Informatica

Informatica® PowerExchange for SAS
10.5.1

User Guide for PowerCenter

Informatica PowerExchange for SAS User Guide for PowerCenter
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Preface

Use the *Informatica® PowerExchange® for SAS User Guide for PowerCenter®* to learn how to read from or write to SAS by using the PowerCenter Client. Learn to create a SAS connection, develop mappings, and run sessions in an Informatica domain.

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CHAPTER 1

Introduction to PowerExchange for SAS

This chapter includes the following topics:

PowerExchange for SAS Overview

PowerExchange for SAS is an extension of PowerCenter that facilitates the use of SAS data objects in your Data Integration processes. PowerExchange for SAS integrates with the PowerCenter Client and the PowerCenter Integration Service.

PowerExchange for SAS consists of the following components:

Client component

The Client component extends the PowerCenter Client capabilities to help the registration and use of SAS data objects.

PowerCenter Integration Service component

The PowerCenter Integration Service component extends the PowerCenter Integration Service to read from and write to SAS.

Repository Service component

The Repository Service component extends the Repository Service to store SAS metadata.

Communication component (SPI Server)

The Communication component completes all the tasks requested from the machine that hosts the SAS data objects.

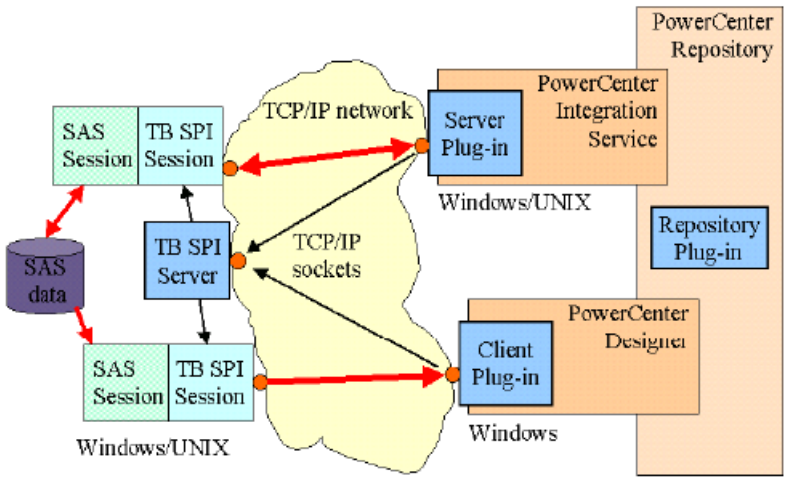
PowerExchange for SAS Architecture

The Communication component (SPI Server) is the central component of the architecture for PowerExchange for SAS. The SPI Server is a multithreaded TCP/IP listener service. The SPI Server handles requests from the PowerCenter Designer and from the sessions started from the PowerCenter Integration Service.

When you use the Designer to import a SAS source or a SAS target definition, the Client component requests the metadata from the SPI Server. The SPI Server starts an SPI session to retrieve the information from SAS and then passes this information to the Client component. When you save the SAS source or target, the Repository Service component saves it to the PowerCenter repository.

When you run a workflow that includes a SAS source or target, the PowerCenter Integration Service uses the PowerCenter Integration Service component to start a session with the SPI Server. The SPI Server accesses SAS data and passes it back to the PowerCenter Integration Service component for processing.

The following image shows how PowerCenter integrates with SAS:



User Authentication

You must have a user authentication to connect to an SPI Server.

Users

PowerExchange for SAS users include the following users:

Normal User

The normal users have the permission to connect to the SPI Server. The normal user gets a table metadata when you import sources or targets with the Designer and to request to read or write SAS data.

Administrator

The administrator is same as a normal user, but with permission to remotely stop the SPI Server.

User Administration

Use the SPI Server Configuration tool to add or remove a user, change a password, or change the type of a user. You can administer users locally. After installation, two users are defined with default passwords, which are the same as the user names.

CHAPTER 2

Installation and Configuration

This chapter includes the following topics:

Installing and Configuring PowerExchange for SAS

You must install or upgrade PowerCenter before you install or upgrade PowerExchange for SAS.

Perform the following steps to install and configure PowerExchange for SAS:

1. Install PowerExchange for SAS.
2. Configure the Communication component.
3. Register the plug-in.

Installing PowerExchange for SAS

Install the following components so that PowerCenter can access SAS:

Client component

The Client component permits you to import definitions, create mappings, and create connection objects by using the PowerCenter Client.

Server component

The Server component permits the PowerCenter Integration Service to run SAS sessions.

SPI Server component

The SPI Server component permits the Designer and PowerCenter Integration Service to access the SAS host.

You can use the **Full Installation** option to install all the components simultaneously.

Installing the Client Component

You must install the Client component on each PowerCenter Client machine where you want to create or access SAS metadata.

Perform the following steps to install the Client component on Windows:

1. Run the installer from the following location: `<InstallerLocation>\install.bat`
2. Follow the instructions in the installation wizard.

   The Client component is installed.

Updating PowerCenter Online Help Files

When you install the Client component, the following online help files are extracted to the PowerExchange for SAS installation directory:

powercenterhelp.chm

The PowerCenter master help file that contains links to PowerExchange for SAS help.

sas.chm

The online help file for PowerExchange for SAS.

You must copy the PowerExchange for SAS online help files to the PowerCenter help directory to complete the Client component installation.

Perform the following steps to update PowerCenter online help files:

1. On the PowerCenter Client machine, back up the `powercenterhelp.chm` file in the help directory in the following location:
   `<PowerCenter Installation Directory>\clients\PowerCenterClient\client\bin\Help\en`

   You must rename the file in the following format to back up the file:

   `Original_powercenterhelp.chm`.
2. Copy the `powercenterhelp.chm` file and the `sas.chm` file from the PowerExchange for SAS installation directory to the help directory on the PowerCenter Client machine.

Installing the Server Component

Install the PowerCenter Integration Service component on each node to run the PowerCenter Integration Service process if the PowerCenter Integration Service runs on primary and backup nodes.

Perform the following steps to install the PowerCenter Integration Service component on Windows:

1. Run the `setup.exe` file from one of the following locations:
   - `<DownloadLocation>\install.bat`
   - `<DownloadLocation>\install.bat`
2. Click **Yes** to install PowerExchange for SAS.

   The **Welcome** window appears.
3. Click **Next**.
4. Retain the selected default directory for installing the PowerCenter Integration Service component.
5. Click **Next**.
6. Select **Server Component**.
7. Click **Next**.

8. Select a **Start** menu file for program shortcuts.
9. Click **Next**.

   A **Confirmation** page appears.
10. Click **Install**.

    The **PowerCenter Integration Service Component Setup Wizard** launches.
11. Click **Next**.
12. Review the license agreement.
13. Click **Yes**.

    The PowerCenter Integration Service component is installed.
14. Click **Finish** to exit the installer.

    The PowerCenter Integration Service component is installed.

Perform the following steps to install the PowerCenter Integration Service component on UNIX:

1. Run the installation script from the installation CD.
2. Choose **Install Server Plug-in**.
3. Use the same credentials that you used to install the PowerCenter Integration Service.
   The PowerCenter Integration Service component is installed.

Installing the Communication Component

You must install the Communication component (SPI Server) on the machine that runs the SAS environment that you want to connect to.

The Communication component does not connect to the PowerCenter repository. The configuration is stored locally.

Before installing the Communication component, ensure that you install the libstdc++.so.6 library.

Installing the Communication Component on Windows

The Communication component runs as a Windows service on Windows.

Perform the following steps to install the Communication component on Windows:

1. Run the `setup.exe` file from the following location: `<DownloadLocation>\install.bat`
2. Click **Yes** to install PowerExchange for SAS.

   The **Welcome** window appears.
3. Click **Next**.

