

SAS® Content Categorization Collaborative Server 5.2 Administrator's Guide



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SAS® Content Categorization Server 5.2: Administrator's Guide

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About This Book

Audience

SAS Content Categorization Collaborative Server is SAS Content Categorization Studio with operations that enable the following administrators to set up the server:

- Database administrator who sets up the data sources on the server
- Project administrator who has upload permissions
- Either type of administrator can specify permissions for regular users

You could be assigned one of these functions, or all of them.

SAS Content Categorization Collaborative Server enables you to use this software with other SAS products. This documentation focuses on tasks that define and configure the collaborative operations for SAS Content Categorization Studio.

Prerequisites

Here are the prerequisites for using SAS Content Categorization Collaborative Server:

- SAS Content Categorization Studio loaded onto your machine
- Appropriate server permission for all users, assigned by the database and project administrators
- Read SAS Content Categorization Studio: User's Guide

Conventions

This manual uses the following typographical conventions:

| Convention | Description | |
|------------------|---|--|
| TGM_ROOT | The root directory where SAS Content Categorization Studio is installed, typically the following: | |
| | Windows: C:/Program Files/SAS/SAS Content Categorization Studio UNIX:/opt/SAS_collab-server | |
| -admin -regular | The code examples for _tk240 are shown in a fixed-width font. | |
| OK button | The labels for user interface controls are shown in a bold, sansserif font. | |
| Тор | The names of taxonomy nodes appear in a fixed-width font. | |
| www.sas.com | The hypertext links are shown in a light blue, fixed-width font, and are underlined. | |
| ? | The Question Mark button accesses SAS Content Categorization Studio: User's Guide in PDF format. | |

What's New in SAS Content Categorization Collaborative Server 5.2

New and enhanced features in SAS Content Categorization Collaborative Server include the following:

- Support for Oracle
- Support for SAS Contextual Extraction Studio concepts
- Improved support for Microsoft SQL Server
- Improved user account management

| SAS Content C | Categorization | Collaborative . | Server: A | Administrator' | s Guide |
|----------------|----------------|-----------------|-----------|----------------|---------|
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Chapter: 1

About SAS Content Categorization Collaborative Server

- What Is SAS Content Categorization Collaborative Server?
- Benefits to Using SAS Content Categorization Collaborative Server
- How Does SAS Content Categorization Collaborative Server Work with SAS Content Categorization Studio?
- Using Collaborative Operations
- Architecture

1.1 What Is SAS Content Categorization Collaborative Server?

In most organizations it is necessary to obtain information about, and from, data that is created internally and externally. This process is expedited when a team of subject matter experts work together to create a single SAS Content Categorization Studio project. The collaborative operations are what distinguish SAS Content Categorization Collaborative Server from SAS Content Categorization Studio.

Using the collaborative server and an intuitive, Windows interface, multiple users can access a single project residing on a server. At the same time, these users can work on a cached version on their local machines. Users with various skill sets and levels of expertise develop a taxonomy. These users write rules for the categories that classify data and the concepts that extract entities. These users can also test these rules by using sample documents.

You and your team can use the collaborative server in order to create, maintain, and revise a taxonomy of topics and entities according to your areas of expertise. An administrator can specify the various levels of access for all users.

Easy permission setting

The database administrator adds users to the project and sets their permission levels. Easy-to-use interfaces within the project enable the project administrator to set permissions for these users both across the taxonomy and at the individual category and concept level.

Easy distributed workflow

Processes are distributed across various areas of expertise. For example, taxonomists might develop the categories, while subject matter experts write rules.

Easy version management

Use the RevisionLog to see, and revert to, earlier versions of your taxonomy, categories, and concepts.

Levels of permissions

Grant users permissions to work on a project according to their level of expertise. For example, grant some users permissions to read and write rules. All users added to the database have Read-Only permissions.

1.2 Benefits to Using SAS Content Categorization Collaborative Server

SAS Content Categorization Collaborative Server provides users with the following add-on benefits to SAS Content Categorization Studio:

Use the expertise of a wide range of subject matter experts

SAS Content Categorization Collaborative Server adds the features that enable multiple subject matter experts to work together on one SAS Content Categorization Studio project. These benefits include permission setting, and the shared projects folders that enable two or more developers to work on a single project on one machine.

Control access to the project

The database and project administrators set permissions at database, project, and node levels to restrict access, where appropriate.

Automatic project updates

Use the Options window to automate the updates for your project.

Enable two or more users to build separate projects on one machine

Two, or more developers, develop projects on one machine using the cached version in the Shared Projects folders.

The following benefits are for SAS Content Categorization Studio. They are included with SAS Content Categorization Collaborative Server.

Empower subject matter experts and taxonomists by providing a simple, visual interface where you build a taxonomy, define rules, and test

SAS Content Categorization Studio includes easy-to-use Windows interfaces that make it easy to build large, complex, and hierarchical taxonomies. Specify your own rules, test them, and generate .mco and .concepts files that are applied by SAS Content Categorization Server to input documents.

Develop metadata for your information

SAS Content Categorization Studio uses advanced linguistic technologies to identify metadata in, and about, your documents.

Improve the business value of information technology and the corporate data that it manages

SAS Content Categorization Studio creates .mco and .concepts files that automate the classification and extraction of entities from input documents during real time using SAS Content Categorization Server.

Save money on information retrieval and organization costs

All of the information created by, or within, your organization can be classified and retrieved. Find related information, whether you know the exact terms that you are seeking.

1.3 How Does SAS Content Categorization Collaborative Server Work with SAS Content Categorization Studio?

Use SAS Content Categorization Collaborative Server to enable multiple subject matter experts to develop one project, while controlling access according to expertise. These experts use SAS Content Categorization Studio as explained in the following paragraphs:

SAS Content Categorization Studio is a Windows application that anyone can use to develop taxonomies that classify and extract the information found in your organization. Interactively identify the data that you need without using a programming language.

SAS Content Categorization Studio enables users to easily create taxonomies, write rules, and test these rules against a variety of testing sets. You can upload the output .mco and .concepts files to SAS Content Categorization Server where they are automatically applied to input documents.

You can also use the _tk240 command-line program to build the binary file that is the <language>.mco file for categories and the <language>.concepts file for concepts. Both of these files are used by SAS Content Categorization Server. For more information, see Appendix A: *Using the _tk240 Utility*.

1.4 Using Collaborative Operations

The ability of multiple developers to work together depends on collaborative operations:

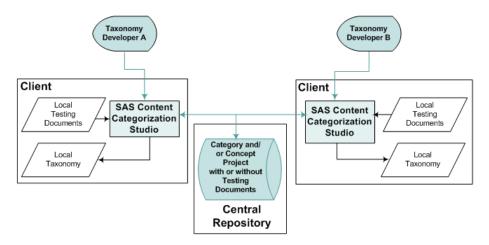
- Create a collaborative, customized SAS Content Categorization Studio project using categories and concepts that form a taxonomy residing on a server. This project can be accessed by multiple developers using a single machine that has different *Shared Projects* folders, or by users who are each working on their own local machines.
- Set project access levels for each of the individual developers and teams if you are an administrator. These permissions, or access levels, can be set at the project, and at the category and concept levels. For example, choose to restrict development permissions for specific taxonomy nodes to a single individual or group. You can simultaneously grant this person or group wider access to other categories and concepts.
- Track modifications to the project using a revision log for both a category rule and a concept definition. You can also use the information in this log file to revert to an older version of the rule or definition.
- Simplify the task of keeping a local project up-to-date with its counterpart on the server.
- Make changes to the taxonomy when a project is up-to-date with the server. This feature ensures that the modifications, additions, and deletions that are made by one developer are not overwritten by another.
- Automate commit operations for all of the changes to the taxonomy.
- Automate a number of server and cached project update processes and set up separate *Shared Projects* folders using the Options dialog box.
 This process enables multiple developers to work on individual cached projects that are located on one machine.
- (Optional) Upload testing documents to the server to enable other developers to use these documents to reproduce your results.

In summation, these features provide the benefits of collaboration. These operations enable your team to balance necessary control with optimal flexibility in order to meet your organization's project development requirements.

1.5 Architecture

Two, or more, subject matter experts, or developers, can work together to create one SAS Content Categorization Studio project.

Figure 1-1 SAS Content Categorization Collaborative Server Architecture



A SAS Content Categorization Studio project that is used for collaborative work, resides on a remote server. The server enables multiple subject matter experts to work together on the same project. This project is cached on their local machines. A project that resides on a server is called a remote project.

2Setting Up a Project on Your Server

- Overview of Setting Up a Project on Your Server
- Installing and Configuring the Server
- Installing the _tk240 Utility
- Setting Up ODBC Data Sources
- Defining Users
- Logging In
- Quick Start Guide Using _tk240

2.1 Overview of Setting Up a Project on Your Server

When your organization chooses to run SAS Content Categorization Studio in the collaborative mode, you as the database administrator, set up data sources on the server. You also add permissioned users to the database. This chapter is written primarily for database administrators, including those who might also function as a project administrator in a small company.

Sections of this chapter also contain information about the tasks that end users perform. These users can set up their own data sources that access the SAS Content Categorization Studio project running on the server.

Note: This chapter contains information for both administrators and regular users. The chapter assumes that administrators often set up data sources for users.

For more information about the tasks that apply to both types of users, see Section 2.4 *Setting Up ODBC Data Sources* on page 15.

2.2 Installing and Configuring the Server

2.2.1 Install the Server

Install a SQL-based database server on your server in order to set up a repository for SAS Content Categorization Studio. Both the SAS Content Categorization Studio application and _tk240 support MySQL, Microsoft SQL Server, and Oracle.

Note: SAS has certified Microsoft SQL Server 2005, or newer, at this point in product development.

If you are running Microsoft SQL Server, the ODBC drivers are pre-installed on Windows. However, if you want to connect to a Microsoft SQL Server database using the ODBC driver for UNIX and did not install this driver, a third-party solution is required.

The address to install MySQL is below:

http://dev.mysql.com/downloads/mysql

Make the following changes to the server configuration file to ensure that SAS Content Categorization Studio runs smoothly. These changes are important if you plan to develop classifier concepts with 100,000, or more, entries.

