

Post-Installation Guide for SAS[®] 9.1.3 Foundation for Microsoft[®] Windows[®]



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About this Guide

This document provides configuration instructions for SAS 9.1.3 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 are available from your SAS Software Navigator.

The server-side configuration instructions contained in this document are for the configuration of a generic SAS server.

- For information about configuring OLAP, workspace and stored process servers, please see *SAS Integration Technologies: Server Administrator's Guide*.
- For information about setting up a metadata server, please see *SAS 9.1.3 Intelligence Platform: System Administration Guide*.

This material can be found at

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

Chapter 1: SAS/ACCESS Interfaces

Configuring SAS/ACCESS Interface to MySQL Software

Before you can use SAS/ACCESS Interface to MySQL software, the following products are required:

- Base SAS software
- SAS/ACCESS Interface to MySQL software

Before you use SAS/ACCESS interface to MySQL software, verify that the MySQL client library has been appended to Path, a system variable. The MySQL client library is often located in C:\mysql\bin.

To locate the Path system variable, follow the instructions for your operating system.

- For Windows NT, right-click **My Computer** and choose **Properties**. Select the **Environment** tab and you will see in your list of system variables.
- For Windows 2000, right-click **My Computer** and choose **Properties**. Select the **Advanced** tab and select the **Environment Variables** button. You will see Path in your list of System Variables.
- For Windows XP, click **Start** then select **Control Panel**. Double-click **System**. Select the **Advanced** tab and select the **Environment Variables** button. You will see Path in your list of System Variables.

If you use MySQL Client version 4.1.0 or later, you will need to make a change because of client incompatibilities. The SASMYL SAS option must be updated so that the SAS/ACCESS Interface to MySQL can identify your version of the MySQL client. This can be done either in the beginning of your SAS program or in your SASV9.cfg file.

If you want to set the SASMYL option in your SAS Program, add the following line at the top of your SAS program:

```
options set=SASMYL MYWIN417
```

The SASV9.cfg file is located in your !SASROOT directory. To set the SASMYL SAS option in your config file, add the following line

```
-set SASMYL MYWIN417
```

For more information about SAS/ACCESS Interface to MySQL, refer to the MySQL chapter in *SAS/ACCESS 9.1 for Relational Databases: Reference*.

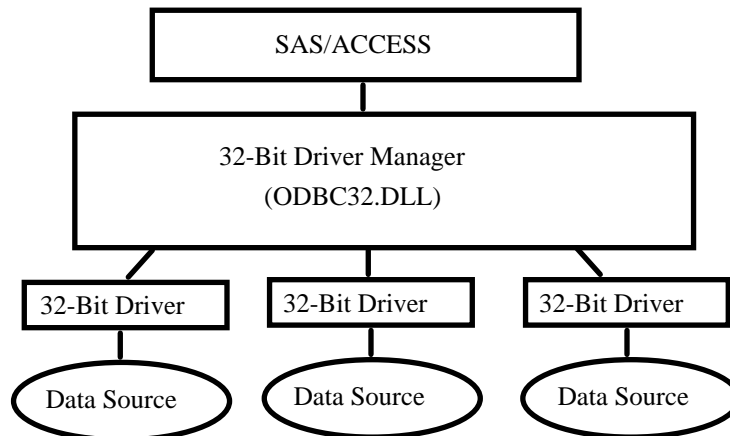
Configuring SAS/ACCESS Interface to ODBC Software

Before you can use SAS/ACCESS Interface to ODBC software, the following products are required:

- Base SAS Software
- SAS/ACCESS Interface to ODBC Software
- A 32-bit ODBC driver for the source from which you want to access data

The ODBC solution allows different technologies to be used by defining a standard interface. SAS/ACCESS Interface to ODBC software with ODBC drivers provides you with access to different databases. An ODBC driver processes ODBC function calls from--and returns results to--SAS/ACCESS software. You can get drivers from Microsoft, your database vendor, or other third party software vendors.

To run SAS/ACCESS software on 32-bit Windows, you need 32-bit drivers. The application calls the 32-bit Driver Manager (ODBC32.DLL), which in turn calls the 32-bit drivers. The following figure illustrates the architecture:



The ODBC Driver Manager and Administrator are Microsoft products that are included with all ODBC drivers. When you install an ODBC driver, the ODBC Driver Manager and Administrator are also installed. The ODBC Administrator should appear as an icon in the control panel. However, it can appear as an icon in the Start menu instead.

After you install the ODBC driver, you can use the ODBC Administrator to define and manage the data sources. A data source associates a particular ODBC driver with the data you want to access through that driver. It can consist of information about the data you want to access and its associated operating system, DBMS, and network platform (if any) used to access the DBMS. For information about how to configure your data sources, refer to the documentation provided with your ODBC drivers.

For more information about SAS/ACCESS to ODBC, refer to the ODBC chapter in *SAS/ACCESS 9.1 for Relational Databases: Reference*. For more information about ODBC, refer to *Microsoft ODBC 3.0 Programmer's Reference and SDK Guide*.

SAS/ACCESS ODBC Conversion Utilities

The SAS/ACCESS ODBC Conversion Utilities are included in the SAS/ACCESS Interface to ODBC software. It helps users of Version 6 SAS/ACCESS Interface to AS/400 and SAS/ACCESS Interface to Microsoft SQL Server move from a native DBMS interface connection to an ODBC interface connection on SAS 9.1.3.

AS/400 Users

Before you can use the ODBC Conversion Utilities for AS/400 Interface, you need to install IBM's Client Access ODBC Driver (32-bit) V3.00.0004 or above. If your AS/400 Client Access installation loaded a Client Access ODBC Driver prior to this release, you can download Program Temporary Fix (PTF) SF59504 or later from <ftp://ftp.software.ibm.com/> for an update. This service pack for the Client Access product can be found in the `/as400/products/clientaccess/win32/v3r1m2/servicepack/` directory. When this update is applied, Version 3.00.0004 or later of the ODBC driver should be installed.

You are also required to create a data source name. You can use the ODBC administrator to add it. The data source name AS400 is recommended. If you want to use another data source name, set the SAS environment variable AS400DSN, located in your `sasv9.cfg`, to the data source name you assigned. Quotes are required if blanks or special characters are included. You may want to create it as

a system DSN instead of a user DSN if you have more than one user who might want to use the same workstation to access the AS/400 database.

Complete the following steps to create a data source for AS/400 database access:

1. Run ODBC Administrator from the Control Panel or Start menu: **Start > Settings > Control Panel > (Admin Tools > on XP) Data Sources (ODBC)**.
2. Click the **User DSN** or **System DSN** tab, depending on the number of users.
3. Click the **Add** button and then choose Client Access ODBC driver (32-bit) from the pop-up windows.
4. Click **Finish**. This brings up the Setup dialog.
5. Click the **General** tab and enter AS400 (or another name) in the Data Source Name field. This name needs to match the value you set for the SAS environment variable AS400DSN.
6. From the pull-down menu, choose an AS/400 system that you want to connect to using this data source.
7. To change the method that this data source will use to connect, click **Connection Options**. Select the appropriate option and click **OK**.
8. Click the **Server** tab. The default library is QGPL. You can change this designation by deleting its name from under the Default Libraries filed and either entering a new library to use or leaving it blank.
9. Click the **Format** tab. Using the Naming Convention pull-down list, select **System naming convention (*SYS)**.
10. Click the **Package(s)** tab. Uncheck the box for Enable Extended Dynamic Support.
11. Click **OK** to close the Setup window.

Microsoft SQL Server Users

An ODBC Conversion Utility is provided that will allow you to read SAS System Version 6 views to access data in Microsoft SQL Server which were created with SAS/ACCESS Interface to Sybase and SQL Server software on Windows. The Conversion Utility helps users migrate to SAS/ACCESS Interface to ODBC software on Windows.

Note: *The Conversion Utility applies only to views that access data in Microsoft SQL Server. It does not apply to SYBASE SQL Server.*

The ODBC Conversion Utility requires the Microsoft SQL Server ODBC driver (32-bit) from Microsoft. This driver is installed as part of Microsoft Data Access Components (MDAC).

It is recommended (but not required) to create a data source name. You can use ODBC administrator to add it. You must set the SAS environment variable MSSQLDSN, located in the `sasv9.cfg`, as the data source name you assigned. Quotes are required if blanks or special characters are included. You can create it as a system DSN instead of a user DSN if you have more than one user who may use the same workstation to access the Microsoft SQL Server database.

Complete the following steps to create a data source for Microsoft SQL Server database access:

1. Run **ODBC Administrator** from the Control Panel or Start menu.
2. Click the **User DSN** or **System DSN** tab, depending on the number of users, as stated above.
3. Click the **Add** button and choose **SQL Server** from the pop-up window.
4. Enter any name in the Name field. This name needs to match the value you set for the SAS environment variable MSSQLDSN.

5. Choose or enter the **Server** field which you defined using SQL Client Configuration Utility.
6. Click **Next**. Select the radio button that describes your login method. If necessary, enter a login ID and password.
7. Click **Next**. A connection will be initiated. If the connection succeeds, please refer to Step 8 below. If the connection fails, an error message will provide a reason for the failure.
8. After a connection succeeds, your default databases may be changed. Click **Next** to leave this screen.
9. After changing your default databases, other options may be selected. Click **Finish** when this screen is correct.
10. Click **Test Data Source**. After a message appears that indicates that the test was successful, click **Okay**. Click **Okay** on the following message as well.

Note: SAS 9.1.3 will automatically install Microsoft Data Access Components (MDAC) when you install SAS/ACCESS Interface to ODBC software.

Configuring SAS/ACCESS Interface to Oracle Software

Before you can use SAS/ACCESS Interface to Oracle software, the following products are required:

- Base SAS software
- SAS/ACCESS Interface to Oracle software
- Oracle Server, Release 8.1.7 or later
- Oracle Client, Release 8.1.7 or later

Assigning the Default Path for the Oracle Server

When you use SAS/ACCESS interface software without specifying any PATH statement/field, SAS/ACCESS software uses the defined default path.

Complete the following steps:

1. Run Windows registry editor (REGEDIT).
2. Select **HKEY_LOCAL_MACHINE > SOFTWARE > Oracle**.
Note: If you are using the ORACLE8i client, the sequence in Step 2 above ends with an additional selection > **HOME0**.
3. Select **Edit > New > String Value**.
4. Enter LOCAL as the Value Name and then select **Edit > Modify**.
5. The Value Name field now says Local.
6. Enter your connect-string for the Value Data field in the pop-up dialog box.
7. Select **OK**.

For more information about SAS/ACCESS Interface to Oracle, refer to the Oracle chapter in *SAS/ACCESS 9.1 for Relational Databases: Reference*.

Configuring the SAS/ACCESS Interface to PeopleSoft

Refer to the *SAS 9.1.3 Foundation for Microsoft Windows System Requirements* for information about the SAS/ACCESS products required for access to the underlying PeopleSoft database.

The SAS/ACCESS Interface to PeopleSoft requires that a libname statement be executed prior to running the application. This libname statement produces a libref to the database where the PeopleSoft data resides.

Here is an example of the `libname` statement:

```
libname psdb oracle user=userid pass=pass
      path='dbpath';
```

Configuring 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.

Configuring 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 Interface to SAP BW* included in your SAS software order for detailed installation instructions and configuration information.

Configuring SAS/ACCESS Interface to SYBASE Software

In SAS 9.1.3, the administrator or user must install a Sybase-stored procedure on the target server. Two files have been included in the `!SASROOT\access\misc` directory to assist in the installation:

- `sas-spcp.txt` is a text file containing instructions on how to do the installation.
- `sas-spdf.txt` is the actual stored procedure script. The process utilizes two Sybase facilities, `defncopy` and `isql`.

Configuring SAS/ACCESS Interface to Teradata Software

Before using SAS/ACCESS Interface to Teradata software, you should verify connectivity by logging into your Teradata account with the Teradata BTEQ utility. If BTEQ is unavailable, establish connectivity as documented in the *SAS/ACCESS to Teradata* white paper, available at <http://support.sas.com/techsup/technote/ts713.pdf>.

If BTEQ fails to connect to the Teradata server, you may need an entry in the hosts file on your PC to provide the network address of the Teradata server. Typically, this means adding a `dbccop1` entry to your hosts file. For more details about the entry, see your *Teradata Client for Windows Installation Guide*.

