

## Rebuilding SAS® Web Application for Web Report Studio 4.3

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### ABSTRACT

SAS® Enterprise Business Intelligence Web Applications can be customized based on organizations need. In order to customize Web Applications setting and configuration, EAR (Enterprise Archive) files needs to be rebuilt and redeployed for the seamless access to SAS® Web applications. This paper illustrates and focuses on, required steps to install SAS® 9.3 Application Server, Web Application Server - JBoss Server-4.2.3 GA in Windows Server 2008 Environment and discuss rebuilding .EAR files scenarios for SAS® Web Report Studio 4.3.

### INTRODUCTION

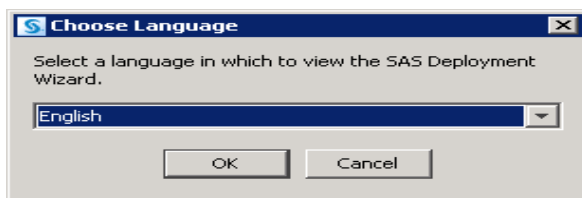
Once SAS® 9.3 Application Server is installed and configured along with Web Application Server- JBoss Server-4.2.3 GA, It is important to consider if any customization needs to be added to the existing configuration or any issue needs to be addressed by installing hot fix. For instance after installing a hot fix or customizing the HTTP Session Time-out Interval for Web Report Studio, you must rebuild EAR files. Since EAR files are rebuilt that contain updated most settings and configurations, next step is to redeploy EAR Files at Web Application Server - JBoss Server-4.2.3 GA to make sure updated settings are applied and are in effect.

EAR is a file format used by Java EE (Enterprise Edition) for packaging one or more modules into a single archive so that the deployment of the various modules onto an application server happens simultaneously and coherently. EAR file consist of .jar and .war that are packaged as JAR file with .ear extension and deployed into Web Application Server.

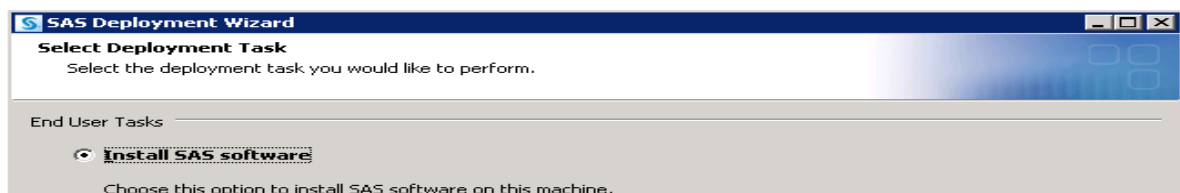
### Installing SAS 9.3 Application Server and Web Application Server JBoss Server 4.2.3 GA

Locate SAS Depot Folder: Right-click setup.exe and select Run as Administrator to run the SAS Deployment Wizard.

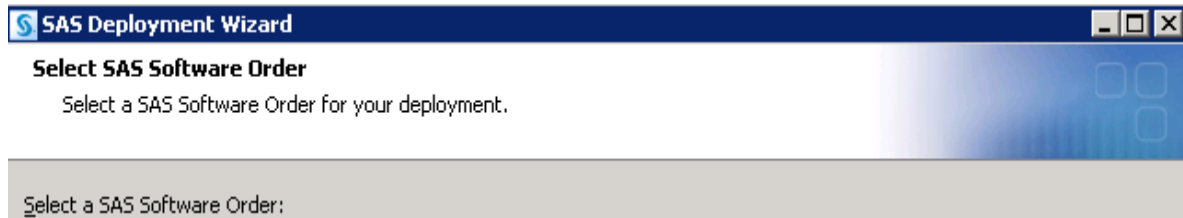
- 1) Choose Language: Select your language from the drop-down menu. Click OK.



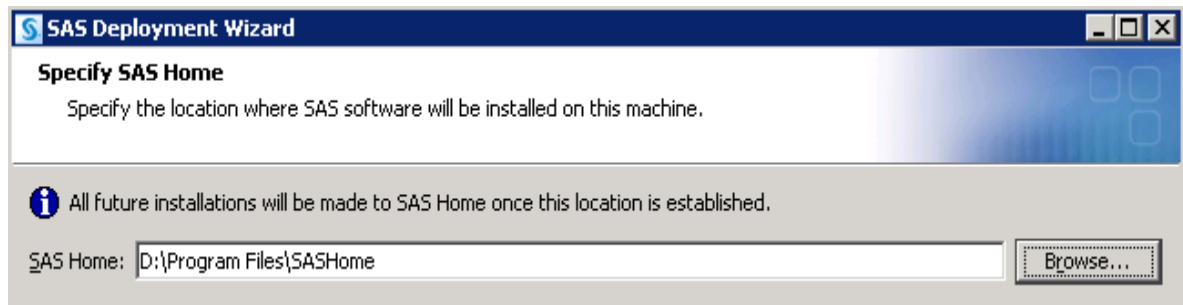
- 2) Select Deployment Task: Select Install SAS software. Click Next.



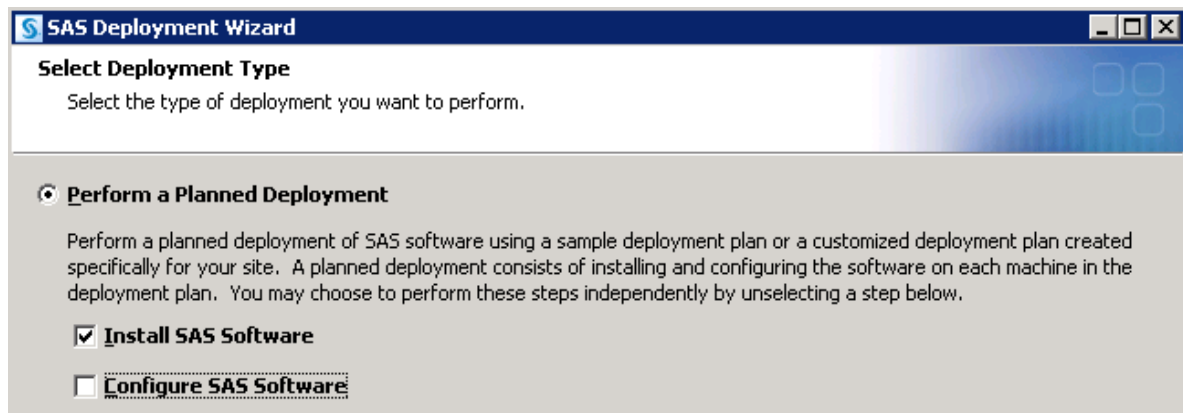
- 3) Select SAS Software Order: Select your SAS software order. Click Next.



