

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 [Getting Started](#).

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 [Note 207303.1](#)' 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

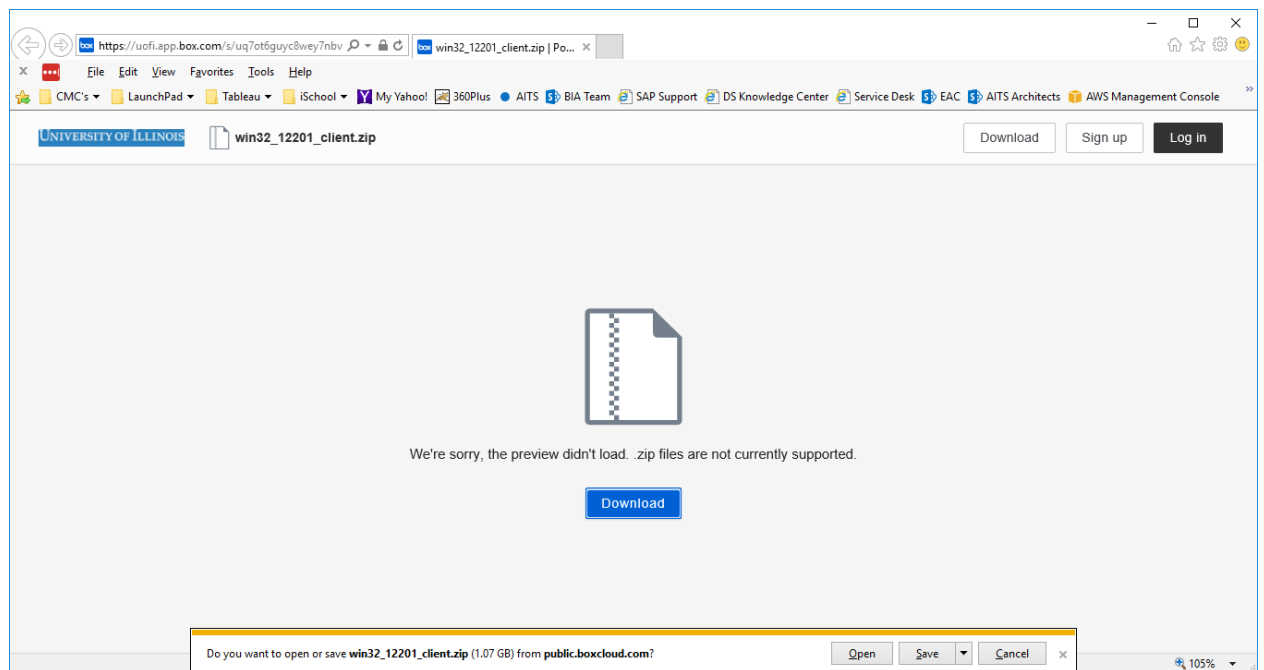
Windows ODBC Data Connections: 64 bit vs 32 bit

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

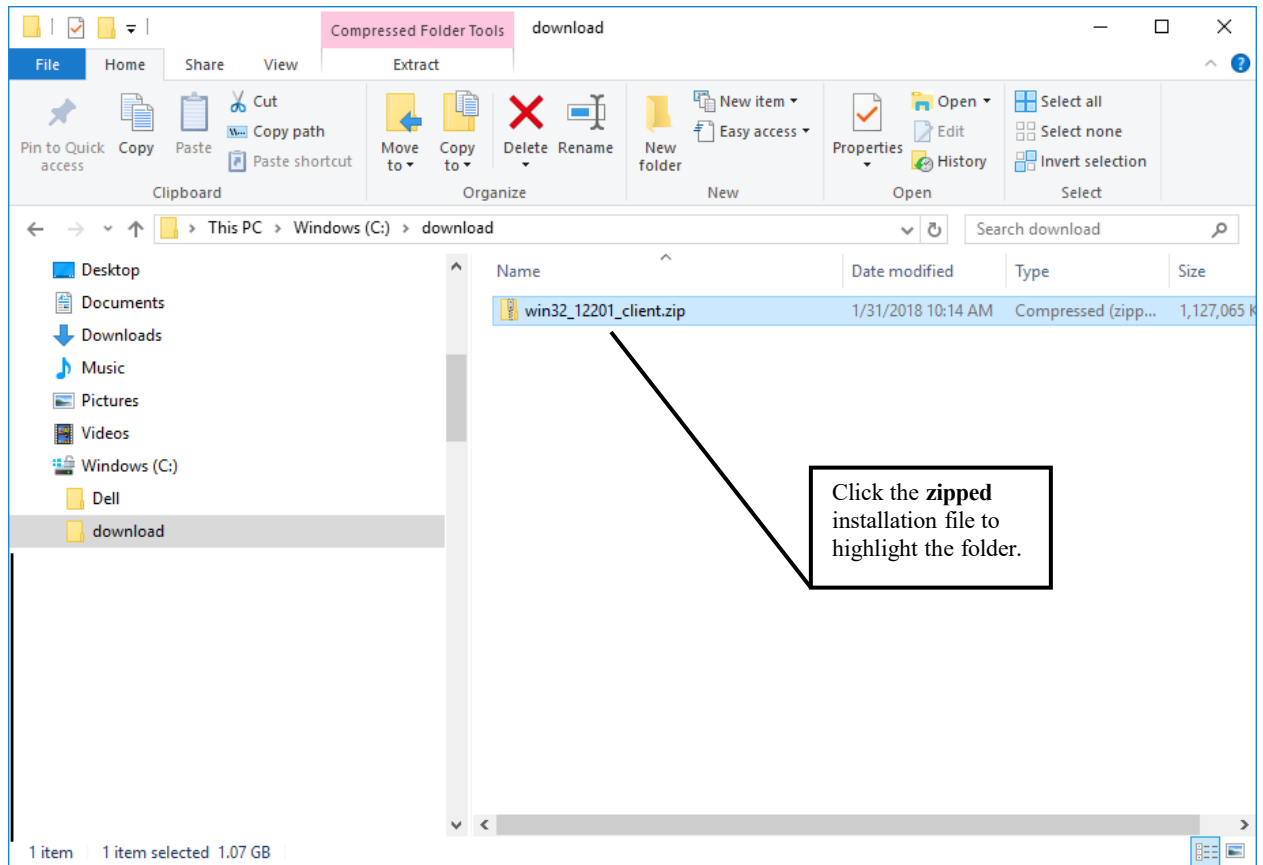
The files to install the Oracle client and ODBC driver are located on the U of I Box online file sharing service.

