IBM OpenPages GRC Platform
Lifecycle Configuration Guide

NOTE

Before using this information and the product it supports, read the information in *Appendix C: Notices* of this document

Product Information

This document applies to IBM OpenPages GRC Platform 7.2.0.2 and may apply to subsequent releases.

# Contents

Pre-Requisites:

      Requires OpenPages 7.2.0.2 + All modules Install or higher version

Configure LifeCycle for New Objects

This document will describe steps on how to configure LifeCycle for objects other than standard defined OOB (Issue/Incident/Control/LossEvent) which comes with the installation.

Task 1: The 4 Main Steps

- The first step is to identify the object that you would like to configure the LifeCycle.
- The second step is to design a LifeCycle workflow for the object identified. Workflow is defined by the below set of attributes
    a. Stage - represents a step in the lifecycle
    b. Transition – represents the possible next stage for the current stage
    c. Status – represents the possible status upon a transition
    d. Assignee – represents the responsible person for the stage
- The third step is to identify values for each of the attributes defined above
    a. Stage – New, In Progress, In Review, Closed
    b. Transition – Start, Send for Review, Review Reject, Review Close
    c. Status – In Progress, In Review, Review Rejected, Closed
    d. Assignee – performer, Reviewer
- The fourth step is to draw a workflow diagram with all the values for each attribute
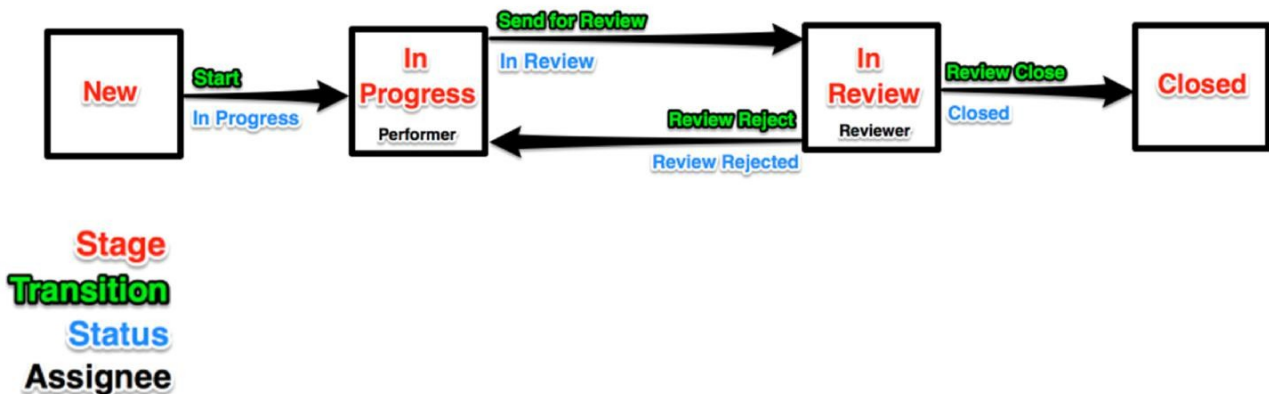
Task 2: Define the Workflow in Detail

- When an object is initially created "Stage" will be set to "New"
- User can take the workflow to the next "Stage" by selecting the required transition
- From the above workflow diagram, the only "Transition" defined is "Start"
- Upon selecting the "Transition", the workflow "Stage" is set to "In Progress"
- When the "Stage" is "In Progress", the "Status" is set to "In Progress" and user who is defined as the responsible owner is "Performer"
- User can then move the "Stage" from "In Progress" to "In Review" by selecting the "Transition" to "Send for Review"
- When the "Stage" is in "In Review", the "Status" in this stage will be "In Review" and the "Reviewer" is the responsible owner

- User can the move the "Stage" from "In Review" to either close the workflow by selecting the "Transition" to "Review Close" or can take back to "In Progress" stage by selecting the "Transition" to "Review Rejected"
- When user selects "Transition" to "Review Close", the "Stage" is moved to "Closed" and the "Status" is set to "Closed"

Task 3: New Field Group

- Once the workflow is defined, the next step is to define the fields for each attribute of the workflow.
- Define a field group:
    a. The standard notation for naming the field group is "OPLC-<Object Type>"
    b. As an example, we are creating the workflow for "SOXTest" object
    c. Navigate to Administration ! Field Groups
    d. Click on "Add"

    e. Create a new Field Group - "OPLC-SOXTest"

    f. Create 4 enumerated/dropdown fields and define values by clicking on "Add" button as shown in the below example

        i. LCName – Specify the name of the lifecycle. You can define any number of stages as you wish per the workflow design you have defined in the step 1. Ex: 1 Stage, 2 Stage, 3 Stage…

Field Definition Information   Object Types > SOXTest > OPLC-SOXTest > LCName   Reporting Period: Current ▼   Global Search 🔍 ❓

▼ Field Definition Information | ▼ Enumerated String Values

Field Definition Information   Edit...

