



## **SAS Life Science Analytics Framework 4.7.1**

---

*September 30, 2016  
Upgrade Instructions*

The correct bibliographic citation for this manual is as follows: SAS Institute Inc., *SAS Life Science Analytics Framework 4.7.1, Installation Instructions*, Cary, NC: SAS Institute Inc., 2007.

## **SAS Life Science Analytics Framework 4.7.1, Installation Instructions**

Copyright © 2007 SAS Institute Inc., Cary, NC, USA.

All rights reserved. Printed in the United States of America. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, by any form or by any means, electronic, mechanical, photocopying, or otherwise, without the prior written permission of the publisher, SAS Institute Inc.

Limited permission is granted to store this copyrighted material in your system and display it on terminals, to print only the number of copies required for use by those persons responsible for installing and supporting the licensed SAS programs for which this material has been provided, and to modify the material to meet specific installation requirements. The SAS Institute copyright notice must appear on all printed versions of this material or extracts thereof, and on the display medium when the material is displayed. Permission is not granted to reproduce or distribute the material except as stated above.

U.S. Government Restricted Rights Notice. Use, duplication, or disclosure of the software by the government is subject to restrictions as set forth in FAR 52.227-19 Commercial Computer Software-Restricted Rights (June 1987).

SAS Institute Inc., SAS Campus Drive, Cary, North Carolina 27513.

SAS® and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries.

® indicates USA registration.

Other brand and product names are trademarks of their respective companies.

**Checklist A: “Backup of Customized LSAF Files”**

**Note:** This document is intended to assist an administrator in installing *SAS Life Science Analytics Framework (LSAF) 4.7.1* from version **4.7**.

**Prerequisites:** All installation checklists for LSAF 4.7 should have been completed prior to completing this checklist.

Checklist A: “Backup of Customized LSAF Files”		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
A1.	Login to an admin PC.	Windows display appears.	
A2.	Using the putty tool, create an <b>ssh</b> connection from the admin PC to the web server and login as <b>webtrust</b> .  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.	
A3.	Enter the webtrust <i>password</i> .	You’re logged into web server.	
A4.	Use the <b>script</b> command to capture commands that are typed in the Unix window. The syntax is <b>script /var/staging_logs/&lt;servername&gt;_471upgrade.txt</b>	System should indicate script has started.	
A5.	If any customizations were made to the LSAF 4.7 web application, these files should be copied to another location on this server.  <b>Ex: cp /sso/sfw/tcServer/sddserver1/webapps/sdd/WEB-INF/web.xml /sso/sfw/sdd47_custom</b>	Files are copied as a backup.	
A6.	Repeat <b>steps A1 – A5</b> for any additional sddservers.	Steps repeated as necessary.	

