THE POWER TO KNOW.

SAS® Performance Management Solutions 5.2

9.1.3 to 9.2 Migration Guide

SAS® Documentation

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Chapter 1

Introduction

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About This Book

This book applies to release 5.2 of the SAS Performance Management Solutions. It describes the migration approach for upgrading your SAS Performance Management Solutions *X*.4 content and configuration from SAS 9.1.3 to SAS 9.2.

- If you are performing a migration, begin with this document. Refer also to the documents listed in "References" on page 2.
- If you are performing an upgrade in place (from release 5.1 to release 5.2), refer to the *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions* instead.

Notes and Restrictions

Be aware of the following notes and restrictions:

- If you are migrating SAS Strategic Performance Management 2.4, see "SAS Strategy Management: Partial Promotion Tools" on page 57 for additional options.
- You cannot use the SAS Migration Utility and the Software Deployment Wizard to migrate the SAS Intelligence Platform and then rerun the same software to migrate the SAS Performance Management solutions later.
- You cannot migrate installations prior to *X*.4.
- If you are installing new products in addition to migrating old ones, first migrate the *X*.4 installation. Then install the new products.

Terms and Conventions

This book uses the following terms and conventions:

Convention	Description
data tier	The machine on which you install the data-tier software for SAS Solutions Services, SAS Financial Management, SAS Human Capital Management, and SAS Strategy Management (depending on the products you are installing).
metadata tier	The machine on which you installed the SAS Metadata Server. Usually, this is the same machine as the data tier.
middle tier	The machine on which you installed the Web application server and on which your Web applications run.
single-tier installation	An installation that is done on one machine. In that case, the single machine functions as both the data tier and the middle tier, and you should follow instructions for both the data tier and the middle tier.
multi-tier installation	An installation that is done on more than one machine (for example, with a data tier and a middle tier).
SAS-config-dir	The path to the SAS configuration directory in the operating system; for example, **`C:\SAS\Config`** (Windows) or **`/usr/local/SAS/Config`** (UNIX).
MySQL-install-dir	The path to the MySQL installation directory. For example, **`C:\MySQL\bin`** (Windows) or **`/usr/local/mysql`** (UNIX)
`!SASROOT`	The SAS root directory. In a SAS 9.1.3 installation, **`!SASROOT`** is typically **`C:\Program Files\SAS\SAS 9.1`** (Windows) or **`/usr/local/sas/SAS_9.1 (UNIX).`** In a SAS 9.2 installation, **`!SASROOT`** is typically **`C:\Program Files\SAS\SASFoundation\9.2`** (Windows) or **`/usr/local/SAS/SASFoundation/9.2`** (UNIX).

References

Refer to the following documents to assist with your installation and migration:

- *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions*. This book contains instructions for installing third-party software, creating users, and installing and configuring the SAS Performance Management software.

  It is available at the following sites:

- **SAS Financial Management:** `http://support.sas.com/documentation/onlinedoc/fm`
- **SAS Strategy Management:** `http://support.sas.com/documentation/onlinedoc/stm`
- **SAS Human Capital Management:** `http://support.sas.com/documentation/onlinedoc/hcm`

Note: These sites are password-restricted. You can find the user name and password in the preinstallation checklist or by calling Technical Support.

- *SAS Solutions Services: System Administration Guide*. This book contains additional configuration and administration information, as well as a list of changes in SAS Solutions Services. It is available at the sites listed above.
- *SAS Solutions Services: Data Administration Guide*. This book contains information about loading and managing data for the solutions. It is available at the sites listed above.
- For the SAS Intelligence Platform:
  - *SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide*
  - *SAS Intelligence Platform: Installation and Configuration Guide*
  - *What's New in SAS 9.2 Intelligence Platform*

  These documents (and others) are available at `http://support.sas.com/92administration`.
- *What's New in SAS Information Delivery Portal* , available at `http://support.sas.com/documentation`.

Chapter 2

Preliminary Tasks

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Important Assumptions

This document is written with the following assumptions:

- You have prepared for a standard installation (such as installing required third-party applications, planning which tiers are going to be installed on which machines, and so on).

  See the "Pre-Installation Steps" in the *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions*. For migration-specific information about external accounts, see "Create Operating System Accounts" on page 6.

- You have prepared a software depot and an installation plan file.

Create Operating System Accounts

Required External Accounts

Create the required external accounts in the operating system for the primary users, as listed in your preinstall checklist. External accounts are defined outside the metadata repository (for example, in the operating system).

When performing an installation with migration from SAS 9.1.3, you are given the option of using the new SAS 9.2 internal accounts. We recommend that you take that option.

The following table summarizes the required external accounts and the differences between SAS 9.1.3 and SAS 9.2.

Table 2.1 *Required External User Accounts*

External Account (SAS 9.1.3)	External Account (SAS 9.2)	Example (SAS 9.2)
SAS Installer	SAS Installer	*domain*\installer-ID
SAS General Server User	SAS Spawned Servers account	*domain*\sassrv
SAS Demo User	SAS First User	*domain*\sasdemo
not applicable	Solutions Host User	*domain*\sassln

Note:

- The *domain* is not used for UNIX accounts.
- The sasdemo account is optional. If you include this identity, it must refer to an external account.

For more information about the account that must be used for installation with migration, see "The SAS Installer Account" on page 7.

Optional External Accounts

The following external accounts are required only if you do not take the internal-account option:

Table 2.2 *Optional External User Accounts*

External Account (SAS 9.1.3)	External Account (SAS 9.2)	Example (SAS 9.2)
SAS Administrator	SAS Administrator	*domain*\sasadm
SAS Trusted User	SAS Trusted User	*domain*\sastrust
Solutions Role Administrator	Solutions Role Administrator	*domain*\slnadm

Note: The *domain* is not used for UNIX accounts.

The SAS Installer Account

The SAS Installer account must be the same account that was used to install SAS 9.1.3. It must have a corresponding metadata identity, with membership in the Administrators group and the MySQL Users group.

On Windows, this user must be a member of the Administrators group in the operating system.

On UNIX, this user's profile must be the same as the SAS 9.1.3 profile, including the environment variables for MySQL. Here is an AIX example:

```
# Path to the libdir in your mysql install
MYSQL_LIBDIR=/usr/local/mysql/lib
export MYSQL_LIBDIR

# Path to directory to hold shared library for SAS Access to MySQL
MYSQL_CLIENT_DIR=/usr/local/SAS/libmysql
export MYSQL_CLIENT_DIR

# Set or add to the shared library load path
LIBPATH=$LIBPATH:$MYSQL_CLIENT_DIR
Or
LIBPATH=/usr/lib/:/lib:$MYSQL_CLIENT_DIR
export LIBPATH

# Add mysql/bin to the PATH environment variable
PATH=$PATH:/usr/local/mysql/bin
export PATH
```

Note: On UNIX, verify that the link-editor for object files, ld, is in the SAS installer's path.

The sasspusr Account Not Needed

X.4 installations required an additional user account, domain\sasspusr, for access to the stored process server via the SPAuth domain. This user account is no longer required. For post-migration instructions, see "Remove References to sasspusr and SPAuth" on page 31.

Perform Checks Before Running the SAS Migration Utility

Overview

On a single-tier system, perform all the pre-migration checks listed. On a multi-tier system, perform the pre-migration checks on the specified machines.

(Data Tier) Check the Required Hot Fix Level

Before you migrate the SAS 9.1.3 environment, make the following checks:

- Check that the metadata server version is 9.1.3SP4. (In an interactive SAS session, look at **Help** ⇨ **About**.)
- Check that hot fix E9BC59 has been applied by confirming the existence of the file **!SASROOT\core\sasinst\hotfix\e9bc59wn.aud**.
- Make sure that you followed the post-installation instructions when you applied the hot fix.

CAUTION:
Be sure to make this update before the migration. If you already performed the migration, you must delete the configuration directories and rerun the configuration pass of SAS Deployment Wizard. If you applied the hot fix but are uncertain as to whether you followed the post-installation steps, follow them now.

If the hot fix has not been applied, download and install the hot fix. Point your browser to the following location: **http://ftp.sas.com/techsup/download/hotfix/e9_sbcs_prod_list.html#e9bc59** and download the appropriate hot fix for your operating system.

The Readme file includes the post-installation steps.

(Data Tier) Update the Metadata for SAS Data Integration Studio

CAUTION:
Be sure to make this update before the migration. Otherwise, you must delete the configuration directories and rerun the configuration pass of SAS Deployment Wizard.

Before performing a migration, update the metadata for SAS Data Integration Studio on the *X*.4 data tier:

1. Point your browser to the following SAS Note:

   http://support.sas.com/kb/37/686.html

2. Download the JAR file and follow the SAS Note instructions.

(Data Tier) Run the Diagnostic Tool

The diagnostic tool ensures that the environment is ready for migration. It also gathers information about the site's stageDDS, DDS, and SASSDM data models and compares them to the corresponding SAS data models. For successful migration, there must be no critical differences between a site's data model and the SAS data model to ensure successful migration. After running the diagnostic tool, correct any critical differences before continuing the migration.

On the *X*.4 system, run the diagnostic tool from SAS Data Integration Studio, as follows:

1. In SAS Data Integration Studio, log on to the data tier as a power user (not the unrestricted user). Select the Solutions repository as the default.
2. Select the **Inventory** tab.
3. In the Solutions repository, right-click the **Jobs** folder and select **Import**. Select **SAS_HOME\SASSolutionsServices\1.4\DataTier\Diagnostics\DataModels\chk_dataModels_Job.spk** as the package to import.

   Note: Substitute "1.4.1" as the version number if necessary.

4. Open the chk_dataModels job.

5. Open the properties for the chk_dataModels transformation.
6. Select the **Options** tab and set the following options:
   - **Directory (Input)**: Directory where the SAS dictionary tables are stored, with names such as dictionary_14.sas7bdat or dictionary_13.sas7bdat. Default values for this directory are as follows:
     - **(Windows) `..\Program Files\SAS\SASSolutionsServices \1.4\DataTier\Diagnostics\DataModels`**
     - **(UNIX) `../SAS/SASSolutionsServices/1.4/DataTier/ Diagnostics/DataModels`**
   - **Directory (Output)**: Directory where the HTML output reports are stored. Default values are as follows:
     - **(Windows) `..\SAS\SASSolutionsConfig\Lev1\Data`**
     - **(UNIX) `./SAS/SASSolutionsConfig/Lev1/Data`**

   Keep the default values for the remaining options.
7. Execute the chk_dataModels job.
8. Open the log and check the output files that are produced by the chk_dataModels job. The files are listed at the bottom of the log. Here is an example:

```
  NOTE: Check the following html documents:
- C:\SAS\SASSolutionsConfig\Lev1\Data/diff_site_DDS_version
1.4_09AUG10111604.html
- C:\SAS\SASSolutionsConfig\Lev1\Data/diff_site_STAGEDDS_version
1.4_09AUG10111604.html
- C:\SAS\SASSolutionsConfig\Lev1\Data/diff_site_SASSDM_version
1.4_09AUG10111604.html
```

   Only tables that differ from the standard model are listed in the report output. If you see a column in the report whose data type and length match the standard model, then only the label has been changed, and you can ignore the difference. If a column is reported as missing in the site model, it usually results from a difference in case between the column name in the site model and the SAS model. Case differences in column names can be safely ignored. Investigate and correct any other differences to ensure a valid migrated model.

   If the HTML files are empty, no differences were found.

Install the SAS Migration Utility

The SAS Migration Utility is a tool to package content from the SAS 9.1.3 installation so that it can be migrated to a new SAS 9.2 installation. For more information about the SAS Migration Utility, refer to the *SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide* (see "References" on page 2).

To install the SAS Migration Utility on Windows:

1. In the directory where you downloaded the software depot, find the directory named **`utilities\smu`**.

   This directory contains the smu.exe file, the smu.properties.template file, and possibly other files and directories.

