

## CHAPTER

## 1

# Introduction to Installing the SAS Intelligence Platform

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## What Is Covered in This Document?

### Overview of the Document's Scope

This document takes you through the entire process for installing the SAS Intelligence Platform. Installing the software will be easier, however, if you have read the *SAS Intelligence Platform: Overview* and understand the architecture of the system. In addition, after installing your software, you will need to perform a few of the tasks discussed in the *SAS Intelligence Platform: Data Administration Guide* and the *SAS Intelligence Platform: Security Administration Guide* to complete some configuration tasks that are necessary at most sites, but are not handled by the SAS Configuration Wizard. For instance, the data administration guide explains how to give your users access to your data sources so that they can begin creating data integration jobs and reports.

*Note:* If you are installing the SAS Intelligence Platform *and* one or more SAS Solutions, you might need additional, or different, installation instructions. Consult with your SAS representative for further information.  $\Delta$

This document picks up at the point where you and your SAS representative have decided what software you need and what machines you will install the software on. At this point, you can begin performing some pre-installation tasks, such as creating

operating system user accounts and allocating the ports that you will use during installation. This document covers all of the pre-installation, installation, and configuration tasks that you must perform to deploy the SAS Intelligence Platform on a single machine or in a distributed heterogeneous environment. By the time you reach the end of this guide, all of your SAS servers, middle-tier servers, and clients will be functional.

*Note:* This document focuses on installing the platform on Windows and UNIX hosts. However, it is also possible to run the SAS servers on a z/OS system. For information about installing software in that environment, see Appendix 2, “Installing and Configuring the SAS Servers on z/OS,” on page 85. (For information about configuring an OS scheduler on an OpenVMS Alpha system, see <http://support.sas.com/techsup/technote/ts744.html>.) △

This document also explains how to add one or more new products to an existing system. For information on this subject, see Appendix 1, “Software Index Installations,” on page 79.

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## Before Installing Your SAS Software

Before you begin the installation of your SAS software (which is covered in Chapter 6), you must have completed a set of pre-installation tasks (these are covered in Chapters 2 through 5) and filled out a set of pre-installation checklists (Chapters 3 and 5). Some of pre-installation tasks require that you have received certain materials from SAS. These materials include the following:

- a deployment plan file or the name of a sample (or standard) deployment plan
- one or more SAS Installation Data (SID) files
- one or more SAS Installation Kits, which contain the release media

A deployment plan file, named **plan.xml**, contains information about what software should be installed and configured on each machine in your environment. This plan serves as input to the SAS installation and configuration tools. Such deployment plans come in two types: custom and standard. A custom plan is a deployment plan that a SAS representative creates specifically for your site, and a standard plan is a predefined deployment plan that describes a common configuration.

- If a SAS representative created a custom plan for you, an XML file (or a ZIP file containing an XML file) will have been e-mailed to you.
- If your SAS representative recommended that you use a standard plan, you just need the *name* of the plan that you will use; the actual planning file will be shipped to you on your media in an installation kit. During the installation, the standard plan will be available from a drop-down list in the SAS installation program. This list is populated based on the SID file that you point to at the beginning of your installation.

A SID file contains information about the software that you have licensed. After you place an order, SAS sends you one or more Software Order E-mails, each of which contains a SID file as a text attachment. You must have this SID file (or files) before you install your software. The SID file is sent to you right before your SAS Installation Kit(s) is shipped, so when you receive it, you will know that your order is on its way.

Finally, you must have received your SAS Installation Kit(s), which contains the CDs that you will use during the installation.

As you receive these materials from SAS, you can complete the set of pre-installation tasks that are introduced in “Overview of Deploying the SAS Intelligence Platform” on page 3.

*Note:* As a general rule, we recommend that you install any third-party products required by the SAS Intelligence Platform before you install your SAS software. See Chapter 5, “Installing Third-Party Products,” on page 33 for more information.  $\Delta$

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## After Installing Your Software

When you have finished performing the tasks covered in this guide, all of the servers in your system will be running, and you will be able to start all of the clients that you have installed. However, there will be some site-specific configuration that you need to perform. For example, you will need to perform these tasks:

- define additional users and groups in your metadata repository
- establish connectivity to your data sources
- control access to your metadata and your data

The final chapter in this guide, Chapter 7, “What’s Next?,” on page 75, points you to the sections in the *SAS Intelligence Platform: Data Administration Guide* and *SAS Intelligence Platform: Security Administration Guide* that will enable you to perform these tasks.