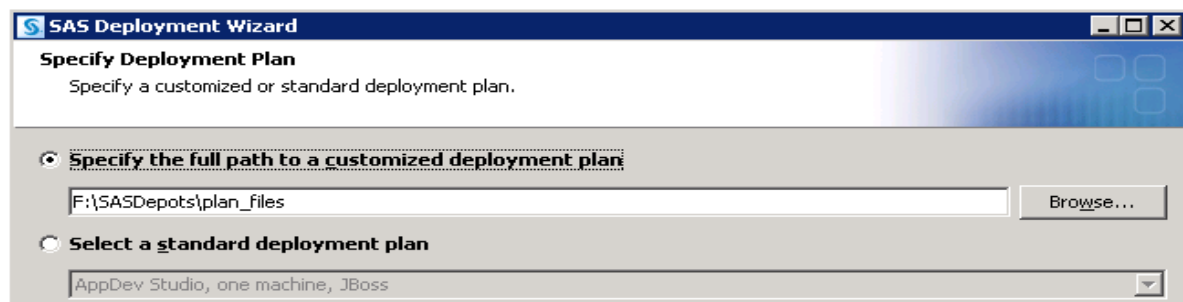
- 4) Specify SAS Home: Click Browse to select the location where the software will be installed. In this case location is D:\Program Files\SASHome. Click Next.



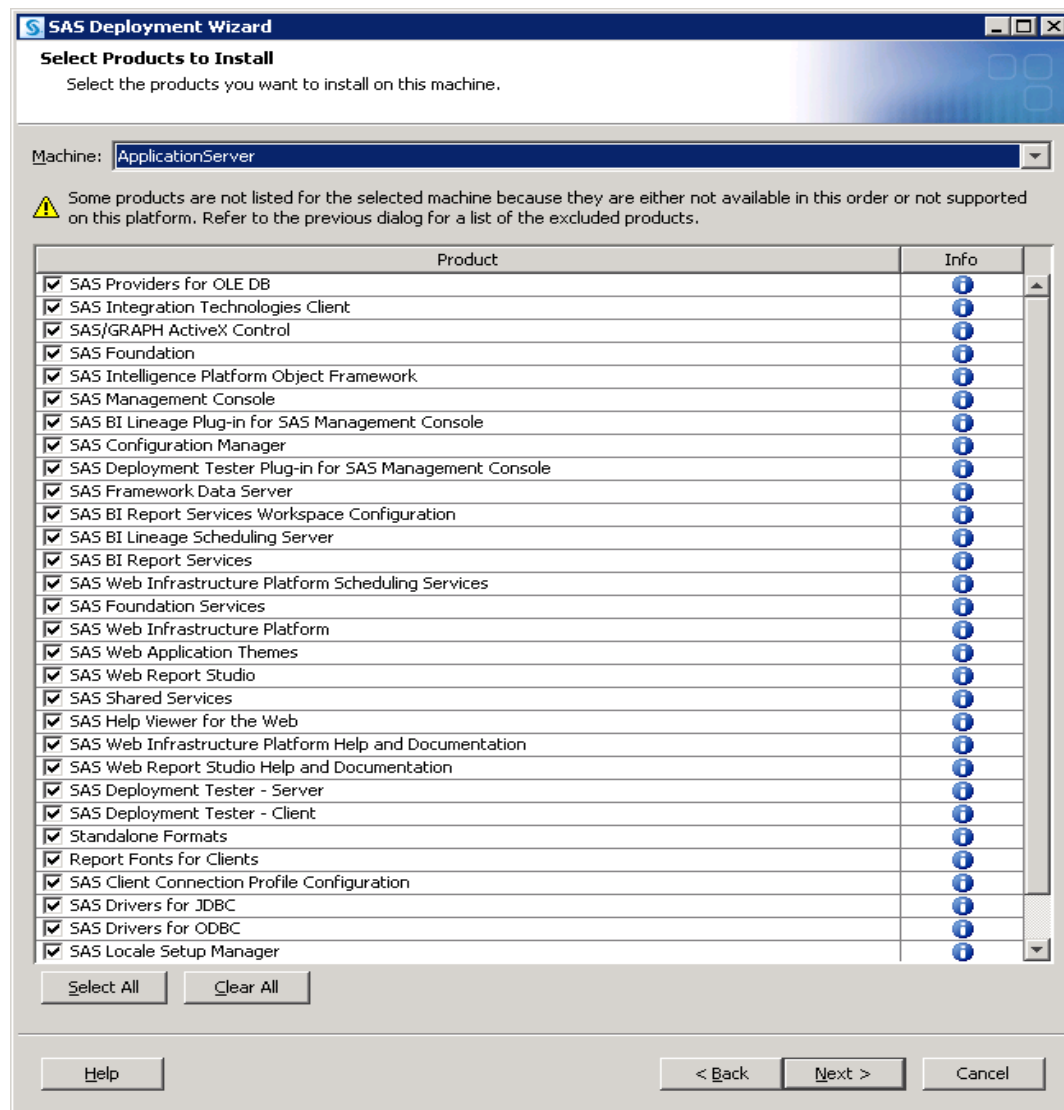
- 5) Select Deployment Type: Select Perform a Planned Deployment and Install SAS Software. Click Next.



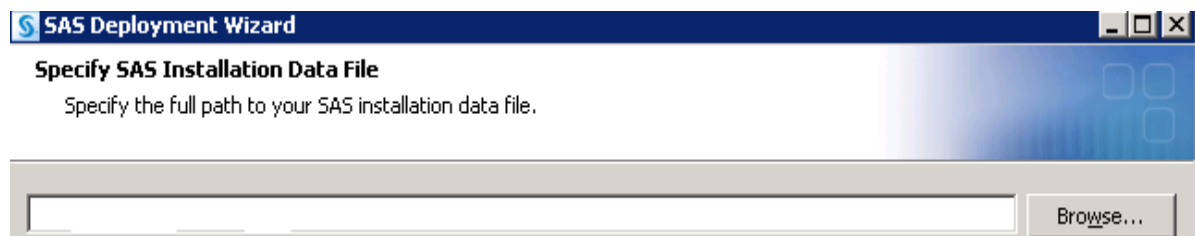
- 6) Specify Deployment Plan: Select Plan file, this is for two Machine Installation 1) SAS Metadata Server 2) SAS Application Server and Web Application Server .Click Next.



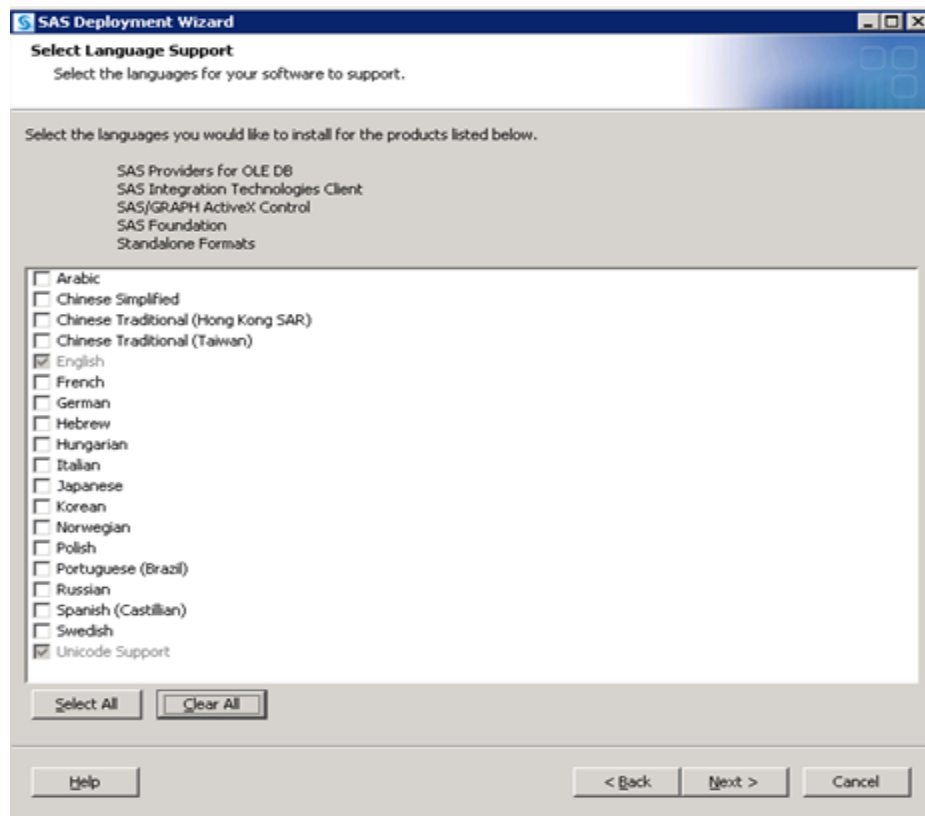
- 7) Select Products to Install: From drop-down menu, select ApplicationServer and select SAS software to be installed. Click Next.