2. Copy the contents of the **utilities\smu** directory to a new directory on each of the computers in your SAS 9.1.3 installation. For example, create **C:\Program Files \SAS\SASMigrationUtility\9.1.3** and copy the files there.

On UNIX, FTP the files from the depot to a new directory on each of the computers in your SAS 9.1.3 installation.

Run the SAS Migration Utility

Before running the SAS Migration Utility, create a shared directory on the network that is available to all of the computers in the installation. This directory becomes the SAS Migration Utility migration package directory. All SAS Migration Utility output from all computers is stored in this directory.

Then perform the following steps on each computer that needs migration. Begin with the computer that is running the SAS 9.1.3 metadata server:

1. Navigate to the directory where you copied the contents of the **utilities\smu** depot directory.
2. Copy the smu.properties.template file to smu.properties.
3. Edit the smu.properties file with a text editor.

   Note: The smu.properties file is in the Java properties file format. The following format rules are most important to apply when you are editing the smu.properties file:

   - Lines that begin with the # character are comments and have no effect.
   - Backslash characters (\) must be doubled. For example, **C:\\Program Files\\SAS**.
4. Review the entire smu.properties file and change property settings as necessary.

   The comments in the file explain each property that must be set. This table explains some specific properties:

Property	Description
SMU.Output.Dir	This property contains the path to the SAS Migration Utility migration package directory. Enter the path to the shared directory that you created in step 1.
SMU.password	The smu.properties comments state that the SMU.password property value must be encoded in the {sas001} format using the PWENCODE procedure. However, a plain-text password is also accepted. If you choose to specify a plain-text password, for security, erase this password immediately after running the SAS Migration Utility.

Property	Description

SMU.SASROOT	For machines on which SAS is installed, enter the path to the **!SASROOT** directory. For example:
	`SMU.SASROOT=C:\\Program Files\\SAS\\SAS 9.1`
	or
	`SMU.SASROOT=/usr/local/SAS/SAS_9.1`
	On a middle-tier machine, comment out this property.

SMU.spmmidtier.scorecard.ear.dir	This property must be set only for sites with SAS Solutions Services 1.4.1 and IBM WebSphere 6 on AIX: Path to the deployed EAR file for SAS Strategic Performance Management: ***WebSphere-install-dir*/profiles/*profile-name*/installedApps/*network-cell-name*/SAS Strategic Performance Management.ear** ***WebSphere-install-dir*** is the path to the IBM WebSphere root installation directory (such as **/usr/IBM/WebSphere/AppServer**). ***profile-name*** is the name of the application server profile (such as **AppSrv01**). ***network_cell_name*** is the cell name of the deployment manager node.

5. (Windows) Open a command window in the directory in which you installed the SAS Migration Utility and submit one of the following commands:

   - If this is the computer on which the DAV server is running (either Xythos or Apache), then submit this command:

     smu.exe -s -a -davtier -properties "*full_path_to_SMU_install_directory*\smu.properties"

   - Otherwise, submit this command:

     smu.exe -s -a -properties "*full_path_to_SMU_install_directory*\smu.properties"

     Note: In the previous commands, quotation marks are required around *full_path_to_SMU_install_directory*\smu.properties only if there is a space in the pathname.

   Note: You must specify the full path to the smu.properties file in the -PROPERTIES option, even though the smu.properties file is in the current directory (the same directory as the smu.exe file). This is because smu.exe is actually a self-extracting archive; it extracts the complete program into a separate temporary directory and runs it from there.

   After a few seconds, a second command window appears with the SAS Migration Utility console output.

6. (UNIX) Submit one of the following commands (line breaks added for readability):

   - If this is the computer on which the DAV server is running (either Xythos or Apache), then submit this command:

```
./smu.sh -- -davtier -outputdir /usr/local/SAS/smupackage
   -properties /usr/local/SAS/smu/smu.properties
```

- Otherwise, submit this command:

```
./smu.sh -- -outputdir /usr/local/SAS/smupackage
   -properties /usr/local/SAS/smu/smu.properties
```

Note: The output directory should not be the same as the SMU installation directory.

7. Wait for the SAS Migration Utility to finish running.

Check the output as described in "Check the SAS Migration Utility Migration Package" on page 12. For additional troubleshooting help, see "Errors Running the SAS Migration Utility" on page 45.

Check the SAS Migration Utility Migration Package

In the previous section, you set the SMU.Output.Dir property in the smu.properties file to point to the SAS Migration Utility migration package directory, the directory under which all migrated content is stored.

There is a subdirectory in the SAS Migration Utility migration package directory named after each computer on which you run SAS Migration Utility. Inside this subdirectory are many other subdirectories. Each subdirectory contains backed-up content from a particular SAS product. (Some directories might be empty.)

To check the SAS Migration Utility migration package:

1. After smu.exe finishes running, check the final few lines of output in the command window to determine whether the SAS Migration Utility produced error messages.
2. If the SAS Migration Utility produced error messages, take these steps:
   a. View the migrate.log file in the computer's subdirectory inside the SAS Migration Utility migration package directory to determine the cause of the error.
   b. Look for and correct any remaining errors. If you have made corrections, rerun the SAS Migration Utility with the **`-replace`** option.
3. Review the migration status messages for the products:
   a. In the subdirectory named AnalysisReport, open the FullReport.html file and review the messages.

      There are migration status messages for each product. This report indicates whether any products must be upgraded or have patches installed before migration can be completed.
   b. Run the SAS Migration Utility again after installing any patches.
   c. Look for and correct any remaining error messages before continuing.
   d. Examine all warning messages.

      Warning messages are for informational purposes.

      Note: Warning messages are expected on most systems. For example, a warning message appears in the Analysis Report for each data directory found in metadata that exists outside of the SAS Configuration directory. If these are needed in the SAS 9.2 installation, migrate them manually.
4. Perform these additional checks to verify that data has been backed up correctly:

Note: On the middle tier, ignore these steps.

a. In the **metadatasrv** subdirectory, verify the existence of these subdirectories: **MetadataRepositories** and **rposmgr**.

b. In the **MetadataRepositories** subdirectory, verify the existence of one subdirectory for each metadata repository.

c. In the **WFS** subdirectory, verify the existence of a subdirectory named **Area1**.

The **Area1** subdirectory should contain the WFSDump.xml file as well as several files with names that begin with "X" and end with a number.

d. In the **soldatatier** subdirectory, verify the existence of a **SQL** subdirectory containing a file named sassdm.sql.

This file might be large (megabytes or hundreds of megabytes.)

e. (SAS Strategy Management) In the **spmdatatier** subdirectory, verify the existence of a **SQL** subdirectory containing a file named spm.sql.

f. (SAS Human Capital Management) In the **hcmdatatier** subdirectory, verify the existence of a **SQL** subdirectory containing a file named hcm.sql.

Repeat for Each Computer

Repeat the steps in "Run the SAS Migration Utility" on page 10 and "Check the SAS Migration Utility Migration Package" on page 12 for every other computer in this installation (other than client machines).

Note: The FullReport.html file shows a failure (✕) for the SAS Metadata Server Product when the smu.exe is run on any tier other than the metadata server machine.

(Data Tier) Modify Data Set Names If Necessary

If the physical names of any custom data sets in the STAGEDDS library begin with "STAGE_", you must rename them in the SAS Migration Utility (SMU) package before installing the 5.2 software. If the physical names of any custom data sets consist of a single letter (such as "a.sasb7dat"), you must rename them (for example, to "aa.sasb7dat").

Note: These steps apply regardless of whether the prefix is in upper case, lower case, or mixed case.

1. Navigate to the ***path-to-SMU-package**data-tier-name*\levconfig\levdata\Data** directory.

   path-to-SMU-package is the directory in which the SAS Migration Utility package was created. ***data-tier-name*** is the name for the data-tier machine.

2. Open the ZIP file in that directory and make the following changes:

   a. If you find any data sets with a name that begins with "STAGE_", rename each matching data set to begin with "STG_" (or a similar string) instead.

   b. If you find any data sets with a name that is a single letter, rename each matching data set so that it has more than one letter in its name.

(SAS Human Capital Management Data Tier) Export the FORMATS Catalog

If your site installed SAS Human Capital Management and you are migrating from 32-bit Microsoft Windows to 64-bit Microsoft Windows, you need to export the FORMATS catalog from the old installation before running the SAS Deployment Wizard.

Note: If you did not install this product, or if you are not migrating to 64-bit Windows, you can skip this task.

Follow these steps on the *X*.4 data-tier server:

1. Start SAS.
2. Assign a libref to the SAS Human Capital Management FORMATS catalog.

   The catalog is typically located at ***SAS-config-dir*\Lev1\SASMain\SASSolutionsServices\SASFormats**.
3. Execute the following code to create a .CPO file of the FORMATS catalog:

   ```
   Proc cport catalog=libref.formats file='path\formats44.cpo';
   Run;
   ```

   Here is an example:

   ```
   Libname v4fmts
      'c:\sas\sassolutionsconfig\lev1\sasmain\sassolutionsservices\sasformats';
   Proc cport catalog=v4fmts.formats file='c:\formats44.cpo';
   Run;
   ```

   - *libref* is the libref that was assigned for the FORMATS catalog.
   - *path* is the name of the directory in which to save the .CPO file.
4. Copy the .CPO file (formats44.cpo) to the data-tier machine in the 5.2 installation.

   After installation but before configuration, you will import this file to the migrated system.

Chapter 3

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Install the Client Applications **19**

Overview

Read the instructions in this chapter. Then follow the installation steps in the *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions*. (See "References" on page 2.)

Note: The installation guide refers to the application server directory as **`SASApp`**. In a migrated system, this directory is typically named **`SASMain`**.

If you are migrating from 32-bit Windows to 64-bit Windows, and your migration includes SAS Human Capital Management, go to "Two-Pass Installation and Configuration" on page 17.

Otherwise, for installation and migration on the data tier (the machine on which you installed the SAS Solutions Services Data Tier software), follow the installation and configuration steps in "One-Pass Installation and Configuration" on page 16..

For troubleshooting help with SAS Deployment Wizard, see "Configuration Errors" on page 46.

One-Pass Installation and Configuration

1. Run the SAS Deployment Wizard

Running the Wizard

Run the SAS Deployment Wizard, making these selections:

- **Deployment type**: Select both **Install SAS Software** and **Configure SAS Software** as the deployment type.
- **Perform migration**: When you reach the Migration Information page, select the **Perform migration** check box.

  In the **SAS Migration Utility Package Directory** field, type or navigate to the shared directory in which the SAS Migration Utility stored its output.

For migration-specific information about responding to prompts in the SAS Deployment Wizard, see "Installation and Configuration Prompts" on page 16.

For additional information, refer to the installation guides for the solutions and the SAS Intelligence Platform. See "References" on page 2.

Installation and Configuration Prompts

Refer to the following notes when you respond to prompts in the SAS Deployment Wizard:

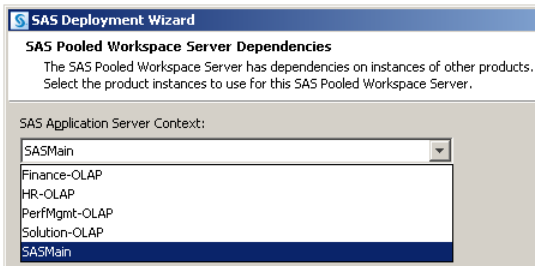
- **Internal accounts**: We recommend that you select **Use SAS internal accounts when appropriate** on the Deployment Accounts wizard page. See "Create Operating System Accounts" on page 6.
- **External accounts**: When you are asked for the user name and password of an external account, check the domain name prefix carefully to ensure that it is correct for your site. It might still have the domain name prefix from the SAS 9.1.3 installation.

  Note: MySQL and WebLogic account names are created in MySQL Server and Oracle WebLogic. They are not operating system accounts. Do not add a host name prefix to those account names.
- **Server context**: The SAS Deployment Wizard presents several pages in which you must select the application server context. During migration, the correct application server context might not be selected by default. There is typically a list of server contexts, consisting of the correct new server context as well as all the migrated OLAP server contexts.