*Signature below indicates completion of Checklist A, items A1 – A6, above.*

Name (print or type): \_\_\_\_\_ Sign-off: \_\_\_\_\_ Date: \_\_\_\_\_

**Checklist B: “Deploy the LSAF 4.7.1 Distribution”**

Checklist B: “Deploy the LSAF 4.7.1 Distribution”		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B1.	<p><b><u>Transfer Files</u></b></p> <p>From the admin PC, download the <b>LSAF 4.7.1</b> distribution from the SAS Hot Fix site. After the distribution has been downloaded, use the WinSCP2 tool to copy this file to <b>/sso/sfw/installers</b> on the web server. Transfer this as a binary file.</p> <p><b>lsaf-4.7.1.PROD.26.20160920.103147.zip</b></p>	The file is transferred to the web server.	
B2.	<p><b><u>Shutdown tcServers</u></b></p> <p>Type <b>cd /sso/sfw/tcServer</b></p>	Navigate to that directory.	
B3.	Type <b>./tcruntime-ctl.sh sddserver1 stop</b>	<p>System displays:</p> <p>Instance is running as PID=2302, shutting down...</p> <p>Instance is running PID=2302, sleeping for up to 60 seconds waiting for shutdown</p> <p>Instance shut down gracefully</p>	
B4.	Type <b>ps -ef   grep webtrust</b>	You should not see the tcserver process running.	
B5.	Type <b>cd sddserver1/logs</b>	Navigate to the <b>/sso/sfw/tcServer/sddserver1/logs</b> directory.	
B6.	Delete or rename the <b>sdd_info.log</b> and <b>catalina.out</b> files.	Log files are deleted or renamed.	
B7.	Type <b>ls -al</b>	Verify that log files have been renamed or deleted and the <b>.pid</b> file has been deleted.	
B8.	Repeat <b>steps B2 – B7</b> for the remaining tcServers, including stopping the <b>sddserveradmin</b> tcServer. Repeat this for each physical server that has tcServers installed.	There are no tcServer processes running.	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B9.	<b>Unzip and Deploy the Build</b> Type <code>cd /home/webtrust/Installs</code>	Navigate to that directory.	
B10.	Type <code>rm -rf dist</code>	The dist directory is deleted.	
B11.	Type <code>ls -al</code>	Verify that the dist directory was deleted.	
B12.	Type <code>cp /sfw/installers/lsaf-4.7.1.PROD.26.20160920.103147.zip .</code>	The LSAF 4.7.1 binary is copied.	
B13.	Type <code>unzip -q lsaf-4.7.1.PROD.26.20160920.103147.zip</code>	The contents of the zip file are extracted.	
B14.	Type <code>ls -al</code>	You will see a dist directory that was created in the previous step.	
B15.	Type <code>cd dist</code>	Navigate to the /home/webtrust/Installs/dist directory.	
B16.	Type <code>ant clean</code>	System displays:  Buildfile: /home/webtrust/Installs/dist/build.xml  clean: [delete] Deleting directory /sso/sfw/tcServer/sddserveradmin/webapps/xythosadmin [delete] Deleting directory /sso/sfw/tcServer/sddserver1/webapps/lsaf [delete] Deleting directory /sso/sfw/tcServer/sddserver2/webapps/lsaf [delete] Deleting directory /sso/sfw/tcServer/sddserver3/webapps/lsaf [delete] Deleting directory /sso/sfw/tcServer/sddserver4/webapps/lsaf  BUILD SUCCESSFUL Total time: 0 seconds	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B17.	