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# Performance Management Advisors Deployment Guide

Switching Advisors Oracle database connectivity from JDBC thin driver to Oracle Call Interface (OCI)

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# Switching Advisors Oracle database connectivity from JDBC thin driver to Oracle Call Interface (OCI)

If you prefer using Oracle OCI for connectivity between Advisors and Oracle database, you need to perform the standard installation procedure with Oracle JDBC thin driver and then switch to OCI by applying a post-installation procedure presented below.

Genesys recommends that you have deployed (or migrated) your Advisors installation using procedures described in this document and in the [Genesys Pulse Advisors Migration Guide](#), and verified that the Advisors installation is working correctly, before proceeding with the procedures described on this page.

## Download and Install the Oracle Instant Client

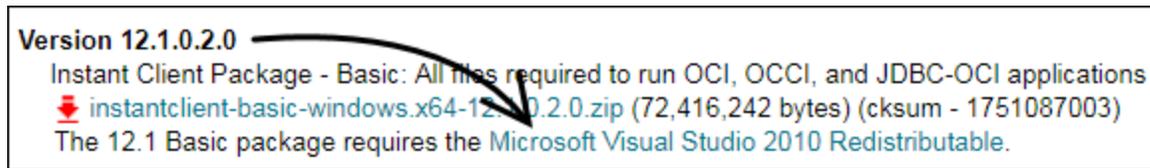
You must install the Oracle Instant Client on each machine in an Advisors installation (that is, all Platform, XML Generator, Frontline Advisor (FA), Workforce Advisor (WA), and Advisors Genesys Adapter (AGA) machines).

Go to the [Instant Client Downloads](#) page on the Oracle website. Click the link that matches your system type (for example, Instant Client for Linux x86-64). Choose "Accept License Agreement" at the top of the page, and then download the Instant Client Package (an .rpm file for Linux or a .zip file for Windows) for your target Oracle and operating system version. For example, if your Oracle version is 12.1.x, then select the Instant Client Package that matches the 12.1.x version.

In addition to downloading the Instant Client Package, you can also download the SQL\*Plus package that goes with your version of the Instant Client. Downloading the SQL\*Plus package is optional, but SQL\*Plus is useful for testing the OCI connection to an Oracle database. In fact, using SQL\*Plus to test the OCI connections is part of the process described on this page.

## Installation on Windows systems

On Windows-based machines, in addition to installing the Oracle Instant Client, you must also download and install the correct version of Microsoft Visual Studio Redistributable. You can find information about the required Microsoft Visual Studio Redistributable under each Instant Client Package on the [Instant Client Downloads for Microsoft Windows](#) page on the [Oracle Web site](#). For example:



On a Windows server, extract the Instant Client Package zipped files to the desired directory, and then add the path to the PATH system variable. For example:  
C:\>set PATH=C:\instantclient\_12\_1;%PATH%

Make sure that the path is correct, and that no other PATH variable entry preceding this one ends in a slash (/) character. If one exists, then delete the slash character.

## Installation on Linux systems

To install the Oracle Instant Client on a Linux system, navigate to the folder where you downloaded the Instant Client package and execute the .rpm package. This example assumes that you are using a 12.1 version of Oracle; be sure to use the proper version and path for your system:

```
rpm -i oracle-instantclient12.1-basic-12.1.0.2.0-1.x86_64.rpm
```

If you are installing SQL\*Plus, then also execute the following command; again, be sure to use the proper version and path for your system:

```
rpm -i oracle-instantclient12.1-sqlplus-12.1.0.2.0-1.x86_64.rpm
```

Run the following two commands to export paths to the PATH variables. Once again, this example assumes that you are using a 12.1 version of Oracle; be sure to use the proper version and path for your system.

```
export LD_LIBRARY_PATH=/usr/lib/oracle/12.1/client64/lib  
export PATH=/usr/lib/oracle/12.1/client64/bin:$PATH
```

Alternatively, you can edit profile files to permanently set the OCI path.

## Using a TNS alias to connect to an Oracle system

The following example assumes that you are using a 12.1 version of Oracle; be sure to use the proper version and path for your system.

To use a TNS alias to connect from an Advisors application or from SQL\*Plus to an Oracle database:

1. On Linux systems, create a network/admin directory under /usr/lib/oracle/12.1/client64/, or on Windows systems, create a network\admin directory under the \instantclient\_12\_1 folder.
2. Add your tnsnames.ora file to the admin folder. The tnsnames.ora file must contain your Oracle database connection descriptors that point to the databases to which you intend to connect.

