SAS® Enterprise Miner™ 6.1
Migration Guide

The correct bibliographic citation for this manual is as follows: SAS Institute Inc. 2009. *SAS® Enterprise Miner™ 6.1: Migration Guide*. Cary, NC: SAS Institute Inc.

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Contents

Overview

This document provides guidelines for upgrading from SAS Enterprise Miner 5.2 and SAS Enterprise Miner 5.3 on SAS 9.1.3 to SAS Enterprise Miner 6.1 on SAS 9.2.

General information about upgrading and migrating SAS deployments is available in the Migration focus area at http://support.sas.com/rnd/migration/. In particular, the SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide provides details about designing, preparing, implementing, validating, and rolling out a migration for metadata-based deployments. The Migration Guide is available at http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/overvw.htm.

SAS Enterprise Miner 6.1 is a new release on the SAS 9.2 platform. It contains new data mining tools for use with SAS 9.2, analytical enhancements, and changes made to integrate the Enterprise Miner toolset with SAS 9.2. In addition, deployment functionality has been enhanced. For more information, see http://support.sas.com/documentation/cdl/en/whatsnew/62435/HTML/default/emwhatsnew61.htm.

You can migrate SAS Enterprise Miner 5.2 and SAS Enterprise Miner 5.3 (collectively referred to as SAS Enterprise Miner 5.*x*) project information that is stored in your SAS Metadata Server for use with SAS Enterprise Miner 6.1. You cannot migrate project information from any version prior to SAS Enterprise Miner 5.2, such as SAS Enterprise Miner 5.0 or SAS Enterprise Miner 5.1, for use with SAS Enterprise Miner 6.1.

Once you have upgraded a SAS Enterpriser Miner 5.*x* installation from SAS 9.1.3 to SAS 9.2, you may not go back to using SAS Enterprise Miner 5.*x*. You must use SAS Enterprise Miner 6.1 with SAS 9.2. When you migrate, you will perform a full system migration. SAS 9.1.3 content and configuration is migrated to SAS 9.2 at the same time. For more information about SAS migration requirements, see http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/mig013.htm.

SAS tools automate most of the tasks necessary to migrate content stored in the SAS Metadata Server to SAS 9.2:

- The *SAS Migration Utility* produces a package of SAS 9.1.3 content and configuration settings that the SAS Deployment Wizard uses during the SAS 9.2 installation and configuration.

- The *SAS Deployment Wizard* installs and initially configures SAS 9.2 products. During migration, the SAS Deployment Wizard reads the package that the SAS Migration Utility created and upgrades SAS with your content and configuration settings for SAS 9.2.

Content

Metadata

When you use SAS Enterprise Miner, the following project and model information is stored in the SAS Metadata Server:

- **Enterprise Miner Project Object.** When you create a new project, an Enterprise Miner Project Object is created in the SAS Metadata Server. The Enterprise Miner Project

Object contains the name of the project, the name of the SAS server, and the name of the directory. SAS Enterprise Miner uses these objects to present a selection of projects to the user. Project Objects stored in the SAS Metadata Server can be migrated from SAS 9.1.3 to SAS 9.2.

- **Mining Result Object.** When you register a model, a Mining Result Object is created in the SAS Metadata Server. The Mining Result Object contains the list of input variables, the list of output variables, SAS score code, and additional information about model performance and creation. Several products, including SAS Enterprise Guide, SAS Data Integration Studio, and SAS Enterprise Miner, can read these models to create processes that score new data. Mining Result Objects stored in the SAS Metadata Server can be migrated from SAS 9.1.3 to SAS 9.2.

When you install and configure SAS 9.2 and SAS Enterprise Miner 6.1, you can migrate SAS Metadata Server objects from SAS 9.1.3 for use with SAS 9.2 applications including SAS Enterprise Miner 6.1. This includes the Enterprise Miner Project Objects and Mining Results Objects. The migration process converts objects from the SAS 9.1.3 Metadata Server for use with the SAS 9.2 Metadata Server.

Project Data

All project data, including data source definitions, diagram workspaces, and reports are stored in a directory on the SAS Workspace Server. This includes all intermediate data sets, images, listings, and files. For example, if the root directory is `C:\EM53Projects` and the project name is `PetFoodSales,` the project directory will be `C:\EM53Projects\PetFoodSales.` All files in the project directory belong to the project.