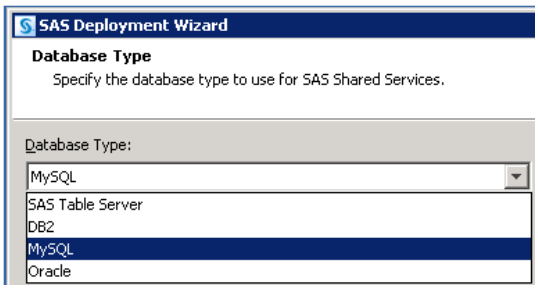
  Choose the correct server context for your site. The default application server context for a migrated system is **SASMain**.

  Note: This application server context does not apply to the metadata server.

  In the example below, **SASMain** is the correct server context to use for the SAS Pooled Workspace Server. The other server contexts are migrated OLAP server contexts.



- When you are asked to specify the database type to use for SAS Shared Services, always select **MySQL**. The other database types listed, including SAS Table Server, are not supported for migration.



When you see the Deployment Summary page, the deployment wizard has finished collecting installation and configuration input. This is the last opportunity to change any information that you have provided in previous pages before the wizard begins writing to your system. Before proceeding with the migration, make sure that the input that you have provided to the deployment wizard is correct. Incorrect user input such as user ID and passwords causes all or portions of your migration to fail.

2. Perform the Instructions.html Tasks

Follow the steps in the Instructions.html file.

3. Perform the Post-Migration Tasks

Perform the post-migration tasks as described in Chapter 5, “Post-Migration Tasks,” on page 27.

Skip the next section (“Two-Pass Data Tier Installation”).

Two-Pass Installation and Configuration

If your site installed SAS Human Capital Management and you are migrating from 32-bit Microsoft Windows to 64-bit Microsoft Windows, or if you are migrating a UNIX installation, follow the steps in this section.

1. Run the SAS Deployment Wizard

If your site installed SAS Human Capital Management and you are migrating from 32-bit Microsoft Windows to 64-bit Microsoft Windows, or if you are migrating a UNIX installation, you must run the SAS Deployment Wizard in two passes: first installation, and then migration and configuration. Between those two passes, you must perform some intervening tasks.

Run the SAS Deployment Wizard. When you are asked to select a deployment type, deselect the **Configure SAS Software** check box, so that the software is installed but not configured. You configure the software in a second pass through the SAS Deployment Wizard.

For migration-specific information about responding to prompts in the SAS Deployment Wizard, see "Installation and Configuration Prompts" on page 16.

For detailed information, refer to the installation guides for the solutions and the SAS Intelligence Platform. See "References" on page 2.

2. Update the Installed Files and Migration Package

(SAS Human Capital Management) Replace the FORMATS Catalog in the Migration Package

If your site installed SAS Human Capital Management and you are migrating from 32-bit Microsoft Windows to 64-bit Microsoft Windows, you need to replace the FORMATS catalog in the migration package after the installation pass, and before the configuration pass. You should have exported the FORMATS catalog already. (See "(SAS Human Capital Management Data Tier) Export the FORMATS Catalog" on page 14.) If not, do so now.

Then perform the following steps on the 5.2 data-tier server:

1. Start SAS.
2. Assign a libref to a temporary location to which the FORMATS catalog will be extracted.
3. Extract the FORMATS catalog by running the following code:

   ```
   Proc cimport catalog=libref.formats infile='path\formats44.cpo';
   Run;
   ```

   - *libref* is the temporary location in which the FORMATS catalog will be created.
   - *path* is the location of the formats44.cpo file that you copied from the 4.4 server.

   Here is an example:

   ```
   Libname v5fmts 'c:\';
   Proc cimport catalog=v5fmts.formats infile='c:\formats44.cpo';
   Run;
   ```

4. Copy the FORMATS catalog that you created (**`c:\formats.sas7bcat`**) to the following path in the SAS Migration Utility package on the 4.4 data-tier: ***`path_to_SMU_package`*`\4.4_data_server_name\hcmdatatier\FORMATS`**

   This copy overwrites the FORMATS catalog that the SAS Migration Utility originally created.

3. Rerun the SAS Deployment Wizard

Run the SAS Deployment Wizard again.

- **Deployment type**: This time, select **Configure SAS Software** as the deployment type, but do not select **Install SAS Software**.
- **Perform migration**: When you reach the Migration Information page, select the **Perform migration** check box.

In the **SAS Migration Utility Package Directory** field, type or navigate to the shared directory in which the SAS Migration Utility stored its output.

For migration-specific information about responding to prompts in the SAS Deployment Wizard, see "Installation and Configuration Prompts" on page 16. In particular, remember the recommendation to select **Use SAS internal accounts when appropriate** on the Deployment Accounts wizard page.

For detailed information, refer to the installation guides for the solutions and the SAS Intelligence Platform. See "References" on page 2.

When you see the Deployment Summary page, the deployment wizard has finished collecting installation and configuration input. This is the last opportunity to go back and change any information that you have provided in previous pages before the wizard begins writing to your system. Before proceeding with the migration, make sure that the input that you have provided to the deployment wizard is correct. Incorrect user input such as user ID and passwords causes all or portions of your migration to fail.

4. Perform the Instructions.html Tasks

Follow the steps in the Instructions.html file.

5. Perform the Post-Migration Tasks

Perform the post-migration tasks as described in Chapter 5, "Post-Migration Tasks," on page 27.

Install the Client Applications

The *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions* has information about installing the client applications.

The *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions* has information about installing the client applications.

Both *X*.4 and 5.2 versions of the following client applications can exist on the same machine:

- SAS Financial Management Studio
- SAS Solutions Dimension Editor
- SAS Management Console
- SAS Data Integration Studio

However, the *X*.4 and 5.2 versions of the SAS Solutions Services Add-In for Microsoft Office or the SAS Financial Management Add-In for Microsoft Excel cannot exist on the same machine. Installing the 5.2 add-ins deletes the *X*.4 versions.

Chapter 4

Multi-Tier Installation and Configuration

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Overview

For multi-tier installations, read the instructions in this chapter before installing the SAS Performance Management Solutions. Then follow the installation steps in the *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions*.

Note: The installation guide refers to the application server directory as **`SASApp`**. In a migrated system, this directory is typically named **`SASMain`**.

For troubleshooting help with SAS Deployment Wizard, see "Configuration Errors" on page 46.

Separate Metadata Tier

If the data tier and metadata tier are on the same machine, go to "One-Pass Data Tier Installation on the Target Machine" on page 22.

Otherwise, follow these steps:

1. Run the Software Deployment Wizard on the metadata tier first.

   Select both **Install SAS Software** and **Configure SAS Software** as the deployment type.

2. When you reach the Migration Information page, select the **Perform migration** check box.

3. After you complete the installation and configuration of the metadata tier, go on to the data-tier installation and configuration.

One-Pass Data Tier Installation on the Target Machine

Overview

If you are migrating from 32-bit Windows to 64-bit Windows, and your migration includes SAS Human Capital Management, go to "Two-Pass Data Tier Installation" on page 23.

Otherwise, for installation and migration on the data tier (the machine on which you installed the SAS Solutions Services Data Tier software), follow the installation and configuration steps below.

1. Run the SAS Deployment Wizard

Running the Wizard

Run the SAS Deployment Wizard, making these selections:

- **Deployment type**: Select both **Install SAS Software** and **Configure SAS Software** as the deployment type.
- **Perform migration**: When you reach the Migration Information page, select the **Perform migration** check box.

  In the **SAS Migration Utility Package Directory** field, type or navigate to the shared directory in which the SAS Migration Utility stored its output.

For migration-specific information about responding to prompts in the SAS Deployment Wizard, see "Installation and Configuration Prompts" on page 22.

For detailed information, refer to the installation guides for the solutions and the SAS Intelligence Platform. See "References" on page 2.

Installation and Configuration Prompts

Refer to the following notes when you are responding to prompts in the SAS Deployment Wizard:

- **Internal accounts**: We recommend that you select **Use SAS internal accounts when appropriate** on the Deployment Accounts wizard page. See "Create Operating System Accounts" on page 6.

- **External accounts**: When you are asked for the user name and password of an external account, check the domain name prefix carefully to ensure that it is correct for your site. It might still have the domain name prefix from the SAS 9.1.3 installation.

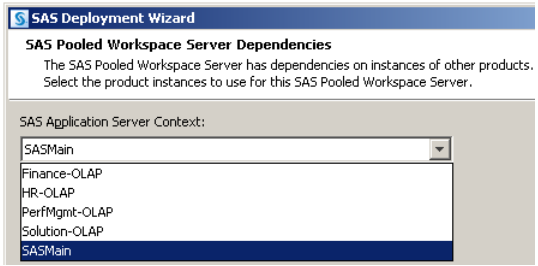
  Note: MySQL and WebLogic account names are created in MySQL Server and Oracle WebLogic. They are not operating system accounts. Do not add a host name prefix to those account names.

- **Server context**: The SAS Deployment Wizard presents several pages in which you must select the application server context. During migration, the correct application server context might not be selected by default. There is typically a list of server contexts, consisting of the correct new server context as well as all the migrated OLAP server contexts.

  Choose the correct server context for your site. The default application server context for a migrated system is **SASMain**.

  Note: This application server context does not apply to the metadata server.

  In the example below, **SASMain** is the correct server context to use for the SAS Pooled Workspace Server. The other server contexts are migrated OLAP server contexts.



When you see the Deployment Summary page, the deployment wizard has finished collecting installation and configuration input. This is the last opportunity to go back and change any information that you have provided in previous pages before the wizard begins writing to your system. Before proceeding with the migration, make sure that the input that you have provided to the deployment wizard is correct. Incorrect user input such as user IDs and passwords causes all or portions of your migration to fail.

2. Perform the Instructions.html Tasks

Follow the steps in the Instructions.html file.

Skip the next section (“Two-Pass Data Tier Installation”).

Two-Pass Data Tier Installation

Overview

If your site installed SAS Human Capital Management and you are migrating from 32-bit Microsoft Windows to 64-bit Microsoft Windows, or if you are migrating a UNIX installation, you must run the SAS Deployment Wizard in two passes for the data tier: first installation, and then migration and configuration. Between those two passes, you must perform some intervening tasks.

1. Run the SAS Deployment Wizard

Run the SAS Deployment Wizard. When you are asked to select a deployment type, deselect the **Configure SAS Software** check box, so that the software is installed but not configured. You will configure the software in a second pass through the SAS Deployment Wizard.

For migration-specific information about responding to prompts in the SAS Deployment Wizard, see "Installation and Configuration Prompts" on page 22.

For detailed information, refer to the installation guides for the solutions and the SAS Intelligence Platform. See "References" on page 2.

2. Update the Installed Files and Migration Package

(SAS Human Capital Management) Replace the FORMATS Catalog in the Migration Package

Replace the FORMATS catalog in the migration package after the installation pass, and before the configuration pass. If you have not already exported the FORMATS catalog, do so now. (See "(SAS Human Capital Management Data Tier) Export the FORMATS Catalog" on page 14.)

Then perform the following steps on the 5.2 data-tier server:

1. Start SAS.
2. Assign a libref to a temporary location where the FORMATS catalog will be extracted.
3. Extract the FORMATS catalog by running the following code:

   ```
   Proc cimport catalog=libref.formats infile='path\formats44.cpo';
   Run;
   ```

   - *libref* is the temporary location in which the FORMATS catalog will be created.
   - *path* is the location of the formats44.cpo file that you copied from the 4.4 server.

   Here is an example:

   ```
   Libname v5fmts 'c:\';
   Proc cimport catalog=v5fmts.formats infile='c:\formats44.cpo';
   Run;
   ```

4. Copy the FORMATS catalog that you created (**c:\formats.sas7bcat**) to the following path in the SAS Migration Utility package on the 4.4 data-tier: ***path_to_SMU_package*\4.4_data_server_name\hcmdatatier\FORMATS**

   This copy overwrites the FORMATS catalog that the SAS Migration Utility originally created.