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:
<https://uofi.box.com/s/uq7ot6guy8wey7nbvfxgt0eeixjbwv5>
 - 64-bit Oracle 12c client:
<https://uofi.box.com/s/93svfdpnh6lzmqx8atuohi9levyhuw0k>
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).



4. Select **"Save"**.
5. The download will start. The file is large, so it may require some time to complete.

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



Decompress or Unzip the Installation File

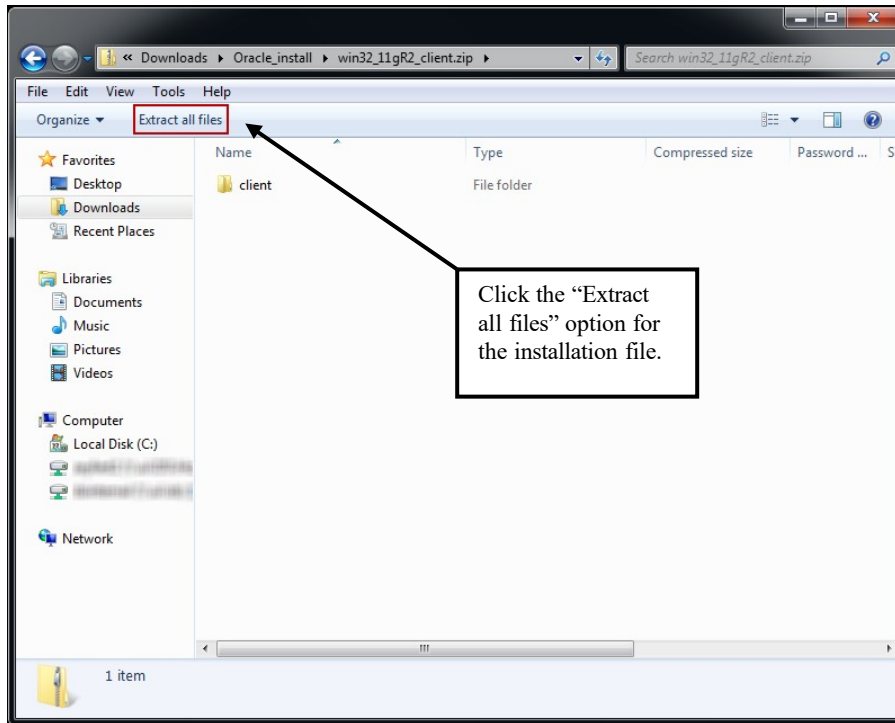
Note: The following description of unzipping the Oracle client zipped file is based on the software utility named "Windows Explorer". The screens you see and the actions you must take to unzip a file may differ from the process described below because differences exist between all unzip utilities. The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

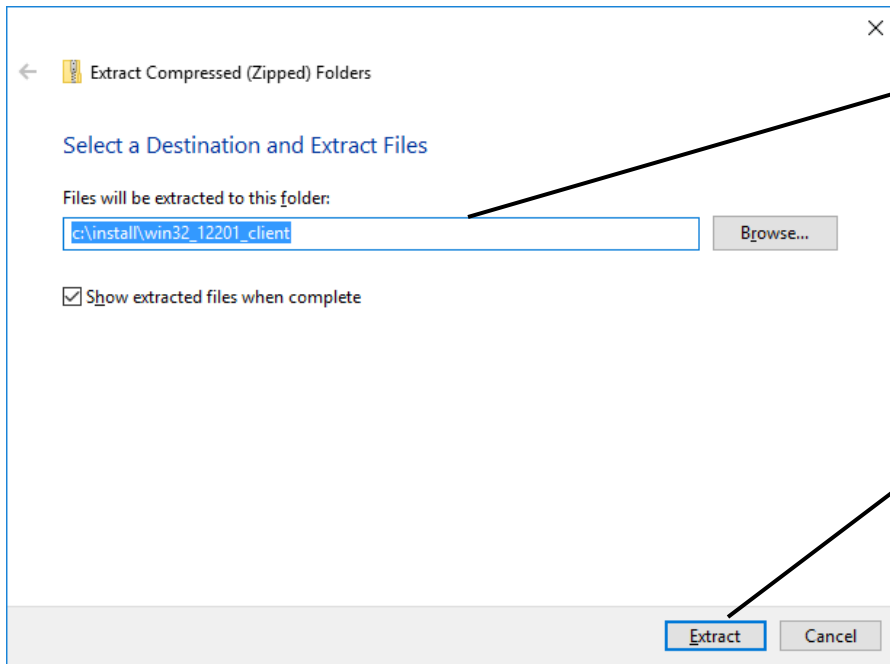
Zipped files are represented by an icon displaying a **Zipper** on the folder. By clicking the zipped file, the program specified by the Windows operating system for unzipping or decompressing files will probably begin.

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.

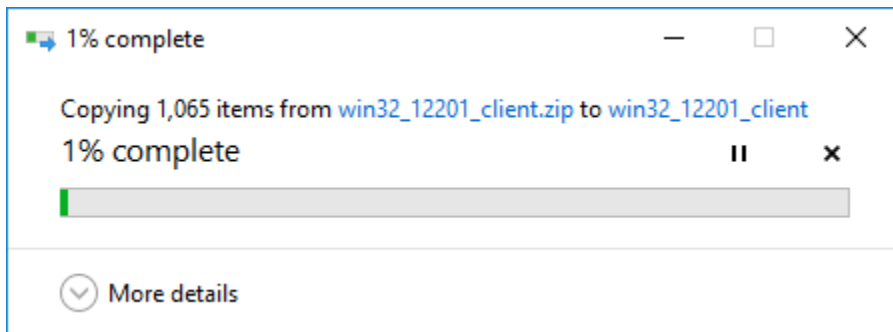
NOTE: The location where the resulting Oracle client will reside can be different from the location where you extract the files. *You will be prompted for a separate file location for the Oracle client during the actual Oracle client installation routine.*



Enter the destination folder location of the extract files or select an existing /new folder location using the browse button.