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# Overview of Deploying the SAS Intelligence Platform

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## A High-Level View of the Steps Involved

Here are the main steps involved in deploying the SAS Intelligence Platform—whether you are deploying the platform on a single machine or in a distributed heterogeneous environment. The first four items are pre-installation tasks. The first three steps can be performed in any order. Step 4 should be performed after steps 1 to 3 are completed.

- 1 Create a set of operating system users and groups that will be required during the installation and configuration of your system, and allocate a set of ports to use.
- 2 Locate your SID and deployment plan files, and place them in a central location. Your SID file(s) will have been sent to your SAS representative before you receive your Installation Kit(s). (If you will be using a standard plan, you do not need a deployment plan file; you just need the name of a deployment plan.)
- 3 Create one or more SAS Software Depots, which will enable you to install the software that you received from SAS over the network, rather than from CDs.
- 4 Install any third-party products, such as a Java Development Kit and a J2EE application server, that are necessary for your installation. These products are identified in your plan file.
- 5 Install and configure your SAS software using the SAS Software Navigator (an installation tool) and the SAS Configuration Wizard.

The sections below provide a brief description of each of these tasks. Subsequent chapters in the guide provide the step-by-step instructions that you will need to perform them.

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## Creating Users and Groups and Allocating Ports

Before you can install and configure your software, you must create a small set of users and groups at the operating system level. For the most part, this work is

necessary so that the system can authenticate a special set of users. For example, you will be asked to create an account for a SAS Administrator. This user has unrestricted access to the metadata repository; therefore, it is essential that the metadata server host be able to authenticate this user. For information about what user accounts and groups you need to create, see Chapter 2, “Setting Up Required Users and Groups and Allocating Ports,” on page 9.

It is also necessary to allocate a set of TCP/IP ports for use by the SAS servers and a number of third-party products. The default ports for these servers are documented in “Allocating Ports” on page 19.

You can perform these particular pre-installation tasks as soon as you and your SAS representative have decided what software you will be ordering and on what machines you will be installing the software. This guide contains all of the information that you need to perform these tasks.

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## Making Your SID and Deployment Plan Files Available

One or more SID files and, most likely, a deployment plan file will be e-mailed to you by SAS. Once you have received these files, you need to copy them to a location on your network that is accessible from all of the machines on which you will be installing software. The tools that you use to install and configure your software read the SID and deployment plan files in order to determine the following for each machine:

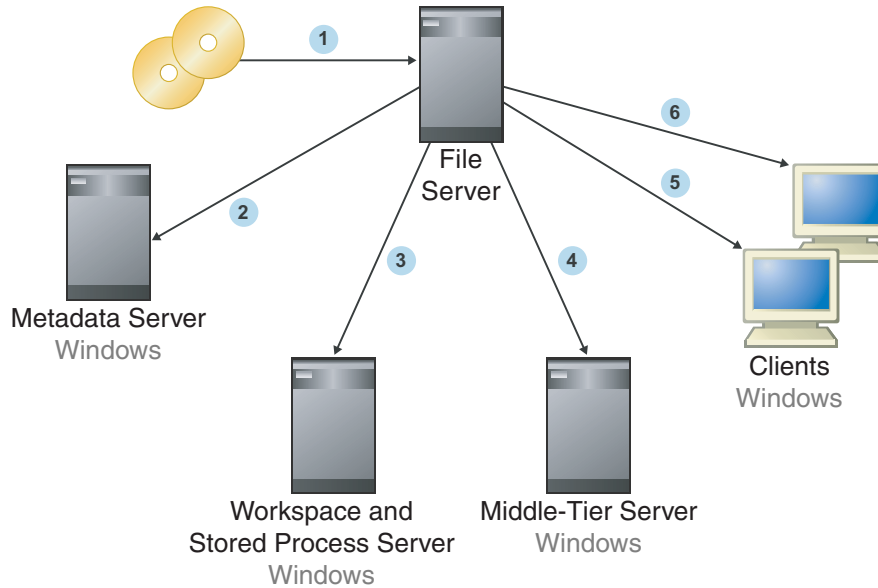
- what software has been licensed and should be installed
- what components (for example, SAS servers) should be configured

For more information about your SID and deployment plan files, see Chapter 3, “Locating Your Software Order E-mail, SID Files, and Deployment Plan,” on page 23.

