

Configuration Guide for SAS[®] 9.1.3 Foundation for OpenVMS[™] Alpha



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Chapter 1 – Introduction

Audience

This document is intended for the SAS Installation Representative, designated as the person responsible for installing and maintaining SAS software for OpenVMS Alpha systems at your site.

This document describes the configuration instructions for SAS Foundation, which is made up of server-side Base SAS and a variety of server-side SAS products (the exact products vary by customer). Information about the configuration of mid-tier and client-side products is available from your SAS Software Navigator.

The server-side configuration instructions contained in this document are for the configuration of a generic SAS server. If you wish to configure your server for more specific functions, such as a Workspace Server or Stored Process Server, please refer to the *SAS Integration Technologies: Server Administrator's Guide* located at <http://support.sas.com/documentation/configuration/913admin.html>. If you wish to configure your server as an OLAP Server, please refer to *SAS OLAP Server: Administrator's Guide, Second Edition*, at the same location.

Understanding This Book

This document conforms to the following conventions:

Courier	Courier type indicates commands, directory paths, file names, menu items, Internet addresses, etc.
<i>Italics</i>	Italic type indicates documentation references or key notes.
Bold	Bold type indicates important text or concepts.
UPPERCASE	Uppercase type indicates variable and option settings.
Dollar sign \$ Pound sign #	A dollar sign \$ or pound sign # at the beginning of an example indicates a sample UNIX command line.

Contacting SAS

If you need to contact SAS, refer to the *SAS Technical Support Information* document for information about who to contact and how to contact them. The document may be located by opening the **Documentation for Installing and Configuring SAS** CD or Install Center. On the first page, select **SAS Basic Installation Edition Kit**, then select **SAS Technical Support Information** in the “Service and Support” section.

Accessing Release Documentation

Release documentation is included on the **Documentation for Installing and Configuring SAS** CD, consisting of Alert Notes, System Requirements, Installation Instructions and Configuration Guide. The latest versions of these enclosures are available on the Install Center Web page, <http://support.sas.com/documentation/installcenter/913/kit/index.html>.

To see the documentation included in your installation kit, visit the Install Center Web site and click **Basic Installation Edition Kit** under “SAS 9.1.3.”

Chapter 2 – Restricted Options

SAS Foundation options can be "restricted" by a site administrator so that once they are set by the administrator, they may not be changed by a user. An option can be restricted globally, by group, and by user. To restrict an option it must be added to the appropriate SAS Foundation configuration file and this file must have the permissions set by the administrator so that it cannot be updated by users. The option files are processed in the following order: global, group and user. If an option is specified in multiple files then the last occurrence gets used.

Global Restrictions

Create the file `SAS$ROOT:[MISC.RSTROPTS]RSASV9.CFG` and add options to this file in the normal config file format.

Group Restrictions

Create a file of the following format

```
SAS$ROOT:[MISC.RSTROPTS.GROUPS]<group name>_RSASV9.CFG
```

and add options to this file in the normal config file format.

Example: For user SMITH with UIC: [DEV,SMITH] the file name is

```
DEV_RSASV9.CFG.
```

User Restrictions

Create a file of the following format

```
SAS$ROOT:[MISC.RSTROPTS.USERS]<userid>_RSASV9.CFG
```

and add options to this file in the normal config file format.

Example: For user SMITH, the file name is

```
SMITH_RSASV9.CFG.
```

Additional information

To verify that an option has been set correctly follow this example:

1. Assume the option `/EMAILSYS=VMS` was specified in one of the restricted configuration files.
2. Submit the following code:

```
proc options restrict; run;
```

The SAS log should then show a message similar to

```
Option Value Information For SAS Option EMAILSYS
Option Value: VMS
Option Scope: SAS Session
How option value set: Site Administrator Restricted
```

The following describes the process when a user attempts to change the option value.

1. Assume the option /EMAILSYS=VMS was specified in one of the restricted configuration files.
2. Submit the following code:

```
option emailsys=smtp;
```

The SAS log should then show a message similar to

```
option emailsys=smtp;
-----
36
WARNING 36-12: SAS option EMAILSYS is restricted by your Site
Administrator and cannot be updated.
```


Chapter 3 – Post-Installation Configuration for SAS/ACCESS Software

Important: Refer to the *System Requirements* to determine if the combination of your operating system and the version or release of your DBMS is supported by the SAS/ACCESS interface you want to configure.

