SAS® Forecast Studio 1.2: Post-installation Tasks

Post-Installation Tasks

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Post-Installation Tasks

Most Current Documentation

For the most current installation and configuration information, see the following Web site and select SAS Forecast Studio as your product:
http://support.sas.com/documentation/onlinedoc/index.html

Install Current Hot Fixes

SAS 9.1.3 Hot Fixes

You must install the current hot fixes for SAS 9.1.3 on the machine that is running the SAS Workspace Server(server tier). The required hot fixes can be downloaded from the following Web address:
http://ftp.sas.com/techsup/download/hotfix/op_home.html

CAUTION: You must install the hot fixes on the server tier before you start configurations on the middle tier.

CAUTION: If you are using Service Pack 3 for SAS 9.1.3, then the hot fixes for Service Pack 3 are required in order for SAS Forecast Server to function correctly.

SAS Forecast Studio Hot Fixes

You must install the current hot fixes for SAS Forecast Studio on the machine that is running the SAS Workspace Server. The required hot fixes can be downloaded from the following Web address:
http://ftp.sas.com/techsup/download/hotfix/op_home.html

CAUTION: The hot fixes for SAS Forecast Studio are required in order for SAS Forecast Studio to function fully.

All Operating Systems Administration Tasks

Pre-Assign Libraries in SAS Management Console

To use your SAS data sets with SAS Forecast Studio, you must enable SAS Forecast Studio to access the SAS data sets that contain appropriate input data. To enable SAS Forecast Server to access the input data sets, you must define a SAS library that specifies the data set location. All data sets that exist in selected libraries are displayed. Therefore, to enable SAS Forecast Studio to access your data, you must create the following:

- an input SAS data set that contains the appropriate time series data.

- a SAS library that specifies the SAS libref, engine, and path of the input data set

To create an input data set and user-defined library, perform the following steps:

1. Create a SAS data set.
   To enable SAS Forecast Studio to read a SAS data set, you can create a SAS program that reads your raw data into a SAS data set.

2. Define the library for the SAS Forecast Studio input data set.
   To enable SAS Forecast Studio to read the input data set, use SAS Management Console to define a library that specifies the SAS libref, engine, and path of the input data set.

   Use the **Data Library Manager** plug-in of SAS Management Console to define a library that is pre-assigned to a server or servers, and specify the location of the input data set. To specify a library as pre-assigned for a server or servers, perform the following steps:

   (a) Open SAS Management Console as the SAS Administrator (e.g., *sasadm*), and connect to a metadata repository.

   (b) Expand the **Data Library Manager** node, and select **SAS Libraries**.

   (c) Right-click the library that you want to pre-assign, and select **Properties**.

   (d) Select the **Options** tab.

   (e) Select the **Library is Pre-Assigned** check box in the library's **Advanced Options** window. This window is accessible from the Library Options window of the New Library Wizard when you create a new data library.

   (f) Ensure that the library is assigned to the correct SAS server(s). The selected library is assigned whenever one of the selected servers starts.

3. Add the METAAUTOINIT option to the server definitions. You need to add the METAAUTOINIT option only once in order to retrieve any pre-assigned library definitions.

   When a SAS Workspace Server starts and the METAAUTOINIT option is specified, the SAS Workspace Server connects to the SAS Metadata Server to retrieve any pre-assigned library definitions. The SAS Workspace Servers that are used by SAS Forecast Studio require the METAAUTOINIT option in order to retrieve pre-assigned library definitions from the SAS Metadata Server.

   To add the METAAUTOINIT option to a workspace server definition that is used by SAS Forecast Studio, perform the following steps:

   (a) In SAS Management Console, expand the **Server Manager** node. Fully expand all three levels of **SASMain** and any other logical servers that you defined.

   (b) Select a server that is used by SAS Forecast Studio
   (e.g., SASMain - Workspace Server, or any other workspace servers that you defined).

(c) Right-click, and select **Properties**.

(d) Select the **Options** tab.

(e) In the **Object Server Parameters** field, enter METAAUTOINIT as shown in Figure 1, and click **OK**.

(f) Repeat the above steps for all workspace servers that SAS Forecast Studio uses.
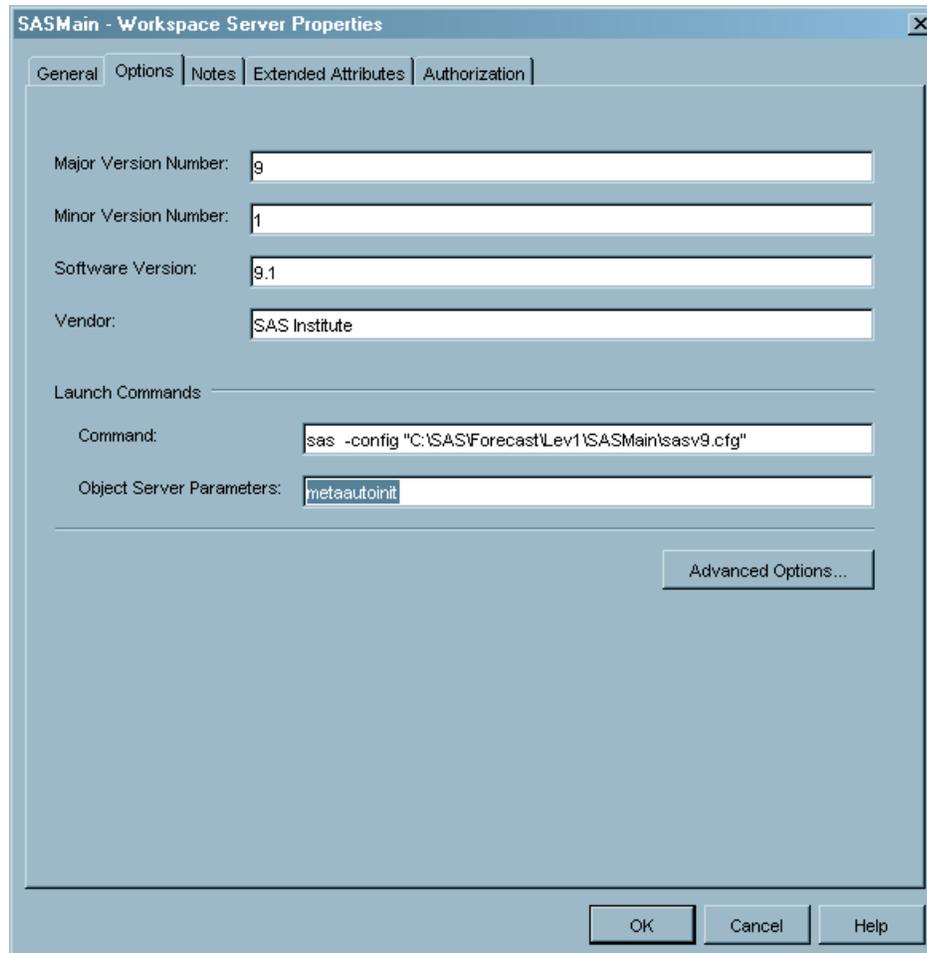
Figure 1. METAAUTOINIT Option in a Workspace Server Definition

4. Set the Metadata permissions on the libraries.

(a) In SAS Management Console, expand the **Data Library Manager** node, and select **SAS Libraries**.

(b) Right-click on the library that you want to grant permissions, and select **Properties**.

(c) Select the **Authorization** tab.

