Creating a connection from HVR to Oracle Autonomous Data Warehouse

Certification Matrix	Version				
HVR	5.6				
OCI Driver	Oracle Client version				
	18.0.0.0 and higher				

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This document provides an overview of the steps required to configure HVR to connect to the Oracle Autonomous Data Warehouse Cloud (ADWC).

HVR supports log-based Change Data Capture (CDC) for heterogeneous data replication from several source database technologies, into a multitude of destination technologies and data formats. HVR 5.6 is the first version certified to deliver data into the Oracle ADWC.

For optimum performance integrating changes into the Oracle ADWC, HVR recommends an architecture that features the use of agents. Agents are installations of the HVR software that are located as close as possible to the source and destination technologies. The use of agents will optimize network communication, and distribute load. HVR features such as initial load, ongoing replication and compare/repair all take advantage of the agents. With the Oracle ADWC as the target, the recommended setup is to include an agent in the Oracle Cloud, in the same availability domain as the ADWC, on a VM, or Bare Metal instance. TCP/IP communication into the Oracle Cloud can be encrypted.



Figure 1. Recommended architecture featuring agents for optimum communication and security



Step 1: Provision ADWC plus Install and Configure the Oracle Client

- Provision the Oracle Autonomous Data Warehouse Cloud (ADWC) and download the corresponding credentials.zip file to the system that will have the HVR target agent installation. For the Oracle documentation to provision ADWC click <u>here</u>. Also check <u>Downloading Client Credentials (Wallets)</u>.
- 2. All connections to the Oracle ADWC use certificate-based authentication and Secure Sockets Layer (SSL). Un-compress credentials.zip file into a secure folder.
- 3. Download the Oracle Database Client to the system that runs the HVR integration agent.
- 4. Edit the sqlnet.ora file, replacing "?/network/admin" with the name of the folder containing the client credentials.

For example:

```
WALLET_LOCATION = (SOURCE = (METHOD = file) (METHOD_DATA =
(DIRECTORY="/home/adwc_credentials")))
SSL_SERVER_DN_MATCH=yes
```

- 5. The TNS_ADMIN environment can be set to point to an alternative location for the sqlnet.ora and tnsnames.ora files. Define the variable if you plan to not use \$ORACLE_HOME/network/admin. The tnsnames.ora file provided with the credentials zip file contains three database service names identifiable as high, medium and low. The predefined service names provide different levels of performance and concurrency for Autonomous Data Warehouse Cloud. Use one of these service names in your connect string.
- 6. Test the Oracle Client with Oracle SQL*Plus:

```
sqlplus username@<connect string>
<enter password at prompt>
or
sqlplus /nolog
sql> connect username@<connect string>
<enter password at prompt>
```

If the connection is successful you are ready to move to the next step.



Step 2: Install HVR

Follow the installation instructions to install HVR.

Note that the HVR hub must be able to reach out to an agent installation through TCP/IP communication. As needed, open the firewall for the HVR listener port to the machine running the HVR agent. Also make sure the operating system allows the connection to go through.

Step 3: Configuring HVR to connect with ADWC

Connect the HVR GUI to the hub, connect to the metadata repository, and create a new Location. If the HVR hub resides in the Oracle Cloud then you may choose to connect directly to ADWC. Use the connect string you tested during the first installation step.

		Locatio	n adwhg				8
Location							
Location adwhg							
Description Autonomous Data	a Warehouse - high	n					
Connection Group Membe	rship						
✓ Connect to HVR on remote	e machine						
Node 192.168.56.101			Login	oracle			
Port 4343			Password	****	****	***	
Class	Database Conne	ection					
Oracle	ORACLE HOME	/u01/app/oracle/pro	duct/18.0.0	0/db			
 Ingres / Vector(H) 							
O SQL Server	TNS	byr bigb					
O DB2 Linux/Unix/Windows	O RAC	CCAN					
O DB2 for i	O NAC	SCAN					
O DB2 for z/OS		Service					
O PostgreSQL/Aurora	User	ADMIN					
MySQL/MariaDB/Aurora	Password	****	*****				
○ HANA	Above is for I	Redo access only;					
 Teradata 	either for Data G	Guard (non-active) Sta	andby or R	oot Contai	ner for LogMine	ī.	
O Snowflake							
O Greenplum							
 Redshift 							
O Hive ACID							
O File / FTP / Sharepoint							
O Azure DLS							
O Azure Blob FS							
○ HDFS							
O S3							
 Salesforce 							
O Kafka							
Нер					Cancel	<u>о</u> к	Test Connection

Figure 2. Direct connection to the Oracle ADWC.



More commonly users will connect to the ADWC using an agent running on a VM in the Oracle Cloud.

Location adwag 🛛 😵							8	
Location								
Location adwag								
Description								
Connection Group Membe	Connection Group Membership							
Connect to HVR on remote machine								
Node 129.146.77.123			Login	oracle				
Port 4343		 ▼	Password	*****	*****			
Class	Database Conne	ection						
Oracle	ORACLE_HOME	/u01/app/oracle/pro	duct/18.0.	0/client_1				
 Ingres / Vector(H) 	O ORACLE SID							
O SQL Server	TNS	hyr high						
O DB2 Linux/Unix/Windows	O BAC	SCAN					1521	
O DB2 for i	0	Service						
O DB2 for z/OS		Service						
PostgreSQL/Aurora	User	ADMIN						
MySQL/MariaDB/Aurora	Password	****	ololololololok]	
○ HANA	Above is for Redo access only;							
 Teradata 	either for Data Guard (non-active) Standby or Root Container for LogMiner							
Snowflake								
O Greenplum								
 Redshift 								
O Hive ACID								
File / FTP / Sharepoint								
Azure DLS								
O HDFS								
○ Salesforce								
O Kafka								
Help					<u>C</u> ancel	<u>о</u> к	Test Connection	

Figure 3. Connecting to Oracle ADWC through an agent.

You can now set up channels using the location as a target and enjoy the benefits of the Oracle Autonomous Data Warehouse Cloud.¹

¹ Note depending on your HVR version you may, during initialize, have to use the low resource TNS connection, or as an alternative set an Environment action name HVR_SQL_INIT with value "alter session disable parallel dml".