	Insights	Provider Identification should be set before data can be shared. Share Provider Identification will be a any share is granted.	wailable to the recipients with whom	Provide	r Ident	ification
€	Catalog					
œ	Data Share ⊧					

- d. Enter a name for the share provider, the share provider email address and a description, then click **Save**. This example has the following entries:
 - Name: Sales
 - Email: <obscured>
 - Description: Sales Q4

Provider Identification	
General	SMTP Configuration (Optional)
Give a name and a description to identi the database user currently logged in.	fy how recipients will see you. This description is specific to
Name *	
Sales	
Email *	
Description *	
Sales Q4	
	Save

e. Click Create Share.

	0	0	
2	H A R E S	RECIPIENTS	
	•	•	

f. Enter the Name for the data share and an optional description on the Create Share dialog, then click **Next**.

This example uses **SalesQ4** for the Name.

Create Share			
•	2	3	
General	Publish Details	Select Tables	Recipients
Name *			
SalesQ4			
Description			
This is sales for Q4 in CA, NM, AZ, NV, NC			
0			Back Next Create Cancel

g. Select SHARE LIVE DATA USING DIRECT CONNECTION, then click Next.

Create Share			
Ø	2	3	(4)
General	Publish Details	Select Tables	Recipients
SHARE VERSIONS USING OBJECT STOF Share data as set of distinct versions, such as en data when you publish a new version.	IAGE d of each day. The recipient will only see changes to the	SHARE LIVE DATA USING DIRECT CONNECT Share data as of the latest database commit with Autor will always see the latest data.	ION nomous Databases in the same region. The recipient

2. Select the objects to share.

Select the tables and/or views you want to share from the **Available Tables** list on the left panel. Use the arrows to include the selected tables on the left **Shared Tables** panel and click **Next**.

In this example, the <code>SAHE_AGE_DIM</code> table is selected.



O		0		3	- 4		
General	Publi	ish De	tails	Select Tables	Recipier	ts	
ailable Tables			Shared Tables				
arch	× O	;	ADMIN				
Name	Row count		TOT ADMIN SAHIE AGE DIM				
SAHIE_AGE_DIM	3						
SAHIE_AGE_DIM_1							
SAHIE_FACT	828K						
SAHIE_FACT_VIEW		>					
SAHIE_GENDER_DIM	2						
SAHIE_GEOG_DIM	зк	<					
SAHIE_INCOME_DIM	5	-					
SAHIE_TIME_DIM	9	4					

Note:

For live data, the Data Share tool supports 1 to 4 shared objects. If the live share data provider is sharing multiple tables which would normally be joined together by the consumer, it is recommended that the producer create a view that performs the joins and then only shares the view.

 Associate the live data share with recipients. Click the drop down arrow for Select Recipient and select the recipient(s) for this share, then click Create.

In this example, **MY_REGION** is selected, which means anyone in this region can potentially consume from this share.

Note:

If you want to create a new recipient, click the **New Recipient** button and complete the information displayed in the dialog box. For further information on creating a new recipient based on a consumer created Share ID, see The Data Share Tool.

Create Share				
O	Ø	O	(4
General	Publish Details	Select Tables	Rec	ipients
Select Recipient			•	New Recipient
MY_REGION				
MY_COMPARTMENT				
MY_TENANCY				
0			Back Next C	reate Cancel

The new Live Data Share is displayed.

Data Share > I	Provide Share	
	1 SHARES	O RECIPIENTS
Search Share + Create S	95 Provider Identification	Q. 1 ¹ Sort By ▼ Page size: 25 ▼ 10 < > > 0 Sort bro Underland on DESC >
Share	SALESQ4 : Share Type: UVE Shared Objects: 1 Description: The is alials for C4 in C4, NM, A2, NV, NC O Updated on: 2023-10-1917/38:382	

Use Oracle as a Data Share Consumer of Live Data

You need to perform several basic steps before you can query data available through live data shares.

- High-Level Steps for Producing Shares for Live Data Live data shared with you through data sharing is not automatically available for consumption. You need to perform several basic steps to subscribe and access the provided live data shares.
- How-To Instructions for Producing Shares for Live Data To consume live data shares, you need to subscribe to them and create views of tables included in the live share.

High-Level Steps for Receiving Shares for Live Data

Data shared with you through live data shares is not automatically available for consumption. You need to perform several basic steps to subscribe and access the provided live data shares.