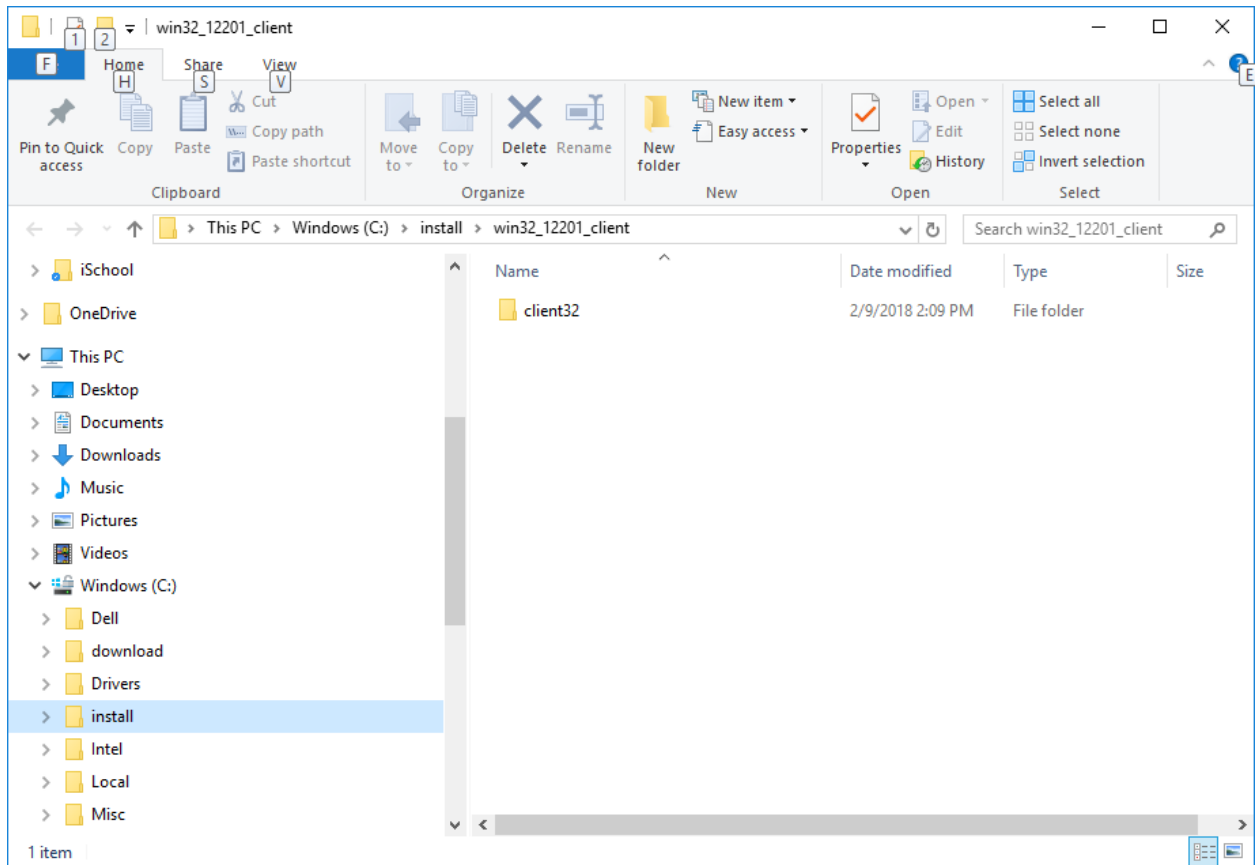
Click "Extract"

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



The extraction process is decompressing the zipped installation file.

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.)

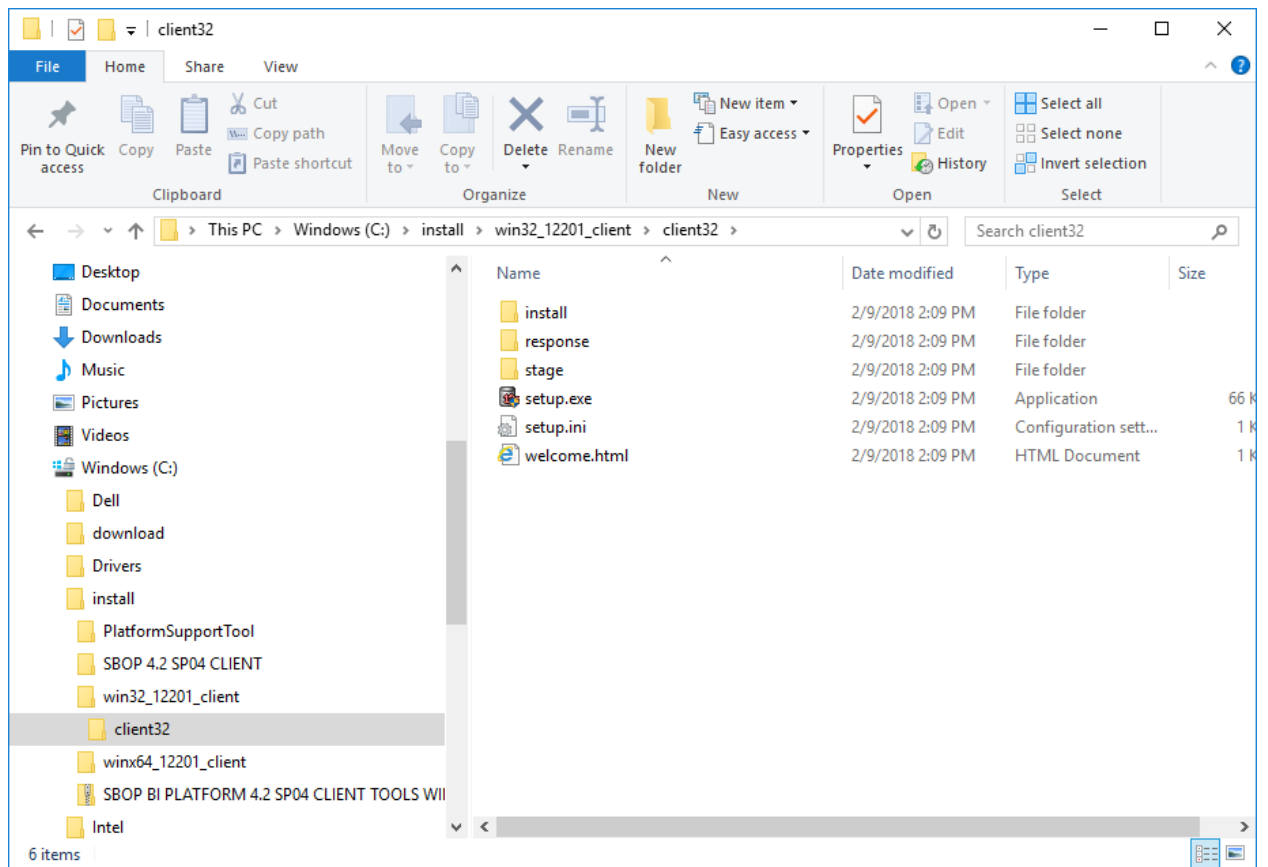


This concludes the unzipping (i.e., decompressing) process.

