

# **Using Remote Connect**

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### **Chapter Overview**

This chapter describes the **Remote Connect** feature of SAS/ASSIST software. With **Remote Connect**, you can

- upload and download data and programs
- □ run programs on remote computers
- execute a SAS/ASSIST task on remote data using Remote submit from any SAS/ASSIST task window
- run a saved local program using remote data.

This chapter shows you how to establish a connection with a remote SAS session, transfer data to a remote location, execute a SAS/ASSIST task on remote data, and terminate a remote connection. You must have SAS/CONNECT software licensed to complete tasks using **Remote Connect**.

#### **Additional Information**

For additional information about working with remote SAS sessions, see the *SAS*/*CONNECT User's Guide*.

### **Establishing a Remote Connection**

You must establish a connection to a remote host before you can do any remote processing with **Remote Connect**. The example in this section establishes a connection between a SAS session under UNIX and a remote SAS session under OS/390. Throughout this example, you should use information specific to the platforms you are using.

#### Instructions

- **1** Use one of the following methods to establish a remote connection:
  - □ From the WorkPlace menu or any task window, follow this selection path:

```
Tasks
▶
Remote
▶
Establish connection
```

 $\hfill\square$  From the WorkPlace menu or any task window, follow this selection path:

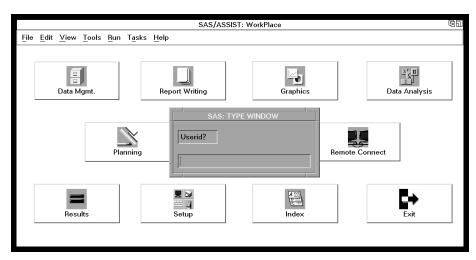
Run 🕨 Signon

The window that appears depends on how many remote configurations are available. A *remote configuration* is a set of instructions that SAS/CONNECT software uses to connect to a specific remote host.

- If you *do not have any* remote configurations saved, the Create New Configuration window appears, which enables you to create a configuration. See "Setting Up Remote Connect Configurations" on page 175 for instructions on how to set up a remote configuration, or contact your site's SAS Support Consultant for assistance.
- □ If you have *one* remote configuration saved, that configuration is invoked and the remote connection described in the configuration is established.
- □ If you have *more than one* remote configuration saved, the Select Description window appears and asks you to select the configuration you want to use to establish a remote connection. Select the configuration you want to use, and then select OK; the connection is established.

This section illustrates a situation where you have one remote configuration saved. In this example, a connection to an OS/390 host is established.

**2** When the connection is made, the TYPE window appears, which prompts you for your userid.



Display 16.1 TYPE Window for Userid Entry

Type your userid for the remote host and press ENTER.

*Note:* If your userid is hard coded into the remote configuration script you are using, you are not prompted for your userid.  $\triangle$ 

3 Another TYPE window appears, which prompts you for your password.

Display 16.2 TYPE Window for Password Entry

						SAS/A	SSIST: V	VorkPlace			65
File	<u>E</u> dit	View	Tools	<u>R</u> un	T <u>a</u> sks	<u>H</u> elp					
		Data M				Report Writing		Graphics		Data Analysis	
				Pla	nning	Password?	]		Remote Co	nnect	
		Resu	<b>II</b> ults			E Setup		A SECTION		Exit	

Type your password for your remote host userid and press ENTER.

 $\it Note:~$  If your password is hard coded into the script you are using, you are not prompted for your password.  $\bigtriangleup$ 

**4** A window appears, indicating that the signon to the remote host completed successfully.

File Edit View Tools Run Tasks Help     Image: Signon completed successfully.     Data Analysis									SAS/AS	SSIST: V	VorkPlace	Э			66
Signon completed successfully.	<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	Tools	<u>R</u> un	T <u>a</u> sks	<u>H</u> elp								
Planning EIS Remote Connect   Results Setup Index Exit		_	back			Sign		mplete	ed succ	_	11y.			 ]	

**Display 16.3** Successful Signon Message

Select Goback to return to the WorkPlace menu or task window.