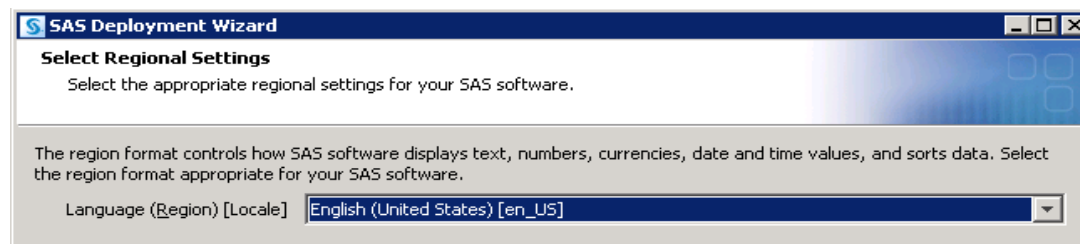
- 8) Specify SAS Installation Data File: Click Browse to select the location of your SAS installation data file. Click Next.



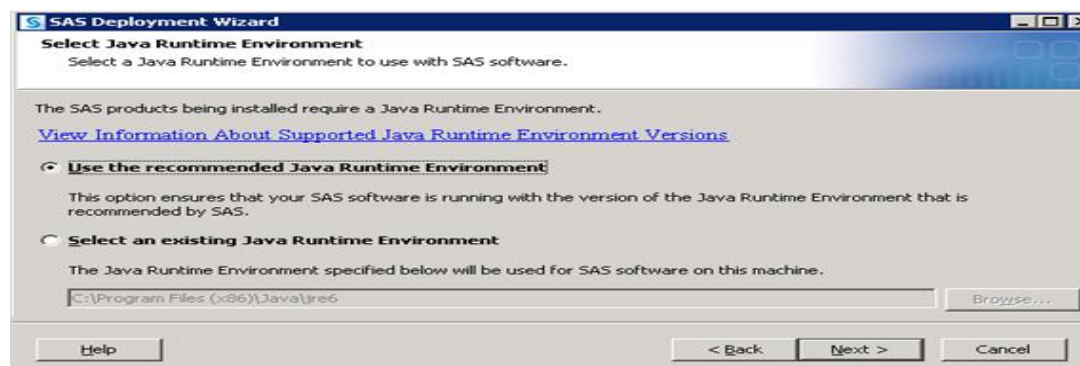
- 9) Select Language Support: Select the languages as English or click Clear All (English remains selected as the default language). Click Next.



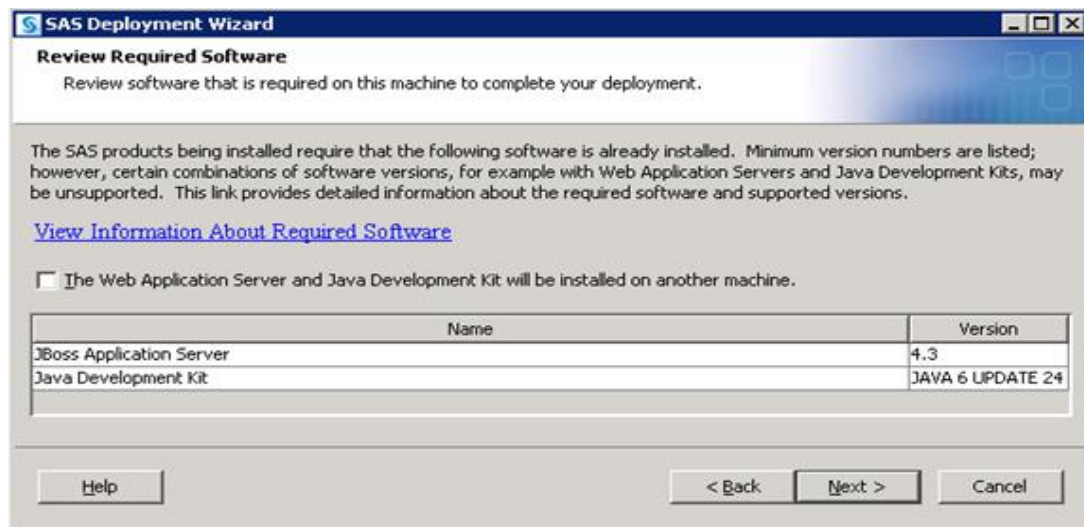
- 10) Select Regional Settings: From the Language (Region)[Locale] drop-down menu, select the regional language. Click Next.



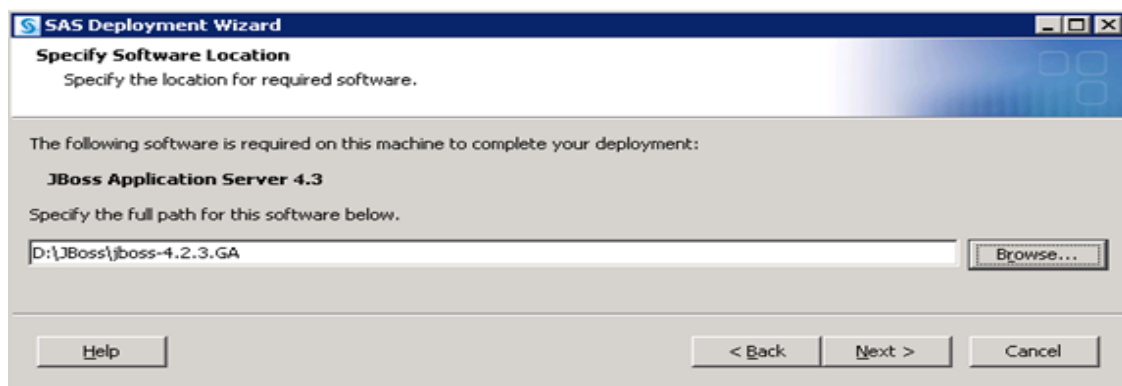
- 11) Select Java Runtime Environment: Select Use the recommended Java Runtime Environment and click Next



