Installation Instructions

SAS® 9.1.3 Service Pack

Overview

The SAS 9.1.3 Service Pack contains recent hot fixes and updates for your SAS 9.1.3 deployment and should be applied to every machine that has any SAS software on it. The *SAS 9.1.3 Service Pack Addressed Issues* document, included with these *Installation Instructions*, describes the fixes included in the SAS 9.1.3 Service Pack.

This document is divided into six sections:

- This "Overview" section.
- "Pre-application Steps" describes tasks that should be completed before installing the SAS 9.1.3 Service Pack media.
- "Applying the Service Pack" contains steps for installing the SAS 9.1.3 Service Pack media to each supported platform.
- "Post-application Steps" describes tasks that should be completed after installing the SAS 9.1.3 Service Pack media.
- "Technical Support" describes how to get assistance from SAS regarding any issues with the SAS 9.1.3 Service Pack.
- The appendixes contain information about verifying the installation of the SAS 9.1.3 Service Pack, as well as information about applying the SAS 9.1.3 Service Pack to specialized deployments of SAS 9.1.3. The appendixes are referenced as necessary in the sections that precede them.

Be sure to at least review the "Post-application Steps" after installing the SAS 9.1.3 Service Pack media.

Note: Do not install a service pack later than SAS 9.1.3 Service Pack 1 to a machine that has SAS Financial Management Server or SAS Strategic Performance Management Server running on it. The CD labels for the service pack describe what level the media contains.

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Pre-application Steps

Follow these steps prior to applying the SAS Service Pack.

1. z/OS users should download the appropriate JRE by going to the Third Party Software Download web page at http://support.sas.com/thirdpartysupport. From the Third Party Software Download page, select the **SAS 9.1.3 Service Pack 4** link and then select **Java Runtime Environments (JRE) for SAS 9.1.3 Foundation with Service Pack 4**. At the table that opens in your browser, find the z/OS row, then download and install the JRE from that row.

2. If your existing SAS 9.1.3 deployment includes a Web Application Server (WebLogic, WebSphere or Tomcat), please review the support requirements at http://support.sas.com/thirdpartysupport and upgrade your Java Development Kit (JDK) and Web application server to the required versions before installing the SAS 9.1.3 Service Pack.

3. Close all your SAS software, including any SAS rich client software, SAS servers, SAS services and/or Web services. Stop all servers and services on all platforms. (Windows users should see the SAS Note located at http://support.sas.com/techsup/unotes/SN/013/013834.html for more details about stopping services.)

4. Back up your existing SAS installation on all platforms except z/OS. UNIX users should ensure that they make back-ups of the following files, which are located in the home directory of the userid which performed the original SAS installation: .sasprefs, .ssnprefs.xml, and vpd.properties.

Applying the Service Pack

Once the back-up is complete, use the following instructions to update your software. **Do not attempt to add the Service Pack media to any existing SAS Software Depot**; instead, you can either install the Service Pack directly from CDs or copy the CDs to a location of your choosing and install the Service Pack from there. If you are performing an installation from a pre-existing SAS Software Depot, first perform the installation from the SAS Software Depot, then apply the Service Pack media by following the instructions below.

Note: *If you are updating an existing installation, SAS strongly recommends that you install your SAS 9.1.3 Service Pack with the same user ID that you used for your original installation. Installing with a different account may cause the service pack to be unable to locate files and applications to be updated. If you are using a Windows terminal server, you **must** use the same account that was used for the original installation and any subsequent updates.*

Note: *All CDs should be run on a native machine. If you attempt to use a terminal emulator, the software may not function properly.*

If any errors occur during the installation of the SAS 9.1.3 Service Pack, consult the SAS Software Navigator log file for error codes and other information. The SAS Software Navigator log can be found in the following locations:

Windows

```
C:\Documents and Settings\<user name>\SSN.log
```

UNIX

```
$HOME/SSN.log
```

Windows (32-bit systems)

Note: *You must be in install mode when installing SAS 9.1.3 Service Packs on a Terminal Server. Use the change user /install command at the command line or use **Add or Remove Programs** from within Control Panel to automatically enter into install mode. You must enter install mode prior to inserting the installation disk.*

If your SAS installation contains no mid-tier or client SAS software, then you may begin the application of the SAS Service Pack by skipping the **SAS 9.1.3 Service Pack 4 Installer** CD, and using only the **Service Pack 4 for SAS Foundation** CD. To help determine which CD to begin with, please refer to SAS Note SN-015827 (http://support.sas.com/techsup/unotes/SN/015/015827.html).

If all of your installed SAS products are found on the list in SAS Note SN-015827, then you may begin with the **Service Pack 4 for SAS Foundation** CD. If you have any installed SAS products that are not included in the list, you should apply the service pack by starting with the **SAS 9.1.3 Service Pack 4 Installer** CD, using the process described below. If you have products not on that list and do not use the **SAS 9.1.3 Service Pack 4 Installer** CD, any Java-based mid-tier and client SAS software you have installed will not be updated.

1. Insert the **SAS 9.1.3 Service Pack Installer** CD. Once the CD is inserted, it should begin to autoplay. If the autoplay does not start, find setup.exe and open it.

2. Select the language in which you wish to run the Service Pack installer, and click **OK**.

3. The **SAS Service Pack Installer** window is displayed and shows you the software that will be installed and configured. Click **Install** to continue.