This data does not need to be migrated to work with SAS Enterprise Miner 6.1. When the SAS 9.2 migration and configuration of SAS Metadata Server objects is completed, you will be able to open projects that you created in SAS Enterprise Miner 5.*x* without loss of functionality.

Once the project data is opened by and registered to SAS Enterprise Miner 6.1, it cannot be used by earlier versions of SAS Enterprise Miner. If you need to continue to access projects with earlier versions of the product, you should make a separate copy of the project directory and all related files. You should not attempt to edit or update project data from two different versions of Enterprise Miner.

Moving Project Data

You have the following options if you want to manually move project data from one system to another:

- To move project files to systems of the same type – such as from a Windows XP system to another Windows XP system or from a Solaris 64 system to another Solaris 64 system – you can use options such as xcopy, cp –r, zip, or tar to move the project files. You must move the entire directory structure and all files in the directory structure.

- To move project files to a different system than the current system, you can use SAS tools to export and import the data sets and catalogs in an Enterprise Miner project to a new system. In most cases, this process is not recommended because there are many files to port. The recommended path is to use SAS Package Files.

- You can use the SAS Package Files created by SAS Enterprise Miner to move all the configuration and results sets for a single analysis from one computer to another. Perform the following steps:

  1. In SAS Enterprise Miner 5.*x*:
     a. Open the project.
     b. Open the diagram.
     c. Select the end node for the analysis.
     d. Select **Create Model Package**.
     e. Save the SAS Package File to a common location.
  2. Install and configure SAS Enterprise Miner 6.1.
     a. Create a new project.
     b. Open the SAS Package File.
     c. Select **Import Diagram**.

The migration package of content from the SAS Metadata Server can be moved between different types of computers.

Model Package Files and WebDAV Servers

When you create a model package with SAS Enterprise Miner, all model training and scoring information is compressed into a SAS Package file. The model package file is always created in the project. In addition, some configurations of Enterprise Miner 5.*x* include WebDAV access, which enables users to store an archival copy of an Enterprise Miner model package (*.spk) in a central area for future reference. When a user registers a model and WebDAV access has been enabled, the model package file is copied to WebDAV. An administrator enables this function by using the SAS Management Console to enter the WebDAV URL.

During an upgrade, no changes are made to a DAV environment created for Enterprise Miner 5.*x*. Starting with SAS 9.2 and SAS Enterprise Miner 6.1, a DAV environment is a shared resource – the SAS Content Server – that is delivered and managed by SAS. When users register new models, they will have the option to store an archival copy of the model package in this shared location.

Model packages created before the upgrade will continue to be stored in the previous DAV environment. Users who want to keep an archival copy of a model package in the SAS Content Server should re-register the model, and choose the archive option. This task will be performed after the upgrade to Enterprise Miner 6.1 is completed.

Sites that performed a custom configuration for SAS 9.1.3 and SAS Enterprise Miner 5.*x* and shared a DAV environment between these products should contact SAS Technical Support for special instructions about updating the URLs of registered models.

Preliminary Steps

Before you begin your migration, you should perform the following preliminary steps to plan your upgrade:

- Review the SAS Intelligence Platform: 9.1.3 to 9.2 Migration Guide**,** and design your migration. The Migration Guide is available at http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/overvw.htm.
- Perform pre-migration tasks.

- Review the SAS 9.2 software QuickStart Guide.

  In addition, you may want to review the Administrative Guides for other products in your SAS installation, such as the Analytics Platform.

  Note: The promotion approach can be used to move some types of SAS 9.1.3 content to SAS 9.2, but SAS Enterprise Miner users should use the migration approach to install SAS 9.2 and to update your current content.

Design Your Migration

The Web page http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/desmig.htm provides you with detailed steps to take when designing your migration, including the following:

- Review high-level SAS migration requirements.
- Assess your hardware and third-party software.
- Perform an inventory of your current SAS deployment. The SAS Migration Utility can help you analyze the content in your current SAS deployment and identify any updates that are needed before the automated migration tools will work with your deployment.
- Evaluate middle-tier options to support the Analytics Platform components.

