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Certification Matrix	Version
SAS/ACCESS Interface to Oracle	9.4 or higher
Oracle Client	12.1.0.2 or higher

Here is the overview of the install and configuration process to get SAS/ACCESS connected to ADW

SAS/ACCESS uses Oracle Database Client to connect to ADW

Provision ADW → Download credentials file to SAS/ACCESS system

Install SAS/ACCESS → Install Oracle Database Client on the SAS ACCESS system → Configure Oracle Database Client → Test Oracle Database Client → SAS/ACCESS is now configured
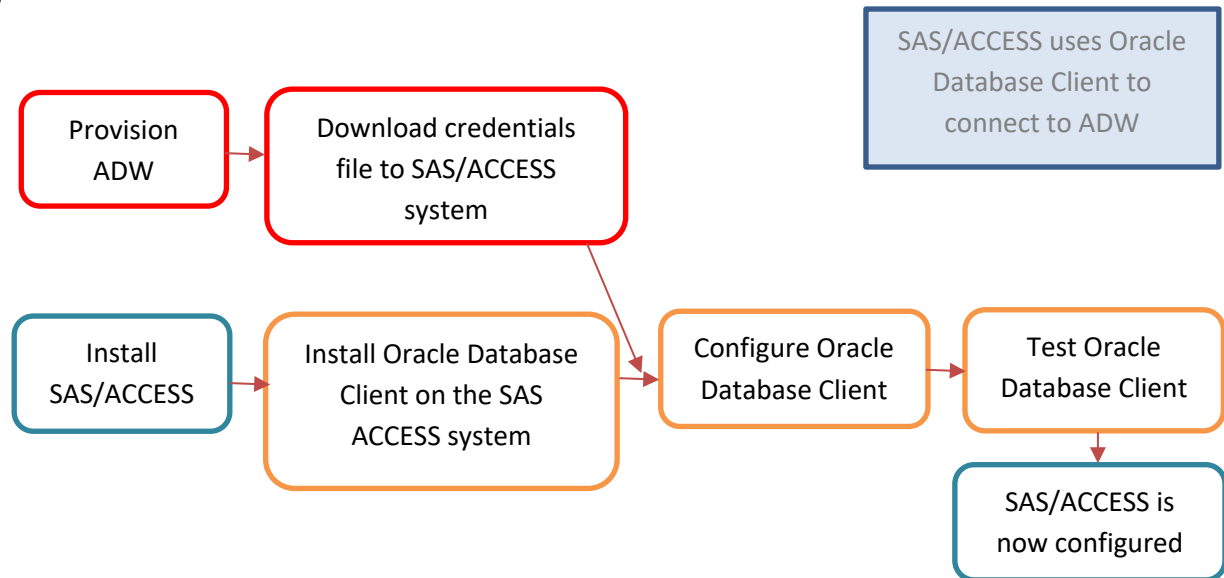
1. This document assumes that the Autonomous Data Warehouse has been provisioned and the corresponding credentials.zip file has been downloaded to the system that has the SAS/ACCESS Interface to Oracle installed. For the Oracle documentation to provision ADW please check here. Also check Downloading Client Credentials (Wallets).

2. Follow the instructions from the SAS documentation to install and configure SAS ACCESS Interface to Oracle. As a prerequisite make sure that you have installed the Oracle Database Client 12.1.0.2 or higher on the SAS/ACCESS environment.

3. All connections to Autonomous Data Warehouse use certificate-based authentication and Secure Sockets Layer (SSL). Copy the client credentials file that you downloaded in step 1 to the system running the SAS/ACCESS and uncompress it into a secure folder.

4. We first validate that the Oracle Database Client can communicate with ADW, and since it is installed on the same system as the SAS/ACCESS, it ensures that SAS/ACCESS Interface to Oracle is also configured correctly.