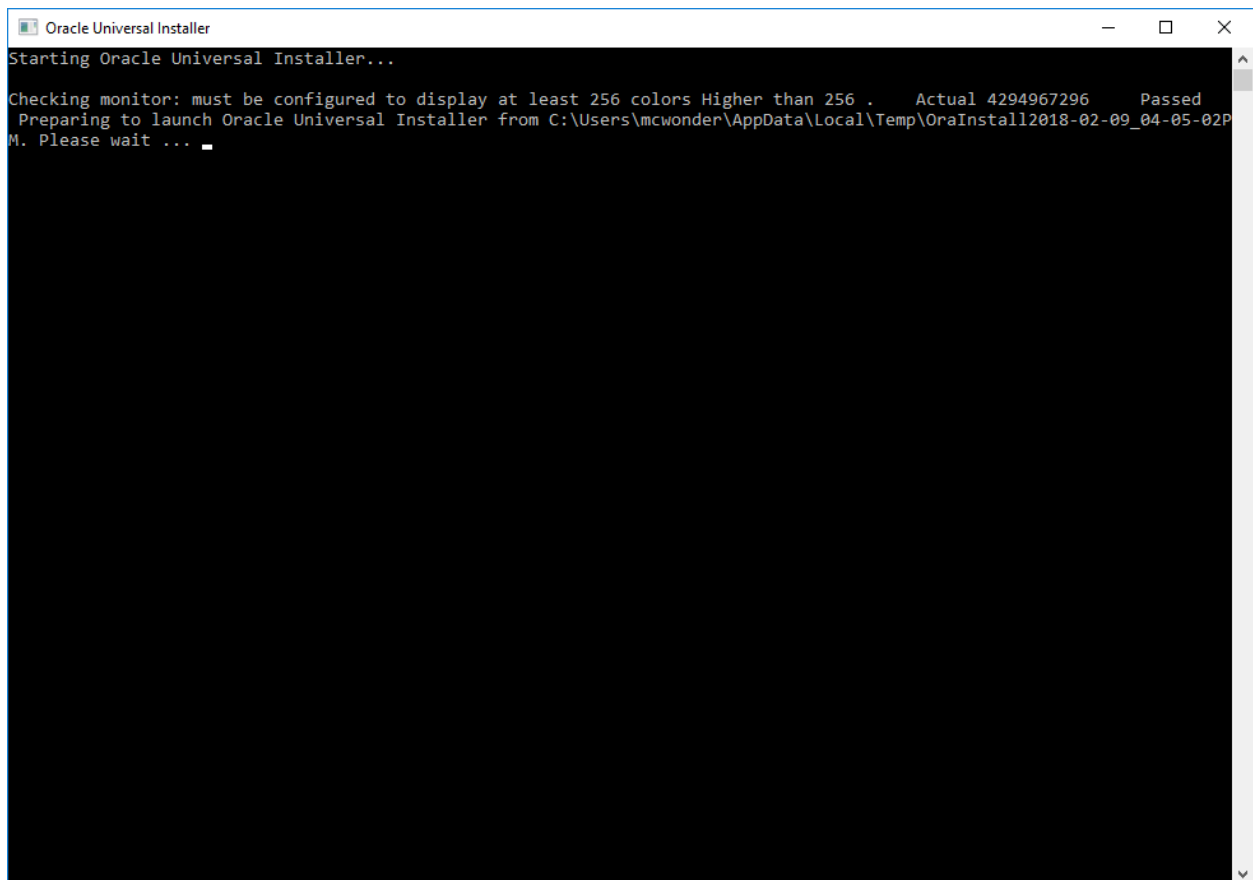
Installing Oracle Version 12c

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 double-click 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.)



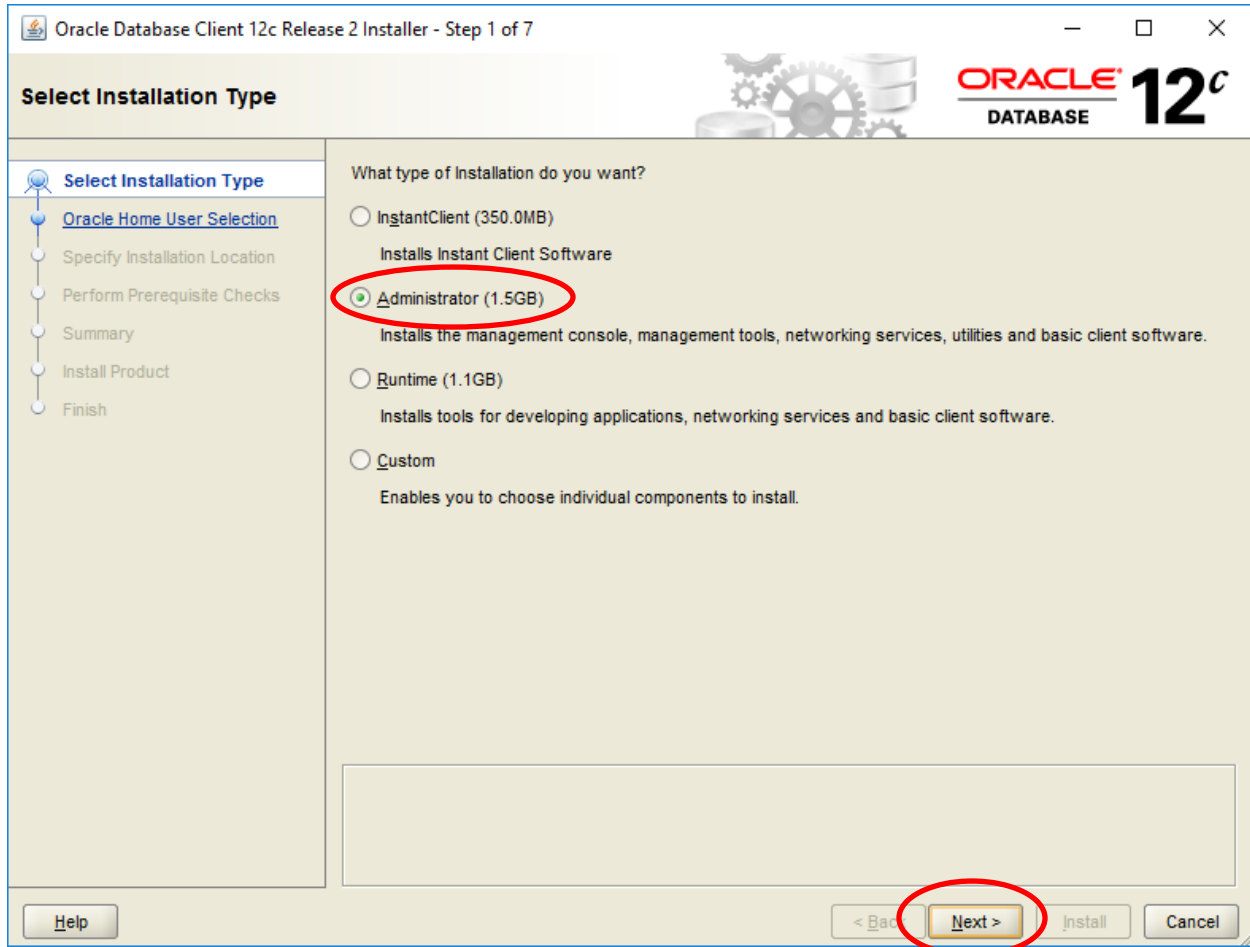
Once launched, the following screen will appear. Please wait.



```
Oracle Universal Installer
Starting Oracle Universal Installer...
Checking monitor: must be configured to display at least 256 colors Higher than 256 . Actual 4294967296 Passed
Preparing to launch Oracle Universal Installer from C:\Users\mcwonder\AppData\Local\Temp\OraInstall2018-02-09_04-05-02P
M. Please wait ...
```