(d) Select the SAS Administrator user ID and grant all permissions to the administrator by checking the **Grant** boxes, as shown in Figure 2.
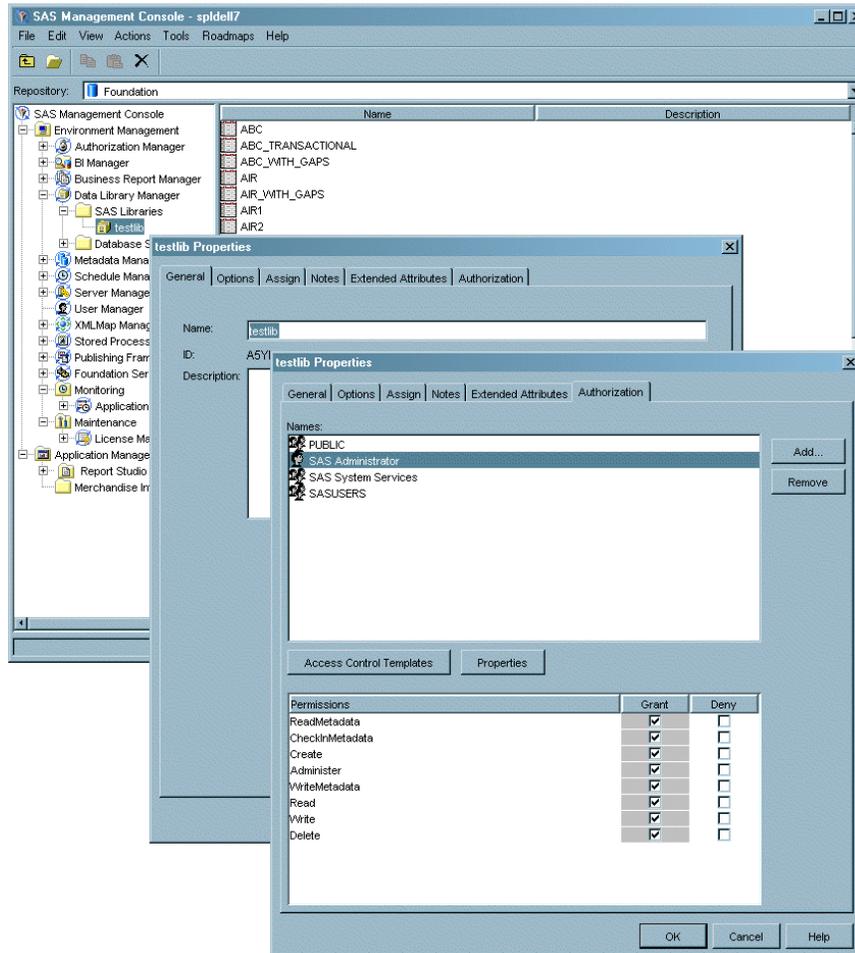
Figure 2. SAS Administrator Metadata Permissions

(e) Repeat the same steps above for granting permissions to the SASUSERS group, as shown in Figure 3.

SASUSERS is an implicit metadata group. To become a member of SASUSERS, you must be able to log on to the metadata server, which makes you part of the Public group, and have a registered metadata identity. All of the single headed icons in the User Manager plug-in become members of SASUSERS.

If SASUSERS is not listed under **Names**, then perform the following steps:

  i. Click **Add**.
  ii. Select SASUSERS from the list in the left column and click the single right arrow to add SASUSERS to the selection list in the right column.
  iii. Click **OK**.
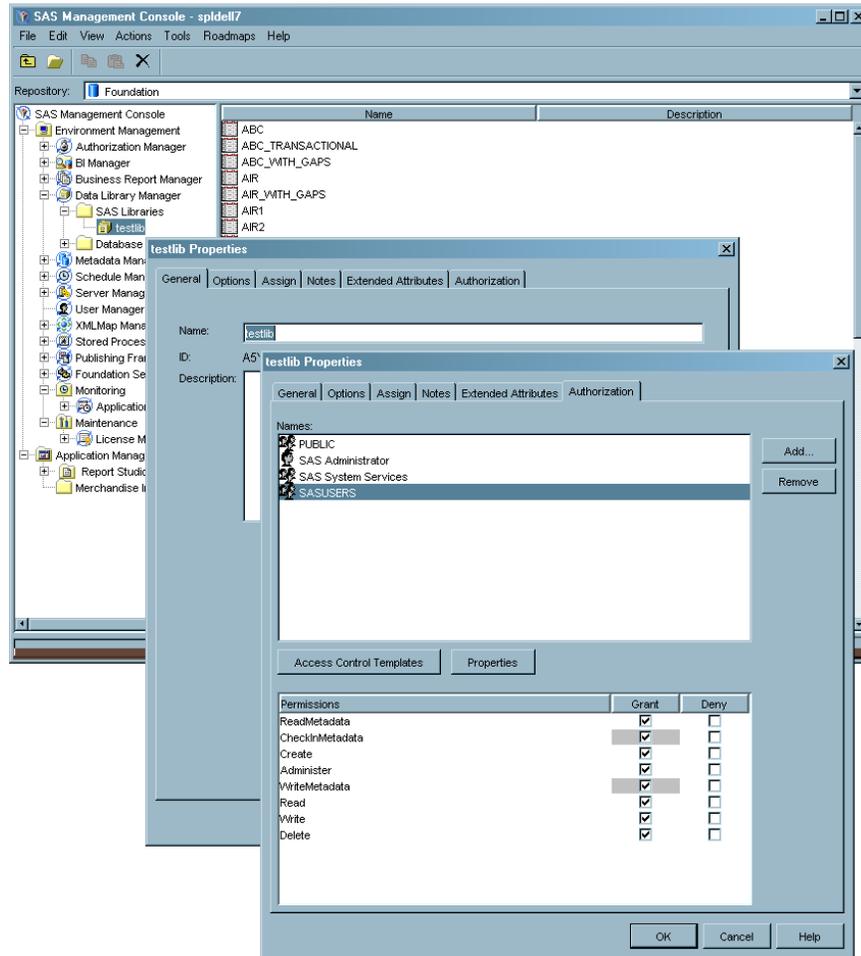
Figure 3. SASUSER Group Metadata Permissions

5. Restart the Object Spawner.

Import the Default Set of SAS Forecast Studio Stored Processes

You can write SAS Stored Processes in order to extend the functionality of SAS Forecast Studio. The solution ships with a default set of stored processes that provide report programs, or you can use the default set of stored processes as illustrations of how to use stored processes with SAS Forecast Studio.

Tip: Before you modify any of the stored processes that SAS provides, it is recommended that you make a copy of the stored process and make your changes to the copied version of the stored process. You can save your changes to the stored process by saving the stored process with a new name. If you make changes to the original version of the stored process that SAS provides without saving the stored process with a new name, and you want to restore the stored process back to the original ver-

sion, then you can import the stored process from the solution CD that contains the SAS Forecast Studio stored processes.

You import the default set of SAS Forecast Studio stored processes by performing the following steps:

1. Create a **Forecast Studio** directory and **Projects** folder in the BI Manager by performing the following steps:

    (a) In SAS Management Console, right-click on the **BI Manager** and select **New Folder**.
    (b) Enter **Forecast Studio** as the name of the folder and click **Next**.
    (c) Select **No content mapping** and click **Finish**.
    (d) Right-click on the **Forecast Studio** folder and select **New Folder**.
    (e) Enter **Projects** as the name of the new folder and click **Finish**.

2. If you have not created a SAS Forecast Studio administration user as a pre-installation task, then you must create a SAS Forecast Studio administration user or grant administrative permissions to an existing user in the metadata.

    Note: You can change the installation's home directory or grant Write permissions for the SAS Forecast Studio administrator to the installation home directory, by following the instructions found in the SAS Intelligence Platform documentation set at the following Web address:
    http://support.sas.com/onlinedoc/913/docMainpage.jsp

    Note: Do NOT use the SAS Administrator *sasadm* account.

    The following example uses an existing user ID (*sasdemo*)

    (a) In SAS Management Console, expand BI Manager.
    (b) Expand the **Forecast Studio** folder.
    (c) Right-click Projects and select Properties.
    (d) Select the Authorization tab and click Add.
    (e) Move SAS Demo User to the right hand pane by selecting **SAS Demo User** in the left pane and click the single arrow icon between the two panes. Click OK.
    (f) With **SAS Demo User** selected in the upper pane, click to select all available checkboxes under the Grant heading in the lower pane. Click OK

3. Create the metadata and complete file system directory structure for the SAS Forecast Studio stored process samples.

    • If the SAS Metadata Server and the SAS Workspace Server are in the same authentication domain, then perform the following steps:

    (a) Start the SAS Analytics Platform.
       Note: If you installed the SAS Metadata Server on a different machine than SAS Forecast Studio, then you must change the server information by reconfiguring the SAS Analytics Platform. For information about configuring the SAS Analytics Platform, see the *SAS*

Analytics Platform Administrator's Guide at the following Web address:

http://support.sas.com/documentation/onlinedoc/

- In the Windows operating system, perform the following steps:
  i. Navigate a shortcut that is created to where the SAS Analytics Platform is installed:
     Start→ Programs→ SAS→ SAS Analytics Platform→ Start AP Server

  ii. If you are prompted for the user name and server location, then verify the following values:

     User name: If you want the user ID and password values to persist whenever you start SAS Forecast Studio, then click **Remember my password**.