   Choose a directory to install the Communication component.
4. Click **Browse** to find a directory or use the default directory.
5. Click **Next**.
6. Select **SAS Communication Component**.
7. Click **Next**.
8. Select a **Start** menu for program shortcuts.
9. Click **Next**.

   A **Confirmation** page appears.

10. Click **Install**.

    The **Communication Component Setup Wizard** launches.
11. Click **Next**.
12. Enter the following information on the **SPI Server Configuration** page:

Property	Description
Port Number	TCP/IP port number for the SPI Server listener process.
Log File Path	Absolute path to the log file. Default is `\\PowerExchange for SAS`
SAS Pre Post Code	Allow SAS exits. Default is No.
Application Path	Absolute path to the SAS executables. Default is `\\Program Files\SAS\sas.exe`
Working Directory Path	SAS working environment directory path. Default is `\\testdata`
Autoexec Name	Name of the autoexec file. Default is `autoexec.sas`

13. Click the **Users** button to add, edit, or delete users, or to change user attributes.
14. Click **OK**. Review the license agreement.
15. Click **Yes**.

    The **Communication** component is installed.

Installing the Communication Component on UNIX

Install the Communication component with a user account that is authorized to start SAS and access the SAS data that you want to read or write. PowerExchange for SAS uses the user account to access the SAS data.

Perform the following steps to install the Communication component on UNIX:

1. Run the installation script from the installation CD.
2. Choose a directory where you want to install the Communication component.
3. Follow the instructions and choose **Install SAS Communication Component**.

   The Communication component is installed.

The following libraries are installed with the spiserver binary:

`libicuuc.<ext>.34`

`libicui18n.<ext>.34`

`libicudata.<ext>.34`

where, <ext> is replaced by the shared library extension for the UNIX operating system. For example, `libicuuc.so.34` for Linux.

You need to add the libraries in the system library path after installing the Communication component on UNIX in one of the following ways:

- Add the SPI Server installation directory to the library search path.
  For example, `export LD_LIBRARY_PATH=/home/PowerExchange‘ForSAS:$LD_LIBRARY_PATH`
- Move the library files to a directory in the library search path.
  For example, `//usr/local/lib`

Configuring the Communication Component

Use the configuration tool to maintain the configuration files and to configure the Communication component. The configuration file is located in the Communication component installation directory.

Configuring the Communication Component on Windows

Use the SPI Server Configuration in the **Start** menu to start the configuration tool on Windows.

Use the SPI Server Configuration to configure the TCP/IP port where the SPI Server listens to find the SPI Server log file, the SPI Server users, and passwords.

You must configure the following SAS environment:

- **Working Directory Path:** Enter the directory from which SAS runs.
- **Autoexec Name:** Enter the file name that SAS uses as its initialization file.

You can use the initialization file to assign SAS Library Names or SAS Libnames that must be accessible by both the Designer and the PowerCenter sessions accessing the SAS data.

The following is an example of a SAS autoexec file:

```
/*
Sample SAS autoexec file
*/
LIBNAME whdata 'W:\data\saswhdata' ;
LIBNAME oltp 'W:\data\sales\2008Q1' ;
```

For a valid `LIBNAME` syntax and options, see the *SAS* documentation.

User Administration on Windows

You can add or remove users and change the user password or the user administrator property.

Perform the following steps for the user administration on Windows:

1. Click **Users** in the configuration page.
2. Enter the changes in the user administration dialog box.
3. Click **Close**.

Configuring the Communication Component on UNIX

Perform the following steps to start the configuration tool on UNIX:

1. Enter `./spiconfig` on the shell prompt in the SPI Server installation directory.
2. Choose an option you want to change.

   The configuration tool prompts you for a another value.
3. Select **Users** to enter the user administration.

Configuring the SAS Autoexec File

Use the `autoexec.sas` SAS autoexec file to configure the SAS environment.

Session and User Identification

The following are the PowerCenter session properties passed to the environment where SAS runs:

- Name of the PowerCenter Integration Service that runs the corresponding workflow.
- Name of the PowerCenter connection used to access the SAS machine.
- Name of the SPI Server user who accesses the SAS environment.

You can use the values of these properties for conditional initialization logic in the SAS autoexec script.

The following system variables provide PowerCenter session property information to the SAS process:

Property	Available	Description
TBPC_PMSERVER_NAME	server	Name of the active PowerCenter Integration Service.
TBPC_CONNECTION_NAME	server	Name of the PowerCenter Integration Service connection.
TBPC_USER_NAME	client/server	Name of the connected PowerCenter user.
TB_SPI_USERNAME	client/server	Name of the SPI server user.

You can use the `sysget( )` SAS function to retrieve system variables.

For example:

```
/* Store system variables into SAS macro variables: */
srvname = sysget("TBPC_PMSERVER_NAME");
conname = sysget("TBPC_CONNECTION_NAME"
);
/* Use the SAS macro variables to code logic: */
.............
.............
/* End of logic */
```

When the PowerCenter Designer initiates a connection to the SAS machine, the system variables that are unavailable for client connections contains no meaningful information. The system variable values default to `_NONE_`.

Reading SAS Character Columns with Binary Zeros

SAS allows the binary zero bytes inside character columns but PowerCenter do not allow characters with the binary zeros. You can replace the binary zeros with NULL characters before passing the data to PowerCenter.

To replace the binary zeros by NULL character, assign the macro variable `CHCKNLLS` in the SAS autoexec file.

Add the following line in the SAS autoexec file:

```
%let CHCKNLLS=YES;
```

Removing Leading Spaces in Text Fields

PowerCenter Connect™ for SAS 3.2.3.0 and earlier, removes the leading spaces in text fields in a SAS source and trims the leading spaces when you write to a SAS target.

You can add the following statement to the SAS autoexec file to remove leading spaces:

```
%let TRMLDSPC=YES ;
```

Starting the Communication Component on Windows

On Windows, the SPI Server runs as a Windows service called Informatica SPI Server.

You can start and stop the service in the following ways:

- Set the startup type to manual. The service starts and stops using the Windows Service Manager.
- Set startup type to automatic. The service starts automatically when booting the Windows system.
- Use a Windows command line or script file to start and stop the service.
  Enter the following command to start the service:

  ```
  net start "Informatica SPI Server"
  ```

  Enter the following command to stop the service:

  ```
  net stop "Informatica SPI Server"
  ```

Starting the Communication Component on UNIX

On UNIX, the SPI Server is executable that runs as a daemon process.

You can start and stop the service in the following ways:

- Go to the directory in which the SPI Server is installed to start and enter the following command:

  ```
  spiserver
  ```

  Check the SPI Server log file to verify that the server started successfully. You can build an initialization script to start the SPI Server automatically when the system starts.

  Note: If the SPI Server does not shut down normally, it might not restart. If this occurs, remove the SPI Server lock file in the SPI Server working directory and then restart the SPI Server.
- To stop, enter the following command:

  ```
  spiserver stop <host> <portnumber> <administrator name>
  ```

Registering the Plug-in

After you install PowerExchange for SAS, register the plug-in with the repository. If you are upgrading, update the plug-in registration when you register the plug-in.

A plug-in is an XML file that defines the functionality of PowerExchange for SAS. To register the plug-in, the repository must be running in exclusive mode. Use the Administration Console or the `pmrep` RegisterPlugin command to register the plug-in.

The plug-in file for PowerExchange for SAS is the `pmsaspi.xml` file. When you install the Repository component, the installer copies the `pmsaspi.xml` file to the following directory:

```
<PowerCenter Installation Directory>/server/bin/Plugin
```

Note: If you do not have the correct privileges to register the plug-in, contact the user who manages the PowerCenter Repository Service.

Uninstalling PowerExchange for SAS

Uninstall PowerExchange for SAS from each machine where you have installed the Client, Repository, or PowerCenter Integration Service components to uninstall PowerExchange for SAS.

Uninstalling from Windows

To uninstall PowerExchange for SAS on Windows, uninstall the main files and each component of PowerExchange for SAS.

