

Installation Instructions

System Requirements

SAS Onlinedoc® for the Web

Important Note:

These instructions apply specifically to the CD labeled “SAS OnlineDoc for the Web.” They do not apply to the CD labeled “SAS OnlineDoc for Windows,” which has a different file format.

1. Overview

Briefly, the SAS OnlineDoc for the Web can be installed on a Web server in most Windows and UNIX environments and distributed for viewing on supported browsers on UNIX and Windows operating systems. SAS OnlineDoc for the Web runs on a Web server. It cannot be read directly from the CD ROM, nor installed directly to a PC for personal use. If you need this functionality, contact your SAS representative to obtain the SAS OnlineDoc for Windows version.

Webdoc, the collective term that refers to the software and documentation components, is used by SAS OnlineDoc for the Web. It is designed to run as a web-based application. All SAS web-based products and solutions use Webdoc to surface help and documentation. See the product-specific installation instructions for further details.

The information included in SAS OnlineDoc for the Web is also included in the SAS Help and Documentation. The path from within SAS is **Help ->SAS Help and Documentation**. Note that you may have a subset of this information depending on which SAS products are installed at your site.

2. System Requirements

Running SAS OnlineDoc for the Web requires a Java application server. The specific requirements for each supported host where SAS OnlineDoc components can be installed are listed below.

Hardware

Webdoc, as with any other web-based application, needs more resources to support a larger number of simultaneous users. The requirements and configuration information that follow were determined to be viable for 20 simultaneous users. You may need to adjust your system depending on the number of users and the resources needed by other applications running on your server.

If you install the complete SAS OnlineDoc library, you will need approximately 210MB of disk space.

Windows

- 2Ghz processor
- 1GB memory

UNIX

- 2Ghz processor
- 1GB memory

Software

Support for viewing SAS OnlineDoc for the Web has been verified in the Microsoft Internet Explorer web browser in the Windows operating system environment. See below for details regarding the supported versions of Internet Explorer.

Support for the Windows 32-bit platform has been verified on the following operating systems: Windows XP, Windows 2000, Windows 2000 Server, Windows NT, Windows NT Server, and Windows 2003 Server.

Windows

- Microsoft Internet Explorer 5.5 or higher
- Sun J2SDK 1.4.2_04
- Apache 2.0.45/Tomcat 4.1.18
- IBM WebSphere 5.1
- BEA WebLogic 8.1 SP2

AIX, 64-bit enabled

- IBM J2SDK 1.4.1.3
- IBM WebSphere 5.1
- BEA WebLogic 8.1 SP2
- Apache 2.0.45/Tomcat 4.1.18

HP-UX IPF, 64-bit enabled

- HP J2SDK 1.4.1.05
- Apache 2.0.45/Tomcat 4.1.18
- BEA WebLogic 8.1 SP1

Solaris, 64-bit enabled

- Sun J2SDK 1.4.2_04
- Apache 2.0.45/Tomcat 4.1.18
- BEA WebLogic 8.1 SP2

3. Installation Instructions

SAS OnlineDoc for the Web uses the SAS documentation delivery software to help you access SAS 9.1 product documentation. To correctly install and deploy the Webdoc software at your site, please read and follow the Installation Instructions carefully.

When installing SAS OnlineDoc for the Web, you can customize your reference library by installing only the libraries for the SAS products you want. Just follow the installation options on the screen.

Once you have completed installation and deployment of SAS OnlineDoc for the Web, it is recommended that you provide a link to invoke it from a web page well-known to SAS users at your site. To create a link from your web page, combine the partial URL, `SASDoc/docMainpage.jsp` with the start up path for the Java Application Server that hosts the `SASDoc.war` file at your location.

For example:

`http://myAppServer.com/SASDoc/docMainpage.jsp`

The following JVM settings were determined to be viable for 20 simultaneous users:

`-Xmx1G -Xms1G -Xss128k`

About Webdoc

You can centrally install the Webdoc software (the `SASDoc.war` file) and the documentation for all SAS products that use Webdoc at your site and still maintain the specific product views into the content so that users only see the documentation that is relevant to the context from which they are accessing it.