If after performing these steps, you encounter problems using SAS/ACCESS, verify that you have installed the `efix DR47606`. To run SAS/ACCESS successfully, you must install this Teradata fix for any Teradata client version earlier than TUF 6.0.

FastExporting

For optimal reads of large tables, SAS/ACCESS can perform *FastExporting*. To perform FastExporting, the Teradata FastExport Utility must be present on the system where you install SAS. You must also modify `Path`, a system variable. Append two directory paths to the end of `Path`:

1. The directory where `fexp.exe` (the FastExport Utility) is located. Often this is `C:\Program Files\NCR\Teradata Client\bin`.
2. The directory where `sasaxsm.dll` is located (`sasaxsm.dll` is usually located in your SAS product tree, in the `!sasroot\core\sasext` directory.)

To locate the `Path` system variable, follow the instructions for your operating system:

- For Windows NT, right click **My Computer** and chose **Properties**. Select the **Environment** tab and you will see **Path** in your list of System Variables.

- For Windows 2000, right-click **My Computer** and chose **Properties**. Select the **Advanced** tab and select the **Environment Variables** button. You will see **Path** in your list of System Variables.
- For Windows XP, click **Start** then select **Control Panel**. Double-click **System**. Select the **Advanced** tab and select the **Environment Variables** button. You will see **Path** in your list of System Variables.

The FastExport Utility is not required; SAS/ACCESS reads large tables quite efficiently without it. For further information, see the DBSLICEPARM option in your SAS/ACCESS to Teradata documentation. Contact NCR if you want to obtain the Teradata FastExport Utility.

For more information about SAS/ACCESS Interface to Teradata software, please see the Teradata chapter in *SAS/ACCESS 9.1 for Relational Databases: Reference*, and the *SAS/ACCESS to Teradata* white paper, available on the SAS web site at

<http://support.sas.com/techsup/technote/ts713.pdf>.

MultiLoad

SAS/ACCESS can load large volumes of data to non-empty tables using MultiLoad. To perform MultiLoading, the Teradata MultiLoad Utility must be present on the system where you install SAS. You must also modify Path, a system variable. Append two directory paths to the end of Path:

1. The directory where `mload.exe` (the MultiLoad Utility) is located. Often this is `C:\Program Files\NCR\Teradata Client\bin`
2. The directory where `sasmlam.dll` and `sasmlne.dll` are located (`sasmlam.dll` and `sasmlne.dll` are usually located in your SAS product tree, in the `!sasroot\core\sasext` directory.)

To locate the Path system variable, follow the instructions for your operating system:

- For Windows NT, right-click **My Computer** and chose **Properties**. Select the **Environment** tab and you will see Path in your list of System Variables.
- For Windows 2000, right-click **My Computer** and chose **Properties**. Select the **Advanced** tab and select the **Environment Variables** button. You will see Path in your list of System Variables.
- For Windows XP, click **Start** then select **Control Panel**. Double-click **System**. Select the **Advanced** tab and select the **Environment Variables** button. You will see Path in your list of System Variables.

The MultiLoad Utility is not required; SAS/ACCESS provides other options for loading tables. For further information, see the MULTISTMT option in your *SAS/ACCESS to Teradata* documentation. Contact NCR if you want to obtain the Teradata MultiLoad Utility.

Chapter 2: Post-Installation Configuration for SAS AppDev Studio Software

For information about how to configure your SAS AppDev Studio™ software after you have completed the installation of SAS 9.1.3 Foundation, please visit the SAS AppDev Studio Developer's Site, <http://support.sas.com/rnd/appdev>.

Chapter 3: Post-Installation Setup for SAS/ASSIST Software

This chapter describes how to add an optional 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 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 all users of SAS/ASSIST software will have read access to.

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. The name of this new directory must be stored in an entry in the SASHELP library. This requires that you have write access to the SASHELP library.

On line 1 of the Editor window of the SAS Display Manager System, type the physical pathname of the master profile directory. Execute the Save command to store this in the SASHELP.QASSIST catalog. For example:

```
SAVE SASHELP.QASSIST.PARMS.SOURCE
00001 S:\SAS\ASSIST\PARMS
00002
00003
```

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

2. 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 physical pathname, and the person who starts SAS/ASSIST software has write access to this physical pathname.

3. 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 Administrator's Guide.

4. 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 9.1.3.

Chapter 4: Post-Installation Setup for SAS/CONNECT Software

TCP/IP is the access method supported for SAS 9.1.3 on Windows. For information about the access methods supported by other systems, refer to *Communications Access Methods for SAS/CONNECT 9.1 and SAS/SHARE 9.1*. This document can be found at <http://support.sas.com/documentation/onlinedoc/>.

Note: *The APPC access method is no longer supported for the Windows operating system.*

Storing and Locating SAS/CONNECT Script Files

Several sample script files are shipped with SAS/CONNECT software. SAS/CONNECT software uses these script files to establish a connection to a remote SAS session.

The SASSCRIPT configuration option points to the location of the SAS/CONNECT script files. The SASSCRIPT option is used by SAS/ASSIST software and can be used by user-written SCL applications.

Under Windows, the script files are installed into the !SASROOT\CONNECT\SASLINK directory by default. The following line is added to the SASV9.CFG file when SAS/CONNECT software is installed:

```
-SASSCRIPT !SASROOT\CONNECT\SASLINK
```

If you want to move the script files to another directory, you must edit the SASV9.CFG file and update the SASSCRIPT option with the new directory location. This option can also be specified from the **Tools/Options/System/Communications/Networking and encryption** selection in DMSEXP mode.

TCP/IP

TCP/IP is the access method supported for SAS 9.1.3 on Windows. SAS/CONNECT software supports Microsoft's TCP/IP System Driver, which is provided with Windows.

Configuring the SAS Windows Spawner Program

The SAS Windows Spawner is stored in the !SASROOT directory and can be executed manually from the !SASROOT directory at any time. You can run the SAS Windows Spawner as a service by executing SPAWNER.EXE with the -install option. By default, the SAS Windows Spawner will be installed to run with security. For complete documentation on the Windows Spawner and the supported options, see *Communications Access Methods for SAS/CONNECT 9.1 and SAS/SHARE 9.1*.

Note: *If you are upgrading to SAS 9.1.3 and you run a spawner from a previous release as a service, you should stop and delete the existing spawner service. The SAS 9.1.3 CONNECT spawner can then be installed as a Windows service.*

By default, when the SAS Windows Spawner is installed as a Windows service, it runs under the LocalSystem userid that has all required User Rights for running the SAS Windows Spawner. If you do not install the SAS Windows Spawner as a Windows service (run it from your system prompt), the Windows userid used to start the SAS Windows Spawner must be the local Administrator of the machine and must have the following User Rights:

- act as part of the operating system
- bypass traverse checking (the default is everyone)
- increase quotas
- replace a process level token
- log on locally (the default is everyone)

The Windows userid specified at signon needs only the User Right "log on as a batch job."

Chapter 5: Post-Installation Setup of Enterprise Miner Software

These instructions cover post-installation steps for Enterprise Miner 4.3. For post-installation setup of Enterprise Miner 5.1 or Enterprise Miner 5.2, refer to the “Preparing Enterprise Miner for Use” chapter of the *SAS Intelligence Platform: Administration Guide*.

Installing Enterprise Miner Server software

If you licensed Enterprise Miner software and have completed the installation, you have installed the server components of Enterprise Miner software (referred to as the *Enterprise Miner server*).

The SAS Enterprise Miner Server software is invoked from the Enterprise Miner Client via SAS/CONNECT. For more information about running Enterprise Miner, refer to *Getting Started with the Enterprise Miner Software, Release 4.3*, and *Enterprise Miner Software: Changes and Enhancements, Release 4.3*.

Note: Enterprise Miner requires that you configure SAS 9.1.3 Foundation for SAS/CONNECT. For this reason, please ensure that you have reviewed and completed the steps in the chapter “Post-Installation Setup for SAS/CONNECT Software” on page 10.

Configuring Enterprise Miner Server Software

Setup Default Data Library

Create a data library on the server to which Enterprise Miner Client Software users have read/write access. This library should be a different folder than the SASROOT location, and ideally, on a different disk. To create the data library, make or designate a folder on an available disk and set appropriate permissions and ownership to allow remote users read and write access.

Provide Information to Configure Enterprise Miner Client Software

Provide the following information to users of Enterprise Miner Client Software to complete the configuration steps necessary for Enterprise Miner Client Software.

- machine name and IP address of the server
- how to invoke SAS 9.1.3 Foundation with SAS/CONNECT
- how to access the default remote data library

Note: Do not specify a UNC pathname.

Invoking Enterprise Miner 4.3 Client software

After it is properly installed, Enterprise Miner Client software is invoked from SAS 9.1.3 under Windows. Once SAS 9.1.3 under Windows has been launched, you can invoke Enterprise Miner in the following ways:

- Pull down the **Solutions** menu from the menu bar, then select the **Analysis** item, and then select **Enterprise Miner**.
- Type *miner* in the SAS command bar.

Configuring Enterprise Miner Client Software for Client-Server Projects

To configure Enterprise Miner Client software for client-server projects, please refer to the section “Creating a Client-Server Project” in *Getting Started with Enterprise Miner 4.3*.

For more information about running Enterprise Miner, please refer to *Getting Started with Enterprise Miner 4.3*, and *Enterprise Miner 4.3: Changes and Enhancements*.

SAS Standalone Formats for Enterprise Miner C*Score

Enterprise Miner C*Score software requires Standalone formats that are found on the SAS Client-Side Components CD, which is included with your SAS Software distribution. When modeling data that contains SAS System formats, the data step score code uses those formats in the process of normalizing data for comparisons. As a result, the scoring code produced from such data step code will contain calls to these formats.

The SAS System formats are supported in the Enterprise Miner C*Score generated 'C' code by use of the SAS Standalone Formats libraries. Follow these instructions to install the SAS Standalone Formats on the platform where you will be running your 'C' scoring code:

1. Locate the **SAS Client-Side Components** CD that is included in your SAS Software package. Mount the CD according to the platform-specific instructions that are provided on the inside cover.
2. In a browser, view the `index.html` page that is located in the root directory of your CD.
3. From the `index.html` page, select the link **SAS Standalone Formats for Enterprise Miner C*Score**.
4. Select the platform where you are running your 'C' scoring code; follow the associated instructions to install the SAS Standalone Formats on that platform.

Chapter 6: Post-Installation Setup for Enterprise Reporter 9.1

Before you install Enterprise Reporter software, we recommend that you read the *Administrator Guide* on the CD, which contains an overview of the installation program.

SAS System Viewer

The SAS System Viewer is used to view and print files created by the SAS System. Enterprise Reporter uses this application to browse report data on your request. We recommend that you install the SAS System Viewer.

Enterprise Reporter 9.1 runs on SAS 9.1.3

Running Mixed Environments

Users in a mixed environment running Enterprise Reporter 2.5, 2.6 and 9.1 can share data and reports on the network. However, previous releases (1.0, 1.5 and 2.0) of Enterprise Reporter cannot share reports with Enterprise Reporter 9.1. Opening a report created with Enterprise Reporter 2.0 (or earlier) with Enterprise Reporter 9.1 will convert the report. When converted, the report cannot be opened with Enterprise Reporter 2.0 again.

Since SAS 9.1.3 does not support remote data from SAS 6.12 and earlier releases, we recommend that you convert the data to a newer SAS version. The infolders also need updating when going from Enterprise Reporter 2.0 to Enterprise Reporter 9.1. You can either create new infolders in Enterprise Reporter 9.1, or convert them from Enterprise Reporter 2.0 using Enterprise Reporter 2.5, Service Pack 3, and then use them directly in Enterprise Reporter 9.1.

Enterprise Reporter Standard Edition

The Standard Edition install is no longer available with Enterprise Reporter 9.1. Instead, the Administrator can create a Client Installation Image and distribute only the components needed for running Enterprise Reporter 9.1. For more information, please refer to the *Administrator's Guide*.