     Server: The server should be the name of the server where the SAS Analytics Platform is running.

  iii. Click **LogOn** to start the SAS Analytics Platform.
- In the UNIX operating system, perform the following steps:
  i. Navigate to the installation directory of the SAS Analytics Platform
     (e.g., . . . /SASAPCore/bin)
  ii. Run the command `./apserver start`. The server is ready to receive clients when the message "Waiting for clients" appears at the bottom of the screen.
  iii. If you chose not to persist the user credentials needed to start the server, then you are prompted for a user ID and password. However, for this to work you need an X display session.
(b) Create the necessary metadata and complete file system directory structure for the stored processes.
  i. The default location of the stored processes is the installation user's home directory. You can change the default location in one of two ways:
     - You can specify a different default location of the SAS Forecast Studio project directory when you run the SAS Forecast Studio setup file. This process should be executed on the physical machine that is running the SAS Analytics Platform. The location change updates the project location in SAS Metadata Server and creates a directory structure in your chosen directory.

Windows:

A. Open a Command window by selecting **Start → Run …** and entering `cmd` in the **Open:** field. Press enter or click **OK**.

B. Navigate to the following directory:

   `...\`**`SASAPCore\apps\ Forecasting\bin`**

   The default location is the following:

   C:\program Files\SAS\ SASAPCore\apps\Forecasting\bin

C. Execute the `ForecastStudioSetup.bat` file with the following option:

   ```
   ForecastStudioSetup
   "location=<new-directory-pathname>\ForecastStudio"
   ```

   Example:

   ```
   ForecastStudioSetup
   "location=D:\myprojects\ForecastStudio"
   ```

UNIX:

A. Navigate to the `...`**`/SASAPCore/apps/Forecasting/bin`** directory. The default location is in your SAS program directory.

B. Execute the `ForecastStudioSetup.sh` script with the following option:

   ```
   ForecastStudioSetup
   "location=<new-directory-pathname>/ForecastStudio"
   ```

   Example:

   ```
   ForecastStudioSetup
   "location=/myprojects/ForecastStudio"
   ```

– You can specify a different default location of the SAS Forecast Studio project directory by running the following code in a SAS session with the appropriate user ID, password, and path:

```
options metaserver="d11569"
metaport=8561
metaprotocol=bridge
metauser="<sas-admin-user-name>"
metapass="<password>"
metarepository="Foundation";

data _null_;
rc=metadata_setattr("omsobj:Directory?
@Name='DefaultLocation'
and @Desc='Forecast Studio default
project location'",
"DirectoryName",
"/<installation-user's-home-directory>/SAS/ForecastStudio");
put rc=;
run;
```

    ii. Run the script that creates the metadata and complete file system directory.

- In the UNIX operating system, on the machine that you installed the SAS Analytics Platform, run the script **ForecastStudioSetup.sh**, which executes the SAS Forecast Studio administrative setup without the need to install the SAS Forecast Studio client. The location of the setup script is in the following subdirectory of the installation directory:

  .../SASApCore/apps/Forecasting/bin

- In the Windows operating system, you create the directory structure from a SAS Forecast Server Mid-Tier machine by running the script **ForecastStudioSetup.bat**, which executes the SAS Forecast Studio administrative setup without the installation of the SAS Forecast Studio client. The script is located in the following directory:

  !SASROOT\SASAPCore\apps\Forecasting\bin

(c) A logon dialog box appears. Log on as the SAS Forecast Studio administrator that you created in the above step to the server where you installed the SAS Analytics Platform (i.e., **localhost:5099**). The directory structure is created on the server that contains your workspace server.

(d) Output similar to Figure 5 appears. The output shown in Figure 5 displays the default values from a Windows machine.
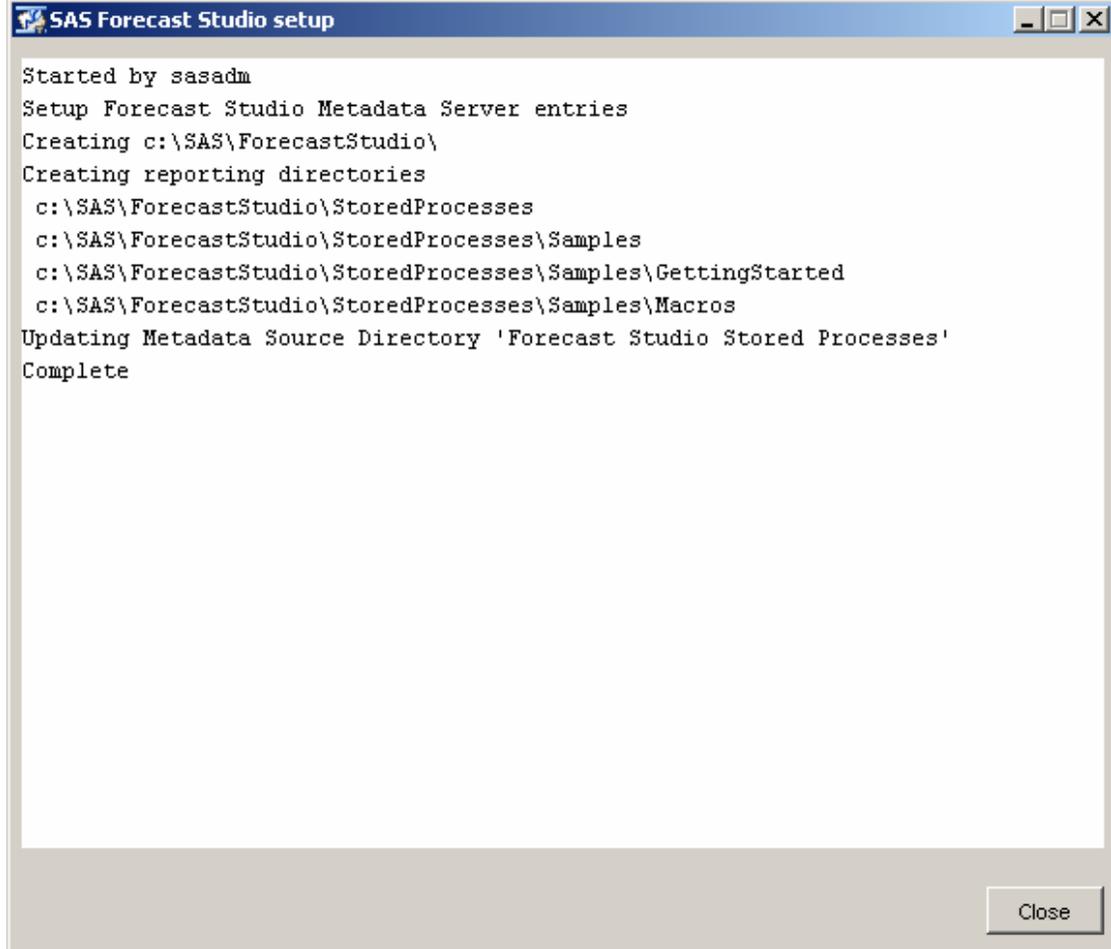
```
SAS Forecast Studio setup                                    _ □ ×

Started by sasadm
Setup Forecast Studio Metadata Server entries
Creating c:\SAS\ForecastStudio\
Creating reporting directories
 c:\SAS\ForecastStudio\StoredProcesses
 c:\SAS\ForecastStudio\StoredProcesses\Samples
 c:\SAS\ForecastStudio\StoredProcesses\Samples\GettingStarted
 c:\SAS\ForecastStudio\StoredProcesses\Samples\Macros
Updating Metadata Source Directory 'Forecast Studio Stored Processes'
Complete




                                                             Close
```

Figure 4. SAS Forecast Studio Directory Structure

- If the SAS Metadata Server and the SAS Workspace Server are in different authentication domains, then perform the following steps:

  (a) Create the metadata and complete file system directory structure for the stored processes.

    i. The default location of the stored processes is the installation user's home directory. You can change the default location in one of two ways:

      – You can specify a different default location of the SAS Forecast Studio project directory when you run the SAS Forecast Studio setup file. This process should be executed on the physical machine that is running the SAS Analytics Platform. The location change updates the project location in SAS Metadata Server and creates a directory structure in your chosen directory.

Windows:

A. Open a Command window by selecting **Start → Run …** and entering `cmd` in the **Open:** field. Press enter or click **OK**.