Note: *If the system requires a reboot, a **Reboot Pending** window will display. Respond appropriately and click **Finish**. It will be necessary to stop all services as described in step*

3 of the "Pre-application Steps". Once the reboot is completed, restart the Service Pack installer to continue your installation.

4. As the SAS 9.1.3 Service Pack installs, a **Reconfigure** window may open, depending on the products in your original installation. If you are presented with this window, you will find a list of possible configuration directories that the installer found in the pane under **Default configuration directory location**. Either select a configuration directory from that pane or click **Alternate configuration directory location** and enter or browse to the location you chose for the configuration directory in your original installation. Once your configuration directory is selected, click **Reconfigure**. When the reconfiguration of that directory is complete, a confirmation window opens. Click **OK** in that window to bring the **Reconfigure** window back to the front. Repeat this step for as many configuration directories as you have (the number of possible configuration directory locations in the pane is a good indicator of how many times you should repeat this step). When you have reconfigured all your configuration directories, click **Done** to finish the install process.

When the SAS 9.1.3 Service Pack has finished installing, take the media to all machines that have SAS software running on them. Use the appropriate platform-specific directions for the machine you are updating in order to ensure that all the fixes are applied to the software that requires them.

Note: *Windows users who have a server image should update that image as well. See "Appendix B - Applying SAS 9.1.3 Service Pack to Upgrade a SAS Image on Windows", on page 20, for a description of the steps required to update a server image.*

UNIX

Note: *Depending on your original installation, you may be required to enter your root password at some point during the Service Pack installation. SAS strongly recommends having your root password on hand before beginning your Service Pack installation.*

If your SAS installation contains no mid-tier or client SAS software, then you may begin the application of the SAS Service Pack by skipping the **SAS 9.1.3 Service Pack 4 Installer** CD, and using only the **Service Pack 4 for SAS Foundation** CD. To help determine which CD to begin with, please refer to SAS Note SN-015827 (http://support.sas.com/techsup/unotes/SN/015/015827.html).

If all of your installed SAS products are found on the list in SAS Note SN-015827, then you may begin with the **Service Pack 4 for SAS Foundation** CD. If you have any installed SAS products that are not included in the list, you should apply the service pack by starting with the **SAS 9.1.3 Service Pack 4 Installer** CD, using the process described below. If you have products not on that list and do not use the **SAS 9.1.3 Service Pack 4 Installer** CD, any Java-based mid-tier and client SAS software you have installed will not be updated.

1. Insert the **SAS 9.1.3 Service Pack Installer** CD and mount it on the machine where SAS software has been installed. The CD will be automatically mounted if you are running an automount program, such as `vold` on Solaris. Otherwise you must manually mount the CD. Manually mounting a CD on UNIX requires root privilege. Log in as root before mounting the CD.

```
$ su root
```

On single-drive systems, the CDs must be unmounted and mounted often. SAS recommends that you maintain a separate root user ID window for mounting and unmounting the CDs, while running the SAS Service Pack Installer in a different window.

The mount command on UNIX follows this format:

```
# mount [options] device mount_point
```

where `[options]` are valid mount options for the operating system, `device` is the name of the CD-ROM device, and `mount_point` is the directory used as the mount point for the media.

The following are sample mount commands for each supported UNIX system. The device names listed below are used only for example; substitute your actual device names accordingly. These instructions assume your mount point is `/mnt/cdrom`; however, you may choose another location.

AIX

```
# mount -r -v cdrfs /dev/cd0 /mnt/cdrom
```

HP-UX and HP-UX for the Itanium Processor Family

```
# mount -F cdfs -o rr,ro /dev/dsk/c0t0d0 /mnt/cdrom
```

Linux for Intel Architecture and Linux for Itanium-based Systems

```
# mount -r /dev/cd0 /mnt/cdrom
```

Solaris and Solaris for x64

```
# mount -r -F hsfs /dev/cd0 /mnt/cdrom
```

Tru64 UNIX

```
# mount -rt cdfs -o noversion,rrip /dev/cd0 /mnt/cdrom
```

2. Once the CD is mounted, find `setup.sh` and open it.

3. Select the language in which you wish to run the Service Pack installer, and click **OK**.

4. When the media begins playing, you will be presented with a view of the products being revised. You do not have the opportunity to choose which you wish to install; instead, the Service Pack will survey the system it is running on and apply the fixes based on what it finds.

5. As the SAS 9.1.3 Service Pack installs, a **Reconfigure** window may open, depending on the products in your original installation. If you are presented with this window, you will find a list of possible configuration directories that the installer found in the pane under **Default configuration directory location**. Either select a configuration directory from that pane or click **Alternate configuration directory location** and enter or browse to the location you chose for the configuration directory in your original installation. Once your configuration directory is selected, click **Reconfigure**. When the reconfiguration of that directory is complete, a confirmation window opens. Click **OK** in that window to bring the **Reconfigure** window back to the front. Repeat this step for as many configuration directories as you have (the number of possible configuration directory locations in the pane is a good indicator of how many times you should repeat this step). When you have reconfigured all your configuration directories, click **Done** to finish the install process.