Then the Oracle 12c Client Installer screen will appear.

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



- Specify Oracle Home User. We recommend using an existing account that is not a local administrator.

Oracle Database Client 12c Release 2 Installer - Step 2 of 7

Specify Oracle Home User

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.

Use Existing Windows User

User Name:

Password:

Create New Windows User

User Name:

Password:

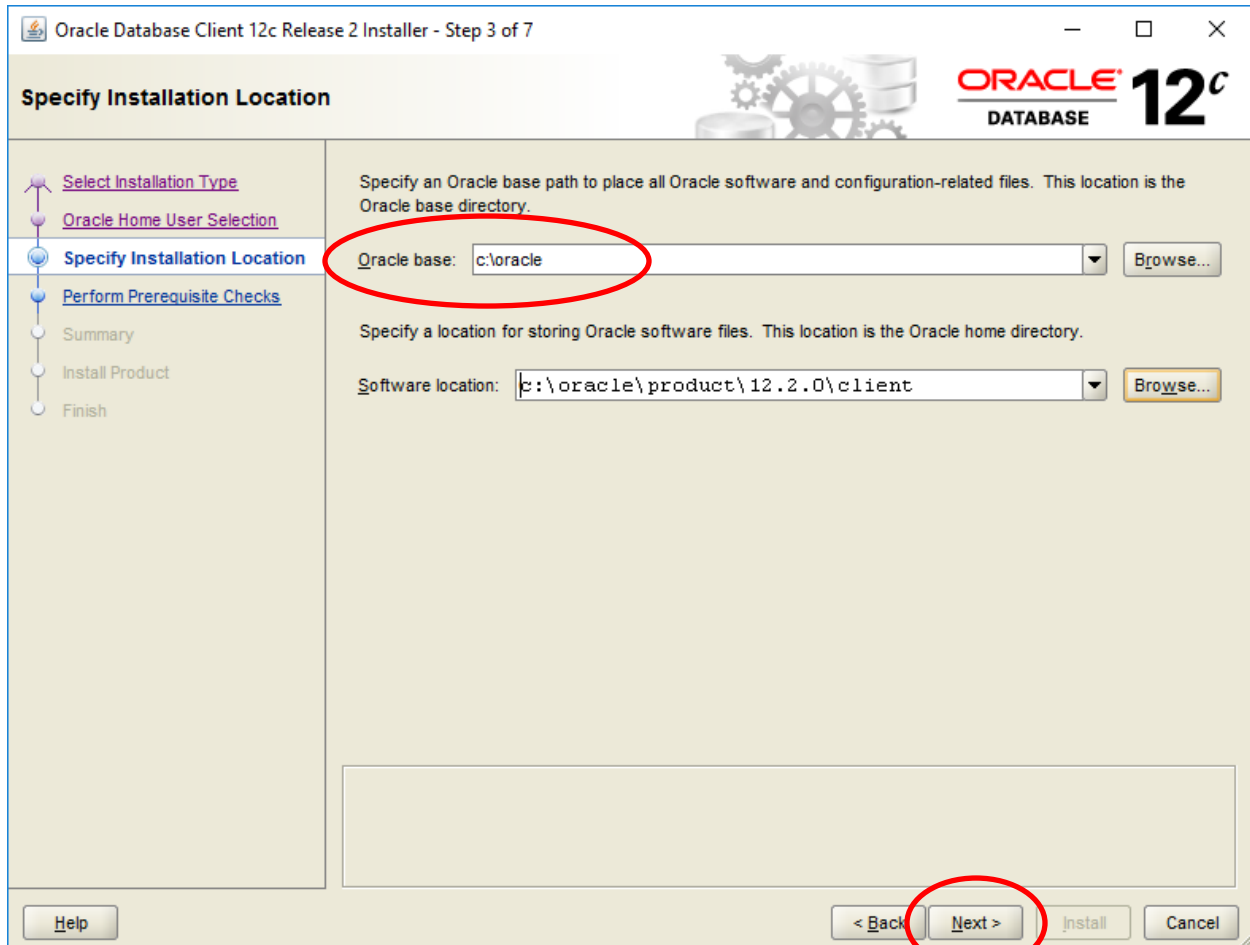
Confirm Password:

The newly created user is denied Windows logon privileges.

