Working with the iWD Business Process in Composer

12/21/2025

Contents

IWDBP Strategies & Subroutines from 9.0.004 to 9.0.008

Classification Strategy

The purpose of this strategy is to invoke corresponding classification rules, analyze the result of the rules application and place the interaction into the appropriate queue, depending on the result.

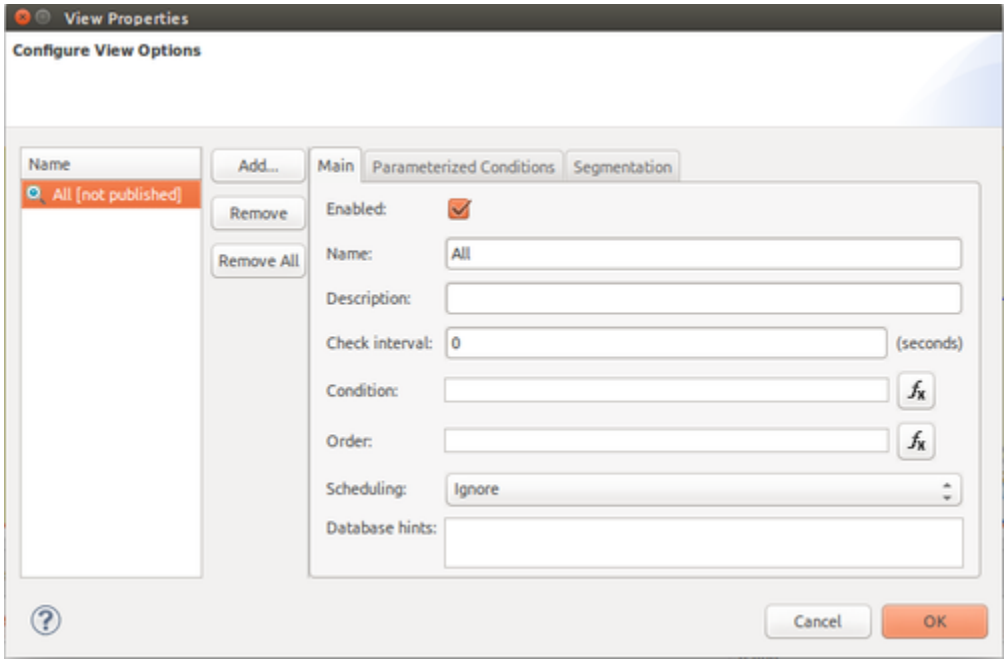
This strategy processes interactions from the following queues:

- `iwd_bp_comp.Main.iWD_New`

Interactions have to satisfy the following conditions:

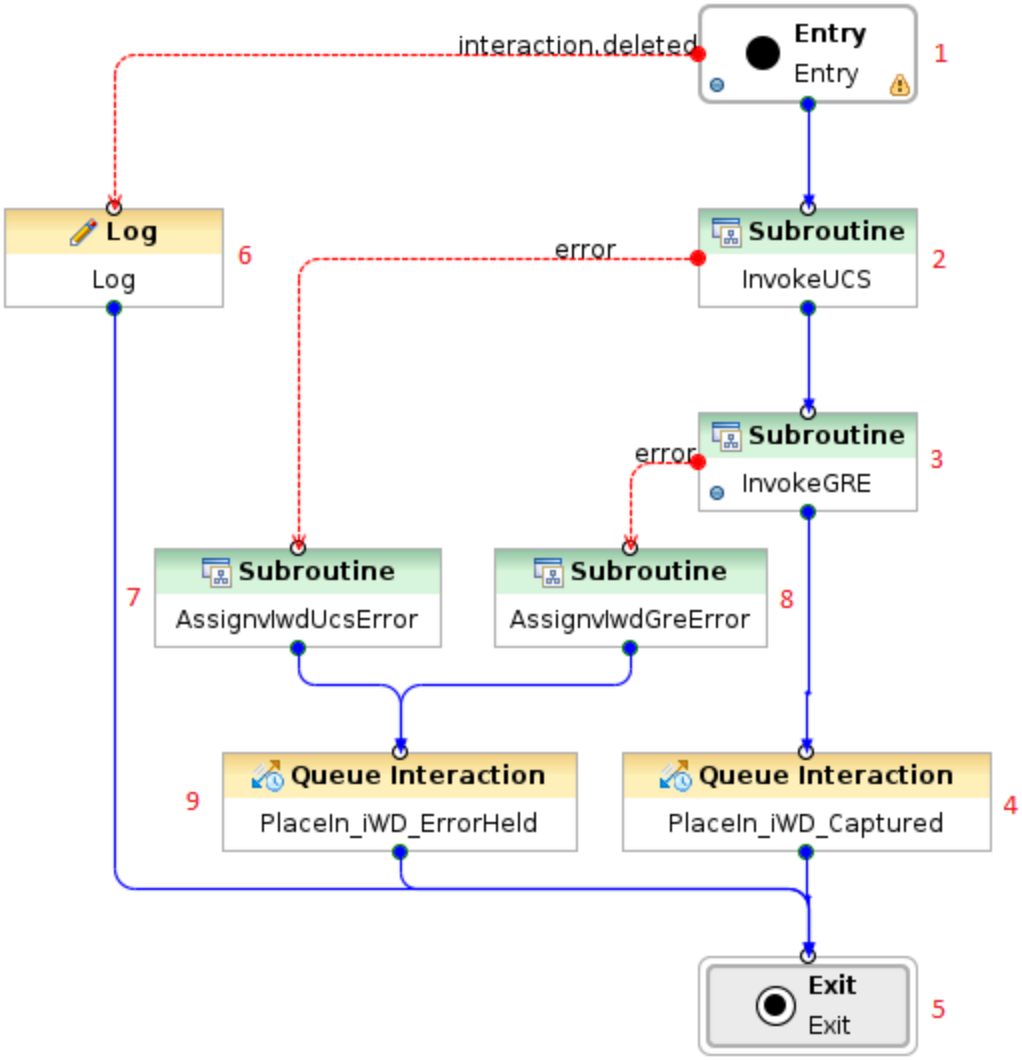
- There are no conditions here.
- Interactions are taken in order they were submitted.