Perform the following step to uninstall PowerExchange for SAS from Windows:

1. Click the **Start** menu.
2. Find the PowerExchange for SAS program group and click the component you want to uninstall.

Cleaning Up the SAS Environment

When you uninstall PowerExchange for SAS, you must remove PowerExchange for SAS files from the SAS environment.

For example, the SAS log files and the SAS autoexec file.

Upgrading PowerExchange for SAS

To upgrade PowerExchange for SAS, perform the following tasks:

1. Install and register PowerExchange for SAS.
2. Configure the communication component.

Install and register PowerExchange for SAS

Perform the following steps to upgrade PowerExchange for SAS:

1. Install the latest version of PowerExchange for SAS.
2. To update the SAS plug-in registration, run the PowerCenter Repository Service in exclusive mode and perform one of the following tasks:
   - To use the pmrep RegisterPlugin command to register the plug-in from the command line program, run the following command:

     ```
     pmrep registerplugin -i <PowerCenter installation directory>\server\bin\Plugin
     \<adaptername>.xml -e
     ```

   - To upgrade a plug-in to the latest version from the Administrator Tool, select the PowerCenter Repository Service to which you want to update the plugin. Navigate to the Register Plug-in page, select the check box to update the existing plug-in registration, and click **OK**.
3. Start the Informatica services.

Configure the Communication Component

Install the communication component or the SPI server on the SAS server machine.

If you want to keep the communication component from the earlier version, install the new version of the communication component in a different directory with the new SPI port in the SAS server machine.

Alternatively, if you want to use the same SPI server port provided in the SAS connection object as in the earlier version, you must stop the installed version of the SPI Server process. Then, configure the same SPI server port with the new SPI server component and then start the new SPI Server.

CHAPTER 3

Working with SAS Sources

This chapter includes the following topics:

Creating a SAS Source Definition

You can use the Designer to create SAS source definitions. You can manually create the source definition or import a SAS data object as a source definition.

Creating a SAS Source Definition Manually

You can manually create a SAS source definition.

Perform the following steps to create a SAS source definition manually:

1. Click **Sources** in the Source Analyzer.
2. Select **Create** from the menu.
3. Enter **SAS** as the database type.
4. Enter a name for the SAS source.
5. Click **Create**.

   Another SAS source definition appears in the Source Analyzer.

Importing a SAS Source Definition

When you import a SAS data object, the PowerCenter Client imports metadata from the SAS data dictionary that describes the data object. The metadata is used to register the data object as a source definition in the repository.

Perform the following steps to import a SAS source definition:

1. Click **Sources** in the Source Analyzer.
2. Import **SAS** Source from the file.

   The **Import SAS Source** page appears.
3. Select the SAS Server you want to use and enter the user name and password.
4. Click **Connect**.

Perform the following steps to import a SAS source definition from a SAS file:

1. Click **Sources** in the Source Analyzer.
2. Import **SAS** Source from the file.

   The **Import SAS Source** page appears.
3. Navigate to the physical SAS file whose definition you want to import.
4. Click **OK**.

Editing a SAS Source Definition

You can edit a SAS source definition by using the source properties dialog box.

Table Attributes

You can access the following table attributes through the **Rename** button on the **Table** tab:

Table name

The table name corresponds with the name of the table to read from SAS.

Database name

The database name constitutes a logical grouping of data objects in the Designer. After importing a SAS table, the value of this attribute will be the name of the SAS library that you imported the table from.

Business name

The business name corresponds with the SAS Label assigned to the table.

You can access the LibraryName attribute through the **Metadata Extensions** tab. The LibraryName holds the library name from which PowerCenter reads the SAS table. The session properties overrules the LibraryName. The LibraryName attribute uses the mapping parameters and variables.

Column Attributes

You can access the following column attributes on the **Columns** tab:

Column name

The column name corresponds with the name of the column in the SAS table.

Precision and scale

The precision and scale determines the representation of data in the mapping and the data transportation from SAS.

Datatype

The Datatype indicates how the PowerCenter Integration Service processes data in the mapping.

Editing Source Qualifier Attributes

You can edit source related attributes in the source qualifier by entering the properties dialog box.

Source Qualifier Attributes

The metadata extensions tab access the following attributes:

WhereClause

You can enter a selection of rows from the SAS source by using the WhereClause attribute. The WhereClause attribute results in a WHERE statement in SAS.

PreSASCode and PostSASCode exits

The PreSASCode and PostSASCode exits attributes facilitates the invocation of a SAS Macro or a SAS %include statement executed before or after reading the SAS Source object. You must configure the SPI Server to allow the execution of SAS exits. The `autoexec.sas` file is a part of the SPI Server configuration defining the invoking of SAS Macro.

The WhereClause attribute uses mapping parameters and variables. For example, `PreSASCode exit` and `PostSASCode exit`.

Joining tables in SAS

You can join tables in SAS by connecting the tables to one source qualifier. The SAS System performs the join.

The following attributes relate to the table join accessed through the **Join** tab in the source qualifier properties dialog box:

Join Type

The join type are the inner join, the full outer join, the left outer join, and the right outer join. In an inner join, more than two tables joins.

Join Condition

You can define the condition that defines the join to be executed by using the join condition. You must enter the join condition using the join condition builder dialog box that you can access by clicking the button next to the join condition field.

If you do not specify a join condition, a join condition generates based on the existing primary key-foreign key relations between the sources as defined in the source analyzer.

Left table

The selection of Left Outer Join or Right Outer Join as join type allows you to define which of the two participating tables is the Left table.

Reading Data from a SAS File or File List

When you configure a SAS session, you can choose to read data from a SAS file or from a SAS file list.

Reading Data from a SAS File

You can read data from a SAS file using the Direct file type option.

When you configure a session to read data from a SAS file, in the **Read From File** session properties, type *Yes* and select **Direct** as the **File Type** to indicate that you want the Integration Service to read data directly from a SAS file.

Specify the SAS file directory and the SAS file name from where you want to read data. When you run the mapping, the Data Integration Service uses the specified path to read data directly from the SAS file.

Reading Data from a SAS File List

A SAS file list contains a list of SAS file names from which you want the Integration Service to read data.

When you configure a session to read data from a SAS file list, you must use the Indirect file type option.

In the **Read From File** session properties, type *Yes* and select **Indirect** as the **File Type** to indicate that you want the Integration Service to read data from SAS files specified within the SAS file list.

Specify the **SAS File Directory** path where the SAS file list resides and the **SAS File List** name, which is a `.txt` file that lists the SAS files.

Within the `.txt` file, you can specify the name of the SAS file, for example, `datetime1.sas7bdat`, or you can specify the full path where the SAS file is available on the Informatica server machine, for example, `C:\Informatica\10.2.0\server\infa_shared\SrcFiles\datetime2.sas7bdat`.

When you do not specify a path for a SAS file within the SAS file list, the Integration Service searches for the SAS file in the specified **SAS File Directory** path.

CHAPTER 4

Working with SAS Targets

This chapter includes the following topics:

Creating a SAS Target Definition

You can manually create a SAS target definition or import a SAS target definition based on a data object.

Creating a SAS Target Definition Manually

Perform the following steps to create a SAS target definition manually:

1. Click **Targets** in the Target Designer.
2. Click **Create**.
3. Enter **SAS** as the database type.
4. Enter a name for the SAS target.
5. Click **Create**.

   The new **SAS Target Definition** appears in the Target Designer.

Importing a SAS Target Definition

When you import a SAS data object, the PowerCenter Client imports metadata from the SAS data dictionary that describes the data object. You can use the metadata to register the data object as a target definition in the repository.

Perform the following steps to import a SAS target definition:

1. Click **Targets** in the Target Designer.
2. Click **Import SAS Target**.

   The **Import SAS Target** dialog box appears.
3. Select the SAS server that you want to use.

