LISA SDK: Create Your Own Filter

February 25, 2015

Revision History

Date	Version	Change History	Author	Reviewer
February 25, 2015	1.0	LISA SDK: Create Your Own Filter	Monika Mehta	Abhishek Mohan

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Description

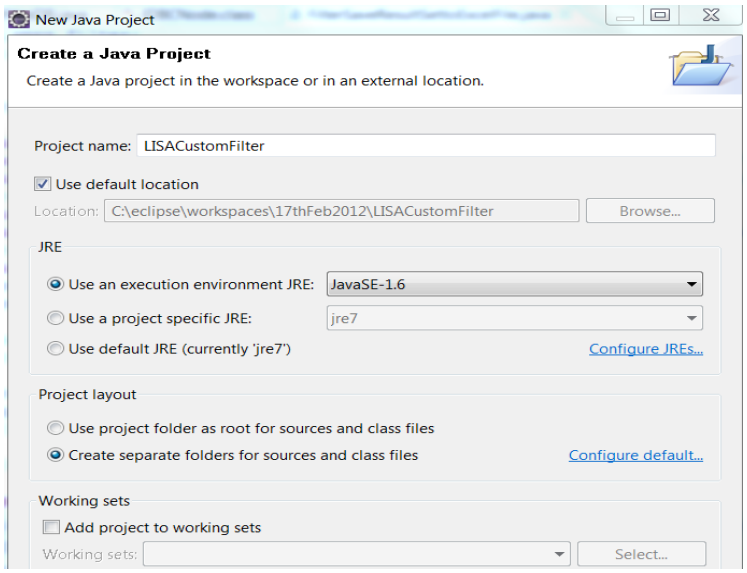
This document is intended to be used by any individual who wishes to create their own Filter to handle a specific situation. The LISA software provides built-in support for custom filters.

Pre-requisite

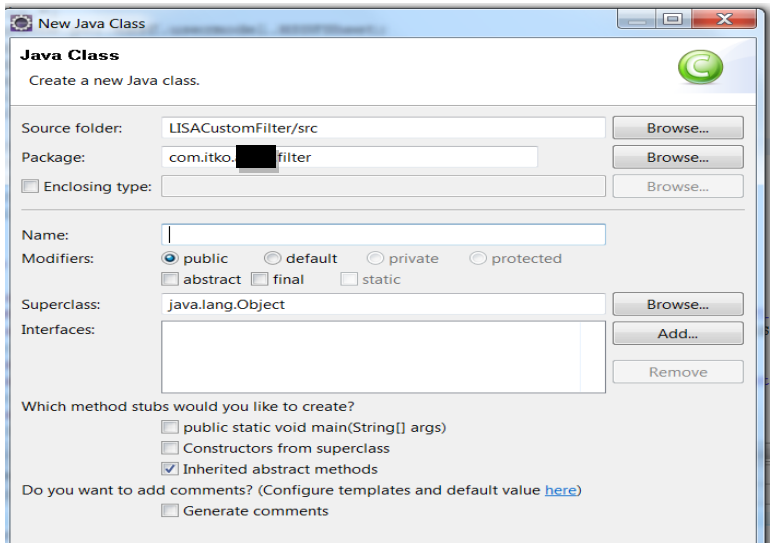
- Java IDE must be installed on machine.
- LISA must be installed on machine.

