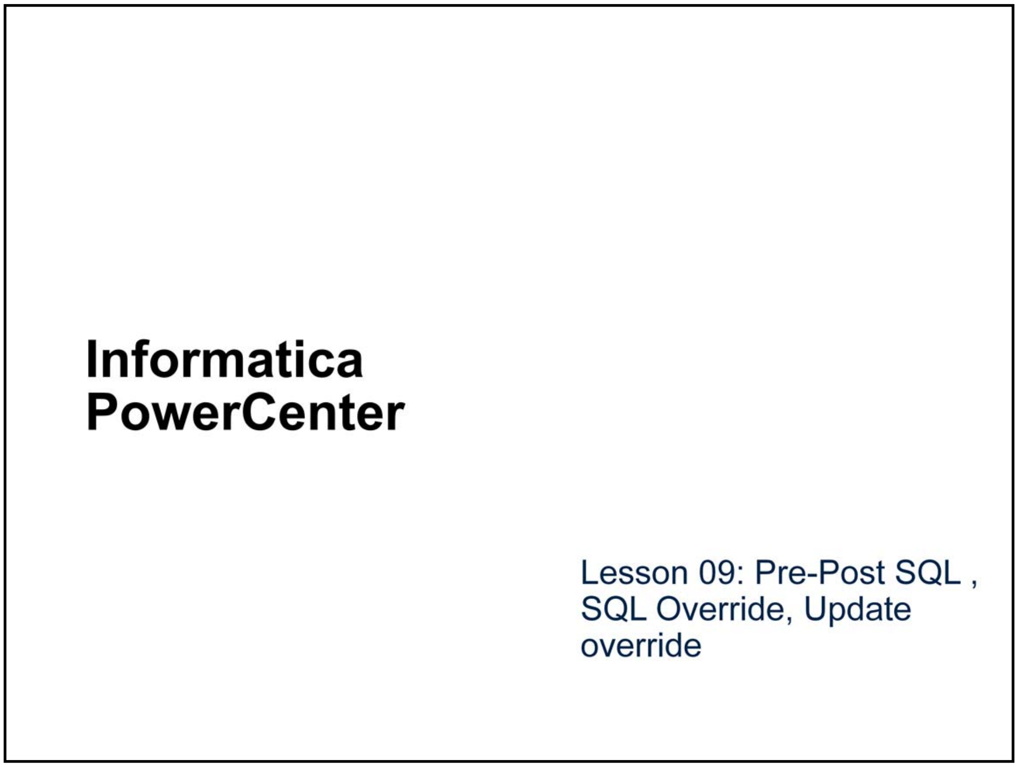

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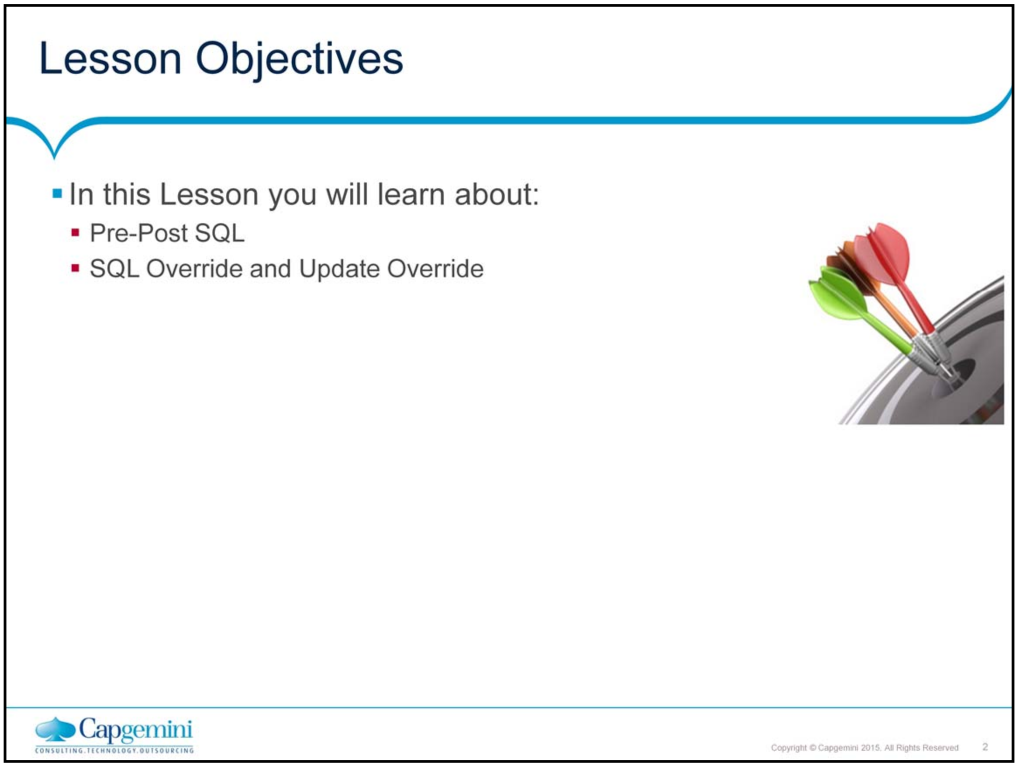
Lesson 09: Pre-Post SQL , SQL Override, Update override