SAS/ACCESS Interface to R/3 Software

SAS/ACCESS Interface to R/3 software requires extensive installation setup before it can be used. Refer to the *Installation Instructions for SAS/ACCESS 4.2 Interface to R/3* included in your SAS software order for detailed installation instructions and configuration information.

SAS/ACCESS Interface to SAP BW Software

SAS/ACCESS Interface to SAP BW software requires extensive installation setup before it can be used. Refer to the *Installation Instructions for SAS/ACCESS 9.1.3 Interface to SAP BW* included in your SAS software order for detailed installation instructions and configuration information.

Chapter 4 – Post-Installation Configuration for SAS/ASSIST Software

This chapter describes how to add a master profile to SAS/ASSIST software. You can use a master profile to override the default settings as sent by SAS. This allows you to provide a customized setup for SAS/ASSIST software. With the master profile, you can control the profile options of all SAS/ASSIST users from one central place. For information on the profile options, refer to *SAS/ASSIST Software Administrator's Guide*.

Adding a Master Profile

Complete the following steps to add a master profile to SAS/ASSIST software:

1. Specify the location of the master profile by creating a new directory that will contain the master profile as shown in the following example:

```
$ CREATE/DIR DISK: [DIRECTORY]
```

All users with write access to this directory will automatically also have write-access to the master profile in SAS/ASSIST software. Select a name that conforms to the naming conventions at your installation. All users must have read access to this library.

2. Invoke SAS.

On line 1 of the `Program Editor` window of the SAS Display Manager System, type the physical pathname to be used as the SAS library to store the master profile. Execute the `Save` command to save the pathname in `SASHELP.QASSIST.PARMS.SOURCE`.

The location of the master profile is now known by SAS/ASSIST software.

3. Create the master profile.

The first time SAS/ASSIST software is started, a master profile is created if `SASHELP.QASSIST.PARMS.SOURCE` contains the name of an existing library and the person who starts SAS/ASSIST software has write access to this library.

4. Customize the master profile by starting SAS/ASSIST software and selecting `Setup ... Profiles ... Master/group`.

If you have write access to the SAS library containing the master profile, you can specify default values for your installation. New users will use these values as they start SAS/ASSIST software.

Note: *If you restrict values by typing R in Status, users will not be allowed to change the values you define.*

You can run SAS/ASSIST software in two different styles - workplace or block menu. The block menu can be new style or old style. You can control this using the profile options below.

```
Run workplace:
SAS/Assist style:           Workplace
Run block menu new style:
SAS/Assist style:           Block Menu
Save selections on end:     Yes
Menu Style:                 New
Run old style:
```

SAS/Assist style:	Block Menu
Save selections on end:	Yes
Menu Style:	Old

By setting the default values in the master profile, you can control if users should use the new or old style of SAS/ASSIST software. In addition, there are many other profile options. For more information on these options, refer to *SAS/ASSIST Software Administrator's Guide*.

5. Create group profiles.

From the master profile, it is possible to create group profiles to allow groups of users to have different setups. The master profile controls group profiles and user profiles when a user is not a member of any group. All users are indirectly controlled by the master profile when option values are set to a restricted (R) status.

From Setup...Master/Group, select Tools...Create Group Profile. To add users to a group profile, select Tools...Update User Group. By default, the userid is found in the macro variable &SYSJOBID. This value is set in the option Userid in the master profile (option type System Administration). Change the value if your site uses another variable to keep the userid. If the value name starts with &, it is a macro variable; otherwise, it is an environment variable, which is set before the start of SAS.

Chapter 5 – Post-Installation Setup for SAS/CONNECT Software

Storing and Locating SAS/CONNECT Script Files

SAS/CONNECT software ships several sample script files that are used to establish a connection to a remote SAS session. The `SAS$CNTMISC` logical name points to the location of the SAS/CONNECT script files.

