

SUDAAN Installation Guide Sun Solaris and Linux

Release 9.0

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1. OVERVIEW AND TECHNICAL SUPPORT

SUDAAN is a single program consisting of a family of procedures used to analyze data from complex surveys and other observational and experimental studies involving cluster-correlated data. A complete description of the capabilities of SUDAAN can be found at <http://www.rti.org/sudaan>.

The following document provides instructions on how to install and run SUDAAN. The most current version of these installation instructions can be obtained by visiting the SUDAAN website at <http://www.rti.org/sudaan> and selecting the *Downloads* tab.

Technical Support

RTI International (Research Triangle Institute) provides limited technical support for SUDAAN problems free of charge. The [SUDAAN Language Manual](#) provides detailed information on programming with SUDAAN and the [SUDAAN Example Manual](#) provides numerous examples. Both of these manuals can be installed during the SUDAAN setup (as .PDF files). These manuals can also be purchased from the SUDAAN website at <http://www.rti.org/sudaan>. You may also review bug reports, get answers to frequently asked questions and obtain other technical assistance through our website.

For additional technical support please submit a support request available from our website or send an email to sudaan@rti.org.

You may also contact the RTI SUDAAN offices at:

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Voice Mail: (919) 541-6602
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Email: sudaan@rti.org

Due to the high volume of telephone calls we receive, when calling the SUDAAN office you may be automatically sent to the SUDAAN voice mail. Please leave your name, telephone number and a brief description of the reason for your call. One of our SUDAAN administrators will contact you as soon as possible.

2. INSTALLATION INSTRUCTIONS FOR SUN SOLARIS STANDALONE INDIVIDUAL VERSIONS

2.1 System Requirements

To run the Standalone Solaris versions of SUDAAN Release 9.0 properly, your system must meet these requirements:

<u>Version</u>	<u>Category</u>	<u>Requirement</u>
32-bit standalone	Operating System	SUN/Solaris 2.6 and up
64-bit standalone	Operating System	SUN/Solaris 2.8 and up

2.2 Software Installation

Standalone SUDAAN 9.0 for Solaris is supplied on a CD-ROM in two versions – 32-bit executable and 64-bit executable. The program files for these versions of SUDAAN are located in the directories SUDAAN90/Rlse902/Std32 and SUDAAN90/Rlse902/Std64. Each directory contains a file named sudaan.tar. This *tar* file contains the following files:

sudproc	The SUDAAN executable for this version
sudinit	Program for initializing or updating the SUDAAN license
SUDAAN.MSG	The SUDAAN message file

To Install the SUDAAN Program Files:

These instructions assume the installer is using the C shell.

1. Before extracting the software from the CD-ROM, create a destination directory for the SUDAAN 9 install at some preferred location on your file system, for example /usr/local/SUDAAN_90x/Standalone. **Note that you cannot install either version of SAS-callable SUDAAN in the same directory as either of the standalone versions, and the two standalone versions must be installed in separate directories.**
2. Your SUDAAN distribution media must be mounted. Under Solaris, most system managers elect to have a daemon running that automatically mounts the CD-ROM when a new one is inserted. If not, however, you will need to mount the CD-ROM.
3. From the directory created in step 1, execute the following *tar* command to extract the SUDAAN program files:

```
tar xvf /cdrom/SUDAAN90/Rlse902/Stdxx/sudaan.tar
```

where *xx* is 32 or 64 depending on the version you wish to install.

4. Verify that all files listed above (i.e. sudproc, sudeinit and SUDAAN.MSG) are present in the SUDAAN directory.

In addition to the SUDAAN program files, the CD contains the SUDAAN Language and Example Manuals as well as the SUDAAN Help files.

To Install the SUDAAN Manual Files:

1. Create a destination directory for the manual files, for example at /usr/local/SUDAAN_90x/Manual.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN manual files:

```
tar xvf /cdrom/SUDAAN90/manual/manual.tar
```

3. The SUDAAN Language Manual and the SUDAAN Example Manual are files in PDF format. Use Adobe Acrobat Reader to view these documents. (Note that Acrobat Reader is available free from Adobe's website.) You can find additional SUDAAN examples on our website.

