

# SAS Hot Fix Analysis, Download and Deployment Tool

## SASHFADD Version 2.2

### Usage Guide

[What's New in SASHFADD 2.2?](#)

---

## Table of Contents

Introduction .....	1
System Requirements .....	2
Important information regarding tool usage.....	2
Preparing to run the Hot Fix Analysis, Download and Deployment Tool .....	2
Download the Hot Fix Analysis, Download and Deployment Tool .....	3
SASHFADD Configuration (SASHFADD.cfg) .....	3
Run the Hot Fix Analysis, Download and Deployment Tool .....	5
Review the Hot Fix Report .....	6
Review and run a hot fix download script .....	7
Run the SAS Deployment Manager (SAS 9.3 and SAS 9.4).....	8
Review, move and run the install script (SAS 9.2) .....	9
Verification of hot fix installation .....	10
Troubleshooting.....	11

## Introduction

The SAS Hot Fix Analysis, Download and Deployment Tool (SASHFADD):

- Analyzes a SAS Deployment Registry (DeploymentRegistry.txt)
- Creates a Hot Fix Report with information and links to hot fixes which are eligible to be installed on the SAS deployment
- Generates scripts that will automate the download of the eligible hot fixes
- Generates scripts to silently install the hot fixes on a SAS 9.2 deployment.

NOTE: Hot fixes for SAS 9.3 and SAS 9.4 are installed with the SAS Deployment Manager, thus eliminating the need for scripting. See [Run the SAS Deployment Manager](#) for information on using the SAS Deployment Manager to deploy SAS 9.3 / 9.4 hot fixes

**WINDOWS** and **UNIX** versions of SASHFADD are available. SASHFADD installed on a **Windows** or **UNIX** machine can be used to analyze SAS deployments for Windows, UNIX, z/OS and OpenVMS Itanium systems.

There are certain SAS Hot Fixes and Patches which are not supported by SASHFADD. See Usage Note [52718](#) for more information.

### Important message about file transfers:

SASHFADD generates scripts which execute anonymous FTP commands to download data files and hot fixes from SAS. If you do not wish to use anonymous FTP for these file transfers, you have the following options:

- Secure FTP using SFTP on UNIX and PuTTY on Windows. See [SASNote 47785](#) for more information. Secure FTP script generation can be activated in SASHFADD by uncommenting “-GENERATE\_SECURE\_FTP\_SCRIPTING” in SASHFADD.cfg.
- Using other 3<sup>rd</sup> party utilities designed to transfer files via HTTP. The download scripts generated by SASHFADD can be converted for use by these utilities. However, 3rd party file transfer utilities are not supported by SAS Technical Support.
- Manual download of the hot fix data file required by SASHFADD and individually clicking the download links for hot fixes in the SASHFADD Hot Fix Analysis Report. See [Troubleshooting](#) for more information.
- **New in SASHFADD 2.2:** You can overwrite the default FTP connection commands in scripts generated by SASHFADD. See **Modifying FTP Script Headers** in the SASHFADD Configuration section below.

## System Requirements

<b>WINDOWS</b> There are no special system requirements for Windows platforms	<b>UNIX</b> SASHFADD requires Perl 5 on UNIX platforms.  SASHFADD is not currently compatible with PERL for z/OS (OS390) on UNIX System Services (USS). For this reason, SAS Technical Support recommends that z/OS users run the WINDOWS version of SASHFADD.
--	---

## Important information regarding tool usage

Carefully read this Usage Guide and review the Hot Fix Report generated by SASHFADD prior to using the generated scripts to download and deploy hot fixes. The Hot Fix Report contains critical information including links to hot fixes that have special pre-installation or post-installation instructions.

**Important note concerning "ALERT" issues:** SASHFADD provides reporting of, and separate script generation for, hot fixes that address "ALERT" issues. This feature is provided to support customers who wish to apply hot fixes only for critical issues as determined by SAS Technical Support consultants.