3. Rerun the SAS Deployment Wizard to Configure the Data Tier

Run the SAS Deployment Wizard again.

- **Deployment type**: This time, select **Configure SAS Software** as the deployment type, but do not select **Install SAS Software**.
- **Perform migration**: When you reach the Migration Information page, select the **Perform migration** check box.

In the **SAS Migration Utility Package Directory** field, type or navigate to the shared directory in which the SAS Migration Utility stored its output.

For migration-specific information about responding to prompts in the SAS Deployment Wizard, see "Installation and Configuration Prompts" on page 22. In particular, remember the recommendation to select **Use SAS internal accounts when appropriate** on the Deployment Accounts wizard page.

For detailed information, refer to the installation guides for the solutions and the SAS Intelligence Platform. See "References" on page 2.

4. Perform the Instructions.html Tasks

Follow the steps in the Instructions.html file.

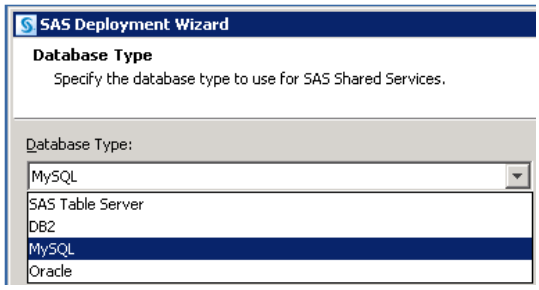
Additional Tiers

On every other tier (excluding client machines), follow these steps.

1. Run the SAS Deployment Wizard

Run the SAS Deployment Wizard.

- Select both **Install SAS Software** and **Configure SAS Software**.
- When you reach the Migration Information page, select the **Perform migration** check box.
- **(Middle Tier)** When you are asked to specify the database type to use for SAS Shared Services, always select **MySQL**. The other database types listed, including SAS Table Server, are not supported for migration.



2. Perform the Instructions.html Tasks

Follow the steps in the Instructions.html file.

Post-Migration

After you install and configure all the machines (other than client machines), perform the steps in Chapter 5, "Post-Migration Tasks," on page 27.

Install the Client Applications

The *Installation Instructions for Release 5.2 of the SAS Performance Management Solutions* has information about installing the client applications.

Both *X*.4 and 5.2 versions of the following client applications can exist on the same machine:

- SAS Financial Management Studio
- SAS Solutions Dimension Editor
- SAS Management Console
- SAS Data Integration Studio

However, the *X*.4 and 5.2 versions of the SAS Solutions Services Add-In for Microsoft Office or the SAS Financial Management Add-In for Microsoft Excel cannot exist on the same machine. Installing the 5.2 add-ins deletes the *X*.4 versions.

Chapter 5

Post-Migration Tasks

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Overview

This chapter contains tasks that must be performed after the installation and migration steps are complete. Some tasks apply only to a particular solution, or only for migrations from 32-bit Windows to 64-bit Windows environments.

Completing the tasks in this chapter requires the following:

- You must have completed the installation, configuration, and migration steps that are outlined in the previous two chapters.
- You must have access to SAS Management Console in the SAS 9.2 installation.
- You must have access to SAS Data Integration Studio in the SAS 9.2 installation.

  To run a SAS Data Integration Studio job, a user must have the following group and role memberships:

  - Solutions Services: Data Administrator role (or the Data Administrators group)
  - Solutions Users group
  - (SAS Human Capital Management jobs): HCM Solution Users group

  Note: Do not connect as the unrestricted user. The unrestricted user cannot start a workspace server session.

Before performing any of the post-migration tasks, apply file permissions as described in "Secure Your Installation" in the *SAS Solutions Services: System Administration Guide*. Otherwise, some tasks in this chapter will fail.

In particular, apply the following permissions to the ***SAS-config-dir*\Lev1\SASMain\Data** directory and its subdirectories:

- For Windows, grant Full Control to SAS General Server User (sassrv) . Grant Read/Write/Modify permission to users who run ETL or SAS jobs to update data in the warehouse. These users should include the Solutions Host User (sassln).
- For UNIX, permit full access for the sas user ID and the sas user group.

For information about the repositories, folders, and libraries in a migrated system, see "Understanding the Migrated System" on page 49.

Migrate SAS Data Sets from 32-Bit to 64-Bit Microsoft Windows

If you are migrating from 32-bit to 64-bit Microsoft Windows, you might need to use PROC MIGRATE to convert data sets in SAS libraries directory from 32-bit format to 64-bit format.

Libraries that are located under the ***SAS-config-dir*** directory (including DDS and StageDDS) are automatically converted during migration.

However, after migration is complete, you must manually convert data sets in any SAS libraries that are not located under the ***SAS-config-dir***. For more information, see the SAS Note at **http://support.sas.com/kb/37/695.html**

(Optional) Modify Conform Library

During migration, the DDS, StageDDS, and ConformedDataMart data directories are copied to a new location conforming to SAS Performance Management Solutions 5.2 conventions. The DDS and StageDDS data sets are also upgraded to the SAS Performance Management Solutions 5.2 data model. For details, see "Migration of SAS Data Sets" on page 53.

In SAS Performance Management Solutions 5.2, by default the Conform library points to the same location as the Cross Industry Detail Data Store folder: ***SAS-config-dir*`\Lev1\SASMain\Data\SolutionsServices\DDSData`**.

If you do not want to use a separate conform area, skip the rest of this section.

If you want to create a separate conform area, you must modify the Conform LIBNAME statement, and you might need to upgrade its data sets. Follow these steps:

1. Prepend the path for the ConformedDataMart to the Conform LIBNAME statement:
   a. On the **Plug-ins** tab of SAS Management Console, navigate to **Environment Management** ⇨ **Data Library Manager** ⇨ **Libraries**.
   b. Right-click **Conform** and open its properties.
   c. On the **Options** tab, add ***SAS-config-dir*`\Lev1\SASMain\Data\SolutionsServices\ConformedDataMart`** to the **Path Specification**.

      Replace *SAS-config-dir* with the path to your site's configuration directory. If necessary, use the up or down arrows so that this path precedes the path to DDSData.
2. If your site does not need the Conform data from the SAS 9.1.3 installation: Copy the CrossIndustryDDS data sets to the ***SAS-config-dir*`\Lev1\SASMain\Data\SolutionsServices\ConformedDataMart`** folder, replacing all the data sets in that folder. Skip step 3.
3. If your site does need the Conform data from the SAS 9.1.3 installation:
   a. Manually upgrade the ConformedDataMart data sets to match the CrossIndustryDDS data model. If a CrossIndustryDDS data set contains one or more columns that are not present in the corresponding ConformedDataMart data set, add those columns to the ConformedDataMart data set.
   b. If the tables are registered in the metadata repository: in SAS Data Integration Studio, navigate to the Conform library. With the table names selected, right-click and select **Update Metadata**.

For more information, see "Appendix 2: The Conform Area" in the *SAS Solutions Services: Data Administration Guide*.

Migrate Additional Libraries

SAS libraries that were in locations outside the configuration directory were not automatically migrated. For more information, see "Migrating Content Stored Outside of the SAS Configuration Directory" in the *SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide*.

Run the post_migration_tasks Job

This job executes a number of post-migration tasks.

1. In SAS Data Integration Studio, connect to the 5.2 metadata tier.
2. Run the post_migration_tasks job.

   This job is located in the **`/Products/Cross Industry Detail Data Store/Post Migration Tasks`** folder.

Load Dimension Type Table

After running the post_migration_tasks job, load the CrossIndustryDDS Dimension Type table, using one of the following jobs:

- the cind_dds_100400_load_dimension_type_table job, which is located in the **`/Products/Cross Industry Detail Data Store/5.2 Jobs`** folder

  We recommend using this job at a site without custom dimensions.

- the 100400 Load DDS DIMENSION_TYPE Table job, which is located in the **`/Products/Cross Industry Detail Data Store/Migrated Jobs/Detail Data Store (DDS)/Reference Table Jobs`** folder

  We recommend using this job at a site with custom dimensions.

Before executing the job, review it to make sure that all source-to-target mappings are correct. Review the mapping in each transformation that is used by the job and propagate or map columns as necessary.

Note: If you run the post_migration_tasks job more than once, you must reload the CrossIndustryDDS Dimension Type table each time.

Update the Conform Folder Permissions

Follow these steps:

1. Open the SAS Management Console as the unrestricted user (sasadm).
2. On the **Plug-ins** tab, select the **Foundation** repository.
3. Select **Environment Management** ⇨ **User Manager**.
4. Right-click the SAS Administrators group and select **Properties**.
5. On the **Members** tab, add Solutions Role Administrator as a member.
6. Save your changes.
7. On the **Folders** tab of SAS Management Console, navigate to the **`Products/SAS Solutions Services`** folder.
8. Right-click the **`Conform`** folder and select **Properties**.

9. On the **Authorization** tab, grant the following permissions to the SAS Administrators group:
   - ReadMetadata
   - WriteMetadata
   - WriteMemberMetadata
   - CheckinMetadata
   - Read
   - Administer

   Deny the Write, Create, and Delete permissions to the SAS Administrators group.
10. Click **Add**.
11. In the Add Users and Groups dialog box, move the SASUSERS group to the **Selected Identities** list. Click **OK**.
12. Grant SASUSERS ReadMetadata permission and deny all other permissions.
13. Click **OK** to save the new properties.

Update KPI and Scorecard Permission Assignments to SAS Demo User

To complete the migration for KPI or scorecard projects, follow the instructions in SAS Note 37794, available at `http://support.sas.com/kb/37/794.html`. These instructions adjust project, scorecard, template, and element permissions for the SAS Demo User. In *X*.4 the permissions were assigned to "SAS Demo User". In SAS 9.2 they are assigned to "sasdemo".

Note: In SAS 9.2, "sasdemo" is the user name; "SAS Demo User" is the display name.

Remove References to sasspusr and SPAuth

In *X*.4, the stored process server was configured to have an authentication domain of SPAuth. In the migrated system, remove references to this authentication domain, as follows:

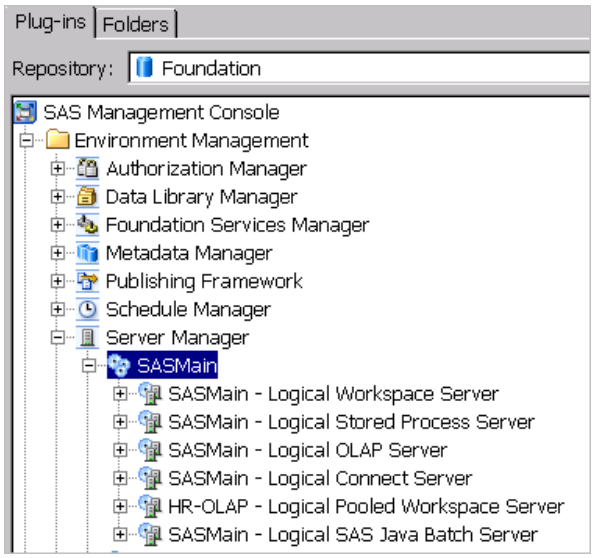
1. In SAS Management Console, select the User Manager plug-in and open the properties for the Solutions Users group.
2. Click the **Accounts** tab.
3. Delete the entry for sasspusr and save your changes.
4. Select **Environment Management** ⇨ **Server Manager** ⇨ **SASMain** ⇨ **SASMain - Logical Stored Process Server** ⇨ **SASMain - Stored Process Server** and open the **Connection** properties.
5. Click the **Options** tab.
6. From the **Authentication Domain** drop-down list, select **DefaultAuth** and save your changes.