B. Navigate to the following directory:
   `...\`**SASAPCore**`\`**apps**`\ `**Forecasting**`\`**bin**
   The default location is the following:
   C:\program Files\SAS\ SASAPCore\apps\Forecasting\bin

C. Execute the `ForecastStudioSetup.bat` file with the following option:
   ```
   ForecastStudioSetup
   "location=<new-directory-pathname>\ForecastStudio"
   ```
   Example:
   ```
   ForecastStudioSetup
   "location=D:\myprojects\ForecastStudio"
   ```

UNIX:

A. Navigate to the `...`**/SASAPCore/apps/Forecasting/bin** directory. The default location is in your SAS program directory.

B. Execute the `ForecastStudioSetup.sh` script with the following option:
   ```
   ForecastStudioSetup
   "location=<new-directory-pathname>/ForecastStudio"
   ```
   Example:
   ```
   ForecastStudioSetup
   "location=/myprojects/ForecastStudio"
   ```

– You can specify a different default location of the SAS Forecast Studio project directory by running the following code in a SAS session with the appropriate user ID, password, and path:

```
options metaserver="d11569"
metaport=8561
metaprotocol=bridge
metauser="<sas-admin-user-name>"
metapass="<password>"
metarepository="Foundation";

data _null_;
rc=metadata_setattr("omsobj:Directory?
@Name='DefaultLocation'
and @Desc='Forecast Studio default
project location'",
"DirectoryName",
"/<installation-user's-home-directory>/SAS/ForecastStudio");
put rc=;
run;
```

ii. Run the script that creates the metadata and complete file system directory.

– In the UNIX operating system, on the machine that you installed the SAS Analytics Platform, run the script **ForecastStudioSetup.sh**, which executes the SAS Forecast Studio administrative setup without the need to install the SAS Forecast Studio client. The location of the setup script is in the following subdirectory of the installation directory:

.../SASApCore/apps/Forecasting/bin

– In the Windows operating system, you create the directory structure from a SAS Forecast Server Mid-Tier machine by running the script **ForecastStudioSetup.bat**, which executes the SAS Forecast Studio administrative setup without the need to install the SAS Forecast Studio client. The script is located is the following subdirectory of the installation directory:

!SASROOT\SASAPCore\apps\Forecasting\bin

(b) A logon dialog box appears. Log on as the SAS Forecast Studio administrator that you created in the above step to the server where you installed the SAS Analytics Platform (i.e., **localhost:5099**). The directory structure is created on the server that contains your workspace server.

(c) Output similar to Figure 5 appears. The output shown in Figure 5 displays the default values from a Windows machine.

Figure 5. SAS Forecast Studio Directory Structure

4. Import the SAS Forecast Studio stored process samples.

Once the default directory structure for the SAS Forecast Studio stored processes is created, you can import the stored processes by using the BI Manager. The BI Manager is part of SAS Management Console. The default SAS Forecast Studio stored processes are provided in a SAS Package file with an extension of `.spk`, which is created when the SAS Forecast Server Mid-Tier is installed.

   (a) Open SAS Management Console and connect to a metadata repository as the SAS Administrator (e.g., *sasadm*).
   (b) Expand the BI Manager as shown in Figure 6.
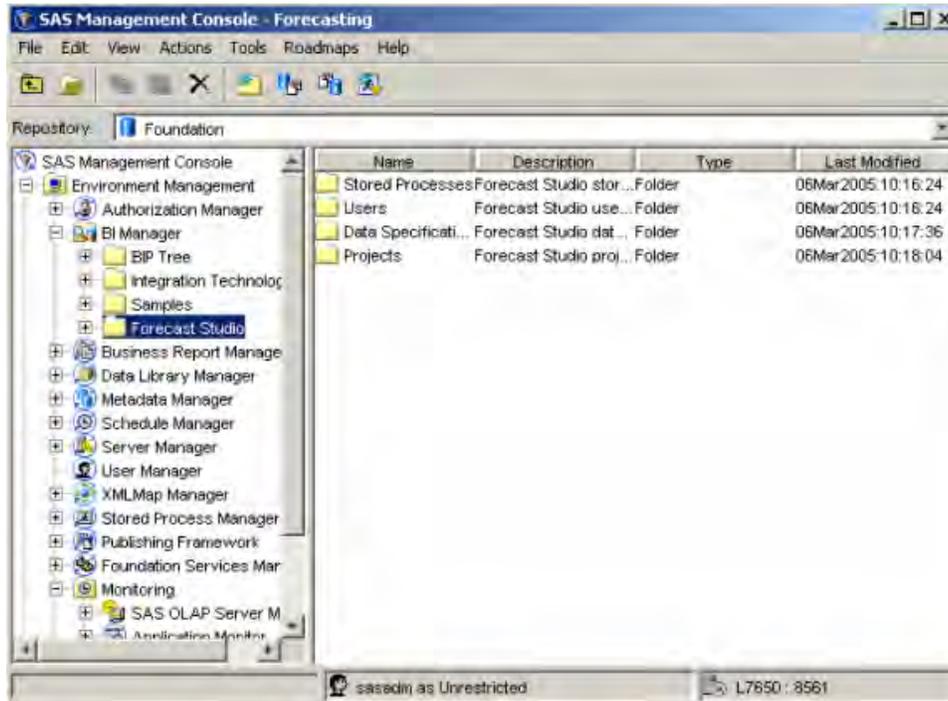
Figure 6. BI Manager

(c) Right-click the **Forecast Studio** folder, and select **Import**.

(d) Browse to the Forecast Server Mid-Tier installation directory to import the StoredProcesses.spk file:

...\SASAPCore\apps\Forecasting\samples
StoredProcesses.spk

The location is determined by retrieving the current default location for Forecast Studio projects. On Windows, the default location is **c:\SAS\ForecastStudio**. On UNIX, the default location is *<user.home>*/**ForecastStudio**. If you changed the default location by using the above SAS script, then specify the new location.

...\SASAPCore\apps\Forecasting\samples
StoredProcesses.spk

Note: Because the SAS Forecast Server Mid-Tier is installed as a SAS Analytics Platform application, it is located under the **SASAPCore** directory.

(e) Select **All Objects** as the Import Options and click **Next**.

(f) Click **Next** again to select the application server and source code repository.

(g) Select the appropriate server, and click **Next**. The window where you specify the application servers appears as shown in Figure 7.
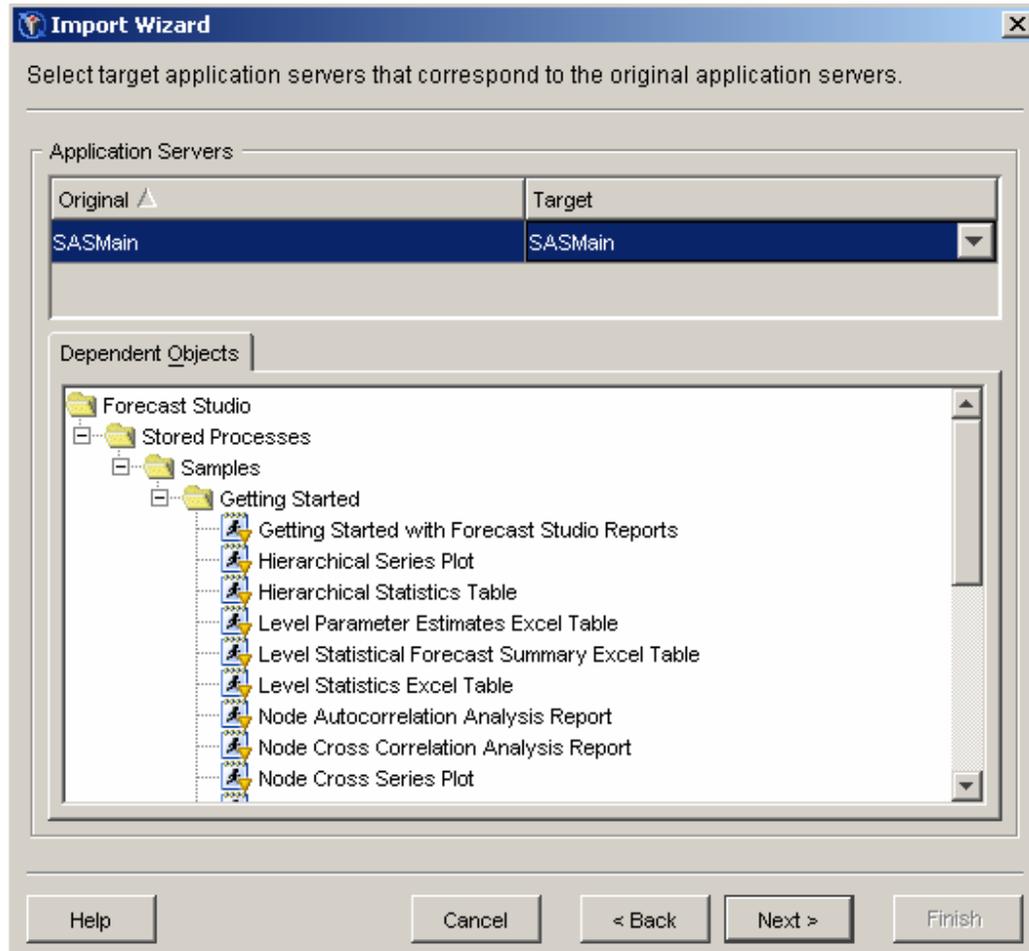
Figure 7. Import Wizard: Original and Target Application Servers