Steps to Create a Custom Filter

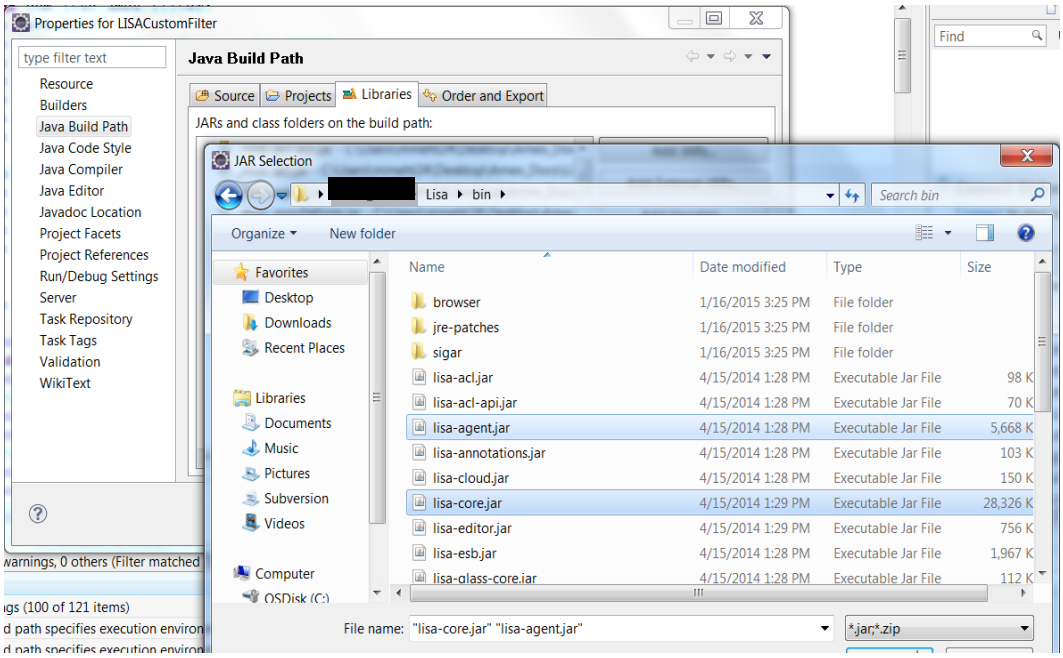
1. Open IDE and create a new Java Project.



2. Provide a Package name and Java Class name.



3. Add External Libraries in build Path from LISA_HOME/bin directory as shown below
   a. Lisa-core.jar
   b. Lisa-agent.jar



4. Java Class created in Step 2 must extend **"FilterBaseImpl".**
5. Implement all mandatory methods. Below are the methods to implement:
   a. **getTypeName** method: This method provides the name that is used to identify the custom filter in the model editor.

```
public String getTypeName()
{
        return "SQL to Result Set Filter";
}
```

   b. **getParameters** method: For each item in the Filter Attributes section of the Filters tab in the model editor, add a **Parameter** to the ParameterList for the filter.

```
public ParameterList getParameters()
{
        ParameterList p = new ParameterList();
        p.addParameter( new Parameter( "Is FTP", ISFTP_PARAM, new
        p.addParameter(new Parameter(FILE_PARAM_DESC, "file", this.file,
        OutputStream.class));
 }
```

   c. **initialize** method: Initialize the custom filter object with the value of the DOM Element.

```
public void initialize(Element e)
{
        this.file = XMLUtils.getAttributeOrChildText(e, "file");
}
```

d. **subPostFilter/subPreFilter** method: Because the filters execute before and after the test step, you get two chances to implement the filter logic. Implement the filter logic before node execution with the **subPreFilter** method. Implement the filter logic after node execution with the **subPostFilter** method.