The script files are installed into the `SAS$ROOT:[TOOLS]` directory by default. If you want to move the script files to another directory, you should redefine the `SAS$CNTMISC` logical name in one of the system startup command procedures in `SAS$ROOT:[TOOLS]`, `SAS91.COM`, or `SAS91_SYSTEM.COM` with the new directory location.

Chapter 6 – Post-Installation Configuration for SAS Integration Technologies Software

If you received SAS Integration Technologies software and have completed the installation of SAS, you have successfully installed the SAS server components of SAS Integration Technologies software. The **SAS Client-Side Components** CDs that are included in your SAS software order contain SAS Integration Technologies client components and documentation for SAS Integration Technologies software.

Chapter 7 – Post-Installation Configuration for SAS/IntrNet Software

Installing SAS/IntrNet Web Server or Client Components

SAS/IntrNet software includes components that must be installed on a Web server or on individual client machines. To install any of the additional SAS/IntrNet components:

1. Locate the **SAS Client-Side Components** CDs that are included in your SAS software order and mount the appropriate CD according to the platform-specific instructions that are provided on the cover letter.
2. In a Web browser, view the `index.html` page that is located in the root directory of your CD.
3. From the index page, select the `SAS/IntrNet Software` link to go to the SAS/IntrNet home page.
4. From the SAS/IntrNet home page, select the `Install` icon and follow the instructions that are provided.

Chapter 8 – Post-Installation Configuration for National Language Support (NLS)

This chapter contains information on post-installation configuration for European language support.

Note: *Double-byte character support (DBCS) is no longer supported on the OpenVMS operating system.*

European Language Support (ELS)

The following sections explain different methods for configuring your system for locale, describe how to set up your local session to transfer data to a remote session, and provide a list of devmap and keymap values that match the locales on your operating system.

Configuring Your System for Locale

To configure your SAS session for a locale other than the default locale, you can either

- change the default LOCALE system option setting
- run SAS in a different locale.

The following sections explain how to use these methods to configure your session for locale.

Changing the Default LOCALE Option Setting

The easiest way to change the default LOCALE setting is by using the LOCALE system option at SAS invocation, for example:

```
$ SAS91/LOCALE=FRENCH_FRANCE
```

Note: *The English version does not set the LOCALE by default.*

Running SAS in a Different Locale

To set the locale for SAS at your site, add the LOCALE system option to the SAS91.COM file in the SAS\$ROOT:[TOOLS] directory. You can find a list of locale values in the *SAS National Language Support (NLS) User's Guide*.

When you read or write a file, SAS expects the data in the external files to be in the session encoding. To specify a different encoding, refer to the documentation for the ENCODING system option in the FILENAME, INFILE, or FILE statement in the *SAS 9.1 National Language Support (NLS) User's Guide*.

When the LOCALE system option is set, the ENCODING system option will be set to an encoding that supports the language for the locale. SAS expects user data to be in the encoding that matches the ENCODING option. If you prefer an encoding other than the most common encoding for the locale, you can also set the ENCODING system option.

When the ENCODING option is set, the TRANTAB option will always be set to match the ENCODING system option. The transport format trantabs (translation tables), set by the TRANTAB option, are used by the CPORT and CIMPORT procedures to transfer SAS data files. These trantabs are also used by the UPLOAD and DOWNLOAD procedures for transferring files and catalogs, remotely submitting code to the server, and returning logs and listings to the client.

The Output Delivery System (ODS) will create output using the encoding that matches the ENCODING system option. If you would like your output created using a different encoding, please refer to the documentation for the Output Delivery System in the online help system.

For more information, refer to the *Base SAS 9.1 Procedures Guide* for documentation about PROC CPORT and PROC CIMPORT. Refer to the *SAS/CONNECT 9.1 User's Guide* for documentation on PROC UPLOAD and PROC DOWNLOAD.

Additional Information

Depending on the applications you run, additional setup may be required for your system. Refer to the following sections for more information about configuring your system to run with alternate locales.

Locale Setup on the Remote Server

Note: The %LS() macro is new in SAS. This macro replaces the functionality of the Locale Setup Window that was used in previous releases. References to "SAS System 9" in the following section refer to all releases of SAS software from SAS System 9 forward.