6. Starting in Service Pack 4, the location of the maintenance files used for user authentication has changed to improve the Service Pack upgrade experience. With this Service Pack, if any of the following three files—`sasauth`, `sasperm`, and `elssrv`—requires maintenance, they are archived and delivered to the new directory `!SASROOT/utilities/bin/setuid` rather than to `!SASROOT/utilities/bin` directly. Note that in this Service Pack 4 only, `elssrv` and `sasauth` require maintenance so they are the only files delivered to this new install directory. As when using UNIX Foundation Installer for a new installation, you have the option of configuring the user authentication as part of the normal install post-processing by supplying the rootuid password during the post-processing step. The files that are present in the new `setuid` directory will be moved to the `utilities/bin` dir and then setuid root once the files are moved. The user can also elect to perform this configuration at a later time from the sassetup uitilities menu post-installation. See the "Configuring User Authentication" section in Chapter 2 of the *Installation Instructions for SAS 9.1.3 Foundation for UNIX Environments* for more information.

7. When the SAS 9.1.3 Service Pack has finished installing, take the media to all machines that have SAS software running on them. Use the appropriate platform-specific directions for the machine you are updating in order to ensure that all the fixes are applied to the software that requires them.

Windows for 64-bit Itanium-based Systems

For Windows for 64-bit Itanium-based Systems, the Service Pack is included with SAS Foundation install. If SAS 9.1.3 is already installed on your system, it will be detected and updated with the Service Pack. If you want to add additional products to your installation, re-run the SAS Foundation install after the Service Pack has been applied.

Server Installations

Note: *If SAS 9.1.3 was installed from a network image rather than from CDs, you must create a network image and install the Service Pack from that image. If SAS 9.1.3 was installed from CD media, you can use either the CDs or a network image to install the Service Pack.*

1. If SAS 9.1.3 was installed on your system directly from CD media, insert the **SAS 9.1.3 Setup Disk** CD. Once the CD is inserted, it should begin to autoplay. If the autoplay does not start, find `setup.exe` at the root of the CD and open it. Proceed to step 4. If you originally installed from a network image or want to create a new network image, go to step 2.

2. To create a network image that users can install from, copy the contents of the **SAS Setup Disk**, the **SAS Software Disks**, and the **SAS Shared Components** CD (and the **SAS/SECURE** CD, if it is in your package) to the same directory on the network. For example, if you want to create an installable SAS image on `C:\SAS9.1\install` and your CD drive is `D:`, execute the following command from a command prompt or from **Start→Run** for each SAS System CD:

   ```
   xcopy /s D:\*.* C:\sas9.1\install
   ```

   If autorun starts when you place the CD in your CD-ROM drive, close the window before copying the CD.

   Note: *When you copy from the **SAS/SECURE** CD to your network image, copy only the file* `sas/securwin1.cab`. *If other files are copied from this CD, the autorun will not function properly.*

3. Open `setup.exe` at the root of your network image. For the example shown above, execute the following command:

   ```
   C:\sas9.1\install\setup.exe
   ```

4. After you select the language for this installation, click **OK**. Under End User Steps, select **2. Install SAS Software.**

5. The install will detect an existing SAS 9.1.3 installation and display the **Updating SAS Foundation** window. Click **Next** to continue.

6. When the **SAS Setup Complete** window appears, click **Finish** to complete the update. If you want to install additional SAS products, open `setup.exe` again.

7. When the SAS 9.1.3 Service Pack has finished installing, take the media to all machines that have SAS software running on them. Use the appropriate platform-specific directions for the machine you are updating in order to ensure that all the fixes are applied to the software that requires them.

Mid-tier and Client Installations

1. Insert the **SAS 9.1.3 Service Pack Installer** CD. Once the CD is inserted, it should begin to autoplay. If the autoplay does not start, find `setup.exe` at the root of the CD and open it. Note that you may receive an error message indicating, "Error: Change User ID," indicating that the service pack installer could not find an existing SAS installation. The error appears because if you do not have Base SAS itself installed, the installer will not identify the machine as having SAS software on it. If you are logged in with the correct user ID, click **No** to continue the installation (refer to http://support.sas.com/techsup/unotes/SN/014/014976.html for more information).

2. Follow the prompts that appear during the course of the installation. When the final dialog appears, click **Finish** to complete the update. If you want to install additional SAS products, open `setup.exe` again.

3. As the SAS 9.1.3 Service Pack installs, a **Reconfigure** window may open, depending on the products in your original installation. If you are presented with this window, you will find a list of possible configuration directories that the installer found in the pane under **Default configuration directory location**. Either select a configuration directory from that pane or click **Alternate configuration directory location** and enter or browse to the location you chose for the configuration directory in your original installation (if you have no configuration directories from previous installs, simply click **Done**). Once your configuration directory is selected, click **Reconfigure**. When the reconfiguration of that directory is complete, a confirmation window opens. Click **OK** in that window to bring the **Reconfigure** window back to the front. Repeat this step for as many configuration directories as you have (the number of possible configuration directory locations in the pane is a good indicator of how many times you should repeat this step). When you have reconfigured all your configuration directories, click **Done** to finish the install process.

4. When the SAS 9.1.3 Service Pack has finished installing, take the media to all machines that have SAS software running on them. Use the appropriate platform-specific directions for the machine you are updating in order to ensure that all the fixes are applied to the software that requires them. Once the service pack has been installed on your entire deployment, restart your servers and services. If you update software on your mid-tier, you will need to redeploy your Web applications to your Web application server.

OpenVMS Alpha

1. Insert the **SAS 9.1.3 Service Pack 4 for SAS Foundation** CD. Mount the CD using the command

    ```
    $ MOUNT/OVER=ID/MEDIA=CDROM/UNDEF=(STREAM_LF:0) cd-rom
    ```

    In this example, *cd-rom* is the actual device name of your CD-ROM drive. Once mounted, launch the software with the command

    ```
    $ MCR cd-rom:[000000]SASSETUP.EXE
    ```

    where *cd-rom* is the actual device name of your CD-ROM drive.