4. Enter the user name and password.
5. Click **Connect**.

   Note: You can click **Reconnect** to add or change SAS server definitions.
6. Expand the library nodes to access tables and views.
7. Select the table or view that you want to import.
8. Click **OK**.

Editing a SAS Target Definition

You can edit a SAS target by using the **Target Properties** dialog box.

Table Attributes

Use the **Rename** button on the **Table** tab to access the following table attributes:

Table name

The table name corresponds with the name of the table that you want to read from SAS.

Database name

The database name constitutes a logical grouping of data objects in the Designer. After you import a SAS table, you must set the value of the attribute to the name of the SAS library from which you imported the table.

Business name

The business name corresponds with the SAS label that is assigned to the table.

Use the **Metadata Extensions** tab to access the following attributes:

LibraryName

The LibraryName attribute holds the library name in which PowerCenter writes the SAS table.

SASCode and PostSASCode exits

The SASCode and PostSASCode exits attributes defines a SAS macro or a SAS %include statement to run before or after processing the SAS source object. You must configure the SPI Server to allow the execution of SAS exits. The `autoexec.sas` file is a part of the SPI Server configuration defining the invoking of the SAS macro.

The WhereClause attribute uses mapping parameters and variables. For example, PreSASCode exit and PostSASCode exit.

Column Attributes

You can access the following column attributes on the **Columns** tab:

Column name

The column name corresponds with the name of the column in the SAS table.

Precision and scale

The precision and scale determines the representation of data in the mapping and the data transportation from SAS.

Datatype

The Datatype indicates how the PowerCenter Integration Service processes data in the mapping.

Configuring Indexes and Keys

You can create or configure indexes and key indexes for SAS target definitions.

Configuring Indexes

Perform the following steps to create, configure, or delete indexes:

1. Edit a target definition in the **Target Designer**.
2. Click the **Indexes** tab.
3. Add, delete, and reorder indexes on the left pane and for each index on the right pane.

To indicate that the index is unique, select the index in the **Indexes** pane and select the Unique box. You can enter a description for each index in the **Columns** pane.

Configuring a Key Index

You can define one of the indexes for the SAS target as the key index by checking the box in front of the index name. The key index designates the key identifying each row used in an update else insert load.

Working with Field Attributes

You can edit the SAS target field attributes on the **Field Attributes** tab of the target definition.

You can edit the following SAS field attributes:

- Formats
- Informats
- Length for a SAS target object

You cannot change the length for string fields. The length follows the precision value on the **Columns** tab for string fields.

Configuring Load Types

You can configure the load type for a SAS target to specify how the PowerCenter Integration Service must write data to the physical SAS data object.

You can use the following load types:

- Full load

- Append load
- Update Else Insert load
- Data driven

You can specify the load type in the session properties.

Full Load

The PowerCenter Integration Service uses full load when you write to a SAS data set by default. You can create a SAS data set from the output when you use full load, overwriting any existing data set. You can apply all attributes defined for the target definition to the SAS data set, including indexes and (in)formats.

Append Load

The PowerCenter Integration Service appends session output to an existing SAS data set with an append load. If the layout of the target definition and the existing SAS data set do not match, an error condition occurs in the SAS processing. The error appears in the session log.

Update Else Insert Load

To update row values by an identifying key, choose the Update Else Insert Load. A proper key must be defined for the existing SAS data set to which the output is to be applied.

Data Driven

To insert, update, or delete row values by an identifying key, choose the Data Driven Load type.

A proper key must be defined for the existing SAS data set to which you want to apply the output. Depending upon the value of the `_DD_ACTION` column for each row, the row is inserted, updated, or deleted from the SAS target.

_DD_ACTION column can have the following values:

- I - For Insert. Appends the row to existing target data set.
- U - For Update. Updates the existing row in the target data set.
- D - For Delete. Deletes the marked row from the target data set.

CHAPTER 5

Working with SAS Sessions

This chapter includes the following topics:

Configuring a SAS Relational Database Connection

Use a relational connection object for each SAS source or target that you want to access. The relational database connection defines how the PowerCenter Integration Service accesses the underlying database for SAS. When you configure a SAS connection, you specify the connection attributes that the PowerCenter Integration Service uses to connect to SAS.

The following table describes the properties that you configure for a SAS connection:

Property	Description
Name	Name of the active SAS connection.
Host	Host name of the machine running the SPI Server.
Port	Port number of the machine running the SPI Server. Must correspond to the port number used in configuring the SPI Server.
Code page	Code page used for the connection.
User Name	User name with the appropriate permissions to access SAS data.
Password	Password for the user.

Editing a SAS Session

When you edit a SAS session, you can configure the SAS source and the target properties.

You can configure the following SAS properties in a session:

Property	Description
Libname Overrule	Optional. Overrides the library name associated with the SAS source or target. By default, the PowerCenter Integration Service uses the library name configured on the **Metadata Extensions** tab of the source or target.
Tablename Overrule.	Optional. Overrides the name of the SAS source or target table. By default, the PowerCenter Integration Service uses the table name of the source or target as defined in the PowerCenter Designer.
Whereclause Overrule	Optional. Overrides the value for the WhereClause used while accessing the SAS data for reading for a SAS source.
PreSASCode overrule	Overrules the value for the PreSASCode exit attribute. The valid values are a SAS Macro or a SAS %include statement.
PostSASCode overrule	Overrules the value for the PostSASCode exit attribute. The valid values are a SAS Macro or a SAS %include statement.
Read From File	Determines whether you can read data from a SAS source or from a SAS file. Specify *Yes* to read data from a SAS file or file list. Specify *No* to read data from a SAS source.
SAS File Directory	The path to the directory where the SAS file or file list for a SAS source resides from where you want to read the data. Applicable when you specify **Read From File** as **Yes**.
SAS File Name	The name of the SAS file for a SAS source from which you want to read data. Applicable when you specify **Read From File** as **Yes**.
File Type	Determines whether the Integration Service reads data from a file or from a file list. You can select from the following options to read data: - Direct. Reads data from a SAS file you specify. - Indirect. Reads data from a SAS file list you specify.

Property	Description
SAS File List	The name of the file list `.txt` file that contains a list of SAS files from which to read data. The Integration Service reads data from the file list `.txt` file that is available in the path you specify in **SAS File Directory** field. Within the `.txt` file, you can specify either the name of the SAS file or the full path where the SAS file is available on the Informatica server machine. When you do not specify a path for the SAS file in the file list, the Integration Service searches for the SAS file in the **SAS File Directory** path.
Join Type Overrule	Optional. Overrides the join type defined for the SAS sources. By default, the PowerCenter Integration Service uses the join type defined in the source qualifier.
Join Condition Overrule	Optional. Overrides the join condition defined for the SAS sources. By default, the PowerCenter Integration Service uses the join condition defined in the source qualifier.
Load Type	Configures the load type for the session.
Password	Determines whether SAS compresses target data. Used in sessions writing to SAS targets using a full load type. For more information about SAS compression, see *"Data Set Option COMPRESS"* in the *SAS* documentation.

You can use mapping parameters and variables in the Libname, Tablename, WhereClause, Pre/PostSASCode Overrule, SAS File Directory, and SAS File Name properties.

Partitioning

You can configure pass-through partitioning for SAS data sets that you import by using the **Import SAS Source** option. You cannot configure the conditions for pass-through partitioning. When you enable partitioning, the Integration Service distributes the data load and optimizes the performance.

Note: You must apply the one-off EBF to enable support for partitioning. Contact Informatica Global Customer Support to obtain the EBF for OCON-15247.

Configuring Pass-Through Partitioning to Read Data from a SAS Source

You can configure a pass-through partitioning to read data from a SAS source.