4. Installing Webdoc

4.1 Overview

The Webdoc installation process requires completion of the following tasks in order to be successful:

- Installing the Java SDK and the Java Application Server.
- Getting documentation files and the Webdoc software (`SASDoc.war`) onto your system.
- Deploying the `SASDoc.war` to your site's Java application server.
- Setting the documentation location (DOCLOC) value in `web.xml`. (Required only if you relocate the documentation files after the initial installation.)
- And, if Webdoc is called in an environment with a security manager enabled, setting grants.

Some of these tasks are handled by the installation wizard and some must be completed manually. See the instructions below for details. Any additional, product-specific installation information required to install and configure Webdoc can be found in the installation instructions for individual products.

4.2 Preparing for the Installation Process

The Webdoc installation assumes that your site already has a Java SDK installed and configured. It also requires a web server and a J2EE application server (servlet capabilities). Installation and configuration of these requirements are out of the scope of this document. However, the following instructions refer to examples based on the Apache Tomcat application server software.

Install the Java SDK

You can download and install the appropriate Java SDK for your platform from <http://Java.sun.com>. We recommend that you install to the default location (usually, `C:\jdk1.4.2_04` on Windows platforms), and choose to install all default components, including plug-ins for both IE and Netscape. Instructions for installation and configuration are located on the website along with the download.

Install the Java Application Server

There are many choices for your Java Application Server; however, see the product's System Requirements in the SAS Software Navigator for a list of the Java application servers that SAS 9.1 products have been verified against. The rest of these instructions will be based on Apache Tomcat for illustration purposes. The version of Tomcat verified with SAS 9.1 products is available at <http://archive.apache.org/dist/jakarta/tomcat-4/archive/> and is also included on the SAS Third Party Software Components CD in your SAS Installation media. Instructions for installation and configuration are located on the CD through the SAS Software Navigator.

4.3 Getting Webdoc Files onto Your System

1. Select the platform-appropriate "Install" link from the Installation table via the SAS Software Navigator for the product you are installing. This action will launch the installation wizard.
2. Follow the instructions on your screen.
3. When prompted for the installation location for Webdoc, it is *highly recommended* that you choose a publicly accessible location where you plan to store the documentation files. This will help to avoid additional post-processing steps. If you do have to move the documentation files to a different location post-installation, then you will need to complete the steps outlined in the section *Running UpdateDocLoc*.
4. Continue to the next section, *Deploying the SASDoc.war File*.

4.4 Deploying the SASDoc.war File

The Webdoc software encompassed in the `SASDoc.war` file must be deployed to a Java application server.

1. Locate the `SASDoc.war` file in the directory where you installed Webdoc.

2. Per the requirements of your Java application server, deploy SASDoc.war to that environment. Deployment of Java web application archive files is specific to the application server you are running. The Web administrator installing the SASDoc.war file should consult the documentation for the Java application server used at your site to see the proper method for deploying Java application archive files.

For example, most Apache Tomcat users would copy the sasdoc.war file from the install location to the <path_to_Tomcat>/webapps directory. Tomcat automatically deploys the war file from that new location and uses that location for its application context. Additional context information is not needed if users deploy to the webapps directory.

If Tomcat users want to put sasdoc.war in a location other than webapps, then they will need to create an application context in the server's server.xml configuration file so that Tomcat can locate the sasdoc.war file. Below is an XML construction that creates a Webdoc application context, which is usually placed just after the "Tomcat Root Context" in the configuration file.

For examples. on Windows, if users copied sasdoc.war to C:\mywarfiles, the context path should be set as follows:

```
<!-- SAS online documentation application context -->
<Context path="\SASDoc"
docBase=" C:\mywarfiles"
debug="0"
privileged="true"
/>
```

On UNIX, if you copied sasdoc.war to /usr/local/mywarfiles, the context path would be set as follows:

```
<!-- SAS online documentation application context -->
<Context path="/SASDoc"
docBase="/usr/local/mywarfiles/SASDoc.war"
debug="0"
privileged="true"
/>
```

The value for the docBase parameter should be the location of SASDoc.war in your installation.

Note: The Tomcat software always checks first for a context in its server.xml file. If it does not find a context there, then it checks its webapps directory. If users later want to install a new sasdoc.war file, they should either deploy it to the same location and delete the old war file, or else adjust the context path in the server.xml to match the location of the new war file.

