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Locally Visible, Remote Data and Format

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ABSTRACT

When in a workplace environment with mixed platforms, sooner or later one will come across the need to work in or access files in a host that is in a different environment. This paper shows how to make remote data available in the local environment. This way, one can perform interactive tasks such as browsing and querying as if everything is local, at one's fingertip, for more productive work.

INTRODUCTION

Say, I have SAS® data on Unix or z/OS; do I have to be on the remote host invoking SAS for viewing and working?

Answer: No, I don't have to. With SAS/Connect® or SAS/Share®, from PC SAS I can view and work with SAS data from different hosts and environments. This paper gives step-by-step instructions.

BACKGROUND

The authors have worked in organizations having a mixture of machines, PC, Unix, and z/OS, and SAS is licensed on each platform. Without SAS/Connect or SAS/Share, a user must login to one platform and work on SAS data. To transfer data between hosts, use FTP and Proc Cport, Clmport etc.

Typically SAS/Connect is licensed. PC SAS user can connect to other platform to work on SAS data on the remote host and transfer SAS data between the PC and remote hosts.

However if SAS/Share is licensed, PC SAS users can work with remote SAS data without the need to login to remote host. For non-SAS clients such as Excel, through ODBC, can view SAS data from remote host.

Recently the authors were very delighted to find out that in SAS 9.2 the PC SAS session can not only access remote data but also remote formatted data. This feature definitely was not available with older versions. We didn't bother to determine when this feature first becomes available. We are only too happy to use it for productivity gains.

SOLUTION 1 SAS/CONNECT

Use SAS/Connect to signon to a remote host. Allocate data library on the remote then in local session uses the remote library normally, including any format usage. SAS will automatically transfer any format catalog from the remote host down to the local session so any formatted values are properly displayed.

```

/* On PC SAS session when only SAS/Connect is licensed. */
%let sassrv=remote_host TCP_IP_port_number;

options remote=sassrv comamid= tcp;
filename rlink '... .. .';

signon;

rsubmit;
  libname datalib '... / ...';
  /* ***
  Say in datalib there is a table customer in it a column Gender,
  whose numeric value is 0 for 'Female' and 1 for 'Male'.
  Say this numeric format gender is also stored in datalib.
  *** */
endrsubmit;

libname local server= sassrv slibref= datalib;

options insert= ( fmtsearch= ( local ))
  fmterr;

```

The above PC SAS libref, *local*, is provided by the remote Unix or z/OS session, *sassrv*, and its libref known to remote session is called *datalib*. I specifically choose “options fmterr” in order to demonstrate the numeric format *gender* is available in the local session. SAS is automatically, and for the lack of better words magically, transferring the format catalog entry from remote host to the local session!

Use a print to show that the remote data and its associated format appear absolutely as normal in the local PC session! First, feel free to take a look at the local session’s work library and there is nothing. Submit the sample below:

```
proc print data= local.customer;
  var Name Gender;
  format Gender gender.;
/* ***
The numeric column Gender is associated with, or decoded by, the gender format; where
0 for Female,
1 for Male.
*** */
run;
```

Customer’s gender is nicely displayed as Female or Male. And look at the local session’s work library, there is a catalog named like *_sasxhst_nnn..n* and in it the gender format entry. This is a good, new, and automatic feature, say in the past two years since 9.2 maintenance release 2 or later.

SOLUTION 2 SAS/SHARE

The SAS Administrator at your site must first start up a SAS/SHARE server. Here is a sample:

```
%let sassrv= __TCP_IP_port_number;

libname datalib '... / ...';
/* ***
Say in datalib there is a table customer in it a column Gender,
whose numeric value is 0 for 'Female' and 1 for 'Male'.
Say this numeric format gender is also stored in datalib.
*** */

proc server id= &sassrv;
run;
```

On PC SAS session

```
%let sassrv= remote_host.__TCP_IP_port_number;

libname local server= &sassrv slibref= datalib;

options comamid= tcp
  insert= ( fmtsearch= ( local ))
  fmterr

;

proc print data= local.customer;
  var Name Gender;
  format Gender gender.;
/* ***
The numeric column Gender is associated with, or decoded by, the gender format; where
0 for Female,
1 for Male.
*** */
run;
```

Again Customer’s gender is nicely displayed as Female or Male. In local session’s work library, there is a catalog named like *_sasxhst_nnn..n* and in it the gender format entry. Specifically in the SAS/Share server’s log there is message like:

```
NOTE: Proc CPORT begins to transport catalog LOCAL.FORMATS
NOTE: Entry GENDER.FORMAT has been transported.
```

The remote data and its associated format appear absolutely as normal in the local PC session!

CONCLUSION

SAS 9.2 and later offers easy and transparent access to remote SAS data and formats. The local SAS user works with remote data as if everything is simply local. This improves productivity for the local user because download details are all taken care of by SAS.

The standard warning is network traffic; the PC SAS user may be transferring huge amount of data across the network. Warnings aside, the benefit of convenience and productivity gains is tremendous.

REFERENCES

[SAS/CONNECT online doc](#) (retrieved 9 March 2012)

<http://support.sas.com/documentation/onlinedoc/connect/index.html>

[SAS/SHARE online doc](#) (retrieved 9 March 2012)

<http://support.sas.com/documentation/onlinedoc/share/index.html>

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