SAS Drug Development 4.2.1

March 11, 2013
Upgrade Instructions

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SAS Drug Development 4.2.1, Installation Instructions

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Checklist A: "Backup of Customized SDD Files"

Note*:** This document is intended to assist an administrator in installing ***SAS Drug Development (SDD) 4.2.1 from version ***4.2***.

Prerequisites: All installation checklists for SDD 4.2 should have been completed prior to completing this checklist.

Checklist A: "Backup of Customized SDD Files"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
A1.	Login to an admin PC.	Windows display appears.	
A2.	Start Xming by selecting **Start → Programs → Xming →Xming**. ***Note:*** Exceed was having some display issues with some third party applications, so we recommend using Xming.	Xming starts and you see an icon on the PC taskbar.	
A3.	Using the putty tool, create an **ssh** connection from the admin PC to the web server and login as **webtrust**. Make sure the Enable X11 forwarding option is not set. Setting this option causes the web application to crash occasionally.	You're prompted for the password.	
A4.	Enter the webtrust *password.*	You're logged into web server.	
A5.	Use the **script** command to capture commands that are typed in the Unix window. The syntax is **script /var/staging_logs/**<*servername*>**_421upgrade.txt**	System should indicate script has started.	
A6.	If any customizations were made to the SDD 4.2 web application, these files should be copied to another location on this server. **Ex: cp /sfw/tcServer/sddserver1/webapps/sdd/WEB-INF/web.xml /sfw/sdd42_custom**	Files are copied as a backup.	
A7.	Repeat **steps A1 - A6** for any additional sddservers.	Steps repeated as necessary.	

Signature below indicates completion of Checklist A, items A1 – A7, above.

Name (print or type): _____ Sign-off : _____ Date:_____

Checklist B: "Install the SAS Hot Fix"

Checklist B: "Install the SAS Hot Fix"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
B1.	Using the putty tool, create an **ssh** connection from the admin PC to the SAS processing server or single SAS server and login as **sasadmin**. Make sure the Enable X11 forwarding option is not set. Setting this option causes the web application to crash occasionally.	You're prompted for the password.	
B2.	Enter the sasadmin *password*.	You're logged into SAS server.	
B3.	Use the **script** command to capture commands that are typed in the Unix window. The syntax is **script /var/staging_logs/**<*servername*>**_sas_421upgrade.txt**	System should indicate script has started.	
B4.			
B5.	**Transfer Files** From the admin PC, use the WinSCP2 tool to copy the following file from **R:\R&D\Installation\SDD_Setup_42\SASServer\hotfixes** to **/sfw/installers** on destination server. Transfer this as a **binary** file. **I23005la.zip**	The file is transferred to the SAS server.	
B6.			

Checklist B: "Install the SAS Hot Fix"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
B7.	**Install SAS Hot Fix** Stop the SAS server processes by typing one of the following commands. If this is a single SAS server system, type **/sfw/sas_servers/Lev1/sas.servers stop** Otherwise, type **/sfw/sas_servers/Lev1/ObjectSpawner2/ObjectSpawner.sh stop** or type **/sfw/sas_servers/Lev1/ObjectSpawner**<*servername*>**/ObjectSpawner.sh stop**	The SAS processes are stopped.	
B8.	Type **ps –ef | grep sasadmin**	The following processes should not be running (depending if this is a single SAS server, first SAS processing server or another SAS processing server): /bin/sh -p /sfw/sas_servers/Lev1/SASMeta/MetadataServer/MetadataServer.sh start2_tag /bin/sh -p /sfw/sas_servers/Lev1/Web/Applications/RemoteServices/RemoteServices.sh start2 /bin/sh -p /sfw/sas_servers/Lev1/FrameworkServer/dffedsvrcfg/dffedsvrcfg.sh start2_tag /bin/sh -p /sfw/sas_servers/Lev1/ObjectSpawner/ObjectSpawner.sh start2_tag	
B9.	Type **mv /sfw/installers/I23005la.zip /sfw/sas9.3/InstallMisc/HotFixes/New/.**	The hot fix file is moved.	
B10.	Type **cd /sfw/sas9.3/SASDeploymentManager/9.3**	Navigate to that directory.	