The basic steps are described here. For step-by-step instructions, see How-To Instructions for Receiving Shares for Live Data How-To Instructions for Receiving Shares for Live Data.

Here are the high-level steps you need to perform:



High-Level Step	Description
1. Browse available live data share providers.	Go to the consume menu and browse the list of available share providers.
2. Subscribe to the live data share provider.	Select the live share provider you want to receive data from and go through the subscribe wizard.
3. Create a view on top of tables in the live data share.	Views derived from the tables in the selected shares are created. These views allow SQL access to the underlying data.
4. Query live data share.	Run queries against views over the live data shares.

How-To Instructions for Receiving Shares for Live Data

To consume live data shares, you need to subscribe to them and create views of tables included in the live share. The views can be queried using SQL scripts.

Follow these steps:

- 1. Browse available live shares.
 - a. Go to the Data Share tool. See How to Access and Enable the Data Share Tool.
 - b. Click CONSUME SHARE.

Provider and Consumer	
PROVIDE SHARE	CONSUME SHARE
See the Quick Start Guide for details on how to share data sets with multiple recipients	Quick Start Guide

A list of available live shares appears.

- 2. Subscribe to the live share provider.
 - a. From the list of available live share providers, click the + icon to the right of the share provider you want to consume.

In this example, the QA4-LIVE_ADMIN live share provider is selected.

Available Live Share Providers in the last 7 days	
QA4-LIVE_ADMIN (admin@oracle.com) 1 Shares, 6 days ago	+
	Q
Search Subscribed Share Provider	

From the Subscribe to Share Provider page, you can make changes to the name and description or leave as is. Click Next.
 In this example, the defaults are kept.



Subscribe to Share Provider				
3				
Provider Settings	Add Shares			
Share Source *				
Select from Live Share Providers Delta Share Provider JSON				
QA4-LIVE_ADMIN (admin@oracle.com)				•
Share Provider Details				
Provider Name *				
QA4LIVE_ADMIN				
Description				
QA4 ADMIN 23.4.2				
U	Back	Next Su	ibscribe	Cancel

The list of Available Shares for this share provider displays.

c. Select the share you want to consume and move it to the **Selected Shares** section using the middle arrows. Click **Subscribe**.

In this example the SALESQ4 share is selected and moved.

Subscribe to Share Provider			
0		2	
Provider Settings		Add Shares	
Available Shares	Selected Shares		
	SALESQ4		
	<		
	«		
0		Back Next	Subscribe Cancel

- 3. Create a view on top of tables in your share.
 - a. Expand the live data share to view tables included in the share. Drag and drop the table you want to consume to the right panel. Click Start.
 In this example, the SALESQ4 live share is expanded to display the SAHIE_AGE_DIM table. The table is dragged and dropped to the right panel.

Select Share	+ Create C	Cloud Store Location
QA4LIVE_ADMIN		· · · · · ·
Search	Start Stop 🗊 🖹 Consumer Group	o: HIGH ▼ 88
R ADMIN.SAHIE_AGE_DIM	ADMIN.SAHIE_AGE_DIM Create View for Remote Table: SAHIE_AGE_DIM_2	:

- b. Click **Run**, in the dialog box that appears.
- **c.** When the view has been created, the new view displays with status showing Complete.



select Share	
QA4LIVE_ADMI	4
Start S	itop

- 4. Query the live share data.
 - a. Click **Database Actions** in the breadcrumb.

≣	ORACLE	Database Actions Launchpad
ŵ	Overview	Data Share > Consume Share

- b. Select **Development**, then click **SQL**.
- c. Select Views, on the left Navigator, from the object drop down. From the list of available views, drag and drop the SAHIE_AGE_DIM_1 view to the worksheet.

	Database Action	s SQL										
Navigator	Files	0	[Worksheet]* 🔻	[≩ ▼	8	• •	6	ta (<u>a</u> ⊥	ΣΞ	Aa 🕶	Ŵ
ADMIN		Ŧ	1									
Views		Ŧ										
Search	C											
Image: Image Solution Image: Image Ima	DIM_1											
 SAHIE_AGE_ SAHIE_FACT, 	DIM_2 _VIEW											

A dialog displays offering the types of available insertions.

d. Click Select, then Apply.

Object Name
🔿 Insert
O Delete
🔘 Update
 Select
Apply Cancel



e. Click **Run** (the arrow icon at the top of the worksheet). The returned data displays under Query Results.