2.2.2 Change the Size of the .cnf File for Linux

To change the size of data in the my.cnf file, complete these steps:

Copy the my-xxx.cnf file from /usr/share/mysql to /etc as my.cnf.
 The size of this .cnf file can vary from small to large, depending on your requirements.

2. Locate the file. The location depends on the SQL installation. For example, see the following path:

```
cp /usr/share/sqlfilename /etc/my.cnf
or:
    cp /usr/share/sqlfilename /etc/mysql/mysql.cnf
```

3. Change the following default setting in the my.cnf file:

```
max_allowed_packet = 1M
to:
    max_allowed_packet = 32M
```

For classifier definitions of one million or more entries, the value is 96M.

- 4. Save the file.
- **5.** Restart MySQL using the following command line:

```
/etc/init.d/mysql restart
```

2.2.3 Change the Size of the Allowed Packet Size for Windows

To increase the allowed packet size of data in the Microsoft SQL Server program directory, complete these steps:

1. Open the my.ini file that was either installed, or created when you configured the server. This file is located in the following, or in a similar, location:

```
C:\Program Files\SQL\SQL_Server
```

2. Change the following default setting under The SQL Server [mysqld] section:

```
max_allowed_packet = 1M
to:
    max_allowed_packet = 32M
```

3. Save the file.

4. Restart Microsoft SQL Server. Select Control Panel --> Administrative Tools --> Services --> SQL.

2.3 Installing the _tk240 Utility

Before you can configure your ODBC data sources, install _tk240. The _tk240 utility is a command line program that enables you to set up the collaborative mode. This program is shipped in a package with a name that is similar to the example shown below:

```
sas_collab_server_<arch>.tar.gz (UNIX)
sas_collab_server_<arch>.zip (Windows)
```

Download this .zip file onto your computer and extract its files into the location of your choice.

Note: To specify the path to the SAS license, see Section A.7 Set the Path to the SAS License on page 84.

2.4 Setting Up ODBC Data Sources

2.4.1 Driver Types

Install and configure the ODBC driver connectivity software on the server and client systems that are used to access the SAS Content Categorization Collaborative Server project repositories.

SAS Content Categorization Collaborative Server uses three types of ODBC data sources. The first two configurations are for the administrator's machine. The third configuration is for regular users.

- The first ODBC driver points to the default database and is used by the database administrator to create the SAS Content Categorization Collaborative Server database on the server.
- The second ODBC driver points to the SAS Content Categorization Collaborative Server database. Database administrators use this driver to add users to this database.
- Regular users can create an ODBC data source on a local machine that points to the SAS Content Categorization Collaborative Server database.

For more information, see Section 2.4.3 *Configuring Data Sources* on page 16 and Section 2.7 *Quick Start Guide Using _tk240* on page 34.

2.4.2 Installing the ODBC Drivers

SAS Content Categorization Studio and _tk240 use ODBC drivers to connect to database repositories.

Note: To install the ODBC software, make sure that your privileges are set to perform an installation.

You can download the MySQL ODBC drivers for either Windows or UNIX, by going to the following location:

http://dev.mysql.com/downloads/connector/odbc.

Microsoft SQL Server, Windows: preinstalled

Microsoft SQL Server, UNIX: third-party solution required

Oracle: Complete these steps:

- 1. Go to http://www.oracle.com/technetwork/database/features/ instant-client/index-097480.html.
- **2.** Download the Database Instant Client for your architecture.

2.4.3 Configuring Data Sources

2.4.3.A Credentials

Use the following credentials to configure each of the three data sources that are required to run SAS Content Categorization Collaborative Server and _tk240. For more information, see:

- Section 2.4.3.C Configure MySQL Data Sources on page 19
- Section 2.4.3.D Configure Microsoft SQL Server Data Source on page
 22
- Section 2.4.3.E *Download and Configure Oracle ODBC Drivers* on page 29

There are several credentials that supply the information required to create the three different types of data sources:

Name

User

Password

Database: You can either specify a name or use the default entry. For more information, see Table 2-1 on page 18.

Examples of these credentials are provided for each of the following three data sources that you create:

- Administrators with database permissions should see Step 1 on page 34 to initialize a SAS Content Categorization Studio database on the server using these credentials.
- Administrators with database permissions should see Step 2 on page 34 to add users to the SAS Content Categorization Studio database.

- Regular users use the example of credentials shown in Step 4 on page 35 to open a remote project after you create the third data source.

2.4.3.B Configuring ODBC Data Sources on UNIX

Administrators can use _tk240 to set up database connectivity. If you, as an administrator, choose to configure through UNIX, all ODBC data sources are configured using an odbc.ini file. To locate this file, see the path specified by the odbc.ini environment variable or see your home directory. If the odbc.ini file is stored in /etc, it is not writeable. To create a local .odbc.ini file, create a file with this name in your home directory. If necessary, create this file by hand. For more information about the file format, see the following link:

http://www.iodbc.org/index.php?page=docs/faq#iodbc237887083

You can also use the graphical data source administrative tool if this tool is installed on your system.

Use the sample odbc.ini file displayed below to either create or to modify your odbc.ini file:

Example 2-1: A Local odbc.ini File

```
;
  odbc.ini
[ODBC Data Sources]
data_source_name1 = ODBC Driver for MySQL
data_source_name2 = ODBC Driver for MySQL
[data_source_name1]
Driver = /usr/lib/odbc/libmyodbc.so
          = 127.0.0.1
Server
          = 3306
Port
Database
          = database_name
[data_source_name2]
Driver = /usr/lib/odbc/libmyodbc.so
Server = server_name
Port = 3306
Database = database_name
```

Note: The example above uses the MySQL database. If you are connecting to Microsoft SQL Server or Oracle, specify the appropriate name.

Use the second example to create your third data source as well as your second data source.

As shown in Example 2-1 above, you create each data source on a separate line that appears below [ODBC Data Sources]. This section of the odbc.ini file lists all of the ODBC data sources. Below this section, you specify each data source name followed by separate lines detailing the Driver, Server, Port, and Database information.

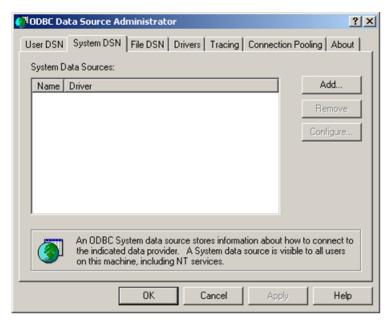
Table 2-1: Data Source Parameters

| Parameter | Description |
|-----------|---|
| Driver | Specify the name and location of the driver library that is installed as part of the ODBC driver. For example, the name of this file might be libmyodbc.so. |
| Server | Specify the name of the machine where MySQL Server is running. Use 127.0.0.1 instead of localhost if you are using MySQL Server running on localhost. |
| Port | Specify the number of the port that connects with MySQL Server. MySQL Server default: 3306 SQL Server default: 1433 Oracle default: 5560 This is true unless MySQL Server was configured to use another port. |
| Database | Specify the name of the database to access using this data source. |

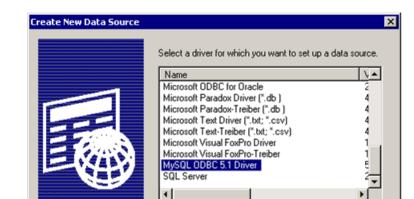
2.4.3.C Configure MySQL Data Sources

To configure data sources on a Windows machines, complete these steps:

1. Select Control Panel --> Administrative Tools --> Data Sources (ODBC) and the ODBC Data Source Administrator wizard appears.



(Administrators) Select the System DSN tab.
 (Regular users) Select the User DSN tab.



3. Click **Add**. The Create New Data Source window appears.

4. Use the scroll bar to locate the appropriate driver. If you select MySQL, see Step 5 below.

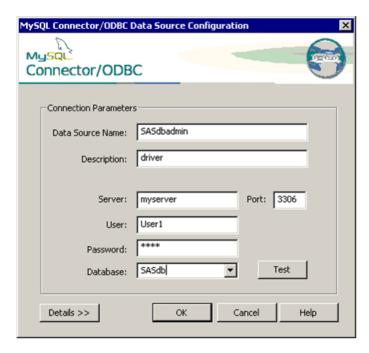
Cancel

Finish

If you are using Microsoft SQL Server, see Step 5 on page 23. If you are using Oracle, see Step 5 on page 30.

Note: Version 5.1 of the MySQL ODBC driver is used for example purposes only.

5 Click Finish and the MySQL Connector/ODBC page appears. Use the MySQL Connector/ODBC wizard to point the ODBC driver to the server:



- **6.** Enter the name of the data source into the **Data Source Name** field. For example, administrators might use SASdbadmin for the first database and SASdb for the second data source. Regular users can use the database name selected by the administrator. For example, they can use SASdb.
- **7.** (Optional) Enter the description into the **Description** field. For example, type driver.
- **8.** Enter the server name into the **Server** field. For example, type myserver.
- **9.** (Optional) The default entry, shown in the right pane of this interface, is entered into the **Port** field.
- **10.** Enter the name of the person making the connection, into the **User** field. Administrators enter their administrative user name as entered on the

server. Regular users specify the user name entered for them by the administrator who added users to the database.

Note: You cannot use a period (.) or an at sign (@) sign when you create a user name for MySQL Server. For example, you cannot use an e-mail address as your user name.

- **11.** Enter your password into the **Password** field. The password for the administrator is the administrator's password on the server.
- **12.** Enter the name of the database that you are connecting to into the **Database** field. The administrator specifies mysql the first time she or he uses this section. The second time, the administrator like all regular users who are using this section for the first time, specifies the database name. For example, you might type tk240db.
- **13.** Click **Test**. If the connection is successful, the Connector/ODBC window appears with a message stating that the connection is successful.

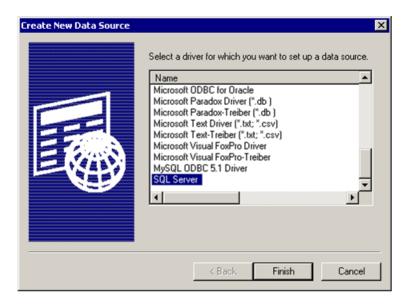


- **14.** (Optional) Click **Details** in the MySQL Connector/ODBC window to set various types of flags.
- **15.** Click **OK**.
- **8.** Click **OK** in the MySQL Connector/ODBC window.