Lesson Objectives

- In this Lesson you will learn about:
  - Pre-Post SQL
  - SQL Override and Update Override

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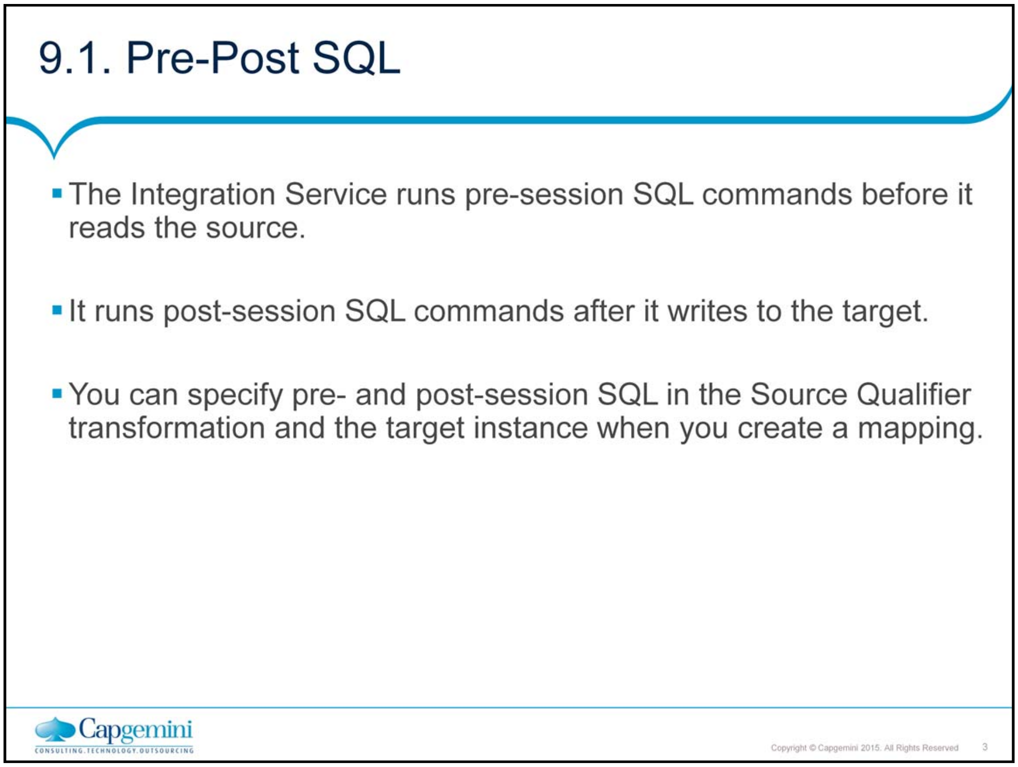
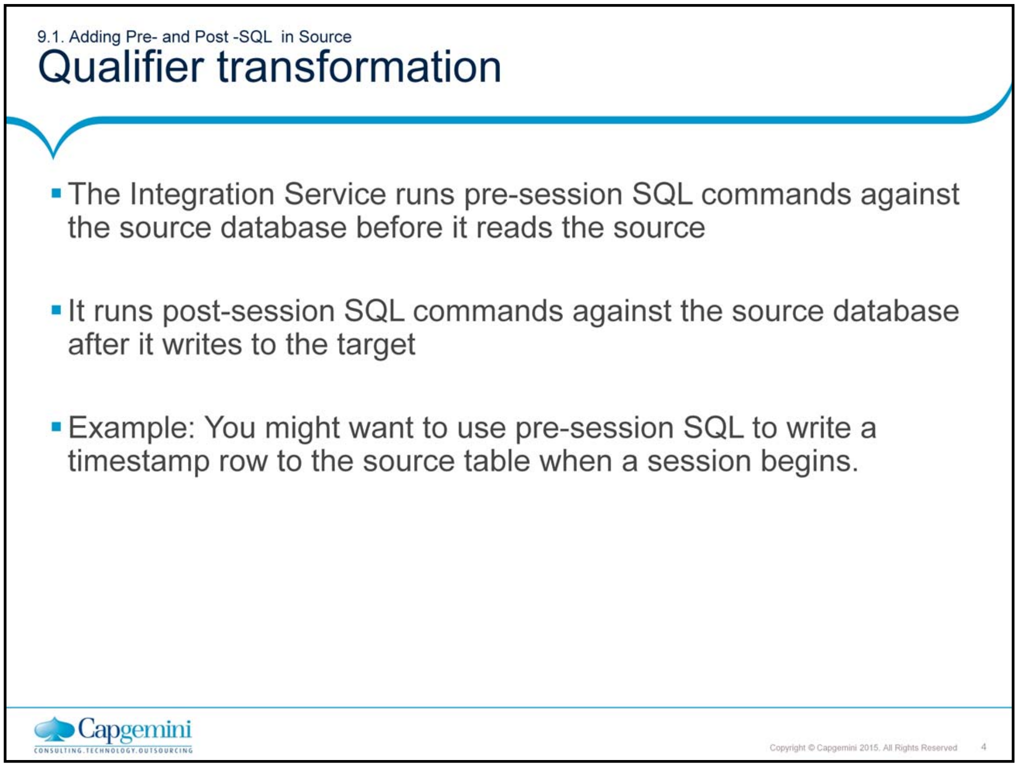