Users of Enterprise Reporter 9.1

User Administration Environment

Administrators can set up an environment for the users in which reports and data are shared. Users and groups must be set up, and it might be necessary to organize reports for groups of users. For more detailed information about setting up groups and users, please see Chapter 2, "User Administration" in the course note *Enterprise Reporter Software: User and Data Administration Course Notes*.

It will also be necessary to create a file called `ADMIN.INI`, which points to the location of the user definitions:

Administrator and Personal Users

The previous releases of Enterprise Reporter contained a file, `ADMIN.INI` in the Enterprise Reporter folder `...\Business`. The file was created during installation with customizations to fit your organization. The file is no longer created during installation, but you can reuse your `ADMIN.INI` or create a new one in the new location `...\reporter`.

Client Users

Client users run in partnership with the administrator version of ADMIN.INI. There are two types of Client installations:

- a network installation, which does not have the complete directory ...**reporter** installed on the PC.
- an installation in which the user installs a Client Image created by the Administrator. In this situation, the user will have a complete ...**reporter** directory.

For more information, please see the description under “Enterprise Reporter Standard Edition” above.

Creating the ADMIN.INI file

To create an ADMIN.INI file, write the text below in a text editor such as Notepad and save it to a file called ADMIN.INI (Make sure that the file has the extension .INI and not .TXT). You will have to change the default values after the equation marks in order to customize the file to your settings.

Here is an example of an Enterprise Reporter initialization file, ADMIN.INI.

```
[License]
Name=Your Name
Company=Your Company

[Installation]
Version=Enterprise Reporter, SAS System Edition

[Table Location]
UserDefinitions=U:\Program Files\SAS\SAS 9.1\reporter\UserDef\
ServerDefinitions=U:\Program Files\SAS\SAS 9.1\reporter\ServerDef\

[File Location]
UserFiles= C:\Documents and Settings\USERNAME\My Documents\My SAS
Files\Enterprise Reporter
```

Note that UserFiles are pointing to the default location on WIN2000. Other operating systems have different default locations for user files.

The settings in the ADMIN.INI file reflect the following in Enterprise Reporter 9.1:

- [License] Name and Company are used in the **About** window in the **Help** menu to identify who has installed the software and where it is installed.
- [Installation] Describes which version of Enterprise Reporter is installed. This information is used in the **About** window accessed from the **Help** menu.
- [Table Location] Location of the tables used in user administration and location of server definitions used in data administration.
- [File Location] Location of user files and folders for each user. The location must be on a local drive that all users can access, for example, c:\enterprise. This folder is automatically created the first time a user starts Enterprise Reporter.

Upgrading a Previous Version to Enterprise Reporter 9.1

With the previous release of Enterprise Reporter, release 2.6, the concept of Administrator installation and User installation changed. The standard for installation of SAS 9.1.3 Foundation is now being used for Enterprise Reporter as well.

Network and Local users of Enterprise Reporter 2.5 cannot be updated automatically to Enterprise Reporter 9.1. Instead, the administrator creates an installation image for users by running the SAS Administrator Wizard, and the users must install the created installation image of Enterprise Reporter 9.1 and the required SAS products.

Running Directly on an Existing Release 2.5 User Administration

Groups and users defined in Enterprise Reporter 2.5 can still be used in Enterprise Reporter 9.1. This requires that you have a file named `ADMIN.INI` pointing at your user definitions. For more details, please refer to the information about the `ADMIN.INI` file in “Creating the ADMIN.INI file” on page 14.

Localized versions

Enterprise Reporter 9.1 is released in an English version only.

Starting Enterprise Reporter 9.1

Enterprise Reporter is integrated with SAS 9.1.3. The software can be started using different methods:

- Enterprise Reporter as an application outside SAS 9.1.3:
Go to **Start > Programs > SAS > Enterprise Reporter 9.1 > Enterprise Reporter 9.1, SAS System Edition**
- Enterprise Reporter within SAS 9.1.3:
Start SAS 9.1.3. Go to the Command line and type the command `ER`.

Chapter 7: Post-Installation Configuration for SAS Integration Technologies

If you received SAS Integration Technologies software and have completed the installation of SAS 9.1.3 Foundation, you have successfully installed the SAS server components of SAS Integration Technologies software.

The SAS Client-Side Components CD that is included in your software order contains SAS Integration Technologies client components and documentation for SAS Integration Technologies software.

Chapter 8: Installing SAS IT Resource Management

Please note that SAS IT Resource Management now ships with both the 2.7 and 3.1.1 versions for Windows.

- If you are installing SAS IT Resource Management 2.7, you should follow the procedures in the “Configuring SAS IT Resource Management 2.7” section below to complete your installation.
- If you are installing SAS IT Resource Management 3.1.1, you should follow the procedures in the “Configuring SAS IT Resource Management 3.1.1” section on page 21 to complete your installation.

SAS IT Resource Management Functionality

For new and updated technical papers, newsletters, and user documentation (including the Macro Reference and User's Guide), please visit the following SAS Web site:

<http://support.sas.com/itrm>.

SAS IT Resource Management is a data management and presentation software package used to access, manage, integrate, aggregate, and analyze large quantities of performance data about many IT resources, such as these:

- hardware
- operating system software
- networks,
- Web servers
- databases
- applications

This IT performance data is generated by the logging mechanisms that are inherent to IT resources or that are created by the Enterprise Systems Management tools that are employed to manage the IT infrastructure.

SAS IT Resource Management 2.7 has both client and server components. The server software is required to process, reduce, and/or update the data in a performance data warehouse (PDB) located on your system. The client software is required only if you want to access a performance data warehouse on a remote server system from a client PC platform.

SAS IT Resource Management 3.1.1 has server components and uses IT Resource Management enhanced SAS 9 client components as the user interface to the solution.

SAS IT Resource Management Server runs on Microsoft Windows NT Server, z/OS, and selected UNIX operating systems.

SAS IT Resource Management Client runs on Microsoft Windows platforms supported by SAS 9.1.3.

For the latest documentation information about SAS IT Resource Management, please look at the “SAS IT Resource Management Documentation” page, <http://support.sas.com/itrm>.

Note: *SAS IT Resource Management was formerly known as IT Service Vision. Some documentation and references may still use the former name.*

Installing SAS IT Resource Management 2.7

Migration Considerations

If you have modified your `SITELIB` library, you will need to save a copy of it so that you can merge it into the new `SITELIB` library. Please see the instructions in “Site Library Considerations” on page 19.

If you have an existing SAS IT Resource Management installation and want to migrate from SAS Version 8 to SAS 9, refer to the conversion information in the directory

`!SASROOT\cpe\itsvdocs\convert89.htm` and at www.sas.com/itsvconv.

If you have an earlier release of SAS IT Resource Management installed, we recommend that you uninstall it prior to installing SAS IT Resource Management 2.7. If you choose not to follow this recommendation, SAS IT Resource Management 2.7 will be installed in the same location, and your earlier release of SAS IT Resource Management will be overwritten. Only SAS IT Resource Management 2.7 will be available.

To remove the earlier release of SAS IT Resource Management from a Windows platform, follow the path: **Start > Settings > Control Panel > Add/Remove Programs**.

If you uninstall an earlier release of SAS IT Resource Management after you install SAS IT Resource Management 2.7, SAS IT Resource Management 2.7 will not be usable. SAS IT Resource Management 2.7 will need to be reinstalled.

Installation Customizations

SAS IT Resource Management Solution will be installed into the `!SASROOT\cpe` folder. If you want to customize your SAS IT Resource Management installation, or see any additional SAS System components present on your media, select **Customize** from the Solutions window.

Starting SAS IT Resource Management

To start SAS IT Resource Management from your Windows desktop, select **Start > Programs > SAS IT Resource Management > SAS IT Resource Management 2.7**.

To start SAS IT Resource Management from within SAS, issue the `itrm` command. You can issue the `itrm` command in the SAS toolbar command area or after the **Command >** prompt, which is obtained by clicking on **Globals > Options > Command Line**. You can also start SAS IT Resource Management 2.7 from within SAS by submitting this statement by using the Program Editor:

```
%CPSTART( );
```

SAS IT Resource Management Documentation

For the latest documentation information about SAS IT Resource Management, please visit the “SAS IT Resource Management Documentation” page, <http://support.sas.com/itrm>.

For more information on running and configuring SAS IT Resource Management, please see *Getting Started with SAS IT Resource Management 2*. A link to this guide can be found on the Web page listed above.

Online documentation is also available from within SAS and SAS IT Resource Management. From SAS, select **Help > Getting Started with SAS Software > Help on SAS software Products > SAS IT Resource Management**.

From the SAS IT Resource Management user interface, select **OnlineHelp > SAS IT Resource Management Help > Help on SAS software Products > SAS IT Resource Management**.

Select **OnlineHelp > Other ITRM Documentation** for the following documents:

- Collector Updates
- Link to SAS IT Resource Management on the Web
- Server Setup Guide
- QuickStart Examples
- Migration - Also directly available with a Web browser from
!SASROOT\cpe\itsvdocs\convert89.htm and at www.sas.com/itsvconv

Site Library Considerations

First Time Installations

If you are installing SAS IT Resource Management for the first time, you may want, at some future date, to create a separate `SITELIB` directory to store site-wide options or customizations, such as your site's preferred graphics device. The supplied version of this directory containing default values will have been created in `!SASROOT\cpe\sitelib` during the default production installation of SAS IT Resource Management.

Wherever you choose to locate `SITELIB`, you must have write access to it, and all other SAS IT Resource Management software users must have read access. If you choose to re-locate `SITELIB`, follow the instructions in "Modifying the Pointer to the Default `SITELIB` Library" on page 20.

Upgrading existing installations

If you have previously installed SAS IT Resource Management on this system, it is strongly recommended that you consider the location of your existing production `SITELIB` before you install this release of SAS IT Resource Management. Without planning, you risk overlaying and losing existing PDB and site options.

When you installed SAS IT Resource Management previously, a directory containing default values was created in `!SASROOT\cpe\sitelib`. Since then, you may have created another `SITELIB` library and re-programmed SAS IT Resource Management to use this new location as its default `SITELIB`. If you are not sure if this happened, you can find out by starting SAS and your existing SAS IT Resource Management software interactively, and then issuing the `LIBNAME` command from the command line in the toolbar. Note the location of the `SITELIB` library.

In either case, you should close your `LIBNAME` window, the SAS IT Resource Management application, and the SAS session, and make a backup of that whole directory now. This will ensure that you have a method of restoring the directory's contents if a problem occurs after the update.

If you have previously installed SAS IT Resource Management on this system, you now need to consider the maintenance of the `SITELIB` library. In the `SASMISC` directory just installed, locate a member called `CPSITEUP`. This code will merge your old, production `SITELIB` library with your newly installed version. Please read the following sections for details on site libraries and how to run the code.

Maintaining `SITELIB` with Previous SAS IT Resource Management Installations

Note: *The following section is relevant when SAS IT Resource Management was previously installed.*

When a new version or release of SAS IT Resource Management is installed, a new `SITELIB` library is created. This ensures that you are able to access any `SITELIB` updates that may have been made in the product.

However, since you have the opportunity to update the menu and other `SITELIB` datasets, you will probably want to save your modifications and avoid re-engineering them in the new library from

scratch. To preserve your modifications, we have supplied code that will merge your existing production SITELIB datasets and catalogs in with the new versions. This code is contained in the !SASROOT\cpe\sasmisc directory.

If you have an existing production SITELIB library that contains site-wide options or datasets that you want to make available to the new release of SAS IT Resource Management, locate the CPSITEUP member and review its contents.

The CPSITEUP code refers to three SITELIB libraries:

1. The newly installed SITELIB, referred to as NEWSITE,
2. The current, production/default SITELIB (whether it is the previously installed SITELIB or a subsequently relocated version), referred to as OLDSITE, and
3. PRODSITE, which is used in referring to your chosen location for the production SITELIB for the newly installed release of SAS IT Resource Management.

So, before running CPSITEUP, ensure that the following updates have been made:

- NEWSITE points to your newly installed SITELIB.
- OLDSITE points to your current production/default SITELIB.
- PRODSITE points to a directory or library from which you want to run SAS IT Resource Management 2.7. This could be the same location as OLDSITE or NEWSITE, in which case those libraries will be overwritten, or it could be somewhere new.

Run the CPSITEUP code, following the instructions at the top of the code.