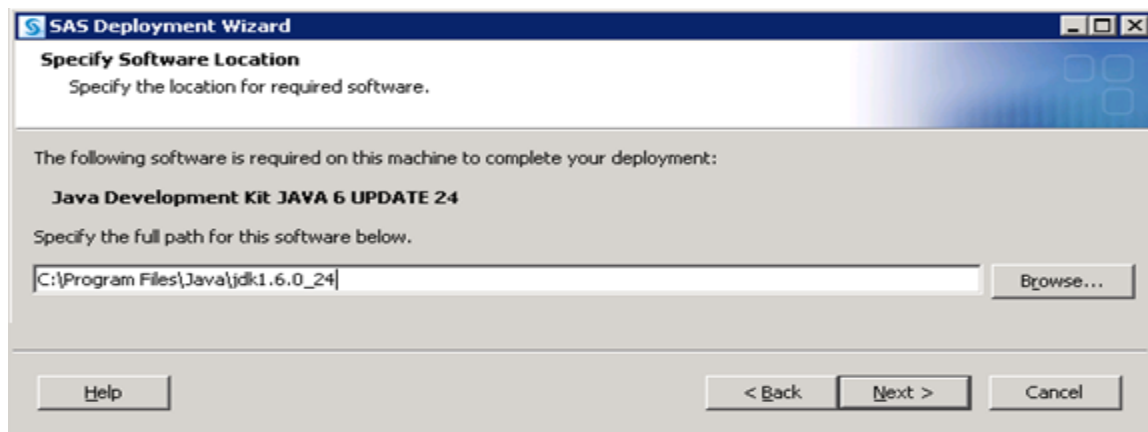
- 12) Review Required Software: Review the required software that is being installed on your machine. Click Next.



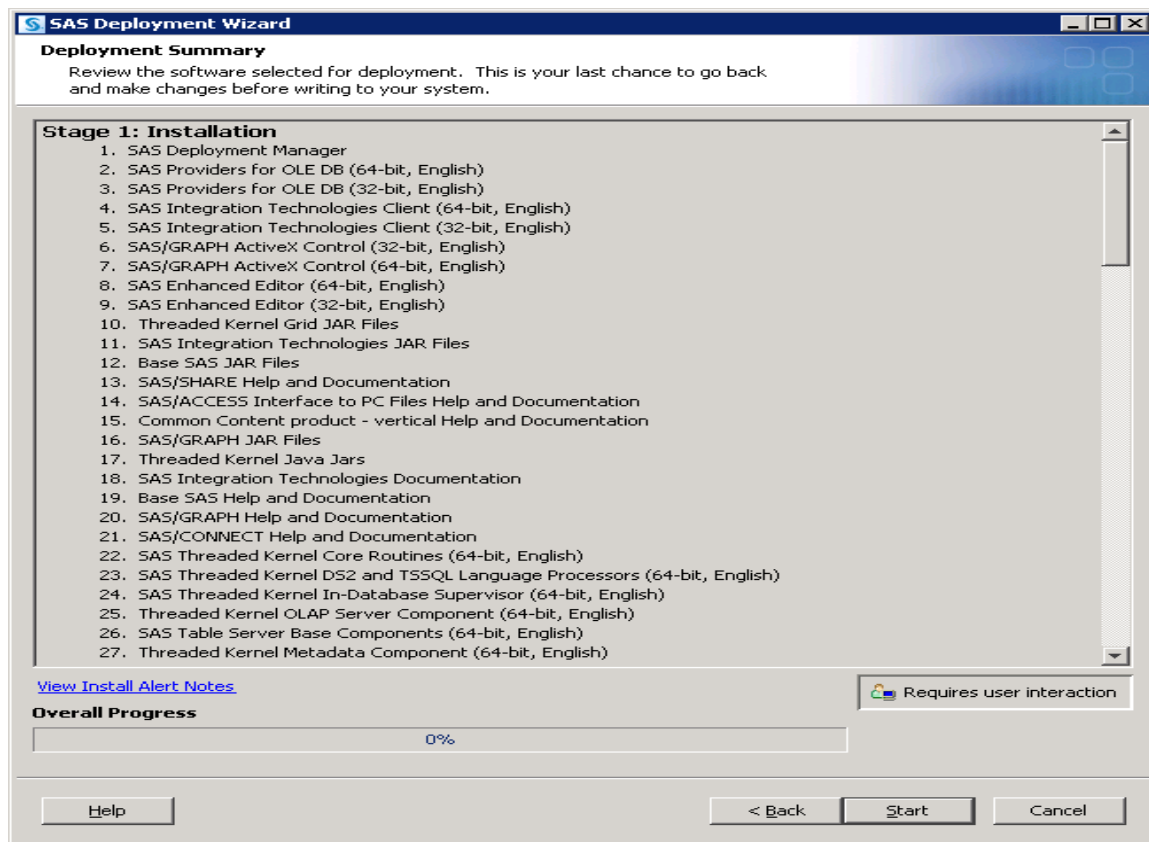
- 13) Specify Software Location: Browse to select the path to the Web Application Server- JBoss -4.2.3.GA



- 14) Specify Software Location: Click Browse to select the location of your JDK. Click Next.



- 15) Deployment Complete: Green check marks, next to every item on this page indicate that your deployment completed successfully.



## When to Rebuild Web Application

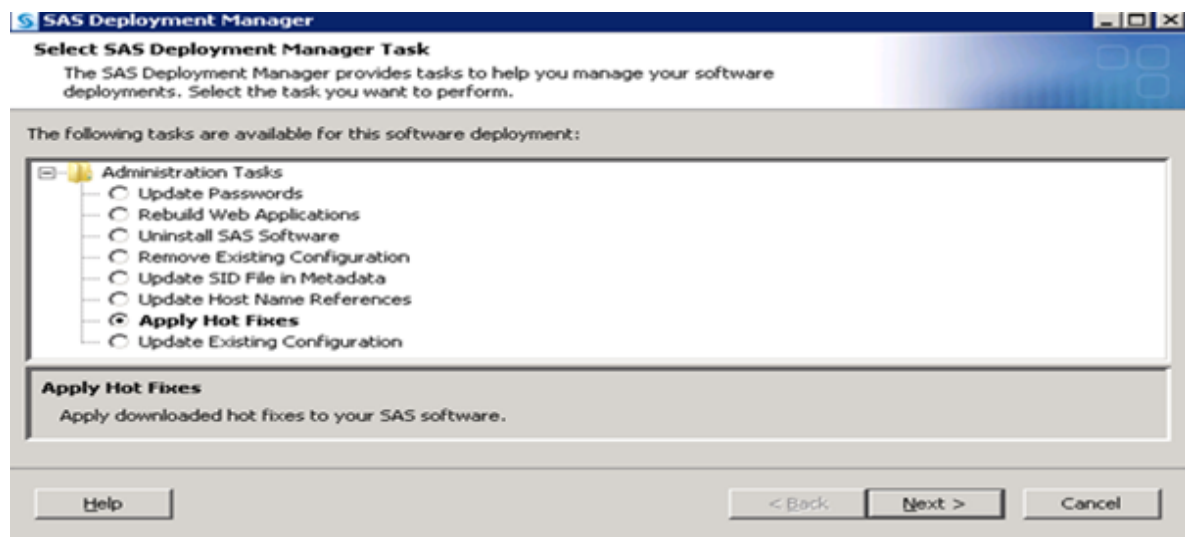
There are couples of reason to rebuild the Web application. Primarily we will be focusing on first two scenarios.