To Install the SUDAAN Help Files:

1. Create a destination directory for the help files, for example at /usr/local/SUDAAN_90x/Help.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN manual files:

```
tar xvf /cdrom/SUDAAN90/help/help.tar
```

3. Use your browser to view the SUDAAN help files. Begin with SUDAAN.htm

Note that SUDAAN's Help is available on our website at <http://www.rti.org/sudaan>. Click on *Technical Assistance* and then *SUDAAN 9 Help*. The default version of the help requires Macromedia Flash Player 6.0 or later, but you can choose to view the non-Flash version of the help if you prefer.

2.3 Procedure to Initialize or Renew a SUDAAN License

Along with your SUDAAN software, you received a 22-digit Product Identification Key. To initialize your software, do the following:

1. Enter the directory where the SUDAAN program files are located. (For example /usr/local/SUDAAN_90x/Standalone)
2. Execute the *sudeinit* program using the following syntax:

```
sudeinit p=<22-digit product key> c=<company_name> o=<owner>
```

Enter your name (<owner>) and company (<company_name>) as they should appear in the SUDAAN banner, and your 22-digit product key. Note that you should place the company name and owner name in quotes if they contain spaces. Spaces should not be included in the product key and letters in the product key may be entered in upper or lower case.

At this point your software is ready to use.

When you renew your current annual license, you will receive a new product key. Once you have the new key, execute the *sudinit* program again using this new 22-digit key to update your license. You do not need to supply your company name and owner name when you renew the software, unless your information has changed.

2.4 Setting up SUDAAN

After installation, each SUDAAN user should add the SUDAAN directory created above (/usr/local/SUDAAN_90x/Standalone) to the path environment variable by adding the following line in the *.cshrc* or *.login* file for C-shell users, or the *.profile* for Korn and Bourne shell users. Users must also set the SUDWORK variable to the path for the directory where all temporary files should be written. The user must create this directory before using SUDAAN if it does not already exist.

C-shell users:

```
.cshrc or .login:  set path=($path /usr/local//SUDAAN_90x/Standalone)
                  set SUDWORK=temp_directory
```

Korn/Bourne Shell users:

```
.profile:         PATH=$PATH:/usr/local/SUDAAN_90x/Standalone
                  SUDWORK=temp_directory
                  export PATH SUDWORK
```

Please use the *setenv* command to set your system parameters if you have difficulty setting the parameters using any other command. You can then use the *env* command to verify the system setting results. Note that you must logout and login again before these settings are active.

2.5 Running SUDAAN

The syntax for executing Standalone SUDAAN from the Solaris prompt is:

```
sudproc infile [outfile] [-r | -a]
```

where *infile* is the name of the file containing SUDAAN procedure statements, *outfile* is the name of the file to which you should direct outputs, and *-r* and *-a* are write options.

If *outfile* already exists:

- r causes the file to be overwritten, and
- a causes the output to be appended to the existing file

See the SUDAAN Language and Examples Manuals for complete information on using the SUDAAN procedures.

3. INSTALLATION INSTRUCTIONS FOR SUN SOLARIS SAS-CALLABLE INDIVIDUAL VERSIONS

3.1 System Requirements

To run the SAS-Callable Solaris versions of SUDAAN Release 9.0 properly, your system must meet these requirements:

<u>Version</u>	<u>Category</u>	<u>Requirement</u>
SAS8-Callable	Operating System	SUN/Solaris 2.6 and up
	Software	SAS® 8
SAS9-Callable	Operating System	SUN/Solaris 2.8 and up
	Software	SAS® 9

3.2 Software Installation

SUDAAN 9.0 for Solaris is supplied on a CD-ROM. The program files for the SAS8-Callable version of SUDAAN are located in the directory /SUDAAN90/Rlse901/SAS8Call in the file sudaan.tar. The program files for the SAS9-Callable version of SUDAAN are located in the directory /SUDAAN90/Rlse902/SAS9Call in the file sudaan.tar. In each case this *tar* file contains the following files:

crosstab	The SUDAAN CROSSTAB procedure
descript	The SUDAAN DESCRIPT procedure
kapmeier	The SUDAAN KAPMEIER procedure
loglink	The SUDAAN LOGLINK procedure
multilog	The SUDAAN MULTILog procedure
ratio	The SUDAAN RATIO procedure
records	The SUDAAN RECORDS procedure
regress	The SUDAAN REGRESS procedure
rlogist	The SUDAAN RLOGIST (LOGISTIC) procedure
survival	The SUDAAN SURVIVAL procedure
sudinit	Program for initializing or updating the SUDAAN license
SUDAAN.MSG	The SUDAAN message file

Note: SUDAAN Release 9.0.1 for the Sun Solaris is available for the SAS8-Callable version of SUDAAN and will operate on a 32 bit operating system only. SUDAAN Release 9.0.2 for the Sun Solaris is available for the SAS9-Callable version of SUDAAN and will operate on a 64 bit operating system only.