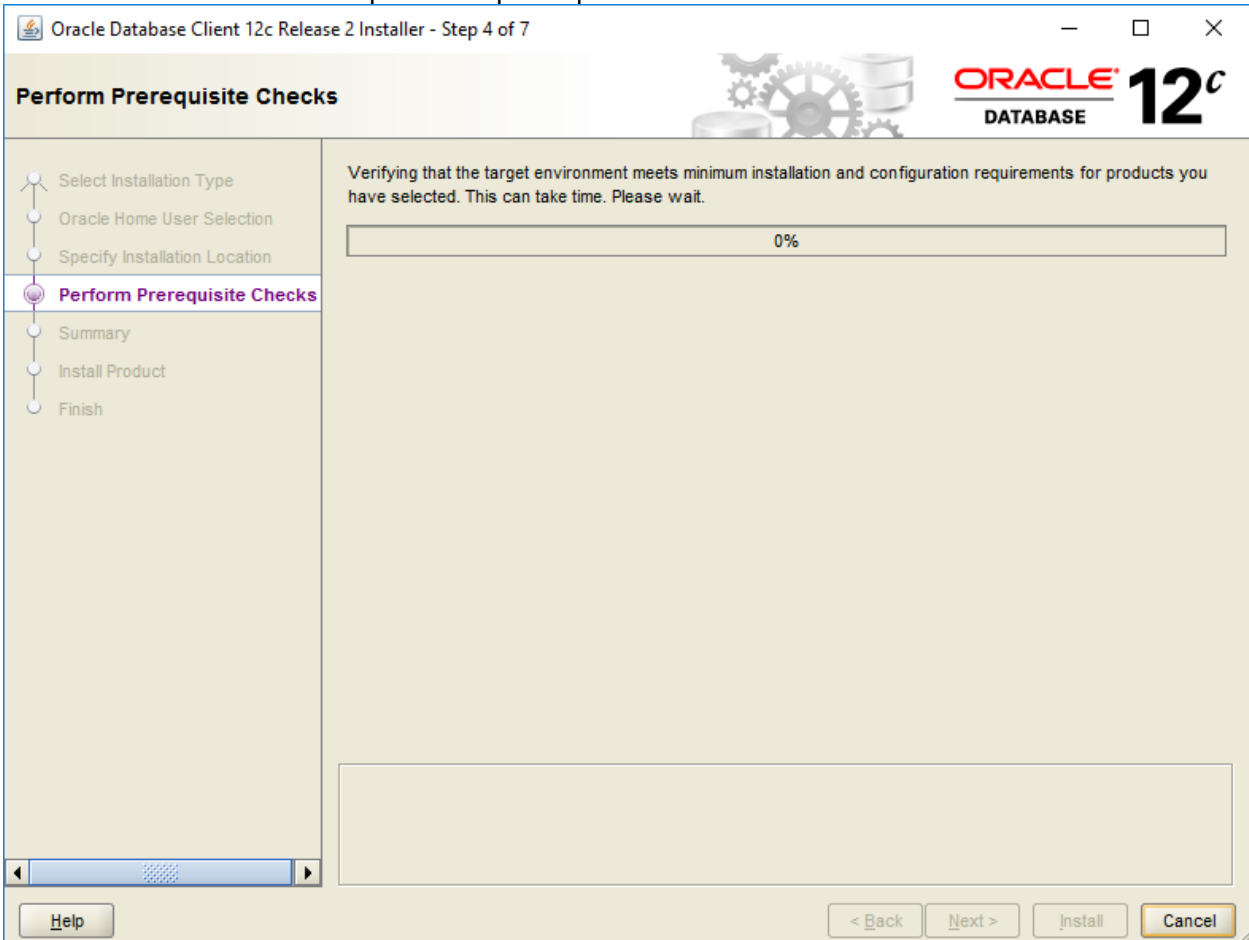
Use Windows Built-in Account

Help < Back Next > Install Cancel

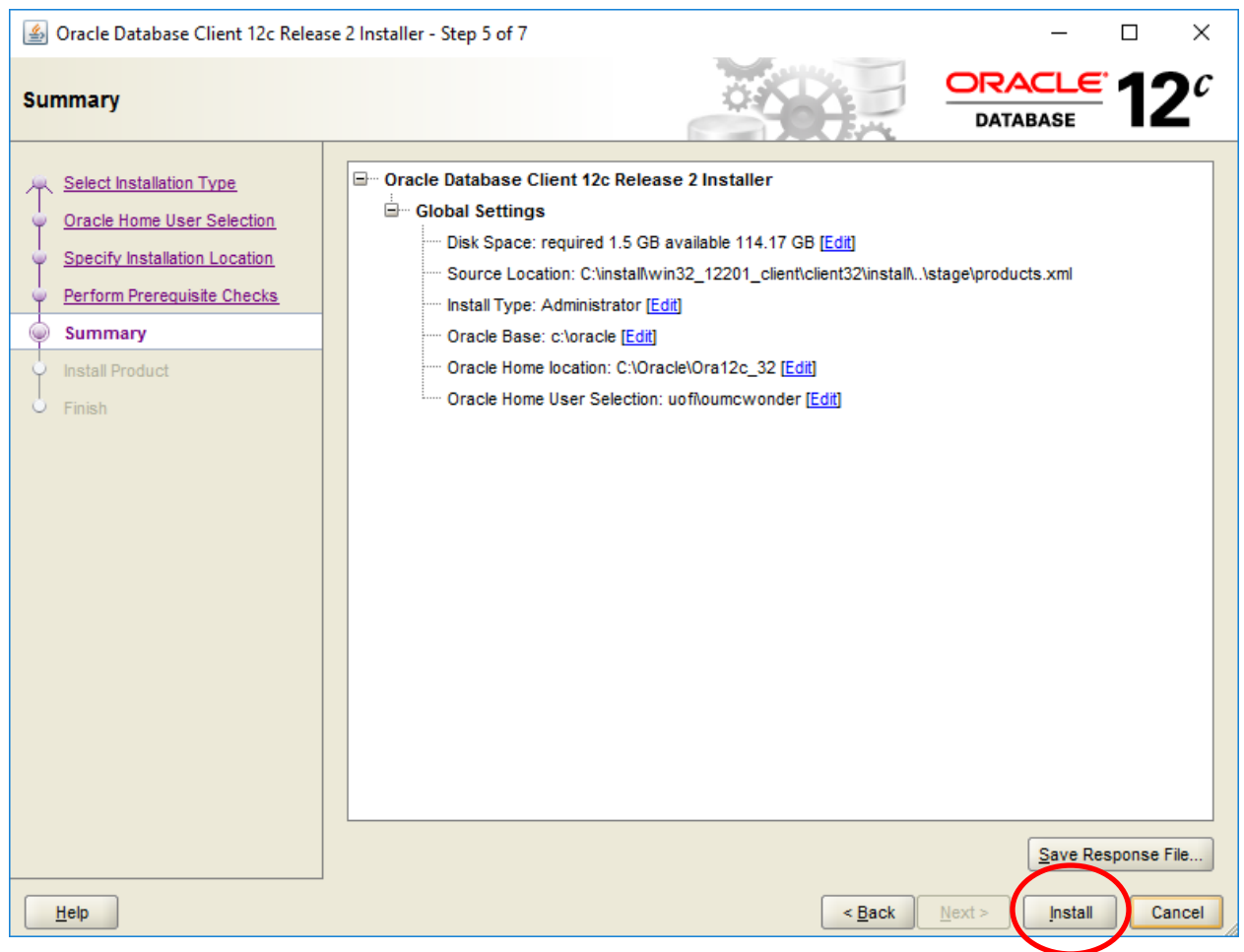
3. Change the Oracle Base to C:\Oracle and the Software Location will automatically change. Click **Next**.