- 1) When you apply a hot fix or after maintenance release.
- 2) When you change the HTTP Session time-out interval for an application, Web Report Studio 4.3
- 3) When you change the Java security configuration for the application
- 4) If a custom theme is created for your organization, then rebuild the SAS Web Application Themes
- 5) If custom content is created, then add files to the WAR directory and rebuild the application to which the custom content applies.
- 6) If custom portal content is created, such as a custom portlet, then rebuild the SAS Information Delivery Portal.
- 7) Rebuild SAS Help Viewer for Midtier Applications after install or upgrade a SAS Web application that offers online Help - SAS Information Delivery Portal Help, AS Web Report Studio Help, SAS Web Report Viewer Help, SAS BI Dashboard Help, SAS Comment Manager help

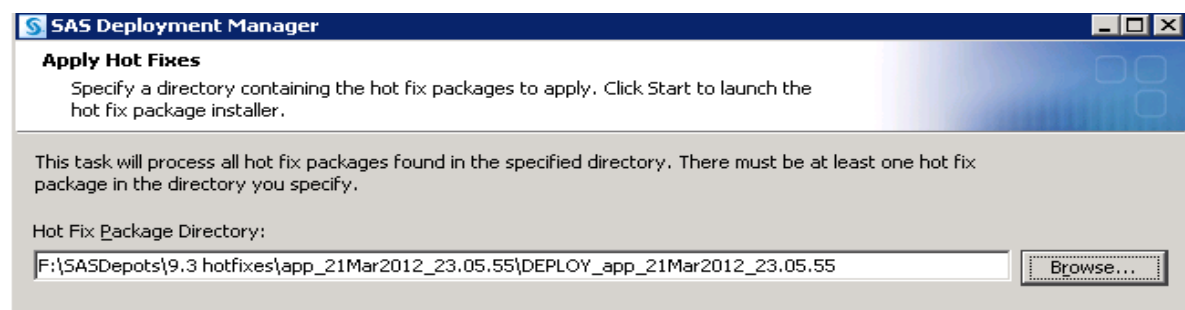
## Scenario # 1: When you apply a hot fix or after Maintenance release

After installing a hot fix or maintenance release for Web Report Studio 4.3, rebuild the EAR files for Web applications that were updated at your site. Follow the instructions in the maintenance documentation or follow the hot fix instructions.

- 1) Download the SAS hot fix to apply from SAS web site. Hot fix should be installed using the same account that performed the initial software installation and the account must have administrator privileges on client or server machine.
- 2) All active SAS sessions, daemons, spawners and servers must be terminated before applying hot fix.
- 3) Locate SAS Deployment Manager  
D:\ProgramFiles\SASHome\SASDeploymentManager\9.3
- 4) Right-click on sasdm.exe and select Run as Administrator to run the SAS Deployment Manager
- 5) Choose Language: Select your language as English from the drop-down menu. Click OK.
- 6) Select SAS Deployment Manager Task: Select Apply Hot fixes. Click next.



- 7) Apply Hot Fixes: Select the folder location of Hot fix. Click next.



- 8) Install SAS Software: Above displayed Hot fix will be installed. Click next and finish.



- 9) Review installed Hot fix, Browse D:\Program Files\SASHome\deploymntreg\DeploymentResistry.txt or DeploymentResistry. html file
- 10) After installing hot fix next step is to Re-build and Re-deploy the Web Applications.

## Scenario # 2: When you change the HTTP Session time-out interval for a Web application - Web Report Studio 4.3.

The session time-out specifies the time-out period or inactive session, assigned to the user for web application that is defined in the Web application server configuration. If the user does not refresh or request a page within the time-out period, the session ends. You can customize or increase the session time-out interval for your environment by modifying web.xml file.

Once session is expired after specific time, you would see following message in JBoss Server or Web Report Studio log file

JBoss Server Log file: D:\jboss\jboss-4.2.3.GA\server\SASServer1\log\server.log

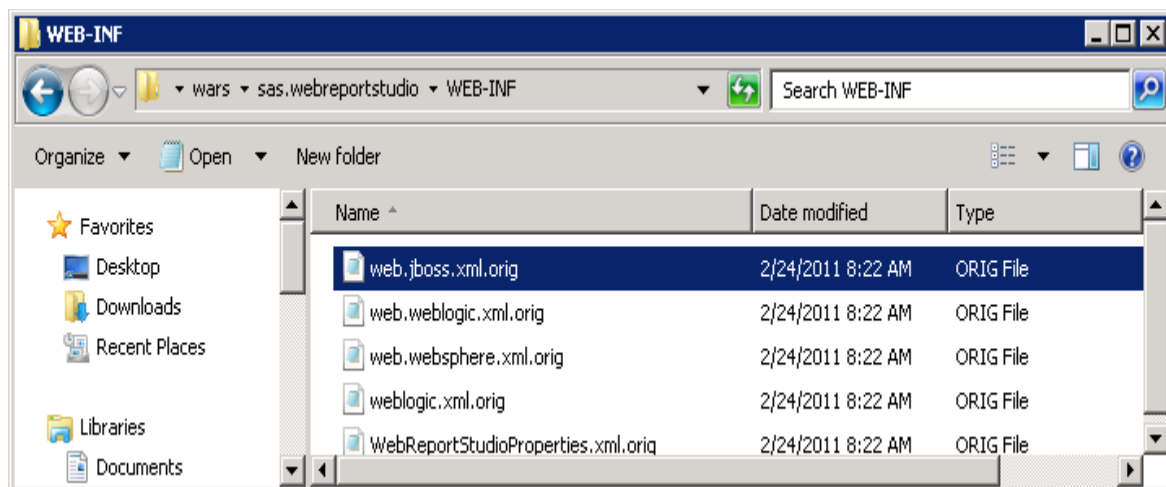
Web Report Studio Log File: D:\SAS\Config\Lev1\Web\Logs\SASWebReportStudio4.3.log

```
2013-02-14 09:59:55,750 INFO [STDOUT] 2013-02-14 09:59:55,750
[ContainerBackgroundProcessor[StandardEngine[jboss.web]]] WARN
[7d2cec96301c0ccc:2755a21b:13ca6b0e123:-7a80SINGH,R]
com.sas.apps.citation.model.user.SessionScopeManager - **
```

\*\* SESSION TIMEOUT \*\* userName (RSINGH) HttpSession has timed out. Initiating logoff \*\*

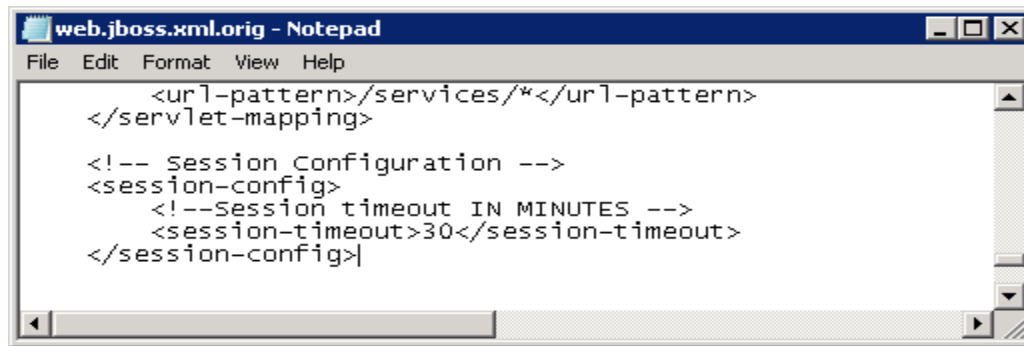
Follow below steps to change HTTP Session time-out interval:

