PUBLIC

Deep dive into SAP Cloud Platform Workflow Management – Restart Workflow

DEV-264

Exercises / Solutions

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THE BEST RUN SAP

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SAP Cloud Platform Workflow Management has Process Visibility capability, enable Process Owners / Process Operators to gain real time insights into processes and insight to actions. In this document you will learn how to model workflows, use as actions in Process Visibility to trigger these workflows based on process status by system or user.

INSIGHT TO ACTION

Processes change their status based on different situations like delays, SLA violation or technical failures. Some of this status changes require system centric actions and others require user centric actions. Process Visibility enable you to define both system and user centric actions based on process status. Please see help portal for more details.

System Triggered Action

Process visibility triggers actions when process status changes like (Failed, Suspended, Overdue or at Risk). Pre-configured workflow is triggered, and the workflow can do appropriate steps like notifying process administrators or creating a service ticket.

User Triggered Action

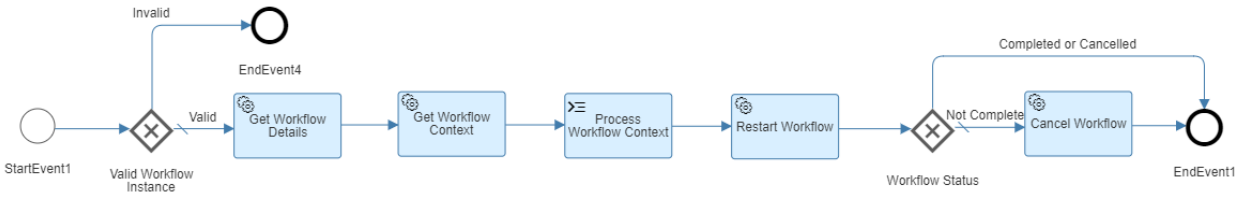
User triggered actions will be enabled when the process reach the preconfigured state and a user can trigger this action from process visibility. For eg: The process has exceeded the cycle time or at Risk or suspended or Failed.

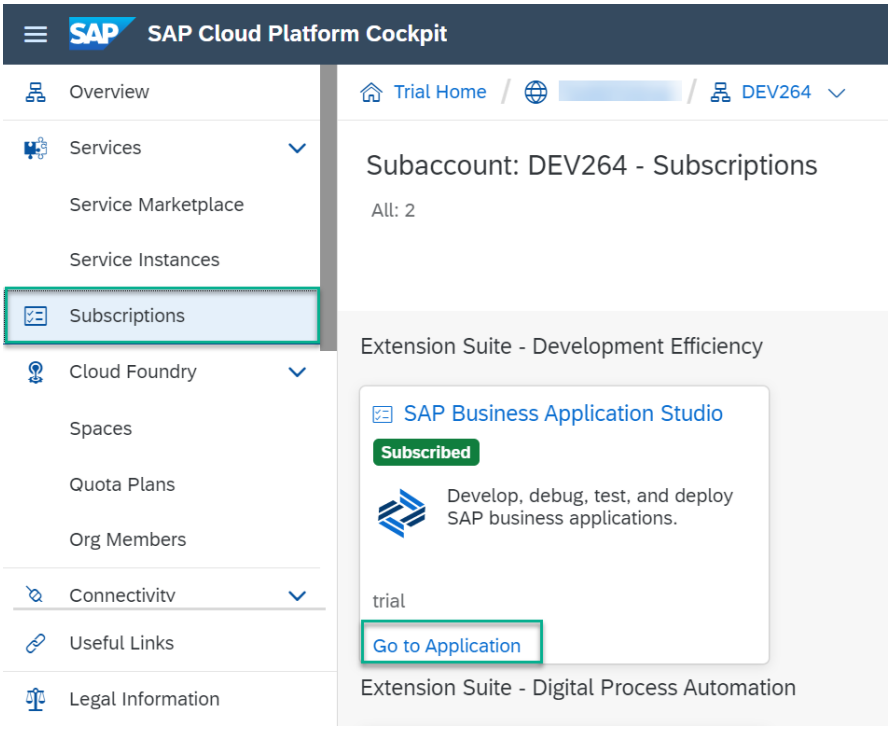
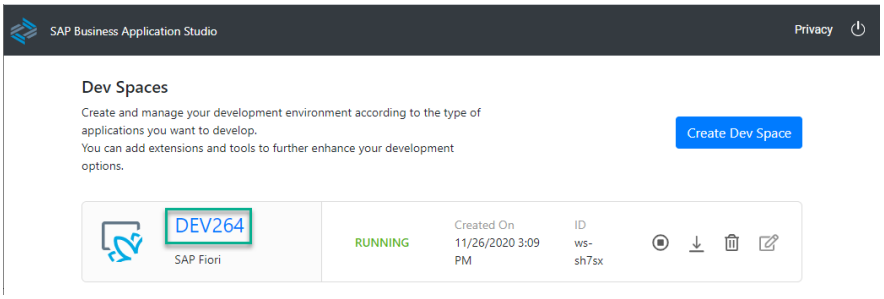
Prerequisite

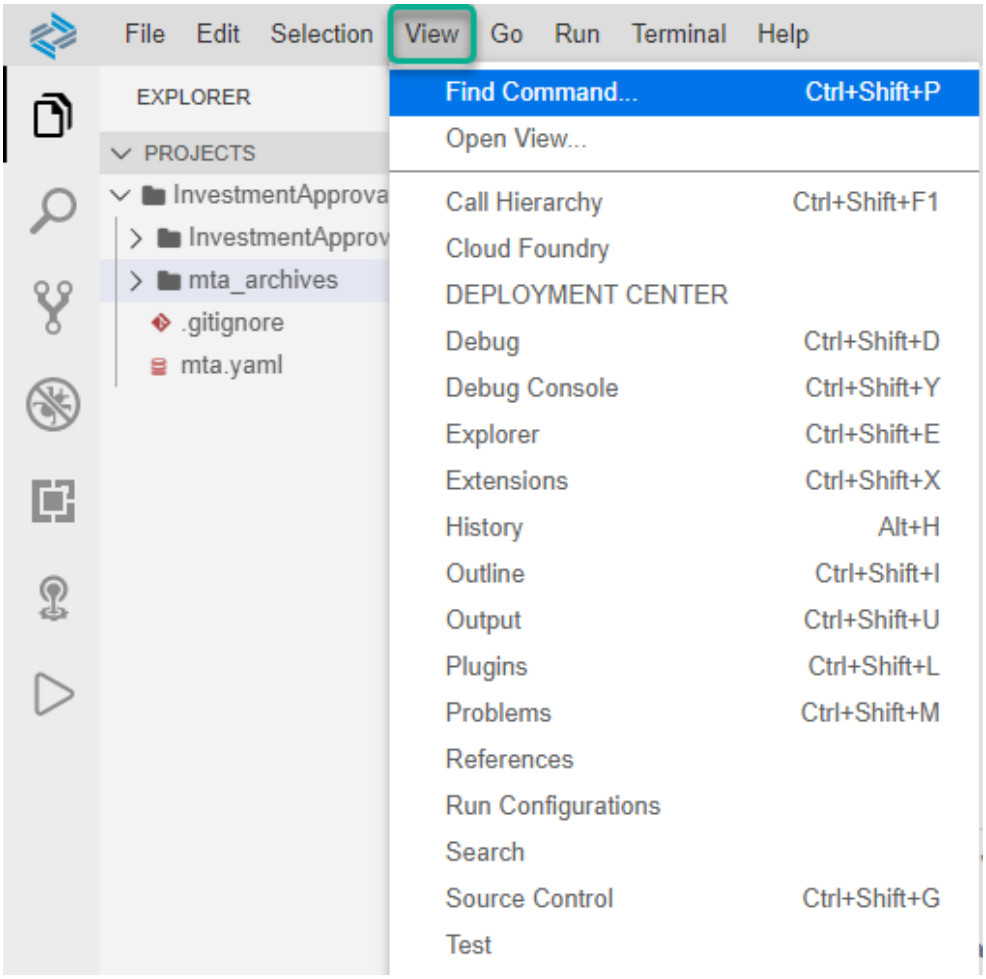
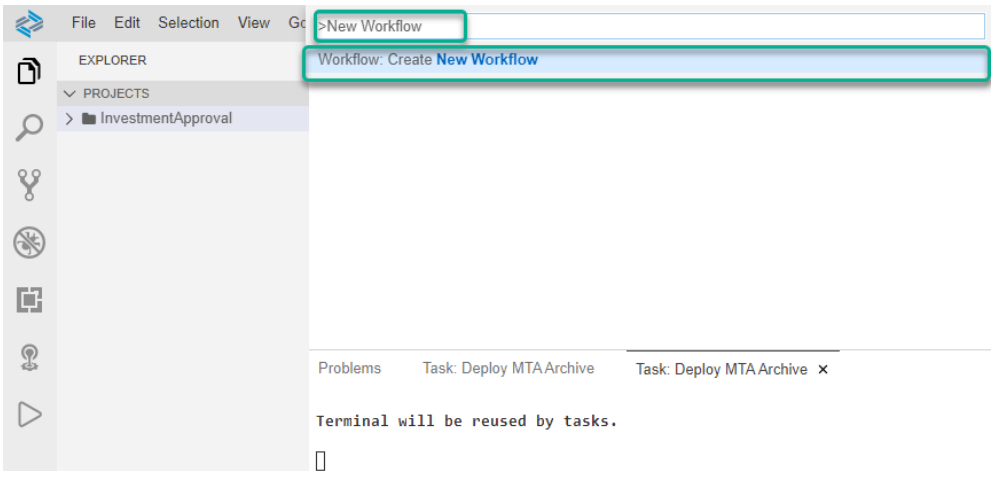
You have already configured your SAP Business Application Studio Workspace and Created the Investment Approval Workflow. Please refer Model Workflow guide how to build and deploy Investment Approval Workflow.

