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Administering SAS[®] Enterprise Guide[®] 4.2



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Administering SAS® Enterprise Guide® 4.2

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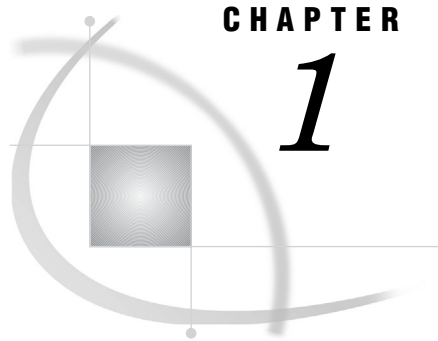
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CHAPTER

1

Introduction to SAS Enterprise Guide Administration

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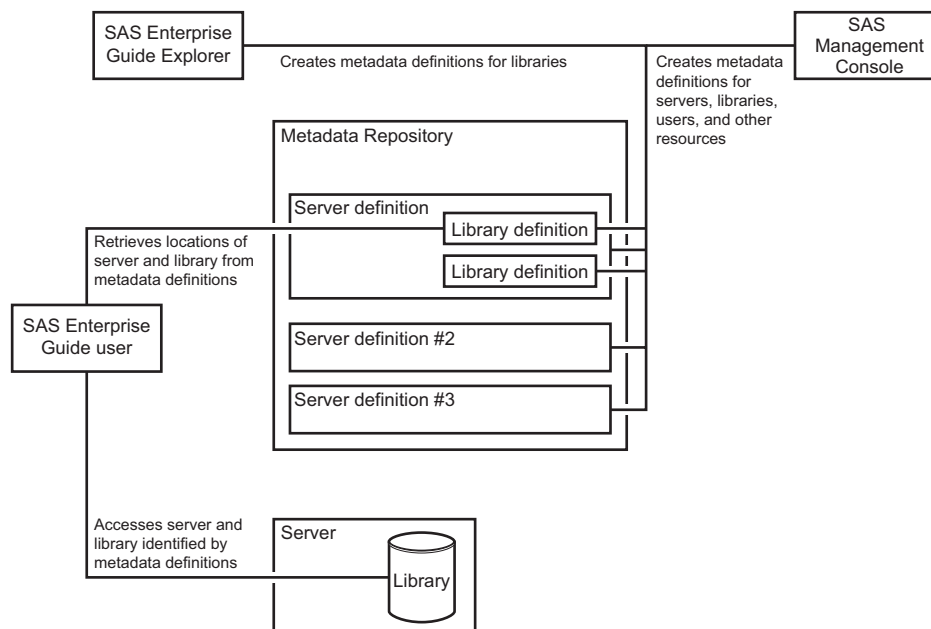
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Overview of SAS Enterprise Guide Administration

Administering SAS Enterprise Guide in your organization involves creating an environment for SAS Enterprise Guide users that contains all of the SAS resources and data that your users need to perform their jobs. SAS Enterprise Guide users should be able to complete tasks and access the data that they need, but be prevented from performing tasks that they are not allowed to do or accessing data that they are not allowed to use. These objectives are met by creating definitions in metadata for the SAS resources that are accessed by SAS Enterprise Guide users. These definitions enable SAS Enterprise Guide users to access data transparently, without knowing the actual location of the data. If you are using SAS Enterprise Guide in a SAS Intelligence Platform environment, metadata definitions can be used by both SAS Enterprise Guide and other Intelligence Platform applications (such as SAS Data Integration Studio and SAS Information Map Studio). This lets multiple SAS applications access a consistent set of resources and data.

To perform SAS Enterprise Guide administration tasks, you need to use both SAS Enterprise Guide Explorer and SAS Management Console. SAS Management Console is the main administration tool for the SAS Intelligence Platform, and enables you to create definitions for servers, libraries, users, groups, and security settings. SAS Enterprise Guide Explorer is a secondary administration tool that provides several functions that are specific to SAS Enterprise Guide. The application enables you to identify metadata sources, create definitions for servers and libraries, and administer a common environment configuration for all SAS Enterprise Guide users. Most tasks that can be performed in SAS Enterprise Guide Explorer can also be performed in SAS Management Console, and there are some tasks (such as defining users and groups and setting up security) that can be performed only in SAS Management Console. Functions such as importing tasks and deploying metadata profiles are available only in SAS Enterprise Guide Explorer.

Figure 1.1 on page 2 illustrates how SAS Enterprise Guide uses the metadata definitions that are created by SAS Enterprise Guide Explorer and SAS Management Console to access SAS resources such as servers and libraries.

Figure 1.1 Creating and Accessing Metadata Definitions

This document does not contain detailed information about the administration tasks that are required to set up a metadata repository and create metadata definitions that are common to all SAS Intelligence Platform applications (such as user definitions and security settings). For information about these procedures, see the SAS Intelligence Platform Administration documents that are listed in Appendix 1, “Recommended Reading,” on page 51.

You can also use SAS Enterprise Guide without a connection to a SAS Metadata Server. In this configuration, SAS Enterprise Guide works on a local SAS server, and cannot use any functions that require a metadata connection. The functions that are not available include the following:

- ☐ stored processes
- ☐ information maps
- ☐ role-based settings
- ☐ library assignments in SAS Enterprise Guide Explorer (only project libraries are available)
- ☐ SAS folders
- ☐ publishing

What Is SAS Enterprise Guide?

SAS Enterprise Guide is a thin-client Windows application that provides a point-and-click desktop interface to SAS (9.2 or later) and can be used to connect to various server platforms, including UNIX, z/OS, and Windows. It communicates with SAS to access data, perform analysis, and generate results (such as graphics, PDF files, and HTML files). From SAS Enterprise Guide you can access and analyze many types of data, such as SAS data sets, Microsoft Excel spreadsheets, and third-party databases. You can either use a set of task dialog boxes or write your own SAS code to perform your analysis. The application helps users to produce results easily, regardless of their SAS knowledge.

SAS Enterprise Guide uses a distributed computing model of network servers that enable users to access data on multiple platforms quickly and easily.

What Is SAS Enterprise Guide Explorer?

SAS Enterprise Guide Explorer is an application for SAS administrators that serves as a resource manager for SAS Enterprise Guide. The resource definitions are stored in a metadata repository, thus enabling all users to access the same resources.

With SAS Enterprise Guide Explorer, you can perform the following tasks:

- manage profile definitions by specifying access information for metadata sources and setting an active profile
- create a shared profile definition that is accessed by all SAS Enterprise Guide users and can be automatically updated
- create metadata definitions for SAS libraries
- browse the contents of servers and libraries
- browse SAS folders and their contents

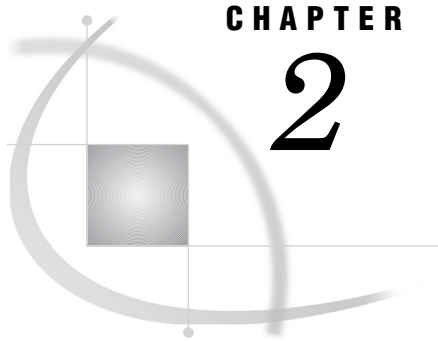
Updates to This Guide

Updates to this guide are available from <http://support.sas.com>.

Getting Help

From the SAS Enterprise Guide Explorer main menu, click **Help ► SAS Enterprise Guide Explorer Help**, or click the **help** button in any SAS Enterprise Guide Explorer dialog box to get help for that dialog box.

For technical assistance, contact SAS Technical Support or visit <http://support.sas.com>.



CHAPTER

2

Setting Up Profiles

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What Is a Profile?

A *profile* defines the connection between SAS Enterprise Guide and a SAS Metadata Server. The SAS Metadata Server contains metadata definitions for objects such as workspace servers, libraries, and users that are used by SAS Enterprise Guide and other applications. After you use a profile to connect to a source of metadata definitions, you can use SAS Enterprise Guide Explorer to define libraries. However, the primary application for creating metadata definitions is SAS Management Console, which you can also use to define libraries, as well as servers, users, groups, and authorization settings.

If you use SAS Enterprise Guide without a profile, you can access only a SAS server that is installed on your local machine. You cannot define libraries or share SAS resources with other SAS applications.

What Is a Metadata Server?

A *metadata server* contains definitions for objects such as workspace servers and libraries that are used by SAS Enterprise Guide and other applications. Metadata definitions in a SAS Metadata Server can be used by many other applications besides SAS Enterprise Guide, which enables you to use a single set of object definitions for all SAS applications in your organization.

You can use SAS Enterprise Guide Explorer to define libraries in a SAS Metadata Server. Other metadata definitions (such as servers, users, and SAS content) are

defined by SAS Management Console or other applications such as SAS Data Integration Studio.

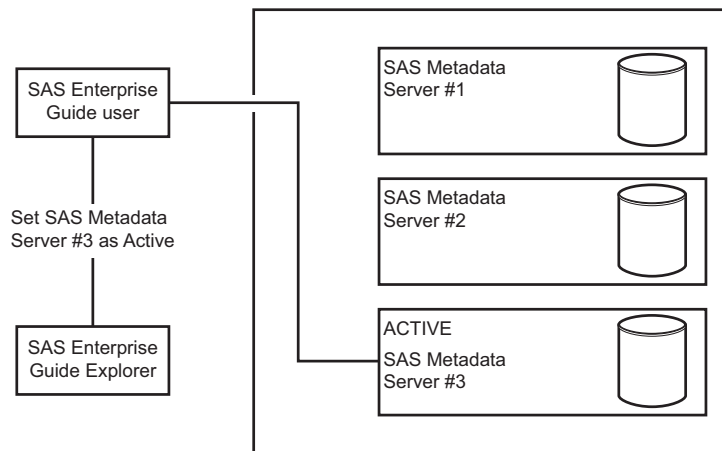
Setting up metadata servers is an essential part of SAS Enterprise Guide administration because SAS Enterprise Guide needs to access at least one metadata source, whether it is local or on a network server, in order to access and share metadata definitions.

If you are using SAS Enterprise Guide only with a local SAS server, you do not need to install and configure a metadata server. You will be able to access the SAS files and SAS Enterprise Guide projects on your local machine, but you will not be able to define libraries or share SAS resources.

You can use SAS Enterprise Guide Explorer to create profiles for multiple metadata servers, and then select one profile as the active profile. SAS Enterprise Guide then uses the server that is identified by the active profile as the source for object definitions. You can change which profile is designated as the active profile, but you cannot share object definitions between profiles.

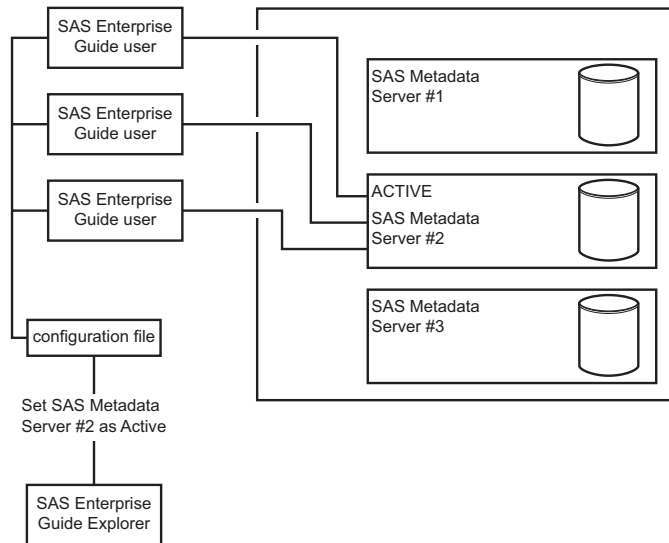
Figure 2.1 is an example of a multi-repository configuration that is used with SAS Enterprise Guide, with a SAS Metadata Repository selected as the active repository. This specifies that SAS Enterprise Guide uses the selected SAS Metadata Repository for object definitions.

Figure 2.1 Repository Configuration, Active SAS Metadata Repository



After you set up the profile configuration, you can use the automatic update feature to make changes to the configuration and apply the changes automatically to all machines where SAS Enterprise Guide is installed. You first use SAS Enterprise Guide Explorer to make changes to the configuration, including defining all profiles and designating the active profile. The new configuration information is then saved to a file in a network location. When a SAS Enterprise Guide user starts the application, the configuration file is automatically read and the profile changes are applied.

