Upgrading from SAS® Forecast Server 1.4 to SAS® Forecast Server 2.1

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Chapter 1

Upgrading from SAS Forecast Server 1.4 to SAS Forecast Server 2.1

Contents

Overview

Upgrading from SAS Forecast Server 1.4 to SAS Forecast Server 2.1 uses many of the same tools and processes that you used when you initially installed SAS Forecast Server. The following system requirements and instructions will guide you through upgrading SAS Forecast Server.

Hardware Requirements

Hard Disk

- SAS Forecast Studio client installation requires 500 megabytes of memory.
- SAS Forecast Server Mid-Tier and SAS Analytics Platform, SAS servers (SAS Metadata Server and SAS Workspace Server), and client installation require 2 gigabytes of memory.

RAM

- SAS Forecast Studio client installation requires a minimum of 128 MB RAM. If your system performance is too slow, then you can increase the amount of RAM. It is suggested that you have more than 1 gigabyte of RAM.
- SAS Forecast Server Mid-Tier and SAS Analytics Platform requires a minimum of 128 MB RAM. If your system performance is too slow, then you can increase the amount of RAM. It is suggested that you have more than 1 gigabyte of RAM.

Operating System Requirements

The SAS Forecast Server Mid-Tier is a Java-based, middle-tier component that enables automatic forecasting of time series data. The SAS Forecast Server Mid-Tier is installed as an application within the SAS Analytics Platform, and can be installed on the following operating systems:

- Windows XP (32-bit)
- Windows Server 2003 (Standard Edition)
- Windows Server 2003 (Enterprise Edition)
- UNIX AIX (64-bit), Release 5.1 or later
- Solaris (64-bit)
- HP-UX (64-bit)
- HP-Itanium

SAS Forecast Studio is a Java-based, client-tier application that is based on SAS High-Performance Forecasting procedures. The SAS Forecast Studio client can be installed only on the Windows XP operating system.

Software Requirements for SAS Forecast Server

SAS Software Requirements

Required SAS Software

Your software bundle includes the following required SAS products and software:

- SAS/OR (unless SAS/OR is explicitly licensed, use of SAS/OR is limited to licensed users of SAS Forecast Server)
- SAS Forecast Server bundle

CAUTION: SAS Forecast Server 2.1 must be used with SAS High Performance Forecasting 2.3 that is available in your software bundle. If you use SAS Forecast Server 2.1 with any earlier versions of SAS High Performance Forecasting, then you might get unexpected results.

NOTE: You must install both SAS High Performance Forecasting and SAS Forecast Server Batch Interface, which are included in your SAS Forecast Server bundle. The new DVD contains macros related to project management and server/client tasks. Using SAS High Performance Forecasting by itself does not require SAS Forecast Server Batch Interface.

Optional SAS Software

The following SAS products and components are often used with SAS Forecast Server, but are not required to operate SAS Forecast Server:

- SAS Data Integration
- SAS BI Server
- SAS Enterprise Miner

Third-Party-Vendor Software Requirements

In addition to the licensed SAS products required to support SAS Forecast Server, some third-party software is required. For information about the third-party software and to access downloads of the software, see the following Web site:
`http://support.sas.com/documentation/configuration/thirdpartysupport/`

NOTE: For full functionality, installation of the Java Runtime Environment 1.4.2_09 is required on both the client tier and the middle tier.

Web Browser

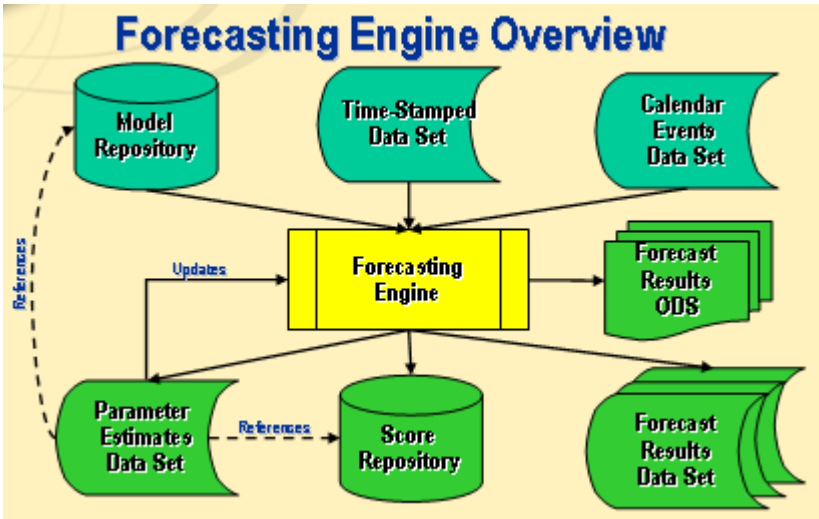
Internet Explorer 5.5 (or later) is required.