7. Make the same change to each of the load balanced (LB) connection definitions.

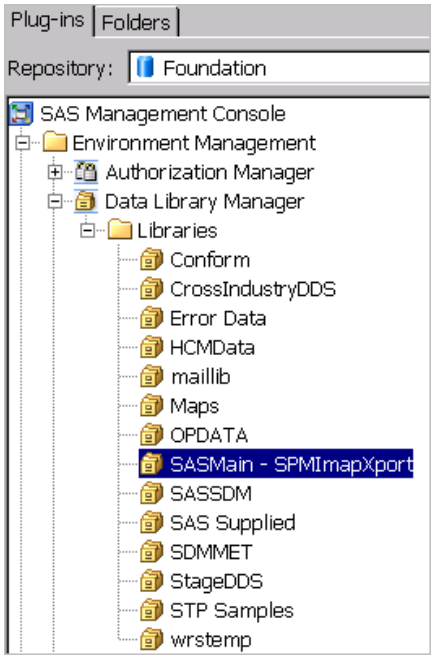
Modify Server and Library Names in %SPMEXPSC Macro

Modify the SAS autocall macro %SPMEXPSC as follows:

1. Log on to SAS Management Console as the administrator (sasadm).
2. On the **Plug-ins** tab, navigate to **Environment Management** ⇨ **Server Manager**.
3. Select the server that has the Logical Workspace Server and the Logical Stored Process Server. Note the name of this server (such as **SASMain**).



4. Navigate to **Data Library Manager** and locate the library whose name ends with **- SPMImapXport**. This library usually contains the GENERICSPMEXPORT table. Note the name of this SAS library (for example, **SASMain - SPMImapXport**).



5. Open the spmexpsc.sas file for editing.

   On Windows, this file is located in the **!SASROOT\scorecard\sasmacro** directory on the data tier.

   Note: We recommend that you first make a backup copy of the spmexpsc.sas file.

6. Find the line that contains **infomapSASServer**. It resembles the following code, although the default SASApp value might have a different value):

   ```
   %let infomapSASServer=SASApp;
   ```

   Change the value of the server name to the server name you observed in SAS Metadata Console. (For the example above, you would change **SASApp** to **SASMain**.)

7. Then, find the line that contains **imapTableLibrary**. It resembles the following code (although the default **SASApp** value might be replaced by something else):

   ```
   %let imapTableLibrary=SASApp - SPMImapXport;
   ```

8. In that line, substitute the name of the library that you observed in SAS Management Console. For the example above, you would modify the code as follows:

   ```
   %let imapTableLibrary=SASMain - SPMImapXport;
   ```

9. Save the file.

Note: For more information about using the Export to Information Map feature of SAS Strategy Management or the KPI Viewer, see "SAS Strategy Management or KPI Viewer Modifications" in the *SAS Solutions Services: System Administration Guide*.

(SAS Strategy Management) Run the update52.sql Script

From a command prompt on the data tier, run the following command, which updates the spm database in MySQL:

```
cmd> mysql -hSPM-datatier-host -uspm-username -pspm-password spm
  < SASHOME\SASStrategyManagementDataTier\5.2\Config\Deployment\SQL\update52.sql
```

Note: A line break was added for readability. The command should be entered on a single line.

- *SPM-datatier-host* is the host name of the data tier.
- *spm-username* is the name of the MySQL administrative user for the spm database. The default user name is spmdbadm.
- *spm-password* is the password to access the spm database.
- *SASHOME* is the path to the SAS installation directory.

(SAS Human Capital Management) Add Users to the HCM Analyst Role

If some SAS Human Capital Management 4.4 users had the Analyst role, add those users to the HCM Analyst role. Follow these steps:

1. Open the SAS Management Console as the unrestricted user (sasadm).
2. On the **Plug-ins** tab, select the **Foundation** repository.
3. Select **Environment Management** ⇨ **User Manager**.
4. Right-click the Analyst Group and select **Properties**.
5. Select the **Members** tab and make a note of all members currently in this group.
6. Click **Cancel** to close the Properties dialog box.
7. Right-click the HCM Analyst role and select **Properties**.
8. Select the **Members** tab and add users to the HCM Analyst role if they have both of the following attributes:
   - They belong to the Analyst Group.
   - They are users of SAS Human Capital Management.

   Note: Add the users individually, not via group membership. Do not remove these users from the Analyst Group. Do not add users who are not users of SAS Human Capital Management.
9. If any users directly belong to the Analyst role, add those users to the HCM Analyst role as well.
10. Click **OK** to save your changes.

Note: In SAS Human Capital Management, users should belong to one (and only one) HCM role: HCM Analyst, HCM User, or HCM Administrator. If a user has more than one HCM role, the role with the fewest privileges applies. Only users (not groups) should belong to the HCM roles. If the migrated role assignments violate those restrictions, make the appropriate changes.

(SAS Human Capital Management) Modifications for Running Diagnostics

Before running the Diagnostics Utility, as described in the Instructions.html file, follow these steps:

1. Modify the HCMDiagnosticsConfig.xml file to reflect migrated server names and pathnames.

   This file is located on the middle tier, in the ***SAS-config-dir*** **\Lev1\Applications\SASHumanCapitalManagement5.2\Diagnostics** directory.

2. Copy the JUnit.jar file to the ***SAS-configdir*****\ Lev1\Applications \SASHumanCapitalManagement5.2\Diagnostics \lib** directory on the middle tier.

For details, see ”Modify the Diagnostics Configuration File” in Chapter 2, “Post-Configuration Steps,” in the *SAS Solutions Services: System Administration Guide*. This book also describes error messages you might see (and can ignore) when you run the diagnostics.

(SAS Human Capital Management) Migrate 5.2 Cubes

Overview

Perform the tasks in this section if you migrated SAS Human Capital Management. Otherwise, you can skip the tasks in this section.

Note: In SAS Data Integration Studio, if you are presented a dialog box that asks for the application server context, select **SASMain**. To verify a successful connection, click **Test Connection**.

Specify Cube Folder Access Permissions

In the operating system, specify the access permissions for the directory that contains the physical OLAP cubes. The typical directory is ***SAS-config-dir*****\Lev1\AppData \SASHumanCapitalManagement5.2\Cubes**.

Access permissions should be as follows:

- For every user who run will run jobs to create and update cubes, assign read/write/modify access permissions (Windows) or read/write permissions (UNIX).
- For all other HCM users, assign read permission.

Note: For UNIX installations, you must also set the umask for the workspace server. See “(UNIX Only) Change Default Permissions for Cubes” in the *SAS Solutions Services: System Administration Guide*.

Grant Access to the OLAP Schema

Grant the HCM Solution Users group access to the OLAP schema, as follows:

1. Log on to SAS Management Console as the administrator (sasadm).
2. On the **Folders** tab, navigate to the **`/Shared Data/SASMain – OLAP Schema`** folder.
3. In the right hand pane, right-click **SASMain - OLAP Schema** and select **Properties**.
4. On the **Authorization** tab, grant HCM Solution Users ReadMetadata and WriteMetadata permission.
5. Save your changes.

Delete the Installed Cube Metadata from the 5.2 Folder

1. In SAS Data Integration Studio, connect to the Solutions 5.2 metadata tier as the unrestricted user.
2. On the **Folders** tab, navigate to the folder **`/Products/SAS Human Capital Management/Data Sources/Cubes`**.
3. Right-click each of the cubes (including cubes that are copies) and select **Delete** from the pop-up menu. Cubes are marked with a Cube icon .

   Do not delete the cube jobs. Cube jobs are marked with a Cube icon containing a gear . The jobs are automatically deleted when the cubes are deleted.

When you are finished, the **`Cubes`** folder should be empty.

Move SAS Human Capital Management Cube Metadata to Required 5.2 Location

1. In SAS Data Integration Studio, connect to the 5.2 metadata tier as the unrestricted user.
2. On the **Folders** tab, navigate to the **`/Products/SAS Human Capital Management/4.4 Jobs and Cubes/Shared Data/HR-OLAP - OLAP Schema`** folder.
3. Select all the cube objects in this directory.

   Note: If the _Job cube objects are in this folder, select those objects as well.
4. Right-click the selected objects and select **Move to Folder** from the pop-up menu.

   The Select a Location dialog box appears.
5. Expand the directories to navigate to the path **`/Products/SAS Human Capital Management/Data Sources`**.
6. Select the **`Cubes`** directory and click **OK**.
7. If the _Job cube objects were not in the **`HR-OLAP - OLAP Schema`** directory, navigate to the **`/Products/SAS Human Capital Management/4.4 Jobs and Cubes/SAS Data Integration Studio Custom Tree/Ungrouped`** folder.

The **Ungrouped** folder should contain the _Job cube objects, such as ACTHCUBE_Job and EMPCUBE_Job.

8. Select the _Job cube objects in this folder and repeat steps 4 through 6.

Now, both the cube objects and the _Job objects are in the 5.2 folder **/Products/SAS Human Capital Management/Data Sources/Cubes**.

In SAS Data Integration Studio, Build Each Cube

1. In SAS Data Integration Studio, connect to the 5.2 metadata tier.
2. Navigate to the folder **/Products/SAS Human Capital Management/Data Sources/Cubes**.
3. Right-click a cube (not the _Job object) and select **Edit Cube Structure** from the pop-up menu.

   The Cube Designer appears, to guide you through the process of designing the cube.
4. Adjacent to the **Physical cube path** field, click **Browse**.

   Note: If you see the error message `Physical file does not exist, <Current specified cube path>`, click **OK**.

   The Browse dialog box appears.
5. Navigate to the 5.2 physical location of the cubes.

   This location is typically ***SAS-config-dir*\Lev1\AppData\SASHumanCapitalManagement5.2\Cubes**.
6. Select the **Cubes** folder and click **OK**.
7. If the cube metadata is maintained using a SAS Human Capital Management job (such as EMPCUBE, ACTHCUBE, HDSMCUBE), click **Next** repeatedly to move through all the steps in the Cube Designer.
8. Otherwise, where desired, edit the cube in the Cube Designer.
9. At the last step in the Cube Designer, select the option to create the physical cube and click **Finish**.

   When the submitted code is complete, the metadata is saved, the physical cube is built, and the SAS Log window appears.
10. Verify that there are no errors in the log and close the SAS Log window.

    If there are errors, investigate the causes and resolve the errors.
11. Repeat steps 3 through 10 for each cube.

Rebuild the Cube and Table Information Maps in the 5.2 Folder

1. In SAS Data Integration Studio, connect to the 5.2 metadata tier as a user who is a member of the HCM Solution Users metadata group.
2. Navigate to the folder /**Products/SAS Human Capital Management/5.2 Jobs**.
3. Double-click the hcm_300000_create_information_maps job. When the job opens, click the **Run** button to execute the job. This job builds the information maps for both HCM tables and cubes.

(SAS Human Capital Management) Update the TERMMAST Table

If you migrated SAS Human Capital Management, update the HCM.TERMMAST table, as follows:

1. Log on to SAS Data Integration Studio as a user who is a member of the HCM Solution Users group.
2. Navigate to **/Products/SAS Human Capital Management/5.2 Jobs**.
3. Double-click to open and run the following jobs, in this order:
   a. hcm_110250_load_acthist_table
   b. hcm_120100_load_acthmast_table
   c. hcm_120350_load_termmast_table

(SAS Human Capital Management) Update the %PREBUILD Macro

If you migrated SAS Human Capital Management, you must update the %PREBUILD macro, as follows:

1. Copy the HCM macro file prebuild.sas from the **!SASROOT\hrds\sasmacro** directory (Windows) or the **!SASROOT\sasautos** directory (UNIX) to the SAS Human Capital Management macro override location: ***SAS-config-dir*** **\Lev1\SASMain\SASEnvironment\HumanCapitalManagement \SASMacro**.
2. Open the prebuild.sas file (in the override location) for editing.
3. Find the line that begins:

   ```
   %let termvars=
   ```

4. Add EMPLOYEE_STATUS_CD to the list of variables after the equal sign.
5. If the site had a custom version of prebuild.sas for *X*.4, that file is located in the SAS Migration Utility migration package for the data tier, in the **\hcmdatatier \OVERRIDES** directory. The *X*.4 custom version of prebuild.sas cannot be used as-is. However, you can compare it to the 5.2 version of the file and update the 5.2 version in the override location if necessary.
6. Save the file.