- 1) Locate web.xml files: D:\Program Files\SASHome\SASWebReportStudio\4.31\Configurable\wars\sas.webreportstudio\WEB-INF\web.jboss.xml.orig

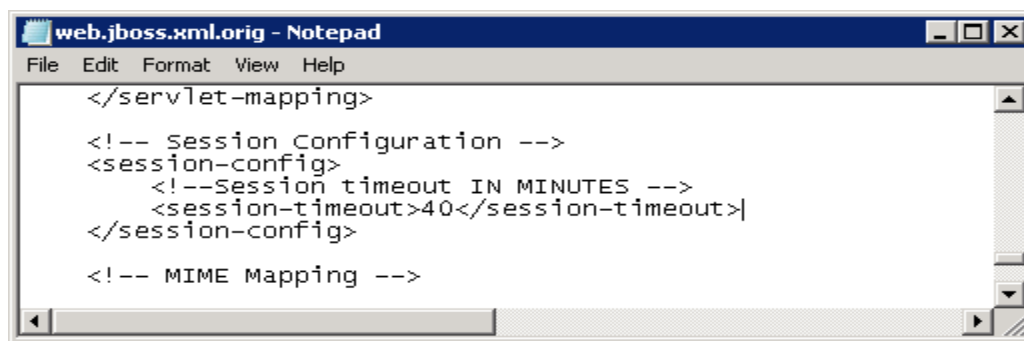


- 2) Open web.jboss.xml.orig . The default value for a session time-out interval is 30 minutes.





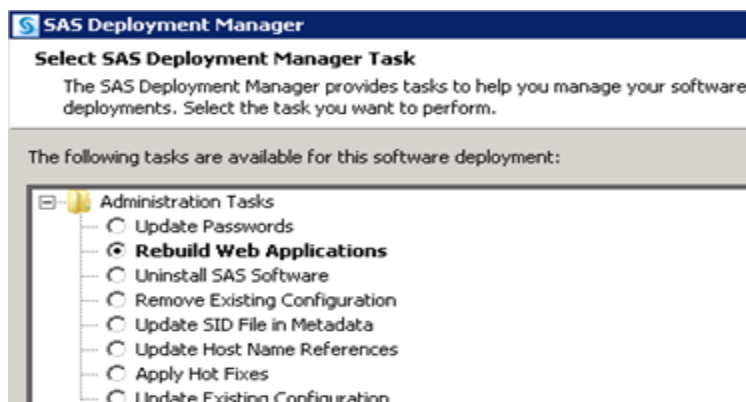
- 3) Change the session timeout to 40 Minutes, Save and close the file. Session- timeout values should not be less than 5.



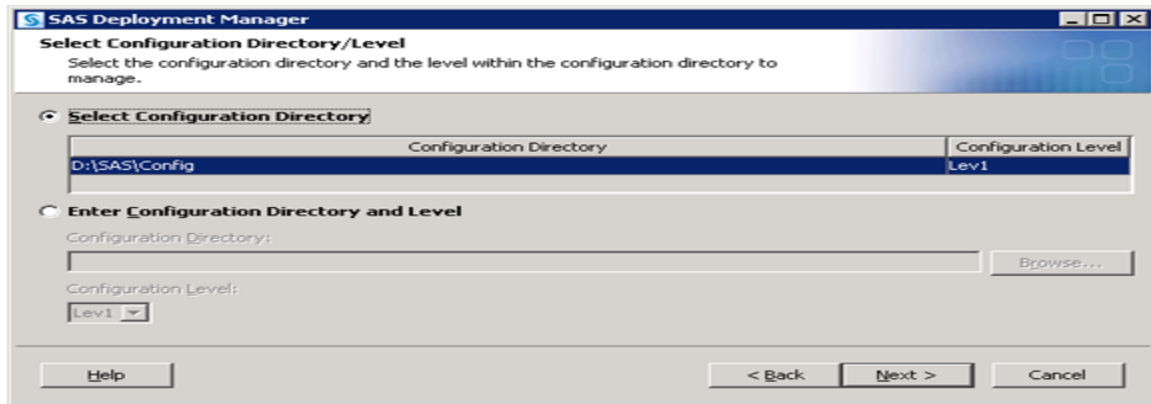
### Rebuilding Web Application- Web Report Studio 4.3

Once you have customized the settings for web application, use the SAS Deployment Manager to rebuild the EAR files that contain the SAS Web applications.

- 1) The Web application server – JBoss Server can be either running or stopped
- 2) Make sure that the SAS Metadata Server is running
- 3) Start SAS Deployment Manager D:\Program Files\SASHome\SASDeploymentManager\9.3, Right click sasdm.exe and Select Run as Administrator
- 4) Choose Language Select English and Click Next.
- 5) Select Rebuild Web Applications and click next.



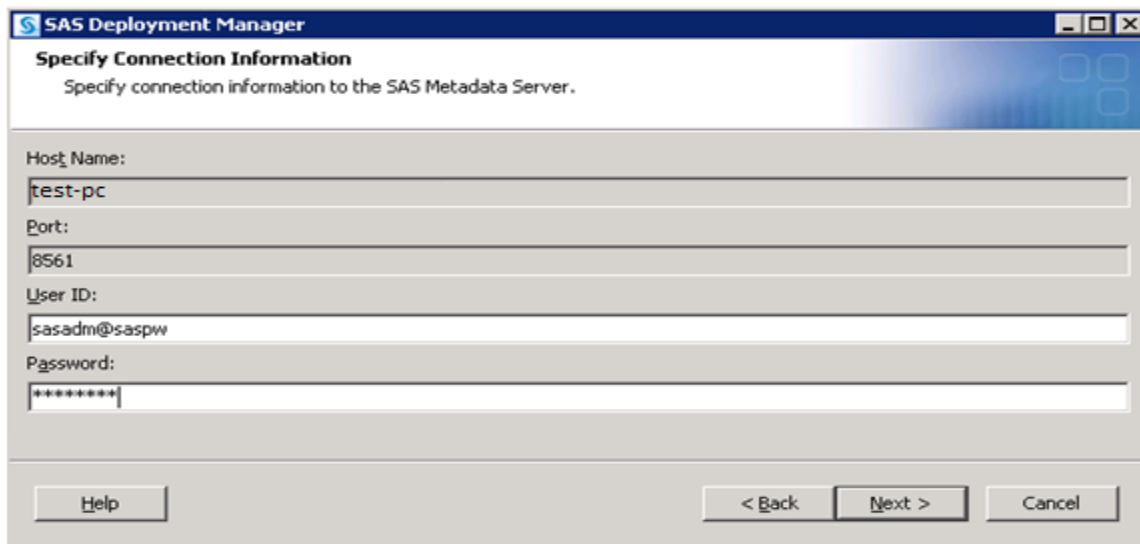
6) Specify the configuration directory/ level; in this case it's D:\SAS\Lev1. Click Next.