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## Creating a SAS Software Depot

A SAS Software Depot is a directory on the network from which you can install software on a set of machines running the same operating system. You build a depot by using a tool called the SAS Software Navigator to copy files from the CDs in a SAS Installation Kit to a directory that is accessible to this set of machines. See the following figure.

**Figure 1.1** Installing Software from a Software Depot

Step 1 represents the installer creating the depot. Steps 2 through 6 represent software being installed on all of the hosts in the system. Note the order in which the software is installed. As we explain later, you must install your software in this order.

If the machines that will participate in your system are running more than one operating system, you must create one SAS Software Depot for each operating system. For example, it is often necessary to create two depots: one for Windows machines and one for machines running some variant of UNIX.

*Note:* Creating a depot, or depots, is *highly recommended* because it simplifies the installation and saves you time. However, it is not a requirement. You can install software on each machine from CDs. △

For instructions on how to create your software depot(s), see Chapter 4, “Building a SAS Software Depot,” on page 27.

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## Installing Third-Party Products

Third-party products play an important role in the SAS Intelligence Platform. For example, an application such as SAS Web Report Studio is a Java 2 Enterprise Edition (J2EE) Web application. This application must execute in a servlet container or a J2EE application server. SAS supports several industry-leading third-party products to fill this role, including BEA WebLogic Server, IBM WebSphere Application Server, and Apache Tomcat.

In general, the third-party products fall into the following categories:

- Java Runtime Environment (JRE).
- servlet container or J2EE application server, both of which depend on a Java Development Kit (JDK).
- WebDAV server, which depends on a database server. (This might be an existing database server.)
- scheduling server.

Your SAS representative can provide a list of the specific third-party products that you must install, and these products will be listed in your plan file as well.

Note that this guide does not explain how to install these third-party products. Rather, it explains the following:

- how to obtain the product, if you don't already have it
- how to find installation instructions for the product
- how to start the product's installation program

This guide also explains what information you should record about the installation of each product so that you can successfully configure the product as part of your system later.

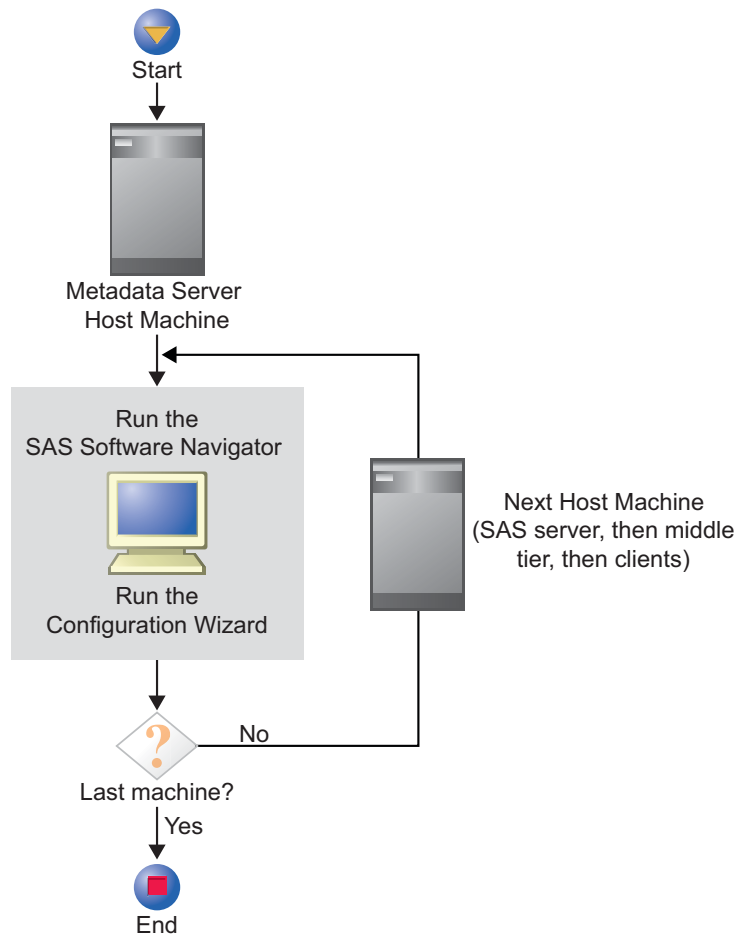
For information about installing third-party products, see Chapter 5, "Installing Third-Party Products," on page 33.