Use the connection you just established to complete the rest of the activities in this chapter. This connection remains established until you terminate the connection as described in "Terminating a Connection" on page 161 or until you end the SAS session.

## **Transferring Data**

You can use **Transfer data** on the **Remote Connect** menu to *upload* (transfer from a local to a remote session) or *download* (transfer from a remote to a local session) SAS tables, SAS catalogs, external files, or members of a SAS data library, from one SAS session to another. Additionally, you can download graphics output from a remote session to a local session. To assist you with uploading and downloading data, you can assign librefs and filerefs in the local or remote session, view the contents of a remote table, or view a remote library listing from within the WorkPlace menu's **Remote Connect** item. Make sure you are connected to the remote session before you transfer the data.

In this section, you transfer the HOUSES table from the local SAS session to a remote table called HOUSES. You also view the contents of the remote HOUSES table and view the contents of the remote SASUSER library.

#### Instructions

**1** Follow this selection path:

ĺ	<b>T</b> 1	D	1.	T	۱.	TT 1 . 1	
	Tasks	Remote		Transfer data		Upload	Upload a SAS Table
Ĩ			-		•		

The Upload SAS Table window appears.

Display 16.4 Upload SAS Table Window

SAS/ASSIST: Upload SAS Table	Ē.	[	96
Select the local and remote tables for the upload procedure. To make a selection, place cursor and press ENTER. Use Run to perform task. Use Goback to return to previous menu.			
Upload SAS Table fi Table to upload: -DEFAULT- Options: -NONE-		Data Analysis	
Remote table: -DEFAULT- Options: -NONE-   Where: -NONE- View the log   Remote session: 0S/390 Conn	te Connect		
Run Goback Help		Exit	

- 2 Select the remote session from the list shown at the bottom of the Upload SAS Table window. For this example, **OS/390 Connection** is selected. If you have only one remote session, you do not need to perform this step.
- **3** Select **Table to upload**, and then select the SASUSER.HOUSES table. For information on selecting tables, see "Selecting a Table" on page 24.
- 4 Select Remote table. The Specify Remote Table window appears.

SAS/ASSIST: Specify Remote Table	Ē		66
Enter the remote table name. To select or deselect the other options, place cursor and press ENTER. Use OK to save selections. Cancel to return without saving selections.			
Specify Remote Table	1	ΣLΠ	
Table: [ ] ] Will be created in library:		Data Analysis	
will be cleated in library:			
◆ Temporary WORK ◇ Permanent [ ]	R.		
OK Cancel Help	te Connec	st	
MVS Connect			
		•	1
Run Goback Help		Exit	

Display 16.5 Specify Remote Table Window

- 5 In the **Table** field, type **HOUSES** as the name of the remote table. Select **Permanent**. In the field next to **Permanent**, type **SASUSER** as the permanent remote library in which you want to store the new HOUSES table. By creating a permanent table of SASUSER.HOUSES, you can remotely run the program that you create and save in the next section.
- 6 Select ox to return to the Upload SAS Table window.
- 7 Select **Run**. The HOUSES table is uploaded from the local host to the remote host into a permanent table called SASUSER.HOUSES. A window appears showing the progress of the upload. When the upload is complete, a message appears indicating that the upload completed successfully.

*Note:* If the table being uploaded is small, the window showing the progress of the upload appears only briefly on the display.  $\triangle$ 

- 8 Select Goback to return to the WorkPlace Menu.
- **9** To view the contents of the table you just uploaded on the remote system, follow this selection path:



The Remote Table Contents window appears.