2. When the install program begins, you will be presented with the `Primary Menu`. Select `Update an Existing Installation`.

3. After supplying the target directory to your SAS 9.1.3 Foundation image, the `Load Software Menu` will be displayed. Select `Load Service Pack Software Only`. The Service Pack will survey the SAS 9.1.3 Foundation image indicated by the target directory supplied, and apply fixes based on the products already installed.

4. When the SAS 9.1.3 Service Pack has finished installing, take the media to all machines that have SAS software running on them. Use the appropriate platform-specific directions for the machine you are updating in order to ensure that all the fixes are applied to the software that requires them.

z/OS

Updates can be performed by using either the **SAS 9.1.3 Service Pack 4 for SAS Foundation** CD or the traditional batch method, utilizing an Action B or an Action C (and subsequent Action D) as described in the instructions below.

Note: *Installing a Service Pack using Actions B, C, and D differs slightly from the same actions used to install new products. When you install a Service Pack utilizing an Action C, the install automatically generates new PROCs and CLISTs which utilize the upgrades in the staging library. The PROCs and CLISTs are located in the newly created* `&prefix.CNTL` *data set. The names for CLISTs begin with CLST and the names for PROCs begin with PROC.*

If the Service Pack is applied to a SAS Intelligence Platform installation as a staged install (Action C), refer to SAS note SN-014524 for changes that will be needed to pick up the Service Pack.

The installation instructions for your Service Pack can be found in one of the following locations:

- On the SAS Install Center Web site:
  - Using your Web browser, navigate to http://support.sas.com/documentation/installcenter/913/kit/index.html.
  - Under **SAS 9.1.3 (TS1M3)**, click **Basic Installation Edition Kit**.
  - Under **Installation**, click **Installation Instructions**--**SAS 9.1.3 Foundation for z/OS;** this will open a PDF version of the document.
  - Refer to "Chapter 5 — Installing a SAS Service Pack Using the z/OS Service Pack Installer" or "Chapter 6 — Installing a SAS Service Pack (Traditional Batch Method)" as appropriate.
- On the **SAS 9.1.3 Service Pack 4 for SAS Foundation** CD which is included in your Service Pack folder (on the **Help Topic** window, select **Help Using the Installation Dialogs** to view a PDF version of the Service Pack installation instructions).

Copying Staged Libraries to Production

If you performed the recommended Action C above on your Service Pack-only media, you will eventually want to move these staging libraries to production. Refer to "Action D: Copy a Service Pack from Staging SAS Libraries to Existing SAS Libraries" in the *Installation Instructions for SAS 9.1.3 Foundation for z/OS*.

The Service Pack contains updates to HFS. If you previously loaded HFS, you will need to run the `USSUNTAR` job to unload these updates.

Post-Installation Steps

If you are upgrading your SAS System installation from an earlier level to the newer Service Pack level and you have set SAS System options by assembling the `DEFAULT OPTIONS TABLE`, you must reassemble this table by running the `BAOPTS1` utility.

If you are running the SAS System out of the LPA with `PGM=SASXAL`, it is necessary to refresh the LPA after completing the installation of the Service Pack.

Service Pack Verification

After the Service Pack installation completes, upon invocation of SAS, a note will be displayed in the `SASLOG` regarding the Service Pack level.

Post-verification

When the SAS 9.1.3 Service Pack has finished installing, take the media to all machines that have SAS software running on them. Use the appropriate platform-specific directions for the machine you are updating in order to ensure that all the fixes are applied to the software that requires them.

Post-application Steps

Follow these steps after the application of the SAS Service Pack is complete.

Note: *Do not begin these steps until the SAS 9.1.3 Service Pack has been applied to each machine in your deployment that has SAS software on it.*

1. Restart your SAS Metadata Server and other SAS servers now, but wait to restart any web tier servers and services until reconfiguration is complete.

2. If you applied the SAS Service Pack to a mid-tier or client tier box, verify that the SAS Service Pack has been properly applied. See "Appendix A - Validating the SAS Service Pack on the Mid-tier or Client Desktop," on page 13, for information on validating your installation.

3. Complete configuration steps for the products listed below.   If the installation you are updating with the SAS Service Pack includes at least one of these products, refer to the *SAS 9.1.3 Service Pack Configuration Instructions*, included in your service pack folder, for more information.

   - SAS/ACCESS Interface to ODBC (UNIX users only)
   - SAS/ACCESS Interface to MySQL (UNIX users only)
   - SAS/ACCESS Interface to Sybase (AIX users only)
   - SAS Enterprise Miner
   - SAS Information Delivery Portal
   - SAS/IntrNet
   - SAS Marketing Automation
   - SAS Marketing Optimization (release 4.1 only)
   - SAS Metadata Server
   - SAS OnlineDoc for the Web
   - SAS OpRisk VaR
   - SAS Remote Help for z/OS
   - SAS Sourcing Data Quality
   - SAS Sourcing Strategy
   - SAS Spend Analysis
   - SAS Web Infrastructure Kit

4. If you have SAS Web applications that were updated by the SAS Service Pack, you need to redeploy your Web applications to your Web application server.