(h) Select the original path of the source code repository, which is the physical location where the stored process source code is stored. When the stored process directory structure was created, a source code repository was created as well. Select this entry and specify the target path where you want the stored processes to be imported. On Windows, this location is the following:

`...\SAS\ForecastStudio\StoredProcesses`

Click **Next**.

Figure 8 shows the window where you specify the original path of the source code repository and the target path.
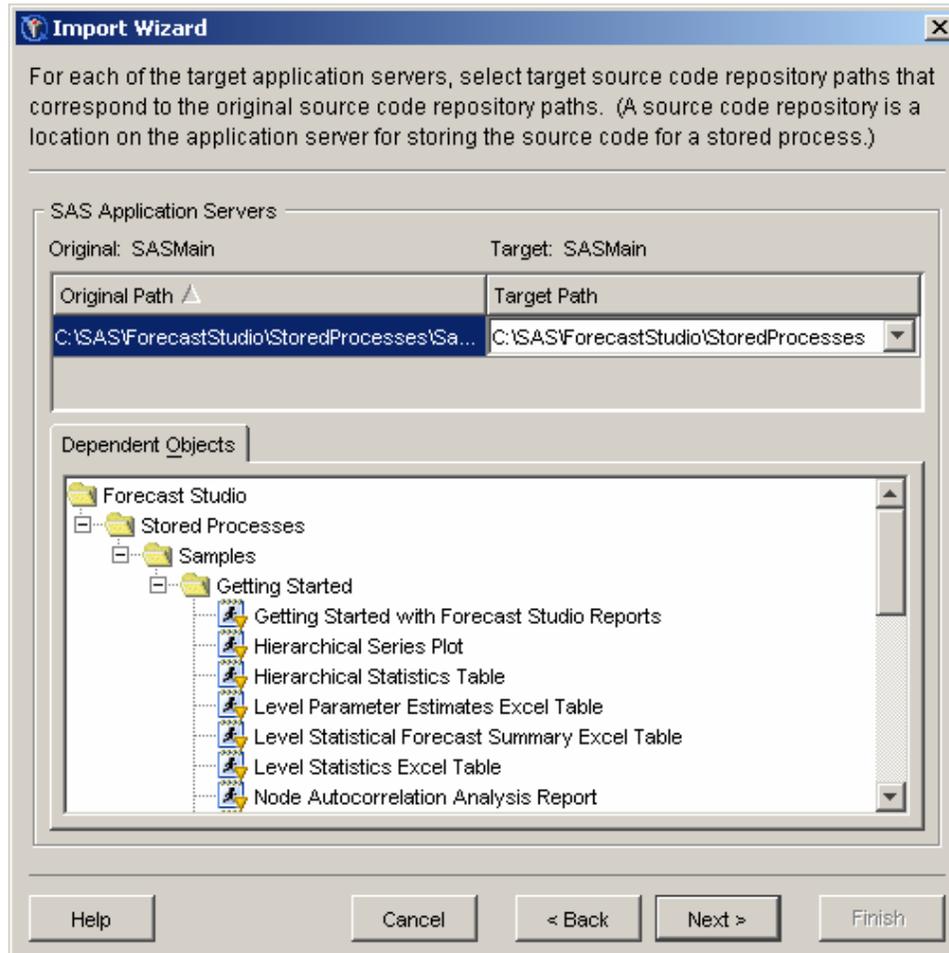
Figure 8. Import Wizard: Target Source Code Repository Paths

(i) Click **Import** at the information step as shown in Figure 9.

Note: You might need to re-authenticate to the metadata server by logging on again.
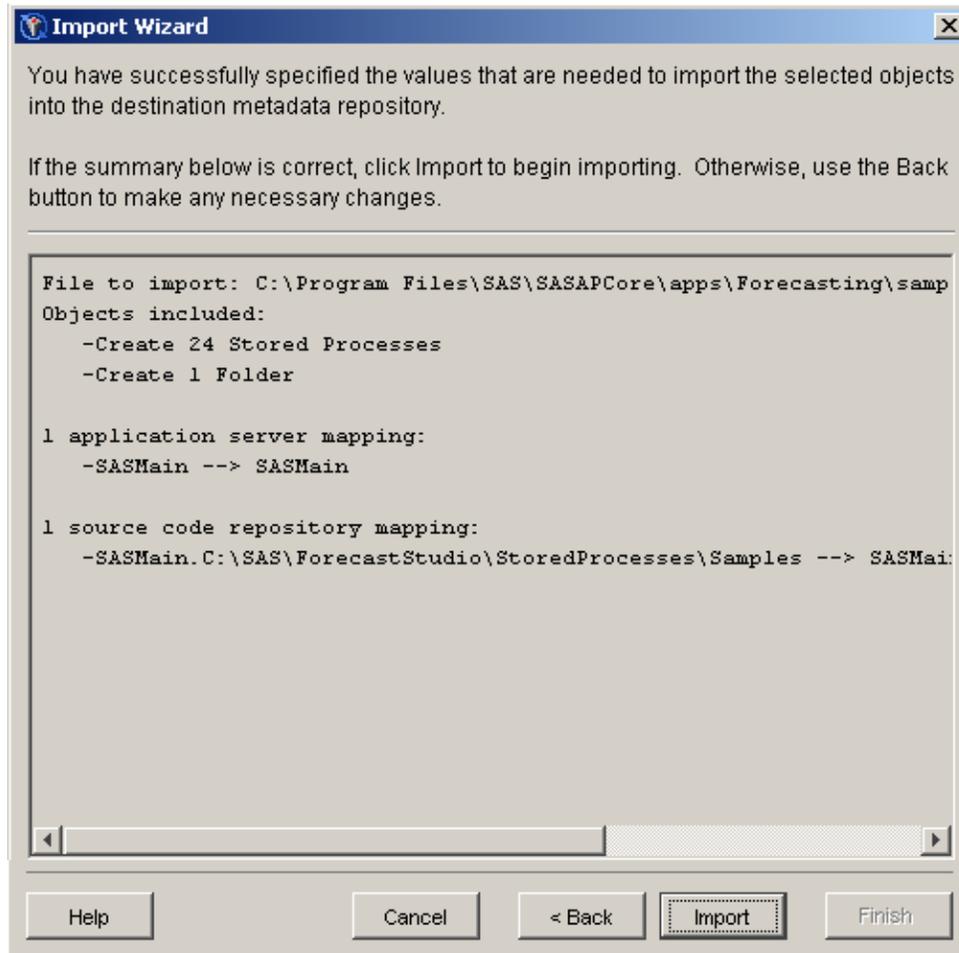
Figure 9. Import Wizard: Information Summary Window