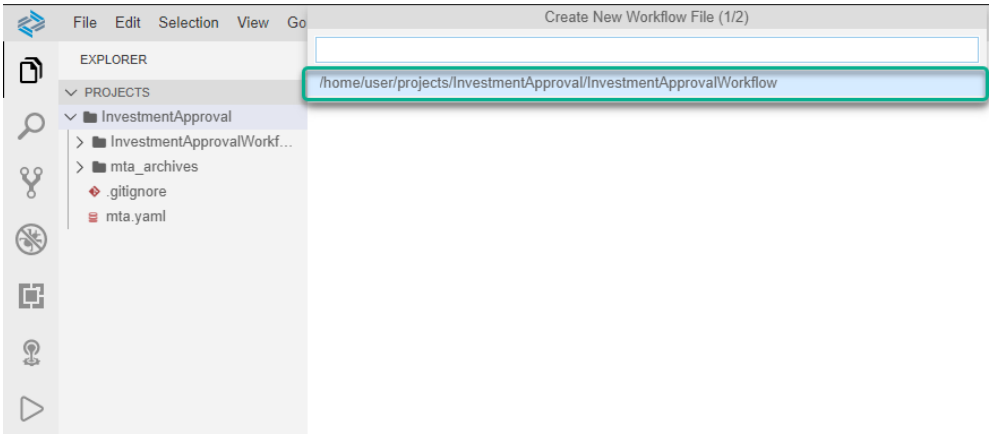
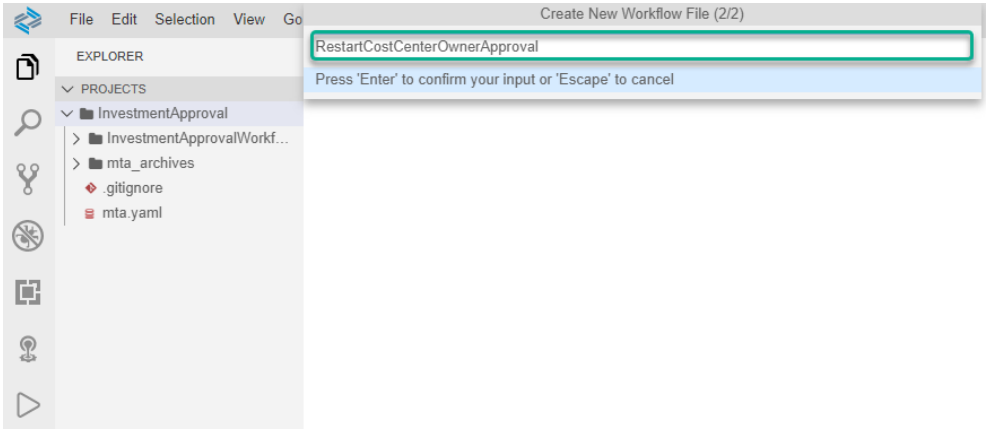
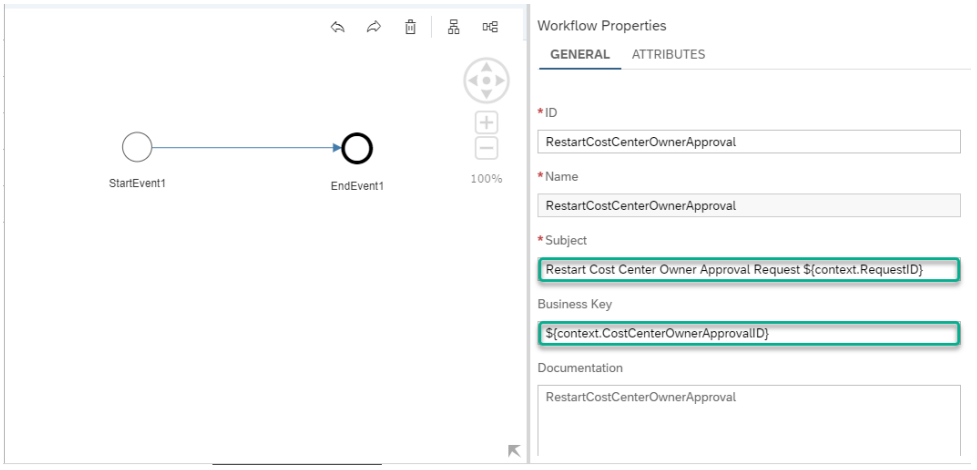
INSIGHT TO ACTION – RESTART WORKFLOW – USER TRIGGERED ACTION

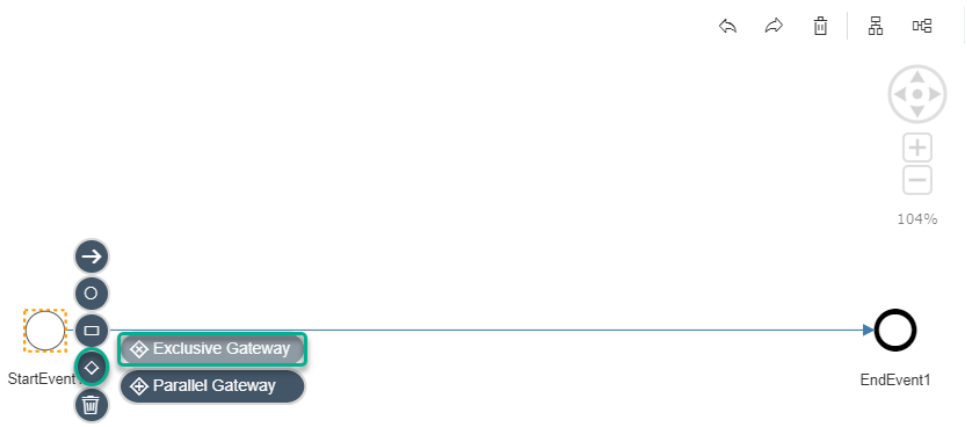
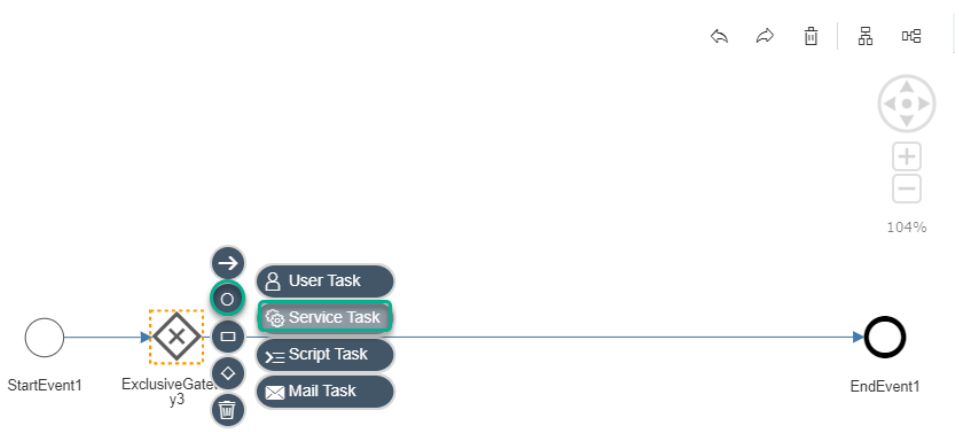
In this hands-on guide you will learn to model a workflow to get the details of a Cost Center Owner Approval workflow instance, get Workflow context, create a new workflow instance and cancel the current workflow instance using SAP Cloud Platform Workflow APIs.

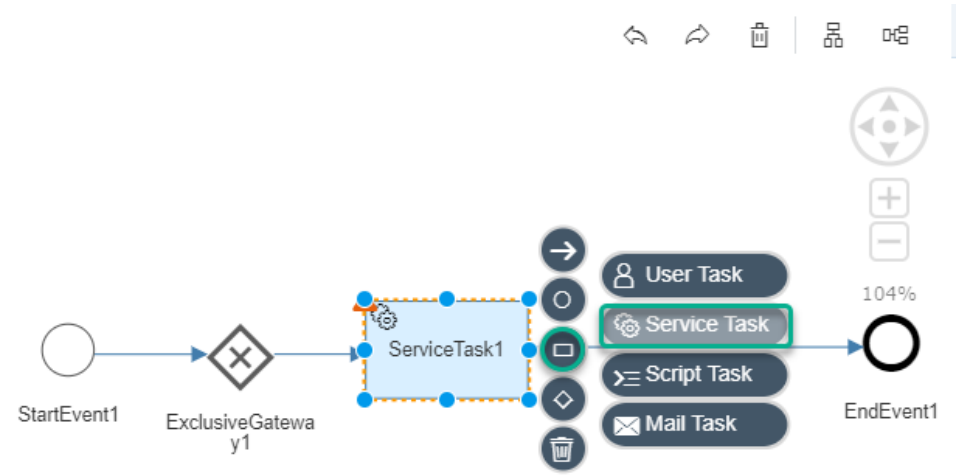
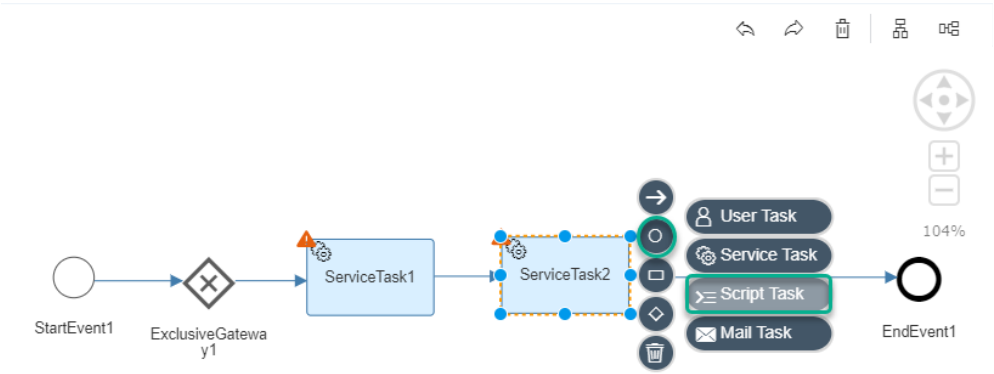