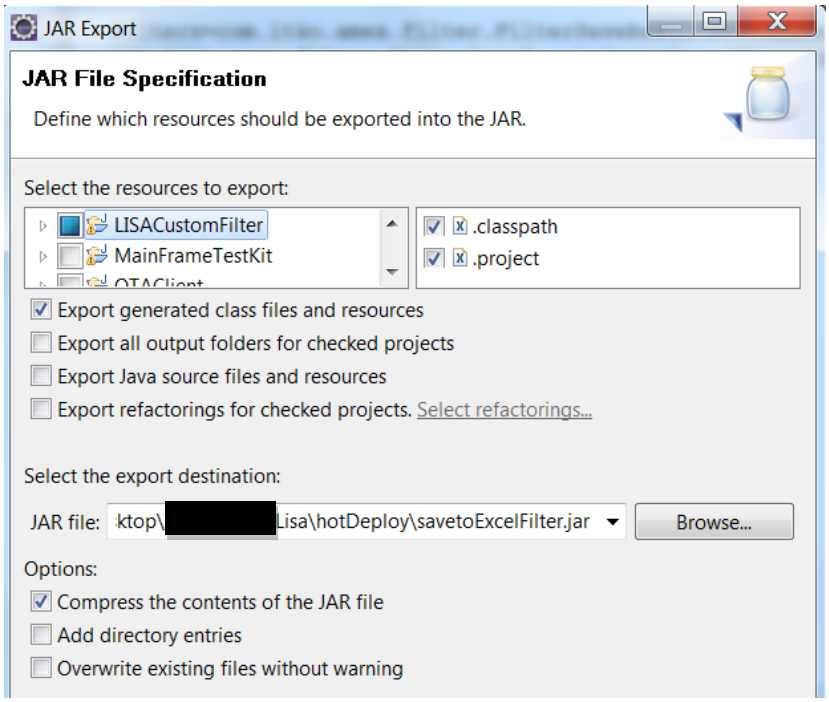
```
public boolean subPostFilter(TestExec testExec)
{
//Provide main Logic here
}
```

```
package com.itko.[redacted]filter;
import java.io.*;

/*     */
public class FilterSaveResultSettoExcelFile extends FilterBaseImpl{

    private static final long serialVersionUID = 1L;
    public static final String FILTER_TITLE = "Save ResultSet Value to an Excel File";
    private static final Logger LOGGER = LoggerFactory.getLogger(FilterSaveResultSettoExcelFile.class
    private static final String FILE_PARAM = "file";
    private static final String FILE_PARAM_DESC = ModuleLegacy.resources.get("test.fsavep2f.filedesc"
    private static final String Sheet_PARAM = "sheet_name";
    private String sheet_name;
    private String file;

    //private static final String FILE_PATH = "filePath";
    //private String filePath;

    public FilterSaveResultSettoExcelFile() {}
    public String getFile()

    public void setFile(String file)

    public String getTypeName()

     public ParameterList getParameters()

   public void initialize(Element e)

    public boolean subPostFilter(TestExec testExec)  {

    public boolean subPreFilter(TestExec arg0) throws TestRunException {
}
```

6. Create .lisaextensions file in the same Project Folder and provide the filter details as shown below:

```
# LISA Extensions file

filters=com.itko.[redacted]ilter.FilterSaveResultSettoExcelFile
com.itko.[redacted].filter.FilterSaveResultSettoExcelFile=com.itko.lisa.editor.FilterController,com.itko.lisa.editor.DefaultFilterEditor
```

7. Export the project into a jar file on your local system.



Instructions to Deploy a New Filter

1. Copy the JAR file that contains custom filter and lisaextensions file to the **LISA_HOME/hotDeploy** directory. If your custom filter depends on any third-party libraries, copy those libraries to the LISA_HOME/hotDeploy directory.

2. Navigate to LISA_HOME and open the file "typemap.properties" with notepad. Navigate to Filters section of the file and provide the class name with package name as shown below:

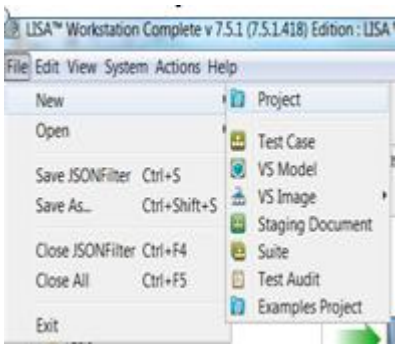
typemap.properties

```
634
635
636 ####################
637 #Filters
638 filters=com.itko.lisa.test.FilterParseOutByExpression\
639 ,com.itko.lisa.test.FilterSaveResponse\
640 ,com.itko.lisa.dynexec.FilterConvertObjToLastResponse\
641 ,com.itko.lisa.test.FilterSavePropToFile\
642 ,com.itko.citi.filter.JSON_to_XML\
643 ,com.itko.[redacted]x.filter.FilterSaveResultSettoExcelFile\
```

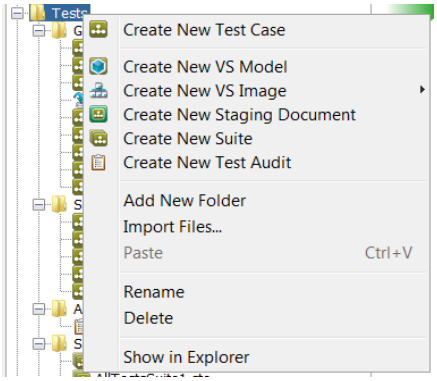
3. Restart LISA, if it is in running state.

