

Getting to Know an Undocumented SAS® Environment

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ABSTRACT

For many companies, SAS has been used for decades and there may or may not be people still around that know the details about the SAS deployment. For a more complex SAS environment (such as a SAS Enterprise Business Intelligence environment), it is harder to decipher how it was deployed. This paper intends to help communicate the steps on how to become familiar with the details of a SAS environment whether it is a basic SAS Foundation install or a multi-server SAS Enterprise Business Intelligence Environment. This paper intends to help a new SAS administrator or user become familiar with a SAS environment for which there is no or limited documentation.

INTRODUCTION

Although a SAS administrator and a SAS user need to know different types of information to do their job, there are some basic processes one can follow to get to know an unfamiliar SAS environment. This paper will not differentiate between what type of SAS person needs to know which type of information. This paper will be organized into the following sections:

- What
- Where
- Who

The examples in this paper will mostly be using Microsoft Windows but the concepts will certainly extend to UNIX and LINUX.

CONCEPTS

The concepts communicated in this paper are meant to outline methods for learning about a SAS environment. This will be organized into what, where, who.

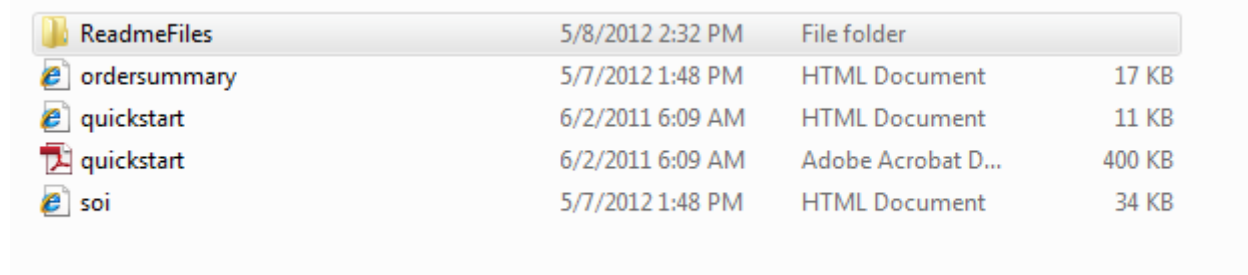
What

What SAS modules, products, solutions exist in the SAS environment?

There are a few ways to find out what is licensed and installed in a SAS environment. One of the best ways to get a handle on the SAS licenses is to look in the SAS Software Depot.

In the SAS Software Depot there should be a directory called `install_doc`. Inside this directory is a folder for each of your SAS Software Orders. Inside these folders are documents that explain your SAS Software Order as shown in Figure 1

Figure 1: The `install_doc` directory in the SAS Software Depot



ReadmeFiles	5/8/2012 2:32 PM	File folder	
ordersummary	5/7/2012 1:48 PM	HTML Document	17 KB
quickstart	6/2/2011 6:09 AM	HTML Document	11 KB
quickstart	6/2/2011 6:09 AM	Adobe Acrobat D...	400 KB
soi	5/7/2012 1:48 PM	HTML Document	34 KB

By looking in these files, one can tell what SAS Software is included in your company's license. An excerpt from the `ordersummary.html` is shown in Figure 2.

Figure 2: SAS Software Order Summary



SAS Software Summary for Order 99JFZJ

The following is a list of the software that comprises your order. Unlike the SAS Order Information sheet, which only lists the software included in your order. If you have located this document without first consulting your Software Order E-mail, please find that e-mail first.

The Java Runtime Environments (JREs) included in your order are part of this order summary. If there is more than one JRE, you will need to install the JRE on each host. The SAS Deployment Wizard will help you determine which JRE needs to be installed for your software order.

- Advanced Analytics Common Components 9.3
- BASE Infrastructure to support Hadoop 9.3
- Base SAS 9.3
- Base SAS Help and Documentation 9.3
- Base SAS JAR Files 9.3
- Base SAS Statistical Procedures 9.3
- CGI Tools for the Web Server 9.3

Another interesting document in this directory is the soi.html (see Figure 3). This also contains the products and bundles with some additional information such as the tech support site number.