If you have decided to use a SITELIB library with a location other than the newly installed SITELIB for 2.7, CPSITEUP will also update the pointer held in PGMLIB so that your chosen SITELIB becomes the new default SITELIB. You will not need to perform the task described below in “Modifying the Pointer to the Default SITELIB Library.”

Other tools that are available for modifying site-wide options are the macros %CPPDBOPT and %CPHDAY, both of which are documented in the SAS IT Resource Management Macro Reference.

Modifying the Pointer to the Default SITELIB Library

A SITELIB directory and its files must be write-able by the SAS IT Resource Management administrator and readable by all other SAS IT Resource Management software users.

When SAS IT Resource Management is started using the %CPSTART macro, you have the option of specifying the SITELIB= parameter. This is not required and is usually not specified. If it is specified, the SITELIB= value is used as the SITELIB library for only that invocation. Otherwise, the default SITELIB library will be used.

This default value is stored in the PGMLIB library and is set at installation to be the name of the newly installed SITELIB library. If you need to change that default, submit the following program:

Note: Update-access to the PGMLIB library and its components is required.

```
libname pgmlib '!sasroot\cpe\pgmlib\';
data pgmlib.cpsite;
  cpsite="name.of.new-or-updated.sitelib";
run;
```

Installing NTSMF (Windows NT Server only)

New SAS IT Resource Management sites receive the product package NTSMF by Demand Technology. NTSMF software can be used to collect performance metrics from up to 50 PC platforms.

If you want to collect resource utilization metrics from your NT servers using NTSMF software, you will need to install it on every NT server that you want to monitor.

Follow the instructions for installing NTSMF in the NTSMF materials. If you have any support questions regarding NTSMF, please contact Demand Technologies directly. Contact information for Demand Technologies can be found in the NTSMF materials.

There are two NTSMF DCS files for NT Server and NT Exchange that match the selection of QuickStart metrics in SAS IT Resource Management. The files are named `ntserv` and `ntexng`. They are located in the `!SASROOT\cpe\sasmisc` directory of your SAS IT Resource Management installation software. Import the files into Demand Technology's Performance SeNTry for use with the QuickStart Wizard.

Configuring SAS IT Resource Management 3.1.1

IMPORTANT: With the availability of the 311IS04 hotfix, it is important to read that hotfix's installation instructions in combination with these instructions. The method by which SAS IT Resource Management metadata is deployed to the SAS Metadata Server has changed.

In summary, if you have an empty ITMS repository and have not deployed any metadata, you will be instructed to execute the `deployITRM_win.bat` script with `DACTION=initialize`. If you happen to have deployed at least some metadata or you have an existing ITMS repository, you will be instructed to execute the same script with `DACTION=hotfix` to migrate it.

SAS IT Resource Management 2.7 and SAS IT Resource Management 3.1.1 are both current releases of this solution. The difference in the software releases is that SAS IT Resource Management 2.7 runs on SAS 9.1.3, and SAS IT Resource Management 3.1.1 runs on and fully leverages the SAS 9.1.3 architecture to create an IT data mart.

In order for the newly installed IT Resource Management 3.1.1 software to function properly there are manual, post-install configuration steps that must be completed. This section addresses required modifications for server-, client- and mid-tier installations. If you are planning on using SAS IT Resource Management 2.7, you should **not** perform these modifications.

Integration with other SAS IT Management Solutions

SAS IT Resource Management 3.1.1 does not integrate with SAS IT Service Level Management or SAS IT Charge Management. SAS IT Resource Management 2.7 remains the prerequisite release for those solutions.

SAS IT Resource Management 2.7 is the prerequisite release for SAS IT Service Level Management and SAS IT Charge Management. Future releases of IT Service Level Management and SAS IT Charge Management will include enhancements necessary for compatibility with SAS IT Resource Management 3.1.1.

SAS IT Resource Management Documentation

For the latest documentation information about SAS IT Resource Management, please see the SAS IT Resource Management Documentation page, <http://support.sas.com/itrm>, document *Introduction to SAS IT Resource Management 3.1.1* that introduces the concepts and facilities of release 3.1.1.

Note: *The following modifications are being made to existing files in your installation. We recommend that you make a backup copy of any file referenced prior to editing its content.*

Server Tier Modifications

Migration Considerations

To migrate your SAS IT Resource Management 2.7 PDB to a SAS IT Resource Management 3.1.1 IT data mart, follow the instructions provided in *SAS IT Resource Management 3.1.1: Migration Documentation* available from <http://support.sas.com/itrm>. If you have not already done so, it is recommended that you apply the latest hot fix available for SAS IT Resource Management 2.7.

SAS Configuration File

The following changes must be made to the SAS configuration file (typically located in `!SASROOT\nls\<language>`).

JREOPTIONS

1. At the beginning of the list of options (immediately after the opening parenthesis), add the following:

```
-Xmx256m -Xms256m -DentityExpansionLimit=10000000
```

(Note that the preceding number is 10 million - 1 followed by 7 zeros.)

2. Insert the following at the start of the `!sas.app.class.dirs` directive:

```
"!SASROOT\itmsmvadata\sasmisc;"
```

3. To the end, add the following directive before the closing parenthesis:

```
-DSAS.JAVAOBJ.EXPERIMENTAL=NO
```

4. When you have completed the updates to your JREOPTIONS option, it should appear similar to this:

```
-JREOPTIONS=(-Xmx256m -Xms256m -DentityExpansionLimit=10000000 -
Dsas.jre.home=C:\PROGRA~1\SAS\SHARED~1\JRE\1499C1~1.2_0 -
Djava.security.policy=!SASROOT\core\sasmisc\sas.policy -
Dsas.app.class.dirs=!SASROOT\itmsmvadata\sasmisc;!SASROOT\core\sasmisc;C:\PROGRA~1\SAS\SHARED~1\applets\9.1 -Dsas.jre=private -
Dsas.ext.config=!SASROOT\core\sasmisc\sas.java.ext.config -
DPFS_TEMPLATE=!SASROOT\core\sasmisc\qrpfstpt.xml -
Djava.class.path=!SASROOT\core\sasmisc\sas.launcher.jar -
Djava.system.class.loader=com.sas.app.AppClassLoader -
DSAS.JAVAOBJ.EXPERIMENTAL=NO)
```

Format catalog search order

To the end of the config file, and on a line of its own, add the following option:

```
-FMTSEARCH=(ADMIN.ITMS SASHELP.ITMS_FORMATS WORK LIBRARY)
```

MXG environment variables

If you have Merrill's Expanded Guide to CPE (MXG) installed, you must also complete the following:

1. Add the following two lines to your configuration file after the FMTSEARCH option:

```
-SET MXGSRC '<custom> <sourclib>'
```

```
-SET MXGFMT '<formatlib>'
```

Where `<custom>` is the path to your MXG custom source library, sometimes referred to as `MXG.USERID.SOURCLIB`, without quotes; `<sourclib>` is the path to your MXG source library, sometimes referred to as `MXG.MXG.SOURCLIB`, without quotes; and `<formatlib>`

is the path to your MXG format library, sometimes referred to as `MXG.MXG.FORMATS`, without quotes. For example:

```
-SET MXGSRC 'C:\DOCUME~1\myid\MYDOCU~1\MXG\CUSTOM\SOURCLIB <SAS-Install-Directory>\MXG\SOURCLIB'
-SET MXGFMT '<SAS-Install-Directory>\MXG\FORMATS'
```

Note: Path names with embedded blanks are **not** supported. If blanks cannot be removed, the notation must follow 8.3 syntax.

2. You must also complete the MXG modification to the `autoexec.sas` file used by your Workspace Server. This modification is specified in the next section.

SAS Autoexec File

If your installation requires interaction with MXG, then you must also modify the `autoexec.sas` file used by your Workspace Server. This file is called `appserver_autoexec.sas` and is typically located in:

```
<Install Drive>:\SAS\<project-directory>\Levl\SASMain
```

Add the following line to the end of the file:

```
%RMMXGINI ;
```

Note: You should have also completed the associated MXG modification to the SAS configuration file specified in the previous section.

Update Default Authorizations

During job execution, SAS IT Resource Management 3.1.1 creates information maps. In order to successfully accomplish this task, you should modify the Default Access Template for the SAS Metadata Repository (SMR) user(s) or group(s) that will be creating and submitting jobs for SAS IT Resource Management 3.1.1. The following steps describe how to make this change.

Create IT Resource Management User(s) or Group(s)

Note: User(s) or group(s) should be created **only** in the Foundation repository. Do **not** create user(s) or group(s) in the ITMS repository.

1. Launch the SAS Management Console and ensure that you are connected to the Foundation repository of your metadata server.
2. The instructions in this step refer to an “ITRM Users” group. This is a group defined in the Foundation SMR that simplifies the management of authorizations for many users and/or groups. Modifications to the Default Authorizations are applied to all of the users and groups that are members of “ITRM Users.” If you would prefer to have your SMR Users organized in a group like this so that permissions can be managed and modified for a single entity, you can create a group as follows:
 - A. Select **User Manager**.
 - B. Right-click and select **New**→**Group** from the pop-up dialog.
 - C. On the **General** tab, supply a unique name such as *ITRM Users*.
 - D. On the **Members** tab, select the users who will be part of this group, and use the right arrow widget between the two panes to add them to the group.
 - E. Click **OK** to save the group.

Update Default Authorizations for User(s) and Group(s)

Note: Ensure that the following steps have been performed in **both** the Foundation and the ITMS repositories.

1. If the SAS Management Console is not still available from the previous step, start it and ensure that you are connected to the Foundation repository of your metadata server.
2. Select the Authorization Manager and expand the Access Control Templates item.
3. Select **Default ACT**.
4. Right-click and select **Properties** from the resulting pop-up dialog.
5. Select the **Users and Permissions** tab.
6. If the list of available names does not include the user or group whose Default ACT is to be modified, follow these steps to add it:
 - A. Click **Add...**
 - B. For each user or group that you want to add to the Selected Identities, select the item in the list of Available Identities and then use the right arrow between the panes to add the item to the Selected Identities. It is here that you should select the "ITRM Users" group if it was created in the previous section.
 - C. Click **OK**.
7. Set the following permissions for each Identity that you want to update (and also ensure that none have **Deny** selected on the **Authorization** tab): ReadMetadata, WriteMetadata, Read, and Delete.
8. After all necessary items have been modified, click **OK**.
9. Using the SAS Management Console, connect to the ITMS repository of your metadata server and repeat steps 2-8.

Server Tier Hot Fixes

To function properly, SAS IT Resource Management requires several hot fixes and installation actions. For the complete list, refer to *SAS Note 30753: Fixes to apply to SAS® IT Resource Management release 3.1.1*, which can be found at <http://support.sas.com/kb/30/753.html>.

Client-Tier Modifications

Tuning the SAS Data Integration Studio Invocation

In order for the SAS IT Resource Management 3.1.1 client software to function properly, you need to modify the options that are passed to the Java Virtual Machine (JVM) when SAS Data Integration Studio is started.

The file to modify is `<SAS Home Directory>\SASETLStudio\9.1\etlstudio.ini`. Before you continue, please create **a backup copy** of this file. Edit the original file by adding the following options to the beginning of the list immediately following `CommandLineArgs=` :

```
-Xmx1024m -Xms128m -Xss1m
```

After you complete the updates, your `etlstudio.ini` `CommandLineArgs=` line should appear similar to the following:

```
CommandLineArgs=-Xmx1024m -Xms128m -Xss1m  
-Djava.system.class.loader=com.sas.app.AppClassLoader  
-Djava.security.auth.login.config=security/login.config
```

```
-Djava.security.policy=security/auth.policy
-Dsas.app.class.dirs="C:\Program Files\SAS\SASETLStudio\9.1"
-Dsas.app.class.path=sas.dbuilder.app.jar;.
-Dsas.ext.config=sas.java.ext.config -cp sas.launcher.jar
com.sas.wadmin.application.TheAppWA
```

Client-Tier Hot Fixes

You should apply all the SAS Data Integration Studio, SAS Enterprise Guide, and SAS Information Map Studio hot fixes currently available from SAS Technical Support. The hot fixes and the instructions for applying them can be found at the Technical Support Hot Fixes Web page, located at http://ftp.sas.com/techsup/download/hotfix/op_home.html.