Hot fixes that address ALERT issues are identified in the Hot Fix report with [A]. Scripts designated "ALERT\_ONLY" contain hot fixes for ALERT issues, but *may* also contain some non-ALERT hot fixes that are needed to satisfy ALERT hot fix dependency requirements.

Scripts NOT specifically designated "ALERT\_ONLY" contain ALL hot fixes which are eligible for download and installation via scripting, **including hot fixes for "ALERT" issues.**

## Preparing to run the Hot Fix Analysis, Download and Deployment Tool

Run the ViewRegistry tool (See [SAS Note 35968](#)) to create a DeploymentRegistry.txt file containing the latest information regarding your SAS installation.

SASHFADD run on **WINDOWS** or **UNIX** can analyze the DeploymentRegistry.txt file generated from a SAS installation on a different host operating system. For example, you can generate a DeploymentRegistry.txt for your SAS installation on **z/OS** or **OpenVMS Itanium**, then copy the DeploymentRegistry.txt into the directory on the Windows or UNIX machine where SASHFADD is installed.

## Download the Hot Fix Analysis, Download and Deployment Tool

**IMPORTANT:** If you are updating to a new release of SASHFADD and using the same install location as the previous release, it is recommended that you remove ALL content that was generated by the previous release from the directory before installing and running the new SASHFADD.

WINDOWS	UNIX
<ol style="list-style-type: none"> <li><a href="#">Download SASHFADDwn.exe</a></li> <li>Choose "Run". This will launch the WinZip Self-Extractor to unzip the download.</li> <li>Click "Unzip" to extract the contents. The following sections assume you extracted the files to the default location "C:\Program Files\SAS\SASHFADD".</li> <li><b>Copy the DeploymentRegistry.txt file</b> created in the previous section to the C:\Program Files\SAS\SASHFADD directory.</li> </ol> <p>The C:\Program Files\SAS\SASHFADD directory should now contain the following files:</p> <ul style="list-style-type: none"> <li>DeploymentRegistry.txt</li> <li>SASHFADD.cfg</li> <li>SASHFADD.exe</li> </ul>	<ol style="list-style-type: none"> <li>Create a directory on your UNIX system where SASHFADD will reside.</li> <li><a href="#">Download SASHFADDux.tar</a> to the directory you created and 'cd' to that directory.</li> <li>Untar SASHFADDux.tar using the command: <b>tar -xvf SASHFADDux.tar</b></li> <li><b>Copy the DeploymentRegistry.txt file</b> created in the previous section to your current directory</li> </ol> <p>Your current directory should now contain the following files:</p> <ul style="list-style-type: none"> <li>DeploymentRegistry.txt</li> <li>SASHFADD.cfg</li> <li>SASHFADD.pl</li> <li>SASHFADDux.tar *</li> </ul> <p>* You may choose to delete "SASHFADDux.tar" since it is no longer needed.</p>

For Windows users, the default install location is: "C:\Program Files\SAS\SASHFADD"

## SASHFADD Configuration (SASHFADD.cfg)

The SASHFADD.cfg file can be used to:

- Run SASHFADD "silently"
- Highlight the most recently released hot fixes in the Analysis Report
- Specify if SASHFADD should generate scripts just for "ALERT" hot fixes or just for all eligible hot fixes
- Specify if SASHFADD should generate scripts for secure FTP
- Suppress the display of non-English hot fixes in the Hot Fix Report
- Force SASHFADD to interpret a DeploymentRegistry.txt as originating from a specific release of SAS (This option is not commonly used)
- Specify if the SAS Hot Fix Data file needs to be downloaded manually (This option is not commonly used)
- Change the format of the date/time stamp applied to directories and files. **← New in SASHFADD 2.2**
  - The optional new format (YYYY\_MM\_DD\_Time) will allow the generated output directories to be easily sorted within the SASHFADD home directory based on when SASHFADD was run.
- Modify the FTP script headers generated by SASHFADD (see below) **← New in SASHFADD 2.2**

## Modifying FTP Script Headers

Scripts generated by SASHFADD for downloading the hot fix data file and individual hot fixes use basic FTP commands to connect to ftp.sas.com. If these basic connection commands are not compatible with your proxy server, you can overwrite the default commands by following these steps:

- 1) Create a file in the SASHFADD home directory called "modified\_script\_header.txt". File name is case sensitive!
- 2) In "modified\_script\_header.txt", type the ftp connection commands that are compatible with your proxy server.
  - a. In the default scripts generated by SASHFADD, all commands **before** the command "binary" are considered part of the header and will be over-written by the commands you save in "modified\_script\_header.txt."