   If your original installation was configured using the SAS Configuration Wizard, .war and .ear files will be recreated in the install location for each product. The new .war and .ear files have been copied to a staging location in your configuration directory, `<configuration-directory>/Lev1/web/webapps`. In addition, the .war and .ear files have been expanded to `<configuration-directory>/Lev1/web/webapps/exploded` if the exploded directory exists.

   You can choose to redeploy your Web applications directly from the staging location, but SAS recommends that you copy them from this location to where web applications are typically deployed from at your site. For example, with Tomcat you typically need to:

   a. Delete the existing war files and folders from the `<tomcat>\webapps` location.

Note: *Deleting these files may remove any customization you might have performed prior to applying the service pack (such as input pages for custom processes written as JSP files). Be sure to back up any customized files before deleting the contents from this location.*

b. Delete the same named war files from the `<tomcat>\work\standalone\localhost` directory, if applicable.

c. Copy the new war files into the `<tomcat>\webapps` directory.

If your original installation was **not** configured using the SAS Configuration Wizard, then you need to rebuild the appropriate .war and .ear files for each product and redeploy them individually with the same methodology used in the original installation.

5. Beginning with SAS 9.1.3 Service Pack 2, users whose installations include SAS Subscription Manager 1.5 should upgrade that application to a newer revision. To determine if you have SAS Subscription Manager 1.5 installed, verify the inclusion of the following directory on your machine:

- Windows: `SASHOME\SASSubMgr\1.5`
- UNIX: `SASHOME/SASSubMgr/1.5`

where `SASHOME` represents the root location of your SAS software installations.

If this directory does not exist on your system, then you need to take no further steps. If the directory does exist, you should reinstall SAS Subscription Manager 1.5 so that the upgraded installation overwrites the previous installation. SAS Subscription Manager 1.5 is included on the SAS Client-Side Components CDs included with the SAS 9.1.3 Service Pack.

Technical Support

Before contacting Technical Support by phone, you may want to explore the information provided at the SAS Technical Support Web site, located at http://support.sas.com/techsup. The SAS Technical Support Web site offers a Knowledge Base, FAQs, Technical Support Documents, and more, that may answer your questions. This Web site also provides a mechanism for reporting problems. SAS also maintains several other electronic services for tracking problems and questions for Technical Support. These electronic services are available 24 hours a day.

SAS Installation Coordinators and Support Representatives are the first support contact for SAS users. These SAS Support Personnel at your site have problem-solving tools and knowledge of site-specific SAS information that can expedite the resolution of your problem. SAS Support personnel who are unable to resolve the SAS user's problem can refer the SAS user to SAS Technical Support.

For U.S. and Canadian customers, support is provided from our corporate headquarters in Cary, North Carolina. You may call (919) 677-8008, Monday through Friday to contact U.S. Technical Support.

Customers outside of the U.S. can obtain local-language technical support through the local office in their countries. Customers in these locations should contact their local office for specific support hours. See http://support.sas.com/techsup/contact/index.html for contact information for local offices.

Appendix A – Validating the SAS Service Pack on the Mid-tier and Client Desktop

After you install the SAS 9.1.3 Service Pack to your client or mid-tier, we recommend that you verify that it was applied successfully. In order to do this, you should check a key file per product included in the service pack to verify it was updated. The list below contains a list of products along with the key file name and a date stamp for the key file. To verify the service pack was applied successfully, ensure that the key file for the product you are verifying has been updated to the level indicated by the date provided.

Note that the Service Pack installer updates are based on data contained in a file called `vpd.properties`. If you have deleted, moved, or renamed this file such that the service pack installer cannot find it, your products were not updated. This file should not be moved, modified, or deleted in any way to ensure successful application of future service packs.

If the key files you have installed on your system per product have not been updated following the installation of the SAS Service Pack, please contact SAS Technical Support.

- **SAS Analytics Platform**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default Location: `SASHOME\SASAPCore\lib`

- **SAS BI Web Services for Java**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default Location: `SASHOME\Web\WebServicesforJava\1.0\SASXMLA\WEB-INF\lib`

- **SAS Campaign Studio**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASMarketingAutomation\4.1`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Campaign Studio. The service pack only updates the release that can be identified by a version number of 4.3. Any other build should ignore this key file information. You can find the version number by using **Help→About**. If you want a newer version of SAS Campaign Studio, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Credit Risk Management Mid-Tier**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default Location: `SASHOME\SASCreditRiskManagement\4.1\webapps\criskm` `\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Credit Risk Management Mid-Tier. The service pack only updates release 4.1 which can be identified by confirming that the* `CreditRiskSession.class` *in* `SASHOME\SASCreditRiskManagement\4.1\webapps\criskm\WEB-INF\class\com\sas\ets\creditrisk` *has a date of 3/9/2005. Any other build should ignore this key file information. If you want a newer version of SAS Credit Risk Management Mid-Tier, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS ETL Studio**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASETLStudio\9.1`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS ETL Studio 3.3. The service pack only updates the release that can be identified by a build number of 9.1.20050810.21015. Any other build should ignore this key file information. You can find the build number by using **Help→About**. If you want a newer version of SAS ETL Studio, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

  Note: *The SAS 9.1.3 Service Pack will not update installations of SAS Data Integration Studio 3.3. Please contact Tech Support according to the methods described in the "Technical Support" section on page 12 for information on how to update to installations of SAS Data Integration Studio 3.3.*