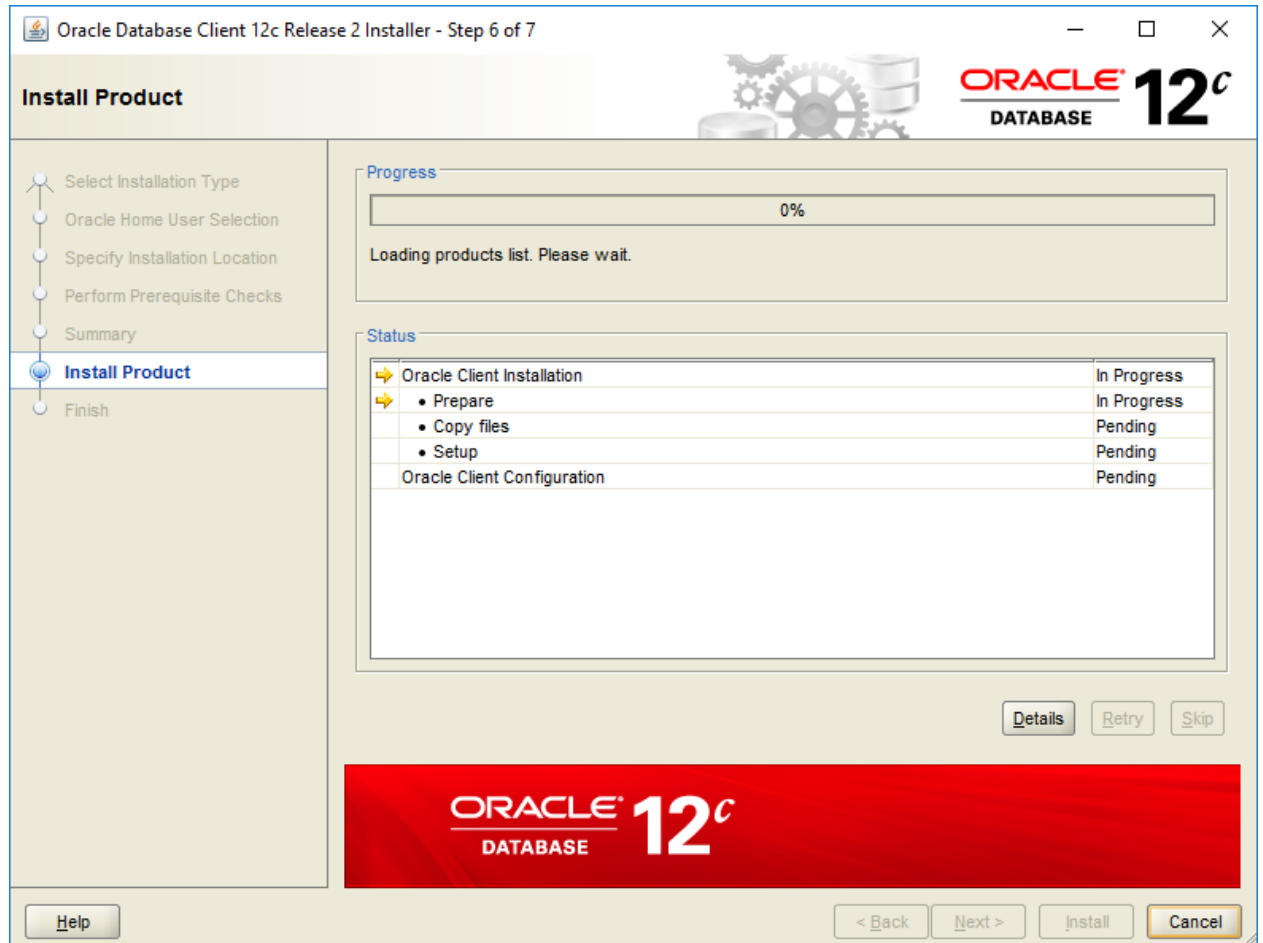
4. Wait as the installer performs prerequisite checks.



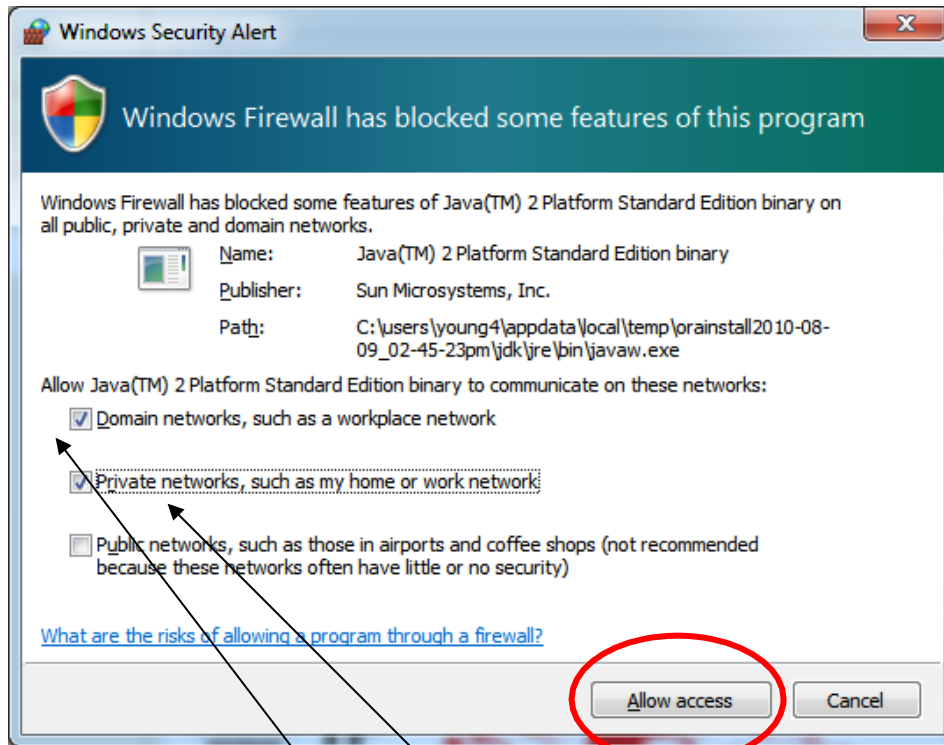
5. Click **Install** in the Summary window.