Perform Pre-Migration Tasks

The Web page http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/desmig.htm# lists pre-migration steps that you should perform, such as the following:

- Back up your SAS 9.1.3 system, including servers and desktop clients.
- Perform any required SAS 9.1.3 maintenance that is required to meet minimum baselines.
- Determine whether you will use a standard deployment plan to install SAS 9.2 and SAS Enterprise Miner 6.1 or you will need to request a custom deployment plan. You will specify the plan file when you use the SAS Deployment Wizard.
- Complete pre-installation and migration checklists. These checklists can be customized based on the deployment plan that you choose. For more information about pre-migration checklists, see http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/mig213.htm#mig224.
- If you are moving to a new system, ensure that the required operating system accounts exist. The migration process requires the same operating system accounts that you used with SAS 9.1.3 and SAS Enterprise Miner 5.*x*.
- Install third-party software.
- Create a SAS Software Depot. The Web page http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/mig208.htm has information about how to create a SAS Software Depot.
- Use the SAS Migration Utility to create a migration package. Information about running the SAS Migration Utility is available from:
    - o Appendix A to this document (Running the SAS Migration Utility). The Appendix includes information about specifying properties in the SAS Migration Utility that apply when you are migrating SAS Enterprise Miner 5.*x*.
    - o The SAS Migration Utility Reference that is available at http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/smuref.htm.

Review the QuickStart Guide

When you create a SAS Software Depot for your SAS 9.2 installation, a QuickStart Guide is available to help you install your downloaded software. The QuickStart Guide provides an overview of the steps that are required to install your software, such as links to documentation for system requirements, migration, pre-installation checklists, and installation. You can review this document to ensure that you have completed tasks necessary before you begin your installation.

Migrate a Single-User Deployment of SAS Enterprise Miner

SAS Enterprise Miner 5.*x* can be configured as a single-user deployment. All SAS Enterprise Miner for Desktop installations will have this configuration, and other users may have selected this configuration during the SAS Enterprise Miner 5.*x* installation.

Upgrade Using Automated Migration Tools

For single-user deployments (except SAS Enterprise Miner for Desktop), you can use the SAS Migration Utility and SAS Deployment Wizard to migrate your Enterprise Miner 5.*x* projects information that is stored on the SAS Metadata Server. You must perform the following manual steps to allow the SAS Migration Utility to run in a single-user environment:

1. Stop the SAS Metadata Server.

2. Back up the **adminusers.txt** file in your SAS Enterprise Miner 5.*x* installation. The default location for the **adminusers.txt** file is
   `C:\SAS\SAS\EMiner\Lev1\SASMain\MetadataServer`.

3. Edit the **adminusers.txt** file. Scroll to the end of your **adminusers.txt** file, and put an asterisk (*) in front of any user IDs. This allows the SAS Migration Utility to run in a single-user environment.

4. Save the edited **adminusers.txt** file.

5. Restart the SAS Metadata Server.

Once you have completed these manual steps, you can perform the steps in Appendix A to run the SAS Migration Utility. After you create your SAS Migration Utility package and complete your migration assessment, you can install your SAS 9.2 and SAS Enterprise Miner software. For more information about single-user installations, see
http://support.sas.com/documentation/cdl/en/bisuug/61234/HTML/default/titlepage.htm.

1. Begin a Windows installation by selecting **setup.exe** from the software depot you downloaded. This launches the SAS Deployment Wizard, which helps you install and configure SAS 9.2 products. For more information about the SAS Deployment Wizard, see
   http://support.sas.com/documentation/installcenter/en/ikdeploywizug/62130/PDF/default/user.pdf.

   Note: If you are installing on the same machine as your SAS 9.1.3 configuration, stop all SAS 9.1.3 servers before proceeding.

2. Select an appropriate standard plan, such as **Enterprise Miner, one machine** or **Data Mining for the Classroom.**

Note: Do not select the **Enterprise Miner for Desktop** plan. The Enterprise Miner for Desktop plan does not provide an option to select Multiple-User Mode, which is required to perform migration.

3. Select **Multiple-User Mode** for your account mode.
   Note: You must select **Multiple-User Mode**, because **Single-User Mode** does not provide an opportunity to perform migration.

4. Continue the SAS Deployment Wizard until you reach the Migration Information screen. Check the **Perform migration** box, and then enter the path for the migration package that you created.

5. Enter domain credentials when prompted for the Unrestricted User and the Trusted User. For a Windows account, provide the User ID in a qualified format, such as `domain\UserID` or `machine\UserID`.

6. On the E-mail Server dialog box, enter the port, host name, and e-mail addresses for an SMTP e-mail server that the SAS Metadata Server uses to send e-mail alerts to an administrator.

   Note: If you do not know the name of your SMTP e-mail server, or do not have an SMTP server, then entering a dummy value enables the installation to continue. However, you will not receive e-mail notifications if your SAS Metadata Server runs low on disk space.