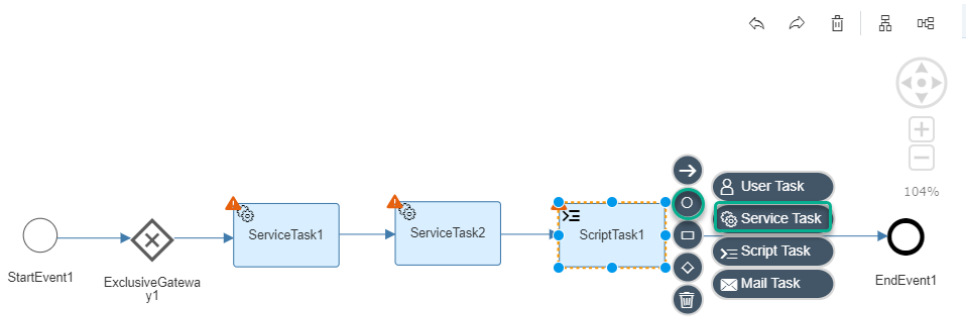
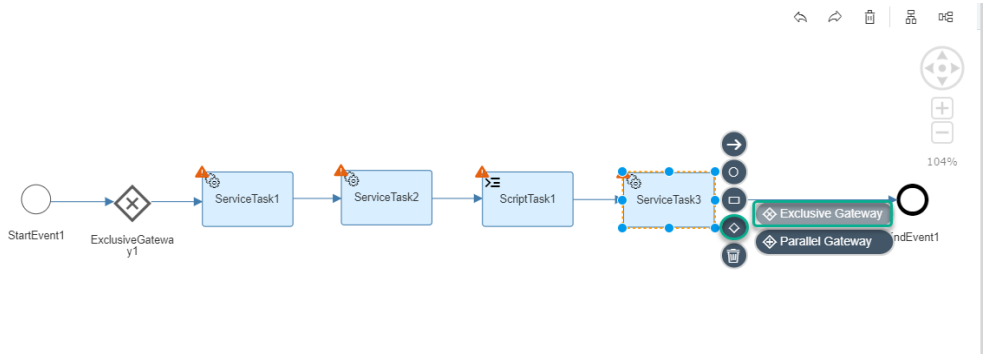
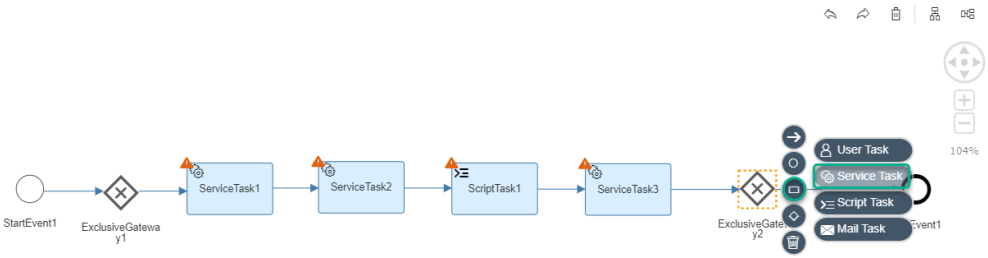
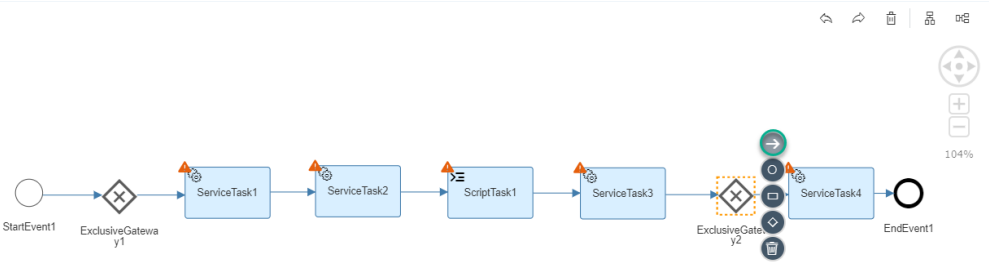
Explanation	Screenshot
1. Select **Subscriptions** in your Sub Account and you see the subscribed applications. 2. Select **SAP Business Application Studio** and click **Go to Application**. SAP Cloud Platform Business Application Studio will be opened in new browser window.	
3. Click your **Dev** Space.	

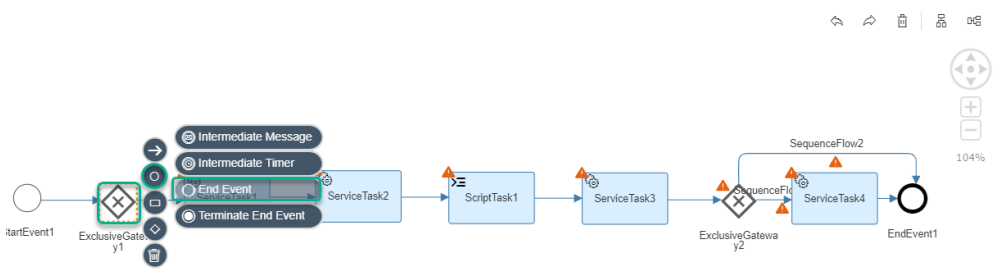
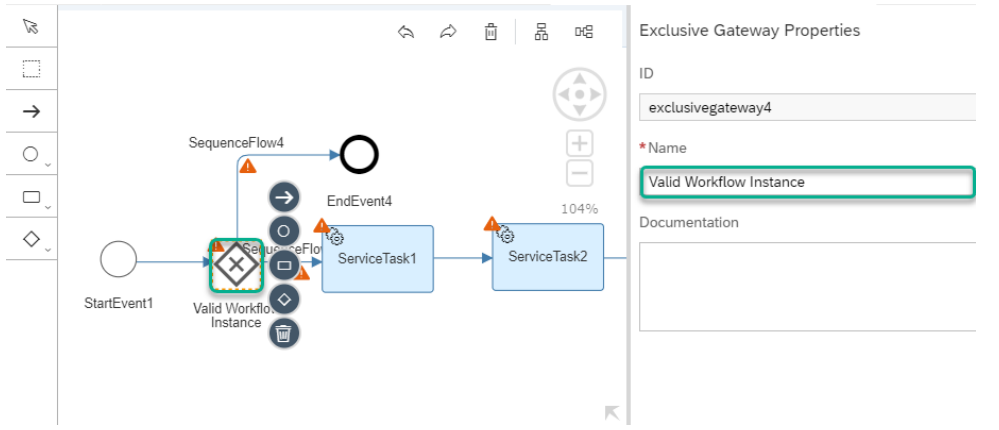
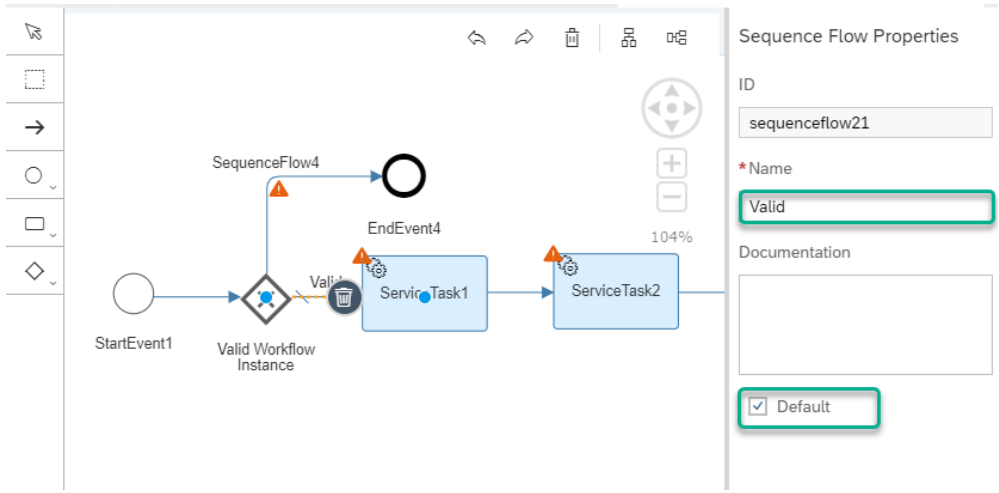
Explanation	Screenshot
4. Click **View** on the menu and select **Find Command**.	
5. Search for **New Workflow.** 6. Select **Workflow: Create New Workflow**	