2.4.3.D Configure Microsoft SQL Server Data Source

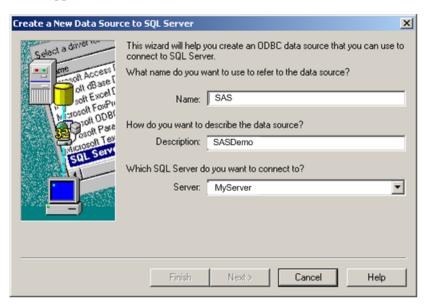
Use the following steps to configure the SAS Content Categorization Studio database using Microsoft SQL Server. These steps continue from Step 4 on page 20:

5. (Optional) If you select SQL Server in the Create New Data Source page, click **Finish**.



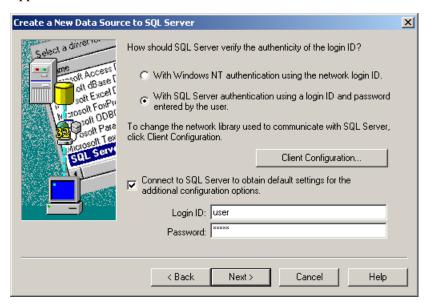
Note: SQL Native Client is also available on some machines. This SQL selection is also valid.

The first screen of the Create a New Data Source to SQL Server wizard appears.



- **6.** Enter the name of your data source into the **Name** field. For example, type SAS.
- **7.** (Optional) Enter the descriptive information for your database into the **Description** field. For example, type SASDemo.
- **8.** Enter the name of the server into the **Server** field. For example, type MyServer.

9. Click **Next** and the next Create a New Data Source to SQL Server page appears.

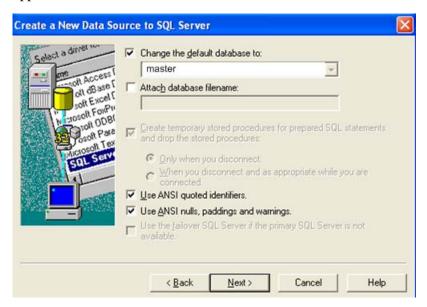


10. (Either Windows NT authentication or SQL Server authentication is OK.) Select With SQL Server authentication using a login ID and password entered by the user.

Note: Step 11 and Step 12 apply only if SQL Server authentication is selected.

- 11. (Optional, but recommended) Enter your name into the Login ID field.
- **12.** (Optional, but recommended) Enter your password into the **Password** field.

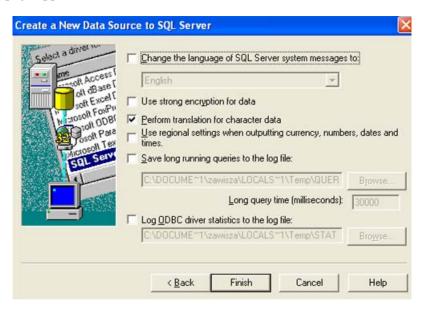
13. Click **Next** and the next Create a New Data Source to SQL Server page appears.



Any of the default settings are OK.

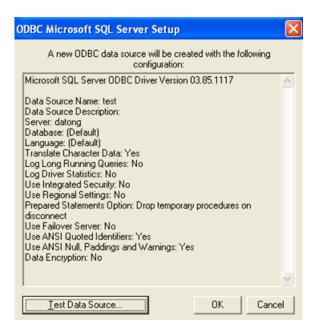
14. Click Next.

15. Click **Next** and the next **Create a New Data Source to SQL Server** page appears.

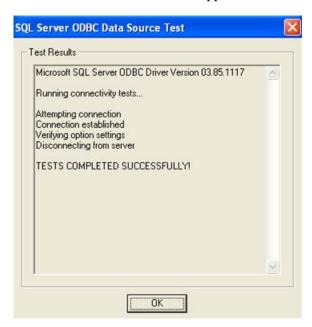


Any of the default settings are OK.

16. Click **Finish**. The ODBC Microsoft SQL Server Setup page appears displaying the configuration that you defined for the new ODBC data source.



17. (Optional) Click **Test Data Source** and a window similar to the SQL Server ODBC Data Source Test window appears.



- **18.** Click **OK**, if you see the SQL Server ODBC Data Source Test window.
- **19.** Click **OK** in the ODBC Microsoft SQL Server Setup page.

2.4.3.E Download and Configure Oracle ODBC Drivers

You can download Oracle ODBC drivers to your machine.

To download an Oracle ODBC driver, complete these steps.

- 1. Go to the Oracle Web site and download the Instant Client package (direct link: http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html).
- **2.** Choose the desired architecture in the Web page that opens from this link.
- 3. Click Sign In/Register for Account and log in.
- **4.** Accept the license agreement.

5. Download both the Instant Client – Basic and Instant Client – ODBC packages.

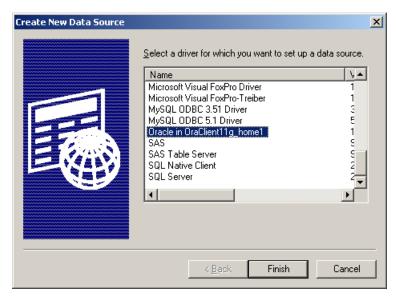
Note: Make sure that both client package files are located in the same directory.

- **6.** Extract the client packages.
- **7.** Navigate to the subdirectory where the packages were extracted.
- 8. Run odbc_install. (On Windows, run odbc_install.exe.)

ODBC support for Oracle is configured after you run the install command.

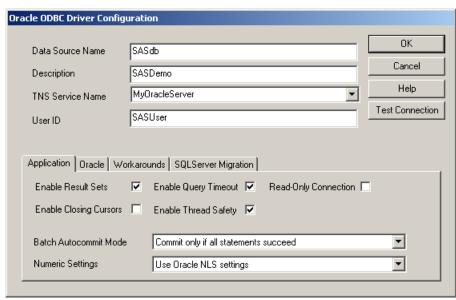
To configure your Oracle ODBC drivers to set up your data source, complete these steps. These steps continue from Step 5 on page 13:

5. Select the ODBC driver that you installed. The exact name of the driver depends on the version of Oracle Instant Client that you install.



6. Click Finish.





- **7.** Enter the name of the data source into the **Data Source Name** field. For example, type SASdb.
- **8.** (Optional) Enter the information about your database into the **Description** field. For example, type SASDemo.
- **9.** Enter the server name into the **TNS Service Name** field. For example, type MyOracleServer.
- **10.** Enter the user name assigned by the database administrator into the **User ID** field. For example, type SASUSER.

11. Click **OK**. The Oracle ODBC Driver Connect window appears.



12. The fields in this window are automatically filled in for you with the exception of the **Password** field.

Hints: The **Server Name** field contains the same name as the entry in the **TNS Service Name** field.

The **User Name** field contains the same name entered by the database administrator into the **User ID** field. See Step 10 on page 21.

13. Click **OK**. If the connection is successful, the Testing Connection window appears with this message.



- 14. Click OK.
- **15.** Click **OK** to close the Oracle ODBC Driver Connect window.

2.5 Defining Users

After the SAS databases are configured, but before you add user accounts to a new project, define administrative and regular users. For more information, see Section A.5.1 *Add Users* on page 78.

To make a new user a project administrator, assign them upload permissions for the project. For more information, see Section 4.5 *Setting Permission Levels in an Open Project* on page 56.

Only database administrators can perform some operations:

- Access every SAS Content Categorization Studio project on the server.
- Project administrators can also upload SAS Content Categorization Studio projects to the server.
- Add, change, and delete users in the SAS Content Categorization Collaborative Server project.

After regular users are added to a project by an administrator, their permission levels for the project are set using the SAS Content Categorization Collaborative Server interface. This permission level setting controls their access to the project. By default, a regular user has Read-Only permissions.

2.6 Logging In

After the connections to the remote server are set up from the local host, a user can log in from any host that they are set up to use. Three pieces of information are required to log in to the remote repository:

- the data source name
- your user name
- your password

2.7 Quick Start Guide Using _tk240

Administrators use _tk240 to enable the collaborative mode of SAS Content Categorization Studio.

To use _tk240, complete these steps:

1. You, as the database administrator, initialize the SAS Content Categorization Studio database using the following command line example:

```
_tk240 -initialize_database
-driver <datasource_1>
-user <sam>
-pass <admin12>
-verbose
```

2. You, as the database administrator, add one or more project administrators to the project:

```
_tk240 -add_user
    -driver <datasource_2>
    -user <sam>
    -pass <admin12>
    -username <pam>
    -password <pam34>
    -regular
    -can_upload
    -verbose
```

Notes: If you use SQL server with Windows Authentication, replace -user and -pass with -windows_authentication in this step and all of the following steps.

Replace with -login_name <DOMAIN\username > in Step 2 above and Step 4 on page 35.

The user name of a new project administrator, who has upload privileges, is specified using the <username> parameter. For example, pam has upload permission in this example. This user is required to use the specified password. For example, specify pam34, to access this project. For more information, see Section A.5.1 *Add Users* on page 78.

- **3.** (Optional) Continue using Step 2 above, reiteratively, until all of the project administrators are added to your project.
- **4.** You, as the database administrator, add regular users to the project. For more information, see Section A.5.1 *Add Users* on page 78.

```
_tk240 -add_user -driver <datasource_2>
-user <sam>
-pass <admin12>
-username <tom>
-password <tom22>
-regular
-verbose
```

The user name of the new regular user is specified using the <username> parameter. For example, specify tom. This user is required to use a password to access the project because his password is specified using the cpwd> parameter. In this example, tom uses this password tom22 to access the project.

This user can access a project on the server as a regular user and download that project. This user cannot upload a project to the server, because upload permissions are not specified. If upload permissions are specified, this regular user becomes a project administrator.

5. (Optional) Continue using Step 4 above, reiteratively, until you have added all of the regular users to your project.

3

Using the Interface

- How Collaborative Management Affects the User Interface for SAS Content Categorization Studio
- The Menu Bar
- The Server Operation Windows
- The Miscellaneous Windows

3.1 How Collaborative Management Affects the User Interface for SAS Content Categorization Studio

Collaborative operations are enabled by a server. For this reason, some of the operations that are visible in the SAS Content Categorization Studio user interface are not accessible until you set up the server. The collaborative operations enable you as an administrator to upload files and to set user permissions.