Checklist B: "Install the SAS Hot Fix"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
B11.	Type **./sasdm.sh**	The Choose Language window displays.	
B12.	Click **OK**.	The Select SAS Deployment Manager Task window displays.	
B13.	Select the **Apply Hot Fixes** radio button and click **Next**.	The Apply Hot Fixes window displays.	
B14.	Leave the default value of **/sfw/sas9.3/InstallMisc/HotFixes/New** in the Hot Fix Package Directory field. Click **Next**.	The SAS Deployment Manager does a system check and then the displays the results in the Checking System page. In the middle of the screen, you should see "Unwritable files: 0."	
B15.	Click **Next**.	The Review Hot Fix Updates window displays the list of files that will be added, removed, and changed.	
B16.	Click **Next**.	The Deployment Summary page displays.	
B17.	Click **Start**.	The hotfix is deployed, then the Deployment Complete page displays upon completion.	
B18.	Click **Next**.	The Hot Fix Updates Complete window displays the list of hot fix updates that were processed.	
B19.	Click **Next**.	The Additional Resources window displays.	
B20.	Click **Finish**.	The SAS Deployment Manager closes.	
B21.			
B22.	**Update Object Spawner for GMT** Type **cd /sfw/sas_servers/Lev1/ObjectSpawner** **Note:** The Object Spawner directory name may be a little different depending if this is a single-SAS-server configuration or a multi-SAS-server one.	Navigate to that directory.	
B23.	Type **vi ObjectSpawner.sh**	File opens in vi for editing.	

Checklist B: "Install the SAS Hot Fix"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
B24.	At the beginning of this file beneath the block of #'s representing comments, type: **TZ=GMT** **export TZ**	File is modified.	
B25.	Hit **Esc** and type **:x** to save the file.	File is saved with changes made.	
B26.	Type **more ObjectSpawner.sh**	Verify that changes have been saved.	
B27.	Start the SAS server processes by typing one of the following commands. If this is a single SAS server system, type **/sfw/sas_servers/Lev1/sas.servers start** Otherwise, type **/sfw/sas_servers/Lev1/ObjectSpawner2/ObjectSpawner.sh start** or type **/sfw/sas_servers/Lev1/ObjectSpawner**<*servername*>**/ObjectSpawner.sh start**	The SAS processes are started.	

Checklist B: "Install the SAS Hot Fix"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
B28.	Type **ps –ef | grep sasadmin**	The following processes should be running (depending if this is a single SAS server, first SAS processing server or another SAS processing server): /bin/sh -p /sfw/sas_servers/Lev1/SASMeta/MetadataServer/MetadataServer.sh start2_tag /bin/sh -p /sfw/sas_servers/Lev1/Web/Applications/RemoteServices/RemoteServices.sh start2 /bin/sh -p /sfw/sas_servers/Lev1/FrameworkServer/dffedsvrcfg/dffedsvrcfg.sh start2_tag /bin/sh -p /sfw/sas_servers/Lev1/ObjectSpawner/ObjectSpawner.sh start2_tag	
B29.	Hit **Ctrl-D** to stop the script command.	System indicates script stopped running.	
B30.	Type **exit**	You're logged off the web server.	
B31.	Repeat **Checklist B** for any additional SAS processing servers.		

Signature below indicates completion of Checklist B, items B1 – B31, above.

Name (print or type): _____ Sign-off : _____ Date:_____

Checklist C: "Deploy the SDD 4.2.1 Distribution"