Notes on SASDoc.war File Expansion

Some servers require that the SASDoc.war file be expanded into the application directory in order to run. If expansion of the SASDoc.war file is required by your Java application server, see the processes described below.

Windows - Use the WinZip application to expand the SASDoc.war file located in the directory that you supplied during the install. For example, in this path C:\Program Files\Apache Group\Tomcat 4.1\webapps, create folder SASDoc, and in it expand the SASDoc.war.

Note: In the WinZip application, ensure that you choose the option "Use folder names" during the extraction.

UNIX - Use the jar utility provided in the JRE bin directory or the UNIX “unzip” command to expand the SASDoc.war archive to the webapps directory of the JAVA application server. For example, with a Tomcat server, cd to <path_to_Tomcat>/webapps, create a SASDoc directory, and expand SASDoc.war in it. Use the commands below to complete these tasks.

```
mkdir <path_to_Tomcat>/webapps/SASDoc
cd SASDoc
jar xvf SASDoc.war
```

Note: If you use the unzip command on UNIX, you may have to reset the read/write permissions on the expanded files. Use the “chmod” command to enable reading and writing to these files and directories.

Additional Configuration Steps

Depending on your site's configuration needs, you might need to complete additional post-installation tasks. If you relocate the documentation files from where they were originally installed, see the next section in this document, *Running UpdateDocLoc*. If you are running other SAS Web applications with Security Manager enabled, see the section *Installing Webdoc with a Security Manager* in this document.

Additionally, you might need to create URLs to the Webdoc application to support different views of documentation. See the product-specific installation documentation for the detailed URLs for the views that your site needs.

4.5 Running UpdateDocLoc

You do not need to run the UpdateDocLoc Java utility unless you have moved the documentation files from where they were originally installed by the installation wizard.

The UpdateDocLoc utility updates the DOCLOC value in the web.xml file so that the Webdoc application can locate the documentation files and, additionally, creates files that can be used to give Webdoc the permissions necessary for the software to run with a Security Manager enabled.

To run UpdateDocLoc, run the following configuration program from the location of the sas.sasdoc.jar file:

Example:

```
C:\Program Files\SAS\Documentation\9.1\java -cp sas.sasdoc.jar
com.sas.doc.util.UpdateDocLoc
-war "C:\Program Files\SAS\Documentation\9.1\SASDoc.war"
-docloc "c:\sas\core\help"
```

Then redeploy the updated SASDoc.war file to your Java application server environment.

If you are running under WebSphere, you must add the –container option, which performs additional configuration specific to WebSphere. For example

```
<Path_to_Java>/java -cp sas.sasdoc.jar com.sas.doc.util.UpdateDocLoc
-war <path to the war file including the SASDoc.war filename>
-docloc <the fully qualified new docloc path (not a URL)> -container
```

If after running UpdateDocLoc and redeploying the SASDoc.war file, you are unable to invoke Webdoc, you can manually check that the DOCLOC parameter in the web.xml is configured correctly:

1. In the location where you deployed SASDoc.war, locate the web.xml file and open it using a text editor such as Notepad. If, for example, you installed Apache Tomcat to the default location and created the SASDoc directory there, you will find web.xml in C:\Program Files\Apache Group\Tomcat 4.1\webapps\SASDoc\WEB-INF\ directory.
2. Ensure that the DOCLOC <context-param> points to the documentation directory where the documentation files physically reside on your system. For example,

On Windows: If you installed the files to C:\SAS\SASOnlineDoc\sasdoc91web, the DOCLOC option should appear as follows:

```
<context-param>
  <param-name>DOCLOC</param-name>
  <param-value>file:\C:\SAS\SASOnlineDoc\sasdoc91web\</param-
value>
</context-param>
```

On UNIX: If you installed the files to /usr/local/SAS/SASOnlineDoc, the DOCLOC option should appear as follows:

```
<context-param>
  <param-name>DOCLOC</param-name>
  <param-value>file:/usr/local/SAS/SASOnlineDoc/</param-value>
</context-param>
```

Note: The documentation files are installed in language subdirectories. Within each language subdirectory are additional subdirectories with an extension of .hlp. When moving the documentation files, you must maintain this directory structure. That is, the entire directory structure must be moved intact, including each language subdirectory and each .hlp subdirectory. When checking the DOCLOC value in the web.xml file, you will notice that the language directory is not included as part of the path. You will also notice the URL specifier begins with file:/ and ends with a / This is the proper syntax for the value of DOCLOC.