Data Requirements

Overview of SAS Forecast Server Data Flow

Figure 1.1 shows the general flow of data in SAS Forecast Server.

Figure 1.1 Data Flow in SAS Forecast Server



When using SAS Forecast Server, you create or update forecasts by using the following general data flow:

1. Create or generate an input SAS data set, which you store in a pre-assigned SAS library.
2. Open SAS Forecast Studio (client), and perform the following steps:
   a) Create a project.
   b) Select your input library and SAS data set.
   c) Specify how to forecast your data.
   d) Assign variables to roles.
   e) Configure the hierarchy.
   f) Enter project properties.
   g) Perform additional steps.
3. Create the forecasting model database.
4. Select the default model selection list.
5. Create events.
6. Generate forecasting results.
7. Modify estimates and forecast data again, if necessary, and repeat steps 3-6 (iterative process).
8. Store forecasting results and parameter estimates.

For a more information about using SAS Forecast Studio see the SAS Forecast Studio Help system.

Input Data Set Requirements

Overview

In order for SAS Forecast Server to generate a forecast, the input SAS data set must contain one variable for each time series. SAS Forecast Server requires a date or datetime variable in the data set in order to generate forecasts. SAS Forecast Server generates forecasts from timestamped data that consists of unique and equally spaced data over time. If the data are not equally spaced with regard to time, then SAS Forecast Server uses the date or datetime variable to accumulate the data into a time series before forecasting. The input data set must be a single SAS data set that is pre-assigned.

You can use transactional data to generate a forecast. You can use the accumulation options in SAS Forecast Studio to prepare the time series data.

Data Set Variables

You can have the following variables in the input data set:

- The time ID variable must contain the date or datetime value of each observation.
- BY variables enable you to group observations into a hierarchy.
- Dependent variables are the variables used to model and forecast.
- Independent variables are the explanatory or input variables that are used to model and forecast the dependent variable.
- Reporting variables are not used for analysis but for reports only.
- Indicator variables are used to signify any unusual event in the model, such as holidays and promotions.

The names of the variables cannot match any of the reserved variable names that are used in the output data set. The variable names in your input data set cannot start with an underscore and cannot match any of the variable names in the output data sets that SAS Forecast Server creates. The following table lists the variables that are created by the output data sets. For more information about the output data sets that are created, see the *SAS High-Performance Forecasting User's Guide*.

If your input data set contains one of the variables listed in Table 1.1 and you try to assign this variable to a role in SAS Forecast Studio, then an error message appears.

Table 1.1 Reserved Variable Names

Variable Name	Description
_VariableName	Any variable name that begins with an underscore
ACTUAL	Dependent series value
COMP	Name of the component
COMPONENT	Model component

Table 1.1 (continued)

Variable Name	Description
CROSS	Cross variable name
DSVAR	Data set variable mapping
EST	Parameter estimate
FACTOR	Model factor
LABEL	Parameter or statistic label
LAG	Lag of input
LOWER	Lower confidence limit
MODE	Mode of decomposition
MODEL	Name of model
MODELVAR	Model variable mapping
NAME	Variable name
PARM	Parameter name
PREDICT	Component forecast
PVALUE	Parameter estimate *p*-value
SEASON	Seasonal index
SELECT	Name of selection list
SHIFT	Shift
STAT	Statistic name
STATUS	Indicates success/failure in estimating parameter
STD	Prediction standard error
STDERR	Parameter estimate standard error
TIME	Time ID
TIMEID	Time ID values
TVALUE	Parameter estimate *t*-value
TRANSFORM	Transformation applied
UPPER	Upper confidence limit
AADJRSE	Amemiya's adjusted R-Square
ACF	Autocorrelations
ACF2STD	Indicates ACF beyond two standard errors
ACFLPROB	Autocorrelation log probabilities
ACFNORM	Normalized autocorrelations
ACFPROB	Autocorrelation probabilities
ACFSTD	Autocorrelation standard errors
ACOV	Autocovariances
ADJRSQ	Adjusted R-Square
AIC	Akaike information criterion
APC	Amemiya's prediction criterion
AVG	Average value
CC	Cycle component
CCF	Cross-correlations
CCF2STD	Indicates cross-correlations beyond two standard errors
CCFNORM	Normalized cross-correlations
CCFLPROB	Cross-correlation log probabilities
CCFPROB	Cross-correlation probablities
CCFSTD	Cross-correlation standard errors

