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## Dear Readers,

Last month I told you about [sasCommunity.org](http://sasCommunity.org). I hope you had a chance to visit it. Now, I have even more exciting news to share. Your friends at SAS are in the process of creating a new communications vehicle especially for those of you who are interested in content on [support.sas.com](http://support.sas.com). It's designed to keep you informed about what's happening on our customer site. You'll hear from members of the Web team, technical support, R&D, communications and more. Plus, you'll be able to give us *your* thoughts and opinions.

Want to know more? I'll give you all the details next month. Trust me, you'll like it!

A handwritten signature in black ink that reads "Shelley Sessoms".

**Shelley Sessoms**

Editor, *SAS Tech Report*

## Troubleshooting an Installation of Platform Product Suite for SAS®

This paper is intended to help you determine what has gone wrong during an installation of the Platform Product Suite for SAS.

## Troubleshooting an Installation of Platform Product Suite for SAS®

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The installation instructions provided with Platform Product Suite for SAS guide you through the process of installing the following software:

- Process Manager Server
- Process Manager Client
- Platform LSF (Load Sharing Facility)

Installation documentation is also available on the SAS Install Center at [support.sas.com/documentation/configuration/913admin.html](http://support.sas.com/documentation/configuration/913admin.html). This document is intended help you determine what has gone wrong during an installation of Platform Product Suite for SAS. It is not an installation guide, and you should not attempt to use it as one.

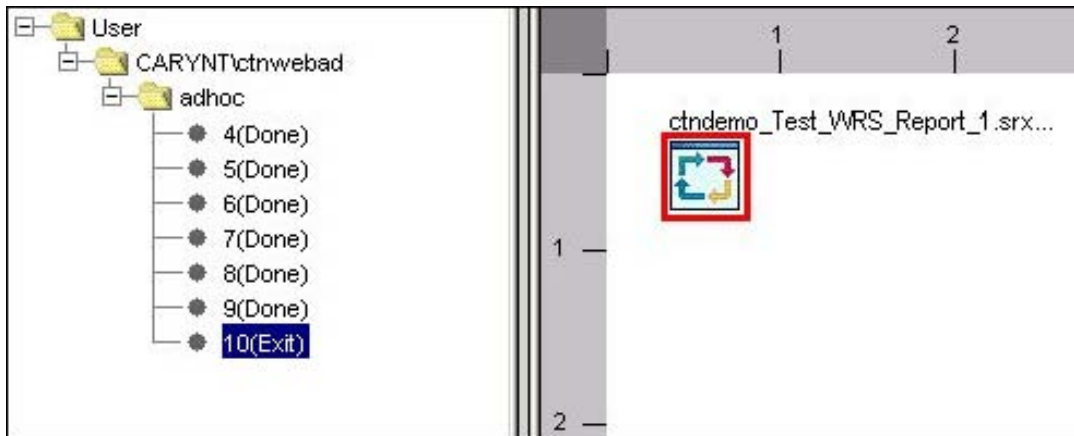
### **Using Flow Manager to Check for Errors**

Flow Manager is installed as part of Platform Product Suite for SAS and is available on the application server.

1. Start Flow Manager. On the **Start** menu, select **All Programs> Platform Process Manager> Flow Manager**.
2. Log into Flow Manager with the scheduling user name `\lsfuser`, `carynt\lsfuser`, `\saswadm`, and so on.
3. Locate the jobs that failed.
  - a. Browse the left pane of the Flow Manager window. The folder hierarchy for the selected user appears. See Display 1.
  - b. Select the user folder. A job listing appears. If you scheduled the reports to Run

Now they appear in the `adhoc` folder. If the job failed, (Exit) appears in the file name.

- c. Select the `adhoc` folder, if required. A job listing appears. If the job failed, (Exit) appears in the file name.



**Display 1. Flow Manager Window**

4. Check for error messages.
  - Double-click the job suspected of failing. The job appears in the right pane and is color-coded (**red** = successful and **blue** = failed).
  - Right-click the job name.
  - Click **View History**.
  - View any error messages in the history.