Figure 3: The soi.html

Information for Tech Support Site 70011420:

Site Name:	EXPERIS IT SERVICES US LLC
Tech Support Site Number:	70011420
Contracts Site Number:	41840
Operating System:	Microsoft® Windows® Workstation & Server 32-bit
Product:	SAS 9.3 TS1M1, Rev. 930_12w16

Product(s) Ordered

Gold Partner Program, including the products:

- Base SAS
- SAS AppDev Studio
- SAS Enterprise Guide
- SAS Integration Technologies
- SAS OLAP Server
- SAS/ACCESS Interface to ODBC
- SAS/ACCESS Interface to OLE DB
- SAS/ACCESS Interface to PC Files
- SAS/AF
- SAS/ASSIST

If you would like to see what license has been applied to a particular SAS desktop or SAS server, you can run the following code:

```
PROC SETINIT NOALIAS; RUN;
```

An example of the SAS LOG after running this code is shown in figure 4.

Figure 4: SASLOG after running PROC SETINIT

```

1
2   proc setinit noalias;run;

NOTE: PROCEDURE SETINIT used (Total process time):
      real time           0.10 seconds
      cpu time            0.01 seconds

Original site validation data
Site name:      'EXPERIS IT SERVICES US LLC'.
Site number:   70011420.
Expiration:    30JUN2013.
Grace Period:  45 days (ending 14AUG2013).
Warning Period: 46 days (ending 29SEP2013).
System birthday: 08AUG2012.
Operating System: W32_E .
Product expiration dates:
---Base Product                               30JUN2013
---SAS/STAT                                   30JUN2013
---SAS/GRAPH                                  30JUN2013
---SAS/ETS                                    30JUN2013
---SAS/FSP                                    30JUN2013

```

Another interesting piece of information to learn about your environment is not only what has been licensed but what has been installed. By running the following code, you can get a report about what has been installed on the server or desktop.

```
proc product_status; run;
```

As you can see in Figure 5, this procedure shows the exact version of the products that have been installed.

Figure 5: SASLOG after Running PROC PRODUCT_STATUS

```

3   proc product_status;run;

For Base Product ...
  Custom version information: 9.21_M3
  Image version information: 9.02.02M3P032410
For SAS/STAT ...
  Custom version information: 9.22
  Image version information: 9.02.02M0P033110
For SAS/GRAPH ...
  Custom version information: 9.21_M2
For SAS/ETS ...
  Custom version information: 9.22
  Image version information: 9.02.02M0P033110
For SAS/FSP ...
  Custom version information: 9.21_M2

```

Paper BI-01 (continued)

Where

Where is the software installed and where are the relevant configuration and autoexec files?

From a batch program or SAS Display Manager, you can run the following code:

```
proc options long; run;
```

The results from this code will look like the excerpt in Figure 6..

Figure 6: PROC OPTIONS excerpt

```
1
2  proc options long;run;

      SAS (r) Proprietary Software Release 9.2  TS2M3

Portable Options:

APPEND=          Append at the end of the option value
APPLETLOC=C:\Program Files\SAS\SASGraphJavaApplets\9.2
                  Location of Java applets
ARMAGENT=        ARM Agent to use to collect ARM records
ARMLOC=ARMLLOG.LOG Identify location where ARM records are to be written
ARMSUBSYS=(ARM_NONE)
                  Enable/Disable ARming of SAS subsystems
NOASYNCHIO       Do not enable asynchronous input/output
AUTOSAVELOC=     Identifies the location where program editor contents are auto saved
NOAUTOSIGNON     SAS/CONNECT remote submit will not automatically attempt to SIGNON
BINDING=DEFAULT Controls the binding edge for duplexed output
BOMFILE          Add Byte Order Mark when creating Unicode files
BOTTOMMARGIN=0.000 IN
                  Bottom margin for printed output
BUFNO=1          Number of buffers for each SAS data set
BUFSIZE=0        Size of buffer for page of SAS data set
BYERR            Set the error flag if a null data set is input to the SORT procedure
BYLINE           Print the by-line at the beginning of each by-group

Host Options:

ACCESSIBILITY=STANDARD
                  Enable Extended Accessibility
ALTLOG=          Specifies the destination for a copy of the SAS log
ALTPRINT=        Specifies the destination for a copy of the SAS procedure output file
APPEND=          Append a new path to the end of a concatenated path.
AUTHPROVIDERDOMAIN=
                  Authentication providers associated with domain suffixes
AUTHSERVER=      Specify the authentication server or domain.
AUTOEXEC=        Specifies the autoexec file to be used
AWSCONTROL=(SYSTEMMENU MINMAX TITLE)
                  Used to customize the appearance for the SAS AWS. Valid parameters are
                  TITLE/ NOTITLE SYSTEMMENU/NOSYSTEMMENU MINMAX/NOMINMAX
AWSDEF=(0 0 79 79)
                  Specify the initial size and position of the SAS AWS. This should be
                  specified as follows: 0 0 100 100
AWSMENU          Show the main window's (AWS) menu.
AWSMENUMERGE     Add host specific menu items to the main window's (AWS) menu.
AWSTITLE=        Specify the text for the SAS AWS title bar.
COMAUX1=         Specify auxiliary 1 communication access method id.
COMAUX2=         Specify auxiliary 2 communication access method id.
COMDEF=(BOTTOM CENTER)
                  Specify command dialog default display location.
CONFIG=C:\Program Files\SAS\SASFoundation\9.2(32-bit)\nls\en\SASV9.CFG
                  Specifies a SAS configuration file.
```