This chapter describes the operations that are available for an administrative user. For information about the collaborative operations that are available for both you and regular users, see the SAS Content Categorization Collaborative Server: User's Guide.

3.2 The Menu Bar

Many of the collaborative operations for SAS Content Categorization Studio are located in the menu bar. Some of the menu commands are also available on the standard toolbar, and a few can also be accessed by right-clicking on the nodes in the Taxonomy window.



This is the command that is available for administrators in the SAS Content Categorization Studio menus:

File --> Upload Project to Serve

Place a copy of the project onto the server. This operation can be performed only if you have administrative permissions. When you select this operation, the Upload to Server window appears. For more information, see Section 3.4.5 *The Upload to Server Window* on page 47.

3.3 The Server Operation Windows

3.3.1 Access Server Permissions

Server permissions enable you to set the level of access for each user.

Display 3-2: Server Operations



When you right-click on a taxonomy node, a menu appears. The **Server Permissions** operation is available from individual nodes in the taxonomy.

Note: The server operations, Local Permissions, and Project Permissions are available only in the Server menu.

3.3.2 The Project Server Permissions Window

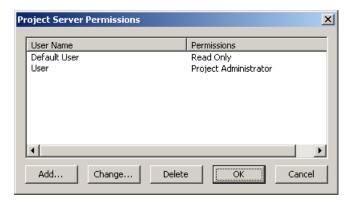
Specify, and see a list of users and their permission levels for your entire project using the Project Server Permissions window.

To open the Project Server Permissions window, complete this step:

Right-click on the project name node. For example, right-click on SAS_Demo. Select **Server Permissions** from the drop-down menu that appears.



The Project Server Permissions window appears.



User Name

See a list of all of the project users for this project.

Permissions

See the permission level assigned to each user.

Add

Make a member of the Default User group, a user with his or her own permission level. The Set User Permission window appears. For more information, see Section 3.3.4 *The Set User Permission Windows* on page 42.

Change

Click after you select a user in the Project Server Permissions window. The Set User Permission window appears. For more information, see Section 3.3.4 *The Set User Permission Windows* on page 42.

Delete

Click after you select a user. A SAS Content Categorization Studio confirmation window appears asking you to confirm your decision to remove the permission setting for the selected user.

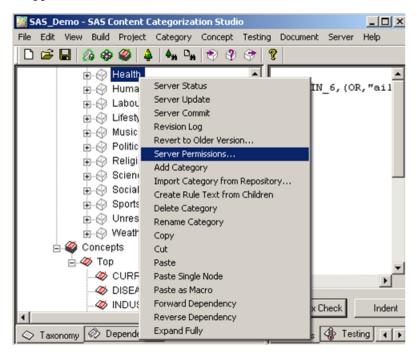
3.3.3 The Set Server Permissions for a Selected Node Window

Use the Server Permissions for (the selected category or concept node) window to specify users and to set their access levels for the selected category or concept. The permission levels that you specify apply to the selected node only and override the access level that you set for the project.

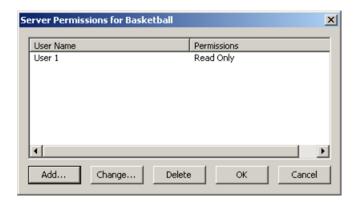
For example, you might specify that User1 has Read and Write privileges for the project. You might also specify a Read-Only permission setting for the Health node. In this case, User1 can read the rule for the Health category, but cannot make any changes to this rule.

To access the Server Permissions for a selected node window, complete this step:

Right-click on a taxonomy node. For example, right-click on the Health category node. Select **Server Permissions** from the drop-down menu that appears.



The Server Permissions for (the selected category or concept name) window appears.



Use the various components of this window to set user permissions for the selected nodes. For more information, see Section 3.3.2 *The Project Server Permissions Window* on page 39.

3.3.4 The Set User Permission Windows

Only an administrator can change user permissions from the default setting of Read Only that is set at the command line when each user is added to the project.

There are two windows for this operation:

Display 3-3: Set User Permissions at the Project Level



Display 3-4: Set User Permissions at the Category or Concept Node Level



To use a Set User Permission window, complete these steps:

- 1. Click ▼ to the right of the **User Name** field to select a name from the drop-down list of users added to the project. For more information, see Section A.5.1 *Add Users* on page 78.
- 2. Click **v** to the right of the **Access Level** heading to specify the user's new permission level:
 - Read Only: Read, but do not make any changes to the project.

- Read and Write Rules: Read the project and write rules and definitions.
- Read, Write, and Change Taxonomy: Develop any part of this project, including the taxonomy.
- **3.** (Optional, and only available at the individual node level) Select **Propagate to children**. When you make this selection, the user has the specified permission level for the child nodes.
- 4. Click OK.

For more information, see Section 4.5 Setting Permission Levels in an Open Project on page 56.

3.4 The Miscellaneous Windows

3.4.1 The Repository Login Window

Log in to the server before you work on a collaborative project. If you do not log in and you select any of the following operations from the **File** drop-down menu, the Repository Login window automatically appears:

- Open Remote Project
- Remove Project from Server
- Repository Login
- Change Repository Password

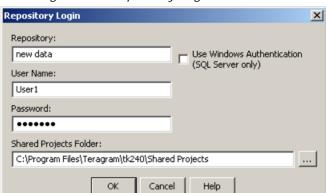


Figure 3-5: Repository Login Window

To use the Repository Login window, complete these steps:

- 1. Enter the name of the ODBC data source into the **Repository** field.
- (Optional) Select User Windows Authentication (SQL Server only) to use the Windows user account principal token to connect. If you select this check box, the User Name and Password fields are grayed.
- **3.** Enter your user name into the **User Name** field.

Hints: If you previously used SAS Content Categorization Collaborative Server, the Repository, User Name, and Shared Projects Folder fields are all filled in. In Windows Vista a preference is set so that data is not stored in the program files directory hierarchy.

- **4.** Enter your password into the **Password** field.
- **5.** (Optional) Click under the **Shared Projects Folder** heading and the Select a Directory window appears. Use this window to select a location for the Shared Projects folder. For more information, see Section 3.4.2 *The Select a Directory Window* below.
- 6. Click OK.

3.4.2 The Select a Directory Window

Use this section in cases where your operating system restricts what can be stored in the Program Files directory. For example, use this section if you are running Windows Vista/2008 Server/7.

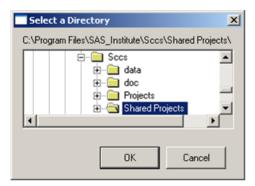
In any of these cases, use the Select a Directory dialog box to locate either a remote project, or a cached copy of a SAS Content Categorization Studio project.

To open and use the Select a Directory window, complete these steps:

- 1. Select File --> Open Remote Project. The Repository Login window appears. See Figure 3-5 on page 44.
- 2. Use Step 1 to Step 4 on page 44.

Hint: These fields are automatically filled in for you, unless this is the first time you are using this window.

3. (Optional) Click under the **Shared Projects Folder** heading and the Select a Directory window appears.



- **4.** Select the Shared Projects folder or a cached project in another location on your machine.
- 5. Click OK.

3.4.3 The Select a Project Window

Use the Select a Project window to locate a project on the server. You can open the project on your local machine, or delete the project.

To open and use the Select a Project window to open a project, complete these steps:

1. Select **File --> Open Remote Project**. The Select a Project window appears.



- **2.** Highlight the project in the Select a Project window that you want to open. For example, select Sample.
- 3. Click OK.

To remove a project, complete these steps:

- 1. Select File --> Remove Project From Server.
- **2.** Use Step 2 through Step 3 above. A SAS Content Categorization Studio confirmation window appears.



Note: The project that you want to remove from the server cannot be open and running on your machine during the removal process.

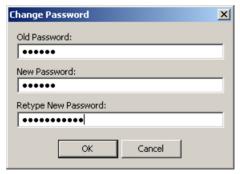
3. Click Yes.

3.4.4 The Change Password Window

Use the Change Password window to specify a new password.

To open and use the Change Password window, complete these steps:

1. Select File --> Change Repository Password and the Change Password window appears.



- **2.** Enter your password into the **Old Password** field.
- **3.** Enter your new password into the **New Password** field.
- **4.** Re-enter the new password into the **Retype New Password** field.
- 5. Click OK.

3.4.5 The Upload to Server Window

A project or database administrator, only, can use the Upload to Server window to upload a project from a local workstation to the server. After the project is created on a local machine and uploaded to the server, this SAS Content Categorization Studio project is accessible to other permissioned users.

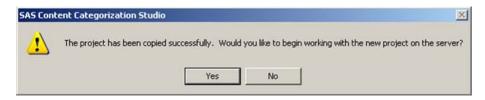
To upload a project, complete these steps:

1. Create a SAS Content Categorization Studio project on your local machine. For more information, see the SAS Content Categorization Studio: User's Guide.

2. Select **File --> Upload Project to Server** and the Upload to Server window appears.



- **3.** Enter the name of the project that you are uploading to the server into the **Enter project name** field.
- **4.** Click **OK**. A SAS Content Categorization Studio confirmation window appears.



5. Click Yes.

4

Administering a Collaborative Project

- Overview of Administering a Collaborative Project
- Create a Project on a Local Machine
- Upload a Project
- Open a Remote Project
- Setting Permission Levels in an Open Project
- Remove a Project from the Server

4.1 Overview of Administering a Collaborative Project

You, as the project or database administrator, set up a project that is developed by subject matter experts working together. Collaboration between project developers is possible only when a SAS Content Categorization Collaborative Server project resides on a server with cached versions of the project on one or more workstations. Working at their local machines, regular users can collaborate on one project.

In order to administer a SAS Content Categorization Collaborative Server project, you grant the permission levels that are necessary to access the project at its various levels. After SAS databases are configured, but before you add user accounts to a new project, define administrative and regular users.

Only administrators can upload a project to the server, or remove a project from the server, and set permissions. To make a regular user a project administrator, assign this person upload permissions. For more information, see Section 4.5 *Setting Permission Levels in an Open Project* on page 56.

For information about using many of the same collaborative operations with the _tk240 command line see Appendix A: *Using the _tk240 Utility*.

