

SQL Server → Oracle Linked Server Setup Guide

This is a step-by-step reference for setting up a Linked Server from SQL Server to Oracle, including all installation and configuration steps, verified on a 64-bit server.

1. Install Oracle Instant Client (64-bit)

1. Download **Oracle Instant Client Basic 19c (64-bit)** and **ODBC package**.
2. Extract both ZIPs into the same folder, e.g., `C:\Oracle\instantclient_19_64`.
3. Ensure the following files exist:
4. `oci.dll`
5. `sqora64.dll`
6. `odbc_install.exe`
7. Register the ODBC driver:

```
cd C:\Oracle\instantclient_19_64
odbc_install.exe
```

8. Add the folder to **System PATH**.
 9. Verify in **ODBC Data Source Administrator (64-bit)** under **Drivers tab**: `Oracle in instantclient_19_64` appears.
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2. Install ODAC 19c (64-bit) with OLE DB provider

1. Download **ODAC 19c XCopy (64-bit)**.
2. Extract the ZIP to `C:\Oracle\ODAC19c`.
3. Open Command Prompt as Administrator and run:

```
cd C:\Oracle\ODAC19c
install.bat oledb C:\Oracle\ODAC19c odac19
```

4. Verify `C:\Oracle\ODAC19c\bin\oci.dll` exists.
 5. Add `C:\Oracle\ODAC19c\bin` to the top of **System PATH** (above Instant Client).
 6. Restart **SQL Server service**.
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3. Configure ODBC System DSN

1. Open **ODBC Data Source Administrator (64-bit)** → System DSN → Add.
2. Select **Oracle in instantclient_19_64**.
3. Enter:
4. Data Source Name (e.g., `OracleDSN`)
5. TNS Service Name (from `tnsnames.ora`) or EZCONNECT `host:port/service_name`
6. User ID (Oracle username)

7. Test connection — must succeed.

4. Configure OraOLEDB.Oracle in SQL Server

1. In SSMS: `Server Objects → Linked Servers → Providers → OraOLEDB.Oracle → Properties`
 2. Enable:
 3. `AllowInProcess`
 4. `DynamicParameters`
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5. Create Linked Server in SQL Server

T-SQL Example:

```
-- Create Linked Server
EXEC sp_addlinkedserver
    @server      = 'ORACLE_LINKED',
    @srvproduct  = 'Oracle',
    @provider    = 'OraOLEDB.Oracle',
    @datasrc     = 'host:1521/service_name';

-- Map login
EXEC sp_addlinkedsrvlogin
    @rmtsrvname  = 'ORACLE_LINKED',
    @useself     = 'FALSE',
    @rmtuser     = 'oracle_user',
    @rmtpassword = 'oracle_password';
```

6. Test Linked Server

```
SELECT *
FROM OPENQUERY(ORACLE_LINKED, 'SELECT 1 FROM dual');
```

- Should return `1`. - Use `OPENQUERY` for queries to avoid 4-part name issues.

7. Tips & Best Practices

- SQL Server must load **ODAC OCI first** in PATH.
- Always enable `AllowInProcess` and `DynamicParameters`.
- SQL Server service account must have **Read & Execute** permissions on Oracle folders.
- Avoid distributed transactions unless necessary.
- Always test with `SELECT 1 FROM dual` first before querying large tables.

Saved by: SQL Server ↔ Oracle Linked Server Setup Notes