7. Complete the SAS Enterprise Miner 6.1 installation and configuration, and then perform any required post-installation steps. The instructions.html file that is produced after your installation might have post-installation steps to follow.

8. The folder that contains your SAS Enterprise Miner 5.*x* project must have an exact equivalent folder on your SAS Enterprise Miner 6.1 machine. If SAS Enterprise Miner 5.*x* and SAS Enterprise Miner 6.1 are installed on different machines, copy your SAS Enterprise Miner 5.*x* project folder to an identical location on your SAS Enterprise Miner 6.1 machine.

   To ensure that you can modify your migrated SAS Enterprise Miner 5.*x* projects after you open them in SAS Enterprise Miner 6.1, right-click each folder in the project, select Properties, and then de-select the **Read Only** box.

9. Launch SAS Enterprise Miner 6.1 by selecting **Start → Programs → SAS → Analytics → SAS Enterprise Miner 6.1 Client**.

   a. Select **Open Project** from the Welcome to Enterprise Miner screen.

   b. Select **Shared Data** from the Open Project dialog box. Your migrated SAS Enterprise Miner 5.*x* projects are listed in the Shared Data folder.

   c. Select your migrated SAS Enterprise Miner 5.*x* project to open it in SAS Enterprise Miner 6.1.

Convert Project Information without Using Migration Tools

If you have a SAS Enterprise Miner 5.*x* for Desktop installation and are planning to upgrade to SAS Enterprise Miner 6.1, you cannot use the SAS Migration Utility or SAS Deployment Wizard to migrate your SAS Enterprise Miner 5.*x* content and configuration to SAS Enterprise Miner 6.1.

Instead, you can install and configure SAS Enterprise Miner 6.1. Once you have completed your deployment, you can manually import existing SAS Enterprise Miner 5.*x* projects for use with SAS Enterprise Miner 6.1. Manual conversion is also available for other deployments. Perform the following steps:

1. Install SAS Enterprise Miner 6.1 by selecting an appropriate standard plan in the SAS Deployment Wizard, such as **Enterprise Miner for Desktop, one machine**; **Enterprise Miner, one machine;** or **Data Mining for the Classroom.** For information about single-user installations, see
   http://support.sas.com/documentation/cdl/en/bisuug/61234/HTML/default/titlepage.htm.

   Note: If you are installing on the same machine where SAS 9.1.3 resides, you must stop your SAS 9.1.3 servers before proceeding.

2. Launch SAS Enterprise Miner 6.1 by selecting **Start → Programs → SAS → Analysis → SAS Enterprise Miner Client 6.1**.

3. When the Welcome to Enterprise Miner screen appears, select **New Project**.

4. Use the Create New Project wizard to enter a project name and path that exactly matches the project name and path of an existing SAS Enterprise Miner 5.*x* project.

5. Finish creating the project. When your project opens, it registers the SAS Enterprise Miner 5.*x* project to your SAS Enterprise Miner 6.1 metadata server.

   Note: Repeat steps 3 through 5 for all SAS Enterprise Miner 5.*x* projects that you would like to use in SAS Enterprise Miner 6.1.

Migrate a Multiple-User Deployment of SAS Enterprise Miner

If your SAS 9.1.3 and SAS Enterprise Miner 5.*x* installation is a multiple-user deployment, you can use migration tools to migrate project and model information that is stored in the SAS Metadata Server to a SAS Enterprise Miner 6.1 installation.

After you have designed your migration and completed other preliminary steps, you can perform a migration assessment by running the SAS Migration Utility on the machine where the SAS Metadata Server is installed. The SAS Migration Utility produces a package of SAS 9.1.3 content and configuration settings that the SAS Deployment Wizard uses when you install and configure SAS 9.2 and SAS Enterprise Miner 6.1. For information about running the SAS Migration Utility, see Appendix A.

After you create your SAS Migration Utility package and complete your migration assessment, you can then begin to install and configure SAS 9.2 and SAS Enterprise Miner 6.1. During this process, you will have the option to perform migration.

1. Begin the deployment on the metadata server. For a Windows installation, select **setup.exe** from the software depot you downloaded. For a UNIX installation, select **setup.sh**. This launches the SAS Deployment Wizard, which helps you install and configure SAS 9.2 products. For more information about the SAS Deployment Wizard, see http://support.sas.com/documentation/installcenter/en/ikdeploywizug/62130/PDF/default/user.pdf.