The screenshot shows the 'SAS Deployment Manager' window with the title 'Select Configuration Directory/Level'. The instruction says 'Select the configuration directory and the level within the configuration directory to manage.' There are two radio buttons: 'Select Configuration Directory' (selected) and 'Enter Configuration Directory and Level'. Under 'Select Configuration Directory', there is a table with two columns: 'Configuration Directory' and 'Configuration Level'. The first row shows 'D:\SAS\Config' and 'Lev1' respectively. At the bottom, there are 'Help', '< Back', 'Next >', and 'Cancel' buttons.

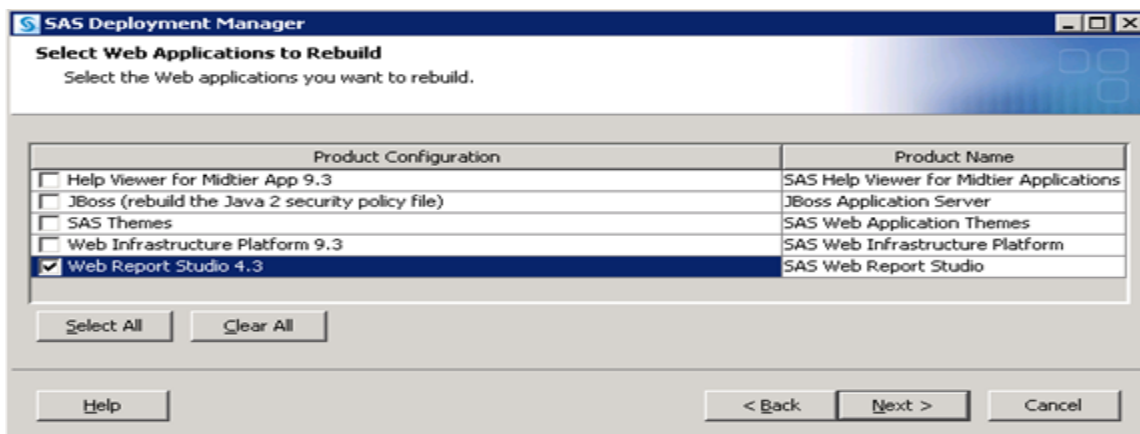
Configuration Directory	Configuration Level
D:\SAS\Config	Lev1

7) Specify Connection Information: Enter the user ID and password for an unrestricted administrative user sasadm@saspw. Click Next.



The screenshot shows the 'SAS Deployment Manager' window with the title 'Specify Connection Information'. The instruction says 'Specify connection information to the SAS Metadata Server.' There are fields for 'Host Name' (test-pc), 'Port' (8561), 'User ID' (sasadm@saspw), and 'Password' (masked with asterisks). At the bottom, there are 'Help', '< Back', 'Next >', and 'Cancel' buttons.

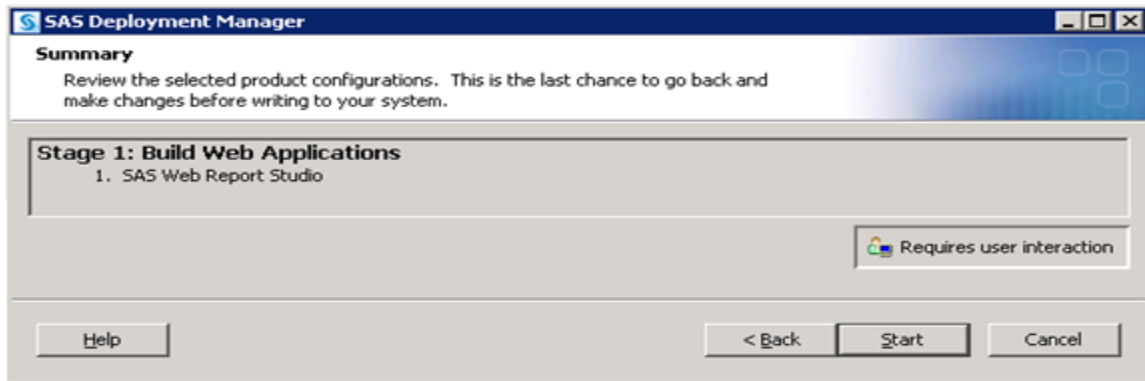
8) Select Web Application to Rebuild: Select the check boxes for Web Report Studio 4.3. Click Next



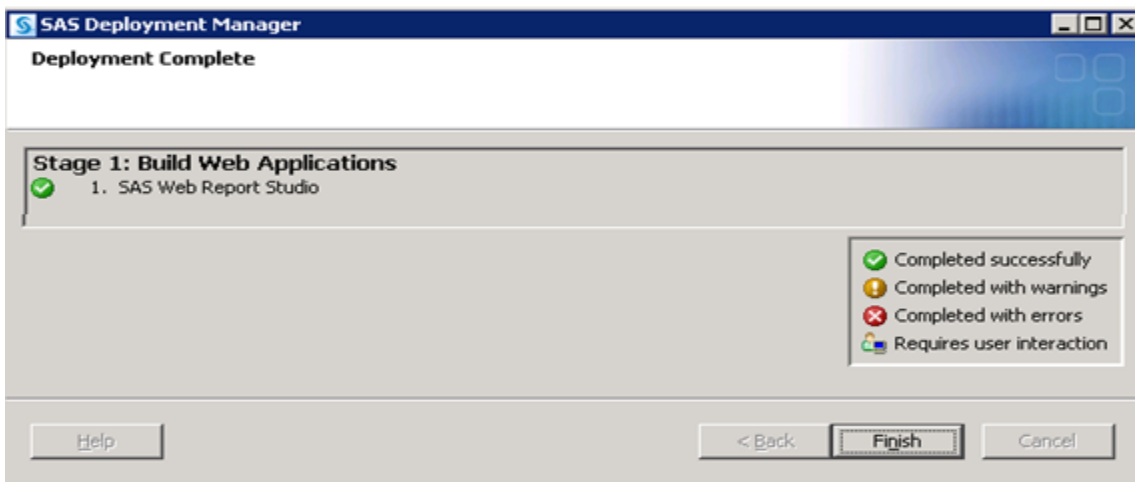
The screenshot shows the 'SAS Deployment Manager' window with the title 'Select Web Applications to Rebuild'. The instruction says 'Select the Web applications you want to rebuild.' There is a table with two columns: 'Product Configuration' and 'Product Name'. The first four rows are unchecked, and the last row, 'Web Report Studio 4.3', is checked. At the bottom, there are 'Select All', 'Clear All', 'Help', '< Back', 'Next >', and 'Cancel' buttons.

Product Configuration	Product Name
<input type="checkbox"/> Help Viewer for Midtier App 9.3	SAS Help Viewer for Midtier Applications
<input type="checkbox"/> JBoss (rebuild the Java 2 security policy file)	JBoss Application Server
<input type="checkbox"/> SAS Themes	SAS Web Application Themes
<input type="checkbox"/> Web Infrastructure Platform 9.3	SAS Web Infrastructure Platform
<input checked="" type="checkbox"/> Web Report Studio 4.3	SAS Web Report Studio

9) Summary: Review the Summary page and Click Start.