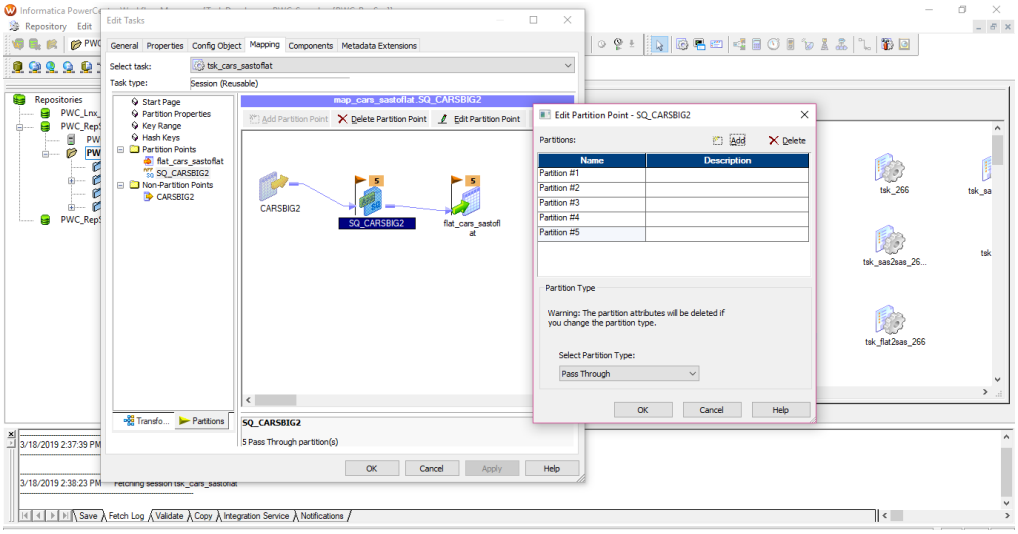
Perform the following steps if you want to configure pass-through partitioning for a session configured to read data from a SAS source and write data to a flat file.

1. Start the PowerCenter Designer and connect to a PowerCenter repository configured with a SAS instance.
2. Click **Sources** in the Source Analyzer and choose **Import SAS Source**.

   Note: This option is not available for SAS sources imported from a SAS file.
3. Click **Targets** in the Target Designer and import a flat file target.
4. In the Mapping Designer, create a mapping to read data from the SAS source and write to a flat file.
5. Validate the mapping.
6. In the Workflow Designer, open the session properties.
7. On the **Partitions** view, click **Add Partition Point**.
8. Select the Source transformation, and click **Edit Partition Point**.

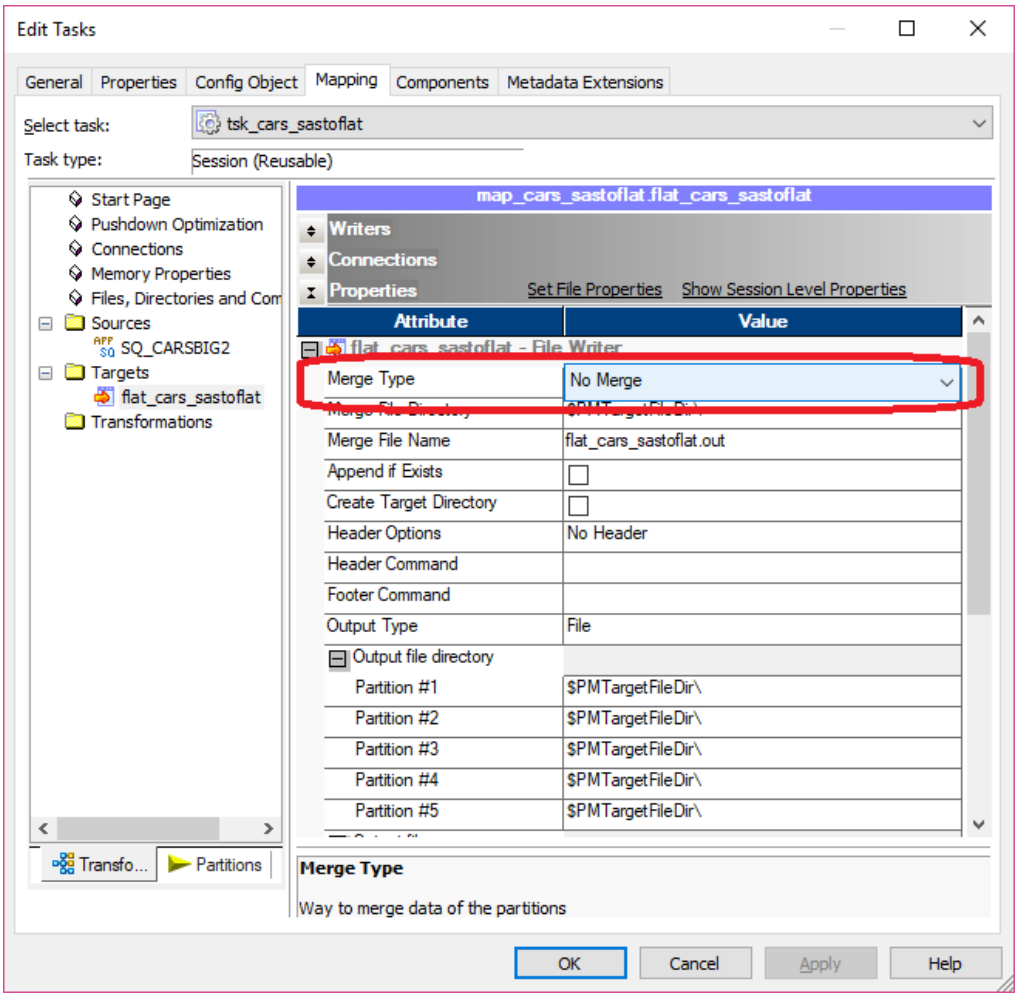
   The Edit Partition Point dialog box appears.
9. Click **Add** to add the required number of partitions and enter a description for each partition.
10. Select the partition type as **Pass Through** for each of the partitions.

    The following image shows the configured pass-though partitioning for a SAS session:



11. In the target session properties, you can set the **Merge Type** property to **No merge**.

    When the **Merge Type** option is **No merge**, the Integration Service creates partition files equivalent to the number of partitions with equally distributed records.
    The following image shows the configured **No merge** option in the target session properties:



    If you set a different option for the **Merge Type** in the target session properties, the Data Integration Service creates a single target file that contains all the records read through the partitions.

Configuring Pass-Through Partitioning to Write Data to a SAS Target

You can configure a pass-through partitioning to write data to a SAS target.

Perform the following steps if you want to configure pass-through partitioning for a session configured to read data from a SAS source and write the data to a SAS target.

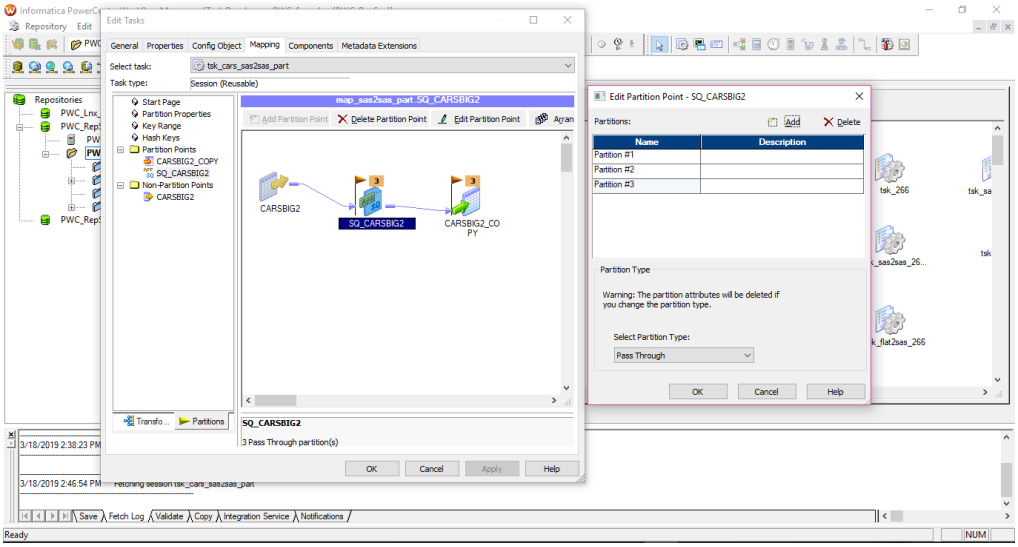
1. Start the PowerCenter Designer and connect to a PowerCenter repository configured with a SAS instance.
2. Click **Sources** in the Source Analyzer and choose **Import SAS Source**.

