How to Install Oracle 12c Client & ODBC Driver

The Oracle 12c Client and ODBC Driver

The **University Data Warehouse** "**EDW**" is comprised of Oracle databases. Most clients, who access data in the data warehouse, do so through the Business Objects suite of reporting tools (Web Intelligence or "WEBI").

The tools found in Web Intelligence simplify report creation and access to the data warehouse by providing a semantic "middle layer" that hides the complexity of the underlying Oracle database. This middle layer is called a **Universe**. A Universe handles the table linking and presents easy to understand field names. Without it, a client directly accessing the Oracle database would need to link numerous database tables and decipher technical database field names. Therefore, when possible, we encourage the use of the Web Intelligence software. If you need help starting with Web Intelligence, please visit <u>Getting Started</u>.

Sometimes the complexity of a report or data access operation might be better handled in another reporting or data access tool. At times clients may just prefer to use a data access tool in which they already possess extensive experience. In these cases, direct access the data warehouse is needed without the help of a Universe.

To directly access the data warehouse database, the client will need to install either the Oracle 12c **client** or the Oracle 12c **ODBC Driver** (or both). Some report writing tools, such as SAS or Crystal Reports, can use either the Oracle client to access the database directly in its own language, or use the Oracle 12c ODBC Driver to access the database indirectly using ODBC as a type of middle-layer "translator". For example, Microsoft Access connects to Oracle using ODBC.

Below we will show how to install both pieces. Once installed, you are likely to find that using the Oracle 12c Client is more efficient than using ODBC, but with some software, ODBC will be your only option.

Important: As per the support matrix 'Client / Server Interoperability Support Matrix for Different Oracle Versions <u>Note 207303.1</u>' client version 11.1.0.7 is not supported with Database version 12.2.0.1. All AITS hosted Oracle databases are currently version 12.2.0.1.

At the University, installing the Oracle client and ODBC driver is basically a four or five step process:

- 1. Download the Oracle installation file.
- 2. Decompress (i.e., unzip) the Oracle installation file.
- 3. *Optional*: Run the Oracle Universal Installer to "uninstall" an earlier version of the Oracle client.
- 4. Run the Oracle Universal Installer to install the Oracle client and ODBC.
- 5. Add "SQLNET.ORA" and "LDAP.ORA" files to Your Workstation

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Windows ODBC Data Connections: 64 bit vs 32 bit

Many Windows applications are 32-bit architecture. If you use these applications on a system with 64-bit Windows, you will need to create 32-bit ODBC dataset connections. Microsoft Windows has independent utilities and drivers for 32-bit and 64-bit ODBC connections. You will find the 32-bit ODBC Administration utility at C:\Windows\SysWOW64\odbcad32.exe. Confirm with your application whether the 32-bit or the 64-bit Oracle client is required.

Downloading and Installing the Oracle Client and ODBC Driver

The files to install the Oracle client and ODBC driver are located on the U of I Box online file sharing service.

- 1. To download the Oracle Client files, click on one of the following links (or copy the URL into your browser):
 - 32-bit Oracle 12c client: <u>https://uofi.box.com/s/uq7ot6guyc8wey7nbvfxgt0eeixjbwv5</u>
 - 64-bit Oracle 12c client: <u>https://uofi.box.com/s/93svfdpnh6lzmxq8atuohi9levyhuw0k</u>
- 2. Click on the Download button
- 3. A **File Download** dialog box will appear (your image may vary depending upon which internet browser you are using).

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We're sorry, the preview didn't loadzip files are not currently supported.		
Do you want to open or save win32_12201_client.zip (1.07 GB) from public.boxcloud.com?	▼ <u>C</u> ancel ×	🔍 105% 🔻 _

- 4. Select "<u>Save"</u>.
- 5. The download will start. The file is large, so it may require some time to complete.

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When the download completes, the Zip file should appear in the designated download directory:

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Decompress or Unzip the Installation File

Note: The following description of unzipping the Oracle client zipped file is based on the software utility named "Windows Explorer". The screens you see and the actions you must take to unzip a file may differ from the process described below because differences exist between all unzip utilities. The general process, though, will likely resemble the following "unzipping" description.