(SAS Human Capital Management) Analyze Override Macros

Your X.4 site might have other override macros in the **\hcmdatatier\OVERRIDES** directory of the SAS Migration Utility migration package for the data tier. Analyze each X.4 override macro change by comparing it to the 5.2 version of the same macro.

To port a change to the 5.2 system, copy the 5.2 macro file to the override directory (***SAS-config-dir*\Lev1\SASMain\SASEnvironment\HumanCapitalManagement\SASMacro**) and modify the copy. Do not modify the original 5.2 macro file.

Migrate SAS Web Report Studio Reports

Overview

In the *X*.4 release of the solutions, SAS Web Report Studio reports might be stored in more than one repository (for example, the HR repository, the Solutions repository, and the Performance Management repository). By default, the BIP Tree in each repository was mapped to the same DAV content location (**/sasdav/wrs**). When the DAV content is migrated, all the content is stored in a single DAV folder. (The folder that is selected depends on which repository's **BIP Tree** folder is mapped first during the migration.)

You can verify the existence of multiple SAS 9.1.3 repositories by searching the AnalysisReport.html file in your SAS Migration Utility package for a warning similar to the following:

```
Content URL http://<DAV server>=8300/sasdav/wrs is mapped to by multiple
metadata roots: BIP Tree, BIP Tree, BIP Tree, BIP Tree
```

To repair the reports, you must export the *X*.4 reports and import them into your 5.2 system (replacing the migrated reports), as described in the following sections. Otherwise, when users try to open a report, they might see a message stating that the report is not accessible.

Note: If your *X*.4 system used a different content mapping for the **/BIP Tree** folder in each repository, these steps are not necessary.

Export the SAS Web Report Studio Reports

To export the reports from the *X*.4 system, log on to SAS Management Console 9.1 as the unrestricted user (sasadm). In the BI Manager plug-in, examine the shared reports folder and the user reports folders in each repository. For each folder that contains SAS Web Report Studio reports, follow these steps:

1. Navigate to the source directory.

   For shared reports, the source directory is the **/BIP Tree/ReportStudio/Shared/Reports** folder.

   For users' personal reports, the source directory is the **/BIP Tree/ReportStudio/Users/*username*/Reports** folder.

2. Select all the reports in the **Reports** folder, right-click, and select **Export** from the pop-up menu.
3. In the Export wizard, select a destination for the export package:
   a. Click **Browse** to browse to the directory where the package file will be exported.

      Select a directory that is accessible from the 5.2 installation.

   b. Give the file a name that identifies the repository (and user, if these are user reports), so that you can easily select the correct file to import.
   c. Click **Open**.
   d. If you are exporting shared reports, select the **Include access controls** check box if you want to retain permissions that are associated with those reports.

      Note: If the access controls are based on an access control template (ACT), make sure the ACT is defined in SAS 9.2 before importing these reports.

      If you are exporting users' personal reports, do not select the **Include access controls** check box.

   e. Click **Next**.
4. Select each of the reports to be migrated.

   Do not select any dependent information maps for export.
5. Click **Next**.
6. Review the Summary and click **Export**.
7. Verify that the export process was successful and click **Finish**.

Import the Reports into the 5.2 Installation

On the 5.2 system, log on to SAS Management Console 9.2 as the unrestricted user (sasadm). For each reports package that you exported from your *X*.4 system, follow these steps:

1. On the **Folders** tab, navigate to the target folder for the reports.

   If you are importing shared reports, navigate to the **`/repository-name/BIP Tree/ReportStudio/Shared/Reports`** folder (for example, **`/HR/BIP Tree/ReportStudio/Shared/Reports`**).

   If you are importing reports from a user's personal folder, navigate to the **`/Users/username/My Folder/repository-name/Reports`** folder (for example, **`/Users/sasdemo/My Folder/HR/Reports`**).

   Note: If desired, you can import the exported reports to a different folder and delete the old migrated reports.
2. Right-click the **Reports** folder and select **Import SAS Package** from the pop-up menu.
3. Complete the Import SAS Package page, as follows:
   a. Click **Browse** and browse to the *X*.4 package file that corresponds to this target folder.
   b. Select the file and click **OK**.
   c. If you saved access controls (for shared reports only), select the **Include access controls** check box.

For users' personal reports, do not select this check box.

d. Select the **All objects** radio button (the default), so that existing reports with the same name are overwritten.

e. Click **Next**.

4. On the Select Objects to Import page, select the reports to store in this folder and click **Next**.
5. On the About Metadata Connections page, click **Next**.
6. On the Information maps page, click the Browse button for each information map to verify or select the target information map. By default, the correct target information map (in the /**`BIP Tree/ReportStudio/Maps`** folder) should already be selected. If the target information map is pointing to a different folder, navigate to the **`/BIP Tree/ReportStudio/Maps`** folder, select the appropriate information map, and click **OK**.
7. Click **Next**.
8. Verify the summary and click **Next** to import the reports.
9. Verify that the import process was successful and click **Finish**.

SAS BI Dashboard Modifications

Re-Create Indicator Data Definitions for Dashboards

Overview

If your migration included dashboards (for BI Dashboard) that use the SAS Strategy Management data provider, you must re-create the indicator data definitions for those dashboards.

Export the Indicator Data Definitions

To export the indicator data definition (.imx) files from the metadata repository, follow these steps:

1. On the 9.2 system, log on to SAS Management Console as an administrator.
2. On the **Folders** tab, navigate to the **Products** ⇨ **BI Dashboard 4.3** ⇨ **ModelConfigs** folder.
3. In the right-hand pane, right-click an .imx file and select **Write Content to External File**. Select a destination on your machine and export the file.
4. Repeat steps 3 and 4 for each .imx file.
5. Search the .imx files for the following string:

   ```
   <ModelProvider>spm</ModelProvider>
   ```

   The matching files are the files that you need to re-create. You cannot simply modify the files and import them, but you can refer to their contents when you re-create the indicator data definitions in SAS BI Dashboard.

Re-Create the Indicator Data Definitions

Re-create the indicator data definitions, as follows:

1. Log on to the Dashboard Builder:

   `http://server:port/SASBIDashboard`

   - *server* is the host name of the managed server to which you deployed SAS BI Dashboard.
   - *port* is the port number for the managed server.

2. Click **Manage Dashboards**.
3. For each indicator data definition that must be re-created, follow these steps:
   a. In the **Library** view of the **Objects** pane, select **Indicator Data** from the **New** drop-down list.
   b. In the **Create Indicator Data** dialog box, type the name of the .imx file, without the extension, and click **OK**.
   c. From the **Data Source** drop-down list, select **SAS Strategy Management 5.x**.
   d. Define the indicator data. Note the following:
      - In the **Scorecard Server URL** field, type the URL to the SAS Strategy Management application (as **`http://server:port/SASStrategyManagement`**) and click **Set Server**.
      - Use the <ModelQuery> text from the exported .imx file as a reference for the remaining fields.
      - If the original query references a single date, use the same date for both **Start Date** and **End Date**.

      For more information, see "View SAS Strategy Management Data in SAS BI Dashboard" in the *SAS Strategy Management User's Guide* and "Indicator Data" in the *SAS BI Dashboard 4.3 User's Guide*. Both books are available at **`http://support.sas.com/documentation/onlinedoc`**.
   e. When you save the query, use the same location as the original .imx file (overwriting the original).

Modify Indicator Definitions

If your migration included dashboards (for BI Dashboard) that use the SAS Strategy Management data provider, you might need to modify the indicator definitions for those dashboards.

To modify an indicator definition:

1. Log on to the Dashboard Builder:

   `http://server:port/SASBIDashboard`

2. Click **Manage Dashboards**.
3. In the **Library** view of the **Objects** pane, navigate to the .idx file, in the **Products** ⇨ **BI Dashboard 4.3** ⇨ **IndicatorDefinitions** folder.
4. Double-click the file to open it in the workspace.

5. In the **General** area of the **Properties** pane, inspect the indicator data selection. If it points to an indicator definition that you re-created in "Re-Create Indicator Data Definitions for Dashboards" on page 41, proceed with the next step.

   Otherwise, this indicator does not use the SAS Strategy Management data provider. Close the indicator definition and skip the remaining steps.

6. In the **Properties** pane, click the Set up indicator links button .

7. If the **Link type** is **External Link** and the **Link** path is empty, change the **Link type** to **None** and click **OK**.

8. Save the indicator definition.

Repeat these steps for each .idx file.

For more information about indicator definitions, see "Indicators" in the *SAS BI Dashboard 4.3 User's Guide*.

Validate the Installation

After performing the post-migration tasks:

1. Perform the post-configuration tasks that are described in "Post-Configuration Steps" in the *SAS Solutions Services: System Administration Guide*.

   CAUTION:
   Do not install the sample data!

2. Perform the validation tasks that are described in the Instructions.html file on the middle tier.

3. Check for content that is known to be present in the source SAS 9.1.3 configuration.

   Note: Some migrated content can or should be deleted. See "Understanding the Migrated System" on page 49.

You can also run the authorization differences reports. Those reports are described in the "Performing Post-migration Tasks" chapter of the *SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide*. These reports identify differences in access to libraries, tables, folders, OLAP schemas, and cubes between the SAS 9.1.3 and SAS 9.2 installations. See also *What's New in SAS 9.2 Intelligence Platform* and *What's New in SAS Information Delivery Portal* .

For more information about changes that are specific to SAS Solutions Services and the solutions, see "Understanding the Migrated System" on page 49, as well as "What's Changed in SAS Solutions Services 5.2" in the *SAS Solutions Services: System Administration Guide*.

See Also

"References" on page 2

Appendix 1

Troubleshooting

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Errors Running the SAS Migration Utility

If you encounter errors running the SAS Migration Utility, consult the following table.

Table A1.1 *Possible SAS Migration Utility Errors and Resolutions*

Error	Description and Possible Cause	Resolution
Exception because of missing MySQL password	The following message appears in the console window where SAS Migration Utility is running: `The application script threw an exception: java.lang.Exception: Missing DBMS_USER_PASSWORD property in SASCONFIG\mysqldbs.properties` SAS Migration Utility is not able to process the DBMS_USER_PASSWORD_E property in order to get the encoded MySQL password. It can process only the DBMS_USER_PASSWORD property containing the clear-text (unencoded) password, and this does not exist in the mysqldbs.properties file.	In the console window where the SAS Migration Utility is running, choose **2** to quit if you have not done so already. On the data tier of the SAS 9.1.3 system, edit the **SAS-config-dir \mysqldbs.properties** file and add a line like the following: `DBMS_USER_PASSWORD=`*`password`* Replace *password* with the clear-text MySQL password. Save the file and rerun SAS Migration Utility on this machine. For security, after SAS Migration utility completes successfully, delete the DBMS_USER_PASSWORD line from mysqldbs.properties. Leave the DBMS_USER_PASSWORD_E line in place.

Configuration Errors

If you encounter configuration errors, consult the following table.

Table A1.2 *Possible Configuration Errors and Resolutions*

Error	Description and Possible Cause	Resolution
Error during SAS Solutions data-tier configuration	In rare cases, an error during SAS Solutions data-tier configuration might be caused by duplicate SAS library entries. The migration fails during Solutions Services data-tier configuration if a SAS library named StageDDS exists in both the Foundation and Detail Data Store metadata repositories on the original *X*.4 SAS Solutions Services system.	Delete or rename the duplicate SASLibrary in the Foundation repository on the *X*.4 Solutions system. Rerun the SAS Migration Utility. Then rerun the configuration and migration.