Name:	📁 LCName
Description:	Identifies the lifecycle used
Label:	LCName
Data Type:	Enumerated String
Required:	False
Global Search:	True
Multi-valued:	False
Default Value:	1StageRequest

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Enumerated String Values   Add...   Delete   Hide/Unhide   Update Order

☐ Name	Label	Hidden	Order
☐ 🏳 1StageRequest	1StageRequest	False	1

⬆Top

ii. LCStage – Specify the stages listed above. In this case, will be New, In Progress, In Review, Closed

Field Definition Information   Object Types > SOXTest > OPLC-SOXTest > LCStage   Reporting Period: Current ▼   Global Search 🔍 ⊙

▼ Field Definition Information | ▼ Enumerated String Values

Field Definition Information   Edit...

Name:	📁 LCStage
Description:	Automatically set by the lifecycle
Label:	LCStage
Data Type:	Enumerated String
Required:	False
Global Search:	True
Multi-valued:	False
Default Value:	New

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Enumerated String Values   Add...   Delete   Hide/Unhide   Update Order

☐ Name	Label	Hidden	Order
☐ 🏳 New	New	False	1
☐ 🏳 In Progress	In Progress	False	2
☐ 🏳 Closed	Closed	False	5
☐ 🏳 In Review	In Review	False	6

iii. LCStatus – Specify the status listed above. In this case, will be In Progress, In Review, Review Rejected, Closed

Field Definition Information   Edit...

Name:	📁 LCStatus
Description:	Automatically set by the lifecycle
Label:	LCStatus
Data Type:	Enumerated String
Required:	False
Global Search:	True
Multi-valued:	False
Default Value:	

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Enumerated String Values   Add...   Delete   Hide/Unhide   Update Order

☐ Name	Label	Hidden	Order
☐ 🏳 Review Rejected	Review Rejected	False	11
☐ 🏳 In Progress	In Progress	False	2
☐ 🏳 In Review	In Review	False	10
☐ 🏳 Closed	Closed	False	4

iv. LCTransition – Specify the transition listed above. In this case, will be Start, Send for Review, Review Reject, Review Close

Field Definition Information   Edit...

Name:	🔲 LCTransition
Description:	Automatically set by the lifecycle
Label:	LCTransition
Data Type:	Enumerated String
Required:	False
Global Search:	True
Multi-valued:	False
Default Value:	

⬆Top

Enumerated String Values   Add...   Delete   Hide/Unhide   Update Order

☐	Name	Label	Hidden	Order
☐	🏳 Start	Start	False	1
☐	🏳 Send for Review	Send for Review	False	9
☐	🏳 Review Reject	Review Reject	False	10
☐	🏳 Review Close	Review Close	False	11

        v.   The final field group after creating the 4 fields will look like the below

Task 4: Object Level Changes

- Once the field group is created, navigate to Administration ! Object Types ! SOXTest ! Included Field Groups
- Click on "Include…" button next to the "Included Field Groups" section
- Include the below highlighted fields –
    - a. "OPLC-Owners"
        - i. Optional and contains a default list of possible owners at different stages in the lifecycle
    - b. "OPLC-Std"
        - i. LCAssignee – the owner at the current stage of the lifecycle
        - ii. LCComment – optional comment the user supplied on a transition
        - iii. LCDueDate – can be used for specifying a due date
        - iv. LCInReview – can be used for UI behavior
        - v. LCReadOnly – can be used for UI behavior
        - vi. LCUpdateAssignee – used to update/reset the LCAssignee field for the current stage
    - c. "OPLC-SOXTest"
        - i. Created in Task 3

- Navigate to Administration ! Object Types ! SOXTest ! Dependent Picklists
- Create a new picklist dependency between "LCTransition" and "LC Stage"