9.1. Pre-Post SQL

- The Integration Service runs pre-session SQL commands before it reads the source.
- It runs post-session SQL commands after it writes to the target.
- You can specify pre- and post-session SQL in the Source Qualifier transformation and the target instance when you create a mapping.



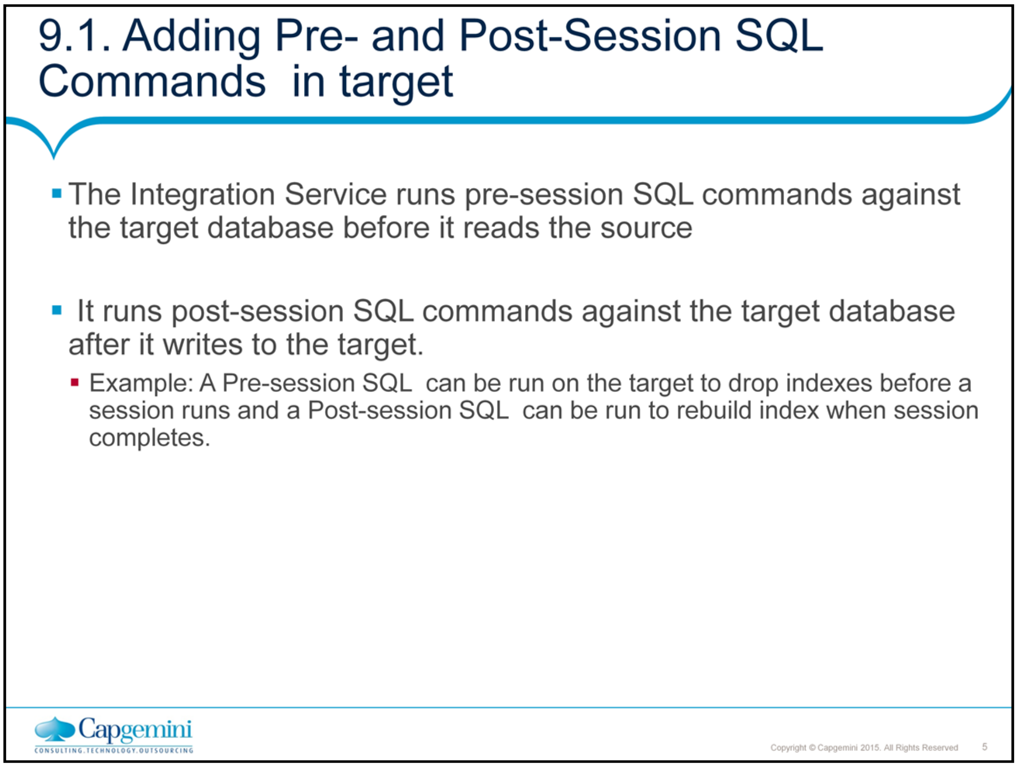
9.1. Adding Pre- and Post -SQL in Source

Qualifier transformation

- The Integration Service runs pre-session SQL commands against the source database before it reads the source
- It runs post-session SQL commands against the source database after it writes to the target
- Example: You might want to use pre-session SQL to write a timestamp row to the source table when a session begins.