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C1.	**Transfer File** From the admin PC, download the **SDD 4.2.1** distribution from the SAS Hot Fix site. After the distribution has been downloaded, use the WinSCP2 tool to copy the file to **/sfw/installers** on the web server. Transfer this as a **binary** file. **sdd-4.2.1.PROD.153.20130221.143725.zip**	The file is transferred to the web server.	
C2.			
C3.	**Shutdown tcServers** Type **cd /sfw/tcServer**	Navigate to that directory.	
C4.	Type **./tcruntime-ctl.sh sddserver1 stop**	System displays: INFO Instance name: sddserver1 INFO Script directory: /apps/tcServer INFO tc Runtime location:/apps/tcServer INFO Instance base: /apps/tcServer INFO Binary dir: /apps/tcServer/tomcat-6.0.35.A.RELEASE INFO Runtime version: 6.0.35.A.RELEASE INFO Script version: 2.6.3.RELEASE Instance is running as PID=29796, shutting down... Instance is running PID=29796, sleeping for up to 60 seconds waiting for shutdown Instance is still running PID=29796, forcing a shutdown	
C5.	Type **ps –ef | grep webtrust**	You should not see the tcserver process running.	
C6.	Type **cd sddserver1/logs**	Navigate to the /sfw/tcServer/sddserver1/logs directory.	
C7.	Delete or rename the **sdd_info.log** and **catalina.out** files.	Log files are deleted or renamed.	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C8.	Type **ls –al**	Verify that log files have been renamed or deleted and the .pid file has been deleted.	
C9.	Repeat **steps C4 – C8** for the remaining tcServers, including stopping the **sddserveradmin** tcServer.	There are no tcServer processes running.	
C10.			
C11.	**Unzip and Deploy the Build** Type **cd /home/webtrust/Installs**	Navigate to that directory.	
C12.	Type **rm –rf dist**	The dist directory is deleted.	
C13.	Type **ls –al**	Verify that the dist directory was deleted.	
C14.	Type **cp /sfw/installers/sdd-4.2.1.PROD.153.20130221.143725.zip .**	The SDD 4.2.1 binary is copied.	
C15.	Type **unzip -q sdd-4.2.1.PROD.153.20130221.143725.zip**	The contents of the zip file are extracted.	
C16.	Type **ls –al**	You will see a dist directory that was created in the previous step.	
C17.	Type **cd dist/install**	Navigate to the /home/webtrust/Installs/dist/install directory.	
C18.	Type **ant clean**	System displays: Buildfile: build.xml clean-tomcat: clean-tcserver: [delete] Deleting directory /sfw/tcServer/sddserver1/webapps/sdd [delete] Deleting directory /sfw/tcServer/sddserver2/webapps/sdd [delete] Deleting directory /sfw/tcServer/sddserver3/webapps/sdd [delete] Deleting directory /sfw/tcServer/sddserver4/webapps/sdd clean: BUILD SUCCESSFUL Total time: 0 seconds	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C19.	Type **ant deploy**	System displays: Buildfile: build.xml deploy-tomcat: deploy-tcserver: deploy-tcserver-1: do-deploy-tcserver: [echo] Deploying to tcServer... [echo] tcServer home = /sfw/tcServer [echo] tcServer deployment = /sfw/tcServer/sddserver1/webapps/sdd [copy] Copying 537 files to /sfw/tcServer/sddserver1/webapps/sdd deploy-tcserver-2: do-deploy-tcserver: [echo] Deploying to tcServer... [echo] tcServer home = /sfw/tcServer [echo] tcServer deployment = /sfw/tcServer/sddserver2/webapps/sdd [copy] Copying 537 files to /sfw/tcServer/sddserver2/webapps/sdd … deploy-tcserver-5: deploy-tcserver-6: deploy-tcserver-7: deploy-tcserver-8: deploy: [echo] User home = /home/webtrust BUILD SUCCESSFUL Total time: 2 seconds	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C20.	If you are not installing or updating the JavaAPI, then **skip to step C25**. Otherwise, type **cd ../..**	Navigate to the /home/webtrust/Installs directory.	
C21.	Type **unzip sdd-java-api-server-1.4.zip**	The contents of the zip file are extracted.	
C22.	Type **ls -al**	You will see a sdd-java-api-server-14 directory that was created in the previous step.	