The default Windows header which will be overwritten:

```
open ftp.sas.com
anonymous          ← FTP User
SASHFADD            ← FTP Password
```

The default UNIX header which will be overwritten:

```
#!/bin/sh
FTPHOST=ftp.sas.com
FTPUSER=anonymous
FTPPW=SASHFADD
ftp -n $FTPHOST <<-EOF
user $FTPUSER $FTPPW
```

- b. You may want to generate default SASHFADD scripts and review the header first before attempting to write a modified header.
    - i. Windows users can view a generated "SAS9[2-3-4]\_HFADD\_data\_ftp\_download\_script.txt"
    - ii. UNIX users can view a generated "SAS9[2-3-4]\_HFADD\_data\_ftp\_download.sh"
  - c. You may need to work with a system administrator at your site to determine the syntax for the header.

After the commands are entered, save "modified\_script\_header.txt".

- 3) In SASHFADD.cfg, uncomment the line: "-USE\_MODIFIED\_SCRIPT\_HEADER", then save SASHFADD.cfg
- 4) Run SASHFADD. All FTP scripts generated by SASHFADD will use your modified header.

**Note (1):** If you activate "-USE\_MODIFIED\_SCRIPT\_HEADER" in SASHFADD.cfg, and then later choose to deactivate this feature, you must also delete the following files from your SASHFADD home directory to restore generation of the default script headers:

- Windows – Delete: "SAS9[2-3-4]\_HFADD\_data\_ftp\_download\_script.txt"
- UNIX - Delete: "SAS9[2-3-4]\_HFADD\_data\_ftp\_download.sh"

**Note (2):** A modified script header will NOT be used if "-GENERATE\_SECURE\_FTP\_SCRIPTING" is also activated in SASHFADD.cfg.

## General Information about SASHFADD.cfg

- If you do not make any changes to SASHFADD.cfg, SASHFADD 2.2 will generate output comparable to the previous release (SASHFADD 2.1.1).
- Unless otherwise documented in this Usage Guide, the instructions for making configuration changes are included within the installed SASHFADD.cfg file. Confirmed SASHFADD configuration settings will appear at the bottom of the Hot Fix Report and in the SASHFADD Log file.

- You are **not** required to specify in SASHFADD.cfg the release of SAS being analyzed. SASHFADD should be able to make that determination by looking for key products in DeploymentRegistry.txt. However, in the event of an unusual SAS deployment where that determination can not be made by SASHFADD, you should "uncomment" one of the commands "-SAS 9.2" or "-SAS 9.3" or "-SAS 9.4" to specify the release of SAS. If you accidentally uncomment more than one release, SASHFADD will report a failure and will not proceed with the hot fix analysis.

## Run the Hot Fix Analysis, Download and Deployment Tool

<b>WINDOWS</b> Double-click the SASHFADD.exe file to execute the tool.	<b>UNIX</b> Execute the command: <b>perl SASHFADD.pl</b> Your system settings may require you to enter a fully qualified path to the PERL 5 executable. If PERL 5 is not installed on your system, you will need to either install it or use the Windows version of SASHFADD.
---	---

If you did not select the "-SILENT" option in SASHFADD.cfg, you will be prompted to enter a descriptive name for the machine that contains the SAS deployment being analyzed. This name will be used for the creation of the output directory containing the SASHFADD report and scripts. Only alphanumeric characters and underscores '\_' are allowed in the name. (Examples: "My\_PC", "ALECs\_pc", "server4321", "Test\_Machine\_5")

During SASHFADD processing, scripts are generated and executed that download a required data file from the SAS Technical Support Hot Fix site. The file will be "SAS92\_HFADD\_data.xml", "SAS93\_HFADD\_data.xml" or "SAS94\_HFADD\_data.xml" depending on the release of SAS being analyzed.