Dependent Picklists

	Dependent Field	Controlling Field	Enabled
☐	LCTransition	LCStage	true

- Controlling field is "LCStage" and dependent picklist is "LCTransition" field

LCStage:	New	In Progress	Closed	In Review
LCTransition:	Start	Start	Start	Start
	Send for Review	Send for Review	Send for Review	Send for Review
	Review Reject	Review Reject	Review Reject	Review Reject
	Review Close	Review Close	Review Close	Review Close

Task 5: Profile Level Changes

- Navigate to Administration ! Profiles ! Pick a profile ! Object Fields
- Click on "Include…" button next to "Object Fields" section

☐	Audit Test Procedure	OPSS-TestP-Aud	Audit Test Procedure	false	Text Area
☐	PrimaryOwner	OPLC-Owners	Primary Owner	false	User/Group Selector
☐	Reviewer	OPLC-Owners	Reviewer	false	User/Group Selector
☐	Approver	OPLC-Owners	Approver	false	User/Group Selector
☐	AdditionalOwners	OPLC-Owners	Additional Owners	false	User/Group Selector
☐	BusinessOwner	OPLC-Owners	Business Owner	false	User/Group Selector
☐	LCAssignee	OPLC-Std	Assignee	false	User/Group Selector
☐	LCUpdateAssignee	OPLC-Std	Update Assignee	false	List
☐	LCComment	OPLC-Std	Lifecycle Comment	false	Text
☐	LCDueDate	OPLC-Std	Due Date	false	Date
☐	LCReadOnly	OPLC-Std	Read Only	false	Boolean
☐	LCInReview	OPLC-Std	In Review	false	Boolean
☐	Control Attester	OPLC-Owners	Control Attester	false	User/Group Selector
☐	LCName	OPLC-SOXTest	LCName	false	List
☐	LCStage	OPLC-SOXTest	LCStage	false	List
☐	LCStatus	OPLC-SOXTest	LCStatus	false	List
☐	LCTransition	OPLC-SOXTest	LCTransition	false	List

Navigational Views   Add New...   Update Order

Name	Description	Default	Enabled	Order	Actions
Overview	Hierarchical View	false	false		Enable
Filtered List	Filterable Listing	true	true	1	Disable
Folder	Folder View	false	true	2	Disable	Make Default

Association Views

Name	Description
Context	Context View
List	Object Listing

- Include all the lifecycle fields from the field groups added to the object to the detail view except "LCTransition", "LCReadOnly" and "LCInReview" fields
  - All the owner fields included in the profile should have the display type as user/group selector   o   The below fields should be set to "Read-Only" in the views
    - " LCName
    - " LCStage
    - " LCStatus
    - " LCAssignee
    - " LCComment

☐ Trend	Trend	☐	23	
⊟ Internal Audit Test Plan	Internal Audit Test Plan		24	Edit...	Delete
☐ Audit Test Procedure	Audit Test Procedure	☐	25	
⊟ Test Plan Administration	Test Plan Administration		26	Edit...	Delete
☐ Location	Folder	☑	27	
⊟ LifeCycle	LifeCycle		28	Edit...	Delete
☐ AdditionalOwners	Additional Owners	☐	29	
☐ Approver	Approver	☐	30	
☐ LCAssignee	Assignee	☑	31	
☐ BusinessOwner	Business Owner	☐	32	
☐ Control Attester	Control Attester	☐	33	
☐ LCDueDate	Due Date	☐	34	
☐ LCName	LCName	☑	35	
☐ LCStage	LCStage	☑	36	
☐ LCStatus	LCStatus	☑	37	
☐ LCComment	Lifecycle Comment	☑	38	
☐ PrimaryOwner	Primary Owner	☐	39	
☐ Reviewer	Reviewer	☐	40	
☐ LCUpdateAssignee	Update Assignee	☐	41	