Figure 2.2 shows how the changes to the profile configuration are applied to SAS Enterprise Guide through the configuration file.

Figure 2.2 Profile Changes Applied through Configuration File

Setting Up SAS Metadata Servers

The metadata definitions on SAS Metadata Servers are used not only by SAS Enterprise Guide but also by other SAS applications. Using SAS Metadata Servers enables SAS Enterprise Guide users to access and share libraries and servers with other applications.

A SAS Metadata Server is installed by the SAS Deployment Wizard during the installation and configuration of SAS software. Use SAS Management Console to create repositories on the metadata server that will contain the SAS Enterprise Guide object definitions. For information about defining SAS Metadata Servers and repositories, see the *SAS Intelligence Platform: System Administration Guide*.

Note: The character encoding of the metadata server and the data sets that you use in SAS Enterprise Guide must be the same. If they do not match, reports that are produced from the data might contain errors. △

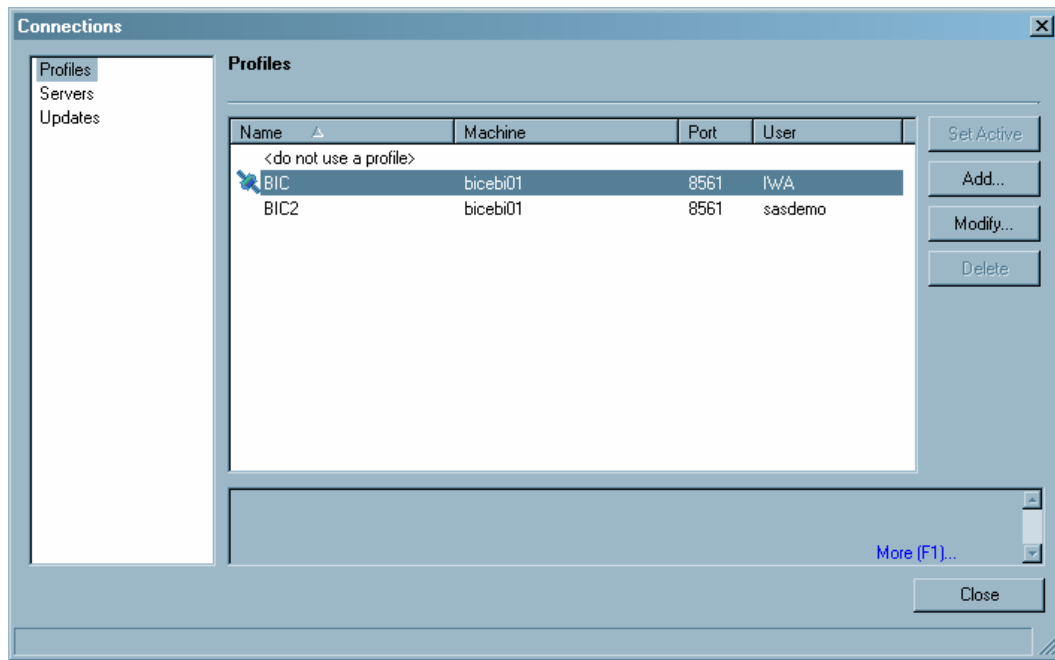
Managing Profiles


About Profile Management

After the metadata servers that you need are defined, you must create and manage profiles to connect to the servers' definitions so that SAS Enterprise Guide can access them. Managing profiles includes these tasks:

- ☐ creating new profiles
- ☐ specifying the active SAS Workspace Server
- ☐ modifying existing profiles
- ☐ setting up automatic updating of profile information

To configure and manage repositories, select **File ► Manage Profiles**. The Connections dialog box opens.



The Connections dialog box contains a list of all the profiles that have been defined for SAS Enterprise Guide Explorer. The active profile is identified by the active profile icon ().

Define a Profile

To connect to a metadata server, you must create a definition for the profile in the Connections dialog box. To define a profile, follow these steps:

- 1 Select **Profiles** from the selection pane and click **Add**. The Create Profile dialog box opens.

Create Profile

Name: IP repository

Description:

Machine

☒ Remote ☐ Local Port: 8561

1234.mycorp.com

☒ Use Integrated Windows Authentication

User: Password:

Authentication Domain: DefaultAuth

Save Cancel

- 2 Specify the name and description for the profile.
- 3 Specify the machine and the port to which the profile connects. If the profile connects to a local machine, you only have to specify the port number. If you are using SAS Enterprise Guide in a Citrix environment, you must specify **Remote** and the ID of the Citrix server. You must specify **Remote** even if the server is on the same machine that you are currently using.
- 4 Specify how users connect to the machine. If the machine is running Microsoft Windows, you can select **Use Integrated Windows Authentication** to specify that the credentials that are used to log on to the Windows desktop are also used to connect to the machine. If you do not use Integrated Windows Authentication, you must specify a user ID and password under which connections are made.

If you are configuring a Citrix environment, specify a valid ID and associated password for logging on to the Citrix server. This ID will be used only to establish an administrative connection with the server. Individual SAS Enterprise Guide users are prompted for their user IDs and passwords.

- 5 Leave the Authentication Domain field blank unless your organization has set up a specific authentication domain configuration. If the field is left blank, SAS Enterprise Guide automatically uses a value of DefaultAuth for the authentication domain. The authentication domain enables the machine to use resources without authentication prompts. When a user accesses a resource on the server, the authorization domain of the resource is compared to the value that is specified for the profile. If the authorization domains match, the user does not have to enter credentials to use the resource.
- 6 Click **Save** to create the profile definition and return to the Connections dialog box.

Specify an Active Profile

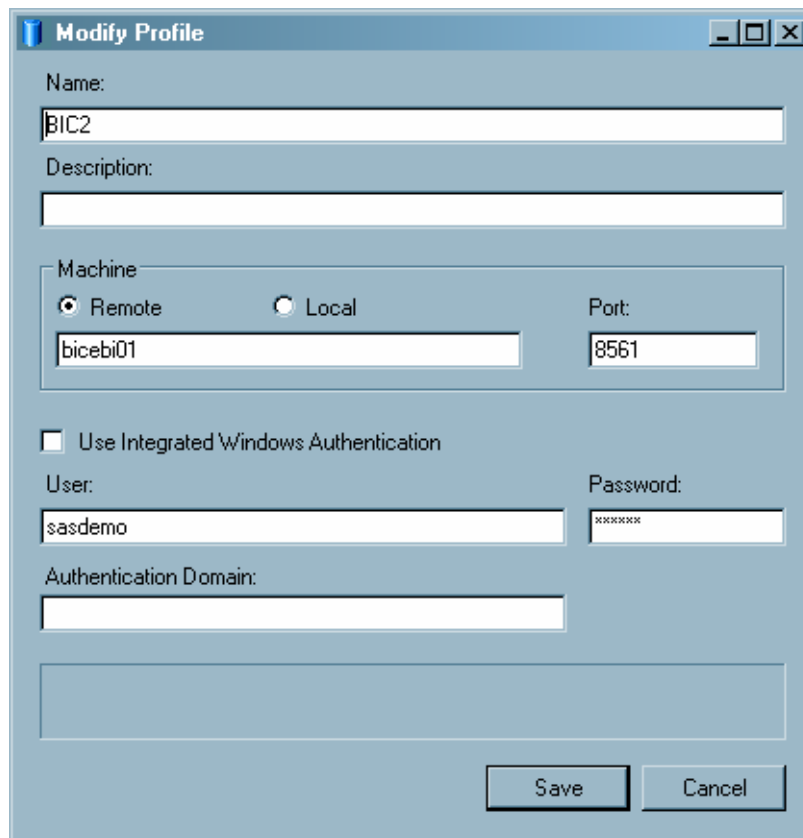
You can specify one profile as the active profile. The active profile connects to the server that serves as the source for all resource definitions (such as servers and libraries).

To specify an active profile, select **Profiles** from the selection pane, select a profile from the list of defined profiles, and then click **Set Active**. The selected profile is identified by the active profile icon ().

Modify a Profile

After a profile has been defined in the Connections dialog box, you can modify the properties of the profile. To modify a profile, follow these steps:

- 1 Select **Profiles** from the selection pane, choose the profile that you want to change, and then click **Modify**. The Modify Profile dialog box opens.



- 2 Make any needed changes to the profile options, and then click **Save** to accept the changes and return to the Connections dialog box.

Delete a Profile

You can use the Connections dialog box to delete a profile. Select **Profiles** from the selection pane, choose the profile that you want to remove, and then click **Delete**.

Specify the Active Workspace Server

After you have specified the active profile, you must specify the default SAS Workspace Server that will be used to process SAS requests. You must use SAS Management Console to define SAS Workspace Servers on the machine to which the profile connects.

To specify the default server, follow these steps:

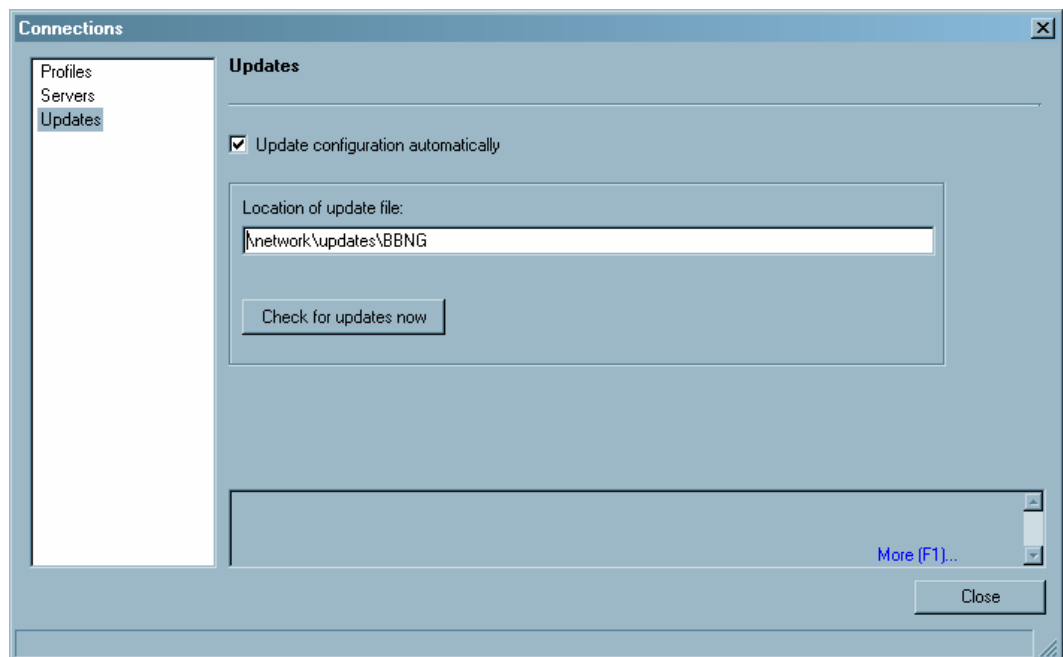
- 1 Select **Servers** from the selection pane.
- 2 Select **Automatically add local SAS server** to specify that a workspace server that runs on the local machine is added to the list of workspace servers on the remote machine.
- 3 Use the menu to select a SAS Workspace Server from the list of servers that have been defined on the active profile's machine. Use SAS Management Console to define additional servers if needed.

Configure Profile Updates

Whenever you make changes to the profile configuration, such as changing the machine to which a profile connects or adding a new profile, you must provide the changed information to SAS Enterprise Guide users so that they can find the changed profiles. To avoid having to update SAS Enterprise Guide users manually, you can store the profile configuration information in a shared location and enable SAS Enterprise Guide to automatically apply configuration updates.

To set up automatic updating, follow these steps:

- 1 In SAS Enterprise Guide Explorer, select **File ► Manage Profiles**.
- 2 In the Connections dialog box, select **Updates** from the selection pane.