## **Verifying Services Status and Ownership**

1. Ensure that the following services are running on the server, with the LSF administrative user as owner:
  - LSF cluster name LIM
  - LSF cluster name RES
  - LSF cluster name SBD
  - Process Manager
2. Verify that the services or process are indeed owned by the LSF Administrator.

## **Verifying Status of Process Manager Server Metadata**

### **Verifying Status of Process Manager Server Metadata**

1. Ensure that the metadata for the Process Manager Server includes the following information:
  - The machine network address
  - The port number for the servers
2. A Process Manager Server *must be defined* in the metadata repository.
3. Verify that the ports listed in Table 1 are available for LSF and the Process Manager.

Port Name	Number	Description
LSF_RES_PORT	6878	LSF Scheduler Remote Execution Service (RES) port
LSF_LIM_PORT	6879	LSF Load Information Manager Service (LIM) port
LSB_MDB_PORT	6881	LSF Master Batch Daemon (MBD) port
LSB_SBD_PORT	6882	LSF Slave Batch Daemon
JS_PORT	1966	Job Scheduler port

**Table 1. Ports for LSF and Process Manager**

## Troubleshooting the SAS Java Batch Server

SAS Java Batch Server schedules specific Java applications which SAS supplies and the standard java.exe shell launches.

SAS® Web Report Studio creates and schedules reports. The SAS Java Batch Server definition supports this activity. When you use SAS Web Report Studio to schedule a report, job metadata becomes available to Schedule Manager. This job metadata includes the following information:

- The command used to execute the job
  - The name of the SAS batch server associated with the job
  - The deployment directory associated with the job
  - The file name of the executable program
1. Determine if the date of the server definition for SAS Java Batch Server **predates SAS Web Report Studio 3.1**. If the server definition predates SAS Web Report Studio 3.1, then **you must delete that server definition and create a new one**.
  2. Verify that you installed Java Batch Server under the parent SASMain node and specified the server type as **SAS Java Batch Server**.
  3. Verify that the name of the server is **BRM Java Batch Server**.  
**Note:** Select SAS Java Batch server under Server Manager in the left pane of SAS® Management Console to display the name of the server.
  4. Verify properties of BRM SAS Java Batch Server.
    - a. Right-click **BRM Java Batch Server**.
    - b. Select **Properties > Options**.
    - c. Verify that the Subtype is **Business Report Manager**.
  5. Verify the server information presented in the **Properties** dialog box.
  6. Test commands in the **Properties** dialog box. Examples of Microsoft Windows and UNIX commands are shown in Table 2.

Operating System	Command
Windows	"C:\Program Files\SAS\SASQueryandReportingServices\3.1\outputgen.exe" --config-file "C:\Program Files\SAS\SASQueryAndReportingServices\3.1\OutputManagementConfigTemplate.xml" --repository Foundation
UNIX	/usr/local/SAS/SASQueryandReportingServices/3.1/outputgen --config-file OutputManagementConfigTemplate.xml --repository Foundation

**Table 2. Command Examples**

- a. Drag the pointer to select and copy the command that appears in the Properties dialog box.
- b. From the Start menu, select Programs > Accessories > Command Prompt.

- c. Paste the command line into the Command Prompt window.
- d. Press Enter to execute the command line.