If you do not see any of these files in your current directory after running SASHFADD, or if you are unable to download the files through a proxy server at your site, you can manually download the files using HTTP. See [Troubleshooting](#) for more information.

SASHFADD will also create a new directory. If you entered a descriptive name when prompted by SASHFADD, the new directory will be called:

<name\_you\_entered>\_<timestamp> \*

If you ran SASHFADD with the "-SILENT" option, or you did not enter a name when prompted, the new directory will be called:

SASHFADD\_<timestamp> \*

The directory will contain the following subdirectories:

ANALYSIS\_  
DEPLOY\_  
DOWNLOAD\_  
LOG\_

\* <name\_you\_entered>\_<timestamp> is used so that a unique directory name is created each time SASHFADD is run. The timestamp is in DayMonthYear\_Hour.Minute.Second format. For example, "My\_PC\_17Feb2016\_13.24.33".

If you uncomment "-USE\_YYYY\_MM\_DD\_TIME\_FORMAT\_FOR\_DIRECTORY\_AND\_FILE\_NAMES" in SASHFADD.cfg, the directory name in the above example will be "My\_PC\_2016\_2\_17\_13.24.33".

## Review the Hot Fix Report

**IMPORTANT!** Carefully review the SAS\_Hot\_Fix\_Report documented in this section prior to downloading and deploying hot fixes! It is especially important that you carefully follow any pre/post installation instructions in Documentation designated by a **[D]** in the report

The Hot Fix Report can be found in the ANALYSIS\_ directory. The report lists the hot fixes that are available for your installed SAS products based on the DeploymentRegistry.txt file.

The Hot Fix Report may contain up to three sections:

### **Hot fixes that may be downloaded and installed individually or by using the generated scripts**

This section will **always** appear in the Hot Fix Report and will list hot fixes that can be downloaded and installed individually, or by using the [generated download scripts](#), SAS [Deployment Manager for SAS 9.3/9.4](#) or [install scripts for SAS 9.2](#).

Successful installation of these hot fixes will be recorded in the deployment registry. If your system is up-to-date with these hot fixes, then an appropriate message will appear.

### **Hot fixes that are available only by clicking the *Download* link and following installation instructions**

This section **may** appear in the Hot Fix Report, and will list hot fixes which must be downloaded and installed individually by closely following the instructions in the documentation.

Successful installation of these hot fixes may be recorded in the SAS Deployment Registry depending on the unique properties of the hot fix. It is possible that you will continue to see these hot fixes in the report even if they have been successfully installed. If you have already applied these hot fixes by following the installation instructions, then you can safely ignore their reappearance in the report.

Hot Fixes that include configuration scripting will appear in this section along with a link to SASNote [57696](#). These hot fixes must be installed separately from hot fixes that do not include configuration scripting. The hot fix documentation will have information on the SAS Deployment Manager settings that must be used to properly complete the installation.

### **Hot fixes containing updates only to non-English software components**

This section **may** appear in the Hot Fix Report and will list hot fixes which can be applied only to systems where the languages listed with the hot fix are installed for the specific SAS product. **These hot fixes will not appear in the SASHFADD FTP scripts.** They must be downloaded by clicking the *Download* link.

Successful installation of these hot fixes will be recorded in the SAS Deployment Registry. If you are ineligible to install these hot fixes because you have not installed the SAS product for the languages listed, then you can safely ignore the appearance of these hot fixes in the report.

If you do not wish to see these hot fixes in the report, uncomment the line "-ENGLISH\_ONLY" in SASHFADD.cfg.

Each section of the report includes a list of available hot fixes and links to review *Issue(s) Addressed*, *Documentation*, and to *Download* the hot fix.