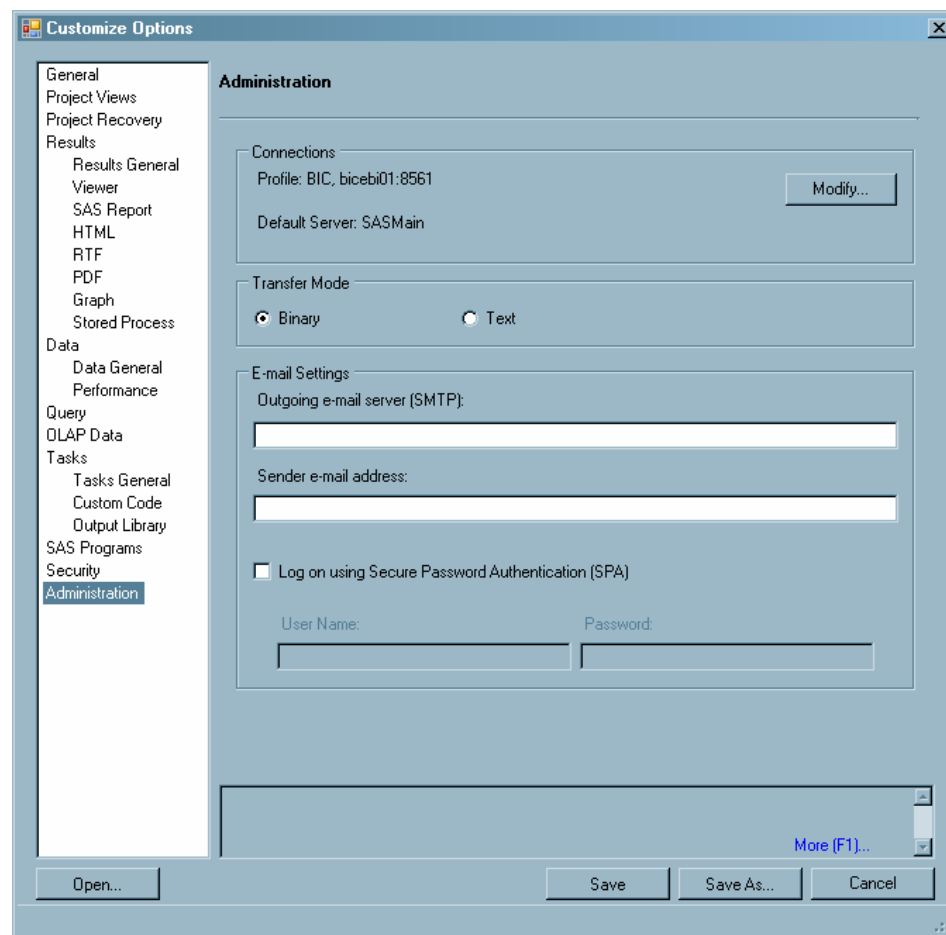
- 3 Select **Update configuration automatically** if you want SAS Enterprise Guide Explorer to receive updates to the configuration information. Usually, the information in SAS Enterprise Guide Explorer and the information in the

configuration file are the same, but you might want to select this option for testing purposes.

If you selected the **Update configuration automatically** check box, use the **Location of update file** field to specify a network location that all SAS Enterprise Guide users can access. When you activate automatic updating, SAS Enterprise Guide checks this location for automatic updates to the profile configuration information.

Click **Check for updates now** to test whether SAS Enterprise Guide Explorer can locate the update information in the specified location.

- 4 Click **Close**.
- 5 Copy the SDSUpdate.xml file from the work directory that you specified when you first configured the profiles (see “Create a Shared Profile Deployment” on page 13) to the network location that you specified in the Connections dialog box.
- 6 Copy the SDSControl.xml file from the work directory to the network location that you specified in the Connections dialog box. If you change the location of the configuration update file, then you must copy the changed SDSControl file to all machines where SAS Enterprise Guide is installed.
- 7 In SAS Enterprise Guide Explorer, select **Tools ► Customize EG Options**. This opens the Options window. Select the **Administration** options and click **Modify** in the **Connections** area. The Connections dialog box opens.



- 8 Select **Updates** from the selection pane and specify the location of the configuration update file that you specified in the Connections dialog box from SAS

Enterprise Guide Explorer. Select **Update configuration automatically**. Click **OK** to close the Connections dialog box.

- 9 In the Options window, click **Save** to save the options to EGOptions.xml.
- 10 Include the EGOptions.xml file in the SAS Enterprise Guide installation package to automatically apply the option to all machines where SAS Enterprise Guide is installed. If you already have SAS Enterprise Guide installed, you can distribute the EGOptions.xml file to the machines where SAS Enterprise Guide is installed in order to change the default SAS Enterprise Guide options.

Create a Shared Profile Deployment

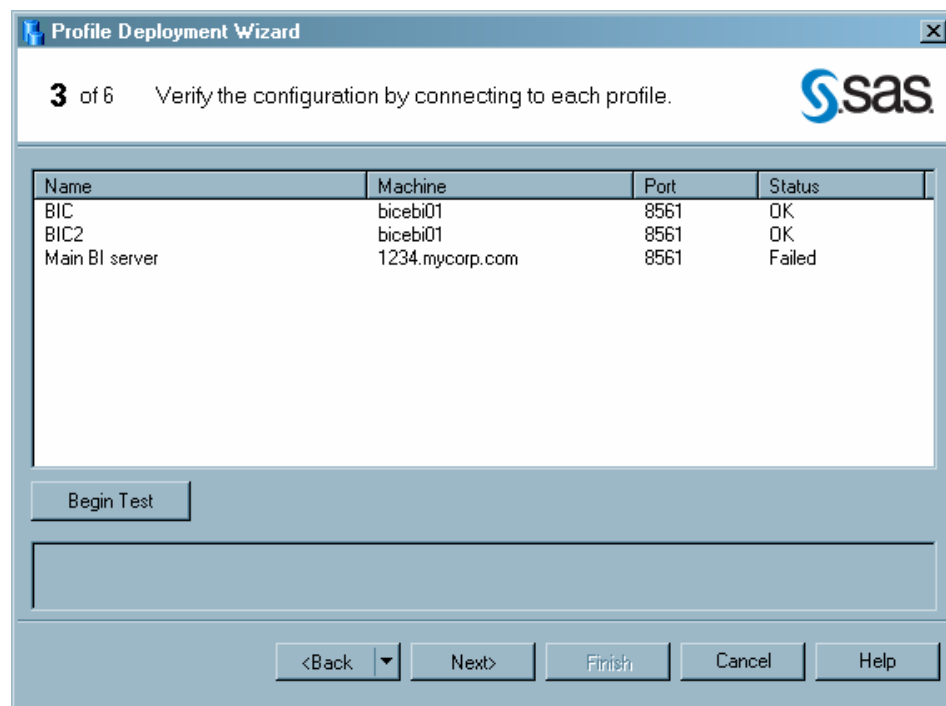
After you define profiles, you can configure the deployment so that it is shared by SAS Enterprise Guide users. Whenever you make changes to the profile configuration, such as changing the machine that is specified in a profile or adding a new profile, you must provide the changed information to SAS Enterprise Guide users so that they can find the changed profiles. By storing the profile configuration information in a shared location and enabling SAS Enterprise Guide to automatically apply configuration updates, you can avoid manually updating SAS Enterprise Guide users.

To configure profile deployment in SAS Enterprise Guide Explorer, follow these steps:

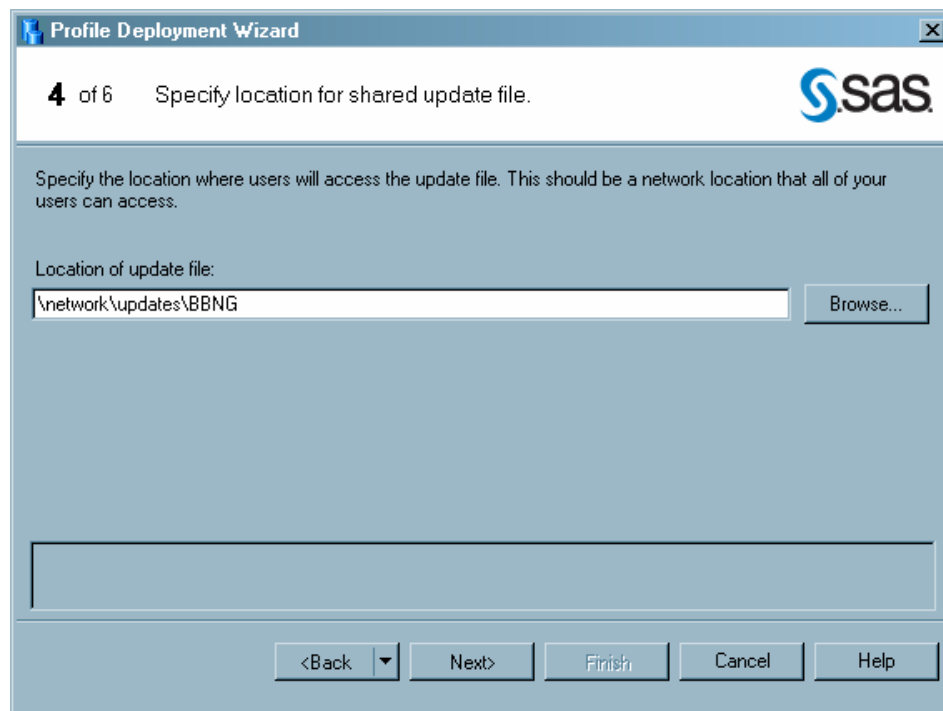
- 1 Select **Tools ► Profile Deployment Wizard**.

The Profile Deployment Wizard starts. Page 1 lists the tasks that the wizard will perform. Click **Next**.

- 2 Page 2 of the wizard lists the name and type of the active profile. To change the active profile or to define a new profile, click **Configure Profiles**. Click **Next**.
- 3 Page 3 enables you to test the connection to all of the machines that are defined in profiles. When you click **Begin Test**, the application attempts to establish a connection to each of the defined machines. The Status column indicates whether the connection was successful. When you have finished the test, click **Next**.

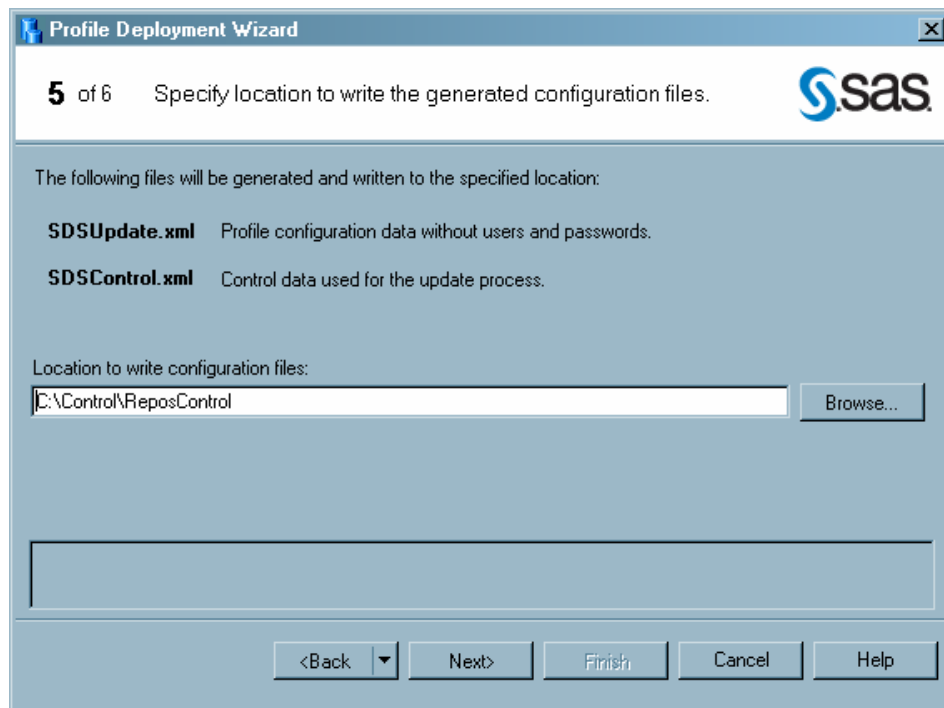


- 4 Page 4 enables you to specify the location of the shared configuration update file. By using automatic updating, you can make changes to the profile configuration in SAS Enterprise Guide Explorer, and those changes will automatically be sent to all SAS Enterprise Guide users.