Use the following guidelines when you enter pre- and post-session SQL commands in the Source Qualifier transformation or target instance:
•You can use any command that is valid for the database type. However, the Integration Service does not allow nested comments, even though the database might.
•You can use mapping parameters and variables in the source pre- and post-session SQL commands.
•Use a semi-colon (;) to separate multiple statements.
•The Designer does not validate the SQL.

Pre- and post-session SQL commands can be entered on the Properties tab of the target instance in a mapping.



9.1. Adding Pre- and Post-Session SQL Commands in target

- The Integration Service runs pre-session SQL commands against the target database before it reads the source

- It runs post-session SQL commands against the target database after it writes to the target.
  - Example: A Pre-session SQL can be run on the target to drop indexes before a session runs and a Post-session SQL can be run to rebuild index when session completes.

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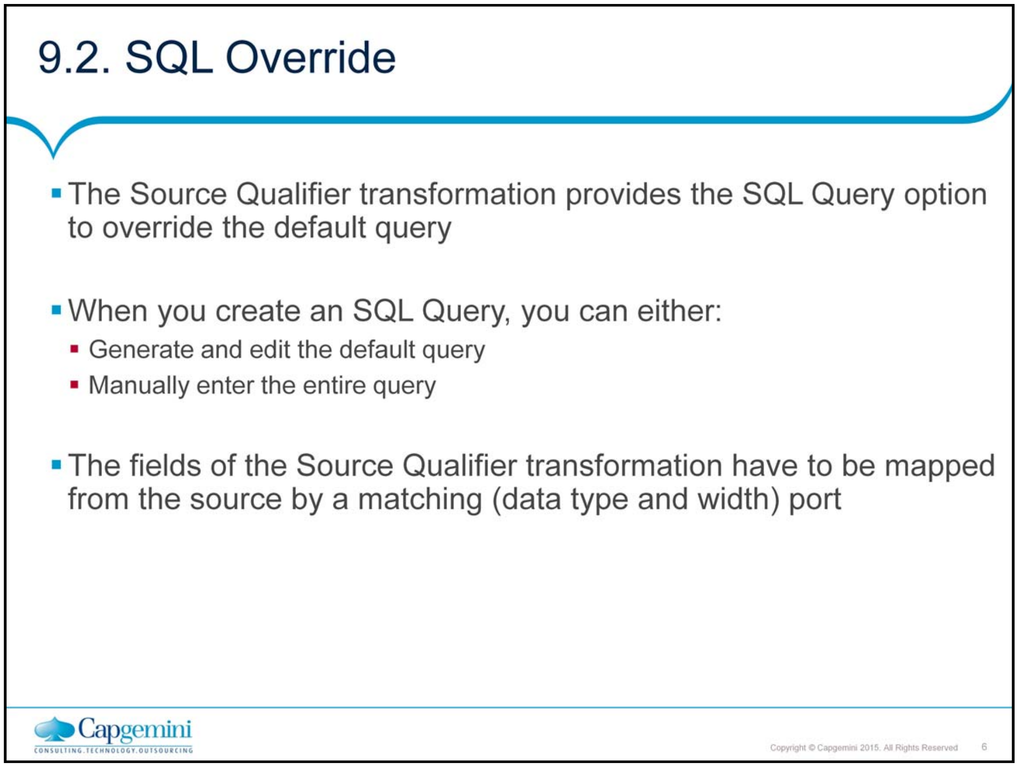

9.2. SQL Override

- The Source Qualifier transformation provides the SQL Query option to override the default query
- When you create an SQL Query, you can either:
  - Generate and edit the default query
  - Manually enter the entire query
- The fields of the Source Qualifier transformation have to be mapped from the source by a matching (data type and width) port