Table 1.1 (continued)

Variable Name	Description
CCOV	Cross-covariances
CSS	Corrected sum of squares
ERROR	Prediction errors
IACF	Inverse autocorrelations
IACF2STD	Indicates inverse autocorrelations beyond two standard errors
IACFNORM	Normalized inverse autocorrelations
IACFLPROB	Inverse autocorrelation log probabilities
IACFPROB	Inverse autocorrelation probabilities
IACFSTD	Inverse autocorrelation standard errors
IC	Irregular component
LAG	Time lag
LAG*h*	Correlation or cross-correlation statistics for lag *h*
LOWER	Lower confidence limits
MAE	Mean absolute error
MAPE	Mean absolute percent error
MAXERR	Maximum error
MAXIMUM	Maximum value
MAXPE	Maximum percent error
ME	Mean error
MEAN	Mean value
MEDIAN	Median value
MINERR	Minimum error
MINIMUM	Minimum value
MINPE	Minimum percent error
MPE	Mean percent error
MSE	Mean square error
N	Number of non-missing observations or Number of variance products
NAME	Variable name
NMISS	Number of missing observations
NOBS	Number of observations
ORIGINAL	Original series index
PACF	Partial autocorrelations
PACF2STD	Indicates PACF beyond two standard errors
PACFLPROB	Partial autocorrelation log probabilities
PACFNORM	Partial normalized autocorrelations
PACFPROB	Partial autocorrelation probabilities
PACFSTD	Partial autocorrelations standard errors
PCSA	Percent change seasonal adjusted component
PERIOD*t*	Decomposition component value or trend statistic for time period *t*
PREDICT	Predicted values
RANGE	Maximum value
RMSE	Root mean square error
RSQUARE	R-Square
RWRSQ	Random walk R-Square
SA	Seasonal adjusted component

Table 1.1 (continued)

Variable Name	Description
SBC	Schwarz Bayesian information criterion
SC	Seasonal component
SCSTD	Seasonal component standard errors
SIC	Seasonal-irregular component
SEASON*s*	Season statistic value for season *s*
SSE	Sum of squares error
STD	Prediction standard errors
STDDEV	Standard deviation
SUM	Summation value
TC	Trend component
TCC	Trend-cycle component
TCS	Trend-cycle-seasonal component
UMSE	Unbiased mean square error
URMSE	Unbiased root mean square error
UPPER	Upper confidence limits
USS	Uncorrected sum of squares
WN	White noise test statistics
WNLPROB	White noise test log probabilities
WNPROB	White noise test probabilities

Additional Information

Often your data are not in the appropriate format for SAS Forecast Server. To avoid misleading or incorrect analysis from your time series data, you should preprocess your data.

- For general information about working with time series data, see the *SAS/ETS User's Guide*.
- For more information about creating time series data from transactional data, see "The TIMESERIES Procedure" and "The EXPAND Procedure" documentation in the *SAS/ETS User's Guide*.
- For more information about creating SAS data sets from Excel files, see the IMPORT Procedure documentation in the *Base SAS Procedures Guide*.
- For more information about transposing data for statistical analysis, see "The TRANSPOSE Procedure" documentation in the *Base SAS Procedures Guide*.