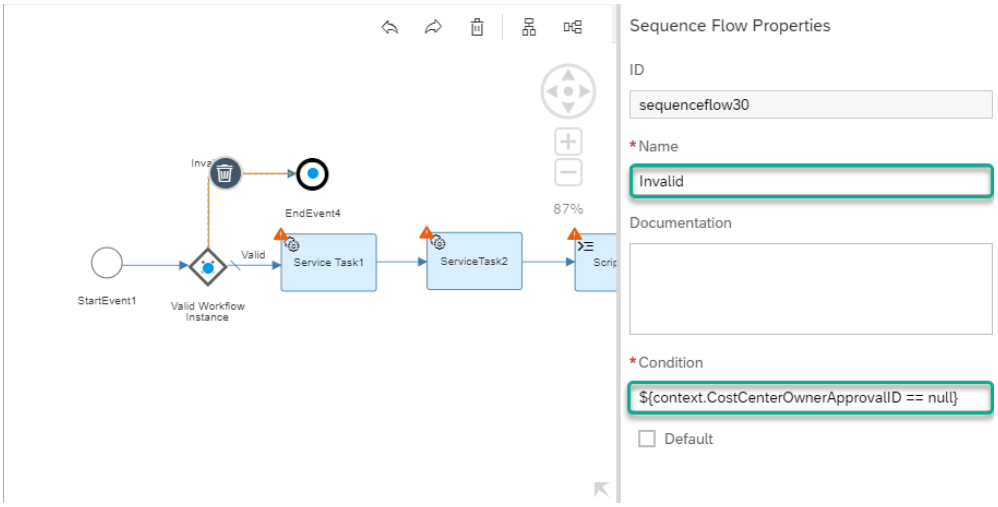
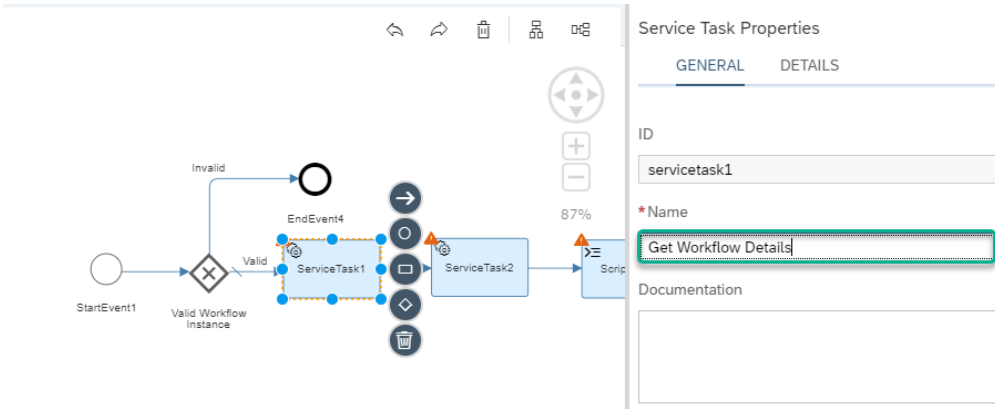
Explanation	Screenshot
7. Select the **folder** name.	
8. Enter the new Workflow name as **RestartCostCenterOwnerApproval**. A new workflow has created and opened in the editor. Drag and drop the **EndEvent** towards right to add other workflow artifacts.	
9. Enter the following. **Subject**: Restart Cost Center Owner Approval Request ${context.RequestID} **Business Key**: ${context.CostCenterOwnerApprovalID}	

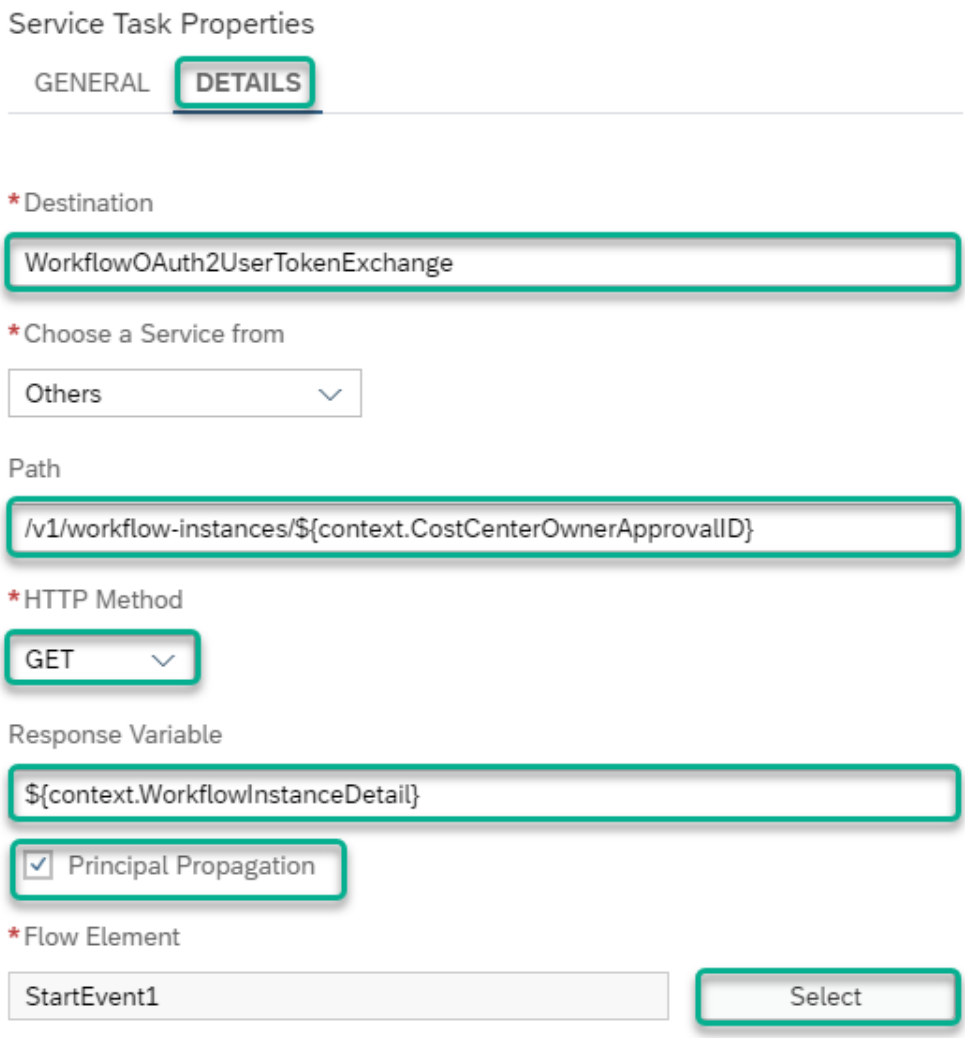
Explanation	Screenshot
10. Select **Start Event** and choose **Exclusive Gateway** from the speed button.	
11. Select **Exclusive Gateway** and choose **Service Task** from the speed button.	

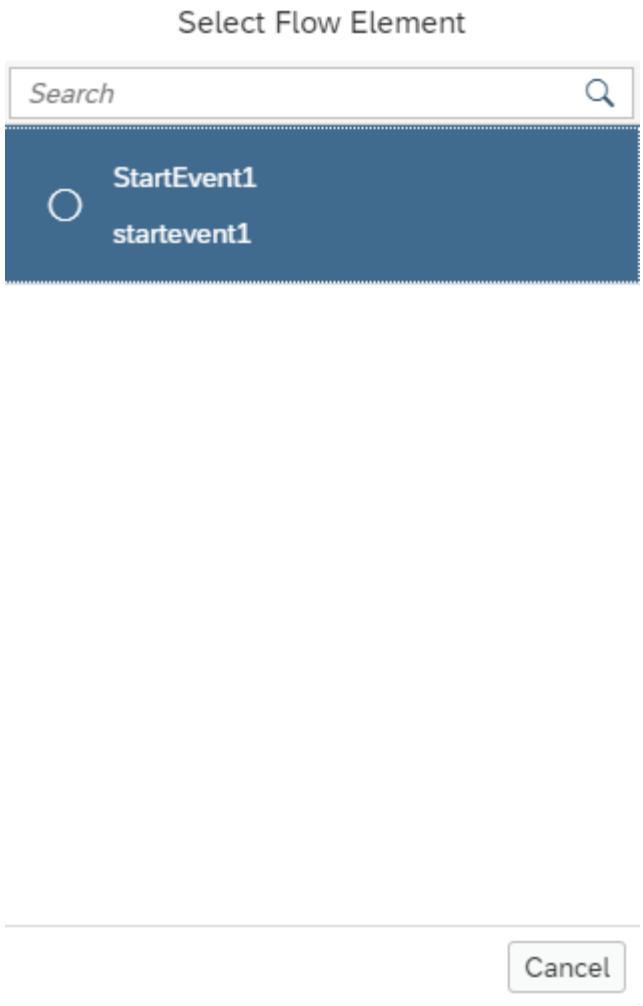
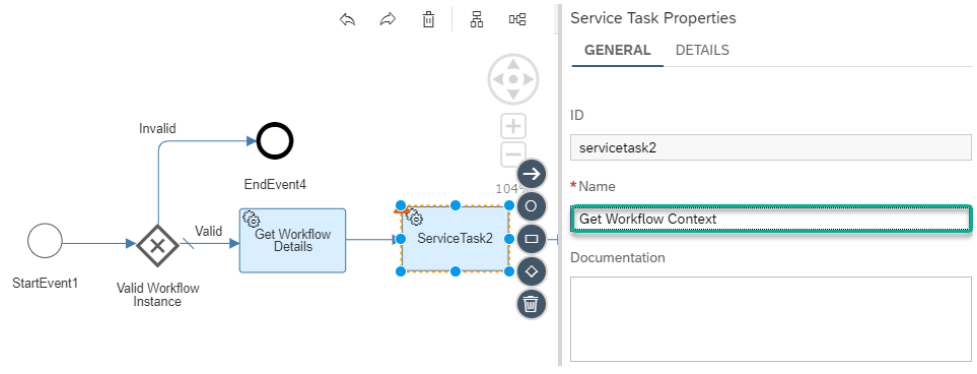
Explanation	Screenshot
12. Select **ServiceTask1** and choose **Service Task** from the speed button.	
13. Select **ServiceTask2** and choose **Script Task** from the speed button.	