### **Hot Fix ID**

**[C]** citation beside a *Hot Fix ID* indicates that this is a "Container" hot fix which delivers updates to multiple SAS Software components in one hot fix download. You can view the Documentation for the list of components that will be updated. Eligible hot fixes with this citation are automatically included in the download script. See "What is a Container Hot Fix?" in the [SAS Hot Fix FAQ](#) for more information.

[3] citation beside an *Hot Fix ID* indicates that you should contact [SAS Technical Support](#) for more information about the fix. Hot fixes with this citation are not included in the download script.

**Issues addressed** links provide access to information on SAS Notes addressed by the hot fix.

[A] citation beside an *Issue(s) Addressed* link indicates that at least one "ALERT" issue is addressed in the hot fix. View the *Issue(s) Addressed* for more information. Eligible hot fixes with this citation are automatically included in the download and deployment scripts and are included in separate "Alert\_Only" download and deployment scripts.

[1] citation beside an *Issue(s) Addressed* link indicates that at least one important "Note" appears with the *Issue(s) Addressed* on the download site which should be reviewed before proceeding with the installation of the hot fix. Hot fixes with this citation are automatically included in the download and deployment scripts.

**Documentation** links provide direct access to the hot fix installation instructions.

[D] citation beside a *Documentation* link indicates that the documentation contains special pre-installation, post-installation or other unique instructions not commonly used for hot fix deployment. Documentation should be reviewed before proceeding with the download and deployment of the hot fix. Hot fixes with this citation are automatically included in the download and deployment scripts. **Failure to follow pre/post installation instructions will result in an incomplete hot fix installation and may result in system instability.**

**Download** links provide direct access to download the hot fix.

[2] citation beside a *Download* link indicates that the hot fix does not use the same installation process as other hot fixes, or it may need to be installed separately from other hot fixes with special settings in the SAS Deployment Manager. Use the *Documentation* link to review installation instructions prior to proceeding with the hot fix download. These hot fixes *may* continue to appear on the Hot Fix Report even if they have already been downloaded and deployed since their installation may not be recorded in the SAS deployment registry.

## Review and run a hot fix download script

**IMPORTANT (1):** In the following sections, files designated "\_ALERT\_ONLY" include hot fixes that address ALERT issues as indicated by [A] on the Hot Fix Report. Files NOT designated \_ALERT\_ONLY include **all** hot fixes eligible for scripted download and silent installation, **including hot fixes that address ALERT issues.**

**IMPORTANT (2):** The instructions in the following sections assume that you have NOT selected in SASHFADD.cfg one specific type of scripting that you want SASHFADD to generate.

**IMPORTANT (3):** If you specified in SASHFADD.cfg that you want secure FTP scripts to be generated, "sftp\_" script and text files will appear in the DOWNLOAD\_ directory.

WINDOWS	UNIX
In the DOWNLOAD_ directory, you will find the following files:  ALERT_ONLY_README.txt * ftp_script.bat ftp_script_ALERT_ONLY.bat * ftp_script.txt ftp_script_ALERT_ONLY.txt * MD5_checksums.txt	In the DOWNLOAD_ directory, you will find the following files:  ALERT_ONLY_README.txt * ftp_script.sh ftp_script_ALERT_ONLY.sh * MD5_checksums.txt MD5_checksums_ALERT_ONLY.txt *  * Files will appear only if there are hot fixes for "ALERT"