Mid-Tier Modifications

Configure SAS Web Report Studio for use with SAS IT Resource Management 3.1.1

A unique instance of SAS Web Report Studio configured for use with the ITMS dependent repository is required for use with SAS IT Resource Management 3.1.1. The configuration changes that are required for SAS IT Resource Management should be made after SAS Web Report Studio has been installed and a default configuration has been completed. If you have not already installed and configured SAS Web Report Studio, please stop and return to this document after completing that task. In addition, before you continue, please ensure that your SAS Metadata Server is running.

Create a new subdirectory off the top-level in WebDAV

1. Access the xythosadmin GUI (<http://<nodename.domain.com>:<port>/xythosadmin>) using the Administrator userid and password.
2. Select **File System** then click **Find Top-Level Directory**.
3. Select **sasdav** and then click **Add New Sub-Directory**.
4. For the name, specify *ITMS* and change the Quota to *Unlimited*.
5. Click **Create Directory**. You should now see *ITMS* as a subdirectory of *sasdav*.
6. Click on the **Permissions** icon to set user permissions.
7. Click **Search for Users and Groups**, type *administrator* in the Contains field, and select **OK**.
8. Select **SAS Web Administrator** and then **OK**.
9. For the row corresponding to SAS Web Administrator, set all permissions to *Yes*.
10. Save your changes.

The following three steps require interaction with the SAS Metadata Server. To facilitate this, launch the SAS Management Console on your Mid-Tier Server.

Add /sasdav/ITMS as an available base path

1. Confirm that the Foundation repository is the current, active repository.
2. Expand Server Manager.
3. Select **HTTP DAV Server**.
4. Right-click and then select **Properties** from the resulting popup dialog.
5. Select the **Options** tab and then click the **New...** button. Supply */sasdav/ITMS* as the Base Path. Be sure to select the **Supports WebDAV** checkbox. Click **OK**.
6. Click **OK**.

Add the ITMS Repository to Information Services for SAS Web Report Studio

In order for SAS Web Report Studio to find content in a repository other than Foundation, you must add the ITMS repository, which is a dependent repository, to the Platform Information Service within Query and Reporting services.

1. On the mid-tier server, launch the SAS Management Console and connect to the Foundation repository on the Data Server as the administrative unrestricted user (*sasadm*, for example).
2. Expand the Foundation Services Manager.
3. Expand Query and Reporting.
4. Expand BIP Core Services.
5. Select **Platform Information Service** to highlight it and then select **File > Properties** from the pull down menu.
6. Select the **Service Configuration** tab.
7. Select the **Edit Configuration...** button.
8. Select the **Repositories** tab.
9. Select **New...** to add the ITMS repository.
10. Supply the following information:
 - Protocol: omi
 - Name: ITMS
 - Description: <optional, enter your description here>
 - Host: Fully qualified nodename hosting the SAS Metadata Server containing the ITMS repository (for example, *nodename.domain.company.com*)
 - Port: The port the SAS Metadata Server is listening on (default: 8561)
 - Domain: The authentication domain for the SAS Metadata Server connection (default: DefaultAuth)
 - Base: ITMS
 - Proxy: No value needed by default
 - Auto-Connect checkbox: Selected
 - Secure checkbox: By default not selected, select only if encryption is supported and the connection to the repository will be made using a secure protocol.Select **OK**.
11. Select **OK** twice to save changes.

Add the ITMS Repository to Information Services for the SAS Information Delivery Portal

In order for the SAS Information Delivery Portal to find content in a repository other than Foundation, you must add the ITMS repository, which is a dependent repository, to the BIP Information Service. This must be done for both the BIP Local Service OMR service in the ID Portal Local Services item and the BIP Remote Services OMR service in the Remote Services item.

1. On the mid-tier server, launch the SAS Management Console and connect to the Foundation repository on the data server as the administrative unrestricted user (*sasadm*, for example).
2. Expand the Foundation Services Manager.
3. Expand ID Portal Local Services.
4. Expand BIP Local Services OMR.
5. Select **BIP Information Service** to highlight it and then select **File**→**Properties** from the pull down menu.
6. Select the **Service Configuration** tab.
7. Select the **Edit Configuration** button.

8. Select the **Repositories** tab.
9. Select **New** to add the ITMS repository.
10. Supply the following information:
 - Protocol: omi
 - Name: ITMS
 - Description: <optional, enter your description here>
 - Host: Fully qualified nodename hosting the SAS Metadata Server containing the ITMS repository (for example, *nodename.domain.company.com*)
 - Port: The port the SAS Metadata Server is listening on (default: 8561)
 - Domain: The authentication domain for the SAS Metadata Server connection (default: DefaultAuth)
 - Base: ITMS
 - Proxy: No value needed by default
 - **Auto-Connect** checkbox: Selected
 - **Secure** checkbox: By default not selected, select only if encryption is supported and the connection to the repository will be made using a secure protocol.

Select **OK**.

11. Select **OK** twice to save changes.

Repeat steps 3 through 11 above, expanding Remote Services for step 3 and BIP Remote Services OMR for step 4.

Update the Repository Root Folder Properties

The repository root folder, as specified during the installation of SAS Web Report Studio (and output to the file < *SAS Web Report Studio Install Folder* > \wrs.config), must be configured in order for SAS Web Report Studio to function properly. The default repository root folder is BIP Tree. For SAS IT Resource Management 3.1.1 this should be changed so that ITRMSoftwareTree is configured as the root instead. To make this change, perform the following steps:

1. On the mid-tier server, launch the SAS Management Console and connect to the ITMS repository. Note that you can connect to Foundation and then use the **Repository:** dropdown to switch to the ITMS repository. You should log in as the administrative super user (*sasadm*, for example).
2. Expand the BI Manager.
3. Select the **ITRMSoftwareTree** folder to highlight it and then select **File > Properties** from the pull-down menu.
4. Select the **Content Mapping** tab.
There should already be a WebDAV content server defined with a format of `http://<dataserver.domain:port>`, for example, `http://dataserver.sas.com:80`). You can use this for SAS Web Report Studio content as well. Just select it from the **Server** drop-down. If you need to add additional content servers, use Server Manager in SAS Management Console while connected to the Foundation repository.
5. Select the Content Base Path.
Base paths specify the URLs that are available on the content server. Earlier in these instructions you defined a new subdirectory off the top-level in WebDAV (`/sasdav/ITMS`). You should now use that as the base path. You can use this base path by selecting it from the **Base Path** drop-down.

If you deploy more than one instance of SAS Web Report Studio (for example, one deployment for each dependent repository), you should define a different base path for each

instance so the data for each deployment is maintained separately. To add additional base paths for a server, use Server Manager in the SAS Management Console. After they have been added, they will be available for selection in the **Base Path** drop-down.

6. If you are using Xythos to manage your WebDAV server, you will need to specify the SAS Web Administrator userid and password. This information can be found in your Pre-installation Checklists.
7. Select **OK** to save changes.
You will receive a dialog box that states, "Content Server, Base Path, and User ID must be specified for the root folder to be functional. Continue Anyway?" Select **Yes**.

Update Your Web Application Server Policy File

If applicable, ensure that the appropriate `sas.wrs.*.policy` file has been included in your Web application server's policy file.

Edit the WebReportStudioProperties.xml File

The `WebReportStudioProperties.xml` file can be located as follows, depending on the host on which your mid-tier resides.

UNIX

The `WebReportStudioProperties.xml` file that must be modified in this step can be found in the `SASWebReportStudio/WEB-INF` directory in your Web application server's deployment directory. For example, if you are using Jakarta Tomcat as your Web application server and have installed it to `<install-location>/jakarta-tomcat-4.1.18` then you should find the file in `<install-location>/jakarta-tomcat-4.1.18/webapps/SASWebReportStudio/WEB-INF`.

Windows

The `WebReportStudioProperties.xml` file that must be modified in this step can be found in the `SASWebReportStudio\WEB-INF` directory in your Web application server's deployment directory. For example, if you are using Jakarta Tomcat as your Web application server and have installed it to `<install-drive>/Tomcat4.1` then you should find the file in `<install-drive>\Tomcat4.1\webapps\SASWebReportStudio\WEB-INF`.

Note: *Element content that is underlined should be modified to the value shown below in bold.*

Change

```
<repository>Foundation</repository>
```

to

```
<repository>ITMS</repository>
```

Change the content of the `citation.model.repository` element so that it appears as follows:

```
<citation.model.repository>
  <path>
    <!-- default value: / -->
    <root>/</root>
    <!-- Note, these are appended to <root> -->
    <!-- default value: ReportStudio -->
    <citationweb>ITReportStudio</citationweb>
    <!-- default value: ReportStudio/BannerImages -->
    <bannerImages>ITReportStudio/BannerImages</bannerImages>
    <!-- Info maps are searched from this location down -->
```

```

<!-- default value: ReportStudio/Maps -->
<maps>ITDataMartTree</maps>
<!-- the "root" for shared files (reports subdir goes here). -->
<!-- default value: ReportStudio/Shared -->
<shared>ITReportStudio/Shared</shared>
<!-- the "root" for a user's files; -->
<!-- username as a subdirectory is created here, -->
<!-- (reports subdir goes under that). -->
<!-- default value: ReportStudio/Users -->
<users>ITReportStudio/Users</users>
<!-- the subdir created in the shared/user area for reports -->
<subdirReports>Reports</subdirReports>
<!-- the subdir created in the shared/user area for queries -->
<subdirQueries>Queries</subdirQueries>
</path>
<!-- Repositories often have more than 1 "root folder", -->
<!-- this parameter indicates which should be used if -->
<!-- there are more than one. -->
<rootFolderName> ITRMSoftwareTree </rootFolderName>
</citation.model.repository>

```

Save these configuration changes.

Note: *If SAS Web Report Studio is reconfigured and redeployed, you must repeat the steps in this section to reapply the changes to the `WebReportStudioProperties.xml`. More information about the administrative files for SAS Web Report Studio can be found in the SAS 9.1.3 Intelligence Platform Web Application Administration Guide.*

Restart the SAS Services Application and Your Web Application Server

Your configuration changes to the mid-tier are now complete. In order for these modifications to become effective, you should restart the SAS Services Application and your Web application server. To do this correctly, stop the Web application server first and then the SAS Services Application. When ready to restart you should start the SAS Services Application first, followed by the Web application server.

Mid-Tier Hot Fixes

You should apply the SAS Web Report Studio hot fix currently available from SAS Technical Support. The hot fix and the instructions for applying it can be found at the Technical Support Hot Fixes Web page, located at http://ftp.sas.com/techsup/download/hotfix/op_home.html.

Updating SAS IT Resource Management 3.1 to 3.1.1

The SAS IT Resource Management 3.1.1 Update Installation process is designed to update an existing installation of SAS IT Resource Management 3.1 to SAS IT Resource Management 3.1.1.

This process requires that a SAS IT Resource Management 3.1 installation is present.

All currently active SAS sessions, servers, processes, daemons, and spawners must be terminated before proceeding. You should back up all directories that may be updated. To accomplish this you may use an operating system directory copy or any number of archive copy utilities (such as WinZip, tar, jar, etc.). By backing up your existing software, configuration, and metadata associated with your IT data marts, you will be able to return to your existing installed state should you need to rerun this process.

The following list is the recommended minimum set of folders to back up:

Server Tier

- `<SAS-Home-Directory>\SAS 9.1`
- `<SAS-Home-Directory>\SASITMSCoreComponents`
- `<SAS-Configuration-Root-Directory>\<SAS-Configuration-Directory>`

Client Tier

- `<SAS-Home-Directory>\SASETLStudio`

For example, assuming default installation and configuration locations, these paths would be:

Server Tier

- `C:\Program Files\SAS\SAS 9.1`
- `C:\Program Files\SAS\SASITMSCoreComponents`
- `C:\SAS\ITRM`

Client Tier

- `C:\Program Files\SAS\SASETLStudio`

Because the installation of new software will overwrite existing configuration files and there may be new hot fixes to apply, there will be manual post-installation configuration steps that must be performed.

A full Java Development Kit (JDK) is required by the scripts that deploy and configure the SAS IT Management Solutions Core Components Data Tier software on the Server Tier. For Windows platforms, the recommended version is 1.4.2_05. Please ensure that this JDK is installed prior to beginning the Deploy and Configure section.