If you intend to use a TNS alias to connect to the database from an Advisors application, then Genesys strongly recommends that you place the tnsnames.ora file in the location mentioned above. Otherwise there is no guarantee that it will be possible to start the application from the Configuration Server Applications list.

The following is an example of a tnsnames.ora descriptor entry:

```
sales.example.com =(DESCRIPTION= (CONNECT_TIMEOUT=10)(RETRY_COUNT=3)
(ADDRESS_LIST= (LOAD_BALANCE=on)(FAILOVER=ON)
(ADDRESS=(PROTOCOL=tcp)(HOST=sales1-scan)(PORT=1521))
(ADDRESS=(PROTOCOL=tcp)(HOST=sales2-scan)(PORT=1521)))
(CONNECT_DATA=(SERVICE_NAME= salesservice.example.com)))
```

## Test Connectivity Between the Advisors Applications and the Oracle Databases

If you have installed SQL\*Plus, then you can now use it to test the client connectivity to the database. Genesys recommends that you verify that the client-database connectivity is successful before you update the Advisors applications to use the OCI instead of the JDBC driver.

### Example for Linux systems

The following example assumes that you are using a 12.1 version of Oracle; be sure to use the proper version and path for your system.

```
[root@vce-u0000 tmp]# export LD_LIBRARY_PATH=/usr/lib/oracle/12.1/client64/lib
[root@vce-u0000 tmp]# export PATH=/usr/lib/oracle/12.1/client64/bin:$PATH
[root@vce-u0000 tmp]# sqlplus adv_mg_852/password@'(DESCRIPTION =(ADDRESS_LIST = (ADDRESS =
(PROTOCOL = TCP)(HOST = sales-s.example.com.com)(PORT = 1522)))(CONNECT_DATA = (SERVICE_NAME =
salesservice.example.com))'
```

### Example for Windows systems

```
C:\> sqlplus adv_mg_852/password@sales-s.example.com/salesservice.example.com
```

## Adjust the Advisors Database Connection Strings to use the OCI Driver

After you have installed the Advisors applications on servers, using normal procedures, make the following adjustments for each Advisors component:

- Advisors Platform installations:
  - In the [advisors]\apache-tomcat-<version>\conf folder, open the Catalina.properties file, and edit it. Update all of the JDBC URIs by replacing :thin: with :oci: in each JDBC string.
  - In the [advisors]\apache-tomcat-<version>\bin folder, edit the setenv.bat file (Windows systems) or setenv.sh file (Linux systems) to add the following string near the top of the file, before the JAVA path command (these are example values – make sure the path is correct for your system):
    - Windows systems: set PATH=C:\instantclient\_12\_1;%PATH%
    - Linux systems: export LD\_LIBRARY\_PATH=/usr/lib/oracle/12.1/client64/lib

- XML Generator installations:
  - In the /conf folder, find the xmlgen.properties file, and edit it. Update all of the JDBC URIs by replacing :thin: with :oci:, as you did for Advisors Platform installations, above.
  - Under the /xmlgen folder, edit the run.bat file (Windows systems) or run.sh file (Linux systems) to add the following string near the top of the file, before the JAVA path command (these are example values – make sure the path is correct for your system):
    - Windows systems: `set PATH=C:\instantclient_12_1;%PATH%`
    - Linux systems: `export LD_LIBRARY_PATH=/usr/lib/oracle/12.1/client64/lib`
- Advisors Genesys Adapter (AGA) installations:
  - In the /conf folder, edit the inf\_genesys\_adapter.properties file to update the JDBC URIs as described above for both Advisors Platform and XML Generator installations (replace :thin: with :oci:).
  - If the AGA supports Contact Center Advisor (CCAdv), then also in the /conf folder, edit the inf\_genesys\_importer.properties file to update the JDBC URIs as described above for both Advisors Platform and XML Generator installations (replace :thin: with :oci:). This does not apply to an AGA that supports Frontline Advisor (FA).
  - In the /bin folder, edit the run.bat file (Windows systems) or setenv.sh file (Linux systems). Add the OCI path to this file, above the JAVA path command (these are example values – make sure the path is correct for your system):
    - Windows systems: `set PATH=C:\instantclient_12_1;%PATH%;`
    - Linux systems: `export LD_LIBRARY_PATH=/usr/lib/oracle/12.1/client64/lib`