C23.	Type **cd sdd-java-api-server-1.4**	Navigate to that directory.	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C24.	Type **ant deploy**	System displays: Buildfile: build.xml deploy: [echo] User home = /home/webtrust deploy-server1: do-deploy: [echo] Deploying distribution to = /sfw/tcServer/sddserver1/webapps/sdd [copy] Copying 4 files to /sfw/tcServer/sddserver1/webapps/sdd/WEB-INF [copy] Copying /home/webtrust/Installs/sdd-java-api-server-1.2/WEB-INF/spring-config/services-config-RAPI.xml to /sfw/tcServer/sddserver1/webapps/sdd/WEB-INF/spring-config/services-config-RAPI.xml [copy] Copying /home/webtrust/Installs/sdd-java-api-server-1.2/WEB-INF/lib/sas.hls.drug.api.jar to /sfw/tcServer/sddserver1/webapps/sdd/WEB-INF/lib/sas.hls.drug.api.jar [copy] Copying /home/webtrust/Installs/sdd-java-api-server-1.2/WEB-INF/spring-config/services-remote-config-RAPI.xml to /sfw/tcServer/sddserver1/webapps/sdd/WEB-INF/spring-config/services-remote-config-RAPI.xml [copy] Copying /home/webtrust/Installs/sdd-java-api-server-1.2/WEB-INF/lib/sas.hls.drug.api.server.jar to /sfw/tcServer/sddserver1/webapps/sdd/WEB-INF/lib/sas.hls.drug.api.server.jar … deploy-server5: deploy-server6: deploy-server7: deploy-server8: BUILD SUCCESSFUL Total time: 0 seconds	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C25.	Repeat steps **C11-C24** for each physical server that has tcServers installed.	Additional tcServers are updated.	
C26.			
C27.	**SDD 4.2.1 Schema Upgrade Script** Type **cd /home/webtrust/Builds**	Directory is changed.	
C28.	The schema upgrade script does not require DBA "system" account access, but it does require Xythos Global Schema and Xythos Docstore account information. Type **vi sdd-install.properties**	File opens in vi for editing.	
C29.	Make sure the following lines are set to: **# Should we install the schema** **database.install=true** Also, ensure that the following lines are ***not*** commented out: **datasource.xgs.username=**<*username*> **datasource.xgs.password=**<*password*> **datasource.xds.username==**<*username*> **datasource.xds.password=**<*password*>	File is modified.	
C30.	Hit **Esc** and type **:x** to save the file.	File is saved with changes made.	
C31.	Type **more sdd-install.properties**	Verify that changes have been saved.	
C32.	Type **cd /home/webtrust/Installs/dist/install**	Navigate to that directory.	
C33.	Type **ant upgrade-4.2.1**	System displays: Buildfile: build.xml upgrade-4.2.1: [input] Your server must NOT be running for this to work - is your server stopped? (y, n)	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C34.	Type **y**	System displays: upgrade-4.2.1: [echo] Upgrading schemas xgs1 xdstore1 from 4.2 to 4.2.1 [sql] Executing resource: /home/webtrust/Installs/dist/install/sql/oracle/upgrade/1.1.1/sas_content_xds_custom.sql [sql] 2 of 2 SQL statements executed successfully [sql] Executing resource: /home/webtrust/Installs/dist/install/sql/oracle/upgrade/1.1.1/sas_content_xgs_custom.sql [sql] 1 of 1 SQL statements executed successfully BUILD SUCCESSFUL Total time: 1 minute 6 seconds	
C35.			
C36.	**<u>Startup tcServer Admin Server</u>** Type **cd /sfw/tcServer**	Navigate to that directory.	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C37.	Type **./tcruntime-ctl.sh sddserveradmin start**	System displays: INFO Instance name: sddserveradmin INFO Script directory: /sfw/tcServer INFO tc Runtime location:/sfw/tcServer INFO Instance base: /sfw/tcServer INFO Binary dir: /sfw/tcServer/tomcat-6.0.35.A.RELEASE INFO Runtime version: 6.0.35.A.RELEASE INFO Script version: 2.6.3.RELEASE Using CATALINA_BASE: /sfw/tcServer/sddserveradmin Using CATALINA_HOME: /sfw/tcServer/tomcat-6.0.35.A.RELEASE Using CATALINA_TMPDIR: /sfw/tcServer/sddserveradmin/temp Using JRE_HOME: /usr/bin/jdk/jdk1.6.0_21 Using CLASSPATH: /sfw/tcServer/tomcat-6.0.35.A.RELEASE/bin/bootstrap.jar Using CATALINA_PID: /sfw/tcServer/sddserveradmin/logs/tcserver.pid	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C38.	Type **ps –ef | grep webtrust**	System displays: webtrust 3963 1 0 11:47 ? 00:01:42 /usr/bin/jdk/jdk1.6.0_21/bin/java -Djava.util.logging.config.file=/sfw/tcServer/sddserveradmin/conf/logging.properties -Xss192K -Xms1024M -Xmx1024M -XX:PermSize=320m -XX:MaxPermSize=320m -XX:NewSize=128m -XX:MaxNewSize=256m -XX:+UseConcMarkSweepGC -XX:-UseTLAB -XX:+DisableExplicitGC -XX:+HeapDumpOnOutOfMemoryError -Djava.util.logging.manager=com.springsource.tcserver.serviceability.logging.TcServerLogManager -Djava.endorsed.dirs=/sfw/tcServer/tomcat-6.0.35.A.RELEASE/endorsed -classpath /sfw/tcServer/tomcat-6.0.35.A.RELEASE/bin/bootstrap.jar -Dcatalina.base=/sfw/tcServer/sddserveradmin -Dcatalina.home=/sfw/tcServer/tomcat-6.0.35.A.RELEASE -Djava.io.tmpdir=/sfw/tcServer/sddserveradmin/temp org.apache.catalina.startup.Bootstrap start	
