



CHAPTER

10

Remote SQL Pass-Through (RSPT) Facility

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Introduction

The Remote SQL Pass-Through (RSPT) facility allows you to pass PROC SQL statements that are issued on your local system to your remote server system for processing. RSPT can be used to process SAS data or DBMS data. When you access external databases through a server, you must reference a SAS/SHARE server that has access to the database. In addition, you must have SAS/ACCESS software licensed on the remote computer for that database.

Syntax

The SQL procedure Pass-Through facility consists of three statements and a FROM-clause component. The SQL syntax follows:

PROC SQL;

CONNECT TO REMOTE <AS *alias* >

(SERVER=*serverid* <SAPW=*server-access-password*>

<USER=*userid*>

<PASSWORD=*password*>

<DBMS=*dbms-name*>

<PT2DBPW=*passthrough-to-DBMS-password*>

<DBMSARG=(*dbms-argument-1=value* < . . . *dbms-argument-n=value*>)>);

SELECT . . . FROM CONNECTION TO REMOTE | *alias* (*dbms-query*);

EXECUTE (*SQL-statement*) **BY REMOTE** | *alias*;

DISCONNECT FROM REMOTE | *alias*;

CONNECT TO REMOTE <AS *alias*>

establishes a connection to a remote DBMS or to remote SAS data through a SAS server. This statement is required (RSPT does not support implicit connection). You can connect more than once to the same server specifying different DBMS= values. You can also connect to more than one server at a time.

SERVER= *serverid*

specifies the name of the remote SAS server. If the server is a multi-user server, *serverid* is the name specified for the ID= option in the PROC SERVER statement. If the server is a single-user server running in a SAS/CONNECT remote session, *serverid* is the name of the SAS/CONNECT remote session. In either case, *serverid* is the same name specified for the SERVER= option in a LIBNAME statement.

SAPW= *server-access-password*

is the password for controlling user access to a multi-user server specified for the UAPW= option in the PROC SERVER statement. If UAPW= is specified when the server is started, you must specify SAPW= in a CONNECT TO REMOTE statement that specifies that server.

USER= *username* | **_PROMPT_**

specifies the userid of the accessing client on the server. The host on which the client runs can also affect username conventions. For details about username conventions imposed by the host, see *Communications Access Methods for SAS/CONNECT and SAS/SHARE Software*.

Nicknames for USER are USERNAME, USERID, and UID.

Valid values that can be assigned to USER are:

username

For details about a valid username, see “Username and Password Naming Conventions” on page 106.

PROMPT

a secure method, specifies that SAS prompt the user for a valid username.

PASSWORD= *password* | **_PROMPT_**

specifies the password of the accessing client on the server. The host on which the client runs can also affect password naming conventions. For details about password naming conventions imposed by the host, see *Communications Access Methods for SAS/CONNECT and SAS/SHARE Software*.

Nicknames for PASSWORD are PASSWD, PASS, PWD, and PW.

Valid values for PASSWORD are:

password

For details about a valid password, see “Username and Password Naming Conventions” on page 106.

PROMPT

a secure method, specifies that SAS prompt the user for a valid password.

DBMS= *dbms-name*

is the name of the remote DBMS you want to connect to. This is the same name you would specify in a CONNECT TO statement if you were connecting directly to the DBMS. This option is used if you want to connect to a remote DBMS instead of the remote SAS SQL processor.

PT2DBPW= *passthrough-to-DBMS-password*

is the password for controlling pass-through access to remote DBMS databases specified for the PT2DBPW= option in the PROC SERVER statement. If PT2DBPW= is specified when the server is started, you must specify PT2DBPPW= in a CONNECT TO REMOTE statement that specifies the same server and specifies DBMS=.

DBMSARG=(*dbms-argument-1=value ...*
<dbms-argument-n=value>)

are the arguments required by the remote DBMS to establish the connection. These are the same arguments that you would specify in a CONNECT TO statement if you were connecting directly to the DBMS.

FROM CONNECTION TO REMOTE |

alias (dbms-query)

specifies the connection to the remote SAS SQL processor or the remote DBMS as the source of data for the SELECT statement and the recipient of the *dbms-query*. For remote SAS data accessed through the PROC SQL view engine, *dbms-query* is any valid PROC SQL SELECT statement. For a remote DBMS, *dbms-query* is the same SQL query you would specify if you were connected directly to the DBMS

EXECUTE (*SQL-statement*) BY REMOTE | *alias*

specifies an SQL statement to be executed by the SAS SQL processor or by the remote DBMS in the server SAS session. For remote SAS data accessed through the PROC SQL view engine, *SQL-statement* is any valid PROC SQL statement except SELECT. For a remote DBMS accessed through a single-user server in a SAS/CONNECT session, *SQL-statement* is the same SQL statement you would specify if you were connected directly to the DBMS.

DISCONNECT FROM REMOTE | *alias*

ends the connection to the remote DBMS or to the SAS SQL processor in the server SAS session.

Examples

Here are examples of processing data by using the RSPT statements. This example joins two remote SAS data sets. (RSPT through a server).

```
proc sql;
  connect to remote(server=sdcmvs.prx6xhsrv);
  select *
  from connection to remote
    (select p.idnum   label='ID Number'
      p.jobcode label='Job Code'
      s.city    label='City'
    from rmtshr.staff s,
      rmtshr.payroll p
    where s.idnum=p.idnum
    orderby jobcode);
```

This example uses RSPT to connect to a remote server to read data from a DB2 table. (Accessing a remote DBMS with RSPT).

```
proc sql;
  connect to remote(server=sdcmvs.mktserv
                  dbms=db2 dbmsarg=(ssid=db2));
  select *
  from connection to remote
    (select flight#, orig, destination, delay
    from educ.db2delay
    where delay > 11);
```


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