(j) As the BI Manager imports the sample stored processes from the SAS Package file, you see a progress dialog similar to Figure 10.
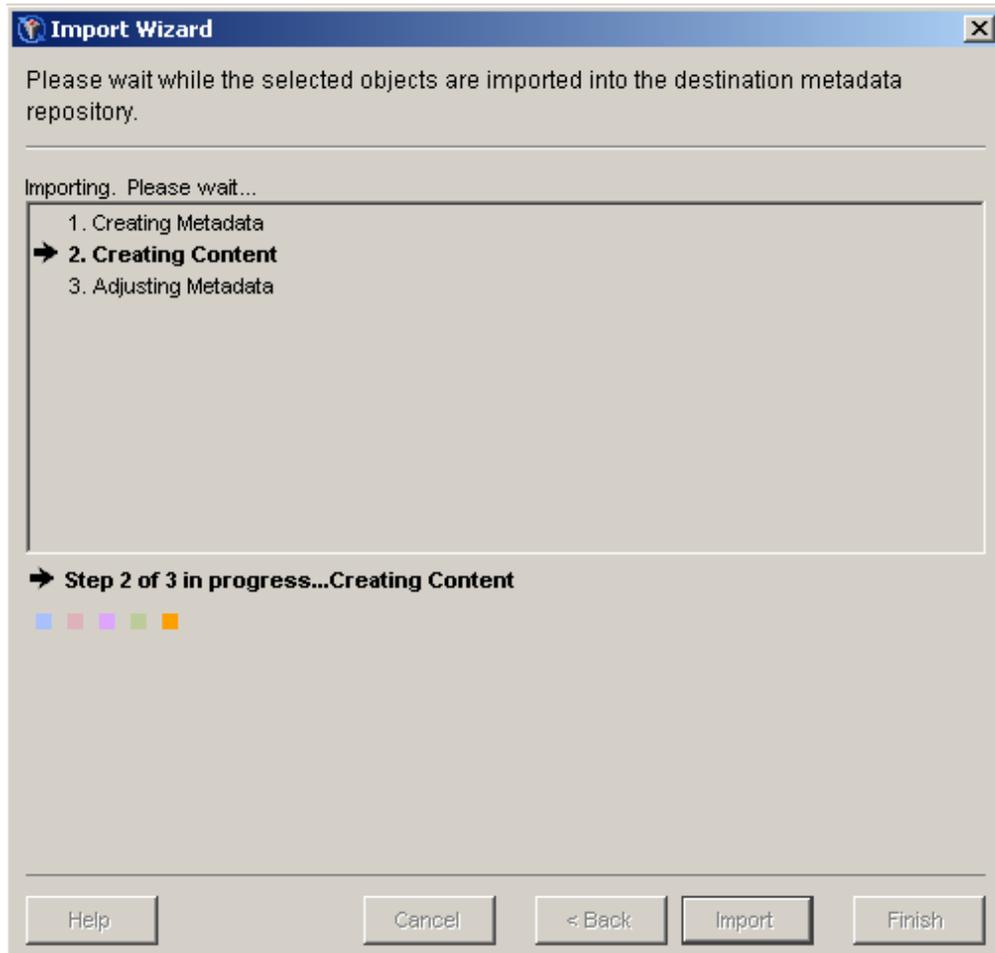
Figure 10. Import Wizard: Information Summary

(k) When the import is done, you get a summary as shown in Figure 11. If everything imported properly, then click **Finish**.
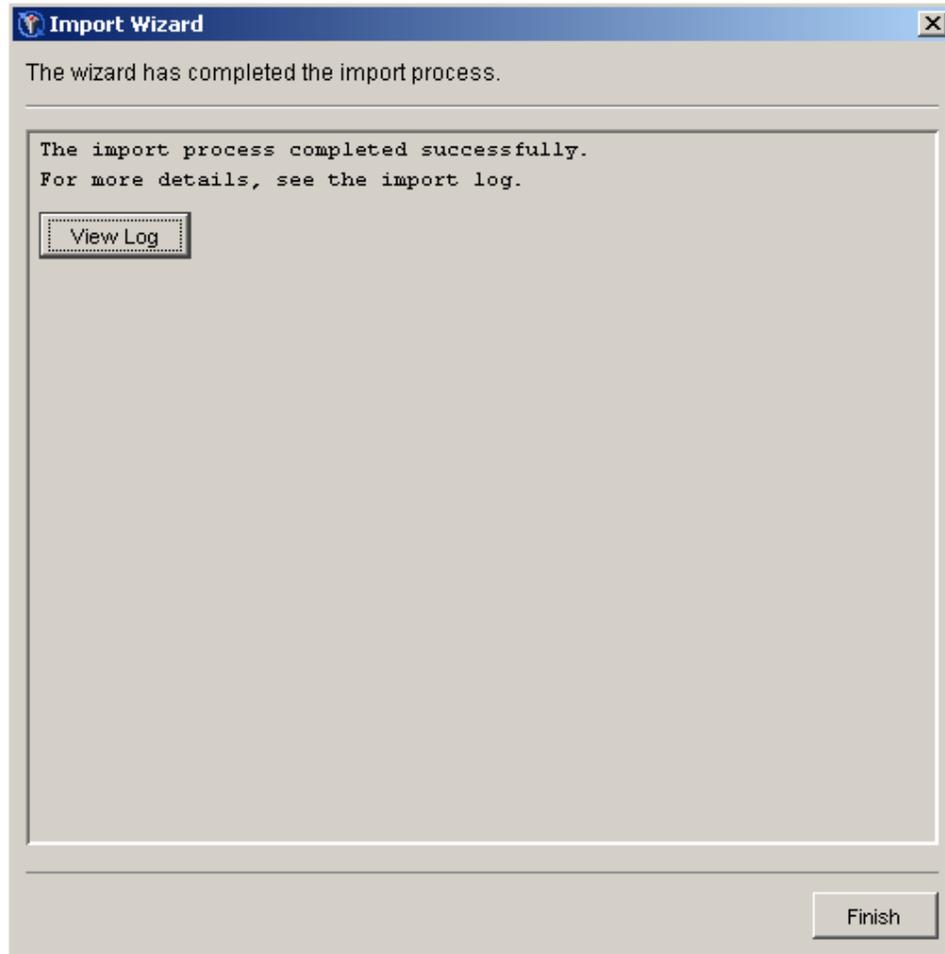
Figure 11.   Import Wizard: Summary Window

5. Configure the stored process service. Once you import the SAS Forecast Studio stored processes, then you must configure the stored process service by using SAS Management Console.

   (a) Open SAS Management Console and connect to a metadata repository as the SAS Administrator (e.g., *sasadm*).

   (b) Expand the **Foundation Services Manager** folder.

   (c) Expand the **Analytics Platform - Foundation Services** folder.

   (d) Expand the **Core Services** folder. If there is a **Stored Process Service**, then you do not need to continue.

   (e) Right-click on the **Core Services** folder, and select **New Service**.
       If SAS Management Console wants to import some predefined service definitions, then let it.

   (f) In the New Service wizard, select **service: Stored Process**. Click **Next**.

   (g) Enter `Stored Process Service` as the name and a description if you like. Click **Next**.

(h) Click **Next** at the Service Interfaces panel.

(i) Click **Next** at the Service Configuration panel.

(j) Click **Next** at the Service Remote Clients panel.
Note: Enable remote clients should NOT be enabled.

(k) Click **Next** at the Required Services panel.

(l) Click **Finish** at the wizard summary panel.

6. Restart the SAS Analytics Platform.

Enable the Search for Servers Functionality (Optional)

By default, the server discovery functionality is disabled. When you install the SAS Analytics Platform, the default value is false. If you want users to be able to discover the server, then you can use the **AP Server Advanced Configuration** tool to enable the discovery functionality. To enable the server discovery functionality, perform the following steps:

1. Start the Analytics Platform Configuration Wizard tool.
Windows: Open the AP Server Advanced Configuration tool by selecting
Start→Programs→SAS→SAS Analytics Platform→ AP Server Advanced Configuration

UNIX: Open the AP Server Advanced Configuration tool by performing the following steps:

(a) Open a terminal session with an X server running and available.

(b) Navigate to the . . . /SASAPCore/bin directory.