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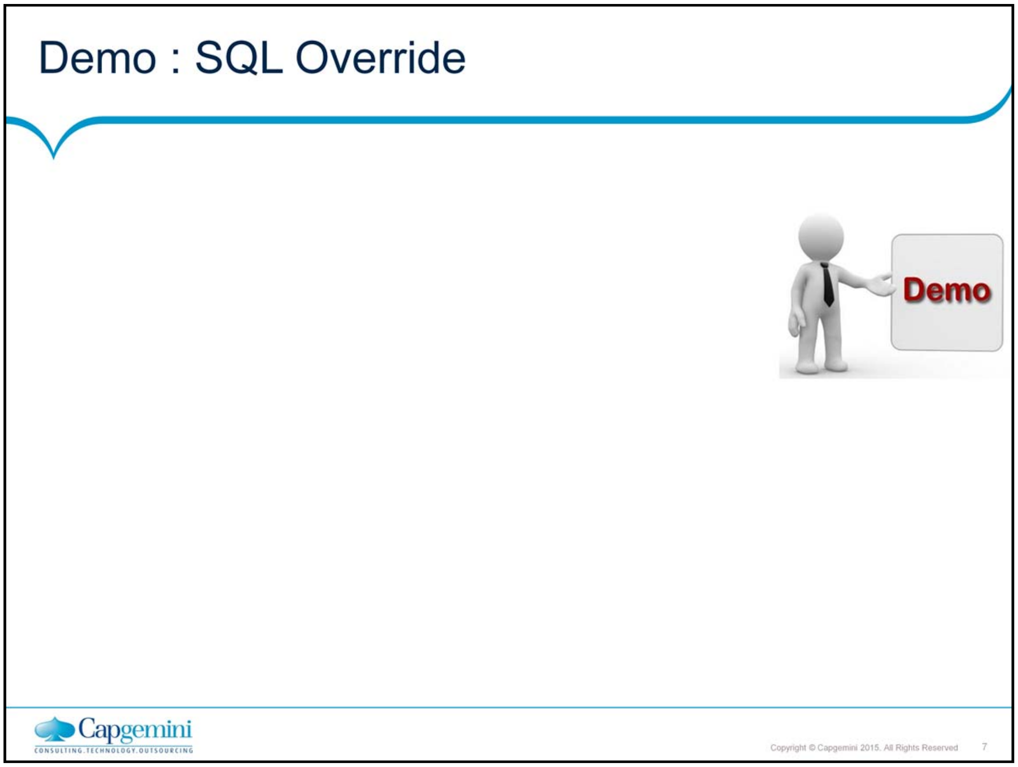
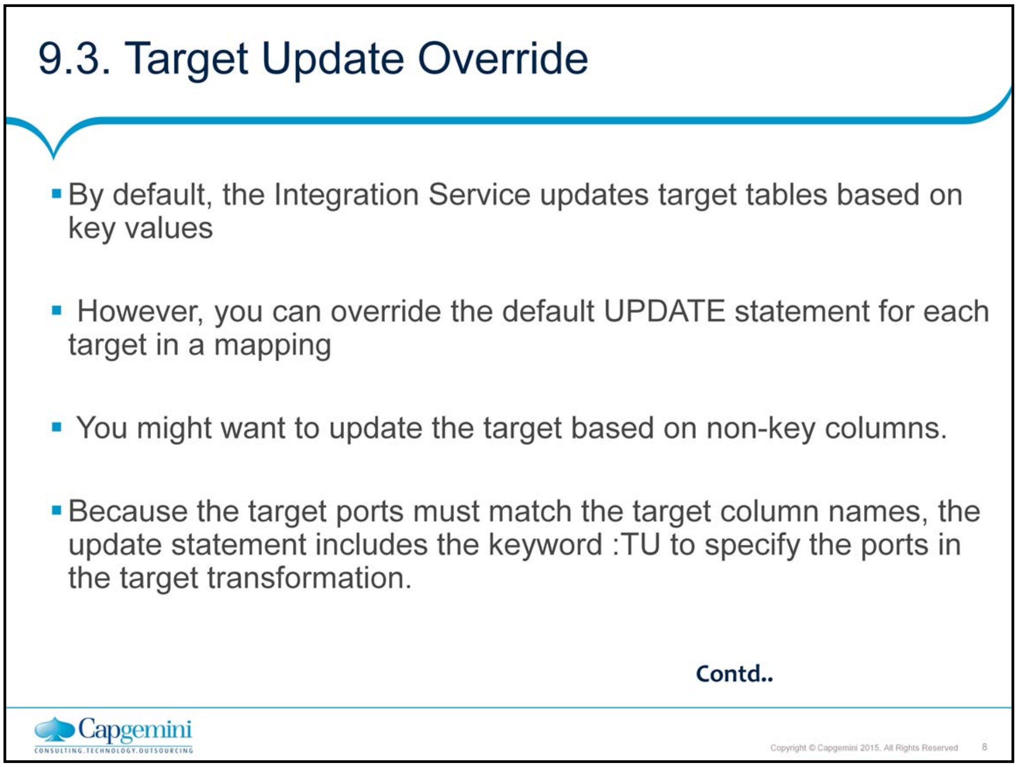
When you create an SQL Query, you can either:
• **Generate and edit the default query:** If you want to use the existing transformation options in the extract override, generate and edit the default query. When the Designer generates the default query, it incorporates all other configured options, such as a filter or number of sorted ports. The resulting query overrides all other options you might subsequently configure in the transformation