<p>MD5_checksums_ALERT_ONLY.txt *</p> <p>* Files will appear only if there are hot fixes for "ALERT" issues.</p> <p>The ftp_script.txt and ftp_script_ALERT_ONLY.txt files can be modified as needed to exclude hot fixes from download or to change the transfer protocol as required by your site.</p> <p>If you are satisfied with the list of hot fixes to be downloaded based on the Hot Fix Report, double-click ftp_script.bat <b>or</b> ftp_script_ALERT_ONLY.bat to begin downloading the hot fixes. A window will appear showing the progress of the downloads.</p> <p>These .bat files MUST be run from within the DOWNLOAD_ directory.</p> <p>It may take several minutes to complete the download process.</p> <p>Hot fix download files will be placed in the DEPLOY_ directory.</p>	<p>issues.</p> <p>The ftp_script.sh and ftp_script_ALERT_ONLY.sh files can be modified as needed to exclude hot fixes from download or to change the transfer protocol as required by your site.</p> <p>If you are satisfied with the list of hot fixes to be downloaded based on the Hot Fix Report, then execute one of the following commands:</p> <p><b>.ftp_script.sh</b> <b>.ftp_script_ALERT_ONLY.sh</b></p> <p>These scripts MUST be run from within the DOWNLOAD_ directory.</p> <p>It may take several minutes to complete the download process.</p> <p>Hot fix download files will be placed in the DEPLOY_ directory.</p>
--	---

**NOTE:** The MD5\_checksums files contain MD5 checksum values for each hot fix download available for your installed SAS products. This file can be useful should you wish to validate the integrity of the downloaded hot fix files. Tools used for performing MD5 validation are not available from SAS and are not supported by SAS Technical Support.

## Run the SAS Deployment Manager (SAS 9.3 and SAS 9.4)

This section is applicable for **SAS 9.3** and **SAS 9.4** deployments.

In the DEPLOY\_ directory, you will find the hot fixes downloaded by the download script.

The SAS Deployment Manager is used to apply hot fixes. For more information on the SAS Deployment Manager for SAS 9.3 or SAS 9.4, see:

[SAS Deployment Wizard/SAS Deployment Manager 9.3: User's Guide](#)

[SAS Deployment Wizard/SAS Deployment Manager 9.4: User's Guide](#)

By default, the SAS Deployment Manager will search in the ' <SASHOME>/InstallMisc/HotFixes/New ' directory for hot fixes to be applied. To complete the installation of the hot fixes you may either:

Copy the downloaded hot fixes from the "DEPLOY\_" directory to ' <SASHOME>/InstallMisc/HotFixes/New '

-or-

When prompted by the SAS Deployment Manager, enter the path directly to the "DEPLOY\_" directory.

**Best Practice:** Since the SAS Deployment Manager will NOT remove the hot fix downloads from the "New" directory after they have been applied, it may be a "best practice" to point the SAS Deployment Manager to the "DEPLOY\_" directory. If SASHFADD is not installed on the same machine as the SAS deployment, you can copy the entire "DEPLOY\_" directory to the machine where SAS is installed before launching the SAS Deployment Manager.

## Review, move and run the install script (SAS 9.2)

This section is applicable for **SAS 9.2** deployments only.

This section is not applicable for SAS installations on z/OS.

### Before running the install script:

- If you modified the download script to exclude hot fixes, you should also modify the install script to exclude the same hot fixes.
- Both the install script and the hot fix downloads must reside in the same directory.
- It is recommended that you back up your system before applying updates to software.
- All currently active SAS sessions, daemons, spawners and servers must be terminated before executing the install script.
- The install script should be executed by the same userid who performed the initial software installation.

In the `DEPLOY_` directory, you will find the hot fixes downloaded by the download script, and for WINDOWS and UNIX systems, host-specific installation scripts that can be used to silently install all of the hot fixes.

**IMPORTANT!** In the following sections, files designated "`_ALERT_ONLY`" include hot fixes that address ALERT issues as indicated by **[A]** on the Hot Fix Report. Files NOT designated `_ALERT_ONLY` include **all** hot fixes eligible for scripted download and silent installation, **including hot fixes that address ALERT issues.**

SASHFADD run on **WINDOWS** or **UNIX** to analyze a **WINDOWS** SAS 9.2 deployment

In the `DEPLOY_` directory, you will find the following files:

`ALERT_ONLY_README.txt *`  
`install_script.bat`  
`install_script_ALERT_ONLY.bat *`

\* Files will appear only if there are hot fixes for "ALERT" issues.