National Language Support

SAS Forecast Server is available in the following languages:

- Chinese (Simplified)

- English
- French
- Italian
- Japanese
- Korean
- Russian

Best Practices for System Performance

For information about changing your system settings to improve system performance, see the section about best practices for configuring the middle tier in the *Web Application Administration Guide* of the SAS Intelligence Platform documentation set:
http://support.sas.com/onlinedoc/913/docMainpage.jsp

Upgrade Installation Tasks

Overview of the Upgrading Process

These upgrade instructions explain how to protect and migrate your SAS Forecast Studio 1.4 projects and data when you upgrade from SAS Forecast Server 1.4 to SAS Forecast Server 2.1.

Use these upgrading instructions as your primary guide to the upgrading process. These upgrading instructions explain the correct order of all upgrading tasks and point you to instructions in additional documents as necessary. It is recommended that you read this complete chapter before you begin the upgrading process.

For best results, it is recommended that you do not perform installations of SAS Forecast Server 1.4 and SAS Forecast Server 2.1. To preserve your SAS Forecast Server 1.4 installation on the same server. It is recommended that you install SAS Forecast Server 2.1 on a different server.

The server where you install SAS Forecast Server 2.1 is the server where you will run the migration jobs because the migration jobs require the macro catalog that is included in SAS Forecast Server 2.1.

When Should You Perform the Upgrading Process?

Evaluate the forecast plans and choose the time to migrate that best fits your business cycle.

Upgrading Tasks

Upgrading Steps Checklist

Table 1.2 shows the required steps that you must complete for a successful upgrading process of SAS Forecast Server.

Table 1.2 Tasks Checklist

Step	Task
1	Create a copy of your SAS metadata.
2	Create a copy of the stored processes.
3	Create a copy of your current SAS Forecast Server directories.
4	Create a copy of your SAS Analytics Platform file.
5	Stop the SAS Analytics Platform, SAS Metadata Server, and SAS Object Spawner.

Create a Copy of Your SAS Metadata

For information about how to create a copy of your entire metadata repository, see the section about managing the SAS Metadata Server in the *S*AS Intelligence Platform: Administration Guide that can be found in SAS OnlineDoc at the following Web address:
http://support.sas.com/onlinedoc/913/docMainpage.jsp

Create a Copy of the Stored Processes

For information about how to create a copy of the stored processes, see the section about the BI Manager Import and Export Wizard in the *S*AS Intelligence Platform: Administration Guide that can be found in SAS OnlineDoc at the following Web address:
http://support.sas.com/onlinedoc/913/docMainpage.jsp

Create a Copy of Your SAS Forecast Server Directories

Installation Directories

To create a backup copy of your SAS Forecast Server installation directories, follow the methods that satisfy the security requirements at your site. The installation directories are found in the following default location:

UNIX:
<*install-dir*>/SASAPCore/apps/Forecasting

Windows:
!SASROOT\SASAPCore\apps\Forecasting

Forecast-studio-project Directories

The <*forecast-studio-project*> directories are the central physical repository of workspace server project files that must be accessible to the SAS Workspace Server. To create a backup copy of your <*forecast-studio-project*> directories, follow the methods that satisfy the security requirements at your site. The <*forecast-studio-project*> directories are found in the following default location:

UNIX:
<*config-dir*>/SAS/ForecastStudio

<*config-dir*> is the home directory of the user who installed SAS Forecast Server.

Windows:
c:\SAS\ForecastStudio

Create a Copy of Your SAS Analytics Platform File

It is recommended that you create a copy of your apserver.sh (or apserver.bat) file. If you made modifications such as adding nohup and logging, then you will lose those changes when the file is replaced.

To create a backup copy of your SAS Analytics Platform script (apserver.bat or apserver.sh), follow the methods that satisfy the security requirements at your site. The apserver file is found in the following default location:

UNIX:
`SAS_HOME/SASAPCore/bin`

Windows:
`SAS_HOME\SASAPCore\bin`

Stop the SAS Analytics Platform, SAS Metadata Server, and SAS Object Spawner

SAS Analytics Platform

To stop the SAS Analytics Platform, perform the following steps:

UNIX:

1. Open a terminal session and have an X server running.
2. Navigate to the **`!SASROOT/SASAPCore/bin`** path.
3. Execute the following command:

   ```
   ./apserver stop
   ```

Windows:
From the **Start** menu, select
Programs →SAS→SAS Analytics Platform→Stop AP Server

Alternatively, you can stop the SAS Analytics Platform by executing a .bat file. At a DOS prompt, navigate to the
!SASROOT\SASAPCore\bin directory and use the following command:

```
apserver.bat stop
```

SAS Metadata Server

To stop the SAS Metadata Server, perform the following steps:

UNIX:

1. Navigate to the following path:
   <*path-to-config-dir*>/Lev1/SASMain/MetadataServer
2. Execute the script in the directory that stops the SAS Metadata Server.