## ***Troubleshooting the Outputgen Command***

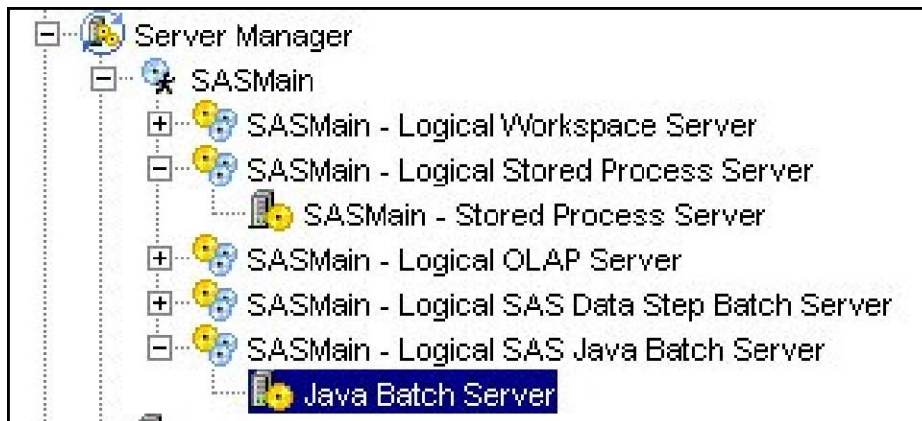
The outputgen command line is lengthy and is very susceptible to minor typographical errors. Therefore, it is advisable to verify and test the validity of this particular command.

**Note:** Prior to testing the outputgen command, you should insure that:

- Flow Manager is not reporting any errors.
- You have followed all the steps required to produce log files.

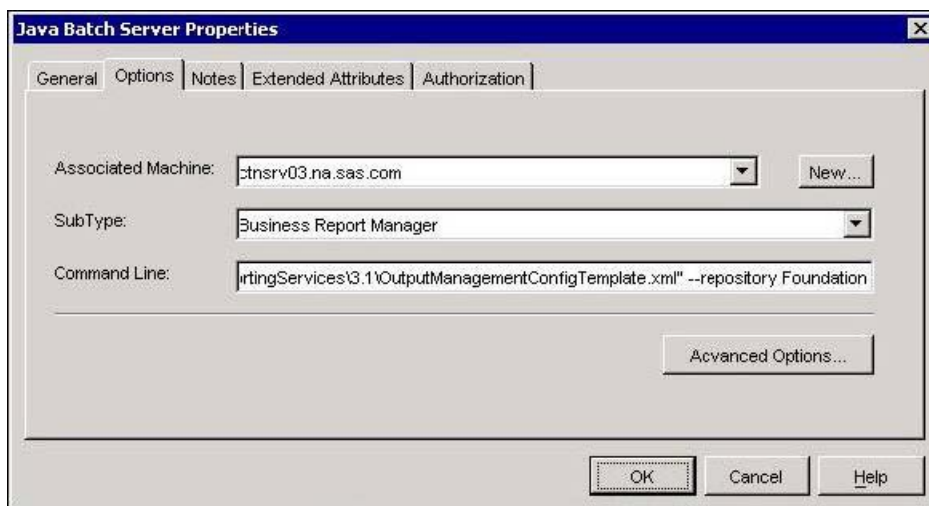
To test the outputgen command, follow the steps below:

1. Open the SAS Management Console. A window with a folder hierarchy for Server Manager appears in the left pane as shown in Display 2.



**Display 2. Server Manager Folder Hierarchy**

2. Right-click Java Batch Server.
3. Click Properties. The Java Batch Server Properties dialog box appears as shown in Display 3.