If you specified the location of the configuration update file in the **Updates** area in the Connections dialog box, then the value that you specified is listed in this field. If you did not specify the location, then enter a network location that all SAS Enterprise Guide users can access.

- 5 Click **Next**.
- 6 Specify the location where SAS Enterprise Guide Explorer stores the profile configuration files.



The SDSUpdate.xml file contains the configuration information that is read by SAS Enterprise Guide to provide automatic updating. When the configuration is complete, you should move this file to the location that you specified in step 4. The SDSControl.xml file is distributed with the SAS Enterprise Guide installation package in your organization. This file specifies the location of the automatic update file.

Specify a location on your local drive for these files. When the configuration process is complete, copy the files to the appropriate location.

- 7 Click **Next**.
- 8 Specify whether you want to view the readme file. Then click **Finish** to create the profile configuration files.
- 9 Copy the SDSUpdate.xml file from the work directory that you specified when you first configured the profiles to the network location that you specified in the Connections dialog box.
- 10 Copy the SDSControl.xml file from the work directory to the network location for the SAS Enterprise Guide installation image. If you change the location of the configuration update file, you must copy the changed SDSControl file to all machines where SAS Enterprise Guide is installed.

Creating Desktop Shortcuts for Different Profiles

After you have created profiles, you can associate a profile with a shortcut on the Windows desktop. This capability enables you to start SAS Enterprise Guide with a specific profile by clicking on a specific shortcut. You can also start SAS Enterprise Guide without a profile by using a desktop shortcut.

To associate a profile with a desktop shortcut, follow these steps:

- 1 Create a shortcut for the file SEGuide.exe. By default, it will be in the directory **C:\Program Files\SAS\EnterpriseGuide\4.2.**

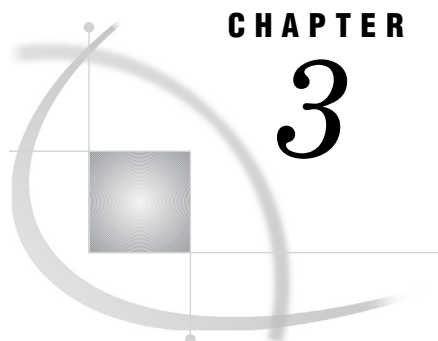
- 2 Right-click on the shortcut that you created and select **Properties**.
- 3 To start SAS Enterprise Guide by using a specific profile, add `/profile:<profile name>` at the end of the string in the **Target** box. You must include a space before `/profile`. If the profile name includes spaces, you must enclose the name in quotation marks:

```
''C:\Program Files\SAS\EnterpriseGuide\4.2\SEGuide.exe'' /profile:''SAS Metadata''
```

To start SAS Enterprise Guide without a profile, add `/noprofile` at the end of the string in the **Target** box. You must include a space before `/noprofile`:

```
''C:\Program Files\SAS\EnterpriseGuide\4.2\SEGuide.exe'' /noprofile
```

- 4 Click **OK** to close the Properties dialog box.
- 5 You can now rename and move the shortcut to the desktop.



CHAPTER

3

Preparing a Setup Image for Users

Preparing a Setup Image for Users in a Network Environment 17

Preparing a Setup Image for Users in a Network Environment

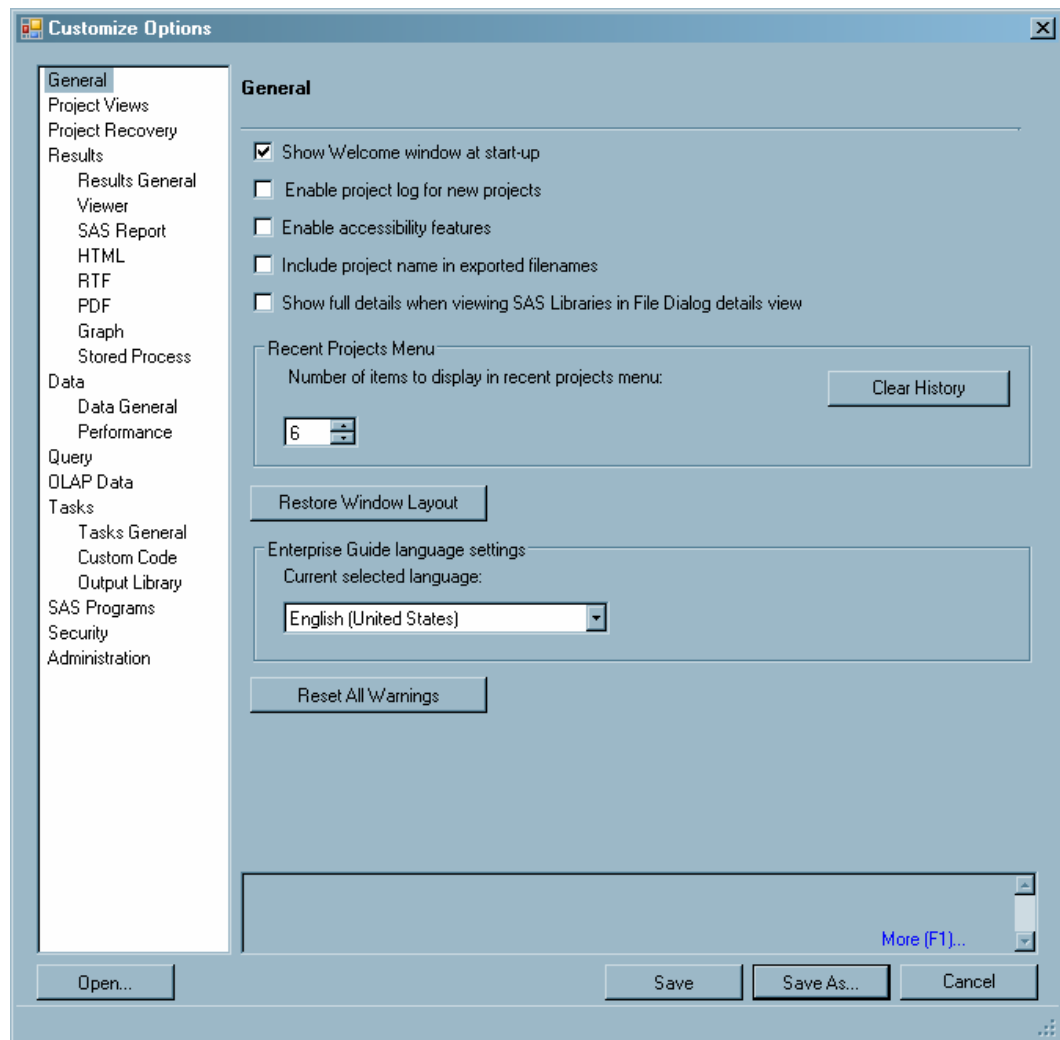
Setting up SAS Enterprise Guide includes giving users access to a setup image of SAS Enterprise Guide. Users must access the setup image in order to install the SAS Enterprise Guide software on their local machines. In a network environment, you create a setup image on a server. Note that the setup procedure includes identifying the profile and associated metadata server.

In a network environment you can create several profiles for several servers, each one for different groups of users. This is the most complex way to use metadata servers, and it is also the most powerful. If you create several metadata servers, then you will need to configure a different setup image for each group of users so that each group will access the correct profile at start-up.

To create a setup image for users in a network environment, follow these steps:

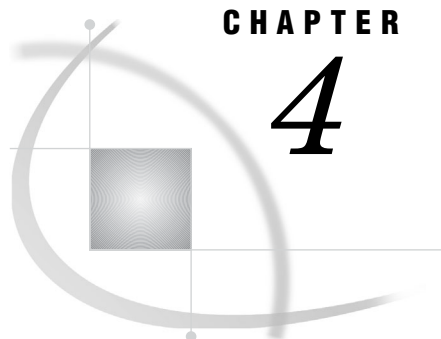
- 1 If you have not already done so, choose a location for the setup image. The location should be on a server that all users can access. Using Windows Explorer or another file manager, copy the installation files (from the installation CD or from another location) to the chosen location.
- 2 Create a customized set of defaults for SAS Enterprise Guide installations, which are automatically applied when users install SAS Enterprise Guide. The defaults are read from the EGOptions.xml file (if present) and the options.ini file when the installation is performed. If you do not create an EGOptions.xml file, SAS Enterprise Guide will use the default values that are set by SAS.

To create the EGOptions.xml file, open the Enterprise Guide Options window by selecting **Tools ► Customize EG Options** from SAS Enterprise Guide Explorer.



Specify the default values for SAS Enterprise Guide installations by selecting each category and setting the displayed options. Position the mouse pointer over an option in order to display a brief description of that option at the bottom of the window.

- 3 After you set the default values, click **Save** or **Save As**. In the Save window, specify a filename of EGOptions.xml. After you create the file, copy it to the location for the setup image.
- 4 Ensure that the profile information for this set of users is in a location where users can access it. (It does not need to be in the same location as the installation files.)
- 5 Copy the SDSControl.xml file from the work directory to the SAS Enterprise Guide setup directory and to the `<shared_files>\SAS Directory Services` location. This file contains the central profile information. The `<shared_files>` location is typically **C:\Program Files\SAS\Shared Files**, but the location might differ depending on your installation.
- 6 Copy the SAS Enterprise Guide application setup directory to a network drive that users can access in order to run SETUP.EXE, which is the program that installs a copy of the setup image on users' local machines. Add the SDSControl.xml file to the directory where SETUP.EXE resides. You can provide a link from a Web site to the directory for easy access.



CHAPTER

4

Managing Metadata Objects

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Understanding Metadata Objects

A *metadata object* is a definition in metadata of a SAS resource that is used by SAS applications. Definitions for servers, libraries, and users are all examples of metadata objects. After an object is defined on a metadata server, the object is then available for use by any SAS application that has access to the server, which enables applications to use a consistent set of resources throughout your organization.

Metadata objects are defined and managed by SAS Management Console, which is the primary application for administering metadata. However, you can also use SAS Enterprise Guide Explorer to manage library definitions. The following objects are managed by SAS Management Console and used in a SAS Enterprise Guide environment:

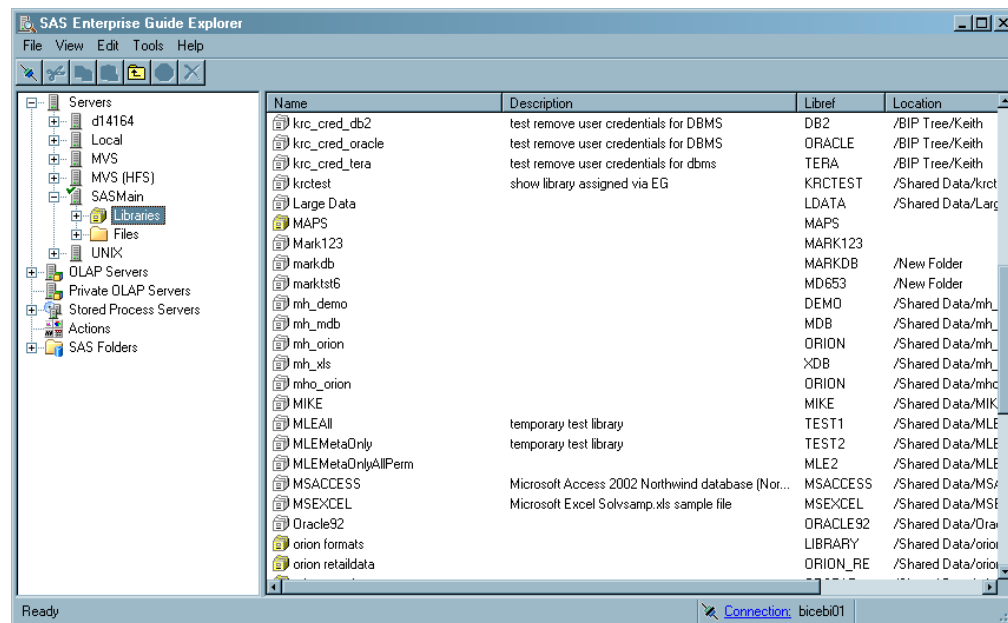
Servers	includes SAS Application Servers, SAS spawners, database servers, OLAP servers, WebDAV servers
Libraries	includes SAS libraries and database libraries
Users	users who have access to the resources that are defined in metadata (note that the Login Manager enables the current SAS Enterprise Guide Explorer user to manage some parts of their login information)
Groups	users grouped by job function, access level, or other criteria
Security settings	controls that specify which users and groups can access resources that are defined in metadata and how users and groups can use those resources

Other metadata objects might be defined by SAS Management Console plug-ins or by other SAS applications such as SAS Data Integration Studio or SAS Information Map Studio.