(c) Issue the following command:
`.apserver config`

2. After the Analytics Platform Configuration Wizard starts, proceed to step 2 of the wizard.

3. Check the **Allow clients to discover this server** checkbox as shown in Figure 12.

Note: There are limitations to the server discovery. Servers must be on the same subnet as the client and if there are firewalls that restrict UDP multicast messages, then the discovery does not function.
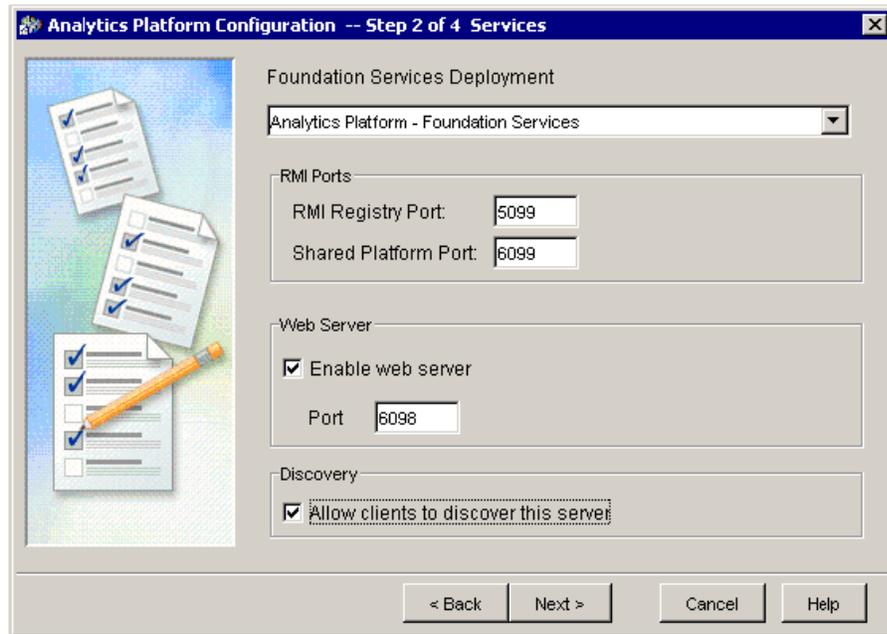
Figure 12. SAS Analytics Platform Configuration Wizard —Step 2 of 4

UNIX Administration Tasks

Define a User Group and Permissions to Access Metadata

Overview

Different users have different operating system privileges on the SAS Workspace Server. By defining user groups, you can grant permissions to all of the SAS Forecast Studio users who log on to the metadata server as members of the group with the same credentials.

For a more secure deployment, you can consult with your system administrator to create a SAS Forecast Studio user group, and ensure that the group contains all of the SAS Forecast Studio users. You must include any user who runs code in the batch mode as part of the group. Also, the group should be the primary group.

If you already have created a SAS Forecast Studio user group as a pre-installation task, then you can grant the same permissions to the user group. Grant Write permission on the SAS Forecast Studio directory on all machines that you installed SAS Forecast Studio. Verify that SAS Forecast Studio users have Read, Write, and Execute permissions on the .../SAS/ForecastStudio/ directory. The exact details of how to do this varies according to which operating system groups are defined and how restrictive you want your security to be.

The following method is one suggestion. This method might not be applicable to your situation. Typically, you can create an operating system group for SAS Forecast

Studio users. The following examples might require changes as per your server configurations.

You can grant permissions to the SAS Forecast Studio users by specifying the umask option on a conditional basis if the user is part of the SAS Forecast Studio user group.

1. Set the umask option in the following shell scripts only if the user is a member of the SAS Forecast Studio user group :

   - sas.sh
     (located in the !SASROOT/<*your-configuration-directory*>/Lev1/SASMain path)
   - sas_SPS.sh
     (located in the !SASROOT/<*your-configuration-directory*>/Lev1/ SASMain/StoredProcessServer path)

2. Recommend a umask setting of 007.

The following command lines in bold text show the commands lines that you change on an UNIX operating system.

```
CMD=<your-operating-system-path>
CURR_GID=eval $CMD -g
GID=<solution-group-id>
if [$CURR_GID -eq $GID]; then umask 007 fi
```

1. **CMD=<*your-operating-system-path*>**
   Replace the CMD= command with the directory on your server where the ID command is stored. This information can be obtained by typing a `which id` command on your console. In this example, the operating system path is `CMD=/usr/bin/id`

2. **GID=<*solution-group-id*>**
   Replace the GID command line with your group ID. You can type **id** on your console in order to get the GID and UID information. In this example, the solution group ID for SAS Forecast Studio is GID=201.

By using the above example values, the resulting command lines look like the following for each of the platforms on which you can install SAS Forecast Studio:

- AIX:
  ```
  CMD=/usr/bin/id
  CURR_GID=eval $CMD -g
  GID=201
  if [$CURR_GID -eq $GID]; then umask 007
  fi
  ```

- H64 (HP-Risc):

```
CMD=/usr/bin/id
CURR_GID=eval $CMD -g
GID=201
if [ $CURR_GID -eq $GID ] ; then umask 007
fi
```

- H64I (HP-Itanium):
```
CMD=/usr/bin/id
CURR_GID=eval $CMD -g
GID=201
if [ $CURR_GID -eq $GID ] ; then umask 007
fi
```

- S64 (Solaris):
```
CMD=/usr/xpg4/bin/id
CURR_GID=`$CMD -g`
GID=201
if [ $CURR_GID -eq $GID ] ; then umask 007
fi
```

Windows Administration Tasks

Set File System Permissions

On a Windows server, allowing SAS users with differing permissions to update a file creates a security setup issue that needs to be corrected. You must set file system permissions for all SAS users to be the same in the areas that are used by SAS Forecast Studio.

To set file system permissions for all SAS users to be the same, perform the following steps:

1. Open Windows Explorer and select the root directory used by SAS Forecast Studio. By default, the root directory is **c:\SAS\ForecastStudio**.
2. Right-click and select **Properties**.
3. Click the **Security** tab.
4. Select the users for the current machine.
5. Enable **Full Control** for the specified group of users.
6. Click **OK**.

Note: Because temporary files are created in the BI directory as well, you should apply the appropriate security to this directory. The default directory is **c:\SAS**. By default, the BI directory is the parent of the **ForecastStudio** folder. If this is true, then you need to set the security on the parent directory only.

Configure the SAS Analytics Platform as a Windows Service

By default, the SAS Analytics Platform is not installed as a Windows service. It is recommended that you install the SAS Analytics Platform as a Windows service. When you install the SAS Analytics Platform as a Windows service, the SAS Analytics Platform restarts when its machine reboots and runs even when users log off of the machine.

By default, the SAS Analytics Platform service is configured to include the SAS Metadata Server as a dependency. If you choose to run the metadata server on another machine, then this dependency must be removed. To remove the dependency, perform the following steps:

1. Navigate to the **!SASROOT\SASAPcore\conf** directory.

2. Edit the file **wrapper.conf**. Comment out the following line that is located near the end of the file by adding a # character at the start of the line as follows: **# wrapper.ntservice.dependency.1=***value*

You can install and start the SAS Analytics Platform as a Windows service by performing the following steps:

1. If the SAS Metadata Server is installed on the same machine as the SAS Analytics Platform, then modify the **!SASROOT\SASAPcore\conf\wrapper.conf** file.

   (a) Open your Windows services by selecting
   Start→**Settings**→**Control Panel**→**Administrative Tools**→**Services**.
   Look for the SAS metadata service (i.e. SAS Lev1 MS - Forecast), as shown in the example in Figure 13. You must use the exact name of the service in the next step.

Figure 13. SAS Lev1 MS - Forecast Service

   (b) Near the end of the file, you see a property **wrapper.ntservice.dependency.1=** *value*. The *value* must be the exact name of the metadata service from the step above, as shown in the example in Figure 14.

```
111  # Service dependencies.  Add dependencies as needed starting from 1
112  # rjc - service dependency.
113  # NOTE: If you are running the metadata server on another machine,
114  # comment out the following line:
115  wrapper.ntservice.dependency.1=SAS Lev1 MS - Forecast
116
117  # Mode in which the service is installed.  AUTO_START or DEMAND_START
118  wrapper.ntservice.starttype=AUTO_START
119
120  # Allow the service to interact with the desktop.
121  wrapper.ntservice.interactive=false
```

Figure 14. Property Value for `wrapper.ntservice.dependency.1=` Entry

2. Navigate to `!SASROOT\SASAPCore\bin` at a DOS prompt, and run the `AnalyticsPlatformService.bat install` command. This script installs the SAS Analytics Platform as an automatic service, but does not start the SAS Analytics Platform initially.

3. Start the service from the Services application as shown in Figure 15, or by using the `AnalyticsPlatformService start` command, or by rebooting the machine.

Name	Description	Status	Startup Type	Log On As
Routing and Remote Access	Offers routin...		Disabled	Local System
rsh (remote shell) Service		Started	Automatic	CARYNT\...
SAS Analytics Platform	Common pl...		Automatic	Local System
SAS Lev1 MS - DI	SAS Lev1 ...		Automatic	Local System
SAS Lev1 MS - EGServers	SAS Lev1 ...		Automatic	Local System
SAS Lev1 MS - Forecast	SAS Lev1 ...	Started	Automatic	Local System

Figure 15. SAS Analytics Platform Starts as a Service

The SAS Analytics Platform is configured to start automatically when your computer boots, so you should not have to start the SAS Analytics Platform manually in the future.