The collaborative operations for SAS Content Categorization Studio also enable an administrator to specify permission levels for each of the subject matter experts working on the taxonomy. This is true whether these experts are defining categories and concepts, or writing rules and definitions. These permission, or access, levels can be applied across the taxonomy as well as to specific categories and concepts. For example, all taxonomists might be granted Read permissions for the entire taxonomy. Some taxonomists might be assigned Write permissions for the categories and concepts representing their area of subject matter expertise.

The operations to set up the appropriate data sources, run _tk240, initialize the database, and add users are performed before projects can be uploaded to the server. For more information, see Section 2, Setting Up a Project on Your Server.

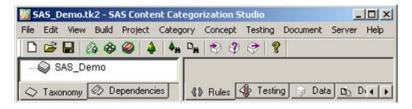
A copy of the project is automatically saved to your local machine. This project is stored in the *Shared Projects* folder that is automatically created by SAS Content Categorization Studio. When you log in to the repository, you open your local version of the selected project.

4.2 Create a Project on a Local Machine

You, as an administrator, upload a project to a server when it becomes a collaborative project. For more information about creating a local project, see SAS Content Categorization Studio: User's Guide.

A user with administrative permissions should create the initial project, because both permission setting and the capability to upload projects to the server are limited to this user type. However, the initial project does not require more than the project name node.

Display 4-1: New Project



After you create a project, you change this project from a regular, into a collaborative, SAS Content Categorization Studio project.

To create a collaborative project, complete these steps:

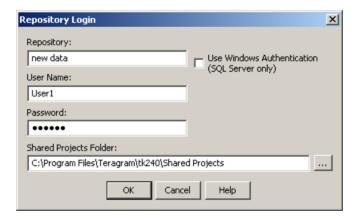
- 1. **Upload a project to the server**: Access by multiple users cannot begin until you upload a project to the server. For more information, see Section 4.3 *Upload a Project* below.
- **2. Open the remote project**: An administrator opens the remote project on the server before she or he can set the permission levels for other users. For more information, see Section 4.4 *Open a Remote Project* on page 54.
- **3. Set permission levels at the project level**: Initially all non-administrative users have Read-Only permissions that prevent them from performing any project development tasks. For more information about permission levels set on the server, see Section A.5.1 *Add Users* on page 78. Also see Section 4.5 *Setting Permission Levels in an Open Project* on page 56.

4.3 Upload a Project

After a project is created, you, the database or project administrator, upload the project to the server. Collaborative work can then begin. The directions in this section apply to the user interface. For more information about the upload process using _tk240, see Section A.5.6 *Upload a Project Using _tk240* on page 81.

To upload a project to the server, complete these steps:

- 1. Open a project.
- **2.** Select **File --> Upload Project to Server** and the Repository Login window appears:



- 3. Enter the name of the ODBC data source into the **Repository** field.
- 4. (Optional) Select User Windows Authentication (SQL Server only) to use the Windows user account principal token to connect. If you select this check box, the User Name and Password fields are grayed.
- **5.** Enter your user name into the **User Name** field.
- **6.** Enter your password into the **Password** field.

Note: The **Shared Project Folder** field is not applicable at this time.

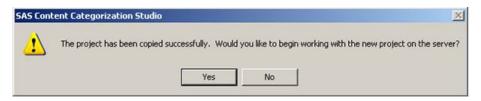
7. Click **OK** and the Upload to Server dialog box appears:



The name of the collaborative project that you are working on is automatically entered for you. For example, see SAS_Demo in the Enter Project Name field. You can also choose to rename the project by entering a new name into the Enter project name field.

The project on the server can have the same name as the local project that you upload, or you can choose a different name. However, two or more collaborative projects cannot have the same name if they are both located on the same server.

8. Click **OK** and a SAS Content Categorization Collaborative Server confirmation window appears:



9. Click Yes.

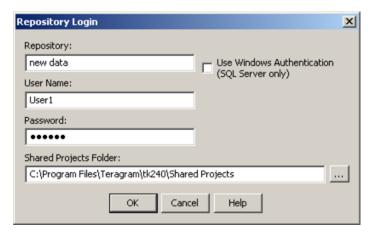
Hint: For large projects, this operation might take several minutes to complete.

4.4 Open a Remote Project

Before you can set user permissions, or work on a project, open a remote project.

To open a remote project, complete these steps:

1. Go to File --> Open Remote Project and the Repository Login window appears:

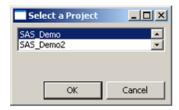


- 2. Enter the name of the ODBC data source into the **Repository** field.
- (For Microsoft SQL Server only) Select User Windows
 Authentication (SQL Server only) to use the Windows user account principal token to connect. If you select this check box, the User Name and Password fields are grayed.
- **4.** Enter your user name into the **User Name** field. If you want to log in using a different user name, type in your new user name as specified by the administrator. For more information, see Section A.5.1 *Add Users* on page 78.
- **5.** Enter the password assigned to you in to the **Password** field.

Hints: If you previously used SAS Content Categorization
 Collaborative Server, the Repository, User Name, and
 Shared Projects Folder fields are all filled in.
 In Windows Vista and Windows 7 a preference is set so

that data is not stored in the program files directory hierarchy.

- **6.** The **Shared Projects Folder** field automatically displays the path to the Shared Projects folder after you access a project on the server. This folder stores the local, cached versions of the projects that you develop. For more information, see Section 3.4.2 *The Select a Directory Window* on page 45.
- 7. Click **OK**. The Select a Project window appears:



8. Select the project that you want to open. For example, select SAS_Demo.

Note: Select a project in order to begin working in the user interface.

9. Click OK.

SAS Content Categorization Studio connects to the database using ODBC drivers.

4.5 Setting Permission Levels in an Open Project

4.5.1 Understanding Permissions

Administrators, only, can use the permissions windows to specify access levels for each project developer. By default, each regular user who is added to the project has Read-Only permissions until this permission level is changed by an administrator. For more information, see Section A.5.1 *Add Users* on page 78.

Each user, with the exception of an administrator, can have different permission levels specified for individual categories and concepts. These permissions can also differ from the project permission level for this user.

For example, you could specify Read and Write Rules at the project level for User1, but Read-Only permissions for the Education category. This user could write rules for every category and concept in this taxonomy, with the exception of the Education category.

4.5.2 Overview of Project Permission Levels

After users are added to a project at the command line, they are collectively known as regular users. For more information about command line operations, see Appendix A: *Using the _tk240 Utility*. The default permission setting for all users is Read Only. This setting enables users to see, but not to make any changes to, a project.

Server permissions for each of the users that are developing a project can be specified at both the project and individual node levels. The project administrator can specify a general access level for the entire project. This administrator can also choose to set different permission settings for one or more of the taxonomy nodes.

For example, if a user is granted Read, Write and Change Taxonomy project-level permissions, this user can read, and write rules for any node in the taxonomy. This user can also change the taxonomy by adding or deleting categories and concepts. However, if the permission levels for the same user is restricted to Read Only for one category, this user would not be able to write the rule. For more information about the various levels of permission setting, see Section 4.5.3 *The Permission Levels* below.

4.5.3 The Permission Levels

This section provides an overview of all six levels of permission setting. Permission levels that are set at individual category and concept levels override the permission levels set at the project level. However, this statement is true only for the category or concept where these permissions are reset. Use the information in the table below to understand these settings before applying them in your project.

Table 4-1: Permission Levels for Collaborative Users

| Setting | Description | Permission Level is set at: | | | | | |
|--|--|--------------------------------|------------------|-----------------|--|--|--|
| | | Local or Individual Node | Whole Project | Server Level | | | |
| Application users | | | | | | | |
| No Access | This user has no access to this project. | | х | | | | |
| Read Only | (Default) This user can read, but cannot make any changes to, the project. | Х | Х | | | | |
| Read and Write Rules | This user can read this project and write category rules and concept definitions. | Х | Х | | | | |
| Read, Write, and Change Taxonomy | This user can read the project, write rules or definitions for categories or concepts, and change the taxonomy by renaming, adding, and deleting categories or concepts. | х | Х | | | | |
| Project Administrators | | | | | | | |

Table 4-1: Permission Levels for Collaborative Users (Continued)

| Setting | Description | Permission Level is set at: | | | | | |
|--|-------------|--------------------------------|------------------|-----------------|--|--|--|
| | | Local or Individual Node | Whole Project | Server Level | | | |
| The project administrator can do everything that the database administrator does, with the exception of adding users to the project. | | | х | Х | | | |
| Data Administrators | | | | | | | |
| The database administrator has access to all of the projects on the server, as does the project administrator. In addition, the database administrator can add and delete all of the SAS Content Categorization Collaborative Server users at the server level. (In some organizations this administrator can also function as the project administrator.) | | | | х | | | |
| Note : Different users, with the exception of administrators, can have different permission levels for every project. | | | | | | | |

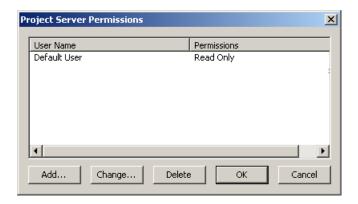
4.5.4 Setting, Changing, and Deleting Permission Levels

4.5.4.A Set Permissions at the Project Level

Use the Project Server Permissions window to specify new permission levels for individual users. By default, all new users are part of the Default User class with the permission level Read Only.

To add users to the project and change their permission level, complete these steps:

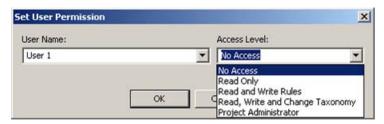
1. Go to Server --> Project Permissions and the Project Server Permissions window appears.



By default, the Project Server Permissions window initially lists only the Default User class. This group of users has the default permission setting of Read Only. These permissions are reset, one user at a time, in order for the members of this group to develop this project.