The following screen will be displayed.

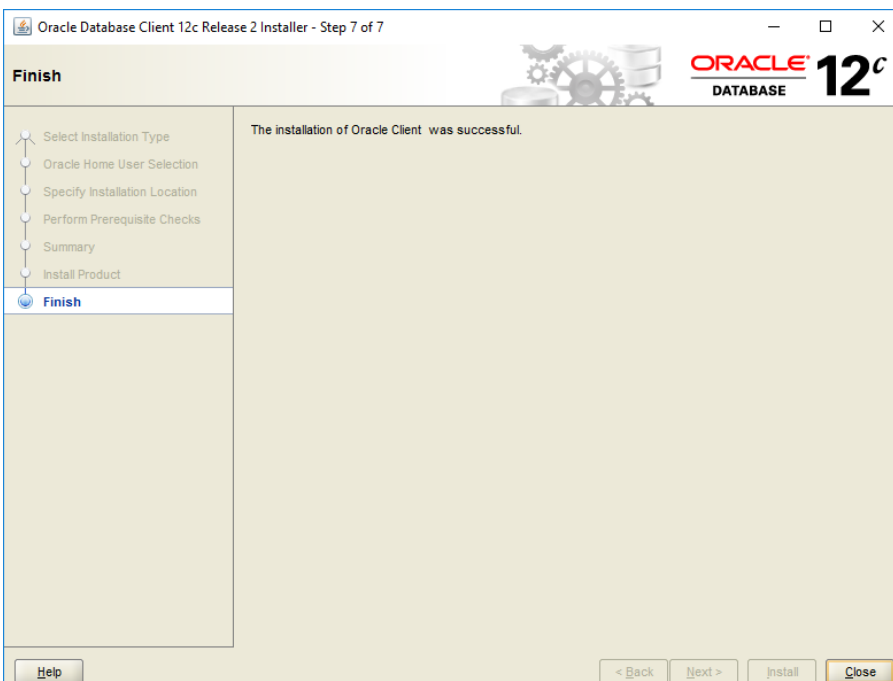


As the installation proceeds, you **may** see the following window:



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

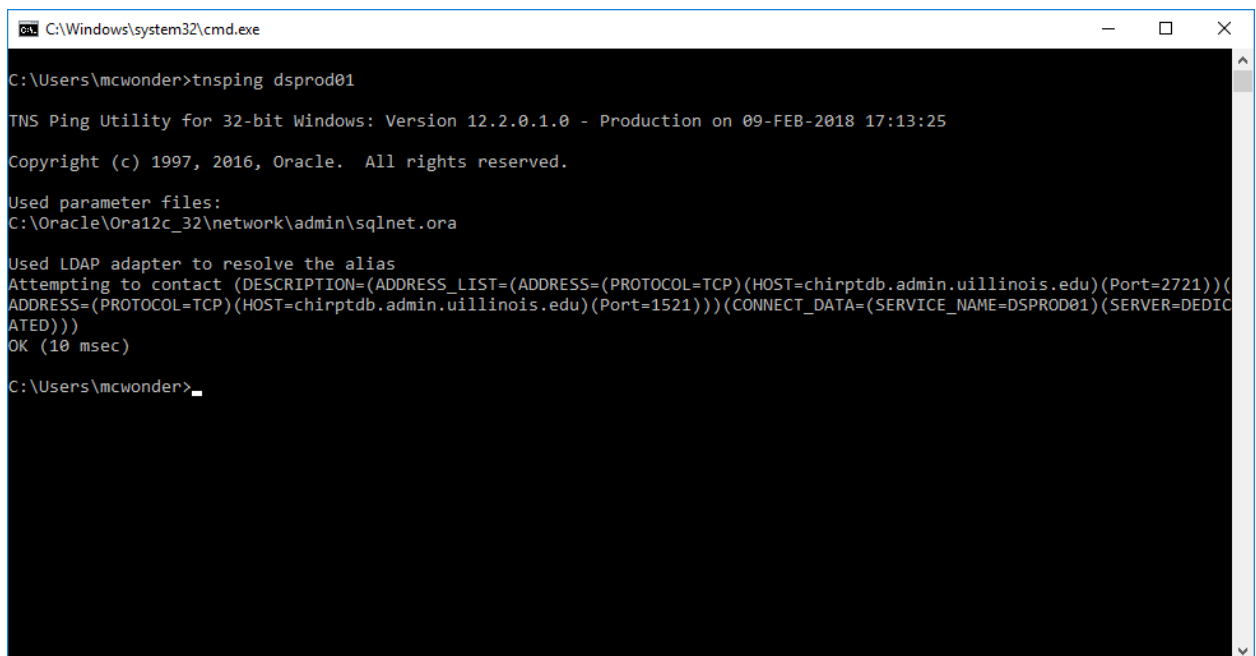
7. Click Close.



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. [SQLNET.ORA](#)
 - ii. [LDAP.ORA](#)
 - 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:



```
C:\Windows\system32\cmd.exe
C:\Users\mcwonder>tnsping dsprod01

TNS Ping Utility for 32-bit Windows: Version 12.2.0.1.0 - Production on 09-FEB-2018 17:13:25

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Used parameter files:
C:\Oracle\Ora12c_32\network\admin\sqlnet.ora

Used LDAP adapter to resolve the alias
Attempting to contact (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=chirptdb.admin.uillinois.edu)(Port=2721))(ADDRESS=(PROTOCOL=TCP)(HOST=chirptdb.admin.uillinois.edu)(Port=1521)))(CONNECT_DATA=(SERVICE_NAME=DSPROD01)(SERVER=DEDICATED)))
OK (10 msec)

C:\Users\mcwonder>
```

This completes the Oracle 12c installation instructions.