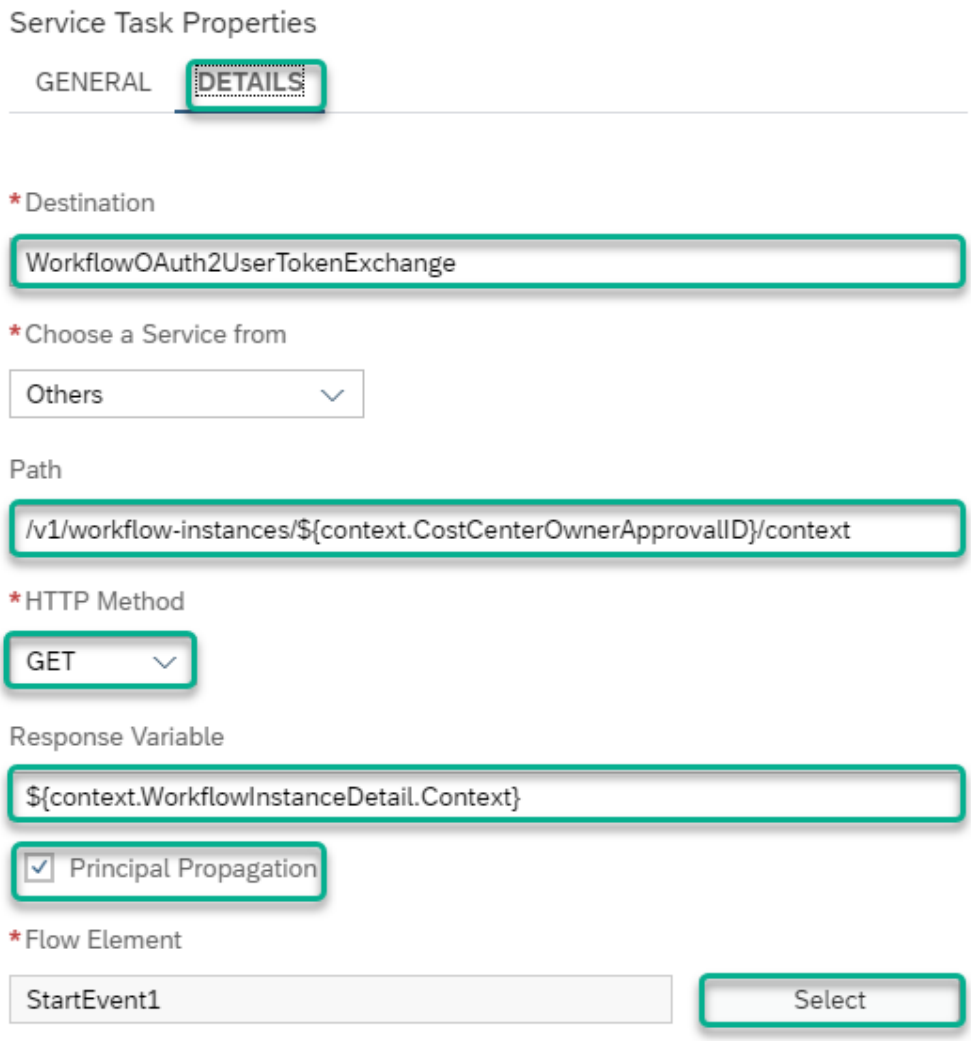
Explanation	Screenshot
14. Select **ScriptTask1** and choose **Service Task** from the speed button.	
15. Select **ServiceTask3** and choose **Exclusive Gateway** from the speed button.	
16. Select **Exclusive Gateway** and choose **Service Task** from the speed button	
17. Select **Exclusive Gateway** and choose **Sequence Flow** from the speed button. 18. Drag and drop the **Sequence Flow** to the **End Event.** Format the workflow diagram.	

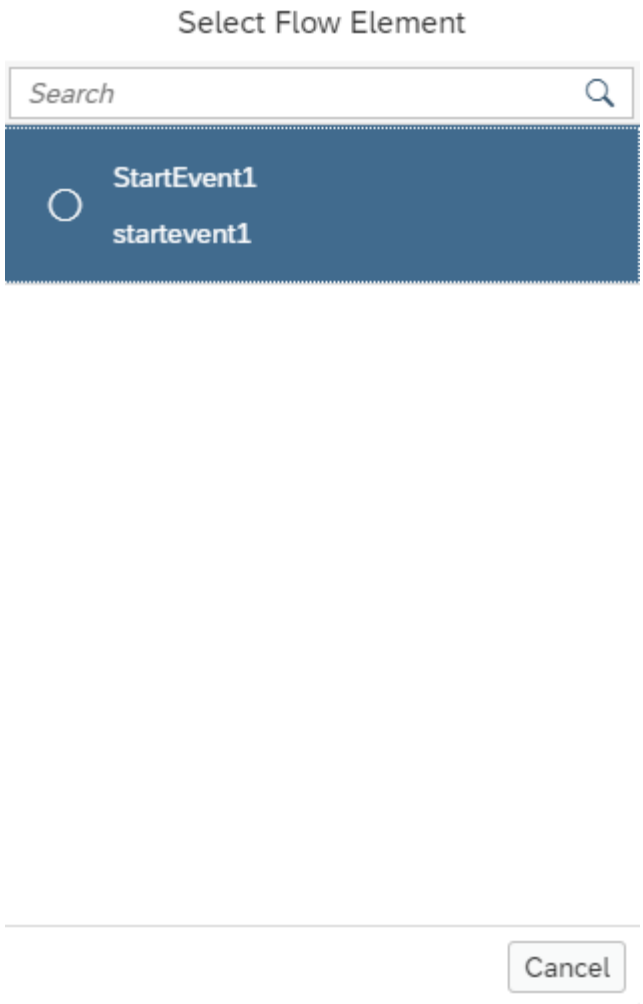
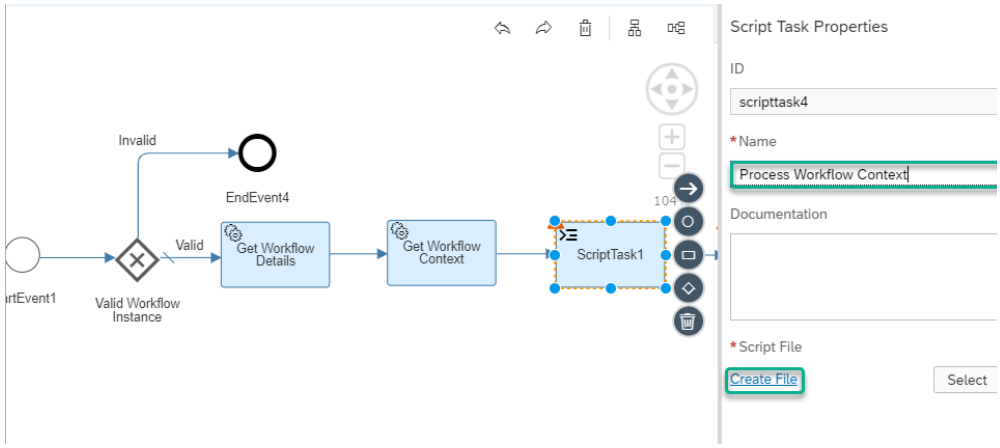
Explanation	Screenshot
19. Select **ExclusiveGateway1** and choose **End Event** from the speed button Format the diagram by drag and drop the new End Event above the Exclusive Gateway.	
20. Select **ExclusiveGateway1** and update **Name**: Valid Workflow Instance. If the Workflow Instance ID as start payload is empty or null complete the workflow.	
21. Select Sequence Flow between **Valid Workflow Instance** and **ServiceTask1.** 22. Update the Name **Name**: Valid 23. **Check** the **Default** check box	