The downloaded file is **compressed** (or "zipped"). It is a file that actually contains many files. These files are compressed in order to speed up and simplify the download process over the network.

The downloaded file is in the form of a **zipped** file, which will need to be **unzipped** (i.e., a compressed file needs to be restored to its normal decompressed format).

Zipped files are represented by an icon displaying a **Zipper** on the folder. By clicking the zipped file, the program specified by the Windows operating system for unzipping or decompressing files will probably begin.

1. **Double-click the downloaded .zip file** and then **click** the **"Extract all Files"** option to begin decompressing the file.



2. The Extraction Wizard begins and asks you to select where to place the decompressed files by entering a location in the "Files will be extracted to this folder:" text entry box. You may use the "Browse" button to select a folder location or create a new folder location for the extracted files to be placed. This can be any folder. (The Extraction Wizard will supply a default location in the same folder where the zipped folder resides – "Oracle_install" in our example.) Using the default location is fine if that is what you choose.

NOTE: The location where the resulting Oracle client will reside can be different from the location where you extract the files. *You will be prompted for a separate file location for the Oracle client during the actual Oracle client installation routine*.

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÷	Extract Compressed (Zipped) Folders	Enter the destination folder location of the extract files or select an existing /new folder location using the
	Select a Destination and Extract Files	browse button.
	Files will be extracted to this <u>f</u> older:	
	c:\install\win32_12201_client Browse	
	☑ S <u>h</u> ow extracted files when complete	
		Click "Extract"
	<u>E</u> xtract Cancel	

3. When the **"Extract"** button is clicked, the extraction process will begin, as demonstrated below.

1% complete Copying 1,065 items from win32_12201_client.zip to win32	 D)1_client	X	 The extraction process is decompressing the zipped installation file.
1% complete	 II	×	
⊘ More details			

4. After the extraction process is complete, the files will be viewable in the folder previously specified ("Oracle_install\win32_11gR2_client\" in our example). Open that folder if you did not select the "Show extracted files when complete" checkbox earlier. (If the checkbox was selected, the folder is automatically displayed.)

↓ 1 2 = win32_12201_client				- C	×
F Home Share View F S V F Cut F Copy path access Paste Poste shortcut	Move Copy to * Copy	New item •	Properties	Select all Select none Invert selection	<u> </u>
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This concludes the unzipping (i.e., decompressing) process.

Installing Oracle Version 12c

Once the installation files have been unzipped, you can proceed with installing Oracle Version 12c.

1. Go to "*location_of_installfiles*\win32_12201_client\client32" and doubleclick on the "setup.exe" file located there.

(In our example, the location is "C:\Install\win32_12201_client\client32". If you downloaded the 64-bit version the folder name after the Install folder will start with winx64 instead of win32.)





Once launched, the following screen will appear. Please wait.



Then the Oracle 12c Client Installer screen will appear.

1. Select the **Runtime** (not InstantClient) install and click **Next**.

🕌 Oracle Database Client 12c Relea	se 2 Installer - Step 1 of 7	- 🗆 ×
Select Installation Type		
Select Installation Type Oracle Home User Selection Specify Installation Location Perform Prerequisite Checks Summary Install Product Finish	What type of Installation do you want? Installs Install (350.0MB) Installs Instant Client Software Administrator (1.5GB) Installs the management console, management tools, networking services Runtime (1.1GB) Installs tools for developing applications, networking services and basic c Custom Enables you to choose individual components to install.	, utilities and basic client software. lient software.
Help	< <u>B</u> ac	Next > Install Cancel

실 Oracle Database Client 12c Relea	ise 2 Installer - Step 2 of 7 - 🗆 🗙
Specify Oracle Home User	
Select Installation Type Oracle Home User Selection	Use Windows Built-in Account or specify a standard Windows User Account (not an Administrator account) to install and configure the Oracle Home. This account is used for running the Windows Services for the Oracle Home. Do not log in using this account to perform administrative tasks.
Specify Installation Location Perform Prerequisite Checks Summary Install Product Finish	O Use Existing Windows User User Name: Password: Uger Name: Pgssword: Confirm Password: Confirm Password: The newly created user is denied Windows logon privileges.
Help	< Back Next > Install Cancel

2. Select Use Windows Built-in Account.

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 Change the Oracle Base to C:\Oracle and the Software Location will automatically change. We recommend renaming the Software Location so the folder name is client_32 or client_64, depending upon if you are installing the 32-bit or 64-bit client. Click Next.