Installing the Software

Although this is not a planned install, the “tier” terminology is used in determining the target location for the updated software.

Server Tier Update

This step updates the software that has been installed and configured on your server tier. The components affected by this are the SAS 9.1 Foundation and SAS IT Management Solutions Core Components Data Tier.

Complete the following steps:

1. Launch the SAS Software Navigator.
2. For the type of deployment to perform, choose **Software Index**.
3. Supply the SAS Installation Data that you received with your SAS IT Resource Management 3.1.1 package.
4. Verify the SAS Installation Data that you received with your SAS IT Resource Management 3.1.1 package.
5. Expand the CD Index folder and select the appropriate folder to install (update) the following components:
 - A. Install SAS 9.1 Foundation.

On Windows systems, there is a back-up made of the `sasv9.cfg` configuration file. You may want to make your own copy so that you can use it as a guide after you complete the SAS 9.1 Foundation installation process. This installation will overwrite

the configuration file, so you will need to reapply the server tier modifications that apply to the SAS configuration file after completing the following instructions.

- i. Expand the folder for **SAS Setup Disk**.
 - ii. Select the **SAS Foundation** item.
 - iii. In the right pane, select **step 4** in the list of End User Steps.
 - iv. Step through the dialog windows, accepting the defaults (unless otherwise necessary). When presented with the dialog that indicates “Existing SAS Installation Found,” choose **Add Components to SAS**.
 - v. Continue with the installation of this component to the end.
- B. Install SAS IT Management Solutions Core Components Data Tier.
- i. Expand the second folder for **SAS IT Resource Management and SAS IT Management Solutions**.
 - ii. Select the **SAS IT Management Solutions Core Components Data Tier** item.
 - iii. In the right pane, scroll down and select the **Install** link for your platform.
 - iv. Proceed with the installation. If prompted, respond **Yes** or **Yes to All** to overwrite existing content.
 - v. Select **Finish** on the last dialog window.
- C. Reapply Configuration Updates to the Server Tier.

The preceding installation will have overwritten the configuration file. You will need to reapply the server tier modifications that apply to the SAS configuration file, as described in the “Server Tier Modifications” section on page 22 of this chapter.

Client Tier Update

This step updates the software that has been installed and configured on your client tier. The components affected by this are the SAS IT Management Solutions Core Components Client and the SAS IT Resource Management Client. This update should be performed only on Windows platforms that contain the original 3.1 release of these client components.

Complete the following steps:

1. Launch the SAS Software Navigator.
2. For the type of deployment to perform, choose **Software Index**.
3. Supply the SAS Installation Data that you received with your SAS IT Resource Management 3.1.1 package.
4. Verify the SAS Installation Data that you received with your SAS IT Resource Management 3.1.1 package.
5. Expand the CD Index folder.
6. Expand the first folder for **SAS IT Resource Management and SAS IT Management Solutions** and then select the appropriate link to install (update) the following components:
 - A. Install SAS IT Management Solutions Core Components Client.
 - i. Select the **SAS IT Management Solutions Core Components Client** item.
 - ii. In the right pane, scroll down and select the **Install** link.

- iii. Proceed with the installation. If prompted, respond **Yes** or **Yes to All** to overwrite existing content.
 - iv. Select **Finish** on the last dialog window.
- B. Install SAS IT Resource Management Client
- i. Select the **SAS IT Resource Management Client** item.
 - ii. In the right pane, scroll down and select the **Install** link.
 - iii. Proceed with the installation. If prompted, respond **Yes** or **Yes to All** to overwrite existing content.
 - iv. Select **Finish** on the last dialog window.

Deploy and Configure the SAS IT Management Solutions Core Components Data Tier Software

The software that was installed with the SAS IT Management Solutions Core Components Data Tier is deployed and configured at this point.

Note: *A full version of the Java Development Kit (JDK) is required for this step. For Windows platforms supporting SAS IT Management Solutions Core Components Data Tier, the recommended version is 1.4 2_05.*

From a Windows command prompt, change directory to the Upgrade subdirectory in the SAS ITMS Core Components Data Tier installation directory. This should be similar to the default location shown below:

```
C:\Program Files\SAS\SASITMSCoreComponents\3.1\DataTier\Upgrade
```

This subdirectory contains a batch script file called `DeployConfig_Ant.bat`. This will deploy and configure the newly installed software to the SAS Configuration directory. Invoke the script and pass it two parameters – the first is the root configuration path and the second is the configuration name.

For example, given a configuration directory that is `C:\SAS\ITRM`, the parameters would be: `C:\SAS` for the root configuration path and `ITRM` for the configuration name. The resulting example command is shown below:

```
DeployConfig_Ant.bat C:\SAS ITRM
```

This should run for about 15 seconds.

Verification

To verify that this step has completed properly, you can change directory to your configuration location (for example, `C:\SAS\ITRM\Lev1\SASMain\SASITMSCoreComponents\OMR`) and verify that there is new content for the supplied metadata xml. You can also view the contents of `C:\SAS\ITRM\Lev1\Utilities\SASITMSCoreComponents\Upgrade`. You should verify that a Windows batch script file called `runUpgrade.bat` exists. This is what you will use in the next section to upgrade the existing repository.

Upgrade the Existing 3.1 Repository

The contents of your existing SAS IT Resource Management 3.1 repository must be upgraded so that they are compliant with SAS IT Resource Management 3.1.1 software.

The upgrade process connects to the SAS Metadata Server to update the ITMS repository. Because the SAS Metadata Server was stopped to install new software it is necessary to start it before proceeding.

From a Windows command prompt, change directory the Upgrade subdirectory in your configuration utilities location. This should be similar to the default location given below:

C:\SAS\ITRM\Lev1\Utilities\SASITMSCoreComponents\Upgrade

This subdirectory contains a Windows batch script file called `runUpgrade.bat`. Invoke this script by submitting `runUpgrade.bat` from the command line. The SAS log generated by the SAS job called by this script is located in `C:\SAS\ITRM\Lev1\Utilities\SASITMSCoreComponents\logs` (assuming the default Upgrade subdirectory location specified above). View this log to verify that the upgrade process completed without errors.

Please note that this process may take a long time. Although typical times to upgrade an ITMS repository have been 30 minutes or less, the upgrade process may take two hours or more to complete, depending on the size of the existing repository.

The key factors that should be considered are which Adapters were originally deployed and how many populated IT data marts the ITMS repository contains. Because of the volume of metadata associated with it, the SMF Adapter has the highest overhead associated with it. This is the case for deployments of only the required tables as well as both required and extended tables.

Once this task is completed and you have verified that there are no errors in the SAS log, you have a viable SAS IT Resource Management 3.1.1 ITMS repository.

Chapter 9: Installing SAS IT Service Level Management 2.1

Instructions for the installation and configuration of your SAS IT Service Level Management Server are included as part of the SAS IT Service Level Management Client located on the **SAS IT Management Client Components** CD, which can be found in your Installation Kit.

Chapter 10: Post-Installation Configuration for SAS/IntrNet Software

If you received SAS/IntrNet software and have completed the installation of SAS 9.1.3 Foundation, you have successfully installed the SAS server components of SAS/IntrNet software (referred to as the SAS/IntrNet server).

The **SAS Client-Side Components** CD that is included in your SAS software order contains SAS/IntrNet client components and documentation for SAS/IntrNet software.

Chapter 11: Post-Installation Setup for the Metabase Facility

In Version 7 of the SAS System, the SAS/EIS Metabase facility was converted to the V7 Common Metadata Repository. The Common Metadata Repository is a general-purpose metadata management facility that provides common metadata services to various metadata-driven applications.

Using the Common Metadata Repository requires a one-time setup of the system the repository manager. If the repository manager was set up in a previous release it may not need to be set up again. The steps in the following sections should be completed before you attempt to use the Metabase Facility. For Metabase Facility users who were using a release prior to Version 7, using the Common Metadata Repository requires a conversion. For more information, see the Version 8 OLAP Server Topic “Converting Legacy Metabases.”

Setting Up the System Repository Manager Files

Complete the following steps to set up the necessary system repository manager files. You must have write access to SASHELP in order to specify the system repository manager.

Note: *This process sets the default location for the repository manager for your site. Individual users may specify their own repository manager location by following the steps below and not selecting the Write values to system registry check box.*

1. Create a directory that will be dedicated exclusively to the storage of repository manager files, for example: !SASROOT\RPOSMGR.

This directory should not be used to store other SAS files.

2. At a SAS command line, type REPOSMGR and then select **Setup Repository Manager**.
3. In the Repository Manager Setup window, Library will default to RPOSMGR. For Path, specify the path from Step 1, above, and then select the **Write values to system registry** check box. Then select **OK**.
4. In the resulting dialog window, select **Yes** to generate the necessary repository manager files.

This completes the setup for the System Repository Manager. You can create additional repository managers (a user repository manager, for example) by repeating the steps above and by using a different path.

Registering the SASHELP Repository in the Repository Manager

The SASHELP repository is used in various samples, including the SAS/EIS Report Gallery templates. Before beginning the steps below, a repository manager must be created (see previous section). Complete the following steps to register the SASHELP repository in the Repository Manager:

1. At a SAS command line, type REPOSMGR and then select **Repository Registration**.
2. In the Repository Registration window, select **New**.
3. In the Register Repository (New) window, type SASHELP (in uppercase) in the **Repository** field, and then type the full directory path where the CORE catalog is located in the Path field, for example:

!SASROOT\CORE\SASHELP

4. In the **Description** field, you can type any character string (for example, SASHELP Repository). Select **OK** to close the Register Repository (New) window. Select **Close** to exit the Repository Registration window.

Note: Repositories cannot span multiple directories because the path cannot contain concatenated directories. If you have existing metabases in concatenated directories, you should copy the metabases to a single path that will be referenced as a repository.

Converting Version 6 SAS/EIS Metabases to Version 8 Repositories

For step-by-step instructions on converting Version 6 metabases to Version 8 repositories, please refer to the topic “Converting existing SAS/EIS metabases” in the SAS/EIS online Help.

Chapter 12: Post-Installation Configuration for SAS Metadata Server

After you apply SAS 9.1.3 Service Pack 4, add a nickname for the SAS Information Maps LIBNAME Engine. The engine nickname (INFOMAPS) is not defined by default in SAS 9.1.3 Service Pack 4. This needs to be done for the Microsoft Windows 32-bit operating systems supported by the Information Maps engine.

You can add the engine nickname to your SAS catalog using the following SAS code:

```
proc nickname cat=sashelp.core;  
  add nickname=infomaps  
  module=sasioime  
  release="9"  
  desc="SAS Information Maps LIBNAME Engine"  
  preferred  
  engine;  
run;  
quit;
```

For information about how to start a SAS session in order to use this code, please refer to <http://support.sas.com/onlinedoc/913/getDoc/en/hostwin.hlp/startsas.htm>.

Chapter 13: Post-Installation Instructions for National Language Support (NLS)

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

Important: *To run a localized SAS image, your operating system must be configured to use a Windows regional setting appropriate to the localized image. You may experience unexpected results if the regional setting and the localized image are not consistent.*

If multiple SAS localizations have been installed on the system, you may need to change the regional setting for each localized SAS image before invocation. For information on how to change or to use regional settings, refer to your Microsoft Windows documentation.

Chinese, Japanese, and Korean DBCS Support

This section explains how to change the default settings for the `DBCSLANG` and `DBCSTYPE` system options and how to specify Asian font catalogs.

Note: *The `DBCSLANG` and `DBCSTYPE` system options (described in the next section) should be used to set locale for Asian character sets only. The `LOCALE` and `ENCODING` system options, described in the SAS Help System, are used to set locale for European languages.*

Changing the Default DBCSLANG and DBCSTYPE Option Settings

When you install SAS 9.1.3 Foundation and choose to load NLS language translations, the installation automatically sets default values for the `DBCSLANG` and `DBCSTYPE` system options based on the language selection and platform. For example, if you install Primary Japanese on Windows 2000, the configuration file (`!sasroot\nls\ja\sasv9.cfg`) sets `DBCSLANG` to `JAPANESE` and `DBCSTYPE` to `PCMS`.