You can also go to the Help Menu from interactive SAS and choose the “About SAS 9” item. In addition, if you are a SAS Enterprise Guide user, you can run any of the above code and go to the “About SAS Enterprise Guide” on the help menu.

Paper BI-01 (continued)

Figure 8: Help > About SAS 9

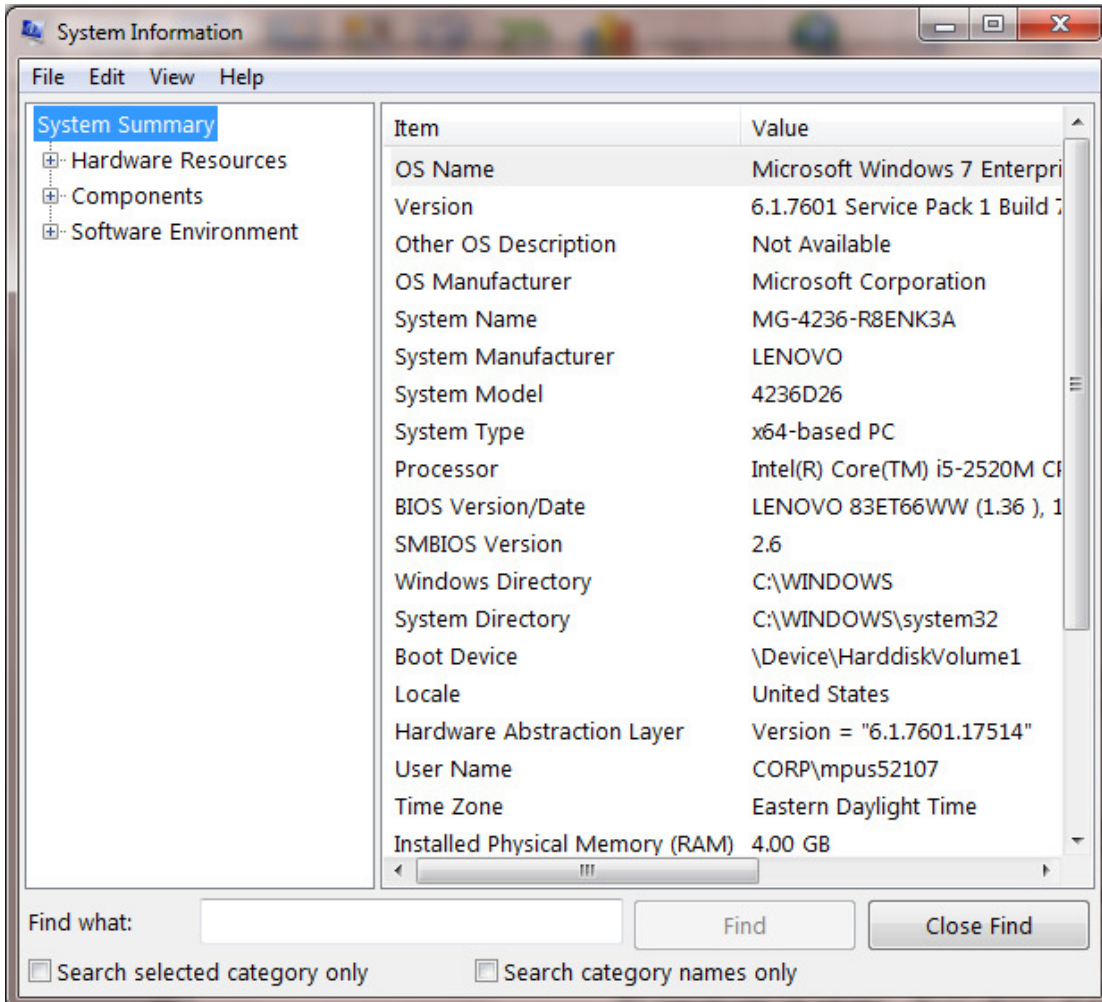
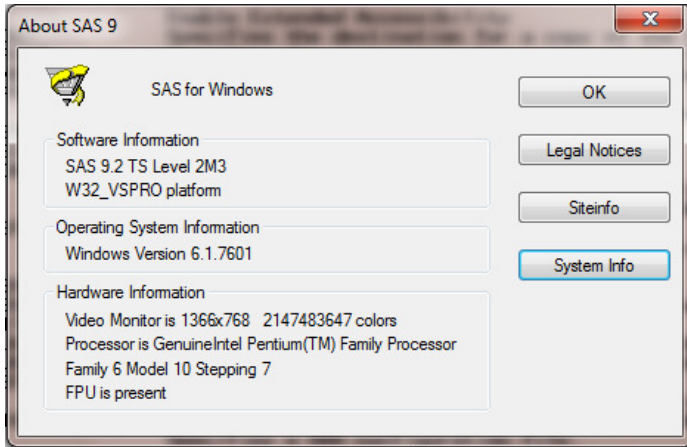
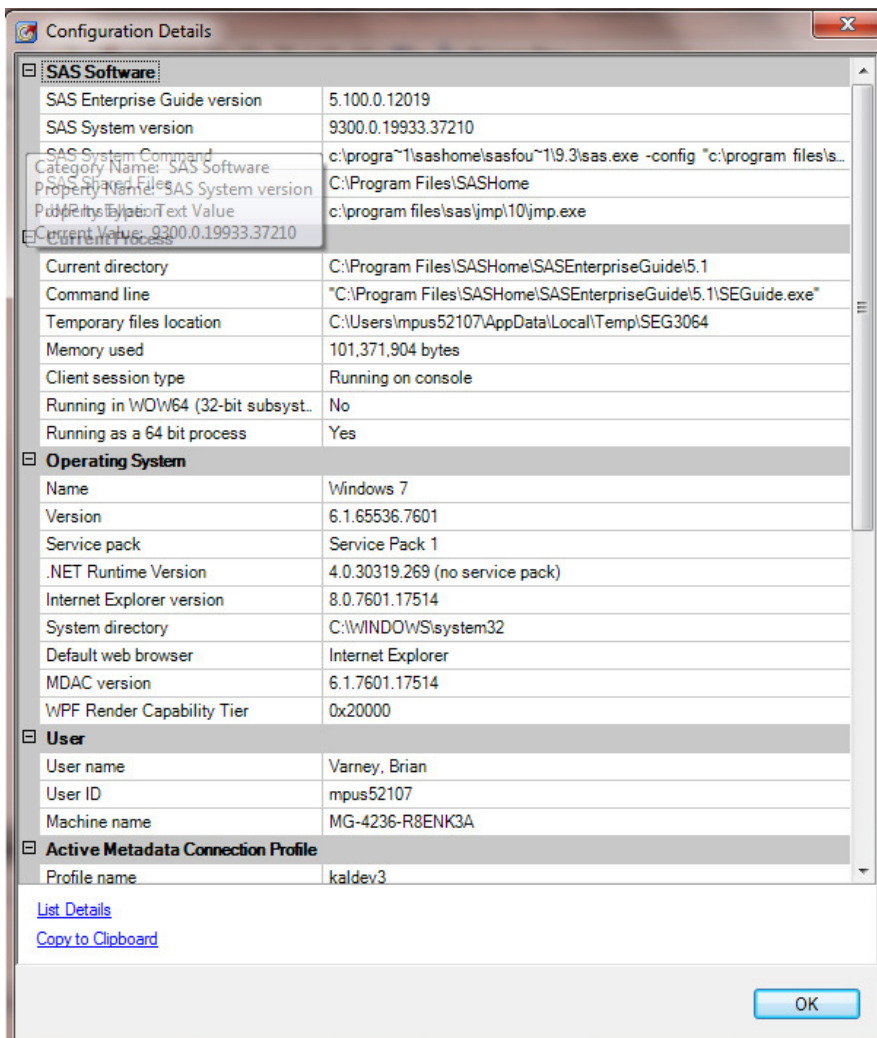
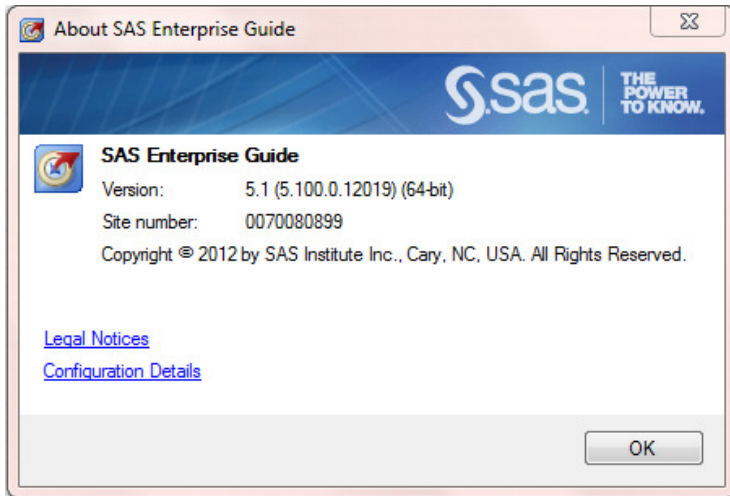