2. Select a user. For example, choose Default User.

3. Click Add and the Set User Permission window appears:



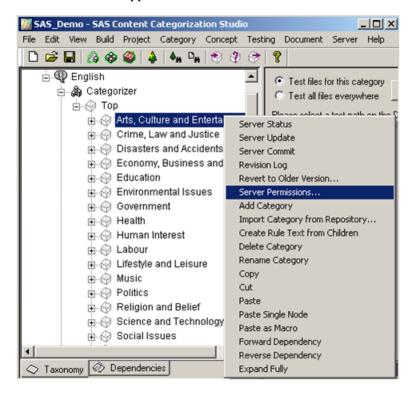
- **4.** (Optional) Click ▼ to the right of the **User Name** field and select another user. By default, the name of one of the default users is displayed in the **User Name** field. For example, choose User 1.
- 5. Click ▼ to the right of the Access Level field and select another permission level. For example, choose No Access.
- 6. Click OK.
- **7.** Click **OK** in the Project Server Permissions window.

4.5.4.B Set Permissions for Individual Nodes

Specify permissions at the individual category or concept level to override the project level setting. This process is similar to setting access levels to the project. You can also assign child nodes the same permission levels as their parent nodes.

To set permission levels for a parent and its children, complete these steps:

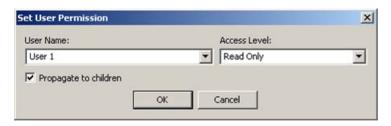
1. Right-click on a node and select **Server Permissions** from the drop-down menu that appears:



The Server Permissions for (selected node name) window appears.



2. Click Add and the Set User Permission window appears.



- 3. (Optional) Click Propagate to children.
- **4.** Follow Step 5 through Step 7 on page 60.

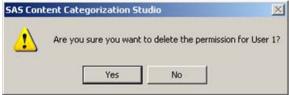
4.5.4.C Changing Project Level Permissions

You can change a user's permission level by using Step 1 on page 59 through Step 7 on page 60, with the exception of Step 3 on page 60. Click **Change**, instead of clicking **Add**.

4.5.4.D Delete Project Level Permissions

To delete a user from a project, complete these steps:

- **1.** Follow Step 1 and Step 2 on page 59.
- **2.** Click **Delete** and a SAS Content Categorization Collaborative Server confirmation window appears:



- 3. Click Yes.
- **4.** Click **OK** in the Project Server Permissions window.

When you remove a user from the project, this user no longer appears in the Project Server Permissions window. This user remains in the drop-down list for the <code>Default User</code> until you change their permission level and grant them access to the project. If you want to remove the user from all of these interfaces, delete

the user at the _tk240 level. For more information, see Section A.5.4 *Delete a User* on page 80.

4.6 Remove a Project from the Server

Only an administrator has the permission level necessary to delete a project from the server. This operation cannot be performed on a project that is currently open. Use the steps in this section to remove a project using the user interface, or see Section A.5.8 *Delete a Remote Project Using _tk240* on page 82.

When you remove a project from the server, you permanently delete this project. This is true unless a copy of the deleted project is stored on your workstation. The Remove Project From Server operation is irreversible.

To remove a project from the server, complete these steps:

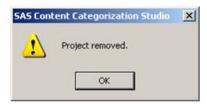
1. Select File --> Remove Project From Server. The Select a Project window appears.



- 2. Select the project that you want to permanently delete from the server.
- **3.** Click **OK**. Two successive SAS Content Categorization Studio windows open.



4. If you are sure that you want to remove the project, click OK.



5. Click OK.

Reference Section

- Appendix A: Using the _tk240 Utility on page 67
- Appendix B: The Program Files on page 85
- Appendix C: Recommended Reading on page 89
- Appendix D: Glossary on page 91

Appendix: A Using the _tk240 Utility

- Overview of the _tk240 Utility
- Command-Line Parameters
- Command-Line Operations
- Performing Database Operations
- Performing Server Operations
- Performing General Operations
- Set the Path to the SAS License

A.1 Overview of the _tk240 Utility

The _tk240 utility is a command-line program that complements the functionality of the SAS Content Categorization Studio application for Windows. This utility is used only by administrators, not regular users. Supported platforms for the _tk240 utility include Windows and all major UNIX distributions. For example, use Linux, Solaris, FreeBSD, and others. For more information, see the SAS Content Categorization Studio: User's Guide.

The _tk240 utility program is shipped in a package with a name that is similar to the example shown below:

```
sas_collab_server_<arch>.zip (Windows)
sas_collab_server_<arch>.tar.gz (UNIX)
```

This package contains the SAS Content Categorization Studio data directory that is required by _tk240. This directory is the root directory of the extracted package for both Windows and UNIX operating systems.

Download this .zip file onto your computer and extract its files into the location of your choice. For example, on a Windows XP operating system, you might extract the tk240_commandline.zip into the following location:

C:\Documents and Settings

Alternatively, you could extract the .zip file in a user folder on a machine running Windows Vista by using the path specified below:

C:\Users

There are several types of operations that you, as an administrator, can perform using _tk240:

- Perform database operations. For more information, see Section A.4 *Performing Database Operations on page 75*.
- Access remote projects on the server and perform server operations. For more information, see Section A.5 Performing Server Operations on page 78.
- Perform project-specific operations. For more information, see Section A.6 *Performing General Operations on page 82*.

The parameters for these operations are described in Section A.2 Command-Line Parameters below and Section A.3 Command-Line Operations on page 71.

A.2 Command-Line Parameters

Use this section to understand and apply the various parameters that you specify when you use the _tk240 command line. Before you use this chapter, see the table below:

Table A-1: _tk240 Command-Line Parameters

| Parameter | Description |
|---|---|
| <admin _pwd=""></admin> | Specify the password for the administrative user with permission to access the database on the server. For more information, see Section A.4 <i>Performing Database Operations on page 75</i> . |
| <admin _user></admin | Specify the name of the administrative user with permission to perform database operations. For more information, see Section A.4 <i>Performing Database Operations on page 75</i> . |
| <pre><concept_ binary_="" file=""></concept_></pre> | Specify the names of your concept binary files. For example, specify <concept_binary_file_1> and <concept_binary_file_2>. For more information, see Section A.6.3 Limit Output to Unique Concept Matches on page 83.</concept_binary_file_2></concept_binary_file_1> |
| <data_path></data_path> | Specify the full path to the SAS Content Categorization Studio data directory that is the root directory of the extracted package file. |
| | The data directory is the top-level folder, not the subdirectory named data that is located within the top-level directory of the package. For example, on a Windows XP operating system, the sas_collab_server_ <arch>.zip can be downloaded and extracted into the following location:</arch> |
| | C:\Documents and Settings\tk240user |
| | Alternatively, if you extracted the WinZip file to a machine running Windows Vista, the path might be the following: |
| | C:\Users\tk240user |
| <flist></flist> | Specify the name of the file that lists all of the files in the project in list format. For more information, see Section A.6.3 <i>Limit Output to Unique Concept Matches on page 83</i> . |
| <pre><missing_ _path="" tk2_file=""></missing_></pre> | Specify the path to the .tk2 file that contains missing concepts. See <data_path> above before specifying this path. For more information, see Section A.6.2 <i>Locate Missing Concepts in a Project on page 83</i>.</data_path> |

Table A-1: _tk240 Command-Line Parameters (Continued)

| Parameter | Description |
|---|--|
| <odbc_ driver _name></odbc_ | Type in the name of the ODBC data source. For example, specify tk240db. For more information, see Section 2.4 Setting Up ODBC Data Sources on page 15. |
| <pwd></pwd> | Enter the password for a regular user. For more information, see Section A.5 <i>Performing Server Operations on page 78</i> . |
| <pre><pre><pre><pre>aname></pre></pre></pre></pre> | Upload the project using this name. Otherwise it is uploaded, opened, or deleted using the name specified in the SAS Content Categorization Studio file. |
| <tk2_file _path></tk2_file | Type in the path to the SAS Content Categorization Studio project file that you want to work with. This can be a relative path. See the following example: |
| | Projects/Test.tk2 |
| | Alternatively, it can be an absolute path. See the following example: |
| | C:\Program Files\Teragram\tk240\Projects\ Test\Test.tk2 |
| <user></user> | Type the name of a regular user here. For more information, see Section A.5 <i>Performing Server Operations on page 78</i> . |
| <path></path> | Specify the relative path to the setinit file for the SAS license. |

A.3 Command-Line Operations

Use this section to understand and apply the various operations that you specify when using the _tk240 command line. The table below lists and explains the operations that apply to command-line operations in the following three subsections of this chapter:

- Section A.4 Performing Database Operations on page 75
- Section A.5 Performing Server Operations on page 78
- Section A.6 Performing General Operations on page 82

Table A-2: _tk240 Command-Line Operations

| Operation | Description |
|--|---|
| -add_multiple _database _support | Enable support for multiple databases on a single server. |
| -add_user | Add a user to the database. |
| -admin | Make this user an administrative user with full database permissions. |
| | Note : The -admin and -regular options are mutually exclusive. (-regular is explained below.) |
| -can_upload | Give a regular user permission to upload projects to the server. When this user uploads a SAS Content Categorization Studio project to the server, this person becomes a project administrator. However, this person is only an administrator for the uploaded project. |
| -change_user | Change the specified permission level or password for this user. For example, you might want to change the user type to enable a regular user to become a project administrator for upload purposes. |
| -check_project | Check the project for errors. |
| -clear_locks | Clear any orphan locks, regardless of the type, from the database. For more information, see Section A.4.7 <i>Clear Database Locks on page</i> 77. |
| -commit_and_ unlock_project | Commit changes and unlock a SAS Content Categorization Studio collaborative project. |

Table A-2: _tk240 Command-Line Operations (Continued)

| Operation | Description |
|--------------------------------|--|
| -con1 -con2 | Compare the concepts (-con1) listed in one .concepts file against those appearing in a second .concepts binary file (-con2). For more information, see Section A.6.3 <i>Limit Output to Unique Concept Matches on page 83</i> . |
| -concepts_fpat | Produce a concepts binary file that is optimized for best performance with SAS Content Categorization Server. This parameter prioritizes concept matching over build time. This selection is also equivalent to selecting Matching Speed in the Optimize For setting on the Concepts tab of the Project Settings window. |
| -data | Specify the path to the SAS Content Categorization Studio data directory here. For more information, see Table A-1 _tk240 Command-Line Parameters on page 69 that describes the <data_path> parameter.</data_path> |
| -database | Enter a name for a database that is not the default database. Before you specify the -database operation, see Section A.4.3 <i>Add Support for Multiple Databases on page 76</i> . |
| -delete_user | Delete the selected user from the database. |
| -delete_ remote_project | Delete a SAS Content Categorization Studio project from the server. |
| -driver | Specify the name of the ODBC data source that is used to connect to the database. |
| -files | Specify the names of the files appearing in the file list. |
| -host | Specify this operation for a Microsoft SQL Server user. By default, two user accounts are created. These accounts are <user>@% and <user>@localhost. If the -host parameter is specified, accounts <user>@host1, <user>@host2, and others, are created instead.</user></user></user></user> |
| -initialize_ database | Initialize the database for SAS Content Categorization Studio. |
| -initialize_ doc_repository | Initialize the testing document repository. |
| -list_remote_ project | List all of the remote projects located on the server. |