   Note: This option is not available for SAS sources imported from a SAS file.
3. Click **Targets** in the Target Designer and import a flat file target.

4. In the Mapping Designer, create a mapping to read data from the SAS source and write to a flat file.
5. Validate the mapping.
6. In the Workflow Designer, open the session properties.
7. On the **Partitions** view, click **Add Partition Point**.
8. Select the Source transformation, and click **Edit Partition Point**.

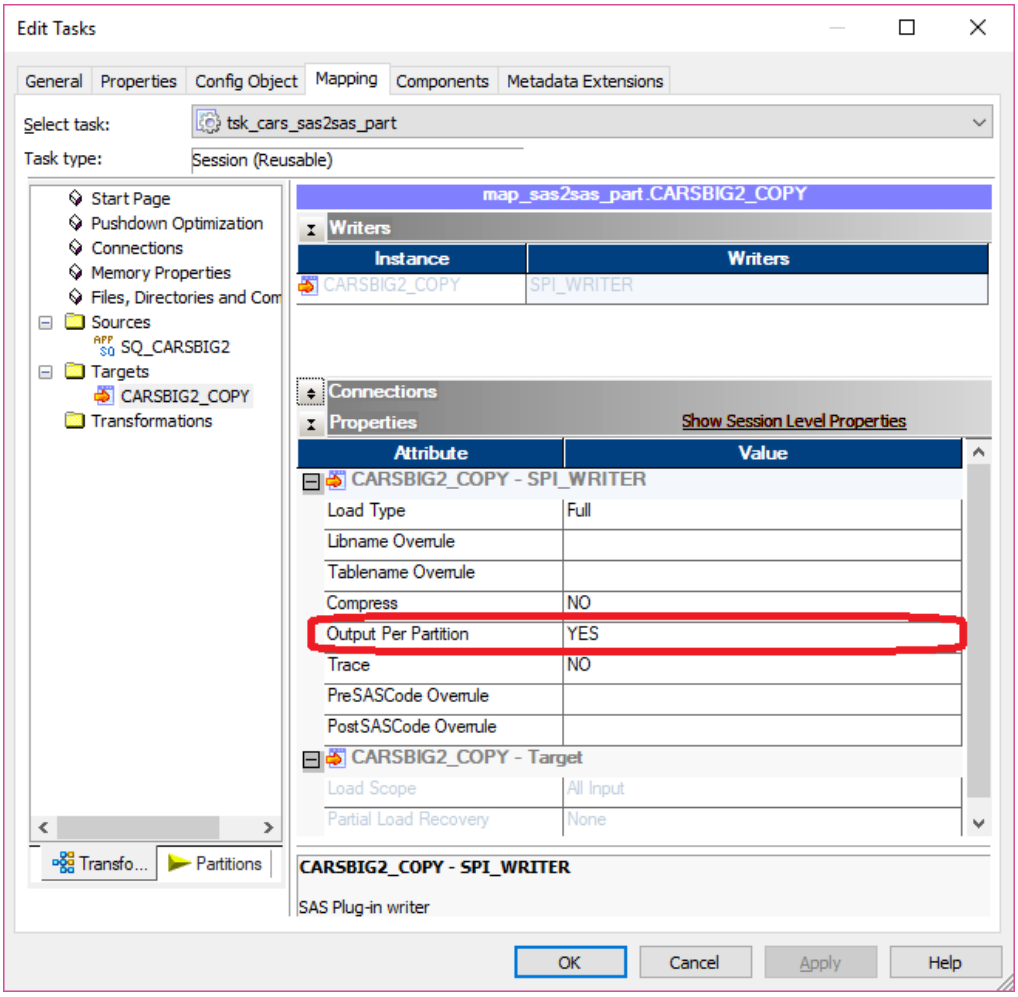
   The Edit Partition Point dialog box appears.
9. Click **Add** to add the required number of partitions and enter a description for each partition.
10. Select the partition type as **Pass Through** for each of the partitions.

    The following image shows the configured pass-though partitioning for a SAS session:



11. In the target session properties, you can set the **Output Per Partition** property as **Yes**.

    When the **Output Per Partition** option is **Yes**, the Integration Service creates SAS targets equivalent to the number of partitions with equally distributed records.
    The following image shows the configured **Output Per Partition** option in the target session properties:



    The **Output Per Partition** value as **NO** is not supported for SAS targets.

Rules and Guidelines for SAS Sessions

Use the following rules and guidelines when you configure SAS mappings:

- You can read data from compressed (COMPRESS=CHAR/YES or COMPRESS=Binary) and uncompressed SAS tables using the **Import SAS Source** option.
- You cannot directly read data from a SAS file that is created with data compression (COMPRESS=CHAR/YES or COMPRESS=Binary).
- There is no limit to the page size when read data from SAS tables and SAS files.
- PowerExchange for SAS does not support sessions on a grid.

APPENDIX A

SAS Datatype Reference

This appendix includes the following topic:

SAS Data Types and Formats

SAS stores all data using Numeric and Character data types. You can specify additional type information by using SAS formats. SAS formats determines the presentation of the data to the end user.

Character Data

The length attribute from SAS specifies the number of characters allowed in the column. PowerCenter uses this value as the scale attribute in the source definition.

Numeric Data

PowerCenter looks at the SAS format assigned to the column to determine the right precision and scale values for numeric data.

For example, if the SAS format of a numeric column is 10.2, the column will be presented using 10 positions in total including a decimal point and two digits after the decimal point. This is translated to a precision of 9 and a scale of 2.
Note: Assigning no format to a numeric column causes PowerCenter to assign a default precision of 10 and scale of 0. This might not be adequate to hold the data. Adjust precision and scale manually to get a definition for the column that is adequate to hold the data you expect for this column.

Date, Time, and Datetime Data

Numeric columns represents all Date, Time, and Datetime columns in SAS. The format of the column usually indicates the intended use of this numeric column, but supported formats differ between SAS releases and localized versions.

For this reason, when importing a SAS data object, PowerCenter do not try to determine the interpretation of a numeric column as a Date value, Time value or Datetime value. These data types are available in a SAS source definition, but you must manually assign them. Automatically the required conversion is done.

APPENDIX B

SPI Server Configuration Parameters

This appendix includes the following topic:

Configuration Parameters

Property	Parameter	Description	Example
ServerConfig	Portnumber	TCP/IP port number for the SPI Server listener process.	11080
ServerConfig	SasAppPath	Full path to the SAS executable.	`\\progs\sas\V8\sas.exe`
ServerConfig	SasWorkingDir	SAS Working Environment directory path	`\\spi\work`
ServerConfig	SasAutoExec	Autoexec file containing library definitions.	`autoexec.sas`
ServerConfig	LogFile	Specifies the location of the server log file.	`\\spi\spiserver.log`
ServerConfig	SasLogMax	Number of SAS log files stored by the server for reader sessions and for writer sessions. Minimum is 12. Default is 256.	256
ServerConfig	SASPrePostCode	Allow SAS exits (Yes/No).	Yes
ServerConfig	SpiTimeout	Number of seconds the SPI server waits for SAS to start. Increase this value on slow networks and when using a lengthy PreSAS Command	10
SpiUsers	<username>	Encrypted password.	89FD2A5347541028C9F A9A26A9057FF7
SpiAdmins	<username>	Encrypted password.	200CEB26807D6BF99F D6F4F0D1CA54D4

APPENDIX C

Error Messages

This appendix includes the following topics:

PowerCenter Client Messages

All available columns have been added to this index.