Save   Cancel

Task 6: New Trigger Config XML

- Create a new trigger definition file
- The below is the sample snippet of the trigger definition file

```xml
<?xml version="1.0" encoding="UTF-8"?>
<trigger-definitions>
  <!-- If <default settings> are set they will be used in the create.object
event handling in the 'PRE' position.
      If an <assigneefield> is specified for a transition, then an e-mail will be
sent during an update.object POST handling
      Transition "name" attribute: Should be a valid enum value in the
lifecycle transition field.
      Transition "nextstage" attribute: Should be a valid enum value in the
lifecycle stage field.
      setstatus "value" attribute: Should be a valid enum value in the lifecycle
status field. -->
  <grcTrigger name="SOXTest Lifecycle" type="lifecycle"
    id="op.lifecycle.soxtest"> <objecttype value="SOXTest"/>
    <lifecyclegroup value="OPLC-SOXTest"/>
    <attribute name="from.address" value="donotreply@openpages.com"/>

    <attribute name="email.subject.string.key" value="lifecycle.soxissue.email.subject"/>
    <attribute name="email.subject.parameter.fields" value="name"/>

    <attribute name="email.body.string.key" value="lifecycle.soxissue.email.content"/>
    <attribute name="email.body.parameter.fields" value="OPLC-
Std:LCAssignee,name,description,OPLC-Std:LCComment,OPLC-
Std:LCDueDate,OPLC-SOXTest:LCStatus"/>
    <defaultsettings>

      <assigneefield objecttype="" field="OPSS-
      Iss:Assignee"/> <attribute name="readonly"
      value="false"/> <attribute name="reviewmode"
      value="false"/>
      <attribute name="sendemail" value="true"/>
    </defaultsettings>
    <transitions>

      <transition name="Start" nextstage="In
        Progress"> <setstatus value="In Progress"/>
        <assigneefield objecttype="" field="OPSS-
        Iss:Assignee"/> <attribute name="readonly"
        value="false"/>
        <attribute name="reviewmode"
      value="false"/> </transition>
      <transition name="Send for Review" nextstage="In
        Review"> <setstatus value="In Review"/>
        <assigneefield objecttype="" field="OPSS-
        Iss:Assignee"/> <attribute name="readonly"
        value="true"/>
        <attribute name="reviewmode"
      value="true"/> </transition>
      <transition name="Review Reject" nextstage="In
        Progress"> <setstatus value="In Progress"/>
        <assigneefield objecttype="" field="OPSS-
        Iss:Assignee"/> <attribute name="readonly"
        value="false"/>
        <attribute name="reviewmode"
      value="false"/> </transition>
      <transition name="Review Close"
        nextstage="Closed"> <setstatus
        value="Closed"/>
```

```
        <attribute name="readonly" value="true"/>
        <attribute name="reviewmode" value="true"/>
    </transition>
  </transitions>
 </grcTrigger>
</trigger-definitions>
```

- Once the trigger definition file is ready, check in the file in the OPX

- Configure the trigger definition file in the registry settings by logging into the application and navigating to Administration ! Settings ! Applications ! GRCM ! Trigger Configuration Files
- Add the Trigger XML file name at the end of the registry setting

- Restart the application services

Task 7: Post-Installation Steps

Sub-Task 1: Test the Workflow

- Login to the application and create a new Test Plan object
- During creation of the record, select the "LCName" from the drop down

- Once the TestPlan object is created by selecting the lifecycle stage, User will have the option to initiate the workflow by selecting "Start" from the Lifecycle dropdown
- Observe that the lifecycle dropdown values are the values from the "LCTransition" field

- The below screenshot displays the values of the configured Lifecycle fields

Assignee:		Business Owner:	
Control Attester:		Due Date:	
In Review:		LCName:	1StageRequest
LCStage:	New	LCStatus:	
Lifecycle Comment:		Primary Owner:	OpenPagesAdministrator
Read Only:		Reviewer:	

- As per the workflow diagram, the next stage is "In Progress"
- Observe that the Lifecycle dropdown in this stage has the value "Send for Review" which is the only transition
- Also, notice that the "LCStage" is set to "In Progress" and "LCStatus" is set to "In Progress"

Fields
+ General

Lifecycle ▾ | Print | Acti
Send for Review

− Test Plan Information

Test Type(s):	Unknown	Sample Size:	1
Frequency:	Unknown	Test Frequency Offset (1 to 365 days):	1
Test Procedure:	1		
Baseline Test Procedure:			

− LifeCycle

Additional Owners:		Approver:	
Assignee:		Business Owner:	
Control Attester:		Due Date:	
In Review:	False	LCName:	1StageRequest
LCStage:	In Progress	LCStatus:	In Progress
Lifecycle Comment:	Starting the lifecycle	Primary Owner:	OpenPagesAdministrator
Read Only:	False	Reviewer:	
Update Assignee:		LCTransition:	Start