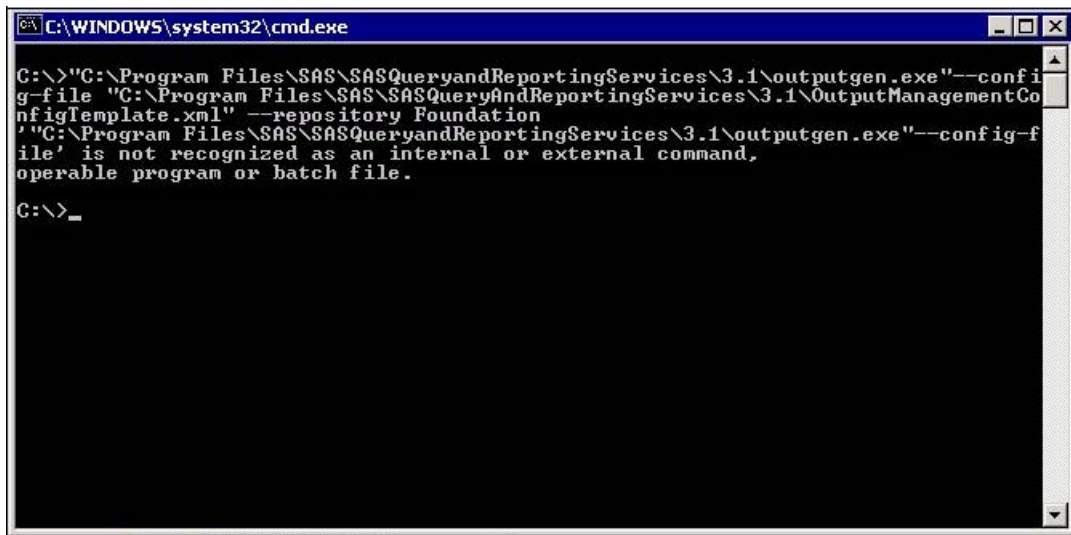


### Display 3. Java Batch Server Properties Dialog Box

4. Select the **Options** tab. The command line appears in the dialog box.
5. Drag the pointer to select and copy the text that appears in the Command Line box.
6. Select **Start > Programs > Accessories > Command Prompt**.
7. Paste the copied text into the Command Prompt window.
8. Press **Enter** to execute the command.

**Note:** After the command executes, error messages might appear in the command Prompt window.

9. Check for errors.
  - When setting up the Java Batch Server, a common error occurs if you copy and paste the outputgen command from the Admin Guide into the SAS Management Console. This error occurs when there is no space following the outputgen.exe in the command.
  - **None of the logs produced will show this error.** An example follows in Display 4.



The screenshot shows a Windows Command Prompt window titled "C:\WINDOWS\system32\cmd.exe". The command entered is: `C:\>"C:\Program Files\SAS\SASQueryandReportingServices\3.1\outputgen.exe"--config-file "C:\Program Files\SAS\SASQueryandReportingServices\3.1\OutputManagementConfigTemplate.xml" --repository Foundation`. The output shows an error: `"C:\Program Files\SAS\SASQueryandReportingServices\3.1\outputgen.exe"--config-file' is not recognized as an internal or external command, operable program or batch file.` The prompt then returns to `C:\>_`.

### Display 4. Error Displayed in the Command Prompt Window

10. If the outputgen command executes successfully, execute the command for a job that you have attempted to schedule.
  - a. Open SAS Management Console.
  - b. Under Schedule Manager, expand the hierarchy to display the job you wish to test. This should be as deep into the hierarchy as possible.
  - c. Right-click the job name.
  - d. Select **Properties**.
  - e. Select the **Scheduling Detail** tab.
  - f. Copy the entire contents of the Command Line box.
  - g. Paste the copied text into a Command Prompt window.
  - h. Execute the command.
  - i. Review error messages in the Command Prompt window.
  - j. Browse the appropriate log files for problems or error messages.

## Troubleshooting Operating System Issues

### Windows Only

1. Assign rights to the LSF administrative user.
  - a. Assign rights to the Isfadmin user to Act as part of the operating system.
  - b. Log on as a batch job.
  - c. Add the Isfadmin user to the Administrators Group.
2. Give the LSF administrative user full control of all of the LSF and Process Manager directories:
  - C:\LSF\_6.0
  - C:\Program Files\Platform Computing\Platform Process Manager\3.1

### AIX Only

Ensure that your kernel is configured in 64-bit mode.

**Note:** The AIX environment is unique in that you can configure your kernel to be in either 32-bit mode or 64-bit mode, with 64-bit applications running under either configuration.

However, Platform Computing requires that the kernel be in 64-bit mode for its 64-bit applications. Therefore, **your kernel must be configured in 64-bit mode** to use Platform scheduling servers and Platform LSF.