Cause: You tried to add a column to an index when columns are no longer available.

Action: No action.

Cannot connect to the SPI server, host = <host name>, port = <port number>, error = <error code>.

Cause: The SPI Server TCP/IP port is not accessible.

Action: Check the Communication component and network configuration. Verify that the SPI Server is running.

Cannot create field <field name>.

Cause: When you are not able to define the field in the repository.

Action: Check for related messages.

Cannot create table <table name>.

Cause: When you are not able to define the table in the repository.

Action: Check for related messages.

Cannot initialize Windows Sockets.

Cause: When you do not configure the Windows network environment.

Action: Contact the Windows system administrator.

Failed to access config file data, wrong file format.

Cause: The configuration file is accessible, but the content is not valid.

Action: Check the configuration file.

Failed to add menu item <item name>.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

Failed to close the session.

Cause: Internal error.

Action: Check the environment for a temporary network or operating system failure.

Failed to launch SAS data viewer, error code = <error code>.

Cause: .NET run time might not be available on your system.

Action: Install Microsoft .NET runtime environment.

Failed to load config file: <file name>, the file does not exist or it is not valid config file.

Cause: The configuration file is not accessible.

Action: Make sure the configuration file exists and is accessible.

Failed to load index information from metadata.

Cause: An internal error occurred while retrieving index information.

Action: Contact Informatica Global Customer Support.

Failed to open the help file: <file name>.

Cause: Help file could not be found or could not be opened.

Action: Check the client installation.

Failed to retrieve metadata, error code = <error code>.

Cause: SAS does not start.

Action: Check the SAS environment. Try to start SAS manually, and check the error messages from SAS.

Failed to retrieve SAS session log, error code = <error code>.

Cause: When you are not able to retrieve the SAS log file from the SAS machine.

Action: Check the SPI Server log file for more information.

Failed to retrieve session ID.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

Failed to retrieve the registry key: <key name>.

Cause: When the installation of PowerCenter do not performed properly.

Action: Perform the installation of the PowerCenter Client.

Failed to save config file: <file name>.

Cause: When you are not able to save the configuration file.

Action: Check the file system.

Index name cannot be empty.

Cause: You tried to define an index without giving it a name.

Action: Supply a name for the index.

Library information is not available.

Cause: The SAS session did not return the expected metadata.

Action: Check the SAS log for error conditions.

No information available about table <table name>.

Cause: The SAS session did not return the expected metadata.

Action: Check the SAS log for error conditions.

No selection has been made.

Cause: You tried to edit a field attribute before selecting an attribute.

Action: Make a selection before attempting the edit.

Nothing has been selected for import.

Cause: When you do not select any items in the table tree.

Action: Select an item.

Received data has not valid format or the imported table/view has no columns.

Cause: This must not occur in normal situations.

Action: Check the SAS environment and the assigned library or table for abnormal conditions.

SAS data viewer requires .NET runtime. It appears that .NET runtime is not installed on this system, continue anyway?

Cause: .NET runtime might not be available on your system.

Action: Install Microsoft .NET runtime environment.

Session open request failed, host = <host name>, port = <port number>, error = <error code>.

Cause: SPI Server cannot initialize a session.

Action: Check the SPI Server log for more information.

SPI server login failed because of wrong user name or password.

Cause: Authentication to SPI Server failed.

Action: Use the correct credentials to connect to SPI Server.

The metadata field <field name> does not correspond to any table field.

Cause: An internal error occurred while retrieving index information.

Action: Contact Informatica Global Customer Support.

The specified length of a numeric field is out of range (a valid value for SAS must be in the range from <value> to <value>). It will be set to the default value.

Cause: The field length is not valid.

Action: Enter a valid length or accept the default value.

Version mismatch is detected. The client version is not compatible with a server you are trying to connect to.

Cause: The Client component of PowerExchange for SAS is not of the same version as the Communication component.

Action: Make sure you install both components from the same version.

Integration Service Messages

10017 A version mismatch is detected. The client version is not compatible with a server you are trying to connect to.

Cause: The Integration Service component of PowerExchange for SAS is not of the same version as the Communication component.

Action: Make sure you install both components from the same version.

11010 Data field length exceeds the maximum value.

Cause: The value for the length of the field is larger than that allowed by SAS.

Action: Enter a valid length. Check SAS documentation for valid lengths.

10001 Cannot connect to the SPI server, host = <host name>, port = <port number>, error = <error code>.

Cause: SPI server TCP/IP port is not accessible.

Action: Check the Communication component and network configuration. Make sure SPI Server is running.

10002 Session open request failed, host = <host name>, port = <port number>, error = <error code>.

Cause: SPI Server cannot initialize a session.

Action: Check the SPI Server log for more information.

10003 Failed to retrieve a session ID.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

10004 Failed to close the session.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

10005 Requested not supported data type, field = <field name>, data type = <data type enumeration>.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

10006 Failed to retrieve SAS session log, error code = <error code>.

Cause: SPI Server cannot read or pass the SAS log file.

Action: Check the existence and permissions of the SAS log file.

10007 Failed to retrieve connection attributes.

Cause: Failed to retrieve connection information from the session.

Action: Contact Informatica Global Customer Support.

10008 Failed to retrieve a host name.

Cause: Failed to retrieve host name from the SAS database connection.

Action: Contact Informatica Global Customer Support.

10009 Failed to retrieve a port number.

Cause: Failed to retrieve port number from the SAS database connection.

Action: Contact Informatica Global Customer Support.

10010 Failed to retrieve a library name from the extension field.

Cause: Failed to retrieve value of the LibraryName metadata extension.

Action: Contact Informatica Global Customer Support.

10011 SAS code generation failed, not supported data type: <data type enumeration>.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

10012 Unexpected command received, command code = <command code> .

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

10013 The session has been aborted.

Cause: When the user aborts the session.

Action: Run the session again.

10014 Failed to retrieve 'libname overrule' attribute from the extension field.

Cause: Failed to retrieve the value of the Libname Overrule session property.

Action: Contact Informatica Global Customer Support.

10015 SPI server login failed because of wrong user name or password.

Cause: Authentication to SPI Server failed.

Action: Use the right credentials to connect to SPI Server.

10016 Failed to retrieve 'trace' attribute from the extension field.

Cause: Failed to retrieve the value of the Trace session property.

Action: Contact Informatica Global Customer Support.

10018 Failed to retrieve 'tablename overrule' attribute from the extension field.

Cause: Failed to retrieve the value of the Tablename Overrule session property.

Action: Contact Informatica Global Customer Support.

10018A Failed to retrieve the server code page ID.

Cause: Failed to retrieve the code page ID of the machine where Integration Service is running.

Action: Contact Informatica Global Customer Support.

10019 Failed to create locale for the code page <code page ID> .

Cause: Failed to create the locale for the code page of the machine where Integration Service is running.

Action: Contact Informatica Global Customer Support.

10020 Failed to expand library name parameter.

Cause: Failed to expand mapping parameter specified for library name.

Action: Contact Informatica Global Customer Support.

10021 Failed to expand table name parameter.

Cause: Failed to expand the mapping parameter specified for table name.

Action: Contact Informatica Global Customer Support.

10019 Failed to create locale for the code page <code page ID>.

Cause: Failed to create the locale for the code page of the machine where Integration Service is running.

Action: Contact Informatica Global Customer Support.

10020 Failed to expand library name parameter.

Cause: Failed to expand mapping parameter specified for library name.

Action: Contact Informatica Global Customer Support.

10021 Failed to expand table name parameter.

Cause: Failed to expand the mapping parameter specified for table name.

Action: Contact Informatica Global Customer Support.

10022 Failed to retrieve Pre SAS Code from the extension field.

Cause: Failed to retrieve the value of the PreSASCode metadata extension.

