

## Kirk's Korner



### Quick & Simple Tips

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### **Tip: Using the PROC SQL METHOD Option**

Under Version 8.2 or later, PROC SQL supports a powerful “undocumented” option called **METHOD**. Although undocumented features like the **METHOD** option should be used with caution by SAS users, this option may provide far greater value than risk. Consequently, it is worth exploring the benefits associated with using the **METHOD** option especially in terms of understanding what happens during specific PROC SQL processes.

The **METHOD** option provides valuable information about the execution methods triggered by a PROC SQL query using a sequence of codes. With the results automatically displayed on the SAS Log, the information can be used to better understand a query's execution as well as enabling performance tuning and debugging operations by SAS users in the know. The various codes and their corresponding descriptions are displayed in the following table. A simple code example is then illustrated using the **METHOD** option, along with its corresponding SAS Log, below.

#### **METHOD Option Codes and Descriptions**

<b>Code</b>	<b>Description</b>
<b>SQXCRTA</b>	Create table as Select.
<b>SQXSLCT</b>	Select statement or clause.
<b>SQXJSL</b>	Step loop join (Cartesian).
<b>SQXJM</b>	Merge join operation.
<b>SQXJNDX</b>	Index join operation.
<b>SQXJHSH</b>	Hash join operation.
<b>SQXSORT</b>	Sort operation.
<b>SQXSRC</b>	Source rows from table.
<b>SQXFIL</b>	Rows filtration.
<b>SQXSUMG</b>	Summary stats (aggregates) with GROUP BY clause.
<b>SQXSUMN</b>	Summary stats with no GROUP BY clause.

The following PROC SQL code example, and corresponding SAS Log, illustrates the **METHOD** option and the execution methods involved in a simple two-way equi-join. The SAS Log shows that the two-table join references the MOVIES and ACTORS tables where the rows are joined using a hash join operation. Because a hash join utilizes available real memory to conduct the join, it is often faster than a merge or index-join operation.

#### **PROC SQL Code**

```
PROC SQL METHOD;  
  SELECT MOVIES.TITLE, RATING, ACTOR_LEADING  
  FROM MOVIES,  
  ACTORS  
  WHERE MOVIES.TITLE = ACTORS.TITLE;  
QUIT;
```

## **SAS Log Results**

NOTE: SQL execution methods chosen are:

```
sqxslct
  sqxjhsh
    sqxsrc( MOVIES )
    sqxsrc( ACTORS )
```

## **Contact Information**

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