2. In the SAS Deployment Wizard, specify a deployment plan for your installation. This can be a custom deployment plan or a standard deployment plan, such as **Enterprise Miner, two machines**.

3. Continue the SAS Deployment Wizard. If you are using a standard deployment plan, select **Multiple-User Mode** for your account mode.

4. At the Migration Information screen, select the **Perform Migration** box, and enter the path for the migration package that you created.

5. Specify an external User ID and Password for **the Unrestricted** user. Then validate that the correct User ID is specified and enter the appropriate password. For a Windows account, provide the User ID in a qualified format, such as `domain\UserID` or `machine\UserID`. On UNIX, do not use the machine name as part of the User ID: `sasadm`.

   Follow the same steps to specify an external User ID and Password for the Trusted user. Validate that the correct User ID is specified and enter the appropriate password.

   Note: The external accounts on the SAS Enterprise Miner 6.1 machine must match the accounts that were used for sasadm and sastrust on the SAS Enterprise Miner 5.*x* machine.

6. Complete the install and configuration, and then perform any required post-installation steps. The instructions.html file that is produced after your installation might have post-installation steps to follow.

7. To open your SAS Enterprise Miner 5.*x* projects in SAS Enterprise Miner 6.1, the folder that contains your SAS Enterprise Miner 5.*x* project must reside on your SAS Enterprise Miner 6.1 machine. If you installed SAS Enterprise Miner 5.*x* and SAS Enterprise Miner 6.1 on different machines, copy your SAS Enterprise Miner 5.*x* project folder to a location on your SAS Enterprise Miner 6.1 machine.

   Note: The names and path to the folder must be exactly the same on the SAS Enterprise Miner 5.*x* and SAS Enterprise Miner 6.1 machines. But if you have several project directories for your SAS Enterprise Miner 5.*x* projects, you might need to create a single directory on your SAS Enterprise Miner 6.1 machine and ensure that all of your SAS Enterprise Miner 5.*x* projects are copied into that folder.

   To ensure that you can modify the SAS Enterprise Miner 5.*x* projects after you have opened them in SAS Enterprise Miner 6.1, do the following:

   - On Windows installations, right-click each folder in the project, select Properties, and uncheck the **Read Only** box.

- On UNIX installations, when you copy the project directory to a different machine, you should tar the directory by using the root account to preserve the appropriate permissions. Remember to use the root account when you untar the directory on a new machine.

8. Launch SAS Enterprise Miner 6.1 by selecting **Start → Programs → SAS → Analytics → SAS Enterprise Miner Client 6.1**.

   a. Select **Open Project** from the Welcome to Enterprise Miner screen.

   b. Select **Shared Data** from the Open Project dialog box. Your migrated SAS Enterprise Miner 5.*x* projects are in the Shared Data folder.

   c. Select the migrated SAS Enterprise Miner 5.*x* project that you want to open in SAS Enterprise Miner 6.1.

Post-Migration Manual Steps

If you used the SAS Management Console plug-in for Enterprise Miner to make any workspace server customizations in SAS Enterprise Miner 5.*x*, those settings are propagated to your SAS 9.2 configuration during migration. Depending on your settings in SAS Enterprise Miner 5.*x*, you might need to make manual changes to update some of those settings to appropriate values for your SAS 9.2 configuration.

- If you specified a default project path for your SAS Enterprise Miner 5.*x* projects and migrate to a different machine, be sure an identical path exists on the SAS 9.2 machine and that users have correct permissions to that location.

- If you specified a command in the MPCONNECT launch comment field on your SAS Enterprise Miner 5.*x* installation, it is likely that the value points to files in your SAS 9.1.3 configuration directory.

  For example, you might have added a value such as:

  ```
  SAS –metaautoresources "SASMain" –config
  "C:\SAS\EMiner\Lev1\SASMain\sasv9.cfg"
  ```

  This command might not be valid on your SAS 9.2 installation. It should be changed to a path on the SAS 9.2 system, such as:

  ```
  C:\SAS\EMiner\Lev1\SASMain\WorkspaceServer\Workspaceserver.bat –
  metaautoresources "SASMain"
  ```

Appendix A: Using the SAS Migration Utility

The SAS Migration Utility produces a package of SAS 9.1.3 content and configuration settings that the SAS Deployment Wizard uses when you install and configure SAS 9.2. The SAS Migration utility must be run on every machine that is running SAS 9.1.3. Begin the migration assessment by running the SAS Migration Utility on the machine where the SAS Metadata Server is installed.