Additional Note: If you are running with a Security Manager enabled, you must update your grants with the new DOCLOC value after you have run UpdateDocLoc. UpdateDocLoc will generate new grant files which can be used to modify your security manager settings. For details on setting security grants, see *Installing Webdoc with a Security Manager* below.

4.6 Installing Webdoc with a Security Manager

Webdoc requires additional grants to run in an environment with a security manager enabled. The application requires read access to the installed documentation files and permission to interact with the logging framework. Depending on your server environment, these are the additional steps you will need to take post install to enable Webdoc on your server.

When running under Tomcat, the grants in the file sasdoc.tomcat.permissions, located in the WEB-INF directory in the area where you deployed the SASDoc.war file, should be added to your Tomcat catalina.policy file, or the policy file in effect for your server if you are not using the default Tomcat configuration. See <http://jakarta.apache.org/tomcat/tomcat-4.1-doc/security-manager-howto.html> for more details about running Tomcat with a Security Manager. These grants are designed to work with Tomcat 4.1.18. If you are using a different version

of Tomcat, you might need to adjust your permissions grants as appropriate for the version that you are running.

When running under Weblogic, the grants in the file `sasdoc.weblogic.permissions`, located in the `WEB-INF` directory in the area where you deployed the `SASDoc.war` file, should be added to the Weblogic policy file, or the policy file in effect for your server if you are not using the default Weblogic configuration.

See <http://e-docs.bea.com/wls/docs81/security/> for more details about running Weblogic with a Security Manager. These grants are designed to work with Weblogic version 8.1. If you are using a different version of Weblogic, you might need to adjust your permissions grants as appropriate for the version that you are running.

When running under WebSphere, the grants in the file `sasdoc.websphere.permissions`, located in the `WEB-INF` directory in the area where you deployed the `SASDoc.war` file, should be added to the WebSphere policy file, or the policy file in effect for your server if you are not using the default WebSphere configuration. See

http://publib.boulder.ibm.com/infocenter/ws51help/index.jsp?topic=/com.ibm.websphere.base.doc/info/aes/ae/tsec_enablejava2sec.html for more details about running WebSphere with a Security Manager. These grants are designed to work with WebSphere version 5.1. If you are using a different version of WebSphere, you might need to adjust your permissions grants as appropriate for the version that you are running.

If your installation has a logging framework configured on your server that the Jakarta Commons Logging framework will use other than the default simple logger, you will need to adjust the grants appropriately to enable your logging implementation to be used by Webdoc. See http://jakarta.apache.org/commons/logging/api/org/apache/commons/logging/package-summary.html#package_description for more details about the Jakarta Commons Logging framework.

4.7 Invoking Webdoc

If you are installing Webdoc for use by a stand-alone application such as **SAS OnlineDoc for the Web** or **Remote Help for SAS on z/OS**, refer to the application's information in SAS Software Navigator "Configuration Information" section for details on invoking Webdoc.

If you are installing Webdoc for use as an integrated application, for example, **SAS Help and Documentation** for the **SAS Information Delivery Portal**, then you invoke Webdoc via the Help navigation methods in the parent software application.

4.8 Note about Uninstalling Webdoc

Note that moving files after the installation could lead to errors in the uninstall process. The installation program that installs the Webdoc software and documentation also supports removal of these files via an uninstall program. However, because the `SASDoc.war` file must be deployed to a different location after the installation has been completed, the uninstall process will not remove the deployed file. Additionally, any other files, including the documentation files, that are moved after they have been installed will not be removed by the uninstall program. Essentially, the uninstall program will only remove files that are in the original installation directory.

Also, if the help or documentation files for more than one product are installed into a single location, the uninstall process will not remove any files that are shared by these products. Since the `SASDoc.war` file is used by many products to surface SAS Web-based documentation, the `SASDoc.war` file will only be removed when all of the documentation files have been removed.

Contact your system administrator and consult the documentation for your Java Application Server for information on removing deployed software.