Changing the Configuration Files for Unicode Server

There are two configuration files. The first, `c:\program files\sas\sas 9.1\sasv9.cfg`, points to the second, `c:\program files\sas\sas 9.1\nls\ld\sasv9.cfg`. To run SAS as a Unicode Server, edit the configuration files for your system with the following changes:

1. DBCS settings are in the second configuration file above. Comment-out the `DBCSLANG` and the `DBCSTYPE` options in that file. For example:

```
/* -DBCSTYPE PCMS */  
/* -DBCSLANG JAPANESE */
```

2. Add the `ENCODING` option and set the value to `UTF8` (`ENCODING=UTF8`):

```
-ENCODING=utf-8
```

Asian Font Catalogs

The default configuration files for Asian language editions already contain font definitions. (However, the configuration file for DBCS extensions does not contain font definitions.) Asian font catalogs reside in subdirectories (by language) for easy installation. If you want to change the font catalog, you can specify it in either the configuration file or in your SAS session.

With the exception of Traditional Chinese fonts, Asian fonts reside in the `SASHELP.FONT` catalog. The default configuration file for the Traditional Chinese language edition already contains font definitions. (However, please note that the configuration file for DBCS extensions does not contain font definitions.) To use Traditional Chinese fonts, you can specify them either in the configuration file or in your SAS session.

Installing Traditional Chinese Fonts

To use Traditional Chinese fonts, you must install the Traditional Chinese localization. You will also need to modify your configuration file, as described in the following section.

Specifying the Font Catalog in the Configuration File for Traditional Chinese Fonts

If you are not running a Traditional Chinese localization but you want to use the Traditional Chinese fonts, you need to modify the configuration file to set `GFontx` to

```
-set gfontx !SASROOT/nls/zt/font-name
```

In this statement,

- `x` represents a value from 0-9.
- `font-name` represents the name of the font catalog you want to use.

Specifying the Font Catalog in a SAS Session for Traditional Chinese Fonts

To specify the font catalog in a SAS session, submit the following `LIBNAME` statement:

```
-libname gfontx !sasroot\nls\langcode\font-name
```

In this statement,

- `x` represents a value from 0-9.
- `font-name` represents the name of the font catalog you want to use.

European Language Support

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 SAS 9.1.3 for Locale

If you want to configure your SAS session for a locale other than the default locale, you have two methods from which to choose to achieve that goal. This section explains those methods.

Changing the Default LOCALE Option Setting

When you install SAS 9.1.3 Foundation and you choose to load NLS language translations, the installation automatically sets the `LOCALE` system option to the default value for the language installed. The `LOCALE` option is set in the system configuration file for each language installed.

For example, `!SASROOT\nls\fr\sasv9.cfg` sets `LOCALE` to `French_France` by default.

If you want to change the default locale setting for SAS, you can set the `LOCALE` system option to the appropriate language in your system configuration file.

For example, you can edit `!SASROOT\nls\fr\sasv9.cfg` and change `-locale French_France` to `-locale French_Canada`.

Running SAS in a Different Locale

To set the locale for SAS 9.1.3 at your site, add the `LOCALE` system option to your configuration file. You can find a list of locale values in the *SAS 9.1 National Language Support (NLS) User's Guide*.

When you read or write a file, SAS 9.1.3 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 `LOCALE` is set, the `ENCODING` system option will be set to an encoding that supports the language for the locale. SAS 9.1.3 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 in the configuration file.

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.

For more information, refer to the *Base SAS 9.1 Procedures Guide* in base SAS software 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 was introduced in SAS 9.1. This macro replaced 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,

```
sas -locale Spanish_Spain
```

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: `sas -locale Spanish_Mexico`
- Previous release receives the data: Start SAS System 9 with the `LOCALE` option at start up.
Example: `sas -locale Spanish_Guatemala`

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. For example, submit the following code from the Program Editor:

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

Devmaps and Keymaps for SAS/GRAPH Software

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

There are two ways in which the `%LSGRAPH` macro automatically sets up an environment:

- copies the devmap and keymap entries that match your encoding to the `GFONT0.FONTS` catalog
- changes 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 (`WLT2`) for a Polish user on the Windows platform:

```
libname gfont0 'your-font-library';  
%lsgraph(wlt2);
```

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

Locale	Devmap and Keymap Name
Arabic_Algeria	wara
Arabic_Bahrain	wara
Arabic_Egypt	wara
Arabic_Jordan	wara
Arabic_Kuwait	wara
Arabic_Lebanon	wara
Arabic_Morocco	wara
Arabic_Oman	wara
Arabic_Qatar	wara
Arabic_SaudiArabia	wara
Arabic_UnitedArabEmirates	wara
Arabic_Tunisia	wara
Bulgarian_Bulgaria	wcyr
Byelorussian_Belarus	wcyr
Croatian_Croatia	wlt2
Czech_CzechRepublic	wlt2
Danish_Denmark	wlt1
Dutch_Belgium	wlt1
Dutch_Netherlands	wlt1
English_Australia	wlt1
English_Canada	wlt1
English_HongKong	wlt1
English_India	wlt1
English_Ireland	wlt1
English_Jamaica	wlt1
English_NewZealand	wlt1
English_Singapore	wlt1
English_SouthAfrica	wlt1
English_UnitedKingdom	wlt1
English_UnitedStates	wlt1
Estonian_Estonia	wbal
Finnish_Finland	wlt1
French_Belgium	wlt1
French_Canada	wlt1
French_France	wlt1
French_Luxembourg	wlt1
French_Switzerland	wlt1
German_Austria	wlt1
German_Germany	wlt1
German_Lichtenstein	wlt1
German_Luxembourg	wlt1

Locale	Devmap and Keymap Name
German_Switzerland	wlt1
Greek_Greece	wgrk
Hebrew_Israel	wheb
Hungarian_Hungary	wlt2
Icelandic_Iceland	wlt1
Italian_Italy	wlt1
Italian_Switzerland	wlt1
Latvian_Latvia	wbal
Lithuanian_Lithuania	wbal
Norwegian_Norway	wlt1
Polish_Poland	wlt2
Portuguese_Brazil	wlt1
Portuguese_Portugal	wlt1
Romanian_Romania	wlt2
Russian_Russia	cyr
Serbian_Yugoslavia	wcyr
Slovakian_Slovakia	wlt2
Slovenian_Slovenia	wlt2
Spanish_Argentina	wlt1
Spanish_Bolivia	wlt1
Spanish_Chile	wlt1
Spanish_Colombia	wlt1
Spanish_CostaRica	wlt1
Spanish_DominicanRepublic	wlt1
Spanish_Ecuador	wlt1
Spanish_ElSalvador	wlt1
Spanish_Guatemala	wlt1
Spanish_Honduras	wlt1
Spanish_Mexico	wlt1
Spanish_Nicaragua	wlt1
Spanish_Panama	wlt1
Spanish_Paraguay	wlt1
Spanish_Peru	wlt1
Spanish_PuertoRico	wlt1
Spanish_Spain	wlt1
Spanish_UnitedStates	wlt1
Spanish_Uruguay	wlt1
Spanish_Venezuela	wlt1
Swedish_Sweden	wlt1
Turkish_Turkey	wtur
Ukrainian_Ukraine	wcyr

Chapter 14: Post-Installation Setup for SAS OLAP Server

SAS OLAP Server includes client components that are used outside of your SAS installation. These components are available on the **SAS Client-Side Components** CD, Volume 1 and are described below.

For more information on using SAS OLAP Cube Studio and SAS OLAP Server Monitor, refer to the *SAS OLAP Server Administrators Guide* in the SAS 9.1 Help and Documentation. For more information on the Open OLAP Client, see the online help for SAS OLAP Server. The online help also contains more information on the post-installation configuration for V8 SAS OLAP Server.

Open OLAP Client for SAS/MDDB Server 3.0

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

If you will be using the Open OLAP Server to access SAS MDDBs, you need to install only the Open OLAP Client. The component should be installed on the Windows platform where your OLE DB-compliant applications will run.

SAS OLAP Cube Studio

SAS OLAP Cube Studio, a component of SAS OLAP Server, is designed for the IT professional responsible for building and maintaining OLAP cubes in a corporate environment. SAS OLAP Cube Studio integrates with SAS Management Console and SAS Data Integration Studio to provide the tools needed to maintain the OLAP environment.

If you will be creating and maintaining SAS OLAP cubes, you need to install SAS OLAP Cube Studio. The component should be installed on the Windows platform that you will use to create your cubes.

SAS OLAP Server Monitor for SAS Management Console

SAS OLAP Server Monitor is a plug-in component for SAS Management Console. You use SAS OLAP Server Monitor to monitor the status of your running SAS OLAP Servers.

If you need to monitor the status of your SAS OLAP Servers, you need to install SAS OLAP Server Monitor. The component should be installed on the same Windows platform as SAS Management Console.

Chapter 15 – Post-Installation Configuration for SAS OpRisk VaR Software

Follow the steps below to configure SAS OpRisk VaR on your Windows system.

Initialize a SAS Data Store for SAS OpRisk VaR 3.2

You can create a data store using the Configuration Editor. If you want to run the macros by hand to create a data store, follow these steps:

1. Skip this section if you have SAS OpRisk VaR version 2.5 and would like to migrate it to SAS OpRisk VaR version 3.2, and go to “Migrate SAS OpRisk VaR 2.5 to a SAS Data Store for SAS OpRisk VaR 3.2.”

2. Run the 'orvsetup' macro in SAS:
`orvsetup();`

3. Run the 'orvdb_create' macro in SAS:

```
orvdb_create(DATA_ROOT=C:\VarTablesNew,  
APPLY_CONSTRAINTS=true);
```

The `DATA_ROOT` parameter represents a new directory you have created for the SAS OpRisk VaR data tables. You do not need to modify any other parameters.

4. If there are no other errors in the log, your data store is now initialized. Skip the next section and go to “Install/Start the SAS Share Server for SAS OpRisk VaR 3.2.”

Migrate SAS OpRisk VaR 2.5 to a SAS Data Store for SAS OpRisk VaR 3.2

In order to perform the steps listed below, you must have a computer that has the following software installed:

- Base SAS with SAS/ACCESS
- SAS OpRisk VaR 3.2
- Software required by SAS/ACCESS to connect to the database being used by SAS OpRisk VaR 2.5 (such as Oracle client if connecting to an Oracle database)

1. Skip this section if you already performed the steps in the section entitled “Initialize a SAS Data Store for SAS OpRisk VaR 3.2.”

2. Perform one of the following steps:

- If your old database is Oracle, run the `OpRiskVaRSeqOracle.ddl` script from within your Oracle database. It will fill in the `VAR_SEQUENCES` table appropriately.
- If your old database is DB2, run the `OpRiskVaRSeqDB2.ddl` script from within your DB2 database. It will fill in the `VAR_SEQUENCES` table appropriately.

3. Create a libref that points to your SAS OpRisk VaR 2.5 database. Here is an example:

```
libname VARDAT25 oracle user=sasuser  
password=sasuser1 path='alien' schema=sasuser;
```

See SAS/ACCESS for details about creating a libref to other external databases.

Note: The machine from which you are running this **must** have the specific database software on it that allows the connection to be satisfied. In the example above, the machine must have at least Oracle client software on it, with the service name 'alien' defined.

4. Run the 'orvsetup' macro in SAS:

```
%orvsetup();
```

5. Run the 'orvdb_migrate' macro in SAS:

```
%orvdb_migrate(DATA_ROOT=C:\VarTables,  
OLDDATA_LIBREF=VARDAT25);
```

The DATA_ROOT parameter represents a new directory you have created for SAS OpRiskVaR data tables. The OLDDATA_LIBREF parameter represents the libref set up in step 2 above.

6. If there are no other errors in the log, your database is now migrated to the SAS OpRisk VaR 3.2 data store. Proceed to the next section. There is also no need to use the **Data Store Creation** tab of the Configuration Editor.

Install/Start the SAS Share Server for SAS OpRisk VaR 3.2

1. Skip this section if you are setting up a single-user configuration.
2. The complete instructions for this step (for the Windows platform) may be found in the file `Configuring a SAS Share Server Service.pdf`. For the UNIX platform, please consult the SAS/SHARE documentation.