Perform the following steps to run the SAS Migration Utility:

1. Create a SAS Software Depot for your SAS 9.2 order. The default location for the depot on a Windows system is `C:\SAS Software Depot`.

2. Locate the SAS Migration Utility provided in your SAS Software Depot. The depot includes a utilities folder with an `\smu` folder. The default location on a Windows system is `C:\SAS Software Depot\utilities\smu`.

    The `\smu` folder includes an executable and properties template that allows you to run the SAS Migration Utility on the SAS 9.1.3 machine where SAS Enterprise Miner is installed.

    Note: If you are planning a single-user installation (other than Enterprise Miner for Desktop), you must perform manual steps that enable you to use the SAS Migration Utility and SAS Deployment Wizard to migrate your projects. The steps are described in this document in the section ***Migrate a Single-User Deployment of SAS Enterprise Miner****.* The manual steps are not necessary if you are planning a multiple-user or multiple-server installation of SAS Enterprise Miner 6.1.

    Note: The SAS Migration Utility is provided with your SAS 9.2 software. You can download the SAS Migration Utility at http://www.sas.com/apps/demosdownloads/setupintro.jsp to do a preliminary assessment of the scope of migration for your SAS 9.1.3 products, but you should not use the downloaded version to perform your software migration. Instead, use the SAS Migration Utility that is included with your SAS 9.2 order. This ensures compatibility with all of the SAS products in your order.

    For more information about the SAS Migration Utility, see http://support.sas.com/documentation/cdl/en/bimig/61696/HTML/default/smuref.htm.

3. If your SAS 9.1.3 and SAS 9.2 installations will be on different machines and the SAS Software Depot is not accessible from the SAS 9.1.3 machine, copy the `\smu` folder to a location on the machine that contains your SAS Enterprise Miner 5.*x* installation. Run the SAS Migration Utility on this machine to assess the scope of migration for your SAS 9.1.3 products.

4. You can run the SAS Migration Utility by using options that you specify in a properties file. To run the SAS Migration Utility using a properties file, perform the following steps:

    a. Copy the smu.properties.template file and rename it as smu.properties.

b. Edit the **smu.properties** file to correspond to the SASROOT, SASHOME, host, port, user IDs, and profile entities for your SAS 9.1.3 installation. You can also specify an output directory where the results of your SAS Migration Utility assessment will be written.

> *Note:* The properties file includes a section on the Analytics Platform. Remove the comment notations from the lines for **SMU.apcore.dir** and **SMU.apcore.migration**. Change the value for **SMU.apcore.migration.is_enabled** to **true**.

> For example,

```
SMU.apcore.dir=C:\\Program Files\\SAS\\SASAPCore
SMU.apcore.migration.is_enabled=true
```

> Save your changes.

c. Run the SAS Migration Utility on the machine where SAS 9.1.3 is installed. Open a command prompt and navigate to the \smu folder on the machine that contains your SAS 9.1.3 installation.

> If you are using a Windows system, run the following command:

```
smu –s –a – "<path-to-smu.properties-file>" –replace
```

> If you are using a UNIX system, run the following command:

```
./smu.sh -- –properties/<path-to-smu.properties-file> -
replace
```

> These commands generate reports and other migration metadata that is written to the output location that you specified in your smu.properties file. The output includes a folder with your machine name, a migration-schemas folder, and a manifest.properties file.

5. After you run the SAS Migration Utility, navigate to the output folder, and expand the folder that has your machine name. You can review the reports and the SAS Migration log file that the SAS Migration Utility creates.

6. View the migrate.log file and check for errors.

7. Select the AnalysisReport folder to view reports from the SAS Migration Utility.

a. In FullReport.html, examine the section titled "Product: SAS Enterprise Miner." If migration is supported, the Status column will be checked:

Product: SAS Enterprise Miner

Status	Item name	Classification	Item type	Version	System location	Package location	Details
✔	Enterprise Miner	Product	Enterprise Miner Product	5.3			Migration is supported for this version.

b. You can also review other reports if you want to check the migration status of your SAS 9.1.3 installation.

After you create your SAS Migration Utility package, ensure that you can access the package location from the machine where you are installing SAS 9.2. You might need to share the folder that contains the SAS Migration Utility package, or mount or copy the SAS Migration Utility package to the machine where you will install SAS 9.2.