For information about creating these objects, see the online Help for SAS Management Console or the SAS Intelligence Platform administration guides that are listed in Appendix 1, “Recommended Reading,” on page 51.

Viewing Objects in SAS Enterprise Guide Explorer

You view objects in SAS Enterprise Guide Explorer the same way that you view objects in the Windows Explorer. Expand a server or folder to view the contained objects.



If you are accessing objects that reside on a specific SAS server, then you might be prompted to enter a user ID and password.

You can customize your session further by selecting **view** from the menu. From the menu you can change how the objects are displayed in the SAS Enterprise Guide Explorer window.

Managing SAS Servers

SAS servers are network computers on which SAS is installed. SAS servers enable multiple clients to access and use SAS libraries (and members of the libraries) concurrently. A SAS server for SAS Enterprise Guide can run in a Windows, z/OS, or UNIX operating environment. You must use SAS Management Console to define servers before you can define libraries, either with SAS Management Console or SAS Enterprise Guide Explorer. For information about defining servers, see the Help for SAS Management Console.

Managing Libraries

About Libraries

Libraries are collections of files that are stored on a server and accessed from SAS Enterprise Guide. Libraries give SAS Enterprise Guide users convenient access to their data on servers. When you add a metadata definition for a library through SAS Enterprise Guide Explorer or SAS Management Console, you make the metadata definition available to all the network SAS Enterprise Guide installations that have access to a specific metadata repository as well as all other applications that use the repository. The metadata definition for a library includes the path, engine, and other options for the library. The metadata definition corresponds to the information that is specified in a LIBNAME statement.

Table definitions specify the tables and columns that are available within a library. You can create table definitions by using one of the following functions:

- ☐ using the Update Library Metadata function in SAS Enterprise Guide
- ☐ using the Register Tables function in SAS Management Console
- ☐ running the METALIB procedure in a SAS session (which synchronizes metadata with the physical contents of a library)
- ☐ using SAS Data Integration Studio to build a data warehouse

You can include authorization settings for both library and table definitions, specifying which libraries and tables a user can access and whether the user can change the contents of a library.

Note: Before you add a library, you must use SAS Management Console to add the server on which the library resides. \triangle

To define a library:

- 1 Define the library's path on the server platform.
- 2 Specify the SAS engine that is identified with the library.
- 3 Enter any associated options that you can specify in a LIBNAME statement. LIBNAME options work like the commands in an AUTOEXEC.BAT file. The LIBNAME options are stored on the client and then executed when a SAS Enterprise Guide application connects to the specified SAS server. For more information about SAS libraries, LIBNAME statements, and LIBNAME options, see *SAS Language Reference: Dictionary*.

Understanding the Metadata LIBNAME Engine

To understand how SAS Enterprise Guide assigns and accesses libraries, it is helpful to understand the metadata LIBNAME engine. The engine, also called the META engine, enables you to use a LIBNAME statement to reference a metadata definition for a library, rather than specifying the physical location of the library's tables. By default, the META engine provides read-only access to a library, which prevents the library contents from being different from the library metadata.

If you use the METAOUT=DATA option in the LIBNAME statement, the META engine can access tables that are not defined in metadata but that exist in the physical library. This option enables you to add and modify tables in the library. However, any metadata authorization settings that have been applied to tables or columns in the library are enforced. If a SAS program changes the contents of a library that uses the

METAOUT=DATA option, you must synchronize the physical data and the metadata. To synchronize the data, you can use the Register Tables function in SAS Management Console, the METALIB procedure, or the Update Library Metadata task in SAS Enterprise Guide.

Adding a Library

To add a library, select **File ► New ► Library** and follow the prompts on each page of the Library Wizard. Depending on the options that you select in the wizard, the number of pages in the wizard and the page on which a specific option appears might change.

Use the following information when completing the wizard:

- On page 1 of the wizard, you must specify a name for the library. The name can be up to eight characters long and must not be duplicated on any server on which you are creating the library. The wizard automatically enters the name in uppercase characters.
- On page 2 of the wizard, you must specify how the library is assigned. You must choose to assign the library by using one of the following:

SAS Enterprise Guide	specifies that SAS Enterprise Guide uses the metadata that is supplied in the wizard to assign the library by using the native engine. No table or column metadata is used.
SAS Server	specifies that the library is assigned in an autoexec statement or through the METAUTOINIT system option. SAS Enterprise Guide does not use the metadata that you specify for the library, but assumes that the library is already assigned.
Metadata Library Engine	specifies that SAS Enterprise Guide assigns the library by using the META engine.

If **Show only tables with metadata definitions** is checked, then only tables that have metadata definitions appear when the library is selected. When this option is selected, the library is always read-only. This option is equivalent to the default behavior of the META engine.

If the check box is not selected, then all tables in the library will appear (even if you deny ReadMetadata permission for a table or the table is not registered in the metadata repository). Permissions are enforced if a user tries to open a restricted table. In this mode, the library is not read-only. This option is equivalent to the METAOUT=DATA option.

- On page 4 of the wizard, you must specify the engine type for the library (file system, database system, or WebDAV) and specific information for the engine type that you select. If you are defining a file system or database system library, you must choose an engine. Select the SAS engine with which the data was created. For more information about engines, see the SAS documentation for your operating environment. See also the chapter that corresponds to your database management system in *SAS/ACCESS for Relational Databases: Reference*.
- Also on page 4 of the wizard, you might have to specify the physical path where the library resides on the server. Depending on the value of the **Engine Type** field, **Path** might not be present. You can use the following wildcards in the **Path** field:

<userid>	substitutes a Windows user ID. For example, if a user logs on as ebeacon, then \\librarypath\<userid> becomes \\librarypath\ebeacon.
----------	--

<sample> substitutes the SAS Enterprise Guide sample directory. For example, if you installed using the default directories, <sample>\data becomes C:\Program Files\SAS\Enterprise Guide 3.0\Sample\data. If, however, another user installed in D:\EC, then <sample>\data becomes D:\EC\Sample\data.

<serveruser> substitutes the server logon user ID.

<serverpassword> substitutes the server logon password.

<libraryuser> substitutes the library logon user ID.

<librarypassword> substitutes the library logon password.

Note: These wildcards might not work with client applications other than SAS Enterprise Guide and the SAS Add-In for Microsoft Office. △

- On page 5 of the wizard, you can specify library options and values. If wildcards are valid in the **Path** field, then you can also use them in the **Options** field. Avoid using prompting options such as DBPROMPT=YES. For additional options, see the chapter that corresponds to your database management system in *SAS/ACCESS for Relational Databases: Reference*.
- On page 6 of the wizard, you must select the folder to which the library belongs. If you do not select a folder, the library is automatically stored in the Shared Data folder.
- Page 7 of the server lets you test the library definition on each server. If the library name or libref is not unique on all servers, the conflict is listed in the Status column.

After you complete the wizard, the library is created and then displayed in the viewer under the client libraries for the specified servers.

Creating an Output Library

By default, SAS Enterprise Guide stores output data in the Sasuser, Work, or Egtask library, or a user-created output library on the SAS server. You can select **Tools ► Options ► Output Library** to change the default output library. For example, you might want all output to go to a central library that all users can access. In addition, Sasuser is a temporary location on z/OS and some UNIX systems, so output needs to be directed to a different location in order to be saved permanently.

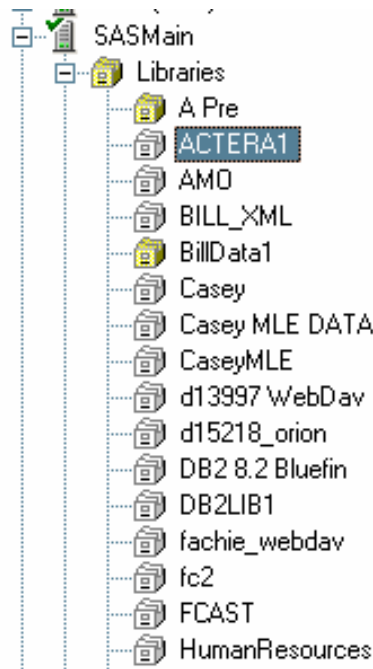
To define an output library, you can follow either one of these strategies:

- Use SAS Management Console to define the library. Select **Data Library Manager**, and then select **New Library**. Choose **Pre-assigned Library** as the library type to ensure that the library is assigned whenever the server starts. Make sure that the library is defined on all servers that will be used with SAS Enterprise Guide.
- Use SAS Management Console to add the LIBNAME statement for the library to all server definitions that are used by SAS Enterprise Guide. Include the statement in the **SAS startup statements** field in the New Server wizard (for new servers) or in the Properties window (for servers that have already been defined).

Assigning Libraries

When you view a SAS server in SAS Enterprise Guide or SAS Enterprise Guide Explorer, you see a list of libraries on the selected server. The list includes both

libraries that are assigned (identified with a yellow icon) and libraries that are unassigned (identified with a white icon).



Assigned libraries are libraries that are pre-assigned or assigned in an autoexec program. *Unassigned libraries* are libraries that have been defined in metadata but have not yet been assigned or accessed. To assign an unassigned library, right-click on the library and select **Assign** from the pop-up menu. If the library definition was created by SAS Enterprise Guide Explorer, the library is assigned using the method that was specified in the library definition. Otherwise, the library is assigned using the META engine in its default mode, which means that the library is read-only. The library contents also match the metadata definition (so physical tables that are not defined in metadata are not displayed), and the tables and columns that are accessible depend on the authorization settings.

Updating Library Properties

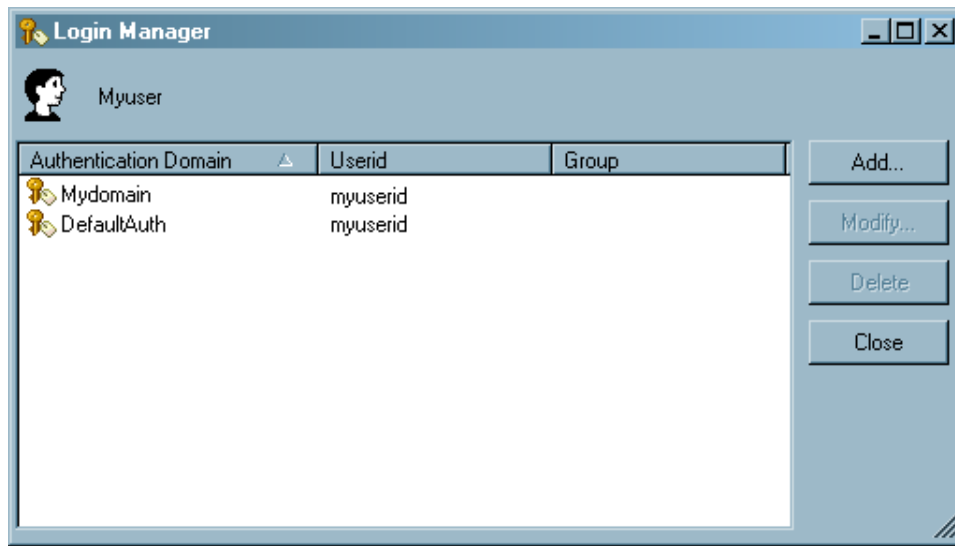
Properties for libraries include information such as names, pathnames, and LIBNAME options. To view or update this information:

- 1 Select a server, and then locate the library whose properties you want to change.
- 2 Select the library, and then select **Properties** from the pop-up menu.
- 3 Select the item in the selection pane that corresponds to the information that you want to update. For information about each field, see “Adding a Library” on page 22.