Action: Contact Informatica Global Customer Support.

10023 Failed to retrieve Post SAS Code from the extension field.

Cause: Failed to retrieve the value of the PostSASCode metadata extension.

Action: Contact Informatica Global Customer Support.

10024 Failed to retrieve 'PreSASCode overrule' attribute from the extension field.

Cause: Failed to retrieve value of the PreSASCode Overrule session property.

Action: Contact Informatica Global Customer Support.

10025 Failed to retrieve 'PostSASCode overrule' attribute from the extension field.

Cause: Failed to retrieve the value of the PostSASCode Overrule session property.

Action: Contact Informatica Global Customer Support.

10026 Failed to expand PreSASCode parameter.

Cause: Failed to expand mapping parameter specified for PreSASCode.

Action: Contact Informatica Global Customer Support.

10027 Failed to expand PostSASCode parameter.

Cause: Failed to expand mapping parameter specified for PostSASCode.

Action: Contact Informatica Global Customer Support.

10028 Open SAS code not allowed.

Cause: Specified SAS code is not allowed.

Action: Enter allowed SAS code.

10031 Opening parenthesis not matched.

Cause: Unmatched opening parenthesis found in the SAS code.

Action: Correct the SAS code with proper closing parenthesis.

10032 Opening quote char not matched.

Cause: Unmatched opening quote found in the SAS code.

Action: Correct the SAS code with proper closing quote.

10033 Invalid value for Pre/Post SAS Code.

Cause: Specified SAS code is incorrect. See the session log for more information.

Action: See the SAS documentation.

10035 The repository is not licensed for PowerExchange for SAS, or the license has expired.

Cause: There is no valid license for the use of PowerExchange for SAS.

Action: Install the proper license keys.

11001 Table %s has no fields.

Cause: Cannot get the field list from the Application Source Qualifier.

Action: Contact Informatica Global Customer Support.

11002 Failed to get ISourceInstance list.

Cause: Cannot get the source list from the Application Source Qualifier.

Action: Contact Informatica Global Customer Support.

11004 Failed to retrieve the source table.

Cause: Cannot retrieve table metadata for the SAS source object.

Action: Contact Informatica Global Customer Support.

11005 Failed to flush PowerCenter buffer, buffer capacity = <buffer capacity>, records to flush = <number of records>.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

11006 Failed to retrieve data, error code = <error code>.

Cause: SAS does not start.

Action: Check the SAS environment. Try to start SAS manually and check the error messages from SAS.

11007 Failed to retrieve a where clause from the extension field.

Cause: Failed to retrieve the value of the WhereClause metadata extension.

Action: Contact Informatica Global Customer Support.

11008 Failed to retrieve 'where clause overrule' attribute from the extension field.

Cause: Failed to retrieve the value of the Whereclause Overrule session property.

Action: Contact Informatica Global Customer Support.

11009 Failed to retrieve metadata extension attributes.

Cause: Cannot retrieve session level SAS table object metadata from the session object.

Action: Contact Informatica Global Customer Support.

11010 Data field length exceeds maximum value.

Cause: The value for the length of the field is larger than that allowed by SAS.

Action: Specify a valid length. Check SAS documentation for valid lengths.

11011 Failed to retrieve partition key information.

Cause: Failed to retrieve partition key information from the session.

Action: Contact Informatica Global Customer Support.

11012 Failed to expand where clause parameter.

Cause: Failed to expand mapping parameter specified for where clause.

Action: Contact Informatica Global Customer Support.

11013 Failed to retrieve 'Join Type' from the extension field.

Cause: Failed to retrieve Join Type information from the mapping.

Action: Contact Informatica Global Customer Support.

11014 Failed to retrieve 'Join Condition' from the extension field.

Cause: Failed to retrieve Join Condition information from the mapping.

Action: Contact Informatica Global Customer Support.

11015 Failed to retrieve 'Join Type overrule' attribute from the extension field.

Cause: Failed to retrieve Join Type information from the session.

Action: Contact Informatica Global Customer Support.

11016 Failed to retrieve 'Join Condition overrule' attribute from the extension field.

Cause: Failed to retrieve Join Condition information from the session.

Action: Contact Informatica Global Customer Support.

11017 Failed to expand Join Condition parameter.

Cause: Failed to expand mapping parameter specified for join condition.

Action: Contact Informatica Global Customer Support.

11018 For %s Only two sources per source qualifier are supported.

Cause: More than two tables participate in the join and the join is not an inner join.

Action: Limit the number of tables to two or specify an inner join.

11019 Failed to get the Primary key - Foreign key relation for creating the Join.

Cause: Failed to retrieve Primary key-Foreign key relation information from the mapping which does not specify join condition.

Action: Create PK-FK relations in the Source Analyzer or specify a join condition.

15001 Failed to retrieve the target table.

Cause: Cannot retrieve table metadata for the SAS target object.

Action: Contact Informatica Global Customer Support.

15002 Failed to send data, error code = <error code>.

Cause: SAS does not start.

Action: Check the SAS environment. Try to start SAS manually and check the error messages from SAS.

15003 Failed to retrieve target instances.

Cause: Failed to retrieve the target instance from the session.

Action: Contact Informatica Global Customer Support.

15006 Failed to retrieve indexes information from the extension field.

Cause: Failed to retrieve indexes from the metadata extension.

Action: Contact Informatica Global Customer Support.

15007 Failed to load index information from the extension field.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

15008 Failed to retrieve key index information from the extension field.

Cause: Failed to retrieve key index metadata extension.

Action: Contact Informatica Global Customer Support.

15009 Failed to retrieve load type attribute from the extension field.

Cause: Failed to retrieve the value of the Load Type session property.

Action: Contact Informatica Global Customer Support.

15010 Failed to retrieve ‘data compression’ attribute from the extension field.

Cause: Failed to retrieve the value of the Compress session property.

Action: Contact Informatica Global Customer Support.

15011 Failed to retrieve ‘output per partition’ attribute from the extension field.

Cause: Failed to retrieve the value of the 'output per partition' session property.

Action: Contact Informatica Global Customer Support.

Communication Component Messages

A version mismatch is detected, the client connection has been rejected.

Cause: The Integration Service or Client component of PowerExchange for SAS is not of the same version as the Communication component.

Action: Make sure you install both components from the same version.

Failed to create SAS data code file <file name>.

Cause: The indicated file could not be created in the Working directory as specified in the Communication component configuration.

Action: Check the configuration and the directory permissions.

Failed to generate SAS dummy log file.

Cause: When there no empty SAS log file created.

Action: Check the file and directory permissions and the Communication component configuration.

Failed to open SAS log file <file name>.

Cause: When you are not able to open the SAS log file.

Action: Check the file and directory permissions and the Communication component configuration.

Failed to receive data from SAS, errno = <error message>.

Cause: SAS does not start.

Action: Check the SAS environment. Try to start SAS manually, and check the error messages from SAS.

Failed to send data to SAS, errno = <error message>.

Cause: SAS does not start.

Action: Check the SAS environment. Try to start SAS manually, and check the error messages from SAS.

Failed to set SAS working directory <directory path>.

Cause: Could not set the indicated path as the current working directory.

Action: Check the existence of the directory and its permissions and the Communication component configuration.

Failed to start SAS session, errno = <error message>.

Cause: SAS does not start.

Action: Check the SAS installation and the Communication component configuration.

Failed to stop SPI server, errno = <error message>.

Cause: When you are not able to stop the SPI server using the spiserver command.

Action: Make sure you specified the right host name and port number.

Failed to write data to SAS data code file <file name>.

Cause: When you are not able to write to the indicated file.

Action: Check file permissions.

SAS session time out expired.

Cause: The SAS process does not end.

Action: Check the SAS log for possible problems.

SAS session wait failed.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

Unexpected command received, message ID = <message ID>.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

Unknown message received.

Cause: Internal error.

Action: Contact Informatica Global Customer Support.

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