- From "In Progress" stage user is provided with option either to close the review and complete it or to reject and bring back to the "In Progress" stage

Test Plan for ABC
Description:
Trend: Not Determined
Business Entity Hierarchy: Global Financial Services > North America > Retail Banking
Primary Parent Hierarchy: RB-05 > RB05-03 > 1-RSK-02-02-01 > 1-CTL-02-02-01-03

Testing Status: Not Tested

Fields

Lifecycle ▾ | Print | Actions ▾
Review Reject
Review Close

− General

Name:	Test Plan for ABC	Description:	

− Test Plan Information

Test Type(s):	Unknown	Sample Size:	1
Frequency:	Unknown	Test Frequency Offset (1 to 365 days):	1

− LifeCycle

Additional Owners:		Approver:	
Assignee:		Business Owner:	
Control Attester:		Due Date:	
In Review:	True	LCName:	1StageRequest
LCStage:	In Review	LCStatus:	In Review
Lifecycle Comment:	Submit for review	Primary Owner:	OpenPagesAdministrator
Read Only:	True	Reviewer:	
Update Assignee:		LCTransition:	Send for Review

- When user selects "Review Close", observe that the Lifecycle dropdown disappears and the Status is set to "Closed", indicating that the lifecycle is completed

Fields					Print	Actions ▼

— General

Name:	Test Plan for ABC		Description:		

— Test Plan Information

Test Type(s):	Unknown	Sample Size:	1
Frequency:	Unknown	Test Frequency Offset (1 to 365 days):	1
Test Procedure:	1		
Baseline Test Procedure:			

— LifeCycle

Additional Owners:		Approver:	
Assignee:		Business Owner:	
Control Attester:		Due Date:	
In Review:	True	LCName:	1StageRequest
LCStage:	Closed	LCStatus:	Closed
Lifecycle Comment:	Closing the lifecycle	Primary Owner:	OpenPagesAdministrator
Read Only:	True	Reviewer:	
Update Assignee:		LCTransition:	Review Close

Task 8: Invoking Custom Triggers from LifeCycle (Optional)

- We can also invoke custom written triggers along with the LifeCycle created above
- The custom written trigger should be included in the trigger xml in this case "OPLC-SOXTest.xml" by adding the below tag

```xml
        </transition>
    </transitions>
    <eventHandler class="com.ibm.openpages.ext.lifecycle.triggers.TestResultLifecycleTriggerEventHandler" >
    </eventHandler>
</grcTrigger>

</trigger-definitions>
```

- The custom trigger should extend "com.ibm.openpages.api.trigger.oob.lifecycle.DefaultLifecycleEventHandler"
- The below sample trigger xml shows the way to invoke a custom trigger

```
<trigger-definitions>

    <!-- If <default settings> are set they will be used in the create.object event handling in the 'PRE' position.

         If an <assigneefield> is specified for a transition, then an e-mail will be sent during an update.object POST handling

         Transition "name" attribute: Should be a valid enum value in the lifecycle transition field.

         Transition "nextstage" attribute: Should be a valid enum value in the lifecycle stage field.

         setstatus "value" attribute: Should be a valid enum value in the lifecycle status field. -->

    <grcTrigger name="SOXTestResult Lifecycle" type="lifecycle" id="op.lifecycle.soxtestresult">
        <objecttype value="SOXTestResult"/>
        <lifecyclegroup value="OPLC-SOXTestResult"/>
        <attribute name="from.address" value="donotreply@openpages.com"/>
        <attribute name="email.subject.string.key" value="lifecycle.soxtestresult.email.subject"/>
        <attribute name="email.subject.parameter.fields" value=""/>
        <attribute name="email.body.string.key" value="lifecycle.soxtestresult.email.content"/>
        <attribute name="email.body.parameter.fields" value=""/>
        <defaultsettings>
        <transitions>
            <transition name="Start" nextstage="In Progress">
            <transition name="Send for Review" nextstage="In Review">
            <transition name="Review Close" nextstage="Closed">
            <transition name="Review Reject" nextstage="In Progress">
        </transitions>
        <eventHandler class="com.ibm.openpages.ext.lifecycle.triggers.TestResultLifecycleTriggerEventHandler" >
        </eventHandler>
    </grcTrigger>

</trigger-definitions>
```

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