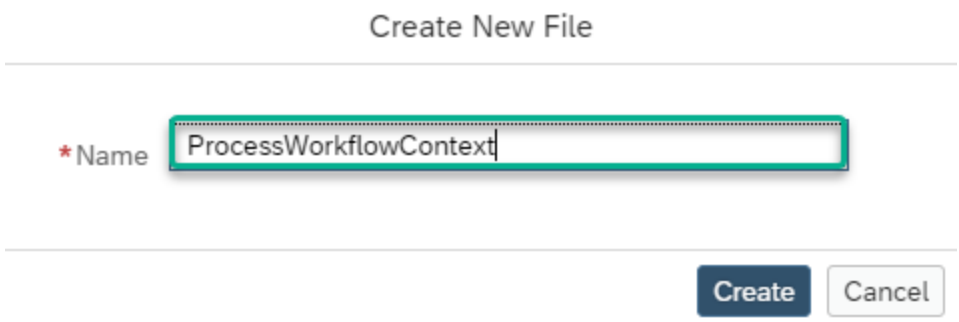
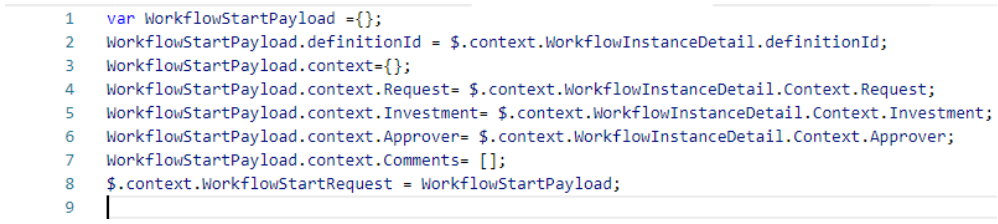
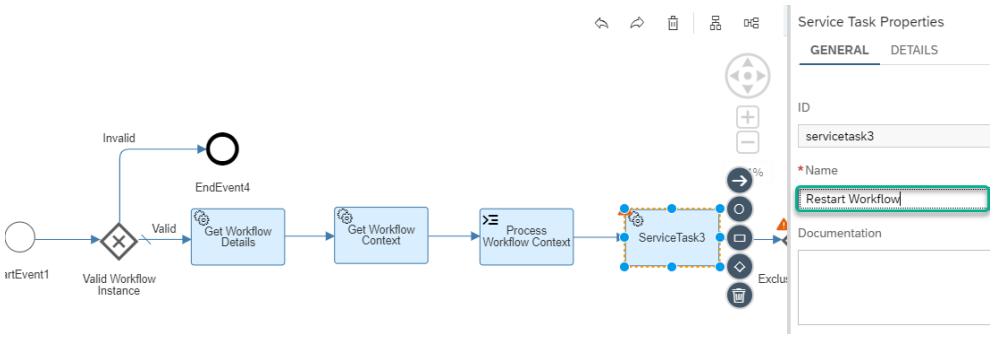
Explanation	Screenshot
24. Select Sequence Flow between **Valid Workflow Instance** and **End Event.** 25. Update the Name **Name**: Invalid 26. Update the Condition as ${context.CostCenterOwnerApprovalID == null}	
27. Select **ServiceTask1** and update the **name** as **Get Workflow Details.**	

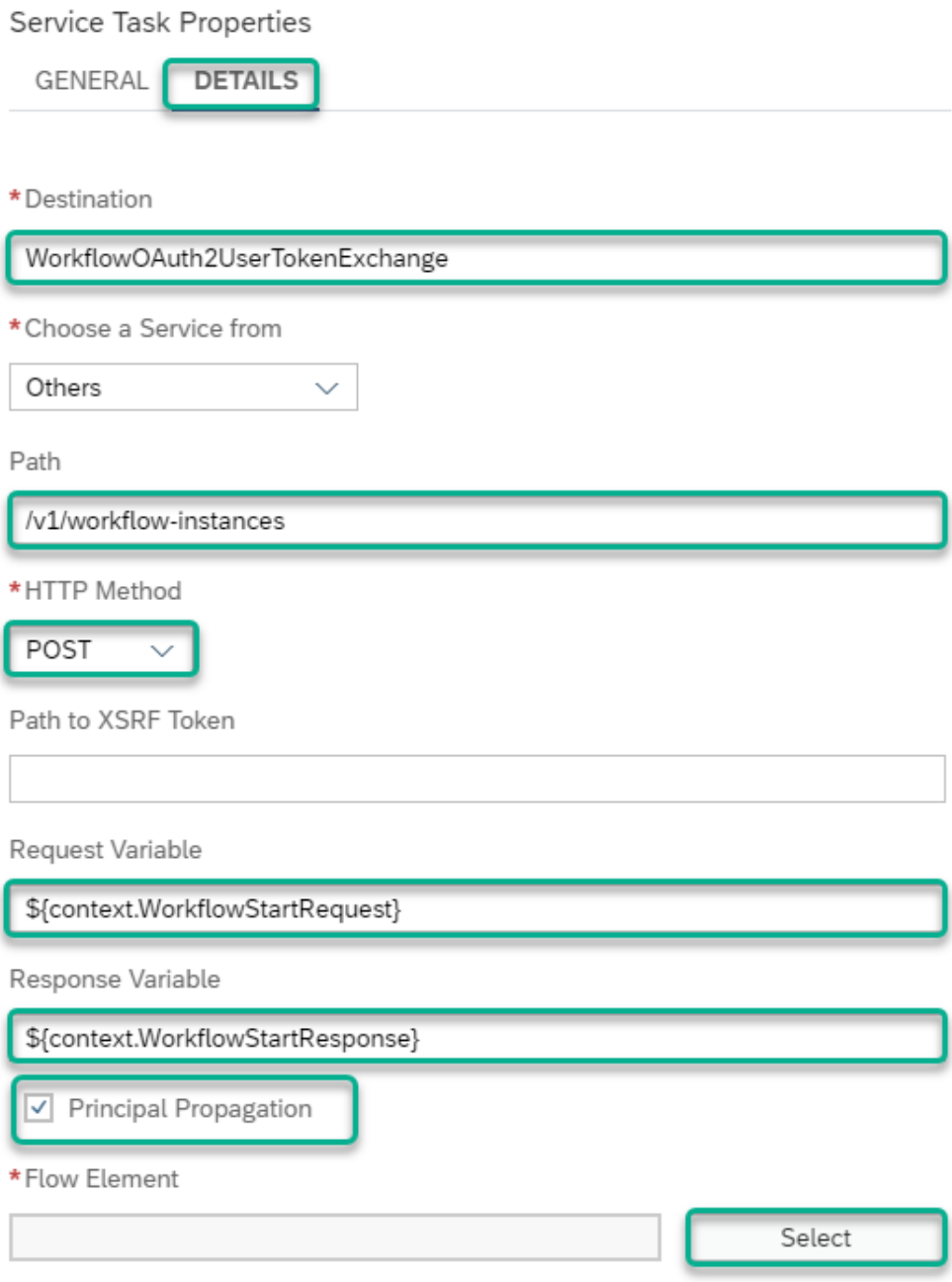
Explanation	Screenshot
28. Select **DETAILS** tab. 29. Set the following Service Task Properties. **Destination**: WorkflowOAuth2UserTokenExchange **Path**: /v1/workflow-instances/${context.CostCenterOwnerApprovalID} **HTTP Method**:GET **Response Variable**: ${context.WorkflowInstanceDetail} 30. Check **Principal Propagation.** 31. Click **Select** to choose a Flow Element Principal Propagation enable Workflow to use the security context of a user started or completed a task. Please refer Workflow help documentation for more about Principal Propagation.	

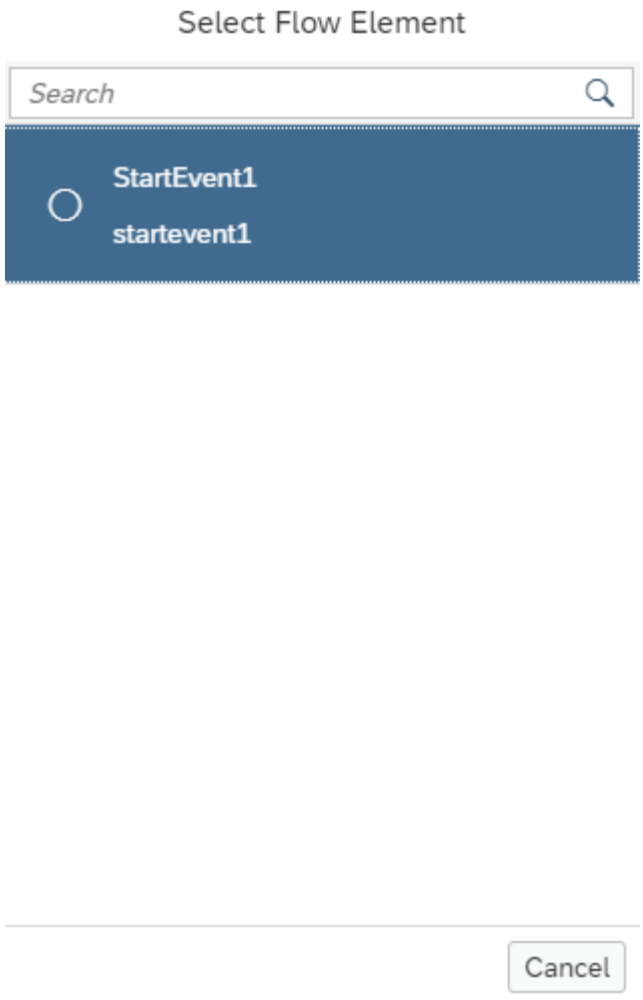
Explanation	Screenshot
32. Select **StartEvent1** as the Flow Element.	
33. Select **ServiceTask2** and update the **name** as **Get Workflow Context.**	