If you are running SAS System 9 as both your client and server sessions, it is not usually necessary to run the %LS() macro to do any further locale setup. The locale of a server should be compatible with the locale of your client session; otherwise, your data may be corrupted.

If your SAS System 9 client is connecting to a session running a release of SAS prior to SAS System 9, you can use the %LS() macro to set up the remote SAS environment for data transfer. As the Locale Setup Window did in previous releases, the %LS() macro copies the host-to-host translation tables from the LOCALE catalog into SASUSER.PROFILE. The %LS() macro does not set the encoding for the SAS session.

If you use SAS/CONNECT to connect to a remote SAS server, you will need to set up the server session for the locale that the SAS client is using. You must set up the server *after* signing on to the remote session from the client.

The following examples show how to set locale for remote connections:

- **Connecting SAS System 9-to-SAS System 9:** Use the LOCALE option at startup. The LOCALE option value of the SAS client and server sessions should be the same. For example,


```
$ SAS91/LOCALE=DANISH_DENMARK
```
- **Connecting SAS System 9 and a previous release of SAS:**
 - **SAS System 9 receives the data:** Use the LOCALE option on the SAS System 9 side at start up. **Example:**

```
$ SAS91/LOCALE=DANISH_DENMARK
```
 - **Previous release receives the data:** Start SAS System 9 with the LOCALE option at start up. **Example:**

```
$ SAS91/LOCALE=DANISH_DENMARK
```

Then use the %LS() macro in SAS System 9 to set up the host-to-host translation tables on the previous release after connection is established. **Example** - Submit the following code from the Program Editor:

```
%ls(locale=Danish_Denmark, remote=on);
```

Devmaps and Keymaps for SAS/GRAPH Software

If you are running SAS/GRAPH software and you want to display non-ASCII characters, you will need to set the appropriate devmaps and keymaps to match your current encoding. The devmap and keymap entries are located in the SASHELP.FONT catalog. To get the correct devmaps and keymaps for your encoding, you should use the %LSGRAPH macro. %LSGRAPH automatically sets up your environment for you by

- copying the devmap and keymap entries that match your encoding to the GFONT0.FONTS catalog
- changing the name of the entry to the name DEFAULT so the devmaps and keymaps will be loaded for you.

The following example uses %LSGRAPH to set the correct devmap and keymap (LAT2) for a Polish user on the OpenVMS Alpha platform:

```
libname gfont0 'your-font-library';
%lsgraph(LAT2);
```

Here is a list of the devmaps and keymaps that match the locales on your platform:

Locale	Devmap and Keymap Name	Locale	Devmap and Keymap Name
Arabic_Algeria	arab	German_Switzerland	lat9
Arabic_Bahrain	arab	Greek_Greece	grek
Arabic_Egypt	arab	Hebrew_Israel	hebr
Arabic_Jordan	arab	Hungarian_Hungary	lat2
Arabic_Kuwait	arab	Icelandic_Iceland	lat1
Arabic_Lebanon	arab	Italian_Italy	lat9
Arabic_Morocco	arab	Italian_Switzerland	lat9
Arabic_Oman	arab	Latvian_Latvia	lat6
Arabic_Qatar	arab	Lithuanian_Lithuania	lat6
Arabic_SaudiArabia	arab	Norwegian_Norway	lat9
Arabic_Tunisia	arab	Polish_Poland	lat2
Arabic_UnitedArabEmirates	arab	Portuguese_Brazil	lat1
Bulgarian_Bulgaria	cyr1	Portuguese_Portugal	lat1
Byelorussian_Belarus	cyr1	Romanian_Romania	lat2
Croatian_Croatia	lat2	Russian_Russia	cyr1
Czech_CzechRepublic	lat2	Serbian_Yugoslavia	cyr1
Danish_Denmark	lat9	Slovak_Slovakia	lat2
Dutch_Belgium	lat1	Slovenian_Slovenia	lat2
Dutch_Netherlands	lat1	Spanish_Argentina	lat1
English_Australia	lat1	Spanish_Bolivia	lat1
English_Canada	lat1	Spanish_Chile	lat1
English_HongKong	lat9	Spanish_Colombia	lat1
English_India	lat9	Spanish_CostaRica	lat1
English_Ireland	lat9	Spanish_DominicanRepublic	lat1
English_Jamaica	lat1	Spanish_Ecuador	lat1