- **SAS Drivers for JDBC and SAS/CONNECT**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASDriversforJDBCandCONNECT\9.1`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS JDBC and Connect Drivers. The service pack only updates the release that can be identified by a build number of 3.1.3.2.20050622.59195. If your installation does not match the date above, you should visit the Demo and Downloads link on the Tech Support web site and update your software by downloading and running the install from this location. If you have any questions finding this download, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS E-mail Marketing**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASEmailMarketing\2.1\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS E-mail Marketing. The service pack only updates the release that can be identified by a version number of 2.1. Any other build should ignore this key file information. You can find the version number by using **Help→About**. If you want a newer version of SAS E-mail Marketing, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Enterprise Miner Java Client**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location:
  `SASHOME\SASAPCore\apps\EnterpriseMiner\webapps\sasmr\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Web Analytics. The service pack only updates the release that can be identified by a version number of 5.2.0.20050929.22025. Any other build should ignore this key file information. You can find the version number by using **Help→About**. If you want a newer version of SAS Web Analytics, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Forecast Server Mid-Tier**
  Key file: `sas.graph.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASAPCore\apps\Forecasting\webstart`

- **SAS Forecast Studio**
  Key file: `sas.svc.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASForecastStudio\1.2`

- **SAS Foundation Services**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASFoundationServices\1.1\jars`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Foundation Services. The service pack only updates the release that can be identified by a version number of 1.2.0.0.20050720.73229. Any other build should ignore this key file information. You can find the version number by invoking SAS Management Console, find the BI Manager node, invoke its popup menu, and select **About BI Manager….** If you do not have a BI Manager node, then your installation of SAS Foundation Services will not be updated by the service pack. If you want a newer version of SAS Foundation Services, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS/GRAPH Java Applets**
  Key file: `sas.graph.constapp.jar`
  Date: 2/10/2006.
  Default location for Windows: `SHAREDFILES\applets\9.1`
  Default location for UNIX: `SASHOME\SAS_9.1\misc\applets`

- **SAS Information Delivery Portal**
  Key file: `sas.packageviewer.jar`
  Date: 2/10/2006
  Default location: `SASHOME\Web\Portal2.0.1\Portal\WEB-INF\lib`

- **SAS Inventory Policy Studio**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default Location: `SASHOME\SASInventoryPolicyStudio\1.2`

- **SAS IT Service Level Management Client**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASITServiceLevelManagement\2.1`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS IT Service Level Management. The service pack only updates the release that can be identified by a version number of 2.1.20050809. Any other build should ignore this key file information. You can find the version number by using **Help→About**. If you want a newer version of SAS IT Service Level Management, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Java Metadata Interface**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\JavaMetadataInterface\9.1`

- **SAS Management Console**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASManagementConsole\9.1`

- **SAS Marketing Automation Application Server**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASMarketingAutomationCore\4.1\ear`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Marketing Automation Application Server. The service pack only updates release 4.3 which can be identified by confirming that the* `sas.analytics.crm.ma.javaconf.jar` *in* `SASHOME\SASMarketingAutomationCore\4.1` *has a date of 8/24/2005. Any other build should ignore this key file information. If you want a newer version of SAS Marketing Automation Application Server, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Marketing Automation Export Adapters**
  Key file: `sas.email.broadcast.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASMarketingAutomation\MAExportAdapters\4.1`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Marketing Automation Export Adapters. The service pack only updates release 4.3 which can be identified by confirming that the* `sas.analytics.crm.ma.adapter.jar` *in the default location listed above has a date of 8/24/2005. Any other build should ignore this key file information. If you want a newer version of SAS Marketing Automation Export Adapters, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Marketing Automation Integration Utilities**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASMarketingAutomation\MAIntegration\4.1`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Marketing Automation Integration Utilities. The service pack only updates release 4.3 which can be identified by confirming that the* `sas.analytics.crm.auxdataio.jar` *in the default location listed above has a date of 8/24/2005. Any other build should ignore this key file information. If you want a newer version of SAS Marketing Automation Integration Utilities, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Marketing Automation Launcher**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASMarketingAutomation\Launcher\4.1`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Marketing Automation Launcher. The service pack only updates release 4.3 which can be identified by confirming that the* `sas.analytics.crm.ma.launcher.jar` *in the default location listed above has a date of 8/24/2005. Any other build should ignore this key file information. If you want a newer version of SAS Marketing Automation Launcher, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Marketing Automation Web Components**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASMarketingAutomationWeb\4.1\war\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Marketing Automation Web Components. The service pack only updates release 4.3 which can be identified by confirming that the* `sas.analytics.crm.ma.webapp.jar` *in the default location listed above has a date of 8/24/2005. Any other build should ignore this key file information. If you want a newer version of SAS Marketing Automation Web Components, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Marketing Optimization Client (for version 4.3 only)**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASMarketingOptimization\4.3`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Marketing Optimization Client. The service pack only updates the release that can be identified by a version number of 4.3. Any other build should ignore this key file information. You can find the version number by using **Help→About**. If you want a newer version of SAS Marketing Optimization Client, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Marketing Optimization Plug-ins for SAS Management Console**
  Key file: `sas.graph.bip.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASManagementConsole\9.1\plugins`

- **SAS OLAP Cube Studio**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASOLAPCubeStudio\9.1`

- **SAS OLAP Server Monitor for SAS Management Console**
  Key file: `sas.smc.olapadmin.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASManagementConsole\9.1\plugins`

- **SAS OnlineDoc for the Web**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\Documentation\9.1`