To Install the SUDAAN Program Files:

These instructions assume the installer is using the C shell.

1. Before extracting the software from the CD-ROM, create a destination directory for the SUDAAN 9 install at some preferred location on your file system, for example /usr/local/SUDAAN_90x/SASx-Callable. **Note that you cannot install SAS8-callable SUDAAN in the same directory with SAS9-callable SUDAAN, and neither version can be installed in the same directory with either of the standalone versions.**
2. Your SUDAAN distribution media must be mounted. Under Solaris, most system managers elect to have a daemon running that automatically mounts the CD-ROM when a new one is inserted. If not, however, you will need to mount the CD-ROM.
3. From the directory created in step 1, execute the following *tar* commands to extract the SUDAAN program files:

```
tar xvf /cdrom/SUDAAN90/Rlse901/SAS8Call/sudaan.tar
or
tar xvf /cdrom/SUDAAN90/Rlse902/SAS9Call/sudaan.tar
```

4. Verify that all files listed above (e.g., crosstab, descript, kapmeier, etc.) are present in the SUDAAN directory.

In addition to the SUDAAN program files, the CD contains the SUDAAN Language and Example Manuals as well as the SUDAAN Help files.

To Install the SUDAAN Manual Files:

1. Create a destination directory for the manual files, for example at /usr/local/SUDAAN_90x/Manual.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN manual files:

```
tar xvf /cdrom/SUDAAN90/manual/manual.tar
```

3. The SUDAAN Language Manual and the SUDAAN Example Manual are files in PDF format. Use Adobe Acrobat Reader to view these documents. (Note that Acrobat Reader is available free from Adobe's website.) You can find additional SUDAAN examples on our website.

To Install the SUDAAN Help Files:

1. Create a destination directory for the help files, for example at /usr/local/SUDAAN_90x/Help.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN manual files:

```
tar xvf /cdrom/SUDAAN90/help/help.tar
```

3. Use your browser to view the SUDAAN help files. Begin with SUDAAN.htm

Note that SUDAAN's Help is available on our website at <http://www.rti.org/sudaan>. Click on *Technical Assistance* and then *SUDAAN 9 Help*. The default version of the help requires Macromedia Flash Player 6.0 or later, but you can choose to view the non-Flash version of the help if you prefer.

3.3 Procedure to Initialize or Renew a SUDAAN License

Along with your SUDAAN software, you received a 22-digit Product Identification Key. To initialize your software, do the following:

1. Enter the directory where the SUDAAN program files are located. (For example /usr/local/SUDAAN_90x/SASx-Callable)
2. Execute the *sudinit* program using the following syntax:

```
sudinit p=<22-digit product key> c=<company_name> o=<owner>
```

Enter your name (<owner>) and company (<company_name>) as they should appear in the SUDAAN banner, and your 22-digit product key. Note that you should place the company name and owner name in quotes if they contain spaces. Spaces should not be included in the product key and letters in the product key may be entered in upper or lower case.

At this point your software is ready to use.

When you renew your current annual license, you will receive a new product key. Once you have the new key, execute the *sudinit* program again using this new 22-digit key to update your license. You do not need to supply your company name and owner name when you renew the software, unless your information has changed.

Note: The product key you have been sent can be used for both SAS8-Callable SUDAAN (Release 9.0.1) and SAS9-Callable SUDAAN (Release 9.0.2). The .log file of your jobs will indicate you are running SUDAAN 9.0.2 for jobs run using SAS8-Callable SUDAAN or SAS9-Callable SUDAAN, however the SUDAAN output files will display the correct release number.

3.4 Setting up SUDAAN

After installation, each SUDAAN user *must* set up the SUDLIB environment variable, by adding the following lines to the .cshrc or .login file for C-shell users, or the .profile file for Korn/Bourne shell users.