To install the downloaded hot fixes "silently" on your Windows system:

Move the entire "`DEPLOY_`" directory to the Windows system from where the `DeploymentRegistry.txt` file used in this process was generated.

On the Windows system, double click either `install_script.bat` **or** `install_script_ALERT_ONLY.bat *`

\* If you chose to download the hot fixes using **ftp\_script\_ALERT\_ONLY.bat**, then you should run **install\_script\_ALERT\_ONLY.bat**.

It may take several minutes to complete the installation process.

**NOTE:** If you ran SASHFADD on a **UNIX** system to analyze a **WINDOWS** SAS deployment, you will need to use a 3rd party "unix2dos" utility to convert `install_script.bat` **or** `install_script_ALERT_ONLY.bat` to DOS format.

SASHFADD run on **WINDOWS** or **UNIX** to analyze a **UNIX** SAS 9.2 deployment

In the `DEPLOY_` directory, you will find the following files:

`ALERT_ONLY_README.txt *`  
`install_script.sh`  
`install_script_ALERT_ONLY.sh *`

\* Files will appear only if there are hot fixes for "ALERT" issues.

To install the downloaded hot fixes "silently" on your UNIX system:

Move the entire "DEPLOY\_" directory to the UNIX system from where the DeploymentRegistry.txt file used in this process was generated.

On the UNIX system, execute either install\_script.sh or install\_script\_ALERT\_ONLY.sh \*, providing the SASHOME location from where the DeploymentRegistry.txt file used in this process was generated. For example:

```
./install_script.sh /installs/SAS92_M3
```

\* If you chose to download the hot fixes using **ftp\_script\_ALERT\_ONLY.sh**, then you should execute **install\_script\_ALERT\_ONLY.sh**.

It may take several minutes to complete the installation process.

**NOTE:** If you ran SASHFADD on a **WINDOWS** system to analyze a **UNIX** SAS deployment, you will need to make the script executable by adding "execute" permission. For example:

```
chmod u+x install_script.sh
```

SASHFADD run on **UNIX** or **WINDOWS** to analyze a **z/OS** SAS 9.2 deployment

The installation script used to silently install all of the hot fixes is not available at this time for z/OS. However, you can still use the FTP download script to download hot fixes. Once downloaded, the hot fixes will need to be applied individually by following the instructions provided in the documentation links in the Hot Fix Report.

SASHFADD run on **UNIX** or **WINDOWS** to analyze an **OpenVMS Itanium** SAS 9.2 deployment

The installation script used to silently install all of the hot fixes is not available at this time for OpenVMS Itanium. However, you can still use the FTP download script to download hot fixes. Once downloaded, you can apply the hot fixes individually by following the instructions provided in the documentation links in the Hot Fix Report, or you can create a script to apply the hot fixes "silently" (without the GUI interface).

To apply multiple hot fixes silently, create a script with symbols to sequentially run the hot fix executables in silent mode. For example, if you wish to install hot fixes B25118vi.exe and B25121vi.exe silently, the script could look like:

```
$ hotfix == "$ $disk:[hfdir]B25118vi.exe"
$ hotfix -silent
$ hotfix == "$ $disk:[hfdir]B25121vi.exe"
$ hotfix -silent
```

## Verification of hot fix installation

To verify that all hot fixes have been installed:

After installation of all hot fixes, rerun the deployment registry tool to create a new DeploymentRegistry.txt.

Copy the updated DeploymentRegistry.txt to the directory where SASHFADD is located.

Run SASHFADD to create a new directory containing a new ANALYSIS\_ subdirectory.

Review the Hot Fix Report and, if necessary, compare the Hot Fix Report with the report generated in the previous execution of SASHFADD.

Reports listing all of the installed hot fixes that appear in DeploymentRegistry.txt are also generated by SASHFADD. These reports appear in the LOG\_ directory and are in HTML and XML formats.

## Troubleshooting

Each execution of SASHFADD creates a SASHFADD\_LOG\_ file in the "LOG\_" subdirectory. The log traces the execution of SASHFADD and can be used to troubleshoot any problems with report, directory, or script generation.