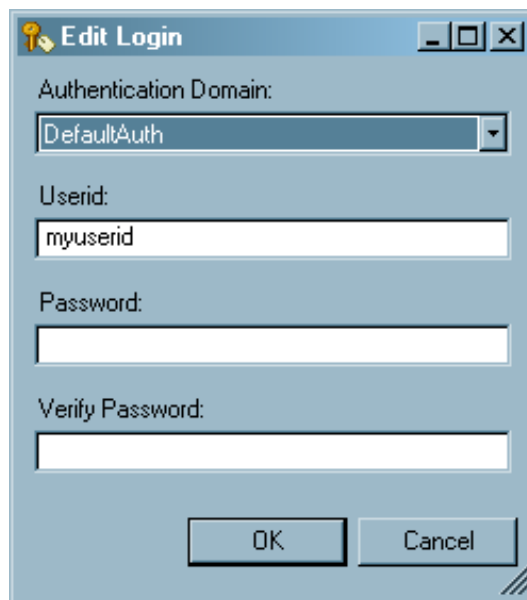
Managing Logins

The Login Manager enables you to manage your login information for your user definition. You can create or modify a user ID and corresponding password and associate the login with an authentication domain. To work with login information,

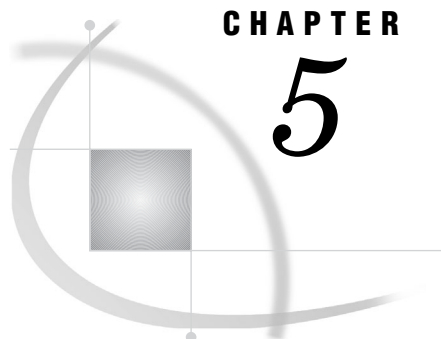
select **File ► Manage Logins**. The Login Manager window displays your user name and all defined logins for your user.



Click **Add** to add a new login, or select a login and click **Modify** to change an existing login. Either button displays the Edit Login window.



Specify the user ID and password (if needed) and select the authentication domain that is associated with the login. The menu contains all authentication domains that are currently defined. Use SAS Management Console to add authentication domains. When you click **OK**, the metadata for your user object is modified. The information that you can modify in the Login Manager corresponds to the information on the **Accounts** tab of the Properties window for a user definition in SAS Management Console.



CHAPTER

5

Migration to SAS Enterprise Guide 4.2

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Migrating from SAS Enterprise Guide 4.1

If you are migrating from SAS Enterprise Guide 4.1, the migration process has two parts—migrating metadata and migrating SAS Enterprise Guide projects. Because metadata contains definitions for the objects that projects are built on, you must first migrate metadata repositories and definitions. If your installation stored metadata in a SAS Metadata Repository, you must migrate the repository and the definitions to a SAS 9.2 Metadata Repository. This step is part of the process of migration to SAS 9.2. For information about the migration process, see the *SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide*. If your installation stored metadata definitions in a SAS Enterprise Guide repository, the definitions must be re-created in a SAS 9.2 Metadata Repository, as detailed in “Migrating from a SAS Enterprise Guide Repository” on page 28.

After you have migrated or converted metadata definitions, you must migrate your SAS Enterprise Guide projects. To migrate a project, you must convert the project to the format that is required by SAS Enterprise Guide 4.2 and change any references to metadata objects that have been renamed or moved. When you open a project in SAS Enterprise Guide 4.2, the project is automatically converted to the correct format. However, you must manually change the references for each changed metadata object in the project. If your organization has a large number of projects to migrate, migrating them one at a time is inefficient and can lead to errors in metadata references. A utility is included with SAS Enterprise Guide 4.2 to enable you to migrate groups of projects and documents to the correct format and to make global changes to metadata references. For more information, see “Using the Migration Wizard” on page 28.

Access to SAS Enterprise Guide 4.2 tasks is controlled through roles. If you enabled SAS Enterprise Guide 4.1 tasks based on user groups, you must define roles and specify role-based access controls to re-create your previous configuration. For more information, see Chapter 6, “Administering Role-Based Settings,” on page 33.

Migrating from a SAS Enterprise Guide Repository

In earlier versions of SAS Enterprise Guide, metadata was stored in a SAS Enterprise Guide repository (SAS Enterprise Guide 4.1 supported both SAS Enterprise Guide repositories and SAS Metadata Repositories). Although some objects (such as servers, libraries, and users) that were defined in SAS Enterprise Guide repositories are also defined in SAS Metadata Repositories, the repositories use very different metadata models. As a result, it is not possible to automatically migrate metadata definitions between the two types of repositories.

Use SAS Enterprise Guide Explorer 4.1 or earlier to examine the definitions for each metadata object (except for binders) in the SAS Enterprise Guide repository, then record the definition information. After your SAS Metadata Server has been installed and configured, use SAS Management Console to create new definitions for servers, libraries, users, and groups. You can also use SAS Enterprise Guide Explorer to create definitions for libraries.

Using the Migration Wizard

Overview of the Wizard

The Migration Wizard enables you to migrate multiple projects to the SAS Enterprise Guide 4.2 format at one time. If you have the SAS Add-In 4.2 for Microsoft Office installed, the wizard also migrates files that are used with the SAS Add-In 2.1 for Microsoft Office, such as Microsoft Word files or Microsoft Excel files. You can use the wizard to identify the projects and documents that you want to migrate and specify new locations for objects in the migrated files. The wizard converts the projects and documents to the correct format and makes global changes to the changed object references.

In addition, you can use mapping files and a migration record file to supply information to the wizard.

Using the Wizard

To run the Migration Wizard, follow these steps:

- 1 Create all required metadata objects in metadata. If you need to create new metadata definitions for objects such as servers or libraries, you should create these definitions before you run the migration wizard. The wizard does not create any metadata definitions. If you run the wizard before you create new definitions, you will receive an error whenever you open a project that refers to a metadata object that has not been defined.
- 2 Navigate to the SAS Enterprise Guide installation directory (the default location is **C:\Program Files\SAS\EnterpriseGuide\4.2**). Start the wizard by double-clicking on **MigrationWizard.exe** or issuing the command from the command line.

Note: You must close all Microsoft Office applications before you run the Migration Wizard. △

- 3 Follow the procedure in the wizard:

- a Page 1 provides an introduction to the wizard.
- b On page 2, verify that the active connection is correct. Click **Modify** to display the Connections dialog box, where you can change the active profile or create a new profile.

If the selected connection contains information about SAS folders that have been moved or renamed as part of the SAS installation and migration process, click **Import**. The information that is imported from your connection is used by the Migration Wizard to automatically remap the location of SAS folders.

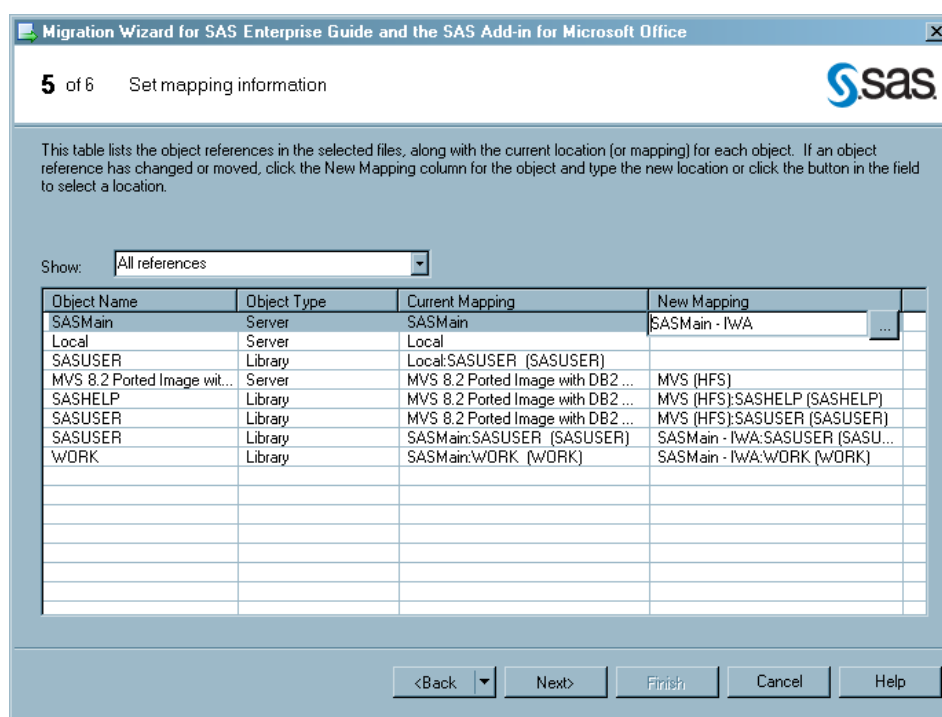
- c On page 3, select the files that you want to migrate. You can select files from local directories, servers, and SAS folders. Use the arrow to move files (preserving the tree structure) to the **Selected Files** area. Selecting a node such as a folder or a server automatically selects all files under that node. Expand the **Local**, **Server**, or **SAS Folders** nodes to locate individual files or directories. Use the Show field to select the type of files that are displayed. To access files on a remote machine, click **Add Location**. The Windows Add Network Drive dialog box is displayed, which enables you to map a network drive to a remote location.

The Migration Wizard processes these types of files:

- ☐ SAS Enterprise Guide Projects (*.egp)
- ☐ SAS Web Report Studio Reports
- ☐ Microsoft Excel files (*.xls)
- ☐ Microsoft Word documents (*.doc)
- ☐ Microsoft PowerPoint presentations (*.ppt)

The SAS Add-In for Microsoft Office must be installed in order to migrate Microsoft Excel files and Microsoft PowerPoint presentations.

- d Page 4 provides an overview of the process of identifying object references that might need to be changed. When you click **Next**, the parsing process begins. The status of the process is indicated by a progress bar.
- e If the wizard finds a mapping file, it will ask whether you want to use it. A *mapping file* is an XML document that specifies correlations between old locations and new locations for objects. A mapping file enables you to specify the object mappings once and then have those mappings automatically applied in the wizard. By default, mapping files are stored in \\My Documents\\Application Data\\SAS\\BI Clients\\4.2\\Migration.
- f Page 5 lists all of the metadata objects that are referenced in the selected files, identifies their type, and provides the currently specified location of the object. To change the mapping for an object, click in the New Mapping column for the object, click the button in the field to open the Change Resource dialog box, and enter a new location or browse to the new location. You can also choose to automatically apply the new location to all objects in the migration list that use the current value. No changes are made until the wizard completes.



- g On page 6, you can specify the name of the migration record file, which contains all of the settings that are specified in the wizard. If you specify the migration record file as a parameter when you run the Migration Wizard from the command line, the wizard will be initialized with all of the settings that you used when the file was created. You can also specify the location of a log file and specify whether files will be backed up before conversion. By default, migrated files are backed up and the original files are overwritten.

You can specify that the migration process attempts to verify that the new resources exist and note the status in the log. The changes are applied whether or not the resources are verified. In order to accurately verify the remappings, you must have Read permissions in metadata for objects such as servers and libraries and operating system Read permissions for file locations. Click **Finish** to migrate the selected files.