5. Steps 5, 6 and 7 configure and test the Oracle Database Client. Edit the `sqlnet.ora` file, replacing "?/network/admin" with the name of the folder containing the client credentials.
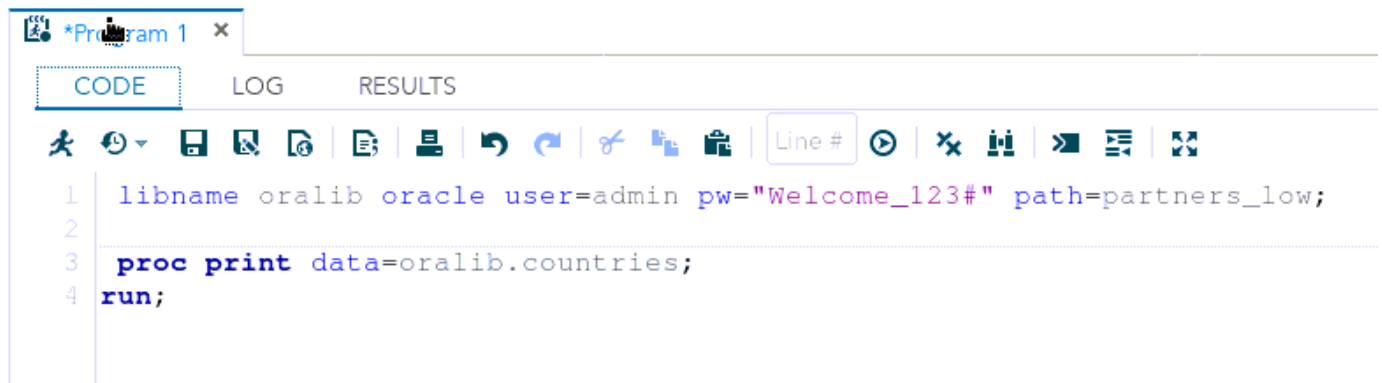
For example:

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

SSL_SERVER_DN_MATCH=yes
```

6. Create the `TNS_ADMIN` environment variable and set it to the location of the secure folder containing the credentials file you saved in Step 3. 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.

7. Test the Oracle Client with Oracle SQL*Plus

```
sqlplus password/\"Password\"@ConnectString
or
sqlplus /nolog
sql> set define off
sql> connect username/password@connectString
```

8. Now that you have successfully configured the Oracle Client it is time to test SAS/ACCESS connectivity to ADW. Once the connection is established at the oracle client layer, there is no change in configuration required from the SAS/ACCESS layer. Test out the connectivity using a tool like SAS Studio and run the following script to connect to ADW.

```
libname oralib oracle user=admin pw="<password from step 1>"
path=<service name from tnsnames.ora>;
```

*Program 1 ✕

CODE   LOG   RESULTS

▸ Table of Contents

Obs	COUNTRY_ID	COUNTRY_ISO_CODE	COUNTRY_NAME	COUNTRY_SUBREGION	COUNTRY_SUBREGION_ID	COUNTRY_REGION	COUNTRY_REGION_ID	COUNTRY_TOTAL	COUNTRY_TOTAL_ID
1	52771	CN	China	Asia	52793	Asia	52802	World total	52806
2	52781	IN	India	Asia	52793	Asia	52802	World total	52806
3	52782	JP	Japan	Asia	52793	Asia	52802	World total	52806
4	52783	MY	Malaysia	Asia	52793	Asia	52802	World total	52806
5	52769	SG	Singapore	Asia	52793	Asia	52802	World total	52806
6	52791	ZA	South Africa	Africa	52792	Africa	52800	World total	52806
7	52774	AU	Australia	Australia	52794	Oceania	52805	World total	52806
8	52785	NZ	New Zealand	Australia	52794	Oceania	52805	World total	52806
9	52787	SA	Saudi Arabia	Middle East	52796	Middle East	52804	World total	52806
10	52786	PL	Poland	Eastern Europe	52795	Europe	52803	World total	52806
11	52776	DE	Germany	Western Europe	52799	Europe	52803	World total	52806
12	52777	DK	Denmark	Western Europe	52799	Europe	52803	World total	52806
13	52778	ES	Spain	Western Europe	52799	Europe	52803	World total	52806
14	52779	FR	France	Western Europe	52799	Europe	52803	World total	52806
15	52789	GB	United Kingdom	Western Europe	52799	Europe	52803	World total	52806
16	52780	IE	Ireland	Western Europe	52799	Europe	52803	World total	52806
17	52770	IT	Italy	Western Europe	52799	Europe	52803	World total	52806
18	52784	NL	The Netherlands	Western Europe	52799	Europe	52803	World total	52806
19	52788	TR	Turkey	Western Europe	52799	Europe	52803	World total	52806
20	52772	CA	Canada	Northern America	52797	Americas	52801	World total	52806
21	52790	US	United States of America	Northern America	52797	Americas	52801	World total	52806
22	52773	AR	Argentina	Southern America	52798	Americas	52801	World total	52806
23	52775	BR	Brazil	Southern America	52798	Americas	52801	World total	52806

9. You are now ready to start exploring and visualizing your data.