When the installation scripts are run for SAS 9.2, the logs pertaining to installation are MIT logs. If problems are encountered with installation of the hot fixes, please refer to the:

[Using the Maintenance Installation Tool to Install SAS® Hot Fixes - Usage and Troubleshooting Guide](#)

### Common Problems and Solutions

- You do not see "SAS9[2-3-4]\_HFADD\_data.xml" in the directory after running SASHFADD,  
...or you see the following message on the command console:

**SASHFADD was unable to download or open a critical hot fix data file.**

...or you see the following messages on the command console:

**FTP> Invalid Command**  
**FTP> Not Connected**

...or you see the following message near the top of the hot fix report:

**Warning: Hot Fix Data file (SAS9[2-3-4]\_HFADD\_data.xml) is not found or is more than 96 hours old.**

...or you see the following ERROR in the SASHFADD\_LOG\_:

**>> %%% ERROR: Unable to open SAS9[2-3-4]\_HFADD\_data.xml**

These errors indicate that SASHFADD could not access current hot fix data. A problem in downloading either *SAS92\_HFADD\_data.xml*, *SAS93\_HFADD\_data.xml* or *SAS94\_HFADD\_data.xml* may have been encountered. Depending on the SAS release being analyzed, SASHFADD must have access to one of these files. This warning is likely due to an FTP problem that affected the generated SAS9[2-3-4]\_HFADD\_data\_ftp\_download\_script.txt (Windows) or SAS9[2-3-4]\_HFADD\_data\_ftp\_download.sh (UNIX) file.

This problem is most likely to occur when a SASHFADD script makes an FTP request that can not be fulfilled through a proxy server.

**New in SASHFADD 2.2 →** You may be able to use the "-USE\_MODIFIED\_SCRIPT\_HEADER" option in SASHFADD.cfg to correct this problem. Ask your system administrator about syntax options to modify the scripts generated by SASHFADD to work with your proxy server. See the [Modifying FTP Script Headers](#) instructions in this usage guide for more information.

If you or your system administrator are unable to correct the FTP and/or proxy server issue, you can download the necessary data file manually:

1. Click: [SAS92\\_HFADD\\_data.xml](#) if SASHFADD is analyzing a SAS 9.2 image  
Click: [SAS93\\_HFADD\\_data.xml](#) if SASHFADD is analyzing a SAS 9.3 image  
Click: [SAS94\\_HFADD\\_data.xml](#) if SASHFADD is analyzing a SAS 9.4 image

2. If you are not certain which release of SAS is being analyzed, download all of the above files. SASHFADD will use the one it needs.
3. Select "File", then "Save As"
4. Confirm that you are saving **SAS92\_HFADD\_data.xml** and/or **SAS93\_HFADD\_data.xml** and/or **SAS94\_HFADD\_data.xml** (file names are case sensitive!)
5. Save **SAS92\_HFADD\_data.xml** and/or **SAS93\_HFADD\_data.xml** and/or **SAS94\_HFADD\_data.xml** to the same directory as **SASHFADD**
6. In SASHFADD.cfg, uncomment -HOT\_FIX\_DATA\_FILE\_MANUAL\_DOWNLOAD then save the updated SASHFADD.cfg. This will prevent SASHFADD from attempting to re-download SAS9[2-3-4]\_HFADD\_data.xml.
7. Run SASHFADD

**Note:** If you are unable to resolve the FTP problem, then you most likely will NOT be able to successfully download hot fixes using the automated scripts. However, you should still be able to download the hot fixes individually by clicking the **Download** link(s) in the "SAS\_Hot\_Fix\_Report\_".

○ The message

```
> > %%% ERROR: Unable to open DeploymentRegistry.txt  
> > %%% ERROR: Deployment Registry Host () could not be identified.
```

in the *Log/tool\_log.txt* file indicates that the required *DeploymentRegistry.txt* file does not exist in the same directory as SASHFADD.

If you are unable to determine the cause of problems encountered with this tool, contact [SAS Technical Support](#).