



# SAS Life Science Analytics Framework Macro API 2.2

Installation Qualification / Operational Qualification Checklist

Install LSAF SAS Macro API 2.2

**Version 1.00**  
**Date October 2019**

**Checklist A: “Install LSAF SAS Macros”**

**Note:** This checklist assumes you have completed an installation of LSAF Java API 2.2.

**Prerequisites:** You will need to set the following property in the **lsaf.properties** configuration file on any tcServer instance that is running:

**sasession.enable.trusted.connections=true**

Checklist A: “Install LSAF SAS Macros”		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 <b>SAS server</b> and login as <b>sasadmin</b> .	You’re prompted for the password.	
A3.	Enter the <i>password</i> for sasadmin.	You’re logged into SAS 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;_lsafmacro2.2_&lt;date&gt;.txt</b>	System should indicate script has started.	
A5.	From the admin PC, download the <b>LSAF Java API 2.2 Client</b> distribution from the SAS Technical Support site. After the distribution has been downloaded, use the WinSCP2 tool to copy the file to <b>/sso/sfw/installers</b> on the SAS server. Transfer it as a <b>binary</b> file using the <b>sasadmin</b> userid.  <b>lsaf-java-api-client-2.2.zip</b>	The file is transferred to the SAS server.	

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A6.	From the admin PC, download the <b>LSAF Macro 2.2</b> distribution from the SAS Technical Support site. After the distribution has been downloaded, use the WinSCP2 tool to copy the file to <b>/sso/sfw/installers</b> on the SAS server. Transfer it as a <b>binary</b> file using the <b>sasadmin</b> userid.  <b>lsaf-sas-macro-2.2.zip</b>	The file is transferred to the SAS server.	
A7.	Stop the Object Spawner by typing <b>/sso/biconfig/940/Lev1/ObjectSpawner/ObjectSpawner.sh stop</b>	The Object Spawner is stopped.	
A8.	Type <b>ps -ef   grep sasadmin</b>	The following process should <b>not</b> be running:  /bin/sh -p /sso/biconfig/940/Lev1/ObjectSpawner/ObjectSpawner.sh start2_tag	
A9.	Type <b>cd /sso/sfw/sas/940/SASFoundation/9.4</b>	Navigate to that directory.	
A10.	Type <b>mkdir lsafapi</b>	Directory is created.	
A11.	Type <b>cd lsafapi</b>	Navigate to that directory.	
A12.	Type <b>unzip -q /sso/sfw/installers/lsaf-java-api-client-2.2.zip</b>	Contents of zip file are extracted.	
A13.	Type <b>unzip -q /sso/sfw/installers/lsaf-sas-macro-2.2.zip</b>	Contents of zip file are extracted.	
A14.	Type <b>touch lsaf_macros.log</b>	The file is created.	
A15.	Type <b>chmod 777 lsaf_macros.log</b>	Permissions are updated.	
A16.	Type <b>ls -al</b>	You see the following directories created:  lsaf-java-api-client-2.2 lsaf_macros.log lsaf-sas-macro-2.2	
A17.	Type <b>cd /sso/biconfig/940/Lev1/LSAFApp/WorkspaceServer</b>	Navigate to that directory.	
A18.	Type <b>vi sasv9_usermods.cfg</b>	File is opened for edit.	

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A19.	<p>After the comment block, add the following lines:</p> <pre> -<b>insert sasautos</b> "/sso/sfw/sas/940/SASFoundation/9.4/lsafapi/lsaf- sas-macro-2.2/sasmacros" -<b>JREOPTIONS (</b> - <b>Dsas.app.class.dirs=/sso/sfw/sas/940/SASFoundati</b> <b>on/9.4/lsafapi/lsaf-java-api-client-</b> <b>2.2/lib:/sso/sfw/sas/940/SASFoundation/9.4/lsafapi</b> <b>/lsaf-sas-macro-2.2/lib</b> - <b>Dsession.strategy.classname=com.sas.lsaf.client.i</b> <b>mpl.TrustedContextSessionStrategyImpl</b> -<b>Dsas.lsaf.macros.trusted=true</b> - <b>Dlog4j.configuration=file:/sso/sfw/sas/940/SASFo</b> <b>undation/9.4/lsafapi/lsaf-sas-macro-</b> <b>2.2/conf/linux/log4j.properties</b> <b>)</b>  /* <b>this prevents a classpath not set warning from</b> <b>javaobj */</b> -<b>SET CLASSPATH !CLASSPATH</b>  <b>Note:</b> Copy and paste this text from the sasv9_usermods.txt file in our staging area. </pre>	File is modified.	
A20.	<p>Hit <b>Esc</b> and type <b>:x</b> to save the file.</p> <p><b>Note:</b> The <b>log4j.properties</b> file is configurable and should be modified to point to the correct path to the <b>lsaf_macros.log</b> file.</p>	File is saved with changes made.	
A21.	Type <b>more sasv9_usermods.cfg</b>	Verify that changes have been saved.	
A22.	Start the Object Spawner by typing <b>/sso/biconfig/940/Lev1/ObjectSpawner/ObjectSpawner.sh start</b>	Object Spawner is started and system displays:  Spawner is started (pid <i>nnnnn</i> )...	

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A23.	Type <b>ps -ef   grep sasadmin</b>	The following process should be running:  /bin/sh -p /sso/biconfig/940/Lev1/ObjectSpawner/ObjectSpawner.sh start2_tag	
A24.	Hit <b>Ctrl-D</b> to stop the script command.	System indicates script stopped running.	
A25.	Type <b>exit</b>	The sasadmin userid is logged off the SAS server.	
A26.	Repeat <b>steps A1 – A25</b> to deploy the LSAF SAS Macros to any additional SAS processing servers.	Steps repeated as necessary.	

*Signature below indicates completion of Checklist A, items A1 – A26, above.*

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