Table A-2: _tk240 Command-Line Operations (Continued)

| Operation | Description |
|------------------------------------|--|
| -lock_and _checkout _project | Lock the project, and check it out, to prevent other users from making any changes to this project. |
| -login_name | Define the Windows login name that is used to derive the database user name. Specify the login name in the DOMAIN\username form. |
| | Note : This parameter is used with Windows Authentication for SQL Server databases. |
| -missing | Locate the missing concepts project. |
| -noserverrole | Prevent administrative users from being added to the sysadmin server role. This is also true when regular users become administrative users. |
| | Note : This parameter is used with Windows Authentication for SQL Server databases. |
| -nosysdelete | Use this operation to prevent a user record in the system database from being deleted when you delete a user from the database. |
| -open_remote _project | Open a project from the server if you have a subdirectory named Shared Projects in the <data_path> directory.</data_path> |
| -pass | (Optional) If Windows authentication is not specified, enter the password for the administrator. |
| -password | If Windows Authentication is not specified, enter the password for the new account. |
| -project | Enter the path to the SAS Content Categorization Studio project. |
| -rebuild | Choose one of the following operations: |
| | - all: Rebuild both categories and concepts, if applicable. |
| | - cat: This operation is equivalent to Build Rule-based Categorizer in the SAS Content Categorization Studio graphical user interface. |
| | - concepts: This syntax is equivalent to Compile Concepts in the SAS Content Categorization Studio graphical user interface. Note : For more information, see the SAS Content Categorization Studio: User's Guide. |

Table A-2: _tk240 Command-Line Operations (Continued)

| Operation | Description |
|---|--|
| -regular | Read-Only permissions are granted to this user until another permission level is specified using the Set User Permission window. For more information, see Section 3.3.4 <i>The Set User Permission Windows on page 42</i> . |
| | Note : The -admin and -regular options are mutually exclusive. |
| -save_ram | _tk240 clears out some additional memory space during the category build process and uses less overall memory, at the expense of speed. |
| -setinit <setinit_path></setinit_path> | Specify the path to the confcatsvr.sas file that contains the SAS license. |
| -show_users | Print a list of all of the project users. |
| -thresh | Output only the first n results. |
| -upload _project | Upload a project from your local machine to the server. |
| -update_ database | Update the SAS Content Categorization Studio database without losing any of your data. |
| -use_old_ shared_ projects | Store the locally cached copy of the project in: Shared Projects\ <pre>project_name> instead of: Shared Projects\<odbc_driver_name>\<user></user></odbc_driver_name></pre> |
| | \ <project_name>.</project_name> |
| -user | (Optional) If Windows Authentication is not specified, enter the user name of an existing administrative account. |
| -username | (Optional) If Windows Authentication is not specified, enter the name of the new user that you are adding to this project. |
| -verbose | Run in verbose mode. This operation is useful for debugging purposes. |
| -windows_ authentication | Use Windows authentication to connect to a Microsoft SQL Server database. |
| | Note : This parameter is used with Windows Authentication. |

A.4 Performing Database Operations

A.4.1 Initialize the SAS Content Categorization Studio Database

Initialize the SAS Content Categorization Studio database tables, before you as an administrator, perform any collaborative operations. Initialize the database using the following command line:

```
_tk240 -initialize_database
-driver <odbc_driver_name>
-user <admin_user>
[-pass <admin_pwd>]
[-verbose]
[-database <db_name>]
[-windows_authentication]
```

If <u>-database</u> is specified, the database is created under a name that is different from the default name tk240db. The <u>-database</u> operation is specific to this command line.

Note: Before you specify -database, see Section A.4.3 *Add Support for Multiple Databases on page 76.*

A.4.2 Update the SAS Content Categorization Studio Database

To gain the benefits of periodic SAS Content Categorization Studio database schema and table content updates and new features, without losing any existing data, specify the following command line:

```
_tk240 -update_database
  -driver <odbc_driver_name>
  -user <admin_user>
  [-pass <admin_pwd>]
  [-verbose]
  [-windows_authentication]
```

The <u>-update_database</u> operation is specific to this command line.

A.4.3 Add Support for Multiple Databases

Enable multiple database support for SAS Content Categorization Studio. By default, the SAS Content Categorization Studio database is named tk240db. Add multiple database support using the following command line:

```
_tk240 -add_multiple_database_support
    -driver <odbc_driver_name>
    -user <admin_user>
    [-pass <admin_pwd]
    [-verbose]
    [-windows_authentication]
```

The <u>-add_multiple_database_support</u> operation is specific to this command line.

A.4.4 Initialize the Testing Document Repository

Initialize the repository to enable the testing document repository. This repository stores sets of test documents that are associated with a project along with that project.

```
_tk240 -initialize_doc_repository
-driver <odbc_driver_name>
-user <admin_user>
[-pass <admin_pwd>]
[-verbose]
[-windows_authentication]
```

The <u>-initialize_doc_repository</u> operation is specific to this command line.

A.4.5 Lock and Check Out a Project

Put a lock on the project after you open it. This operation is similar to opening a remote project.

```
_tk240 -lock_and_checkout_project project
-data <data_path>
-driver <odbc_driver_name>
-user <admin_user>
[-pass <admin_pwd>]
[-verbose]
[-windows_authentication]
```

The <u>-lock_and_checkout_project</u> operation is specific to this command line. For more information, see Section A.4.6 *Commit and Unlock a Project* below and Section A.5.7 *Open a Remote Project on page 81*.

A.4.6 Commit and Unlock a Project

Commit all outstanding changes to a project and release any locks that you, as the administrator, currently hold. This operation is used after you specify the -lock_and_checkout_project operation.

```
_tk240 -commit_and_unlock_project project
-data <data_path>
-driver <odbc_driver_name>
-user <admin_user>
[-pass <admin_pwd>]
[-verbose]
[-windows_authentication]
```

The <u>-commit_and_unlock_project</u> operation is specific to this command line. For more information, see Section A.4.5 *Lock and Check Out a Project* above.

A.4.7 Clear Database Locks

Run the _tk240 command line to clear any existing orphan locks. When you commit the changes to either a taxonomy, or to an individual node, SAS Content Categorization Studio creates locks in the database. These locks ensure that other users do not try to make changes while the commit operation is in progress. The three types of locks are the taxonomy, category, and concept locks.

Under normal circumstances, these locks are deleted when the commit operation is completed. On rare occasions, however, it is possible for orphan locks to remain in the database. These orphan locks make it impossible for users to update the project. Use the following command line to clear any orphan locks:

```
_tk240 -clear_locks [taxonomy|category|concept]
    -driver <odbc_driver_name>
    -user <admin_user>
    [-pass <admin_pwd>]
```

```
[-verbose]
[-windows_authentication]
```

The -clear_locks operation is specific to this command line.

Caution: This command should be run carefully, because it deletes all of the locks that are currently in the database. If valid locks are deleted, data corruption could result.

A.5 Performing Server Operations

A.5.1 Add Users

Create both a system database account and a SAS Content Categorization Studio user record for the new user. If a system database account for the user already exists, only a SAS Content Categorization Studio user record is created. The user name of the new user is specified as <username>. The user password is specified as <username>.

The <u>-add_user</u> operation is specific to this command line.

Note: If you are using the Windows authentication mode with Microsoft SQL Server, see Section A.5.2 *Add Users with Microsoft SQL Server with Windows Authentication Mode* below.

A.5.2 Add Users with Microsoft SQL Server with Windows Authentication Mode

If you are using Microsoft SQL Server with Windows Authentication mode, use <u>-windows_authentication</u> to create a user. The -user, -pass, - username, and -password parameters are not required in this case. The username for the new user is generated automatically from the -login_name parameter.

```
_tk240 -windows_authentication -login_name <DOMAIN\username>
```

This operation does not create a Windows login or a database account for the login. This operation does create a database user corresponding to the login. Specify that login with the <u>-login_name</u> parameter. If you use the -admin parameter, the user that is created is added to the sysadmin server role by default. To prevent this operation, specify the -noserverrole parameter.

A.5.3 Modify User Permissions and Passwords

Modify the permissions, or change the password, for an existing SAS Content Categorization Studio user. For example, you might want to change the user type to make a regular user a project administrator by enabling upload capabilities. Use the following command line to perform these operations:

The <u>-change_user</u> operation is specific to this command line. This operation is similar to the -add_user operation. If you are using Microsoft SQL Server with Windows Authentication, specify the -windows_authentication and the -login_name <DOMAIN\username> parameters. You do not need to specify the -user, -pass, -username, or -password parameters with the Windows Authentication mode.

A.5.4 Delete a User

Remove a SAS Content Categorization Studio user from the collaborative database by using the following command line:

```
_tk240 -delete_user
-driver <odbc_driver_name>
-user <admin_user>
[-pass <admin_pwd>]
-username <user>
[-verbose]
[-nosysdelete]
```

Note: If -nosysdelete or Windows Authentication is specified, this operation does not erase the user's account on the system. Only the SAS Content Categorization Studio user record is deleted.

The <u>-delete_user</u> operation is specific to this command line. This operation is similar to the -add_user operation. If you are using Microsoft SQL Server with Windows Authentication, specify the -windows_authentication and the -login_name <DOMAIN\username> parameters. You do not need to specify the -user, -pass, -username, or -password parameters with the Windows Authentication mode.

A.5.5 Show All Users

Print a list of users with their permission levels using the following command line:

```
_tk240 -show_users
    -driver <odbc_driver_name>
    -user <user>
    [-pass <password>]
    [-verbose]
    [-windows_authentication]
```

The <u>-show_users</u> operation is specific to this command line.

