



# SAS Life Science Analytics Framework Java API 1.8

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Installation Qualification / Operational Qualification Checklist

Install LSAF Java API 1.8

**Version 1.00**  
**Date February 2, 2017**

**Checklist A: “Install LSAF Java API”**

**Note:** This checklist assumes you have completed an installation of LSAF 4.7.1 and are installing the LSAF Java API.

Checklist A: “Install LSAF Java API”		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>web server</b> and login as <b>webtrust</b> .	You’re prompted for the password.	
A3.	Enter the <i>password</i> for webtrust.	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;_lsafapi1.8_&lt;date&gt;.txt</b>	System should indicate script has started.	
A5.	From the admin PC, download the <b>LSAF Java API 1.8</b> distribution from the SAS Technical Support site. After the distribution has been downloaded, use the WinSCP2 tool to copy the file to <b>/home/webtrust/Installs</b> on the web server. Transfer it as a <b>binary</b> file using the <b>webtrust</b> userid.  <b>lsaf-java-api-server-1.8.zip</b>  <i>Note:</i> In a clustered web server environment, this file needs to be copied to each web server in the cluster.	The file is transferred to the web server.	
A6.	Type <b>cd /sso/sfw/tcServer</b>	Navigate to that directory.	

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#	Activity	Expected Results	Actual Results
A7.	Type <b>./tcruntime-ctl.sh sddserver1 stop</b>	System displays:  Instance is running as PID=29796, shutting down... Instance is running PID=29796, sleeping for up to 60 seconds waiting for shutdown Instance shut down gracefully	
A8.	Type <b>ps -ef   grep webtrust</b>	You should not see the tcserver process running.	
A9.	Type <b>cd sddserver1/logs</b>	Navigate to the /sso/sfw/tcServer/sddserver1/logs directory.	
A10.	Delete or rename the <b>sdd_info.log</b> and <b>catalina.out</b> files.	Log files are deleted or renamed.	
A11.	Type <b>ls -al</b>	Verify that log files have been renamed or deleted.	
A12.	Repeat <b>steps A6 – A11</b> for the remaining tcServers.  <i>Note:</i> You do not have to stop the <b>sddserveradmin</b> server.  <i>Note:</i> In a clustered web server environment, steps A6 – A12 must be performed on each web server in the cluster.	The tcServers are stopped with the exception of the sddserveradmin server.	
A13.	Type <b>cd /home/webtrust/Installs</b>	Navigate to that directory.	
A14.	Type <b>unzip lsaf-java-api-server-1.8.zip</b>	The contents of the zip file are extracted.	
A15.	Type <b>ls -al</b>	You will see an lsaf-java-api-server-1.8 directory that was created in the previous step.	
A16.	Type <b>cd lsaf-java-api-server-1.8</b>	Navigate to that directory.	

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#	Activity	Expected Results	Actual Results
A17.	Type <b>ant clean</b>	System displays:  Buildfile: /home/webtrust/Installs/lsaf-java-api-server-1.8/build.xml  clean:  clean-server1:  do-clean: [echo] Clean previous Java API distribution in /sso/sfw/tcServer/sddserver1/webapps/lsaf [delete]                                   Deleting /sso/sfw/tcServer/sddserver1/webapps/lsaf/WEB-INF/lib/sas.hls.drug.api.client.jar [delete]                                   Deleting /sfw/tcServer/sddserver1/webapps/lsaf/WEB-INF/lib/sas.hls.drug.api.server.jar  clean-server2:  clean-server3:  clean-server4: *****  BUILD SUCCESSFUL Total time: 0 seconds	