Steps for Implementation:

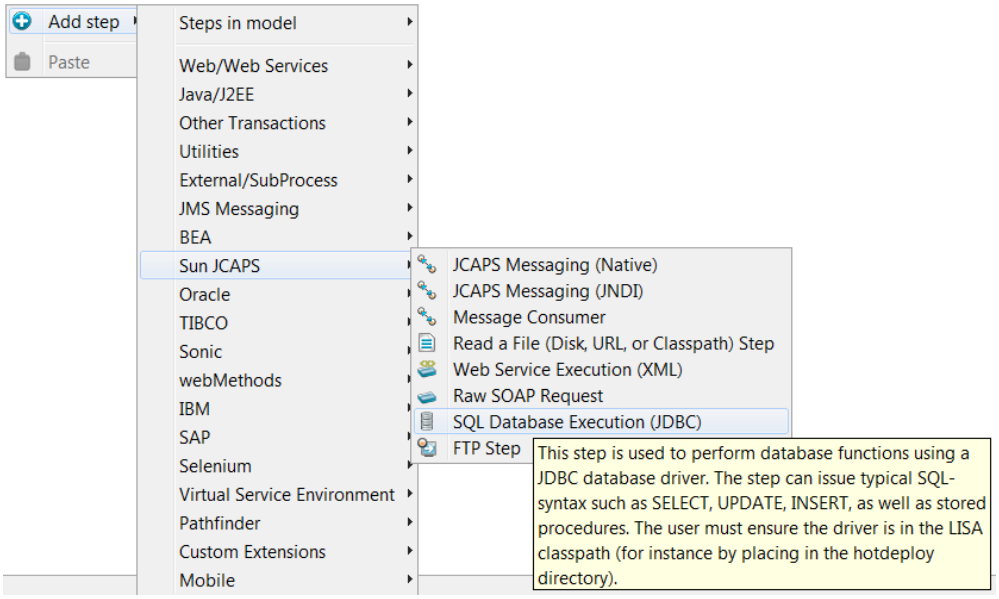
1. Create a Project in LISA workstation.



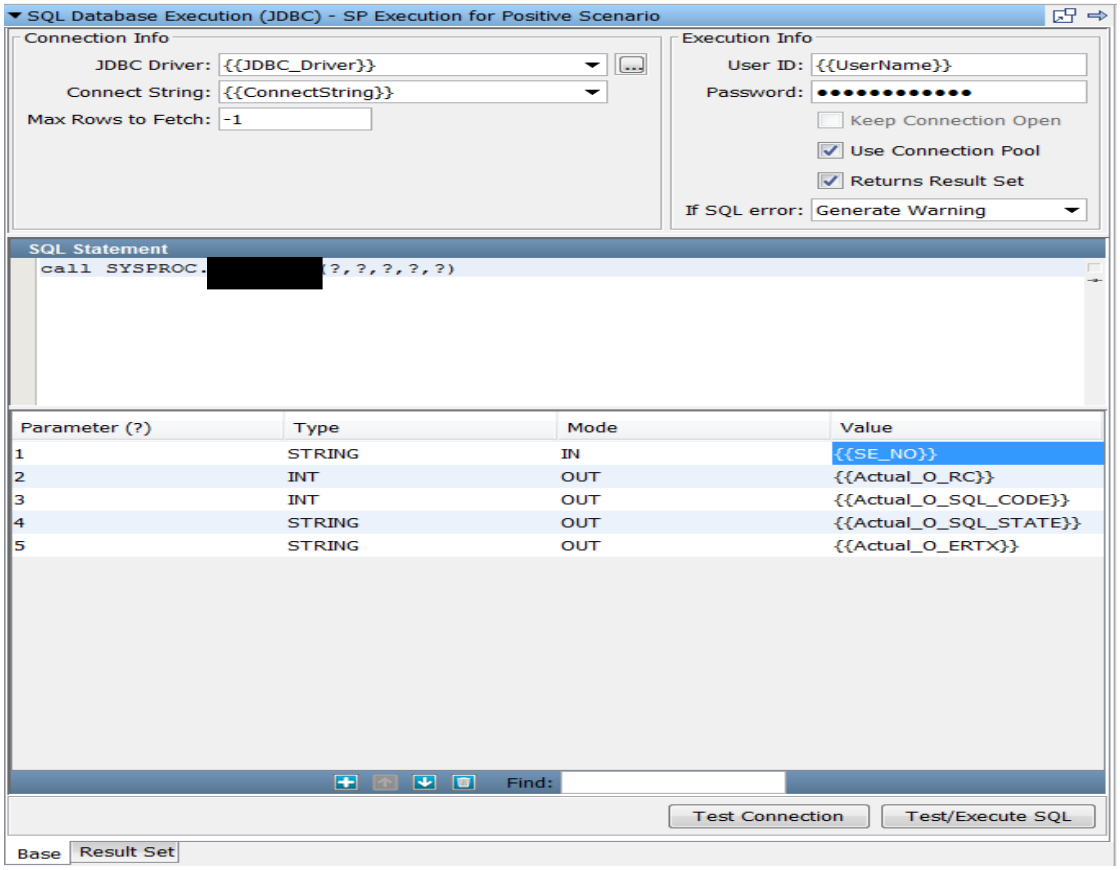
2. Create a Test Case.