- **SAS Personal Login Manager**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASPersonalLoginManager\9.1`

- **SAS Remote Help for z/OS**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\Documentation\9.1`

- **SAS Risk Dimensions Java Client**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\Risk\JavaClient\4.1\jars`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Risk Dimensions Java Client. The service pack only updates the release that can be identified by a version number of 4.2.1 (build 20050991246). Any other build should ignore this key file information. You can find the version number by using* **Help→About**. *If you want a newer version of SAS Risk Dimensions Java Client, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS/SECURE Java Component**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASSecureJava\1.3.1`

- **SAS Sourcing Data Quality Mid-Tier**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location:
  `SASHOME\SASSourcingDataQuality\3.5\CommodityClassification\`
  `sas.solutions.sdq.core\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Sourcing Data Quality Mid-Tier. The service pack only updates release 3.5 which can be identified by confirming that the* `sas.solutions.sdq.core.jar` *in the default location listed above has a date of 8/10/2005. Any other build should ignore this key file information. If you want a newer version of SAS Sourcing Data Quality Mid-Tier, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Sourcing Strategy**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location:
  `SASHOME\SASSupplierRelationshipManagement\3.5\Optimization\`
  `sas.solutions.srm.optimization\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Sourcing Strategy. The service pack only updates release 3.5 which can be identified by confirming that the* `sas.solutions.srm.optimization.jar` *in the default location listed above has a date of 8/10/2005. Any other build should ignore this key file information. If you want a newer version of SAS Sourcing Strategy, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Spend Analysis Mid-Tier**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location:
  `SASHOME\SASSupplierRelationshipManagement\3.5\SpendAnalysis\`
  `sas.solutions.srm.spendanalysis\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Spend Analysis Mid-Tier. The service pack only updates release 3.5 which can be identified by confirming that the* `sas.solutions.srm.spendanalysis.jar` *in the default location listed above has a date of 8/10/2005. Any other build should ignore this key*

file information. If you want a newer version of SAS Spend Analysis Mid-Tier, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.

- **SAS/STAT Power and Sample Size**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\PSS\2.0`

- **SAS Supplier Relationship Management Ranking Mid-Tier**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location:
  `SASHOME\SASSupplierRelationshipManagement\3.5\Ranking\sas.solutions.srm.ranking\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Supplier Relationship Management Ranking Mid-Tier. The service pack only updates release 3.5 which can be identified by confirming that the* `sas.solutions.srm.ranking.jar` *in the default location listed above has a date of 8/10/2005. Any other build should ignore this key file information. If you want a newer version of SAS Supplier Relationship Management Ranking Mid-Tier, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Web Analytics**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\SASWebAnalytics\5.2\SASWebAnalytics\WEB-INF\lib`

  Note: *The SAS 9.1.3 Service Pack will not update all installations of SAS Web Analytics. The service pack only updates release 5.2 which can be identified by confirming that the* `webanalytics.jar` *in the default location listed above has a date of 9/21/2005. Any other build should ignore this key file information. If you want a newer version of SAS Web Analytics, please contact Tech Support according to the methods described in the "Technical Support" section on page 12.*

- **SAS Web Infrastructure Kit**
  Key file: `sas.core.jar`
  Date: 2/10/2006
  Default location: `SASHOME\Web\Portal2.0.1\Portal\WEB-INF\lib`

Appendix B - Applying SAS 9.1.3 Service Pack to Upgrade a SAS Image on 32-Bit Windows

This section contains procedures to perform the following tasks:

- upgrading client servers and clients
- upgrading personal servers
- performing service pack installs from an upgraded SAS Image for deployment
- performing new installs from an upgraded SAS Image for deployment
- deploying a service pack silently.

Each of these procedures is described in detail in the sections below.

Upgrading Client Server Images and Clients

Update Your Client Server Image

1. Begin by inserting the **Service Pack 4 for SAS Foundation** CD into the CD-ROM drive. The **Software Installation** window should open. If it does not, open your **Start** menu, select **Run**, and enter `x:\setup.exe` in the text box, where `x:\` is your CDROM drive. Click **OK** after selecting the language that you want to use during the installation process.

2. Select the **Apply SAS 9.1.3 Service Pack to update a SAS image for deployment** under the Administrator Steps. This will bring up the Welcome to the **SAS Administrator Wizard** in order to apply the Service Pack. Click **Next**.

3. The **End User Type** window opens. Select **Client Users** and click **Next**.

4. The **Network Location** window opens and prompts you for the Destination Folder for the network directory of your Client Server image. This location is required so the SAS Administrator Wizard can examine your Client Server image and properly apply the Service Pack to your existing image. Click **Browse** to change the location if necessary, then click **Next**.

    If you provide an invalid location, the following error message will appear:

    ```
    Software Update Required:

    The selected location does not contain a valid version of SAS to
    upgrade.  Click Yes to provide a valid location and continue this
    installation
    ```

    or, click **No** to exit SAS Setup.

5. After providing a valid location, the **Service Pack** window opens, with the following message:

    ```
    Your existing SAS 9.1.3 software requires Service Pack 4.  If you
    would like to apply the service pack, click Yes to Continue.

    Or, click No to exit SAS Setup.
    ```

    Click **Yes** to continue.

6. The **Start Copying Files** window opens. Click **Next** to continue.

7. When the network image has been created, the **SAS Administrator Wizard Complete** window opens. Click **Finish** to close the installation.