Error during SAS Human Capital Management data-tier configuration	You see an error message during configuration of the data tier of SAS Human Capital Management, and the configuration log file has a line similar to the following:
	`C:\SAS\Config\Lev1\Applications\SASHumanCapitalManagement5.2\SASCode\register_hcm.sas failed.`
	`C:\Program Files\SAS\SASHumanCapitalManagementDataTier\5.2\Config\soltnsutility.xml: 541:`
	(The SAS Human Capital Management data-tier configuration log file is located at ***SAS-config-dir*\Lev1\Logs\Configure\hcmdatatier_*.log**.)
		The SAS FORMATS catalog was not correctly migrated. The solution is to cancel the configuration, delete the configuration directory, perform any other needed configuration cleanup, and then again perform the appropriate steps:
		(multi-tier installations)"(SAS Human Capital Management) Replace the FORMATS Catalog in the Migration Package" on page 24
		(single-tier installations)"(SAS Human Capital Management) Replace the FORMATS Catalog in the Migration Package" on page 18

Problems Running SAS Data Integration Studio Jobs

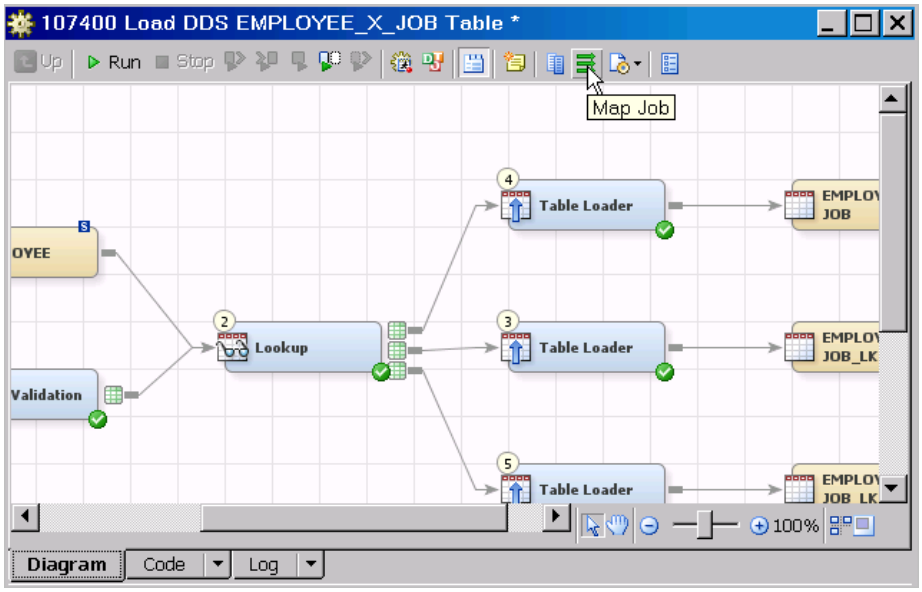
Overview

If you experience difficulties running a migrated job, check the following common issues first.

Broken Mappings

After the migration process, there can be some broken mappings because of the difference between data models or for other reasons. To fix these problems:

1. Open the job in the Job Editor window.
2. Click the Map Job button to enable automatic column mapping.

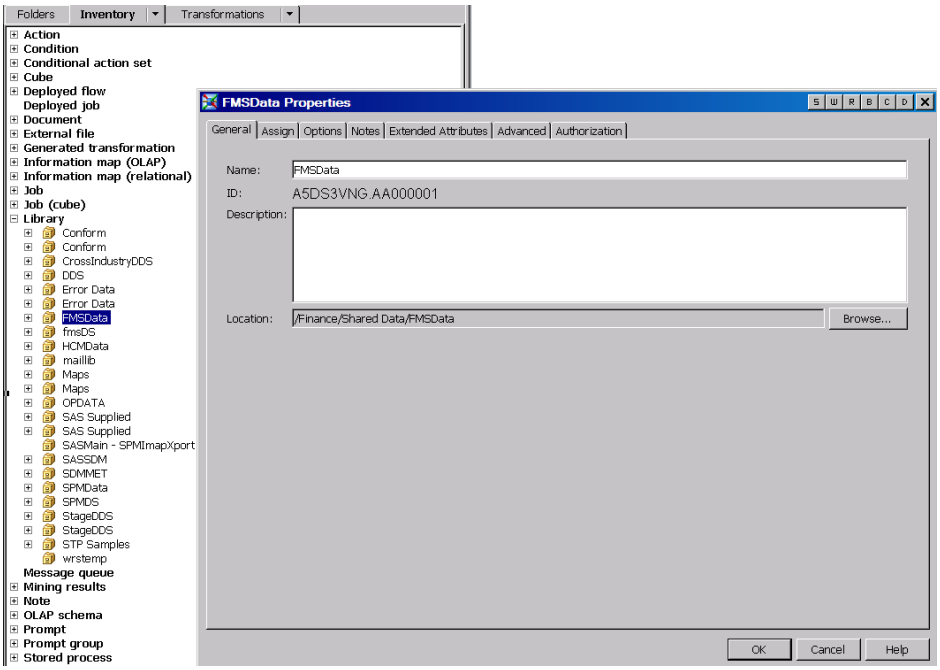


Clicking the Map Job button enables automatic mapping for the transformations in the current job. For more information, see “Maintaining Column Mappings” in the online Help for SAS Data Integration Studio.

3. If the transformations are correct, select **File** ⇨ **Save**.

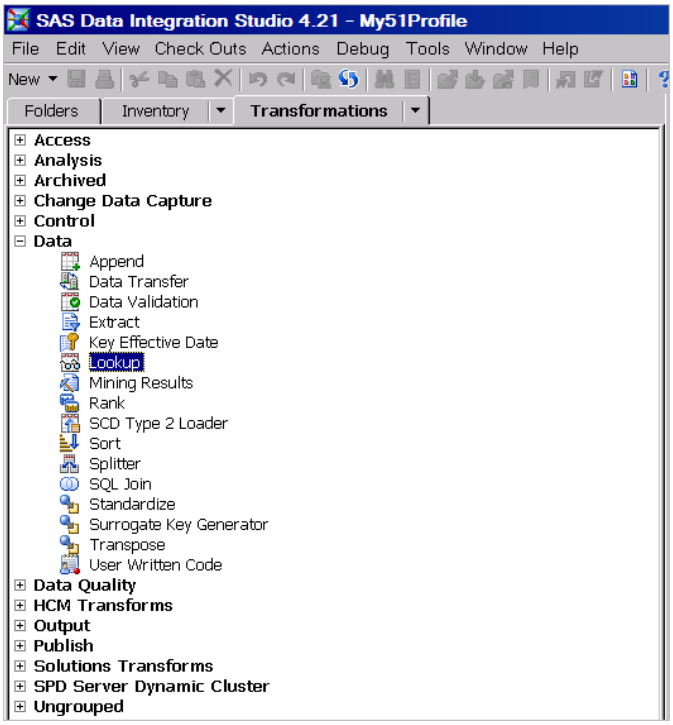
Data Access Problems

If there are problems with data access, make sure that table libraries, especially those for custom jobs, are updated to include new data locations, DBMS settings, and similar information.



Problems with Lookup Transformations

If there are issues with a lookup transformation in a migrated job (for example, a table that does not connect to the lookup), replace the transformation with the **Lookup** transformation found on the **Transformations** tab, in the **Data** directory.



Appendix 2

The Migrated System

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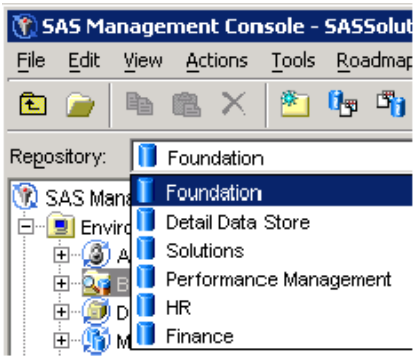
Understanding the Migrated System

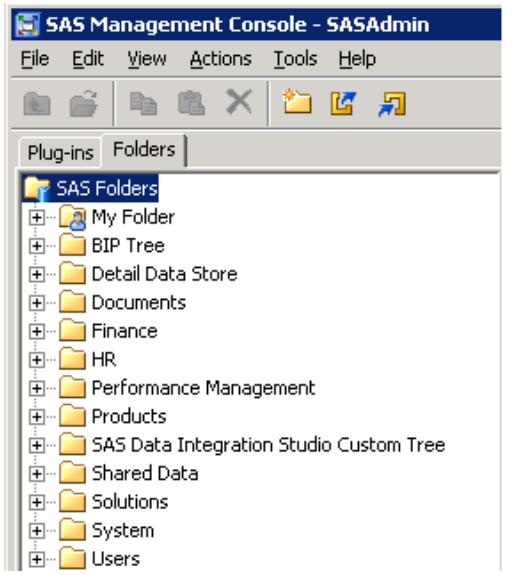
This appendix describes changes that you might notice after migration, in objects such as metadata repositories, folders, libraries, and data sets.

Metadata Repositories

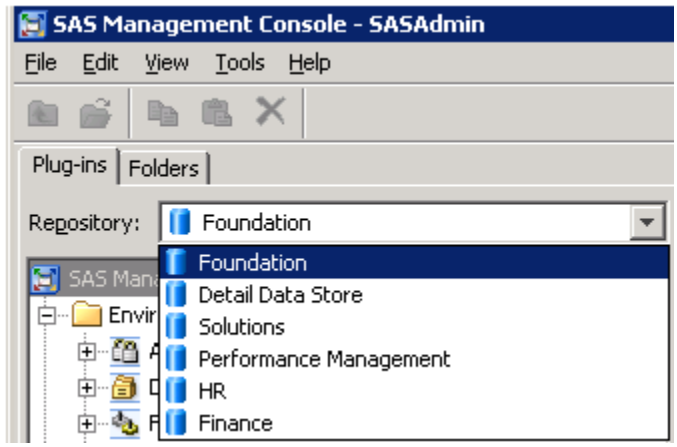
All the metadata repositories that existed in the SAS 9.1.3 metadata server have been migrated to the SAS 9.2 metadata server. The new SAS Management Console contains a new **Folders** tab. Each repository other than the Foundation repository is represented as a separate top-level folder on the **Folders** tab, along with the new folders from the SAS 9.2 installation.

The following displays present SAS Management Console in SAS 9.1.3, showing the typical metadata repositories, and SAS Management Console in SAS 9.2, showing those same repositories on the **Folders** tab.





Notice that in SAS 9.2, the SAS Management Console also has a **Plug-ins** tab. This tab contains the **Repository** drop-down list, which lists the repositories that were migrated from SAS 9.1.3:



The migrated repositories are represented in SAS 9.2 as folders, but, as shown above, they also exist as separate repositories.

Items in Document Manager

All the metadata repositories that existed in the SAS 9.1.3 metadata server have been migrated to the SAS 9.2 metadata server. In SAS Management Console, migrated repositories are represented in two ways:

- On the **Plug-ins** tab, you can select a repository from the **Repository** drop-down list.

  Note: These repositories are no longer dependent on the Foundation repository.

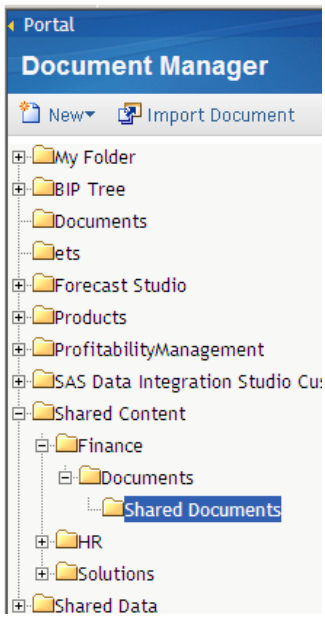
- On the **Folders** tab, a top-level folder has been created corresponding to each repository other than the Foundation repository.

  - Content from the Foundation repository is located in top-level folders such as the **`BIP Tree`** folder and **`Shared Data`** folder.

- Content from other migrated repositories is located in ***/repository-name/folder-name***, such as **/HR/Shared Data**.

Items in the Document Manager have been moved to new folder locations under the **Shared Content** folder in the folder list.