C-shell users:

```
.cshrc or .login:  setenv SUDLIB=/usr/local//SUDAAN_90x/SAS-Callable  
                  setenv SUDWORK=temp_directory
```

Korn/Bourne Shell users:

```
.profile:      SUDLIB=/usr/local/SUDAAN_90x/SAS-Callable
              SUDWORK=temp_directory
              export SUDLIB SUDWORK
```

where *temp_directory* is the location where that user's temporary SUDAAN files should be written. The user must create this directory before using SUDAAN if it does not already exist.

Please use the *setenv* command to set your system parameters if you have difficulty setting the parameters using any other command. You can then use the *env* command to verify the system setting results. Note that you must logout and login again before these settings are active.

3.5 Running SUDAAN

Once SUDAAN setup is complete, there are two ways to execute a SAS-Callable SUDAAN program.

1. The user or system manager can insert the SUDAAN directory (for example */usr/local/SUDAAN_90x/SAS-Callable*) at the end of the *-PATH* command in the *sasvx.cfg* file before the closing parenthesis, but ahead of any previous SUDAAN references. This will enable SAS to find and dynamically load the SUDAAN procedures as needed. Once this setup is completed, to execute SAS with the SUDAAN program *myprog.sas* simply type

```
sas myprog.sas
```

2. Each user can add a *-PATH* command to the SAS command line when invoking SUDAAN procedures. The syntax for executing SAS on the SUDAAN program *myprog.sas* in this case is

```
sas -path /usr/local/SUDAAN_90x/SAS-Callable myprog.sas
```

4. INSTALATION INSTRUCTIONS FOR THE LINUX, STANDALONE INDIVIDUAL VERSION

4.1 System Requirements

To run the Standalone Linux version of SUDAAN Release 9.0 properly, your system must meet these requirements:

<u>Category</u>	<u>Requirement</u>
Operating System	Red Hat Enterprise Linux 3
Kernel	2.4.21

Note that SUDAAN has been produced and tested using Red Hat Enterprise Linux 3. If you wish to try Standalone SUDAAN 9 for LINUX on a different version of LINUX please contact us.

4.2 Software Installation

SUDAAN 9.0 for LINUX is supplied on a CD-ROM. The program files for this version of SUDAAN are located in the directory Standalone in the file sudaan.tar. This *tar* file contains the following files:

sudproc	The SUDAAN program executable
sudinit	Program for initializing or updating the SUDAAN license
SUDAAN.MSG	The SUDAAN message file

To Install the SUDAAN Program Files:

1. Before extracting the software from the CD-ROM, create a destination directory for the SUDAAN 9 files at some preferred location on your file system, for example /usr/local/SUDAAN_90x/Standalone. **Note that you cannot install Standalone SUDAAN in the same directory as the SAS8-Callable version or the SAS9-callable version of SUDAAN.**
2. Copy the file sudaan.tar into the directory created in step 1.
3. From the directory created in step 1, execute the following *tar* command to extract the SUDAAN program files:

```
tar xvf sudaan.tar
```

or from a graphical interface simply double click on the sudaan.tar file to extract the files.

4. Verify that all files listed above are present in the directory created in step 1.

In addition to the SUDAAN program files, the CD contains the SUDAAN Language and Example Manuals as well as the SUDAAN Help files.

To Install the SUDAAN Manual Files:

1. Create a destination directory for the manual files, for example at /usr/local/SUDAAN_90x/Manual, and copy the file Manual/manual.tar from the CD to this directory.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN manual files:

```
tar xvf manual.tar
```

or from a graphical interface simply double click on the manual.tar file to extract the files.

3. The SUDAAN Language Manual and the SUDAAN Example Manual are files in PDF format. Use Adobe Acrobat Reader to view these documents. (Note that Acrobat Reader is available free from Adobe's website.) You can find additional SUDAAN examples on our website.

To Install the SUDAAN Help Files:

1. Create a destination directory for the help files, for example at /usr/local/SUDAAN_90x/Help and copy the file Help/help.tar into it.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN manual files:

```
tar xvf help.tar
```

or from a graphical interface simply double click on the help.tar file to extract the files.

3. Use your browser to view the SUDAAN help files. Begin with SUDAAN.htm

Note that SUDAAN's Help is available on our website at <http://www.rti.org/sudaan>. Click on *Technical Assistance* and then *SUDAAN 9 Help*.