Note: To uninstall a server that is installed as a service, perform the following steps:

1. From the Windows services panel, stop the service.

2. Run the UninstallAPL.exe program that is located in the `!SASROOT\SASAPCore\_uninstAPL` installation directory.

Start SAS Forecast Studio

Required Servers

Before running the SAS Forecast Studio client application, you must have the following servers running:

- SAS Metadata Server
- SAS Workspace Server
- SAS Analytics Platform

Because the SAS Analytics Platform starts the SAS Forecast Server Mid-Tier automatically, you must be running the SAS Analytics Platform before you start the SAS Forecast Studio client. If the SAS Analytics Platform is not running as a service, then the SAS Forecast Server Mid-Tier is started automatically when you start the SAS Analytics Platform.

Start the SAS Analytics Platform

Windows Environment

To start the SAS Analytics Platform in a Windows environment, perform the following steps:

1. Start the SAS Analytics Platform by selecting:
   Start → Programs → SAS → SAS Analytics Platform → Start AP Server.
2. In the Log On dialog box, verify the following values:

   - User name: If you would like the user name and password values to persist whenever you start the SAS Analytics Platform, then click **Remember my password**.
   - Server: The server should be the name of the server where the SAS Analytics Platform is running.

3. Click **Log On** to start the SAS Analytics Platform.

UNIX Environment

To start the SAS Analytics Platform in a UNIX environment, perform the following steps:

1. Navigate to the installation directory of the Analytics Platform
   (e.g., `!SASROOT/SASAPCore/bin`)
2. Run the command `./apserver start`. The server is ready to receive clients when the message "Waiting for clients" appears at the bottom of the screen.
3. If you chose not to persist the user credentials needed to start the server, then you are prompted for a user ID and password. However, for this to work you need an X display session.

Start the SAS Forecast Studio Client

The SAS Forecast Studio client can be run on a Windows operating system only. To start the SAS Forecast Studio client, perform the following steps:

1. Navigate to SAS Forecast Studio by selecting:
   Start → Programs → SAS → SAS Forecast Studio → SAS Forecast Studio 1.2.

2. In the Log On dialog box, enter your user ID and password, and specify a SAS Forecast Server Mid-Tier location.

   - User name: If you would like the user name and password values to persist whenever you start SAS Forecast Studio, then click **Remember my password**.
   - Server: The server should be the name of the server where the SAS Analytics Platform is running.

3. Click **Log On** to start the SAS Forecast Studio client.

Anonymous Logon

Configure the Anonymous Logon Feature

Both the SAS Analytics Platform and SAS Forecast Studio applications support anonymous logons. By default, the anonymous logon feature is disabled. To enable anonymous logons, you must configure the SAS Analytics Platform by using the **AP Server Advanced Configuration** wizard:

1. Navigate to the **AP Server Advanced Configuration** wizard by selecting:
   Start → Program → SAS → SAS Analytics Platform → AP Server Advanced Configuration.

2. In step 3 of the wizard, specify the user ID and password for which you want to enable anonymous logon ability. The user ID and password are used for authentication.
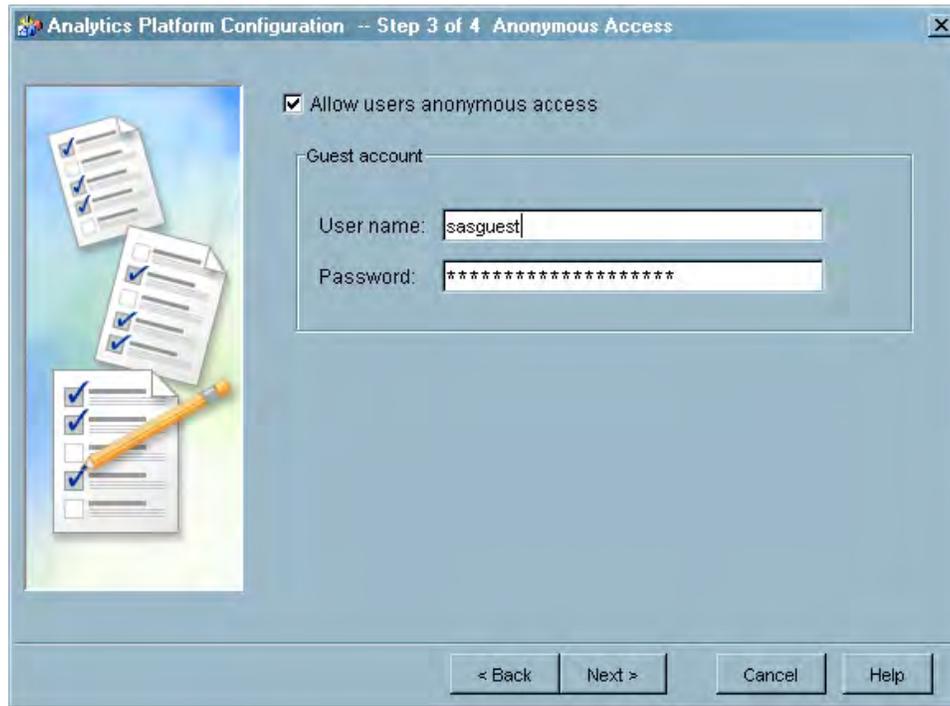
Figure 16. Anonymous Access Screen

3. If the anonymous logon feature is enabled while the SAS Analytics Platform is running, then you must restart the SAS Analytics Platform.

Start SAS Forecast Studio Client with an Anonymous Logon

Once you enabled the anonymous logon feature, then you can log on to SAS Forecast Studio by leaving the user name blank.

1. Navigate to SAS Forecast Studio by selecting:
   Start → Programs → SAS → SAS Forecast Studio → SAS Forecast Studio 1.2.

2. In the Log On dialog box, leave your user ID and password blank, and specify a SAS Forecast Server Mid-Tier location. You must specify the **Server**. The server is the name of the server where the SAS Analytics Platform is running. If you do not remember which server to use, then you can search for a server by performing the following steps:

   (a) Select **Search for Servers** from the **Server** drop-down menu.
   (b) Once the search is complete, click on the drop-down menu arrow for the list of valid servers that you can choose. The valid servers are indicated by green check marks.

3. Click **Log On** to start the SAS Forecast Studio client. Figure 17 shows an example of an anonymous logon dialog box.

Figure 17. SAS Forecast Studio Logon Screen

SAS Forecast Studio Java Web Start

SAS Forecast Server supports automatic downloads of the SAS Forecast Studio client by using Java Web Start. You no longer need to install the client application manually, or worry about the client application version not matching the server version. If you launch the application in this manner, then all of the required JAR files automatically download to your desktop. You might be prompted a few times for security purposes and asked if you want to create a desktop icon. If a new version of SAS Forecast Server is installed on the server, then the updated version automatically installs before the client application is invoked.

Note: You can use the SAS Forecast Studio client in a Windows environment only, and you must have the required JRE version installed on each of the client machines.

You can use the Java Web Start in one of two ways:

- launch the SAS Forecast Studio client from the **SAS Analytics Platform Server Status** Web page.

  The SAS Analytics Platform has a status and configuration Web page that is installed on the SAS Forecast Server Mid-Tier. By default, the Web server is started on port 6098. The SAS Analytics Platform already contains an HTTP server, which is used to deliver the Web pages that contain links to Java Web Start at **http://***your-server-name***:6098**. By default, the HTTP port for the SAS Analytics Platform is 6098. If you installed the SAS Analytics Platform by using a different port, then you must specify the port number that you used.

  From the **Welcome** page, you can click on the **Configuration** tab to view not only the SAS Analytics Platform configuration details, but also any applications that have been configured on the server. To launch a configured application, simply click on the **Launch** link.

- launch the SAS Forecast Studio client from a direct link to the SAS Forecast Server Java Web Start

  The direct link to launch the SAS Forecast Studio client is the following:
  http://*your-server-name***:8080/Forecasting/main.jnlp**

For more information about Java Web Start, refer to the Sun Web site at the following Web address:
http://java.sun.com/products/javawebstart/

Your Turn

If you have comments or suggestions about *SAS Forecast 1.2: Post-installation Tasks,* please send them to us on a photocopy of this page or send us electronic mail.

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