For example, all documents in the **Finance** repository on the SAS 9.1.3 system have been moved into the **Shared Content/Finance/Documents/Shared Documents** folder as shown:



The documents for the HR, Solutions, and Performance Management repositories are treated in a similar manner.

Note: All WebDAV content that was previous associated with Xythos WebFile Server or Apache is now stored in the SAS Content Server.

(SAS Human Capital Management) Obsolete Content

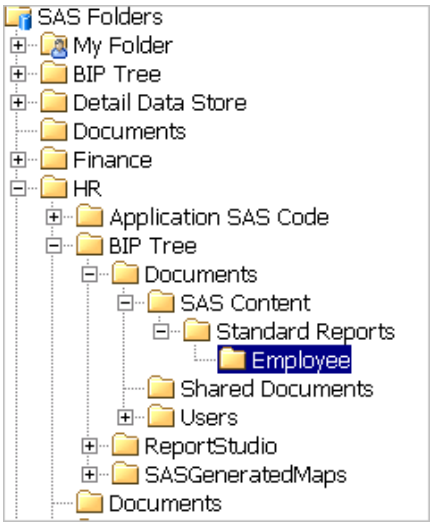
Information Maps in the HR Repository

(Optional) After following the procedures in the previous two sections, you can delete the information maps in the HR repository. In particular, delete any information maps in this repository that are based on cubes, because those information maps are no longer usable.

1. In SAS Data Integration Studio, connect to the Solutions 5.2 metadata tier as the unrestricted user.
2. Navigate to the following folders and delete the information maps contained in these folders:
   - **/HR/BIP Tree/ReportStudio/Maps**
   - **/HR/BIP Tree/SASGeneratedMaps/HR-OLAP - OLAP Schema**

Obsolete Stored Processes

(Optional) The **HR** folder or one of its subfolders might contain standard stored process reports with references to code in the SAS 9.1.3 system. Those stored process definitions can be safely deleted. The new stored processes are in the **`Products/SAS Human Capital Management/5.2 Reports`** folder.



(SAS Strategy Management) Obsolete Content

The Solutions repository of the new system contains some obsolete stored process definitions that can be safely removed.

Note: The definition for the SPMExportScorecard stored process must be removed, in order for the Export to Information Map option to work correctly.

To delete these stored process definitions, follow these steps:

1. Log on to SAS Management Console as an administrator.
2. On the **Folders** tab, select **SAS Folders** ⇨ **Solutions** ⇨ **Application SAS Code**.
3. Delete the stored processes in this folder.

Migration of Metadata Users, Roles, and Groups

Metadata role and group memberships are migrated from the *X*.4 system to the 5.2 system, with these changes:

- Users who have the following SAS Solutions Services roles are added instead to a group that belongs to that role. The following table lists the changes:

***X*.4 Role**	**5.2 Group**
Information Consumer	Information Consumer Group
Analyst	Analyst Group
System Administrator	Solutions Administrator Group

- SAS Human Capital Management: As part of the post-migration steps, you were asked to assign users who belong to the Analyst Group or the Analyst role to the (new) HCM Analyst role. See "(SAS Human Capital Management) Add Users to the HCM Analyst Role" on page 34.
- SAS Strategy Management: Users who have a SAS Strategy Management role are added instead to groups that belong to that role. For example, users with the Scorecard Modeler role are added instead to the Scorecard Modeler Group.
- In new installations, slnadm (the Solutions Role Administrator) is an internal identity. In a migrated installation, this user can be an internal identity or have an external account in the operating system.
- There is a new user, Solutions Host User, for JDBC connections. In *X*.4 systems, this function was performed by the SAS Trusted User. In both new and migrated installations, the Solutions Host User must have an external account in the operating system.
- The sasspusr and the SPAuth domain are no longer necessary. See "Remove References to sasspusr and SPAuth" on page 31.

For more information, see "Create Operating System Accounts" on page 6 and "Group and Role Assignments" in the *SAS Solutions Services: System Administration Guide*. For information about groups and roles in the SAS Intelligence Platform, see *What's New in SAS 9.2 Intelligence Platform*. (See "References" on page 2.)

Migration of SAS Data Sets

SAS 9.1.3 data sets in SAS libraries whose directories are beneath the SAS configuration directory are automatically migrated to the SAS 9.2 system.

The DDS, StageDDS, and ConformedDataMart data directories are copied to a new location conforming to SAS Performance Management Solutions 5.2 conventions. In the metadata repository, the Detail Data Store (DDS) library is given a new name of CrossIndustryDDS.

Other SAS libraries are placed in the same location relative to the SAS configuration directory root as they were on the SAS 9.1.3 system. See the table below.

Table A2.1 *Comparison of X.4 and 5.2 Library Locations Relative to SAS-config-dir Directory*

SAS 9.1.3 Library Location	**SAS 9.2 Migrated Library Location**
`\Lev1\Data\DDSData`	`\Lev1\SASMain\Data\SolutionsServices\DDSData`
`\Lev1\Data\stagedds`	`\Lev1\SASMain\Data\SolutionsServices\stagedds`

SAS 9.1.3 Library Location	SAS 9.2 Migrated Library Location
`\Lev1\Data\ConformedDataMart`	`\Lev1\SASMain\Data\SolutionsServices\ConformedDataMart`
`\Lev1\Data\FMSData`	`\Lev1\Data\FMSData`
`\Lev1\Data\SPMData`	`\Lev1\Data\SPMData`

(Optional) After migration is complete, you can safely delete the following directories from the SAS 9.2 installation:

- `\Lev1\Data\DDSData`
- `\Lev1\Data\stagedds`
- `\Lev1\Data\ConformedDataMart`

SAS libraries that were in locations outside the configuration directory are not automatically migrated. For more information, see "Migrating Content Stored Outside of the SAS Configuration Directory" in the *SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide*.

Libraries in Formerly Dependent Repositories

After a migration, the formerly dependent repositories in the SAS 9.2 system might contain the following SAS libraries from the SAS 9.1.3 system:

- fmsDS (in the Finance repository)
- SPMDS (in the Performance Management repository)
- Maps (in the HR repository)

These SAS libraries, if they exist, refer back to directories or MySQL databases on the SAS 9.1.3 system. They can be safely ignored or deleted from the SAS 9.2 installation.

Items That Are Not Migrated

Some items are not migrated from the SAS 9.1.3 system, including the following:

Note: This is not an exhaustive list. Check your migrated system carefully to note differences from the SAS 9.1.3 system. See "Validate the Installation" on page 43 for links to "What's New" information.

- Alerts:
  - Alerts that were displayed in the My Alerts portlet in the SAS 9.1.3 system are not migrated.
  - Alert settings that are associated with SAS Solutions Services or SAS Financial Management are not migrated, including opt-in alerts that users define in Document Manager. Users need to define new alerts.
  - Alert settings that were defined in SAS Strategy Management projects are migrated.

- JVM options for the managed servers.
- Configuration settings for Oracle MySQL Server.
- Customizations to DAV templates.
- (SAS Financial Management) Workflow customizations. See "Customizing a Workflow" in the *SAS Solutions Services: Customization Guide*for new instructions.
- In a My Favorites portlet, certain tasks. For example, SAS Human Capital Management applications are still supported, but they cannot be tasks in a My Favorites portlet.
- Custom stored processes are migrated if they reside under the ***SAS-config-dir*** directory. They might need updating to match 9.2 requirements. For example, if a stored process uses the Javaobj construction, its authentication code must be updated. The metadata definition of a stored process might also need to be updated. See the *SAS Solutions Services: Customization Guide* for details.

Note: (SAS Financial Management) Migrated forms can be opened only in Microsoft Excel, not in the Web client.

Appendix 3

SAS Strategy Management and Partial Promotion

The SAS Migration Utility is the preferred way to perform migrations from SAS Strategic Performance Management 2.4 to SAS Strategy Management 5.2.

For situations in which the SAS Migration Utility cannot be used, installers can use the partial promotion tools that are shipped with SAS Strategy Management. Here are some cases in which you might use an alternative to the SAS Migration Utility:

- The topology between the two systems is different.
- A site has a SAS 9.2 EBI production environment in which users are actively editing content. Sometime later, the site decides to install SAS Strategy Management 5.2 in the EBI environment and to migrate their SAS Strategic Performance Management 2.4 content to SAS Strategy Management 5.2.
- The site has the systems in parallel. In this case, you install SAS Strategy Management 5.2, using the SAS Migration Utility to migrate content from a production system of SAS Strategic Performance Management 2.4. The 2.4 system is still running on another machine (or set of machines).

  When you are ready to make the 5.2 server the production server, you want any content changes in the 2.4 production server to be moved to the 5.2 server. The partial promotion tools can assist with moving this content.

SAS Strategy Management has two partial promotion tools:

- **Export**: For more information, see the *SAS Strategic Performance Management 2.4 User's Guide* and the *SAS Strategy Management 5.2 User's Guide*.
- **Batch Maintenance Facility**: For more information, see the *SAS Strategic Performance Management 2.4 User's Guide* and the *SAS Strategy Management 5.2 Batch Maintenance Facility User's Guide*.

The *SAS Strategic Performance Management 2.4 User's Guide* is available at **http://support.sas.com/documentation/onlinedoc/spm/**.

The *SAS Strategy Management 5.2 User's Guide* and *SAS Strategy Management 5.2 Batch Maintenance Facility User's Guide* are (or will be) available at **http://support.sas.com/documentation/onlinedoc/stm/index.html**.

Note: To successfully import SQL files from SAS Strategic Performance Management 2.4 into SAS Strategy Management 5.2, you need a conversion script that is available from SAS Technical Support. Ask for the conversion script in Note 37807.

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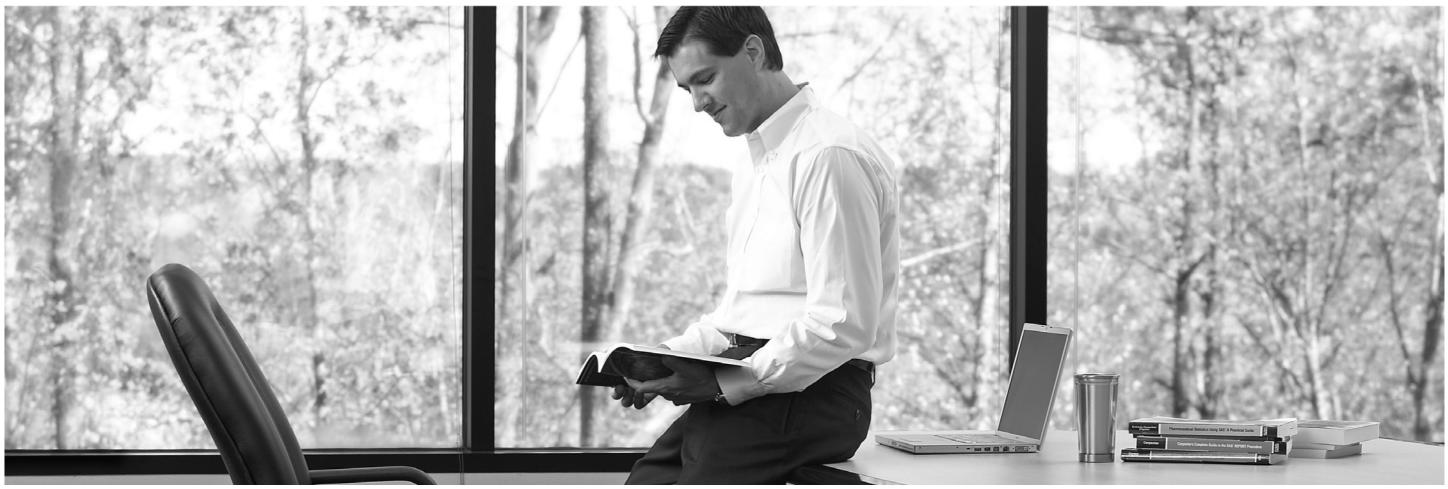

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