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#	Activity	Expected Results	Actual Results
A18.	Type <b>ant deploy</b>	<p>System displays:</p> <p>Buildfile: build.xml</p> <p>deploy: [echo] User home = /home/webtrust</p> <p>deploy-server1:</p> <p>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/lsaf-java-api-server-1.8/WEB-INF/lib/sas.hls.lsaf.api.client.jar to /sso/sfw/tcServer/sddserver1/webapps/lsaf/WEB-INF/lib/sas.hls.lsaf.api.client.jar [copy] Copying /home/webtrust/Installs/lsaf-java-api-server-1.8/WEB-INF/lib/sas.hls.lsaf.api.server.jar to /sso/sfw/tcServer/sddserver1/webapps/lsaf/WEB-INF/lib/sas.hls.lsaf.api.server.jar...</p> <p>deploy-server5:</p> <p>deploy-server6:</p> <p>deploy-server7:</p> <p>deploy-server8:</p> <p>BUILD SUCCESSFUL Total time: 0 seconds</p>	
A19.	Type <b>cd /sso/sfw/tcServer</b>	Navigate to that directory.	

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#	Activity	Expected Results	Actual Results
A20.	Type <code>./tcruntime-ctl.sh sddserver1 start</code>	<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: /usr/bin/jdk/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=24943</p>	
A21.	Type <code>ps -ef   grep webtrust</code>	<p>System displays:</p> <p>webtrust 25205 1 25 14:42 pts/0 00:00:03  /usr/bin/jdk/jdk1.7.0_67/bin/java -Djava.util.logging.config.file=/sso/sfw/tcServer/sddserver1/conf/logging.properties -Djava.util.logging.manager=com.springsource.tcserver.serviceability.logging.TcServerLogManager -Xss256K -Xms4096M -Xmx4096M -XX:PermSize=256m -XX:MaxPermSize=256m -XX:NewSize=1g -XX:MaxNewSize=1g -XX:+UseConcMarkSweepGC -XX:+UseParNewGC -XX:+CMSScavengeBeforeRemark -XX:+CMSParallelRemarkEnabled -XX:CMSInitiatingOccupancyFraction=70 -XX:+DisableExplicitGC -XX:+UseCompressedOops -XX:+PrintGCDetails -XX:+PrintGCDateStamps -XX:+PrintFlagsFinal -Xloggc:/sso/sfw/tcServer/sddserver1/logs/gc_v64-d78393-011_01_05_2016_1442.log -XX:+HeapDumpOnOutOfMemoryError -Djava.endorsed.dirs=/sso/sfw/tcServer/tomcat-8.0.9.B.RELEASE/endorsed -classpath /sso/sfw/tcServer/tomcat-8.0.9.B.RELEASE/bin/bootstrap.jar:/sso/sfw/tcServer/sddserver1/bin/tomcat-juli.jar -Dcatalina.base=/sso/sfw/tcServer/sddserver1 -Dcatalina.home=/sso/sfw/tcServer/tomcat-8.0.9.B.RELEASE -Djava.io.tmpdir=/sso/sfw/tcServer/sddserver1/temp org.apache.catalina.startup.Bootstrap start</p>	

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#	Activity	Expected Results	Actual Results
A22.	Type <b>cd sddserver1/logs</b>	Navigate to the /sso/sfw/tcServer/sddserver1/logs directory.	
A23.	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>	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.  2015-12-10 11:23:41,115   INFO   TCIRA   Starting ProtocolHandler ["http-bio-8001"] 2015-12-10 11:23:41,118   INFO   TCIRA   Server startup in 43242 ms 2015-12-10 11:23:47,408   INFO   LSIRA     Starting Quartz Scheduler now, after delay of 10 seconds	
A24.	Hit <b>Ctrl-C</b> to stop viewing this log file.	You no longer see the output of the log file.	
A25.	Repeat <b>steps A19 – A24</b> to start up any additional sddservers.  <i>Note:</i> In a clustered web server environment, steps A13 – A24 must be performed on all web servers in the cluster.	Steps repeated as necessary.	
A26.	Hit <b>Ctrl-D</b> to stop the script command.	System indicates script stopped running.	
A27.	Type <b>exit</b>	The webtrust userid is logged off the web server.	

*Signature below indicates completion of Checklist A, items A1 – A27, above.*

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