4.3 Procedure to Initialize or Renew a SUDAAN License

Along with your SUDAAN software, you received a 22-digit Product Identification Key. To initialize your software, do the following:

1. Enter the directory where the SUDAAN program files are located. (For example /usr/local/SUDAAN_90x/Standalone)
2. Execute the *sudinit* program using the following syntax:

```
sudinit p=<22-digit product key> c=<company_name> o=<owner>
```

Enter your name (<owner>) and company (<company_name>) as they should appear in the SUDAAN banner, and your 22-digit product key. Note that you should place the company name and owner name in quotes if they contain spaces. Spaces should not be included in the product key and letters in the product key may be entered in upper or lower case.

At this point your software is ready to use.

When you renew your current annual license, you will receive a new product key. Once you have the new key, execute the *sudinit* program again using this new 22-digit key to update your license. You do not need to supply your company name and owner name when you renew the software, unless your information has changed.

4.4 Setting up SUDAAN

After installation, we recommend that each SUDAAN user add the directory location of the SUDAAN executable to their PATH. For the default Bash shell, for example, the following commands should be placed in *.bash_profile*. If SUDAAN is installed in */usr/local/SUDAAN_90x/Standalone*:

```
.bash_profile:      PATH=$PATH:/usr/local/SUDAAN_90x/Standalone
                   SUDWORK=temp_directory
                   export PATH
                   export SUDWORK
```

where *temp_directory* is the location where that user's temporary SUDAAN files should be written. The user must create this directory before using SUDAAN if it does not already exist.

Note that users must logout and login again before these settings are active.

4.5 Running SUDAAN

The syntax for executing Standalone SUDAAN from the Linux command prompt is:

```
sudproc infile [outfile] [-r | -a]
```

where *infile* is the name of the file containing SUDAAN procedure statements, *outfile* is the name of the file to which you should direct outputs, and *-r* and *-a* are write options.

If *outfile* already exists:

- r causes the file to be overwritten, and
- a causes the output to be appended to the existing file

See the SUDAAN Language and Examples Manuals for complete information on using the SUDAAN procedures.

5. INSTALLATION INSTRUCTIONS FOR LINUX, SAS-CALLABLE INDIVIDUAL USER VERSION

The following instructions apply to both the installation of SUDAAN for SAS8 and SAS9. Unless otherwise noted, the '#' character in these instructions should be interpreted as an "8" for SUDAAN SAS8 installations or as a "9" for SUDAAN SAS9 installations.

SAS-Callable SUDAAN users are permitted to install SUDAAN SAS8-Callable, SUDAAN SAS9-Callable or both versions for each licensed user. So one user may have both SUDAAN SAS8-Callable and SUDAAN SAS9-Callable on their machines at the same time and this will count as only "one user" for license purposes. SUDAAN requires users of SAS8 and SAS9 to go through separate installations only because the files needed to run SUDAAN are slightly different to accommodate differences between SAS8 and SAS9.

5.1 System Requirements

To run the SAS-Callable Linux version of SUDAAN Release 9.0 properly, your system must meet these requirements:

<u>Category</u>	<u>Requirement</u>
Operating System	Red Hat Enterprise Linux 3
Kernel	2.4.21
Software	SAS® 8 for Linux
Software	SAS® 9 for Linux

Note that SUDAAN has been produced and tested using Red Hat Enterprise Linux 3. If you wish to try SAS8-callable SUDAAN 9 for LINUX on a different version of LINUX please contact us.

5.2 Software Installation

SUDAAN 9.0 for LINUX is supplied on a CD-ROM. The program files for this version of SUDAAN are located in the directory SAS#-Callable in the file sudaan.tar. This tar file contains the following files:

crosstab	The SUDAAN CROSSTAB procedure
descript	The SUDAAN DESCRIPT procedure
kapmeier	The SUDAAN KAPMEIER procedure
loglink	The SUDAAN LOGLINK procedure
multilog	The SUDAAN MULTILog procedure
ratio	The SUDAAN RATIO procedure
records	The SUDAAN RECORDS procedure
regress	The SUDAAN REGRESS procedure
rlogist	The SUDAAN RLOGIST (LOGISTIC) procedure
survival	The SUDAAN SURVIVAL procedure

sudinit	Program for initializing or updating the SUDAAN license
SUDAAN.MSG	The SUDAAN message file

To Install the SUDAAN Program Files:

1. Before extracting the software from the CD-ROM, create a destination directory for the SUDAAN 9 files at some preferred location on your file system, for example /usr/local/SUDAAN_90x/SAS8-Callable. **Note that you cannot install SAS8-callable SUDAAN in the same directory as the Standalone version or the SAS9-callable version of SUDAAN.**
2. Copy the file sudaan.tar into the directory created in step 1.
3. From the directory created in step 1, execute the following *tar* command to extract the SUDAAN program files:

```
tar xvf sudaan.tar
```

or from a graphical interface simply double click on the sudaan.tar file to extract the files.

