Improving the performance of SQL Data Compare

SQL Data Compare can take a long time to compare and deploy data sources. The speed of the comparison depends mostly on disk write speed, processor speed, memory, and the size of the databases.

When you run a comparison, SQL Data Compare retrieves the data from the two data sources and copies it to a temporary location on your local machine. If the SQL Servers are remote, the data is copied across the network to your local machine.

Although there is no limit on the size of the data sources that you can compare, the amount of available disk space restricts the amount of data that can be compared. You need roughly twice the size of the database for the comparison and up to four times the size of the database to generate the deployment SQL.

To speed up the comparison, and avoid running out of disk space, you can:

- change the location of the temporary files
- filter the comparison at table-level, column-level, or row-level
- · review the options for comparison behavior

Changing the location of the temporary files

SQL Data Compare uses temporary files when it compares the databases. To avoid running out of disk space, you can change the location of these files.

The location of the temporary files is defined by the **RGTEMP** environment variable, or the **TMP** variable if **RGTEMP** does not exist (see your Windows documentation for information about environment variables).

You are not recommended to edit the **TMP** variable, as this will affect all programs that use the variable. Instead, you can create a new environment variable called **RGTEMP**, and specify the required location, such as a different hard disk with more free space. The **RGTEMP** variable affects only Red Gate programs.



Filtering the comparison

By default, SQL Data Compare selects all tables, all columns, and all rows for comparison. This means all the data that differs in both data sources is stored temporarily. By filtering the data, you compare only the data you are really interested in, and the size of the temporary files is reduced.

You filter data using the **Tables & Views** tab on the **Project Configuration** dialog box. The filtering techniques described here are useful when your tables contain a large amount of data that differs:

Table filtering

To exclude all the data in a table, on the Tables & Views tab of the Project Configuration dialog box, clear its check box:

NewProject.sdc*					
Data Sources Tables & Vews Object	Mapping Owner Mapping Options				
	LOCAL WidgetDev		JUCAL WidgetTest		
Select the tables, views and columns Refresh VHERE Clause.	a that you want to include in the comparison.			Find:	₽ ◄
Comparison Key	Table Name	Compare	Table Name	Columns in Comparison	10
PK_Contacts	Contacts		Contacts	9 columns	
PK_WdgetDescriptions	WidgetDescriptions	~	WidgetDescriptions	4 columns	
IX_WidgetPriceList	WidgetPriceList	V	WidgetPriceList	3 columns	
PK_WidgetPrices	WidgetPrices	~	WidgetPrices	4 of 6 columns	
IX_WidgetPurchases	WidgetPurchases	~	WidgetPurchases	5 columns	
PK_WidgetReferences	WidgetReferences		WidgetReferences	2 columns	
PK_Widgets	w Widgets	60)	Widgets		
			To exclude a clear its chec	table, k box.	
Save Save As				Compare Now	Cancel

The table will not be compared.

Column filtering (vertical filtering)

To exclude all the data in particular columns, click in the **Columns in Comparison** box for the associated table, and then clear the check boxes for the required columns:



Only the selected columns will be compared.

Row filtering (horizontal filtering)

To exclude specific rows, click WHERE Clause, and then type a T-SQL WHERE clause in the box:

NewProject.sdc*					E
Data Sources Tables &	Views Object Mapping Owne	Mapping Options			
		WidgetDev	B LOCAL WidgetTest		
Select the tables, view	vs and columns that you want b	a include in the comparison.		Find:	• م
Comparison Key		Table Name Com	pare Table Name	Columns in Comparison	0
PK_Contacts	×	Contacts	Contacts	7 of 9 columns	*
PK_WidgetDescriptions	WHERE Clause Edito	1	X	4 columns	
IX_WidgetPriceList		Filter the rows that will be included in the comparison for the selected tables or views.		3 columns	
PK_WidgetPrices	Filter the rows that will be i			4 of 6 columns	
IX_WidgetPurchases	use the same WHERE da	use for both data sources		5 columns	
			WHERE clause. Rows not matching the WHERE clau are excluded.		
			OK Cancel		
Save Save A	s			Compare Now	Cancel

You can apply the same WHERE clause to multiple tables, by highlighting the required tables before opening the WHERE Clause Editor.

You can apply a different WHERE clause for each data source by clearing the Use the same WHERE clause for both data sources check box.

A You can only filter rows if the data source is a database. WHERE clauses are not available for backups and scripts folders.

Reviewing the options for comparison behavior

By default, SQL Data Compare includes identical values in the comparison results. If your data sources always contain similar data, on the **Options** tab of the **Project Configuration** dialog box, clear the **Show identical values in results** check box.

When you do this, SQL Data Compare does not store data that is identical, reducing the disk space that is required.

If you are comparing tables with large amounts of data that changes infrequently, select the **Use checksum comparison** check box. You must clear the **S** how identical values in results check box before you do this. If the checksums are equal, SQL Data Compare does not compare that table, and its data is not stored, reducing the disk space that is required.

MewProject.sdc*							
Data Sources Tables & Vews Object Mapping Owner Mapping Options							
Pinds P							
🚔 Mapping Behavior	Use checksum comparison						
Ignore case of object names							
Ignore spaces in object names	Performs a checksum prior to comparison. The data is compared only if the checksums differ.						
Ignore underscores in object names	On SQL Server 2000 db_owner permissions are required.						
Include views	Note that this option cannot be used with the Show Identical Values In Results option. When						
 Include Identity columns 	Use Checksum Comparison is selected, only those rows with differences are compared.						
Include timestamp columns							
Comparison Behavior							
Inni traving spaces							
Characterization (case-sensitive)							
I show to entry a way in results							
Synchronization Behavior							
Disable foreionkeys							
Drop primary keys, indexes, and unique constraints							
Use transactions in SQL scripts							
Transport CLR data types as binary							
Disable DML triggers							
Disable DDL trippers							
Reseed identity columns							
V Include comment header in the output script							
Include the comments in the output script							
Save as My Defaults Red Gate Defaults My Defaults							
Save Save As	Compare Now Cancel						

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If your table contains large data types such as text or images, these columns are not included in the checksum, and you are not recommended to use the **Use checksum comparison** option.