Figure 9: Help > About SAS Enterprise Guide



Paper BI-01 (continued)

If you are dealing with a planned SAS installation, there are some important directories and files to consider. The main directory to look at for a planned SAS installation is the SAS configuration directory. This directory will typically contain a directory named Lev1. Inside this directory are files which will tell the story of how the SAS environment is installed and configured. If there are multiple SAS servers in the deployment, begin with the SAS Metadata server, then the SAS Application server and then finally the SAS Web Applications server. These could be all on one physical server or spread across multiple physical servers.

Figure 10: <SAS Configuration Directory>\Lev1\

Name	Date modified	Type	Size
AppData	5/16/2012 3:27 PM	File folder	
Applications	10/11/2011 2:31 PM	File folder	
BILBatch	10/11/2011 2:31 PM	File folder	
ConfigData	10/11/2011 2:22 PM	File folder	
ConnectSpawner	10/11/2011 2:26 PM	File folder	
CustomAppData	10/11/2011 2:50 PM	File folder	
Data	10/11/2011 2:20 PM	File folder	
DeploymentTesterServer	10/11/2011 3:55 PM	File folder	
Documents	10/11/2011 4:25 PM	File folder	
FrameworkServer	10/11/2011 2:23 PM	File folder	
Logs	10/11/2011 2:20 PM	File folder	
ObjectSpawner	10/12/2011 4:24 PM	File folder	
ReportBatch	10/11/2011 2:32 PM	File folder	
SASApp	6/7/2012 9:56 AM	File folder	
SASMeta	10/11/2011 3:04 PM	File folder	
SchedulingServer	10/11/2011 2:23 PM	File folder	
Shared	10/11/2011 3:02 PM	File folder	
Temp	10/11/2011 2:27 PM	File folder	
Utilities	10/11/2011 4:25 PM	File folder	
Web	10/11/2011 2:34 PM	File folder	
WIPSchBatch	10/11/2011 2:32 PM	File folder	
level_env	10/11/2011 2:20 PM	Windows Batch File	2 KB
sasv9_meta	10/11/2011 2:20 PM	SAS Configuration...	1 KB

In the presentation, we will delve into the directories and the information they hold. The main ones we will be discussing are:

- Documents
- Logs
- SASApp
- SASMeta
- Utilities

We will also explore the SAS Management Console to see what information is easily leveraged about a SAS environment.

Paper BI-01 (continued)

Who

Who installed/deployed the SAS environment? What credentials were used? This can be determined by looking at the user directories in Windows. If you are on UNIX/Linux, you can look in the /home/ directories. The file you are looking for is SDWPrefs.txt. There are various other files as well depending on the type of installation.

CONCLUSION

Companies using SAS Software should have documentation that outlines the details about the SAS environment. When that documentation is sparse, non-existent or out of date, users can find out information about the SAS environment by using the methods in this paper.

REFERENCES

SAS Technical Support Website www.support.sas.com

CONTACT INFORMATION

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