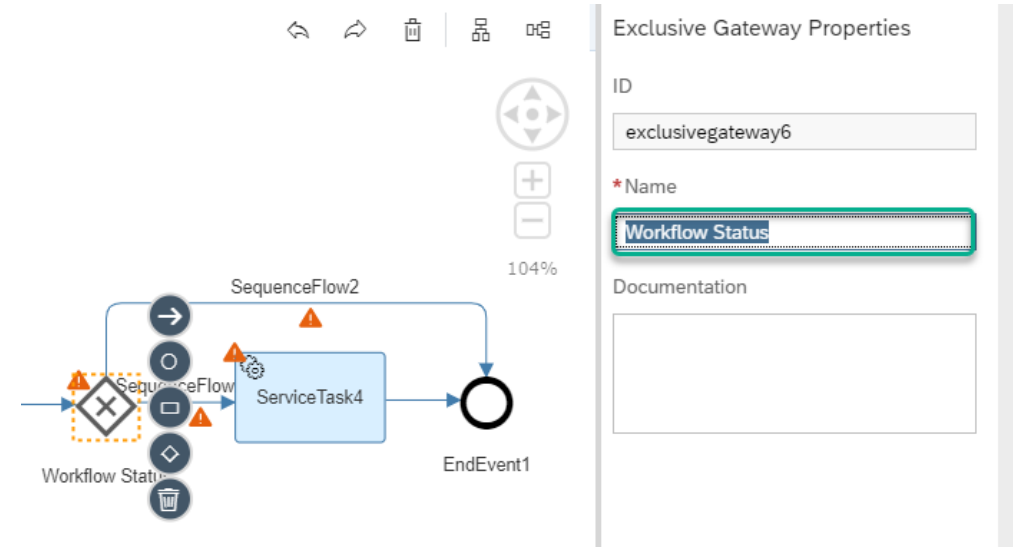
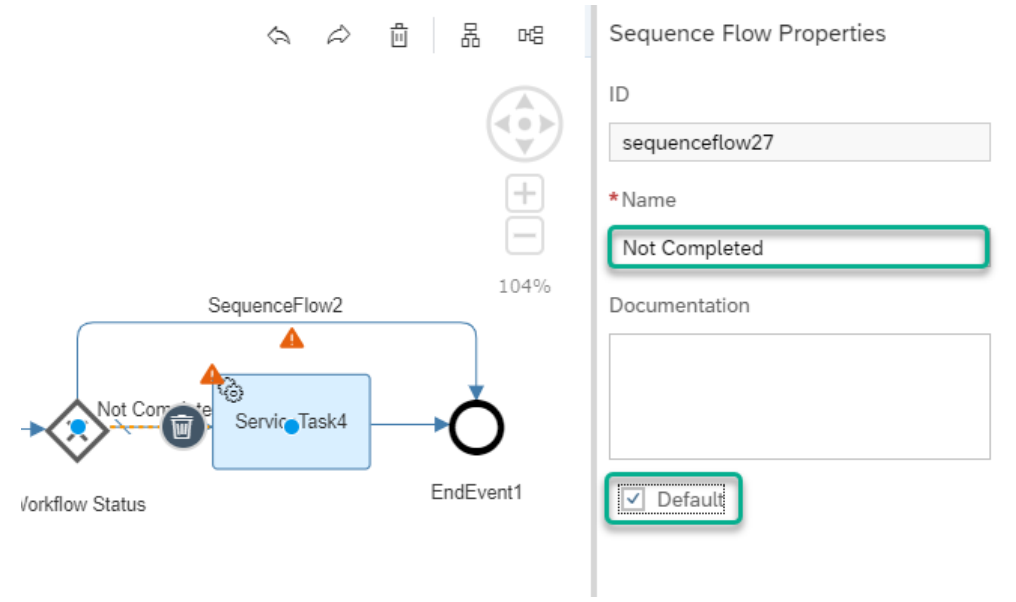
Explanation	Screenshot
34. Select **DETAILS** tab. 35. Set the following Service Task Properties. **Destination**: WorkflowOAuth2UserTokenExchange **Path**: /v1/workflow-instances/${context.CostCenterOwnerApprovalID}/context **HTTP Method**:GET **Response Variable**: ${context.WorkflowInstanceDetail.Context} 36. Check **Principal Propagation.** 37. Click **Select** to choose a Flow Element	

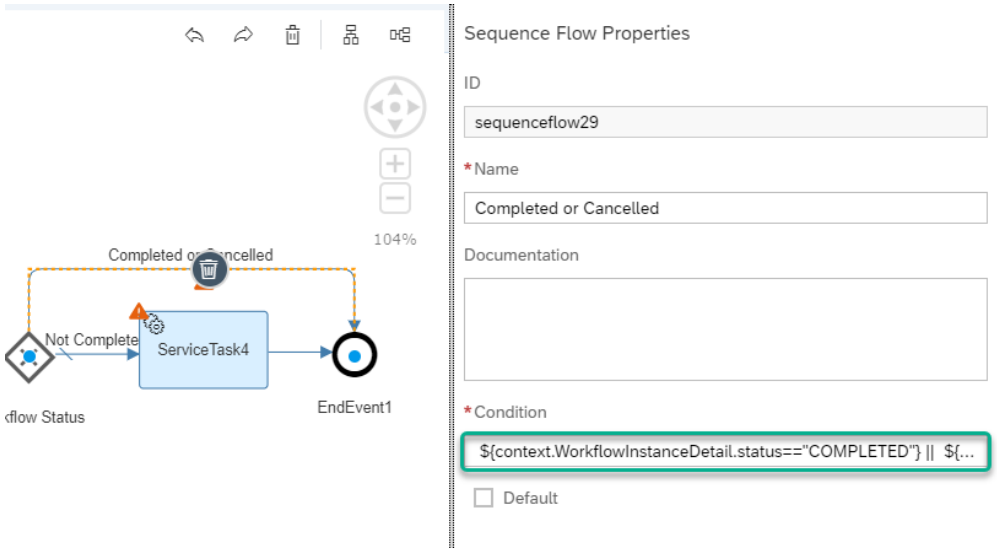
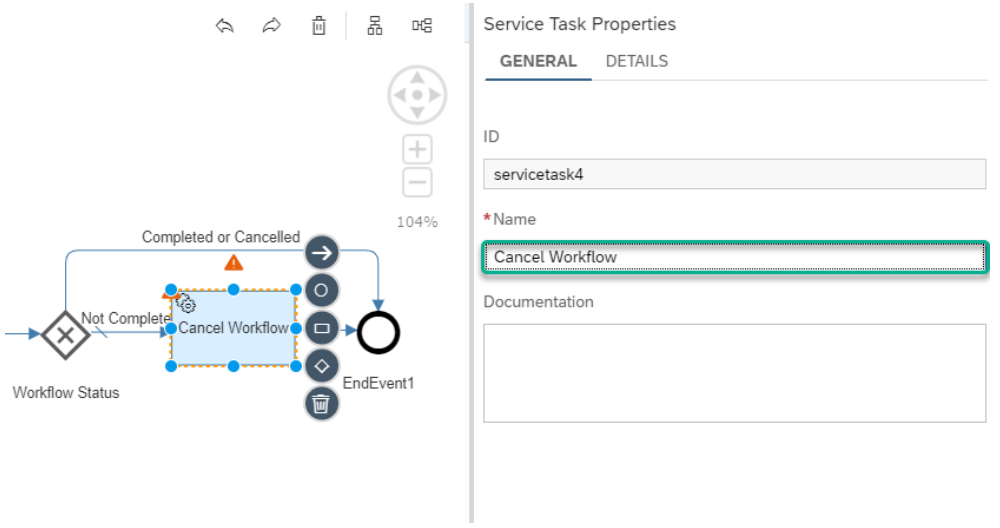
Explanation	Screenshot
38. Select **StartEvent1** as the Flow Element.	
39. Select **ScriptTask1** and update the **name Process Workflow Contex**t. 40. Click the link **Create File**.	

Explanation	Screenshot
41. Enter the **Name** as ProcessWorkflowContext.	
42. Copy and Paste the script from the attached file processworkflowcontext.js.	
43. Select **ServiceTask3** and update the **name** as **RestartWorkflow.**	

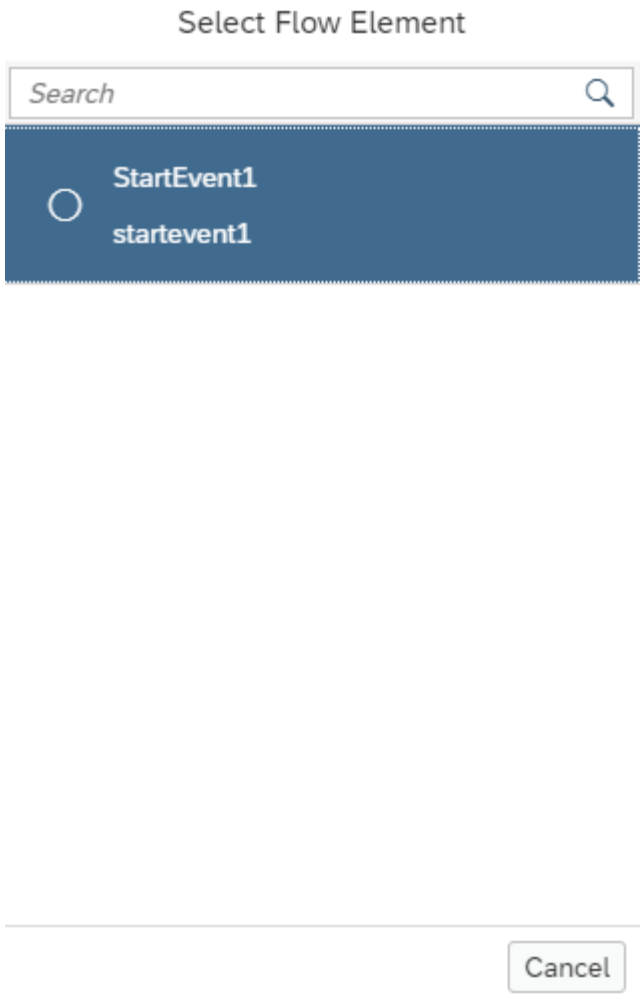
Explanation	Screenshot
44. Select **DETAILS** tab. 45. Set the following Service Task Properties. **Destination**: WorkflowOAuth2UserTokenExchange **Path**: /v1/workflow-instances **HTTP Method**:POST **Request Variable**: ${context.WorkflowStartRequest} **Response Variable**: ${context.WorkflowStartResponse} 46. Check **Principal Propagation.** 47. Click **Select** to choose a Flow Element	