🙆 Oracle Database Client 12c Release	2 Installer - Step 3 of 7		_	\Box \times
Specify Installation Location			ORACLE DATABASE	12 ^c
Select Installation Type Oracle Home User Selection Specify Installation Location Perform Prerequisite Checks Summary Install Product Finish	Specify an Oracle base path to place Oracle base directory Oracle base: C:\Oracle Specify a location for storing Oracle Software location: C:\Oracle\produ	e all Oracle software and configuration- software files. This location is the Ora ct/12.2.0\client_32	-related files. This locat	Browse
Help		< <u>B</u> ack	<u>N</u> ext > Install	Cancel

4. Wait as the instal	ler performs prerequisite checks.	
실 Oracle Database Client 12c Relea	e 2 Installer - Step 4 of 7	- 🗆 X
Perform Prerequisite Check	5	
Select Installation Type Oracle Home User Selection Specify Installation Location	Verifying that the target environment meets minimum installation and configu have selected. This can take time. Please wait.	ration requirements for products you
Perform Prerequisite Checks Summary Install Product Finish		
Help	< <u>B</u> ack	Next > Install Cancel

5. Click **Install** in the Summary window.



The following screen will be displayed.

실 Oracle Database Client 12c Relea	se 2 Installer - Step 6 of 7	– 🗆 X
Install Product		
Select Installation Type Oracle Home User Selection Specify Installation Location Perform Prerequisite Checks Summary Install Product Finish	Progress 0% Loading products list. Please wait. Status ✓ Oracle Client Installation ✓ Prepare < Copy files < Setup Oracle Client Configuration	In Progress In Progress Pending Pending Pending
Heip	ORACLE 12C	Details Retry Skip

As the installation proceeds, you **may** see the following window:

Windows Secur	ity Alert		S			
💮 Windo	ws Firewa	ll has blocked some features of this program				
Windows Firewall ha all public, private ar	as blocked som nd domain netv	e features of Java(TM) 2 Platform Standard Edition binary on vorks.				
	Name:	Java(TM) 2 Platform Standard Edition binary				
	Publisher:	Sun Microsystems, Inc.				
	Pat <u>h</u> :	C:\users\young4\appdata\ocal\temp\orainstall2010-08- 09_02-45-23pm\jdk\jre\bin\javaw.exe				
Allow Java(TM) 2 Pl	atform Standa	rd Edition binary to communicate on these networks:				
✓ Domain netw	orks, such as a	a workplace network				
Private netw	orks, such as r	ny home or work network				
Public netwo because the	Public networks, such as those in airports and coffee shops (not recommended because these networks often have little or no security)					
What are the risks of allowing a program through a firewall?						
		Allow access Cancel				

- 6. Make sure both Domain and Private networks are checked, then click **Allow access**.
- 7. Click Close.



8. Add "SQLNET.ORA" and "LDAP.ORA" files to your workstation.

After you have installed the Oracle client, you will need to add two additional files: "SQLNET.ORA" and "LDAP.ORA". These files help Oracle locate the database server and directory information.

- a. Download these files at:
 - i. <u>SQLNET.ORA</u>
 - ii. <u>LDAP.ORA</u>
- b. Place the files in the "c:\oracle\product\12.2.0\client\network\admin" directory location (the "\client\" portion of the path may differ slightly).
- 9. Test Oracle:
 - a. Opening a command prompt.
 - b. Type sqlplus <username>@dsprod01 and replace <username> with your username. Then hit Enter.
 - c. A connection should be established.
 - d. Type "exit" at the prompt to quit.
- 10. To verify you can connect to the university data warehouse:
 - a. Opening a command prompt
 - b. Type tnsping dsprod01 and hit Enter. You should see a response similar to this:



This completes the Oracle 12c installation instructions.