SAS/AS	SIST: Remote Table Contents	6	Q8
Enter the name of the remote ta Position cursor on the appropri Use OK to save selections. Canc			
Rei	mote Table Contents	9	は世
Table name: [ ]	]	Data .	∑_µ Analysis
Remote session:	View the log		
OS/390 Conn			
		ect	
OK Cancel Help			
Results	Sotup		<b>↓</b> E×it

Display 16.6 Remote Table Contents Window

- 10 In the **Table name** field, type **SASUSER.HOUSES** as the name of the table whose contents you want to view.
- 11 Select the remote session that you want to use from the list in the window. For this example, **OS/390 Connection** is selected.
- **12** Select **or**. The contents of the SASUSER.HOUSES table that is on the remote host appear in the Output window.

Display 16.7 Remote Table Contents Output

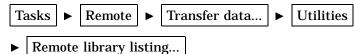
<u>File E</u> dit <u>V</u> iew <u>T</u> ools	<u>S</u> olutions <u>H</u> elp		
	The SAS	-	7
Data Set Name: SASUS Member Type: DATA Engine: V7 Created: 12:04 Last Modified: 12:04 Protection: Data Set Type: Label: Resid	SER.HOUSES A Thursday, May 21,	Observations: Variables: Indexes: 1998 Observation Length: 1998 Deleted Observations: Compressed: Sorted:	15 6 56 56 NO NO
Data Se Number First D	Engine/Host Depend et Page Size: of Data Set Pages: Data Page: s per Page:	lent Information 6144 1 1 109	

Use the scroll bars or the UP and DOWN function keys, depending on your operating environment, to display the rest of the contents.

Depending on your operating environment, when you are in the Output window, you may need to continue using the DOWN function key until all of the output is viewed before returning to the SAS/ASSIST window. You do this to ensure that any procedures running in the Output window are completed.

**13** To return to the WorkPlace menu, use one of the following methods, according to your operating environment:

- □ Use the PREVWIND function key.
- □ Click on the SAS/ASSIST window.
- 14 If you wish to view the contents of a SAS data library on a remote host, follow this selection path:



The Remote Library Listing window appears.

Display 16.8 Remote Library Listing Window

SAS/ASSIST: Remote Library Listing	
Enter the libref of the remote SAS data library. Position cursor on the appropriate field to enter a selection. Use OK to save selections. Cancel to return without saving selections.	
Remote Library Listing	
Libref: [ ]	Data Analysis
Remote session: View the log	
05/390 Conn	
	ect
OK Cancel Help	
Results Setup Index	Exit

- **15** In the **Libref** field, type **SASUSER** as the libref of the remote library that you want to list.
- **16** Select the remote session that you want to use from the list in the window. For this example, **05/390** Connection is selected. If you have only one remote session, you do not need to perform this step.
- 17 Select **ok**. The contents of the SASUSER library appear in the Output window.

Display 16.9 Remote Library Listing Output

<u>File</u>	dit <u>\</u>	View	Tools	Solutions	Help				
					The	SAS S	System	10	Δ
					The CON	TENTS	Procedure		Π
					D:	irecto	ory		
-			Unit Volu Disp Devi Bloc Bloc Tota Tota High	.ne: ical Nam ime: osition:	frack: cy Blocks Blocks: Blocks: Blocks:		SASUSER V7 USERID. SAS701. SASUSER DISK SN0808 OLD 3380 6144 7 105 10 95 10 14		

Use the scroll bars or the UP and DOWN function keys, depending on your operating environment, to display the rest of the contents.

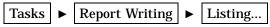
Depending on your operating environment, when you are in the Output window, you may need to continue using the DOWN function key until all of the output is viewed before you return to the SAS/ASSIST window. You do this to ensure that any procedures running in the Output window are completed.

- **18** To return to the WorkPlace menu, use one of the following methods, according to your operating environment:
  - □ Use the PREVWIND function key.
  - □ Click on the SAS/ASSIST window.

## Executing a SAS/ASSIST Task Using Remote Data

In this section, you will make task window selections to run a listing report on the table that you uploaded in "Transferring Data" on page 156. You will then run the task using the **Remote Submit** menu item. For details on creating listing reports, refer to "Producing a Listing Report" on page 30. Make sure you are connected to the remote session before you run the task remotely.