Upgrade Your Clients from the Client Server Image

In order to upgrade the clients from the Client Server image, you should run the typical setup from your Client Server to apply the Service Pack. Please see the ***Administrator Guide for SAS 9.1.3 Foundation for Microsoft Windows*** which was supplied with your original SAS 9.1.3 software.

Note: *Quiet deployment of clients works the same as in SAS 9.1.3 with the exception that you do not have to record a new quietfile. Your existing quietfile will be sufficient.*

Upgrading Personal Server Images

1. Begin by inserting the **Service Pack 4 for SAS Foundation** CD into the CD-ROM drive. The **Software Installation** window should open. If it does not, open your **Start** menu, select **Run**, and enter `x:\setup.exe` in the text box, where `x:\` is your CDROM drive. Click **OK** after selecting the language that you want to use during the installation process.

2. Select the **Apply SAS 9.1.3 Service Pack to update a SAS image for deployment** under the Administrator Steps. This will bring up the Welcome to the **SAS Administrator Wizard** in order to apply the Service Pack. Click **Next**.

3. The **End User Type** window opens. Select **Personal Users** and click **Next**.

4. The **Network Location** window opens and prompts you for the Destination Folder for the network directory of your Personal Server image. This location is required so the SAS Administrator Wizard can examine your Personal Server image and properly apply the Service Pack to your existing image. To verify that you are in the right location, make sure that Disk1 is among the listed directories. Click **Browse** to change the location if necessary, then click **Next**.

   If you provide an invalid location, the following error message will appear:

   ```
   Software Update Required:

   The selected location does not contain a valid version of SAS to
   upgrade.  Click Yes to provide a valid location and continue this
   installation

   or, click No to exit SAS Setup.
   ```

5. After providing a valid location, the **Service Pack** window opens, with the following message:

   ```
   Your existing SAS 9.1.3 software requires Service Pack 4.  If you
   would like to apply the service pack, click Yes to Continue.

   Or, click No to exit SAS Setup.
   ```

   Click **Yes** to continue.

6. The **Start Copying Files** window opens. Click **Next** to continue.

7. When the network image has been created, the **SAS Administrator Wizard Complete** window opens. Click **Finish** to close the installation.

Performing New Installs from an Upgraded SAS Image for Deployment

After you have applied the Service Pack to your Personal Server, you can perform full installations on systems that do not have SAS 9.1.3. The full installation will apply the Service Pack automatically, so a separate Service Pack installation is not necessary.

As with SAS 9.1.3, begin the install process from `disk1`. For further information see the *Administrator Guide for SAS 9.1.3 Foundation for Microsoft Windows* which is available with your original SAS 9.1.3 software.

Deploying a Service Pack Silently for Personal Installs

Service Packs can be installed silently without the need of recording a quietfile or silent response file. Service Packs can also be installed silently from either Service Pack media or from a network location.

Before installing the Service Pack silently, you must first install the SAS Private JRE 1.4.2_09. The SAS Private JRE 1.4.2_09 can be installed silently as well.

From either the **Service Pack 4 for SAS Foundation** CD or a network location where you have copied the contents of the CD, run the SAS Private JRE 1.4.2_09 install by invoking `setup.exe` with the `-silent` switch. For example, use

```
d:\updins\srw\bundles\sasjre\setup.exe -silent
```

where `d:` is either your CD-ROM or network drive.

To install the Service Pack silently from the Service Pack media or from a network location, run the `setup.exe` from the `sas` folder on the **Service Pack 4 for SAS Foundation** disk with the following command line options:

```
"sas\setup.exe" /s /f2"<location of the silent setup log>"
```

For example, if `d:` is a CD-ROM drive,

```
"d:\sas\setup.exe" /s /f2"c:\temp\splog.txt"
```

The silent setup log will indicate the success of the install.

Note that there should be no space between the number `2` and the quotation mark (`"`) that immediately follows it.

Appendix C – Deploying the Service Pack Silently for the Client Tier

Silent mode is an optional installation mode that does not require user interaction. This is useful for administrators who need to deploy software to many machines across their enterprise in an unattended manner.

Silent mode for the Service Pack will create a log file at `<SASHOME>/SP4/sp4.log`. After the Service Pack has been run in silent mode, this log will contain a coded list of products that have been updated along with the installation location of the updated product. If the Service Pack cannot find a product to update, the log will only contain this message:

```
No Updates Required: The Mid-Tier and Desktop Client Service Pack
Wizard did not find any SAS software on your system that required an
update.
```

Insert the **Service Pack 4 Installer** CD in the CD-ROM drive (UNIX users should mount the CD using the appropriate mount command for your operating system). To use silent mode, you must run the installation program with the appropriate command-line options.

Usage:

```
<Setup_Program> -silent
```

For example:

(Windows) `<CDROM_DRIVE>\srvpakall1cd\srvpakall1cd\javaupdate\setup.exe -silent`

(Solaris) `<MOUNT_PATH>/srvpakall1cd/srvpakall1cd/javaupdate/setup_s64.sh -silent`

The appropriate installation program for your UNIX operating system can be identified by using the table below:

Operating System	Installation Program
AIX	setup_r64.sh
HP-UX	setup_h64.sh
HP-UX for the Itanium Processor Family Architecture	setup_h6i.sh
Linux for Intel Architecture	setup_lnx.sh
Linux for Itanium-based Systems	setup_lix.sh
Solaris	setup_s64.sh

4 December 2007