### UNIX Only

Give the LSF administrative user full control of all of the LSF and Process Manager directories:

- /usr/local/LSF\_6.0
- /usr/local/Platform Computing/Platform Process Manager/3.1

## SAS® Query and Reporting Services for All Operating Systems

Ensure that the SAS Reporting Services component of SAS Query and Reporting Services is **installed on the same machine as the Process Manager Server**. This component should already be present on the middle-tier application server.

In SAS Web Report Studio 3.1, SAS Query and Reporting Service has two components:

1. SAS Query and Reporting Services—clientside for SAS Management Console  
**Note:** This requires the same Java run-time environment as used in SAS Management Console. 12-byte code: QRSERVICE
2. SAS Reporting Services—server side for batch reporting and bursting **Note:** This requires the same Java Development Kit as used in Web Report Studio. 12-byte code: QRSERVER

You can install either of these components from BI Metadata Management Clients CD.

## User Accounts on the Scheduling Server for All Operating Systems

You must add the following user accounts to the operating system of the scheduling server:

1. **Isfadmin**
  - This is the primary administrator for the platform scheduling server. On Windows systems, this user owns the scheduling services.
  - This user does **not** need to be added to the metadata repository.
  - This user should already have been added when you installed and configured Platform Product Suite for SAS.

2. **lsfuser**
  - SAS Web Report Studio needs this user to run the Output Generation Tool, which creates scheduled reports in batch mode.
  - You might see this user referred to as the scheduling user.
  - This user does **not** need to be added to the metadata repository.
3. **sastrust**
  - Output Generation Tool needs this user to obtain user credentials from the metadata server.
  - In a default installation, this user already exists in the metadata repository.
4. **saswbadm**
  - SAS Web Report Studio needs this user to perform nightly cleanup of partially deleted jobs.
  - In a default installation, this user already exists in the metadata repository.

## SAS Server Users Group—Windows and UNIX Only

1. Create the following log directory:
  - For Windows:  
`C:\Program Files\SAS\SASQueryandReportingServices\3.1\logs`
  - For UNIX:  
`SAS-install-dir\SASQueryandReportingServices/3.1/logs`
2. Ensure that the SAS Users Group has write access permissions to the logs specified above.

## Troubleshooting User Manager Issues

1. Ensure that the Scheduling Admins user group exists in the SAS Management Console User Manager.
2. Ensure that this user group includes the users, **sastrust** and **saswbadm**.

**Note:** Without this user group and its associated users, the scheduling feature of the software does not function.

## Editing Files

### Copying XML Blocks in the `webreportstudioproperties.xml` File to other Files

Locate the XML block that corresponds to the following example:

```
<wrs.scheduling>
  <LSFSchedulingServerUID> .\lsfuser </LSFSchedulingServerUID>
  <LSFSchedulingServerPw> {sas001}U0FTxHtc </LSFSchedulingServerPw>
</wrs.scheduling>
```

The `lsfuser` and the password for scheduling appear in this block.

1. Insert the block of code in the `LocalProperties.xml` file to prevent this critical information from being overwritten during a redeployment.
2. Place the block of code within the `wrs.config` file located within the installation directory of

SAS Web Report Studio to make this a permanent property of your SAS Web Report Studio installation. This file will be used during each deployment of a new WAR file for SAS Web Report Studio.

## Verifying XML Block in the webreportstudioproperties.xml File

Locate the XML block that corresponds to the following example:

```
<wrs.bursting>
  <libname> maillib </libname>
  <mailServer>
    <name> mailhost.fyi.sas.com </name>
    <port> 25 </port>
  </mailServer>
</wrs.bursting>
```

This block enables distribution within SAS Web Report Studio.

Verify that access is available to the mail server on the specified port.