**1** Follow this selection path:



The List a Table window appears.

- 2 If the active table is SASUSER.HOUSES, continue to the next step. Otherwise, select **Table**, and then select the SASUSER.HOUSES table. For more information on selecting tables, see "Selecting a Table" on page 24.
- **3** If there is an active Subset Data selection (indicated with **BY**, **WHERE**, or **ROWS** next to the **Subset data** button), clear the selection. For more information, see "Clearing a Subset Data Selection" on page 26.
- 4 If other report selections exist (for example, Columns is not -ALL-), follow this selection path to clear these selections:

**5** Follow this selection path:

Run 🕨 Remote Submit

A listing of the remote SASUSER.HOUSES table appears in the Output window.

					4
					I
		Number			
Style of	Square	of	Number of		
homes	footage	bedrooms	bathrooms	Street address	Asking price
RANCH	1250	2	1.0	Sheppard Avenue	\$64,000
SPLIT	1190	1	1.0	Rand Street	\$65,850
CONDO	1400	2	1.5	Market Street	\$80,050
TWOSTORY	1810	4	3.0	Garris Street	\$107,250
RANCH	1500	3	3.0	Kemble Avenue	\$86,650
SPLIT	1615	4	3.0	West Drive	\$94,450
SPLIT	1305	3	1.5	Graham Avenue	\$73,650
CONDO	1390	3	2.5	Hampshire Avenue	\$79,350
TWOSTORY	1040	2	1.0	Sanders Road	\$55,850
CONDO	2105	4	2.5	Jeans Avenue	\$127,150
RANCH	1535	3	3.0	State Highway	\$89,100
TWOSTORY	1240	2	1.0	Fairbanks Circle	\$69,250
RANCH	720	1	1.0	Nicholson Drive	\$34,550
TWOSTORY	1745	4	2.5	Highland Road	\$102,950
CONDO	1860	2	2.0	Arcata Avenue	\$110,700

Display 16.10 Listing of HOUSES Table

*Note:* This operation works because there is a SASUSER.HOUSES table available for both the local and remote sessions. To run a task on a remote table that is not also available for the local session, you must use the **Select Remote data** item on the **Run** menu.  $\triangle$ 

- **6** Return to the List a Table window by using one of the following methods, depending on your operating environment:
  - □ Use the PREVWIND function key.
  - □ Click on the SAS/ASSIST window.

## **Terminating a Connection**

When you have finished processing using the remote SAS session, you terminate the connection with the remote session. Remote connections remain established until you terminate them or end the SAS session.

In this section, you terminate the remote connection that you established in "Establishing a Remote Connection" on page 153.

## Instructions

**1** To terminate the connection, follow one of these selection paths:

Tasks►Remote►Terminate connection

Run 🕨 Signoff

A message appears indicating that the signoff was completed successfully.

SAS/ASSIST: WorkPlace	Ē
File Edit View Tools Run Tasks Help	
Signoff completed successfully. Data Analysis   Goback Planning   ElS Remote Connect	
Results Setup Index	

Display 16.11 Successful Signoff Message

*Note:* The window that appears when you select **Terminate connection** from the Remote Connect Menu depends on which of the following situations exists:

- □ If you have *only one* remote connection established, this connection is terminated.
- □ If you have *more than one* remote connection established, the Select Description window appears for you to select the connection that you want to terminate.
- $\triangle$
- 2 Select Goback to return to the Workplace Menu.

The correct bibliographic citation for this manual is as follows: SAS Institute Inc., *Getting Started with the SAS System Using SAS/ASSIST Software, Version 8*, Cary, NC: SAS Institute Inc., 1999. pp. 196

Getting Started with the SAS System Using SAS/ASSIST Software, Version 8

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ISBN 1-58025-460-8

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SAS Institute Inc., SAS Campus Drive, Cary, North Carolina 27513.

1st printing, October 1999

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