Mapping File Format

The following is the format of the mapping file that is used to identify correlations between old and new locations for metadata objects. This file must be named MappingInformation.xml and stored in \\My Documents\\Application Data\\SAS\\BI Clients\\4.2\\Migration. Include as many <MappedItem> blocks as needed to change the mapping for all affected objects. The format of MappingInformation.xml is as follows:

```
<MappingInformation>
  <MappedItem>
    <ReferenceName>server name
    <ReferenceID>server ID
    <ReferenceType>Server
    <CurrentMapping>old server definition
    <NewMapping>new server definition
```

```

<MappedItem>
  <ReferenceName>library name
  <ReferenceID>library ID
  <ReferenceType>LIBRARY
  <CurrentMapping>old library definition
  <NewMapping>new library definition

<MappedItem>
  <ReferenceName>stored process name
  <ReferenceID>stored process ID
  <ReferenceType>SAS.EG.ProjectElements.StoredProcess
  <CurrentMapping>old stored process definition
  <NewMapping>new stored process definition

<MappedItem>
  <ReferenceName>external file name
  <ReferenceID>external file ID
  <ReferenceType>SAS.EG.ProjectElements.ExternalFile
  <CurrentMapping>old external file definition
  <NewMapping>new external file definition

<MappedItem>
  <ReferenceName>information map
  <ReferenceID>information map ID
  <ReferenceType>SAS.EG.ProjectElements.InformationMap
  <CurrentMapping>old information map definition
  <NewMapping>new information map definition

<MappedItem>
  <ReferenceName>OLAP catalog name
  <ReferenceID>OLAP catalog ID
  <ReferenceType>OLAPCATALOG
  <CurrentMapping>old catalog definition
  <NewMapping>new catalog definition
  <OLAPCatalogName>old OLAP catalog name
  <OLAPServerName>old OLAP server name
  <OlapServerType>old OLAP server type
  <OlapProviderName>old OLAP provider
  <OlapLoginMode>old login mode
  <OlapExtProperties>extended properties for connecting to the OLAP server
  <OlapHostName>old host name
  <OlapPort>old port
  <NewOLAPCatalogName>new OLAP catalog name
  <NewOLAPServerName>new OLAP server name
  <NewOlapServerType>new OLAP server type
  <NewOlapProviderName>new OLAP provider
  <NewOlapLoginMode>new login mode
  <NewOlapExtProperties>new extended properties for connecting to
the OLAP server
  <NewOlapHostName>new host name
  <NewOlapPort>new port

<MappedItem>
  <ReferenceName>OLAP server name

```

```

<ReferenceID>OLAP server ID
<ReferenceType>OLAPSERVER
<CurrentMapping>old server definition
<NewMapping>new server definition
<OLAPServerName>old OLAP server name
<OlapServerType>old OLAP server type
<OlapProviderName>old OLAP provider
<OlapLoginMode>old login mode
<OlapExtProperties>extended properties for connecting to the
OLAP server
<OlapHostName>old host name
<OlapPort>old port
<NewOLAPServerName>new OLAP server name
<NewOlapServerType>new OLAP server type
<NewOlapProviderName>new OLAP provider
<NewOlapLoginMode>new login mode
<NewOlapExtProperties>new extended properties for connecting to
the OLAP server
<NewOlapHostName>new host name
<NewOlapPort>new port

(repeat as needed for all objects)
<MappingInformation>

```

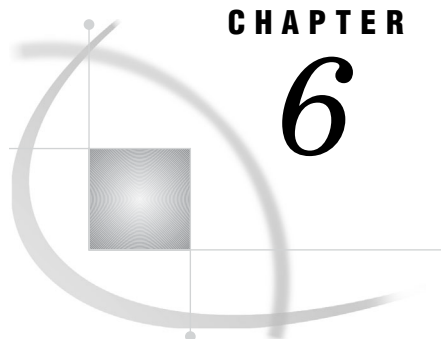
Initializing the Wizard by Using a Migration Record File

You can create a migration record file when you run the Migration Wizard. This file contains a record of all of the information that is provided in the wizard. If you start the Migration Wizard from the command line and specify the migration record file as a parameter, the wizard will be initialized with the same settings that you used when the file was created.

To create a migration record file, specify a name for the file on the last page of the Migration Wizard.

To run the wizard and specify the migration record file, issue this command from a command line:

```
MigrationWizard <migration record file>
```



CHAPTER

6

Administering Role-Based Settings

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Understanding Role-Based Settings

Because SAS Enterprise Guide and the SAS Add-In for Microsoft Office are used by a wide variety of users and groups within an organization, administrators must be able to control the resources and actions that users can access. For example, an organization might want to allow some users to run reports, but not to modify them. The organization might want to prevent SAS Enterprise Guide users from saving files to their local hard drives. Or the organization might want to display only needed SAS Enterprise Guide tasks, project settings, tools, and help, and hide the rest. SAS Enterprise Guide and the SAS Add-In for Microsoft Office enable you to control the actions and tasks that are available to users through roles and role-based settings.

A role manages the availability of application features, called capabilities. For SAS Enterprise Guide and the SAS Add-In for Microsoft Office, the capabilities include how files are opened and saved, the options settings that are visible, and which project settings might be modified. Members are assigned to the roles, based on their activities and responsibilities in your organization. SAS Enterprise Guide tasks are also

considered to be capabilities, so you can present a variety of views of the resources and actions that are available to users through their role membership.

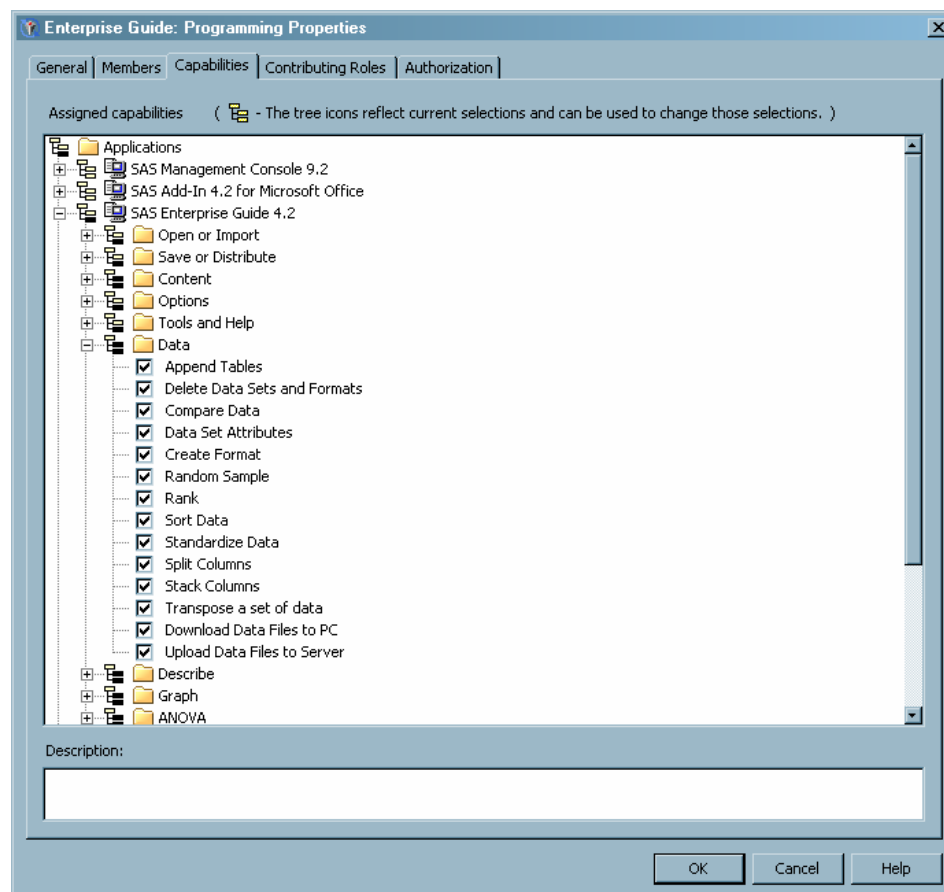
Creating Roles and Modifying Role Settings

To use role-based settings, you must determine the roles that you need, select capabilities for each role, and assign users or groups to roles. Several main administrative roles are defined by default, and SAS Enterprise Guide and the SAS Add-In for Microsoft Office also define several roles that are specific to the application. If the provided roles and the capabilities in each role match the activities and responsibilities in your organization, you only need to assign users to roles. To assign users to a role, use SAS Management Console to view the Properties window for a role. On the **Members** tab, select the users that should be assigned to the role.

If the provided roles do not match the division of responsibilities in your organization, you must create a custom role:

- 1 In SAS Management Console, select the **User Manager plug-in**.
- 2 Select **New ► Role** to open the New Role dialog box.
- 3 Use the **Members** tab to specify which users and groups are assigned to the role.
- 4 Use the **Capabilities** tab to assign the SAS Enterprise Guide and the SAS Add-In for Microsoft Office capabilities and specify tasks to the role.

To modify the capabilities for a role, select the role in the User Manager in SAS Management Console, and then select **Properties**. Select the **Capabilities** tab and choose the capabilities that are assigned to the role.



For more information about working with roles, see *SAS Management Console: Guide to Users and Permissions*.

Capability Listings

The following sections list all of the capabilities that are provided for use with SAS Enterprise Guide. The roles that are listed for each capability are those that are installed with SAS Enterprise Guide. The organization that is used in this topic matches the organization of capabilities in SAS Management Console.

Open or Import Capabilities

Open Files from Local Computer

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can open or import a file from the local file system. If not granted, the Open File dialog box does not allow the user to navigate to the local system, and the user cannot copy and paste or drag from the local file system. This capability does not provide a substitute for system security.

Open Cube from OLAP Server

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can open an OLAP cube source in a project. If not granted, all menus and the tree view should not allow the user to open an OLAP cube or navigate to an OLAP server.

Open Files from SAS Server

Roles	Programming, Advanced
Description	If granted, the user can open or import a file from the file system of a SAS server. If not granted, the Open File dialog box does not allow the user to navigate to the file system of the SAS server. The SAS server file system tree is also removed from the SAS Enterprise Guide tree view. This capability does not provide a substitute for system security.

Open Data from Exchange

Roles	Advanced
Description	If granted, the user can open a source from Microsoft Exchange into a project. If not granted, the menus and process flow diagram do not allow a Microsoft Exchange file to be opened.

Open Data from OLEDB

Roles	Advanced
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Description	If granted, the user can open a source from an installed OLE DB provider. If not granted, the menus and process flow diagram do not allow an OLE DB source to be opened.
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Open Data from ODBC

Roles	Advanced
Description	If granted, the user can open a source by using an ODBC driver. If not granted, the menus and process flow diagram do not allow an ODBC source to be opened.

Open Information Map

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Open Information Map task.

Import Data

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Import Data task.

Save or Distribute Capabilities

Save Files to Local Computer

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can save a file or project to the local file system. If not granted, the Save File dialog box does not allow the user to navigate to the local file system, and the user cannot copy and paste or drag to the local file system. This capability does not provide a substitute for system security.

Save Files to SAS Servers

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can save files or projects to the file system of SAS servers. If not granted, the Save File dialog box does not allow the user to navigate to the file system of the SAS server. The SAS server file system tree is also removed from the SAS Enterprise Guide tree view. This capability does not provide a substitute for system security.

Modify Output Data Location in SAS Tasks

Roles	Analysis, Programming, Advanced
Description	If granted, the user can change the output location for tasks and wizards. If not granted, all controls that allow the user to change the output location are removed from tasks and wizards.

Copy and Paste SAS Server Content

Roles	Analysis, Programming, Advanced
Description	If granted, the user can copy and paste from SAS server files and libraries. If not granted, the applicable menu items are removed and the drag-and-drop feature is disabled. This capability does not provide a substitute for system security.

Publish to Distribution Channel

Roles	Advanced
Description	If granted, the user can create or modify a publish wizard to distribute content to a distribution channel. If not granted, the Publish menu item is removed, and the user is not allowed to make any changes to a publish wizard step.

Send Content to E-mail Recipient

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can create or modify a wizard to distribute files by using e-mail. If not granted, the menu items E-mail Recipient and E-Mail Recipient as a Step in Project are removed. The user is not allowed to make any changes in existing e-mail distribution steps.

Content Capabilities

Create or Modify Advanced Query

Roles	Analysis, Programming, Advanced
Description	If granted, the user can create and modify advanced queries in projects. If not granted, the Query Builder menu item is removed, and the user is not allowed to make any changes to existing advanced queries.

Create or Modify Data Join in Advanced Query

Roles	Analysis, Programming, Advanced
Description	The user can create or modify a table join in an advanced query. If not granted, the Add Table and Join menu items are removed.