## Editing the outputgen.ini File (Windows Only)

1. Open the outputgen.ini file, located in the installation directory for SAS Query and Reporting Services, in a text editor.
2. Locate the line that starts with *;LogDirectory=*
3. Delete the semicolon at the beginning of the line (a semicolon designates the line as a comment).
4. After the equal sign, enter the path to the directory in which you want the tool to create the log file.
5. Verify that the CommandToExecute property is set to C:\j2sdk1.4.2\_05\bin\java.exe. This is the path to the Java Runtime Environment that the Output Generation Tool will use. Be sure that the reference to the executable file includes the .exe extension. This version of the Java Software Development Kit must be installed on the system.
6. Save changes to the outputgen.ini file.

## Troubleshooting the OutputManagementConfigTemplate.xml File

Locate the XML block that corresponds to the following example:

```
<User>
  <Name>sastrust</Name>
  <Password>encodedPassword</Password>
  <Trusted>>true</Trusted>
</User>
```

1. If the <Name> element includes a domain:
  - a. Open the OutputManagementConfigTemplate.xml file in a text editor.
  - b. Either remove the domain or ensure that the domain is followed by a forward slash (/) rather than a backward slash (\).
2. You might encounter the following message in the stderr log:

“An error occurred: Unable to login user. Cause: Access denied.”

This error condition can be confirmed further if the following message appears in the stdout file:

“Caused by: com.sas.iom.SASIOMLDefs.GenericError:

Error authenticating user caryntsastrust in function LogonUser." in the stdout file."

To correct this error:

- a. Open the OutputManagementConfigTemplate.xml file in a text editor.
- b. Then, either remove the DOMAIN from the sastrust user name or specify DOMAIN//USERID in the user name.

## Troubleshooting the OutputManagementConfigTemplate.xml File—No Log Files

Locate the XML block that corresponds to the following example:

```
<MailServer>
  <!-- Default: localhost -->
  <Name>mailhost</Name>
  <!-- Default: 25 -->
  <Port>25</Port>
</MailServer>
<Activated>>true.</Activated>
<Level>error</Level>
```

**Note:** In the bottom statement of the preceding code block, set the level to info. This returns the generated query for the report in the wrsdist.log.

On Windows:

```
<File>C:\SAS\<configuration_dir>\Lev1\SASMain\ReportingServices
  \logs\wrsdist.log</File>
```

On UNIX:

```
<File>/users/<user ID>/SAS/<configuration_dir>/Lev1/SASMain
  /ReportingServices/logs/wrsdist.log</File>
```

If logs do not appear in the logs folder noted here, ensure the following:

1. You have Write access to the folder.  
This is a common problem when the logs directory is created under C:\Program Files\SAS\SASQueryandReportingServices\3.1.

By default, non-Admin users do not have Write access to this folder. If this is the case, then you should add the SAS Server Users group to the 3.1 folder and provide Write access in the operating system. The outputgen.ini file shows the location for these log files.

2. The java.exe command in the outputgen.ini file is complete.
3. The outputgen command is valid.

## Setting Paths and Permissions for Channels

Scheduled reports can be distributed to channels that you define using the SAS Publishing Framework.

If users intend to distribute reports to channels that use archive locations (persistent stores), then the archive location **must be accessible** to both SAS Web Report Studio and the scheduling software.

If the scheduling software and SAS Web Report Studio reside on different computers, then the archive location should be specified as a network path rather than a local path.

To specify the appropriate archive path, follow these steps:

1. In SAS Management Console, expand the hierarchy of the Publishing Framework node.
2. Expand the hierarchy of the appropriate metadata repository node.
3. Expand the hierarchy of the Channels node.
4. Right-click the channel to which you will be publishing reports, and select **Properties**.
5. In the **Properties** dialog box, select the **Persistent Store** tab.
6. In the **Path** box, specify the path to a network location that grants write access to all users who will be creating content.
7. Click **OK**.

**Note:** You might also need to update permissions on the folder to allow access for the users who intend to publish reports.

## ***Setting the LSF Password (Windows Only)***

1. Open a Command Prompt window on the scheduling server.
2. Use the program `lspasswd` to register the credentials for the user ID `lsfuser`, with a command similar to the following:

a. `C:\LSF_60\bin\lspasswd.exe -u .\lsfuser`

The program prompts you for this user's password.