Locale	Devmap and Keymap Name	Locale	Devmap and Keymap Name
English_NewZealand	lat1	Spanish_ElSalvador	lat1
English_Singapore	lat9	Spanish_Guatemala	lat1
English_SouthAfrica	lat1	Spanish_Honduras	lat1
English_UnitedKingdom	lat9	Spanish_Mexico	lat1
English_UnitedStates	lat1	Spanish_Nicaragua	lat1
Estonian_Estonia	lat6	Spanish_Panama	lat1
Finnish_Finland	lat9	Spanish_Paraguay	lat1
French_Belgium	lat9	Spanish_Peru	lat1
French_Canada	lat1	Spanish_PuertoRico	lat1
French_France	lat9	Spanish_Spain	lat9
French_Luxembourg	lat9	Spanish_UnitedStates	lat1
French_Switzerland	lat9	Spanish_Uruguay	lat1
German_Austria	lat9	Spanish_Venezuela	lat1
German_Germany	lat9	Swedish_Sweden	lat9
German_Liechtenstein	lat9	Turkish_Turkey	lat5
German_Luxembourg	lat9	Ukrainian_Ukraine	cyr1

Chapter 9 – Post-Installation Configuration for SAS OLAP Server Software

SAS OLAP Server Software includes an OLE DB provider, Open OLAP Server Software. The Open OLAP Server allows you to access and manipulate MDDB data on your SAS System from OLE DB- and ADO- compliant applications on Windows platforms.

The Open OLAP Server is packaged as a self-installing program for Windows platforms. The file is called SAS Open OLAP client for SAS/MDDB Server Software. It is available on the **SAS Client-Side Components** CD included with your SAS Software distribution. You should install the SAS Open OLAP Client if you want to use the Version 8 Open OLAP Server to access MDDB data.

Please refer to the online help for V8 SAS OLAP Server for information on post-installation configuration for SAS OLAP Server software in SAS .

Chapter 10 – Post-Installation Configuration for SAS/SHARE Software

User Authentication

A SAS/SHARE server can be invoked such that clients must provide authentic userid/password credentials. If so, the TCP Access Method will authenticate the userid/password pair. In order to do so, the process running the server must have the READALL privilege. The SHOW PROCESS/PRIVILEGES command displays the current privileges and rights for the process. Use the SET PROCESS/PRIVILEGES command to enable process privileges on a system.

System Configuration for the TCP/IP Communications Method

We suggest each SAS/SHARE server be defined as a service. The server name should be one to eight characters in length. The first character must be a letter or underscore; the remaining seven characters can include letters, digits, underscores, the dollar sign (\$), or the at sign (@). For more information on defining TCP service names, refer to your TCP/IP software documentation.

Client Components

SAS/SHARE software includes client components that are used outside of your SAS installation. SAS/SHARE client components are available on the **SAS Client-Side Components** CDs included in your SAS software order. The SAS/SHARE client components are described below.

SAS/SHARE Data Provider

The SAS/SHARE Data Provider enables you to access, update, and manipulate SAS data using applications compliant with OLE DB and ADO on Windows platforms.

SAS ODBC Driver

The SAS ODBC Driver enables you to access, update, and manipulate SAS data from ODBC compliant applications on Windows platforms.

SAS/SHARE Driver for JDBC

The SAS/SHARE Driver for JDBC enables you to write applets, applications, and servlets that access and update SAS data. The Java Tools package that includes the SAS/SHARE driver for JDBC also includes the SAS/CONNECT driver for Java. If you are writing Java programs using these interfaces, you may also want to use the tunnel feature. This optional feature can be used with the Java applets you write to solve some common configuration problems.

SAS/SHARE SQL Library for C

The SAS/SHARE SQL Library for C provides an application programming interface (API) that enables your applications to send SQL queries and statements through a SAS/SHARE server to data on remote hosts.

NLS Information

Sites that develop or support international applications that use SAS/SHARE software should refer to the "Post-Installation Configuration for National Language Support (NLS)" chapter.



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