Windows:
From the **Start** menu, select
Programs →SAS→ <*configuration-directory*>**→Stop SAS Metadata Server**

Alternatively, you can stop the SAS Metadata Server by executing a .bat file. You find the .bat file in the following folder:
<*path-to-config-dir*>\Lev1\SASMain\MetadataServer

SAS Object Spawner

To stop the SAS Object Spawner, perform the following steps:

UNIX:

1. Navigate to the following path:
   <*path-to-config-dir*>/Lev1/SASMain/ObjectSpawner
2. Execute the script in the directory that stops the SAS Object Spawner.

Windows:
From the **Start** menu, select
Programs →**SAS**→ <*configuration-directory*>→**Stop SAS Object Spawner**

Alternatively, you can stop the SAS Object Spawner by executing a .bat file. You find the .bat file in the following folder:
<*path-to-config-dir*>\Lev1\SASMain\ObjectSpawner

Installing SAS Forecast Server 2.1 on UNIX

UNIX Tasks Checklist

Table 1.3 shows the required steps that you must complete for installing SAS Forecast Server.

Table 1.3 UNIX Tasks Checklist

Step	Task
1	Complete the upgrading tasks.
2	Remove SAS High-Performance Forecasting hot fixes.
3	Install SAS Forecast Server.
4	Start the SAS Metadata Server and SAS Object Spawner.
5	Import the SAS Forecast Server stored processes.
6	Start the SAS Analytics Platform.

Complete the Upgrading Tasks

Before you begin the installation of SAS Forecast Server 2.1, it is recommended that you complete the preceding upgrading tasks. For information about these tasks, see "Upgrading Tasks" on page 11.

Remove SAS High-Performance Forecasting Hot Fix

If the SAS High-Performance Forecasting hot fixes are applied, then you must remove these hot fixes prior to installing SAS High-Performance Forecasting 2.3, which comes in your SAS Forecast Server bundle. Otherwise, the old files remain in the hot fix directory and are found first. You must run the hotfixcleanup script to remove the hot fixes before you install SAS High-Performance Forecasting 2.3. For information and step-by-step instructions, see the *Important Information* document that is in your SAS Installation Kit. If this document is not available, then go to **`http://ftp.sas.com/techsup/download/hotfix/uinst913.html`** to download the required script.

Install SAS Forecast Server on UNIX

To install the new version of SAS Forecast Server software, perform the following steps:

1. If your site has created a SAS Software Install Depot, then start the SAS Software Navigator. Alternatively, start the software installation by using the setup.sh script.
2. Select the **Advanced** deployment option and the path to your SID that contains the upgraded version of SAS Forecast Server software. Click **Next**.
3. Verify the SID information. Be sure that you use the new SID file that comes in email prior to receiving your package. If you use your existing SID file, even if it is not expired, then the batch interface components do not get installed and SAS Forecast Server does not work properly. Click **Next**.
4. Select a standard deployment plan or browse to the location of your customized plan.

   Click **Next**.
5. Continue the installation instructions by following the tasks specified for the operating environment in which you are installing SAS Forecast Server software.
6. In the Select Your Installation Options window, **deselect** the SAS Configuration Wizard component.
7. Select the installation path and click **Next**. If you specify an alternate default location, then browse to the location before you click **Next**.
8. Select the set of Help files to install, and click **Next**.
9. Review the options before starting the installation process, and click **Install**.
10. Click **OK** in the SAS User Account window.
11. Press ENTER in the SAS Installation Setup window.
12. Type **2** to select the option that updates an existing installation, and press ENTER.
13. Specify the target directory. If the path is correct, then press ENTER. If the path is not correct, then specify the correct installation path and press ENTER.
14. Press ENTER if the path displayed is correct.
15. Press ENTER to load all new licensed software.
16. Select your preferred language, and press ENTER.
17. When asked **Do you wish to continue? (Y)**, press ENTER to complete the installation.
18. Verify the log to check for errors. Warnings can be ignored. Press ENTER to return to SAS Software Navigator.
19. Click **Yes** to continue with the installation. The rest of the installation is in silent mode.