C39.	Type **cd sddserveradmin/logs**	Navigate to the /sfw/tcServer/sddserveradmin/logs directory.	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C40.	Type **tail –1000 catalina.out**	System displays: Mar 26, 2012 10:21:56 AM org.apache.catalina.startup.Catalina load INFO: Initialization processed in 736 ms Mar 26, 2012 10:22:35 AM org.apache.catalina.startup.Catalina start INFO: Server startup in 39283 ms [2012-03-26T15:22:35Z] [Par..ing_41] Info ParameterMaster:308 Xythos WebFile Server Parameter Value Listing WebFile Server Version: 7.2.88.1020 Server last reloaded at: 2012 03 26 10:21:56 EST Xythos.RunMode = XythosStorageServer Command Line or Init File Parameter Values Xythos.Install=default Xythos.ServerGroup=default Xythos.BaseDBType=oracle Xythos.BaseDBUserName=xgs Xythos.BaseJDBCDriverName=oracle.jdbc.OracleDrive r …… Hosted Virtual Servers default (default) … Mar 26, 2012 10:44:27 AM org.apache.catalina.startup.Catalina load INFO: Initialization processed in 729 ms Mar 26, 2012 10:44:35 AM org.apache.catalina.startup.Catalina start INFO: Server startup in 7734 ms	
C41.	Hit **Ctrl-C** to stop viewing this log file.	You no longer see the output of the log file.	
C42.			
C43.	**Startup tcServer sddservers** Type **cd /sfw/tcServer**	Navigate to that directory.	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C44.	Type **./tcruntime-ctl.sh sddserver1 start**	System displays: INFO Instance name: sddserver1 INFO Script directory: /sfw/tcServer INFO tc Runtime location:/sfw/tcServer INFO Instance base: /sfw/tcServer INFO Binary dir: /sfw/tcServer/tomcat-6.0.35.A.RELEASE INFO Runtime version: 6.0.35.A.RELEASE INFO Script version: 2.6.3.RELEASE Using CATALINA_BASE: /sfw/tcServer/sddserver1 Using CATALINA_HOME: /sfw/tcServer/tomcat-6.0.35.A.RELEASE Using CATALINA_TMPDIR: /sfw/tcServer/sddserver1/temp Using JRE_HOME: /usr/bin/jdk/jdk1.6.0_21 Using CLASSPATH: /sfw/tcServer/tomcat-6.0.35.A.RELEASE/bin/bootstrap.jar Using CATALINA_PID: /sfw/tcServer/sddserver1/logs/tcserver.pid	
C45.	Type **ps –ef | grep webtrust**	System displays: webtrust 3963 1 0 11:47 ? 00:01:42 /usr/bin/jdk/jdk1.6.0_21/bin/java -Djava.util.logging.config.file=/sfw/tcServer/sddserver1/conf/logging.properties -Xms1024m -Xmx1024m -XX:PermSize=320m -XX:MaxPermSize=320m -Xss160k -XX:NewSize=128m -XX:MaxNewSize=256m -XX:+UseConcMarkSweepGC -XX:-UseTLAB -XX:+DisableExplicitGC -Djava.util.logging.manager=com.springsource.tcserver.serviceability.logging.TcServerLogManager -Djava.endorsed.dirs=/sfw/tcServer/tomcat-6.0.35.A.RELEASE /endorsed -classpath /sfw/tcServer/tomcat- 6.0.35.A.RELEASE /bin/bootstrap.jar -Dcatalina.base=/sfw/tcServer/sddserver1 -Dcatalina.home=/sfw/tcServer/tomcat-6.0.35.A.RELEASE -Djava.io.tmpdir=/sfw/tcServer/sddserver1/temp org.apache.catalina.startup.Bootstrap start	

Checklist C: "Deploy the SDD 4.2.1 Distribution"		**Corresponding Document:** *None*	
#	***Activity***	***Expected Results***	***Actual Results***
C46.	Type **cd sddserver1/logs**	Navigate to the /sfw/tcServer/sddserver1/logs directory.	
C47.	Type **tail –f catalina.out** ***Note:*** Depending on how fast your server is, you may need to type **tail -300 catalina.out**	You will see the contents of the log file while the server is starting up. Look for the following lines, indicating success start of process. Jan 13, 2012 4:54:23 PM org.apache.catalina.startup.Catalina start INFO: Server startup in 36512 ms	
C48.	Hit **Ctrl-C** to stop viewing this log file.	You no longer see the output of the log file.	
C49.	Repeat **steps C43 – C48** to start up any additional sddservers.	Steps repeated as necessary.	
C50.	Hit **Ctrl-D** to stop the script command.	System indicates script stopped running.	
C51.	Type **exit**	You're logged off the web server.	

Signature below indicates completion of Checklist C, items C1 – C51, above.

Name (print or type): _____ Sign-off : _____ Date:_____