A.5.6 Upload a Project Using _tk240

Upload a project from your local machine to the server using the following command line:

```
_tk240 -upload_project [<project_name>]
    -project <tk2_file_path>
    -data <data_path>
    -driver <odbc_driver_name>
    -user <user> [-pass <password>]
    [-windows_authentication]
```

The <u>-upload_project</u> operation is specific to this command line.

A.5.7 Open a Remote Project

Open a project if you have a subdirectory named Shared Projects in the data_path directory and you are either a regular user or an administrator for the remote project. Open the project using the following command line:

```
_tk240 -open_remote_project project_name>
    -data <data_path>
    -driver <odbc_driver_name>
    -user <user>
    [-pass <password>]
    [-use_old_shared_projects]
    [-windows_authentication]
```

The <u>-open_remote_project</u> and the <u>-use_old_shared_projects</u> operations are unique to this command line. If you run one of these operations and there is no locally cached version of the project, the project is downloaded from the server. However, if there is a locally cached version, _tk240 loads the cached version instead. When -use_old_shared_projects is specified, the locally cached copy of the project is stored in this location:

```
Shared Projects\<project_name>
```

instead of the following location:

```
Shared Projects\<odbc_driver_name>\<user>\<project_name>
```

Note: Specifying the -use_old_shared_projects operation is equivalent to unchecking Use separate Shared Projects folder for each user in the Options window.

A.5.8 Delete a Remote Project Using _tk240

Remove that project from the server, if you are an administrator. Delete the project using the following command line:

```
_tk240 -delete_remote_project project_name>
    -driver <odbc_driver_name>
    -user <user>
    [-pass <password>]
    [-windows_authentication]
```

The <u>-delete_remote_project</u> operation is specific to this command line.

A.5.9 List Remote Projects

List all of the remote projects located on the server using the following command line:

```
_tk240 -list_remote_projects
    -driver <odbc_driver_name>
    -user <user>
    [-pass <password>]
    [-windows_authentication]
```

The -list_remote_project operation is specific to this command line.

A.6 Performing General Operations

A.6.1 Rebuild a Project

Rebuild a SAS Content Categorization Collaborative Server project using the following command line:

The <u>-save_ram</u> and <u>-concepts_fpat</u> operations are specific to this command line.

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A.6.2 Locate Missing Concepts in a Project

Locate the missing concepts in a project by specifying the following command-line syntax:

```
_tk240 -project <tk2_file_path>
    -data <data_path>
    -missing <missing_tk2_file_path>
```

The <u>-missing</u> operation that is specific to this command line, enables you to compare your SAS Content Categorization Studio project with another SAS Content Categorization Studio project containing the missing concepts.

The second project is specified by the .tk2 file that is pointed to by <missing_tk2_file_path>. This command determines what concepts are in the missing project and stores this information in the data directory for the SAS Content Categorization Studio project that is missing some of its concepts.

A.6.3 Limit Output to Unique Concept Matches

Locate and output concept matches that are unique to one, selected list of concepts using the following command-line syntax:

For each file in <flist>, compare the results of doing concepts extraction with <concept_binary_file_1> and <concept_binary_file_2>, and only output the concept matches that are in <concept_binary_file_2>, but not in <concept_binary_file_1>.

If <u>-thresh</u> is specified, only the first n results are output. The <u>-thresh</u> operation, like <u>-files</u>, <u>-con1</u>, and <u>-con2</u>, are specific to this command line.

A.6.4 Run a Project Check

Check the syntax of the project files as they are generated by specifying the following command-line syntax. Specify this command-line operation when a

process other than SAS Content Categorization Studio is used to create the project files.

```
_tk240 -check_project project.tk2 -data datapath
```

The automatically generated script checks the SAS Content Categorization Studio project to ensure there are no errors in the project.

Example A-1: Project Check

```
Checking.tk2 file syntax...PASS
Checking categorizer XML files...PASS
Checking concept XML files...PASS
Checking language project English
Checking for dependencies...PASS
Checking syntax for categories...PASS
Checking for English.concept directory...PASS
Checking syntax for concepts...PASS
Project syntax check succeeded.
```

The -check_project operation is specific to this command line.

A.7 Set the Path to the SAS License

This license is the SAS installation data file (SID file) that is included in the Software Order E-mail (SOE) that you received. The setinit file can be saved in any folder.

To specify the path using _tk240, add the following line to _tk240:

```
-setinit <setinit_path>
```

This line specifies the path to the file that contains the setinit information.

You can also set the environment variable TG_SETINIT and specify the path to the file that contains the setinit information.

Appendix: B The Program Files

- Overview of the Program Files
- Program File Directives
- Configuration Example

B.1 Overview of the Program Files

This appendix covers the folders, files, tags, and directives that are specific to collaboration for SAS Content Categorization Collaborative Server. This appendix also provides a configuration example.

B.2 Program File Directives

The table below describes the directives that are specific to the collaborative application of SAS Content Categorization Studio.

Table B-1: SAS Content Categorization Collaborative Server Directives

| Directive | Description |
|---|--|
| See Section B.1 Projects Folder a | and Table B-1 in the SAS Content Categorization Studio: User's Guide: |
| conceptname.n.def | Specify the definition file for a user-created concept. The character n specifies the identification number on the server. |
| | Note : This value is different for stand-alone projects. |
| See Section B.2.1 .tk2 File For User's Guide: | mat and Table B-2 in the SAS Content Categorization Studio: |
| server_pid= <pid></pid> | Specify the project identification number in the database. |
| client-server | Indicate that the project is a collaborative project. |

Table B-1: SAS Content Categorization Collaborative Server Directives

| Directive | Description | |
|--|---|--|
| server_lpid= <lpid></lpid> | Specify the language project identification number in the SAS Content Categorization Studio database. (Use only with collaborative projects.) | |
| See Section B.2.2.B Category Project Settings and Table B-3 in the SAS Content Categorization Studio User's Guide: | | |
| TaxonomyVersion | Specify the current version of the category taxonomy on the server. | |
| See Section B.2.2.C Categories a | and Table B-4 in SAS Content Categorization Studio: User's Guide: | |
| LocallyModified | (Optional) The presence of this tag, in the format <locallymodified></locallymodified> , indicates that the user made local changes. These changes are saved in the cached version on their desktop, but not yet committed to the server. | |
| See Section B.2.3.B Concept Project Settings and Table B-5 in the SAS Content Categorization Studio: User's Guide: | | |
| TaxonomyVersion | Specify the current version of the concepts taxonomy on the server. | |
| See Section B.2.3.C Concepts and Table B-6 in the SAS Content Categorization Studio: User's Guide: | | |
| LocallyModified | (Optional) See this tag, in the format <locallymodified></locallymodified> . When this tag occurs, the tag indicates that the user has made local changes that are saved in the cached version on their desktop. These changes are not yet committed to the server. | |

B.3 Configuration Example

The example below is a sample .tk2 file that is intended for use with a collaborative project that contains a single English language project with both categories and concepts.

Example B-1: Single Language Project

project=News
server_pid=1
language=English
client-server
server_lpid=1

categorizer=English.directory.xml
uses_concepts
never_expand
should_rebuild_categories
concept=English.concept.xml
should_rebuild_classifier
should_rebuild_concepts

For more information, see Section B.3.4 Configuration Examples in SAS Content Categorization Studio: User's Guide.

Appendix: C Recommended Reading

The following books are recommended:

- SAS Content Categorization Collaborative Server: User's Guide: Users with different expertise work together on a project stored on the server according to their permission levels.
- SAS Content Categorization Studio: User's Guide: Create a SAS Content Categorization Studio project, test, and upload to SAS Content Categorization Server.
- SAS Content Categorization Studio: Installation Guide: Install SAS Content Categorization Studio.
- SAS Content Categorization Studio: Quick Start Guide: Quickly set up a Categories-only SAS Content Categorization Studio project.
- SAS Content Categorization Server: Administrator's Guide: Automate the application of the .mco and .concepts files to input documents.
- *SAS Contextual Extraction Studio: User's Guide*: Build complex definitions that include different types of rules.
- SAS Contextual Extraction Studio: Install Guide: Install SAS Contextual Extraction Studio.
- Use the language books for each language purchased to see the comprehensive list of part-of-speech tags that are available for grammar concepts.

SAS offers instructor-led training and self-paced e-learning courses to help you get started with the SAS add-in, learn how the SAS add-in works with the other products in the SAS Enterprise Intelligence Platform, and learn how to run stored processes in the SAS add-in.

For more information about the courses available, see support.sas.com/training.

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Appendix: D Glossary

Branch

refers to either the category, or the concepts, section of the taxonomy tree. The first node in a branch is either the Categorizer or the Concepts node. If the project is built with more than one language, each language section is also referred to as a branch.

Categorization

refers to the process of concisely defining the subject matter of a document, in other words, the main idea or subject of the document.

Classifier

specifies a list-based set of terms that are extracted from your documents.

Concept

define an autonomous piece of information such as movie, book, title, and so on. Also see *Entity*.

Collaboration

work of two, or more, subject matter experts working together on one project. This project is located on a server with a cached copy in the Shared Projects folder on a local machine.

Definition

defines a concept. Also see Rule.

Developer

defines a permissioned user who is often referred to as a project developer. Also see *User*.

Document

refers to a printable page. Also see Text.

Node

refers to the visual representation of a concept or a category. Less frequently, this term is used to refer to the Categorizer, Concepts, Top, or another component of the taxonomy tree.

Regular user

refers to a collaborative user with one of several permission levels for a project. However, this user lacks either database or administrative privileges. The regular developer is added to the project and has his or her permission level set by either the database, or the project, administrator.

Remote project

resides on a server, instead of your local machine.

Rule

defines a category. This term can also be used to refer to a concept definition.

Shared Projects Folder

stores a cached copy of the project that is located on the server on your local machine. Individual cached copies of the project can be stored on one machine using different Shared Projects folders.

Syntax changes

edits to a category rule or to a concept definition are defined as changes to the syntax of the rule or definition.

Taxonomy

organizes a classification structure that can be either a flat or a hierarchical system.

Text

forms a written document, or a Web page. Also see Document.

User

defines a SAS Content Categorization Collaborative Server developer. This term is usually used to distinguish a subject matter expert from an administrator. Also see *Developer*.

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