• **Manually enter the entire query:** The resulting query overrides all other options configured in the transformation



Demo : SQL Override

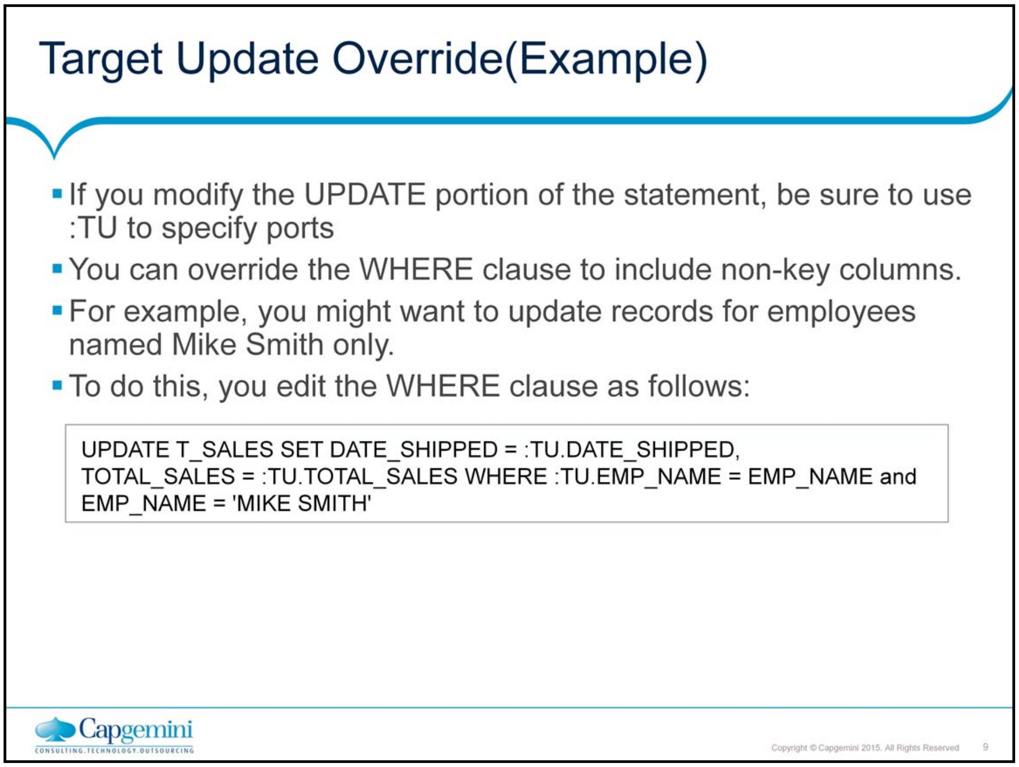
Steps:
1. Open the ***Source Qualifier transformation***, and click the Properties tab.
2. Click the Open button in the SQL Query field. The SQL Editor dialog box appears.
3. Click ***Generate SQL***.
The Designer displays the default query it generates when querying rows from all sources included in the Source Qualifier transformation.
4. Enter your own query in the space where the default query appears.
Every column name must be qualified by the name of the table, view, or synonym in which it appears. For example, if you want to include the ORDER_ID column from the ORDERS table, enter ORDERS.ORDER_ID. You can double-click column names appearing in the Ports window to avoid typing the name of every column.
5. Select the ODBC data source containing the sources included in the query.
6. Enter the user name and password to connect to this database.
7. Click ***Validate***.
The Designer runs the query and reports whether its syntax was correct.
9. Choose ***Repository-Save***.



9.3. Target Update Override

- By default, the Integration Service updates target tables based on key values
- However, you can override the default UPDATE statement for each target in a mapping
- You might want to update the target based on non-key columns.
- Because the target ports must match the target column names, the update statement includes the keyword :TU to specify the ports in the target transformation.

Contd..



Target Update Override(Example)

- If you modify the UPDATE portion of the statement, be sure to use :TU to specify ports
- You can override the WHERE clause to include non-key columns.
- For example, you might want to update records for employees named Mike Smith only.
- To do this, you edit the WHERE clause as follows:

```
UPDATE T_SALES SET DATE_SHIPPED = :TU.DATE_SHIPPED,
TOTAL_SALES = :TU.TOTAL_SALES WHERE :TU.EMP_NAME = EMP_NAME and
EMP_NAME = 'MIKE SMITH'
```

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General Rules:
Use the following rules and guidelines when you enter target update queries:

• When you save a mapping, the Designer verifies that you have referenced valid port names. It does not verify the accuracy of the SQL.