20. Click **Next** in the Welcome to the InstallShield Wizard for SAS Forecast Server Mid-Tier 2.1 window.
21. Click **Next** in the window that specifies the installation directory.
22. Click **Yes to All** when asked if you want to replace the files.
23. Click **Finish** to continue.

Start the SAS Metadata Server and SAS Object Spawner

Windows Operating Environment

If your server is running on a Windows machine, then start the servers by using the **Start** menu and selecting:
Start→Program→SAS→ ***configuration-directory*****→Start SAS Metadata Server**.

NOTE: You can start a server by executing a .bat file. You find the .bat file for a particular server in the following folder:
path-to-config-dir**\Lev1\SASMain\MetadataServer**

When the SAS Object Spawner starts, then the SAS Workspace Server and the SAS Stored Process Server start automatically. You can start the servers by using the **Start** menu and selecting:
Start→Program →SAS → ***configuration-directory*** **→Start SAS Object Spawner**.

UNIX Operating Environment

On a UNIX operating environment, you start a server by performing the following steps:

1. Log on using the SAS installer account.
2. Navigate to the following path:
   \Emph{path-to-config-dir}/Lev1/SASMain/MetadataServer
3. Execute the script in the directory that starts the server.

To start the SAS Object Spawner, perform the following step:

1. Log on using the SAS installer account.
2. Change directories to **\Emph{path-to-config-dir}/Lev1/SASMain/ObjectSpawner**.
3. Execute the script in the directory that starts the server.

Import SAS Forecast Server Stored Processes

You can write SAS Stored Processes in order to extend the functionality of SAS Forecast Server. 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 Server.

NOTE: If the SAS Forecast Server Mid-Tier and server tier are installed on two different machines, then you need to copy the StoreProcesses.spk file to the server tier and then import the stored processes by using BI Manager. The default location of the StoreProcesses.spk file is !SASROOT\SASAPCore\apps\Forecasting\samples\StoredProcess.spk

After the default directory structure for the SAS Forecast Server 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 Server 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.

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

1. Start SAS Management Console on the server host and connect to a metadata repository as the SAS Forecast Server Administrator (e.g., fsadm).

   CAUTION: If you have a SAS Management Console session open from a preceding task, then close SAS Management Console and open a new session. You must be logged on to SAS Management Console as the SAS Forecast Server Administrator (e.g., fsadm).

2. Expand the BI Manager, right-click the **Forecast Studio** folder, and select **Import**.

3. Browse to the Forecast Server Mid-Tier installation directory to import the StoredProcesses.spk file:
   !SASROOT\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.

4. Select **All Objects** as the Import Options and click **Next**.

5. Click **Next** to confirm the selected objects.

6. Click **Next** to select the application server and source code repository.

7. Select the appropriate server and click **Next**. Typically, the server is SASMain.

8. Keep the default value in the **Original Path** field. When the stored process directory structure was created in the previous post-installation task, a new source code repository was created as well. Select this entry to specify the target path where you want the stored processes to be imported. This location is the path that you specified above. Click **Next**.

9. Click **Import** at the information step.
   NOTE: You might need to re-authenticate to the metadata server by logging on again. Use the SAS Forecast Server administrative user account (e.g., fsadmin).
10. As the BI Manager imports the sample stored processes from the SAS Package file, you see a progress dialog box. When the import is done, you get a summary. Click **Finish**.
11. Close SAS Management Console.

Start the SAS Analytics Platform

You can start the SAS Analytics Platform by performing the following steps:

Windows operating environment:

1. Navigate a shortcut that is created to where the SAS Analytics Platform is installed:
   Start→ Programs→ SAS→ SAS Analytics Platform → Start AP Server
2. If you are prompted for the user name and server location, then specify the following values:
   User name: sasadm (SAS Administrative account) and click StrongRemember my password.

   Server: The server is the name of the server where the SAS Analytics Platform is running.
3. Click **LogOn** to start the SAS Analytics Platform.