4. Verify that all files listed above are present in the directory created in step 1.

In addition to the SUDAAN program files, the CD contains the SUDAAN Language and Example Manuals as well as the SUDAAN Help files.

To Install the SUDAAN Manual Files:

1. Create a destination directory for the manual files, for example at /usr/local/SUDAAN_90x/Manual, and copy the file Manual/manual.tar from the CD to this directory.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN manual files:

```
tar xvf manual.tar
```

or from a graphical interface simply double click on the manual.tar file to extract the files.

3. The SUDAAN Language Manual and the SUDAAN Example Manual are files in PDF format. Use Adobe Acrobat Reader to view these documents. (Note that Acrobat Reader is available free from Adobe's website.) You can find additional SUDAAN examples on our website.

To Install the SUDAAN Help Files:

1. Create a destination directory for the help files, for example at /usr/local/SUDAAN_90x/Help and copy the file Help/help.tar into it.
2. From the directory created in Step 1, execute the following *tar* command to extract the SUDAAN

manual files:

```
tar xvf help.tar
```

or from a graphical interface simply double click on the help.tar file to extract the files.

3. Use your browser to view the SUDAAN help files. Begin with SUDAAN.htm

Note that SUDAAN's Help is available on our website at <http://www.rti.org/sudaan>. Click on *Technical Assistance* and then *SUDAAN 9 Help*.

5.3 Procedure to Initialize or Renew a SUDAAN License

Along with your SUDAAN software, you received a 22-digit Product Identification Key. To initialize your software, do the following:

1. Enter the directory where the SUDAAN program files are located. (For example /usr/local/SUDAAN_90x/SAS8-Callable)
2. Execute the *sudinit* program using the following syntax:

```
sudinit p=<22-digit product key> c=<company_name> o=<owner>
```

Enter your name (<owner>) and company (<company_name>) as they should appear in the SUDAAN banner, and your 22-digit product key. Note that you should place the company name and owner name in quotes if they contain spaces. Spaces should not be included in the product key and letters in the product key may be entered in upper or lower case.

At this point your software is ready to use.

When you renew your current annual license, you will receive a new product key. Once you have the new key, execute the *sudinit* program again using this new 22-digit key to update your license. You do not need to supply your company name and owner name when you renew the software, unless your information has changed.

5.4 Setting up SUDAAN

After installation, each SUDAAN user *must* create a SUDLIB environment variable. For the default Bash shell the following commands should be placed in .bash_profile if SUDAAN is installed in /usr/local/SUDAAN_90x/SAS#Callable:

```
.bash_profile:      SUDLIB=/usr/local/SUDAAN_90x/SAS#Callable
                   SUDWORK=temp_directory
                   export SUDLIB
                   export SUDWORK
```

where *temp_directory* is the location where that user's temporary SUDAAN files should be written. The user must create this directory before using SUDAAN if it does not already exist.

Note that users must logout and login again before these settings are active.

5.5 Running SUDAAN

Once SUDAAN setup is complete, there are two ways to execute a SAS-Callable SUDAAN program. The first is preferred.

1. The user or system manager can insert the SUDAAN directory (for example `/usr/local/SUDAAN_90x/SAS8-Callable`) at the end of the `-PATH` command in the `sasv#.cfg` file before the closing parenthesis, but ahead of any previous SUDAAN references. This will enable SAS to find and dynamically load the SUDAAN procedures as needed. Once this setup is completed, to execute SAS with the SUDAAN program *myprog.sas* simply type

```
sas myprog.sas
```

(or whatever is used on your system to invoke SAS).

2. Each user can add a `-PATH` command to the SAS command line when invoking SUDAAN procedures. The syntax for executing SAS on the SUDAAN program *myprog.sas* in this case is

```
sas -path /usr/local/SUDAAN_90x/SAS#Callable myprog.sas
```