• A WHERE clause that does not contain any column references updates all rows in the target table, or no rows in the target table, depending on the WHERE clause and the data from the mapping.

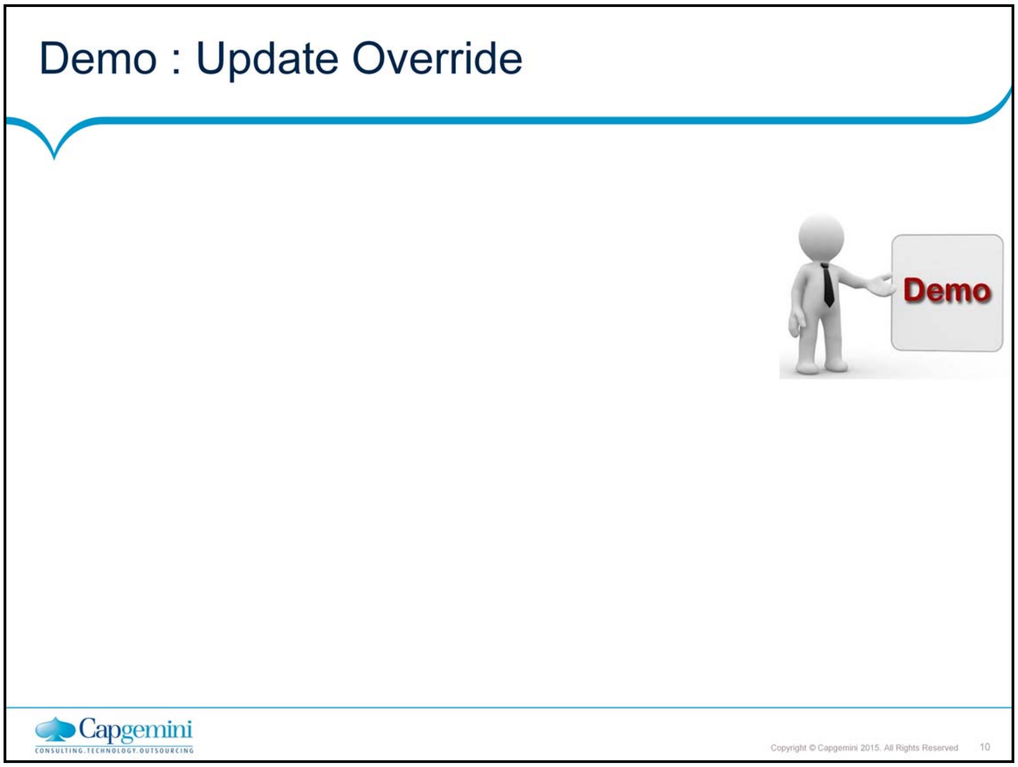
For example, the following query sets the EMP_NAME to 'MIKE SMITH' for all rows in the target table if any row of the transformation has EMP_ID > 100.

UPDATE T_SALES set EMP_NAME = 'MIKE SMITH' WHERE :TU.EMP_ID > 100

• If the WHERE clause contains no port references, the mapping updates the same set of rows for each row of the mapping.

For example, the following query updates all employees with EMP_ID > 100 to have the EMP_NAME from the last row in the mapping.