UNIX operating environment:

1. Navigate to the installation directory of the SAS 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.
   Note: If you are running the SAS Analytics Platform as a background process, then you do not see this message.
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. Specify the SAS Administrator user ID (e.g., sasadm) and password. However, for this to work you need an X display session.

For more information about configuring the SAS Analytics Platform, see **http://support.sasconfiguring.com/documentation/onlinedoc/apcore**

Installing SAS Forecast Server 2.1 on Windows

Windows Tasks Checklist

Table 1.4 shows the required steps that you must complete for installing SAS Forecast Server.

Table 1.4 Windows Tasks Checklist

Step	Task
1	Complete the upgrading tasks.
2	Install SAS Forecast Server.
3	Start the SAS Metadata Server and SAS Object Spawner.
4	Import the SAS Forecast Server stored processes.
5	Start the SAS Analytics Platform.
6	Start the SAS Forecast Studio client.

Complete the Upgrading Tasks

Before you begin the installation of SAS Forecast Server 2.1, it is recommended that you complete the preceding upgrading tasks. For information about these tasks, see "Upgrading Tasks" on page 11.

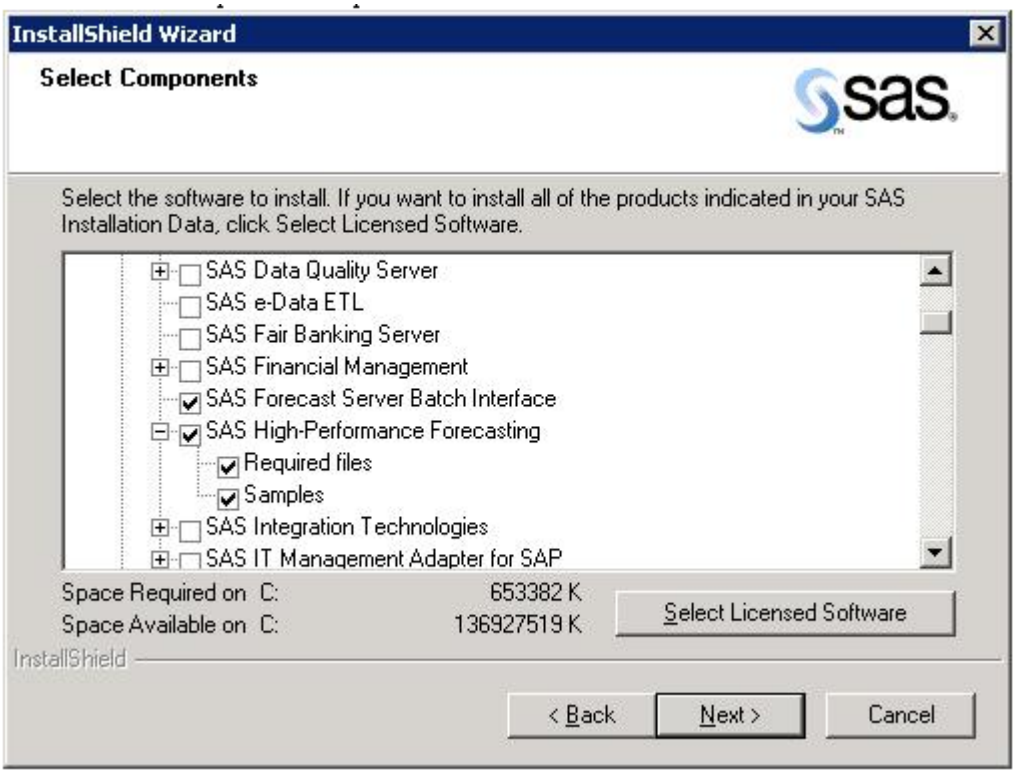
Install SAS Forecast Server on Windows

To install the new version of SAS Forecast Server software on Windows, perform the following steps:

1. If your site has created a SAS Software Install Depot, then start the SAS Software Navigator. Alternatively, start the software installation by using the setup.exe script.
2. Select the **Advanced** deployment option and the path to your SID that contains the upgraded version of SAS Forecast Server software. Click **Next**.
3. Verify the SID information. Be sure that you use the new SID file that comes in email prior to receiving your package. If you use your existing SID file, even if it is not expired, then the batch interface components do not get installed and SAS Forecast Server does not work properly. Click **Next**.
4. Select a standard deployment plan or browse to the location of your customized plan. Click **Next**.