Create or Modify SAS Program

Roles	Programming, Advanced
Description	If granted, the user can create and modify code nodes in projects. If not granted, the user is allowed to run the code in an existing project, but might not be able to make changes to the code. Users are also not allowed to open existing SAS programs in SAS Enterprise Guide projects.

Add or Modify Custom Code to SAS Task

Roles	Programming, Advanced
Description	If granted, the user can create or modify custom code that runs in a SAS Enterprise Guide task. If not granted, the user is not allowed to add or modify code in a task.

Create or Modify SAS Stored Process

Roles	Programming, Advanced
Description	If granted, the user can create or modify stored processes in projects. If not granted, the Create Stored Process and Write TaskCode to Stored Process menu items are removed. The user is not allowed to make any changes to existing stored processes.

Options Capabilities

Modify SAS Server Reference in Project or Document

Roles	Analysis, Programming, Advanced
Description	If granted, the user can change the internal server reference for all projects that run on the server. If not granted, the Select Server menu item is removed.

Modify Security Options

Roles	Advanced
Description	If granted, the user can change the security options for projects. If not granted, the user can view the security options, but cannot change them.

Modify E-mail Options

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can change the e-mail options for projects. If not granted, the user can view the e-mail options, but cannot change them.

Modify Performance Options

Roles	Programming, Advanced
Description	If granted, the user can change the performance options for projects. If not granted, the user can view the performance options, but cannot change them.

Modify All Options

Roles	OLAP, Analysis, Programming, Advanced
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Description	If granted, the user can modify the options that are listed in the Options dialog box. If not granted, the user can view the options, but cannot change them.
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Tools and Help Capabilities

Access Unregistered Custom Tasks

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, by default the user can use custom tasks that are not registered in metadata. Specific custom tasks might still be disallowed. If not granted, the user cannot use custom tasks that are not registered in metadata.

Modify Styles

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can modify the styles that are used to create reports. If not granted, the Style Manager menu item is removed.

Create or Modify Schedules

Roles	Analysis, Programming, Advanced
Description	If granted, the user can create and modify scheduled projects. If not granted, the Schedule Project and Schedule Process Flow menu items are removed. If the user opens a project that contains a schedule project node, the user cannot modify the settings for the project.

Access SAS Enterprise Guide Explorer

Roles	Advanced
Description	If granted, the user can use the SAS Enterprise Guide Explorer application. If not granted, the Enterprise Guide Explorer menu item is removed. The user also cannot start the SAS Enterprise Guide Explorer application directly, from outside of SAS Enterprise Guide.

Assign Project Library

Roles	Advanced
Description	Enables the Assign Project Library task.

Update Library Metadata

Roles	Advanced, Programming, Analysis
Description	Enables the Update Library Metadata task.

Access Project Maintenance

Roles	Advanced
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Description	If granted, the user can open the Project Maintenance dialog box, which allows the user to rename servers and libraries throughout a project. If not granted, the user cannot open the Project Maintenance dialog box.
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Access SAS Technical Support

Roles	OLAP, Analysis, Programming, Advanced
Description	If granted, the user can navigate to the SAS Technical Support Web site from SAS Enterprise Guide. If not granted, the menu items under SAS on the Web that link to SAS Technical Support are removed.

Data Capabilities

Append Tables

Roles	Advanced, Programming, OLAP, Analysis
Description	Enables the Append Tables task.

Delete Data Sets and Formats

Roles	Advanced, Programming, OLAP, Analysis
Description	Enables the Delete Data Sets and Formats task.

Compare Data

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Compare Data task.

Data Set Attributes

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Data Set Attributes task.

Create Format

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Create Format task.

Random Sample

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Random Sample task.

Rank

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Rank task.
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Sort Data

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Sort Data task.
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Standardize Data

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Standardize Data task.
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Split Columns

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Split Columns task.
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Stack Columns

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Stack Columns task.
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Transpose a set of data

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Transpose task.
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Download Data Files to PC

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Download Data Files to PC task.
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Upload Data Files to Server

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Upload Data Files to Server task.
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Describe Capabilities

List Report Wizard

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the List Report Wizard task.
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Distribution Analysis

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Distribution Analysis task.
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Characterize Data

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Characterize Data task.

List Data

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the List Data task.

One-Way Frequencies

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the One-Way Frequencies task.

Summary Statistics

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Summary Statistics task.

Summary Tables

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Summary Tables task.

Table Analysis

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Table Analysis task.

Graph Capabilities**Contour Plot**

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Contour Plot task.

Bubble Plot

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Bubble Plot task.

Radar Chart

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Radar Chart task.

Box Plot

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Box Plot task.
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Donut Chart

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Donut Chart task.
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Area Plot

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Area Plot task.
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Pie Chart

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Pie Chart task.
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Line Plot

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Line Plot task.
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Bar Chart

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Bar Chart task.
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Create Map Feature Table

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Create Map Feature Table task.
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Surface Plot

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Surface Plot task.
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Map Graph

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Map Graph task.
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Bar-Line Chart

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Bar-Line Chart task.
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Tile Chart

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Tile Chart task.
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Scatter Plot

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Scatter Plot task.
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ANOVA Capabilities

Linear Models

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Linear Models task.
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Mixed Models

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Mixed Models task.
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Nonparametric One-Way ANOVA

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Nonparametric One-Way ANOVA task.
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One-Way ANOVA

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the One-Way ANOVA task.
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t Test

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the t Test task.
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Regression Capabilities

Generalized Linear Models

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Generalized Linear Models task.
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Linear Regression

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Linear Regression task.
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Logistic Regression

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Logistic Regression task.

Nonlinear Regression

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Nonlinear Regression task.

Multivariate Capabilities

Canonical Correlation

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Canonical Correlation task.

Cluster Analysis

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Cluster Analysis task.

Correlations

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Correlations task.

Discriminant Analysis

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Discriminant Analysis task.

Factor Analysis

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Factor Analysis task.

Principal Components

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Principal Components task.

Survival Analysis Capabilities

Life Tables

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Life Tables task.
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Proportional Hazards

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Proportional Hazards task.
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Capability Capabilities

CDF Plots

Roles	Advanced
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Description	Enables the CDF Plots task.
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Histograms

Roles	Advanced
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Description	Enables the Histograms task.
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Q-Q Plots

Roles	Advanced
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Description	Enables the Q-Q Plots task.
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Probability Plots

Roles	Advanced
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Description	Enables the Probability Plots task.
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P-P Plots

Roles	Advanced
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Description	Enables the P-P Plots task.
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Control Charts Capabilities

Box Chart

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Box Chart task.
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c Chart

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the c Chart task.
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Individual Measurements Chart

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Individual Measurements Chart task.

np Chart

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the np Chart task.

p Chart

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the p Chart task.

u Chart

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the u Chart task.

Mean and Range Chart

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Mean and Range Chart task.

Mean and Standard Deviation Chart

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Mean and Standard Deviation Chart task.

Pareto Capabilities

Pareto Chart

Roles	Advanced
Description	Enables the Pareto Chart task.

Time Series Capabilities

Forecast Studio Create Project

Roles	OLAP, Analysis, Programming, Advanced
Description	Enables the Forecast Studio Create Project task.

Forecast Studio Open Project

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Forecast Studio Open Project task.
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Forecast Studio Override Project

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Forecast Studio Override Project task.
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ARIMA Modeling and Forecasting

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the ARIMA Modeling and Forecasting task.
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Regression Analysis with Autoregressive Errors

Roles	OLAP, Analysis, Programming, Advanced
-------	---------------------------------------

Description	Enables the Regression Analysis with Autoregressive Errors task.
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Basic Forecasting

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Basic Forecasting task.
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Regression Analysis of Panel Data

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Regression Analysis of Panel Data task.
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Prepare Time Series Data

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Prepare Time Series Data task.
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Create Time Series Data

Roles	OLAP, Analysis, Programming, Advanced
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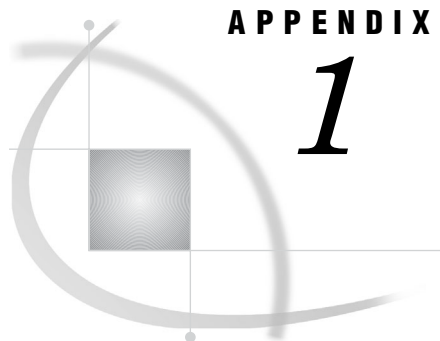
Description	Enables the Create Time Series Data task.
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Model Scoring Capabilities

Model Scoring

Roles	OLAP, Analysis, Programming, Advanced
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Description	Enables the Model Scoring task.
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APPENDIX

1

Recommended Reading

Recommended Reading 51

Recommended Reading

Here is the recommended reading list for this title:

- *SAS/ACCESS for Relational Databases: Reference*
- *Getting Started with SAS Enterprise Guide*
- *SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide*
- *SAS Intelligence Platform: Data Administration Guide*
- *SAS Intelligence Platform: Desktop Application Administration Guide*
- *SAS Intelligence Platform: Installation and Configuration Guide*
- *SAS Language Reference: Dictionary*
- *SAS Management Console: Guide to Users and Permissions*

For a complete list of SAS publications, go to **support.sas.com/bookstore**. If you have questions about which titles you need, please contact a SAS Publishing Sales Representative at:

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Customers outside the United States and Canada, please contact your local SAS office for assistance.

Glossary

authentication domain

a SAS internal category that pairs logins with the servers for which they are valid. For example, an Oracle server and the SAS copies of Oracle credentials might all be classified as belonging to an OracleAuth authentication domain.

capability

an application feature that is under role-based management. Typically, a capability corresponds to a menu item or button. For example, a Report Creation capability might correspond to a New Report menu item in a reporting application. Capabilities are assigned to roles.

connection profile

a client-side definition of where a metadata server is located. The definition includes a computer name and a port number. In addition, the connection profile can also contain user connection information.

database library

a collection of one or more database management system files that are recognized by SAS and that are referenced and stored as a unit. Each file is a member of the library.

engine

a component of SAS software that reads from or writes to a file. Each engine enables SAS to access files that are in a particular file format.

Integrated Windows authentication

a Microsoft technology that facilitates use of authentication protocols such as Kerberos. In the SAS implementation, all participating components must be in the same Windows domain or in domains that trust each other.

libref

a short name for the full physical name of a SAS library. In the context of the SAS Metadata Repository, a libref is associated with a SAS library when the library is defined in the metadata repository.

metadata LIBNAME engine

the SAS engine that processes and augments data that is identified by metadata. The metadata engine retrieves information about a target SAS data library from metadata objects in a specified metadata repository.

metadata repository

a collection of related metadata objects, such as the metadata for a set of tables and columns that are maintained by an application. A SAS Metadata Repository is an example.

metadata server

a server that provides metadata management services to one or more client applications. A SAS Metadata Server is an example.

repository

a location in which data, metadata, or programs are stored, organized, and maintained, and which is accessible to users either directly or through a network. See also metadata repository, SAS Metadata Repository.

role

a set of capabilities. In some applications, certain actions are available only to users or groups that have a particular role.

SAS Metadata Repository

a repository that is used by the SAS Metadata Server to store and retrieve metadata. See also SAS Metadata Server.

SAS Metadata Server

a multi-user server that enables users to read metadata from or write metadata to one or more SAS Metadata Repositories. The SAS Metadata Server uses the Integrated Object Model (IOM), which is provided with SAS Integration Technologies, to communicate with clients and with other servers.

server

a computer system that provides data or services to multiple users on a network. The term 'server' sometimes refers to the computer system's hardware and software, but it often refers only to the software that provides the data or services. In a network, users might log on to a file server (to store and retrieve data files), a print server (to use centrally located printers), or a database server (to query or update databases). In a client/server implementation, a server is a program that waits for and fulfills requests from client programs for data or services. The client programs might be running on the same computer or on other computers.

tasks

in Enterprise Guide, operations that correspond to SAS procedures and SAS functions that analyze, manipulate, or display data. From the Task List you can select the analysis and reporting tasks that you want to run on your data.

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