SAS OpRisk VaR 3.2 Client Configuration

When you have performed an Administrator install of SAS OpRisk VaR Java Client 3.2, you must run the Configuration Editor to set up an `opriskvar.ini` file. The generated file will be requested during the client (non-administrator) installs of SAS OpRisk VaR Java Client 3.2.

Post Migration information

1. If you did not migrate a SAS OpRisk VaR 2.5 data store, ignore this section.
2. After migration, you are required to re-validate the previously loaded SAS OpRisk VaR 2.5 data versions using the SAS OpRisk VaR 3.2 application before the versions can be used successfully in the SAS OpRisk VaR 3.2 application.
3. No VaR results are migrated. You must re-run VaR calculations on the final tab for each project. This is due to the fact that VaR is calculated differently in version 3.2 than in version 2.5. If you prefer the VaR calculation method in SAS OpRisk VaR 2.5, you must keep using that version of the application.

Chapter 16: Post-Installation Configuration of SAS Solution Adapters for SAP

Configuring SAS Activity-Based Management Adapter 6.2 for SAP R/3

SAS Activity-Based Management Adapter 6.2 for SAP R/3 requires extensive installation setup before it can be used. For detailed instructions and configuration information, please visit <http://support.sas.com/documentation/onlinedoc/abm/index.html> and refer to the *Configuration Guide for SAS® Activity-Based Management Adapter 6.2 for SAP R/3*.

Configuring SAS Financial Management Adapter for SAP

SAS Financial Management Adapter for SAP requires extensive installation setup before it can be used. For detailed instructions and configuration information, please visit <http://support.sas.com/documentation/onlinedoc/mgmtsolutions/adapter13.pdf> and refer to the *SAS Solutions Adapter 1.3 for SAP: User's Guide*.

Configuring SAS Human Capital Management Adapter for SAP

SAS Human Capital Management Adapter for SAP requires extensive installation setup before it can be used. For detailed instructions and configuration information, please visit <http://support.sas.com/documentation/onlinedoc/mgmtsolutions/adapter13.pdf> and refer to the *SAS Solutions Adapter 1.3 for SAP: User's Guide*.

Configuring SAS IT Management Adapter 2.7 for SAP

SAS® IT Management Adapter 2.7 for SAP requires extensive installation setup before it can be used. For detailed instructions and configuration information, please visit <http://support.sas.com/documentation/onlinedoc/mgmtsolutions/sap27config.pdf> and refer to the *Configuration Guide for SAS® IT Management Adapter 2.7 for SAP*.

Chapter 17: Installing SAS/SECURE Software Client Components

SAS/SECURE software includes client components that non-SAS System client applications can use to communicate with a SAS server in a secure environment. To use encryption between a non-SAS System client and a SAS server with SAS/SECURE software licensed, you must install the SAS/SECURE client components on the client machine. The SAS/SECURE client components are available in the SAS/SECURE folder accessible through the SAS Software Navigator.

Note: *This installation is not necessary if the SAS System is your client. The SAS System installs the components that it needs as part of the SAS System install process.*

SAS/SECURE for Windows Clients

The SAS/SECURE components needed by Windows clients can be installed by running the SAS Software Navigator to access the SAS/SECURE Windows Client Components. The `secwin.exe` executable available in this folder installs the files necessary for the IOM Bridge for COM to use the CryptoAPI algorithms.

SAS/SECURE for Java Clients

The SAS/SECURE components for Java clients provide encryption support for Java applications. You can incorporate this support into applications that are written using the following components:

- SAS/SHARE driver for JDBC
- SAS/CONNECT driver for Java
- IOM Bridge for Java

The SAS/SECURE components needed by Java clients can be installed by running the SAS Software Navigator to access the SAS/SECURE Java Component. This folder contains two JAR files that enable Java clients to use the CryptoAPI algorithms:

- `sas.rutil.jar` - should be copied to the location where the client you are running gets started
- `sas.core.jar` - included in case you do not already have one however, this will probably not be needed

The `sas.rutil.jar` file should be copied to the location(s) where you installed each of the following products. They are listed below with their respective default installation locations.

- for SAS MC, `<SAS_HOME>\SASManagementConsole\9.1`
- for OLAP Cube Studio, `<SAS_HOME>\SASOlapCubeStudio\9.1`
- for SAS Data Integration Studio, `<SAS_HOME>\SASETLStudio\9.1`
- for SAS Information Map Studio, `<SAS_HOME>\SASInformationMapStudio\1.0`

In these examples, `<SAS_HOME>` is specified through the SAS Software Navigator, with `C:\Program Files\SAS` as the default.

After the file is copied where you need it, you can use algorithms other than `sasproprietary`.

Chapter 18: Post-Installation Setup for SAS/SHARE Software

This chapter discusses the use of the TCP/IP access methods with SAS/SHARE software. TCP/IP is the access method supported for SAS 9.1.3 on Windows. For information about the access methods supported by other systems, please visit

<http://support.sas.com/documentation/onlinedoc/> and refer to *Communications Access Methods for SAS/CONNECT 9.1 and SAS/SHARE 9.1*.

Using the TCP/IP Communications Access Method

Communication between a SAS/SHARE server and user is handled by the TCP/IP communications access method, which is a part of SAS 9.1.3 that uses underlying communications software to exchange messages and data. The TCP/IP access method requires Microsoft's TCP/IP Network Protocol communications software.

Note: *The APPC access method is no longer supported for the Windows operating system.*

To use the TCP/IP access method, you must have the supporting software on each workstation on which a SAS/SHARE server or user will execute.

System Configuration for the TCP/IP Access Method

SAS/SHARE software supports Microsoft's TCP/IP Network Protocol, which is provided with Windows.

To define server names in the TCP/IP SERVICES file, complete the following steps:

1. Locate the SERVICES file.

This file is located under the \windows or \winnt directory paths depending on the specific Windows operating system and upgrade method. For example, under a machine configured with a Windows 2000 operating system, the directory path is named

```
<drive letter>:\winnt\system32\drivers\etc
```

2. Specify the server names and port assignments.

Each SAS/SHARE server that runs on a network must be defined as a service in the SERVICES file. Each entry in this file associates a service name with the port number and protocol used by that service. An entry for a SAS/SHARE server has the form:

```
<server name> <port number>/<protocol> # <comments>
```

The server name must be 1-8 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. The port number must be above 1024, as any port number equal to or less than 1024 is reserved. The protocol must always be TCP.

An entry for a server with the name MKTSEV might look like this:

```
mktsevr      5000/tcp    # SAS server for Marketing and Sales
```

The server name is specified with the SERVER= option in the PROC SERVER statement in the server's SAS session and in the PROC OPERATE and LIBNAME statements in user and server administrator programs. If the server name is not defined, you must use __port#, for example, server= __5012.

For more information about the options used with PROC SERVER and PROC OPERATE procedures, please refer to the *SAS/SHARE 9.1 User's Guide*.

Client-Side Components

SAS/SHARE software includes client components that are used outside of your SAS installation. These components are available on the **SAS Client-Side Components** CD and are described below:

SAS/SHARE Data Provider

The SAS/SHARE data provider enables you to access, update, and manipulate SAS data using OLE DB- and ADO-compliant applications 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 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 chapter Post-Installation Instructions for National Language Support (NLS) on page 38.

Chapter 19: Post-Installation Setup for SAS/STAT Software

The Web application SAS/STAT Power and Sample Size is provided with SAS/STAT software, but it is installed separately. The application is available on the **SAS Mid-tier Components** CD. Detailed installation instructions and a list of required SAS products can also be found there.

Overview

SAS/STAT Power and Sample Size is a user interface that provides power and sample size computations. The application includes tasks for determining sample size and power for a variety of statistical analyses, including the following:

- *t* tests
- confidence intervals of means
- proportions
- equivalence testing
- ANOVA
- linear models
- survival analysis

The application provides multiple input parameter options, stores results in a project format, displays power curves, and produces appropriate narratives for the results.

Because SAS/STAT Power and Sample Size is a Web application, it requires Web server software. To run a Java virtual machine, the Web server must contain a servlet container. Specifications for the servlet container are in the SAS/STAT Power and Sample Size Installation Instructions.

Configuration

SAS/STAT Power and Sample Size can be installed in either of two configurations: local or remote. The configurations differ in terms of where the necessary components are expected to run. The application requires these three components: the Web server, the SAS software, and the Microsoft Internet Explorer Web browser.

Local (Standalone) Configuration

In the local configuration, SAS/STAT Power and Sample Size can run in a standalone manner, that is, without access to the Internet. The Web server, the SAS software, and Microsoft Internet Explorer must all be installed on the same machine. Because Internet Explorer is required, this configuration is only available on PCs running Windows operating systems.

The Apache Tomcat servlet container is available as an optional part of the SAS/STAT Power and Sample Size installation. It can be used as a Web server in this standalone environment. You may also choose to install the Web server and servlet container from a third-party source.

Remote Configuration

In a remote configuration, the application, Web server, and Web browser are not on the same machine. The Web server and servlet container must be installed from a third-party source.

Additional SAS software products are required—specifically, SAS/CONNECT and a license for either SAS Integration Technologies or SAS/IntrNet. The SAS server administrator installs and runs the SAS/CONNECT spawner program. The administrator also provides information to the person installing SAS/STAT Power and Sample Size, who needs to know the machine name of the SAS server, the port for which the spawner is configured, and whether a user name and password are required by

the SAS server. If the SAS server is running on a UNIX system, the person who installs SAS/STAT Power and Sample Size will also need the SAS command that the spawner uses to submit the job to SAS.

Installation

SAS Foundation software should be installed before the SAS/STAT Power and Sample Size application is installed. Full installation instructions are provided on the Mid-tier Components CD. The installation process copies the application WAR (Web archive) file to a directory on the Web server. It does not deploy the application to the Web server itself. The person who installs the application must do that as a separate step.

Deployment in the Web Server

After installation, the application's WAR file must be deployed to the Web server. The deployment procedure varies depending on the Web server. For more information, please see the documentation for your specific Web server. If you are using an Apache Tomcat server that was installed as part of the application, please see your *SAS/STAT Power and Sample Size Installation Instructions* for more details.

Making the Application Available to Users

When installation and deployment of the application is completed, the Web address (URL) of the SAS/STAT Power and Sample Size application must be provided to users. The syntax of the URL varies among Web servers. The URL for the local (standalone) configuration is described in the *SAS/STAT Power and Sample Size Installation Instructions*.

Chapter 20: Post Installation Instructions for SAS/Text Miner

The XCMD option, the ability to submit "x" operating system commands from a SAS process, is necessary for the proper functioning of Text Miner with SAS Enterprise Miner 5.1 or 5.2.

Therefore, it is necessary to include `-xcmd` and `-noxwait` in the Workspace Server SAS command used to launch the actual spawned session. It is also necessary to modify the object spawner controls and add the invocation parameter `-allowxcmd` to the object launch.

To complete the configuration, perform the following steps:

Modify the Object Spawner launch

1. Stop the Object Spawner by stopping the service or canceling the script.
2. Backup then edit `ObjectSpawner.bat`.
3. Insert the option `-allowxcmd` prior to the `-sasLogfile` option to the three command lines. To do this, Replace "`-sasLogfile`" with "`-allowxcmd -sasLogfile`" effectively adding the `-allowxcmd` parameter to three command lines.
4. Save changes.
5. If installed as a service, perform steps 6-8. Please note that this might be necessary if you are running scripts, if you still receive the same error after trying steps 1-4.
6. In a command window, go to the Object Spawner directory into your application server directory for your configuration.
E.g., `C:\SAS\[plan name]\Levl\SASMain\ObjectSpawner`
7. Type in `objectspawner remove` (this removes the existing service).
8. Type in `objectspawner install` (this re-installs the new service).
9. Start the Object Spawner by `service start` or script.

Open the SAS Management Console and Edit the SAS command for the Workspace Server

1. Select "+" to expand the Server Manager node. Fully expand all three levels of `SASMain`.
2. Highlight the lowest level, `SASMain - Workspace Server`. Using the right mouse button, select **Properties**.
3. On the **Options** tab, in the **Command** field, replace the existing text with:
`sas -config "c:\SAS\[plan name]\Levl\SASMain\sasv9.cfg" -xcmd -noxwait`
4. Select **OK** to save changes.



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