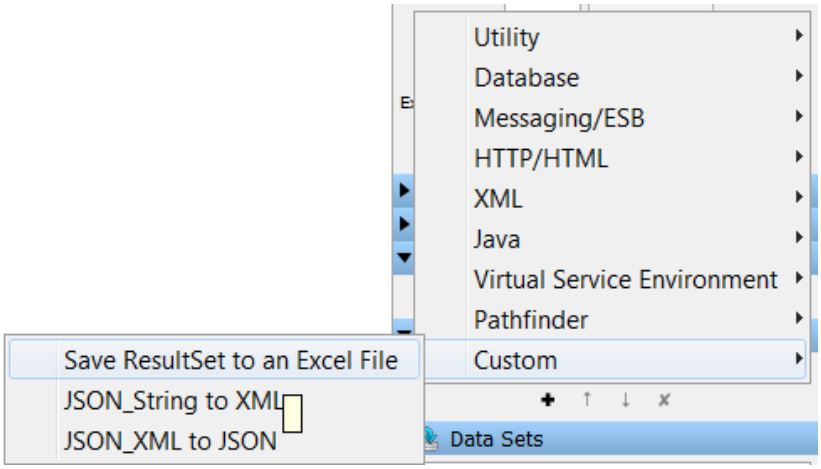
3. Add a Test Step



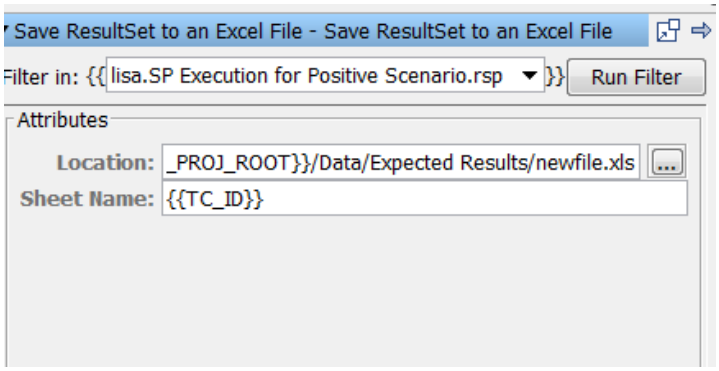
4. Open the step and provide the required Details.



5. On the right side, under Step Information, Click on ✚ button under Filters Section and select the filter created under Custom Filters Submenu.



6. Open the Filter and provide the values for parameters.



7. Click Start a new ITR and execute the Test Case to Test the Filter.

References:

1. https://support.ca.com/cadocs/7/CA%20LISA%207%205%202-ENU/Bookshelf_Files/PDF/LISA_Developer_ENU_r7.5.2.pdf