10) Deployment Complete: Click Finish. For successful build see green check mark icon



## Web Applications Server and EAR Files after Rebuild

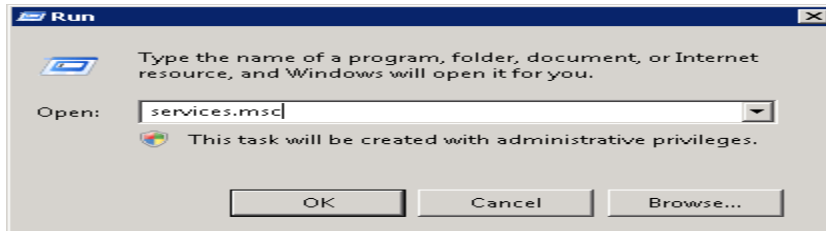
In the above step (Rebuilding Web Application), SAS Deployment Manager rebuilt the EAR file for Web Report Studio 4.3. The rebuild process updates two directories for each rebuilt Web application. The rebuilt EAR files are placed in the SAS-config-dir\Lev1\Web\Staging directory. This Table lists the location and the name of the EAR file for Web Report Studio.

Location of EAR File	EAR File Name	Application
SAS\config\Lev1\Web\Staging	An EAR file for each rebuilt Web application is placed in this directory sas.webreportstudio4.3	SAS Web Report Studio 4.3
SAS\config\Lev1\Web\Staging\exploded	An exploded version of each rebuilt Web application is placed in this directory. sas.webreportstudio4.3.ear and JBoss Server utilize .Ear file from exploded folder	SAS Web Report Studio 4.3

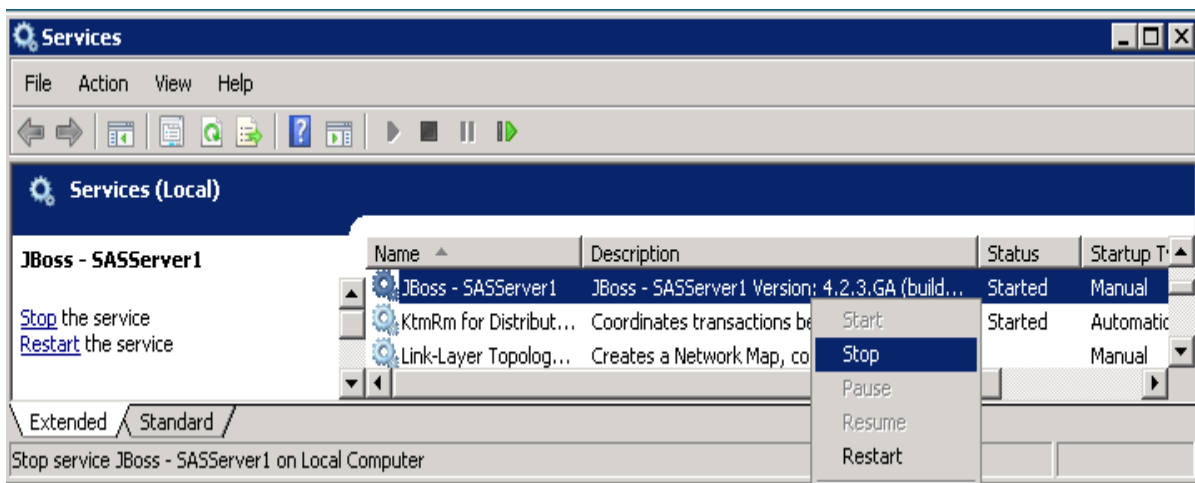
## Redeploy Rebuilt EAR File at JBoss Web Application Server

JBoss Server is configured to run the SAS Web applications from exploded EAR files. Once EAR files are rebuilt, next step is to deploy the EAR files/folder, so that changes are available to Web application. To do so follow below set of instructions.

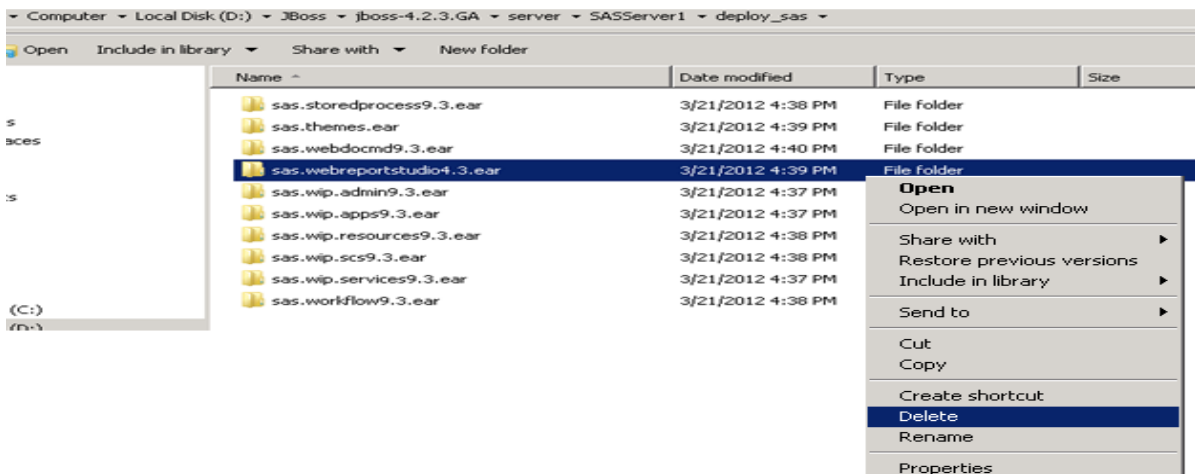
- 1) Go to Run command and type Services.msc



- 2) Shut down JBoss Server: Jboss-SASServer1, Right Click and Stop



- 3) Browse deploy\_sas: D:\JBoss\jboss-4.2.3.GA\server\SASServer1\deploy\_sas and delete sas.webreportstuid4.3.ear folder



- 4) Browse exploded folder: \SAS\Config\Lev1\Web\Staging\exploded\ Copy

sas.webreportstudio4.3.ear folder and Paste under D:\JBoss\jboss-4.2.3.GA\server\SASServer1\deploy\_sas

- 5) Browse JBoss work folder: D:\JBoss\jboss-4.2.3.GA\server\SASServer1\work and delete the jboss.web folder
- 6) Browse tmp folder: D:\JBoss\jboss-4.2.3.GA\server\SASServer1\tmp and delete all the files\folders under temp
- 7) Browse log folder: D:\JBoss\jboss-4.2.3.GA\server\SASServer1\log and delete all the log files
- 8) Restart SAS Metadata Server
- 9) Start JBoss Server after restarting SAS Remote Services
- 10) Review the JBoss Server log: D:\JBoss\jboss-4.2.3.GA\server\SASServer1\log\server.log.2012-03-22.log and find "Started in" keyword to make sure JBoss services are started and running.

## **CONCLUSION**

We discussed two scenarios to rebuild and redeploy .EAR files for Web Report Studio 4.3. Similarly other SAS web application can be customized and changes can be accommodated and redeployed accordingly. For more details please refer SAS(R) 9.3 Intelligence Platform: Middle-Tier Administration Guide

## **REFERENCES**

Details on the process of Rebuilding a SAS Web Applications - Chapter 7- Administering SAS Web Applications in the SAS(R) 9.3 Intelligence Platform: Middle-Tier Administration Guide, Third Edition and SAS9.3 Intelligence Platform Installation and Configuration Guide

## **CONTACT INFORMATION**

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