• UPDATE T_SALES set EMP_NAME = :TU.EMP_NAME WHERE EMP_ID > 100



Demo : Update Override

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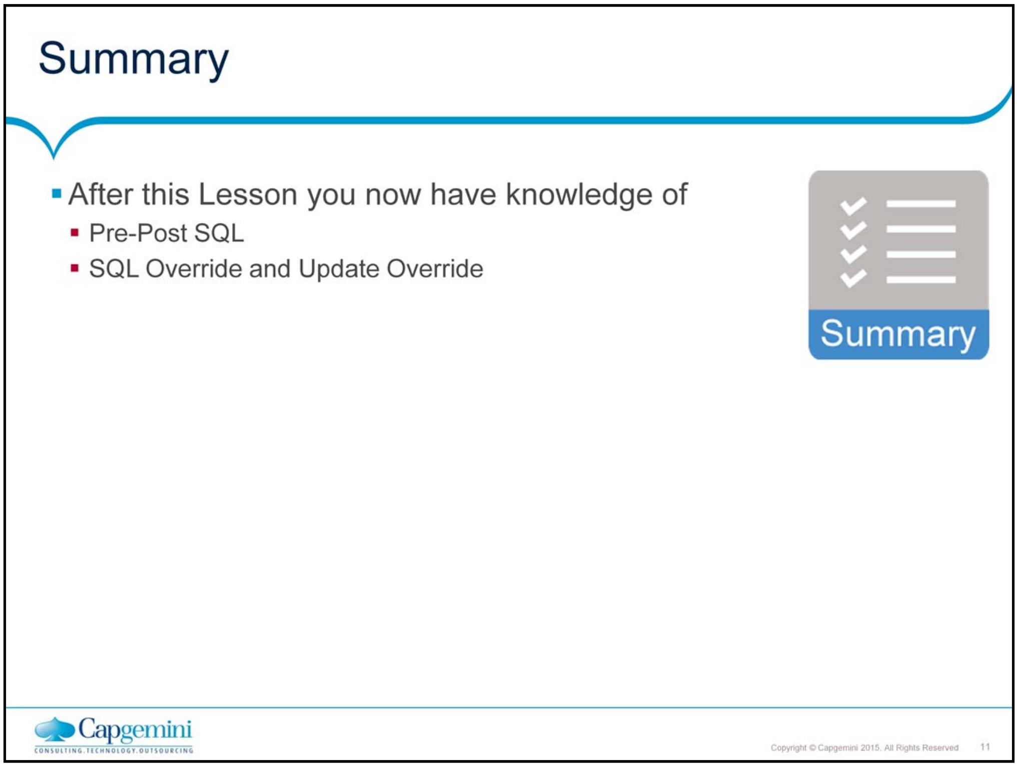

Summary

- After this Lesson you now have knowledge of
  - Pre-Post SQL
  - SQL Override and Update Override

Summary

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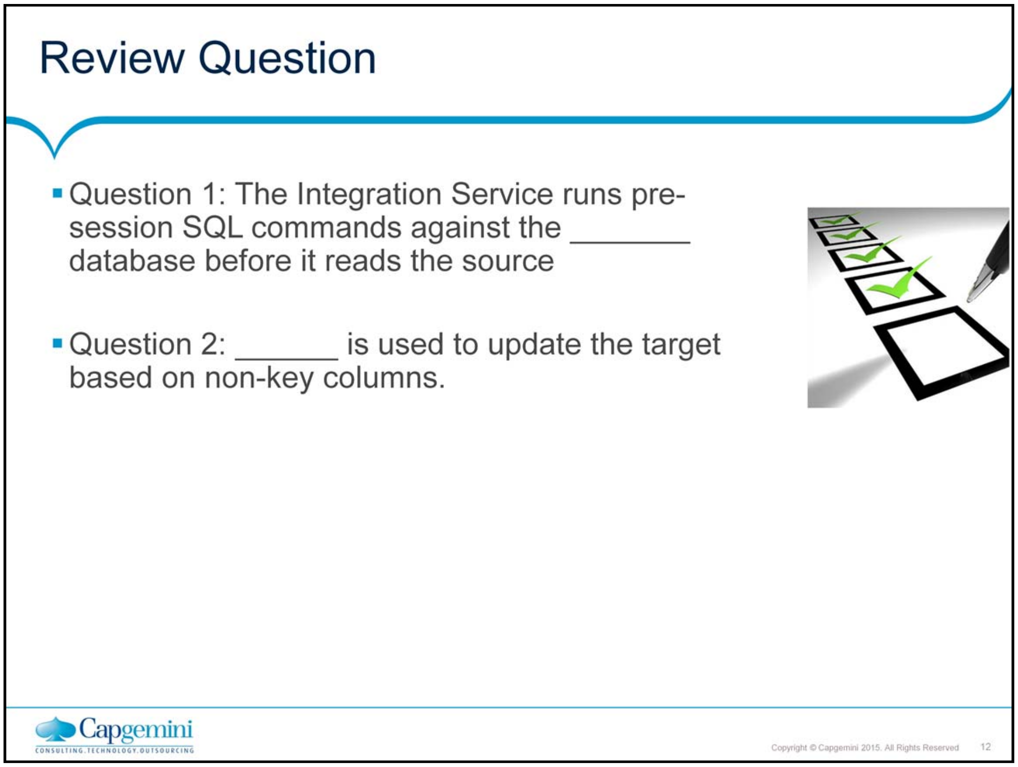

Review Question

- Question 1: The Integration Service runs pre-session SQL commands against the _______ database before it reads the source
- Question 2: ______ is used to update the target based on non-key columns.