5. Continue the installation instructions by following the tasks specified for the operating environment in which you are installing SAS Forecast Server software.
6. In the Select Your Installation Options window, **deselect** the SAS Configuration Wizard component.
7. Select the installation path and click **Next**.
8. Select the set of Help files to install and click **Next**.
9. Click **Install**.
10. The System Requirement Wizard runs to verify your operating system components. You might have to restart the machine and start the installation again by using the setup.exe script, which starts SAS Foundation installation. For more information, see the SAS Intelligence Platform documentation set that can be found at the following Web address: `http://support.sas.com/onlinedoc/913/docMainpage.jsp`
11. In the Existing SAS Installation Found window, select **Add components to SAS** and click **Next**.
12. Select the languages for your software to support and click **Next**.
13. Select required components for SAS installation that include the components shown in Figure 1.2.

Figure 1.2 SAS Components for SAS Forecast Server



14. On the Confirm Update dialog box, check **Use this response for all file types** and click **Yes**.

15. In the SAS Setup Complete window, click **Finish** after the installation is complete.
16. Complete the SAS Foundation installation. The rest of the components and products are installed automatically in silent mode.
17. Finish the SAS installation.

Start the SAS Metadata Server and SAS Object Spawner

Windows Operating Environment

1. Navigate to the Services window by selecting:
   Settings→Control Panel→Administrative Tools→Services.
2. Right-click the server item.
3. Select **Start**, **Stop**, or **Restart**.

If your server is running on a Windows machine and you choose to start the servers by using scripts, then start the servers by using the **Start** menu and selecting:
StrongStart→Program→SAS→ *configuration-directory*→Start SAS Metadata Server.

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Start the SAS Forecast Studio Client

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 on the middle tier 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

If you did not configure the SAS Analytics Platform to run as a service, then to start the SAS Analytics Platform in a Windows environment, perform the following steps:

1. On the middle tier server, 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 hostname:port 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. On the middle tier server, navigate to the installation directory of the SAS 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 either an X display session or you must pass the user ID and password as command line arguments:
   `./apserver start -u` *`admin-user-id`* `-p` *`admin-password`*

NOTE: After you complete the installation of Service Pack 4, the `apserver.sh` script might not be able to find the correct Java version. You might need to update the script to specify the new JRE 1.4.2 path. To update the `apserver.sh` script, perform the following steps:

1. Navigate to the location of the `apserver.sh` script. By default, the path is the following:
   `!SASROOT/SASAPCore/bin`
2. Locate the following command lines in the script:
   ```
   # was $JAVACMD
   !SASROOT/sasjre/1.4.2/bin/java
   ```

3. Change the above lines to the following:
   ```
   # was $JAVACMD
   !SASROOT/sasjre/1.4.2/jre/bin/java
   ```
   NOTE: !SASROOT is the path where you installed SAS.
4. Save these changes to `apserver.sh`.

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 the SAS Forecast Studio client by selecting:
   Start → Programs → SAS → SAS Forecast Studio → SAS Forecast Studio 1.4.
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 (Optional)

Configure the Anonymous Logon Feature

Both the SAS Analytics Platform and SAS Forecast Server 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. On the middle tier, access the **AP Server Advanced Configuration** wizard:
   Windows: Select
   StrongStart → Program → SAS → SAS Analytics Platform → AP Server Advanced Configuration
   UNIX: Run the `apserver.sh` command
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.
3. If the anonymous logon feature is enabled while the SAS Analytics Platform is running, then you must restart the SAS Analytics Platform.

Start the SAS Forecast Studio Client with an Anonymous Logon

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

1. Navigate to the SAS Forecast Studio client by selecting:
   Start → Programs → SAS → SAS Forecast Studio → SAS Forecast Studio 1.4.
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.

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.

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. 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, see the Sun Web site at the following Web address:
`http://java.sun.com/products/javawebstart/`

For information about Java Web Start and SAS applications, see the *SAS Analytics Platform User's Guide* at the following Web address:
http://support.sas.com/documentation/onlinedoc/apcore