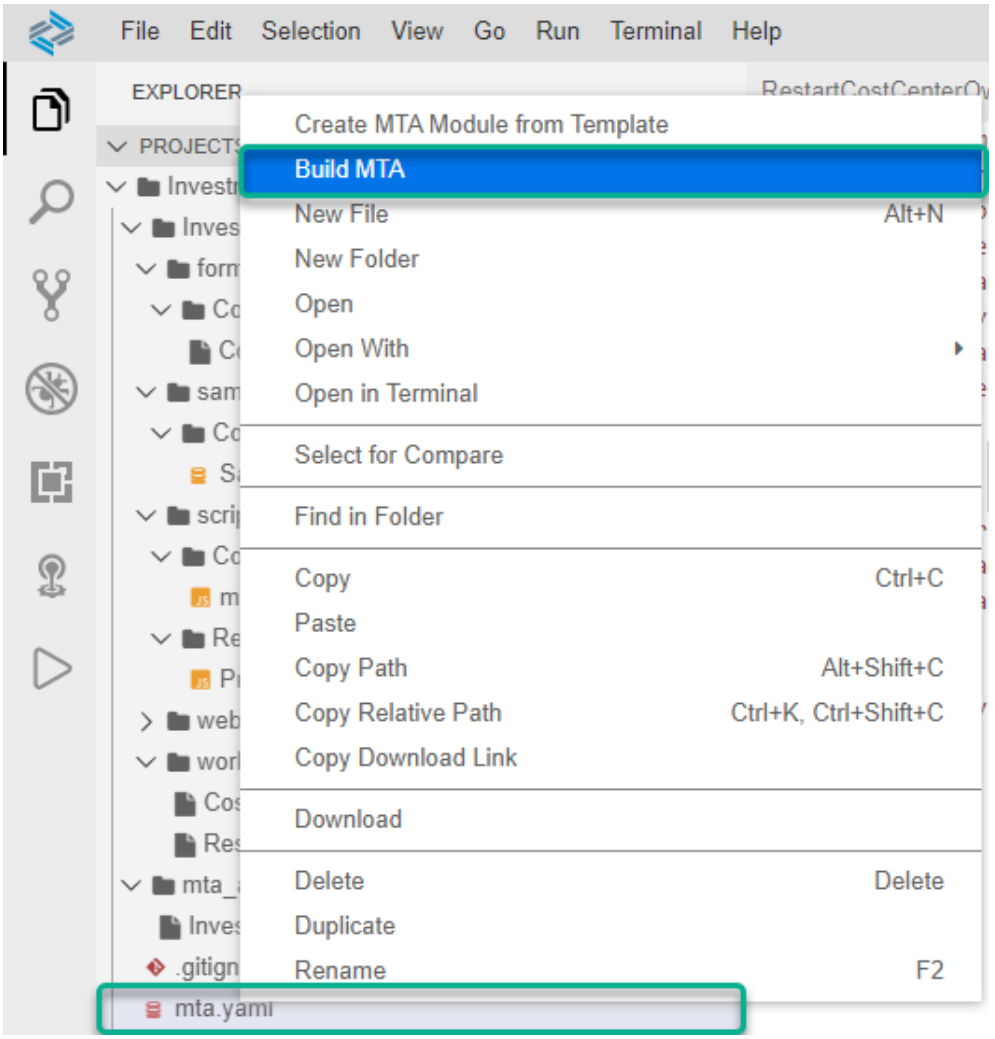
Explanation	Screenshot
48. Select **StartEvent1** as the Flow Element.	

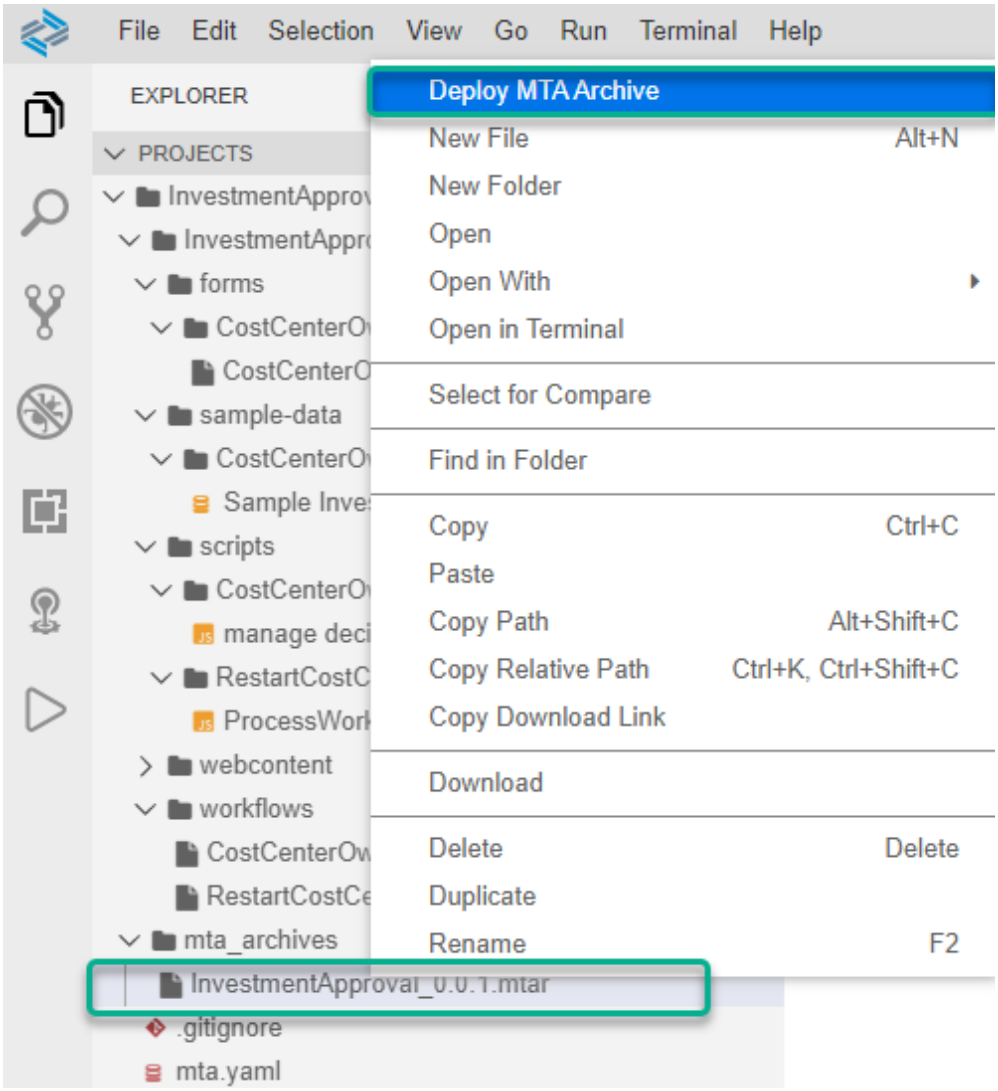
Explanation	Screenshot
49. Select **ExclusiveGateway** and update the **name** as **Workflow Status.**	
50. Select Sequence Flow between **Workflow Status** Exclusive Gateway and **ServiceTask4.** 51. Update the Name **Name**: Not Completed 52. **Check** the **Default** check box	

Explanation	Screenshot
53. Select Sequence Flow between **Workflow Status** Exclusive Gateway and **EndEvent1.** 54. Update the Name **Name**: Completed or Cancelled 55. Update the Condition as ${context.WorkflowInstanceDetail.status=="COMPLETED" || context.WorkflowInstanceDetail.status=="CANCELED"} This condition avoids calling the Workflow Service Instance Patch API on completed or cancelled instances.	
56. Select **ServiceTask4** and update the **name** as **Cancel Workflow.**	

Explanation	Screenshot
57. Set the following Service Task Properties. **Destination**: WorkflowOAuth2UserTokenExchange **Path**: /v1/workflow-instances/${context.CostCenterOwnerApprovalID} **HTTP Method**:PATCH **Request Variable**: ${context.WorkflowPatch} **Response Variable**: ${context.WorkflowPatchResponse} 58. Check **Principal Propagation.** 59. Click **Select** to choose a Flow Element	

Explanation	Screenshot
60. Select **StartEvent1** as Flow Element.	

Explanation	Screenshot
61. Right click on **mta.yaml** file. 62. Select **Build MTA**. 63. This will start the MTA build and it may take a few seconds to create the mta archives under the folder **mta_archives**.	

Explanation	Screenshot
64. Successful build will update the .mtar file and show message in the build logs. 65. Select the .mtar file and right click. 66. Click **Deploy MTA Archive**.	
67. Successful deployment will show the log.	

SUMMARY

You have modeled an action workflow and successfully deployed in your SAP Cloud Platform trial account. In the process visibility hands on guide, you will consume this workflow to configure an action in SAP Cloud Platform Process Visibility.

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