Type <b>ant deploy</b>	<p>System displays (depending on how many tcServers you have installed):</p> <pre> Buildfile: /home/webtrust/Installs/dist/build.xml  deploy:  deploy-lsaf:  deploy:  deploy-tomcat-1:  do-deploy: [echo] Deploying to /sso/sfw/tcServer/sddserver1 [copy] Copying 3 files to /sso/sfw/tcServer/sddserver1 [copy] Copying 1 file to /sso/sfw/tcServer/sddserver1/lib [copy] Copying 23484 files to /sso/sfw/tcServer/sddserver1/webapps/lsaf *****  check-admin-uptodate:  deploy-admin-server: [echo] Configuring administration server /sso/sfw/tcServer/sddserveradmin [unzip] Expanding: /home/webtrust/Installs/dist/lsaf/webapps/xythosadmin.war into /sso/sfw/tcServer/sddserveradmin/webapps/xythosadmin *****  deploy-clc:  do-deploy: [echo] Deploying to /sso/sfw/tcServer/sddserver1 [copy] Copying 2 files to /sso/sfw/tcServer/sddserver1/webapps/lsaf/WEB-INF [copy] Copying 195 files to /sso/sfw/tcServer/sddserver1/webapps/lsaf/resources  deploy-tomcat-2: *****  BUILD SUCCESSFUL Total time: 29 seconds </pre>	
B18.	Type <b>cd /home/webtrust/Installs/dist/lsaf/install</b>	Navigate to that directory.	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B19.	Type <b>ant repair</b>	Buildfile: C:\perforce\LSAF\4.7.1\build.xml  repair:  repair-xgs: [flyway:repair] Flyway 3.2.1 by Boxfuse [flyway:repair] Database: jdbc:oracle:thin:@ptclax01:1521/devsdd.ptclax01.unx.sas.com (Oracle 12.1) [flyway:repair] Repair of failed migration in metadata table "XGS1"."SAS_SCHEMA_VERSION" not necessary. No failed migration detected. [flyway:repair] Updating checksum of 4.5.01 to -823771918 ... [flyway:repair] Updating checksum of 4.6.01 to 911149061 ... [flyway:repair] Metadata table "XGS1"."SAS_SCHEMA_VERSION" successfully repaired (execution time 00:00.098s). [flyway:repair] Manual cleanup of the remaining effects the failed migration may still be required.  repair-xds: [flyway:repair] Database: jdbc:oracle:thin:@****:1521/***** (Oracle 12.1) [flyway:repair] Repair of failed migration in metadata table "XDS1S"."SAS_SCHEMA_VERSION" not necessary. No failed migration detected. [flyway:repair] Updating checksum of 4.5.01 to 1318798974 ... [flyway:repair] Updating checksum of 4.5.02 to 2075512680 ... [flyway:repair] Updating checksum of 4.5.03 to 985021868 ... [flyway:repair] Updating checksum of 4.5.04 to 257379719 ... [flyway:repair] Updating checksum of 4.5.05 to 913346706 ... [flyway:repair] Updating checksum of 4.5.06 to 695738836 ...	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B20.	Step B19 continued...	<p>[flyway:repair] Updating checksum of 4.5.07 to -180779755 ...</p> <p>[flyway:repair] Updating checksum of 4.6.01 to 1573541780 ...</p> <p>[flyway:repair] Updating checksum of 4.6.02 to -819897348 ...</p> <p>[flyway:repair] Updating checksum of 4.6.03 to -1168680390 ...</p> <p>[flyway:repair] Updating checksum of 4.6.04 to -501951684 ...</p> <p>[flyway:repair] Updating checksum of 4.6.05 to -766753076 ...</p> <p>[flyway:repair] Updating checksum of 4.6.06 to 2105844224 ...</p> <p>[flyway:repair] Updating checksum of 4.6.07 to -1989082338 ...</p> <p>[flyway:repair] Updating checksum of 4.6.08 to -701638000 ...</p> <p>[flyway:repair] Updating checksum of 4.6.09 to -679748027 ...</p> <p>[flyway:repair] Updating checksum of 4.6.10 to 519866088 ...</p> <p>[flyway:repair] Updating checksum of 4.6.11 to 1841740857 ...</p> <p>[flyway:repair] Updating checksum of 4.6.13 to 777050213 ...</p> <p>[flyway:repair] Updating checksum of 4.6.23 to 1500929744 ...</p> <p>[flyway:repair] Updating checksum of 4.7.08 to -1883781243 ...</p> <p>[flyway:repair] Updating checksum of 4.7.09 to 294413788 ...</p> <p>[flyway:repair] Metadata table "XDS1"."SAS_SCHEMA_VERSION" successfully repaired (execution time 00:00.204s).</p> <p>[flyway:repair] Manual cleanup of the remaining effects the failed migration may still be required.</p> <p>repair:</p> <p>BUILD SUCCESSFUL</p> <p>Total time: 6 seconds</p>	



Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B21.	If you are not installing or updating the JavaAPI, then <b>skip to step B26</b> . Otherwise, type <b>cd ../..</b>	Navigate to the /home/webtrust/Installs directory.	
B22.	Type <b>unzip sdd-java-api-server-1.7.3.zip</b>	The contents of the zip file are extracted.	
B23.	Type <b>ls -al</b>	You will see an sdd-java-api-server-1.7.3 directory that was created in the previous step.	
B24.	Type <b>cd sdd-java-api-server-1.7.3</b>	Navigate to that directory.	
B25.	Type <b>ant deploy</b>	<p>System displays:</p> <pre> Buildfile: build.xml  deploy:   [echo] User home = /home/webtrust  deploy-server1:  do-deploy:   [echo] Deploying distribution to = /sso/sfw/tcServer/sddserver1/webapps/lsaf   [copy] Copying 2 files to /sso/sfw/tcServer/sddserver1/webapps/lsaf/WEB-INF   [copy] Copying /home/webtrust/Installs/sdd-java-api- server-1.7.3/WEB-INF/lib/sas.hls.drug.api.client.jar to /sso/sfw/tcServer/sddserver1/webapps/lsaf/WEB- INF/lib/sas.hls.drug.api.client.jar   [copy] Copying /home/webtrust/Installs/sdd-java-api- server-1.7.3/WEB-INF/lib/sas.hls.drug.api.server.jar to /sso/sfw/tcServer/sddserver1/webapps/lsaf/WEB- INF/lib/sas.hls.drug.api.server.jar ...  deploy-server5:  deploy-server6:  deploy-server7:  deploy-server8:  BUILD SUCCESSFUL Total time: 0 seconds </pre>	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B26.	Repeat steps <b>B9 - B25</b> for each physical server that has tcServers installed.	Additional tcServers are updated.	
B27.	<b><u>Startup tcServer Admin Server</u></b>  Type <b>cd /sso/sfw/tcServer</b>	Navigate to that directory.	
B28.	Type <b>./tcruntime-ctl.sh sddserveradmin start</b>	System displays: Using CATALINA_BASE: /sso/sfw/tcServer/sddserveradmin Using CATALINA_HOME: /sso/sfw/tcServer/tomcat-8.0.9.B.RELEASE Using CATALINA_TMPDIR: /sso/sfw/tcServer/sddserveradmin/temp Using JRE_HOME: /sso/sfw/java/jdk1.7.0_67 Using CLASSPATH: /sfw/tcServer/tomcat-8.0.9.B.RELEASE/bin/bootstrap.jar:/sso/sfw/tcServer/sddserveradmin/bin/tomcat-juli.jar Using CATALINA_PID: /sso/sfw/tcServer/sddserveradmin/logs/tcserver.pid Tomcat started. Status: RUNNING as PID=12806	
B29.	Type the following:  <b>./tcruntime-ctl.sh sddserveradmin status</b>	System displays: Instance name: sddserveradmin  Runtime version: 8.0.9.B.RELEASE  tc Runtime Base: /sso/sfw/tcServer/sddserveradmin  Status: RUNNING as PID=7272	
B30.	Type <b>cd sddserveradmin/logs</b>	Navigate to the /sso/sfw/tcServer/sddserveradmin/logs directory.	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B31.	Type <b>tail -1000 catalina.out</b>	System displays:  [2013-02-27T16:49:30-0500] [Par..ing_39] Info ParameterMaster:308 Xythos WebFile Server Parameter Value Listing WebFile Server Version: 7.2.96.1017 WebFile Server Hotfix Version: 7.2.96.1097 Server last reloaded at: 2013 02 27 16:49:28 EST Xythos.RunMode = XythosStorageServer Command Line or Init File Parameter Values Xythos.Install=default Xythos.ServerGroup=admin Xythos.BaseDBType=oracle Xythos.BaseDBUserName=xgs1  Xythos.BaseJDBCdriverName=oracle.jdbc.Oracle Driver ...  Hosted Virtual Servers default (default)	
B32.	Hit <b>Ctrl-C</b> to stop viewing this log file.	You no longer see the output of the log file.	
B33.	<b><u>Startup tcServer sddservers</u></b>  Type <b>cd /sso/sfw/tcServer</b>	Navigate to that directory.	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B34.	Type <b>./tcruntime-ctl.sh sddserver1 start</b>	<p>System displays:</p> <p>Using CATALINA_BASE: /sso/sfw/tcServer/sddserver1 Using CATALINA_HOME: /sso/sfw/tcServer/tomcat-8.0.9.B.RELEASE Using CATALINA_TMPDIR: /sso/sfw/tcServer/sddserver1/temp Using JRE_HOME: /sso/sfw/java/jdk1.7.0_67 Using CLASSPATH: /sso/sfw/tcServer/tomcat-8.0.9.B.RELEASE/bin/bootstrap.jar:/sso/sfw/tcServer/sddserver1/bin/tomcat-juli.jar Using CATALINA_PID: /sso/sfw/tcServer/sddserver1/logs/tcserver.pid Tomcat started. Status: RUNNING as PID=13015</p>	
B35.	Type the following:  <b>./tcruntime-ctl.sh sddserver1 status</b>	<p>System displays:</p> <p>Instance name: sddserver1 Runtime version: 8.0.9.B.RELEASE tc Runtime Base: /sso/sfw/tcServer/sddserver1 Status: RUNNING as PID=7350</p>	
B36.	Type <b>cd sddserver1/logs</b>	Navigate to the /sso/sfw/tcServer/sddserver1/logs directory.	
B37.	Type <b>tail -f sdd_info.log</b>  <i>Note:</i> Depending on how fast your server is, you may need to type <b>tail -300 sdd_info.log</b>	<p>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.</p> <p>2013-09-06 15:30:16,692   INFO   TCIRA   Starting Coyote HTTP/1.1 on http-8001 2013-09-06 15:30:16,701   INFO   TCIRA   Server startup in 19635 ms 2013-09-06 15:30:24,990   INFO   SDIRA     Starting Quartz Scheduler now, after delay of 10 seconds</p>	
B38.	Hit <b>Ctrl-C</b> to stop viewing this log file.	You no longer see the output of the log file.	

Checklist B: "Deploy the LSAF 4.7.1 Distribution"		Corresponding Document: <i>None</i>	
#	Activity	Expected Results	Actual Results
B39.	Repeat <b>steps B33 – B38</b> to start up any additional sddservers. Repeat this for each physical server that has tcServers installed.	Steps repeated as necessary.	
B40.	Hit <b>Ctrl-D</b> to stop the script command.	System indicates script stopped running.	
B41.	Type <b>exit</b>	You're logged off the web server.	

*Signature below indicates completion of Checklist B, items B1 – B41, above.*

Name (print or type): \_\_\_\_\_ Sign-off: \_\_\_\_\_ Date: \_\_\_\_\_