

# Exploring the PROC SQL \_METHOD Option

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## Abstract

The SQL Procedure contains powerful options for users to take advantage of. This presentation explores the fully supported \_METHOD option as an applications development and tuning tool. Attendees learn how to use this powerful option to better understand and control how a query processes.

## Introduction

PROC SQL supports a powerful option called **\_METHOD**. Since its implementation, many SAS® SQL users have expressed very favorable comments for the value-added information it provides on the SAS Log. In fact, the \_METHOD option is worth exploring simply due to the benefits associated with gaining a better understanding of the processes during specific PROC SQL operations, including complex table joins and subqueries.

## Application of the \_Method Option

The PROC SQL \_METHOD option can be used as an effective way to analyze a query process as well as for debugging purposes. Information from the \_METHOD option is displayed on the Log using a variety of codes. The codes and their corresponding descriptions associated with the \_METHOD option appear in the table below.

Code	Description
<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.

In the following example a \_METHOD option is specified to show the processing hierarchy in a two-way equi-join. As illustrated in the SAS Log, the PROC SQL optimizer utilized a hash join algorithm in the performance of the join.

## SQL Code

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

## Log Results

**NOTE: SQL execution methods chosen are:**

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

## **Conclusion**

The SQL Procedure's `_METHOD` option provides users with a powerful and effective tool for gaining greater insight into complex join, subquery, and other programming processes.

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