3. Enter and confirm the user's password. This completes the registration process.

## ***Resources***

SAS Institute Inc. 2006. *SAS® 9.1.3 Intelligence Platform: System Administration Guide*. Cary, NC: SAS Institute Inc. Available [support.sas.com/documentation/configuration/bisag.pdf](http://support.sas.com/documentation/configuration/bisag.pdf).

SAS Institute Inc. 2006. *SAS® 9.1.3 Intelligence Platform: Web Application Administration Guide, Second Edition*. Cary, NC: SAS Institute Inc. Available [support.sas.com/documentation/configuration/biwaag.pdf](http://support.sas.com/documentation/configuration/biwaag.pdf).

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Read more at <http://www2.sas.com/proceedings/forum2007/>

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## **Chromosomal Copy Number Analysis of Affymetrix Arrays with JMP® Genomics Software**

A number of different cancers have been associated with changes in the copy number of sequences within the human genome. This white paper describes how JMP Genomics can be used to identify regions of sequence duplication and/or deletions within human chromosomes. It shows how JMP Genomics was used to identify specific regions that showed either loss of heterozygosity or increases in chromosomal copy number.

Download the full whitepaper today:

<http://www.sas.com/ctx/whitepapers/whitepapers.jsp?code=361>

## **New Dashboard Capability for SAS® Enterprise BI Server**

### *Portlet Application Combines Ease of Use, Graphical Appeal*

The recent release of the SAS BI Dashboard is one more compelling reason to upgrade to 9.1.3 Service Pack 4 (SP4) and enjoy the full benefits of your investment. For some time now, customers have been asking SAS to deliver an out-of-the-box dashboard capability with the SAS Enterprise BI Server. Dashboarding has always been possible with the SAS Enterprise BI server, but with the arrival of the SAS BI Dashboard, a new portlet application available to SAS Enterprise Business Intelligence Server customers running SAS 9.1.3 SP4, it just got even easier and more visually appealing.

Dashboarding, simply put, is a way to represent numbers in an easily consumable, graphical form. A dashboard is only able to convey the information provided to it, and the value of that information can vary wildly, as can the interpretation of what is being displayed. To be of maximum value, a dashboard should go beyond the traditional display of actual vs. target numbers, displaying numbers linked to an organization's strategy, cause-and-effect relationships and business process.

The SAS BI Dashboard allows the rapid creation and deployment of dashboards that display data from a wide variety of sources and systems. It features point-and-click interfaces, a variety of graphical indicators that can be selected by the viewer and the ability to consume data for display from a wide variety of sources. Users will find they can quickly devise dashboards without the need to write or maintain code. They can also display forward-looking indicators (additional software to generate information may be required), giving decision makers early warnings of trouble ahead so problems can be prevented, or confirmation that the forecast is bright so needless preventative measures can be avoided.

If you have an interest in the SAS BI Dashboard and meet the criteria, ask your SAS account representative how you can get it. If you have a need for dashboards and do not have the SAS Enterprise BI Server, it may be time to take a look at what SAS software can do to help transform your organization. If this sounds like something that your company needs, don't stop with the SAS BI Dashboard, take a look at SAS for Performance Management as well.

## Webcasts and Events

### [Stirring Up a Complete Predictive Analytics Process](#)

**July 19**

**1:00 pm ET**

In the second installment of this new Webcast series, we'll help you with the exploratory analysis stage that so many find frustrating and time-consuming.

### [SAS' 10<sup>th</sup> Annual Data Mining Conference, M2007](#)

**October 1 - 2**

**Caesars Palace, Las Vegas**

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### [Focus on SAS<sup>®</sup> Enterprise Intelligence Platform](#)

**On-Demand Webcast**

Learn how to optimally integrate individual technology components within your existing IT infrastructure into a single, unified system.