## Installing and Configuring Your SAS Software

### Overview of Installing and Configuring Your SAS Software

Finally, you install and configure your SAS software on one machine at a time, beginning with your metadata server machine. As shown in the following figure, you use tools called the SAS Software Navigator and the SAS Configuration Wizard to install and configure the software on each machine in your system.

**Figure 1.2** Installing and Configuring Your SAS Software



## Order of Installations

In a distributed environment, you must install software in a particular order on the computers that make up the system. For instance, you *always* install software on the metadata server machine first. This starting place is necessary because the configuration of a machine often involves creating new metadata objects, and if the metadata server is not available, this configuration cannot take place. The general rules to follow with regard to order are fairly simple:

- First install and configure the software on the metadata server machine.
- If other machines will host server-tier components (such as a workspace server or a stored process server), install and configure software on those systems next.
- If your system contains a middle tier and you have not installed all of your middle-tier components, install those next.

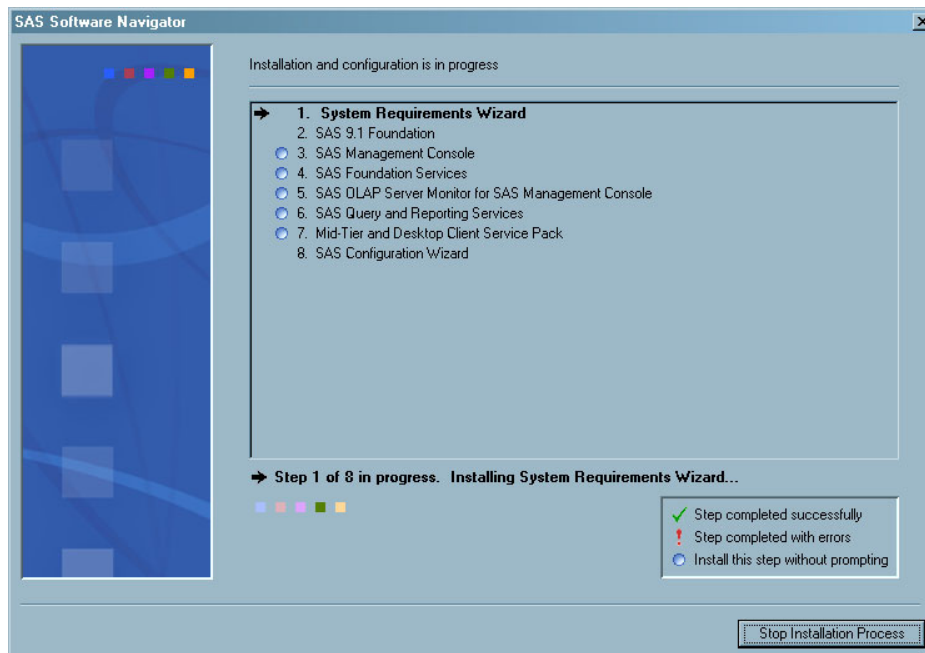
Several of these products should have been installed during pre-installation. These include the JDK, the J2EE application server, and the WebDAV server (if you are using the Apache HTTP Server for that purpose).

The products that you install using the SAS Software Navigator include the following:

- SAS Foundation Services
- Xythos WebFile Server
- The SAS Web applications, including SAS Web Report Studio, SAS Information Delivery Portal, and SAS Web OLAP Viewer for Java
- Finally, install software on the machines that will host only clients. such as SAS Data Integration Studio or SAS Information Map Studio.

## SAS Software Navigator

You install the software on each host computer in your system by using an installation tool called the SAS Software Navigator. This tool reads your deployment plan file and enables you to install, on any particular machine, only the components that the plan calls for. It also reads your SID file(s) to determine what software you have licensed.



## **SAS Configuration Wizard**

After the SAS Software Navigator has installed software on a machine, it typically starts the SAS Configuration Wizard, which configures the software that you just installed. This configuration involves many activities, such as creating a metadata repository; creating metadata objects for users, groups, and servers; building and deploying Web applications; and many other tasks.

## **For Further Information**

For further information, see Chapter 6, “Installing and Configuring Your SAS Software,” on page 51.

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# **Accessibility Features in the SAS Intelligence Platform Products**

For information about accessibility for any of the products mentioned in this book, see the documentation for that product. If you have questions or concerns about the accessibility of SAS products, send e-mail to [accessibility@sas.com](mailto:accessibility@sas.com).