Composer Configuration



The Composer configuration for this strategy block shows that all interactions are distributed to the `iwd_bp_comp.Main.iWD_New` queue without conditions.

Flow Summary



Flow Detail

1. Entry to Classification workflow.
2. The InvokeUCS subroutine is invoked to create new interaction in the UCS database.
3. The InvokeGRE subroutine is invoked.
4. The interaction is placed in the `iwd_bp_comp.Main.iWD_Captured` queue.
5. Exit Classification workflow.
6. Log message in case if interaction was from some reasons deleted.

7. Invoke AssignLastError subroutine with attributes:
   - `vInLastErrorkey`—`IWD_UCS_Error`.
   - `vInLastErrorString`—Error description that occurred in InvokeUCS subroutine.
8. Invoke AssignLastError subroutine with attributes:
   - `vInLastErrorkey`—`IWD_GRE_Error`
   - `vInLastErrorString`—Error description that occured in InvokeGRE subroutine.
9. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.

Prioritization Strategy

The purpose of this strategy is to invoke the corresponding prioritization rules, analyze the result of the rules application and place the interaction into the appropriate queue, depending on the result.

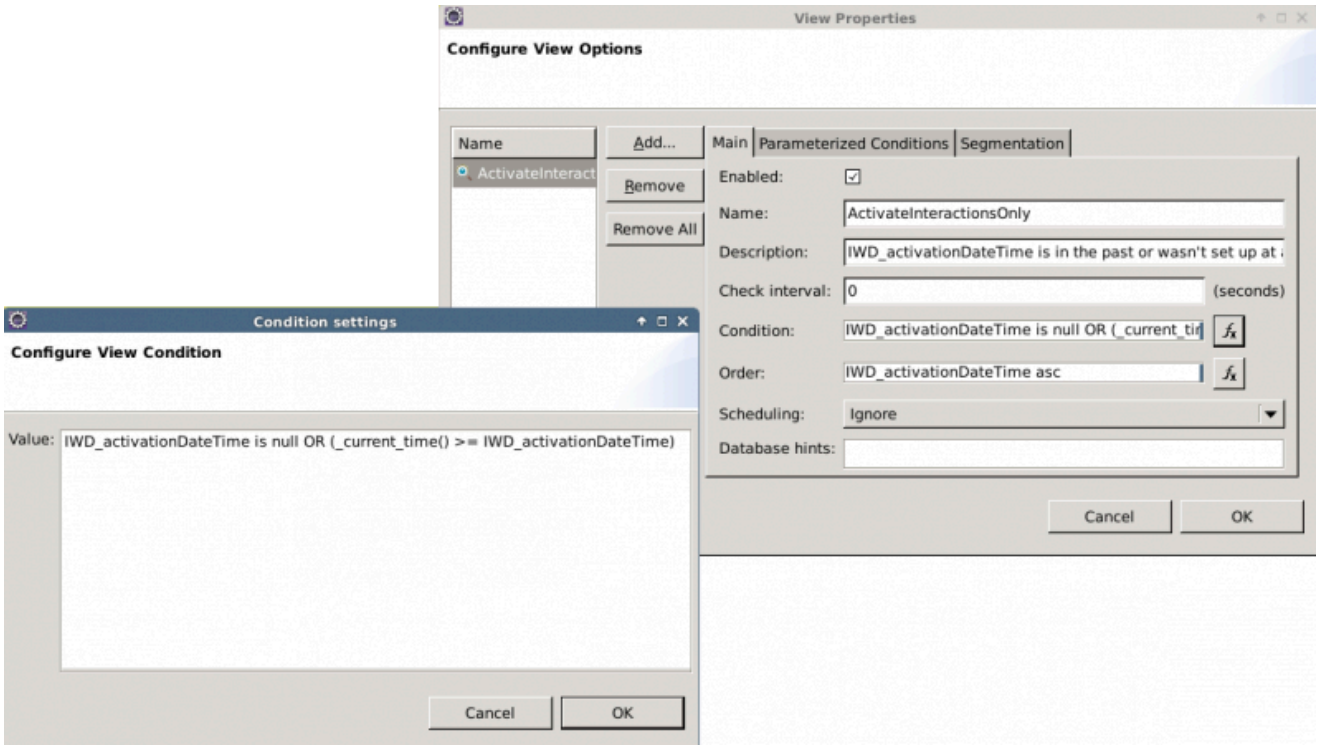
This strategy processes interactions from the following queues:

- `iwd_bp_comp.Main.iWD_Captured`

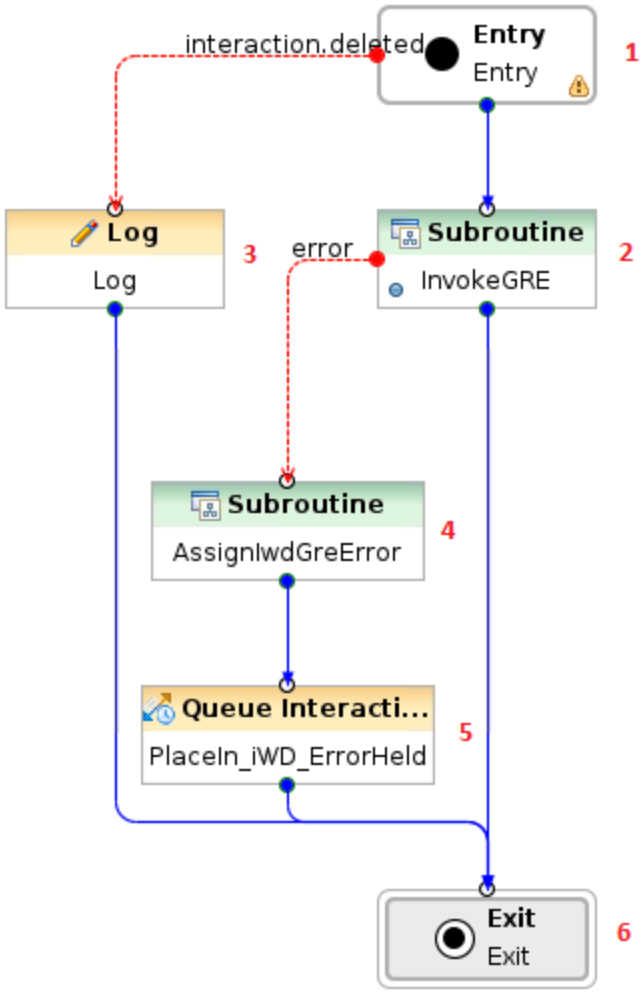
Interactions have to satisfy the following conditions:

- Active interactions only (interactions which do not have the property `IWD_activationDateTime` set, or this property has a time stamp which is in the past.
- Interactions are taken in the order they were submitted.

Composer Configuration



Flow Summary



Flow Detail

1. Entry to Prioritization workflow.
2. The `InvokeGRE` subroutine is invoked.
3. Log message in case if interaction was from some reasons deleted.
4. Invoke `AssignLastError` subroutine with attributes:
   - `vInLastErrorkey`—`IWD_GRE_Error`
   - `vInLastErrorString`—Error description that occurred in `InvokeGRE` subroutine.
5. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.

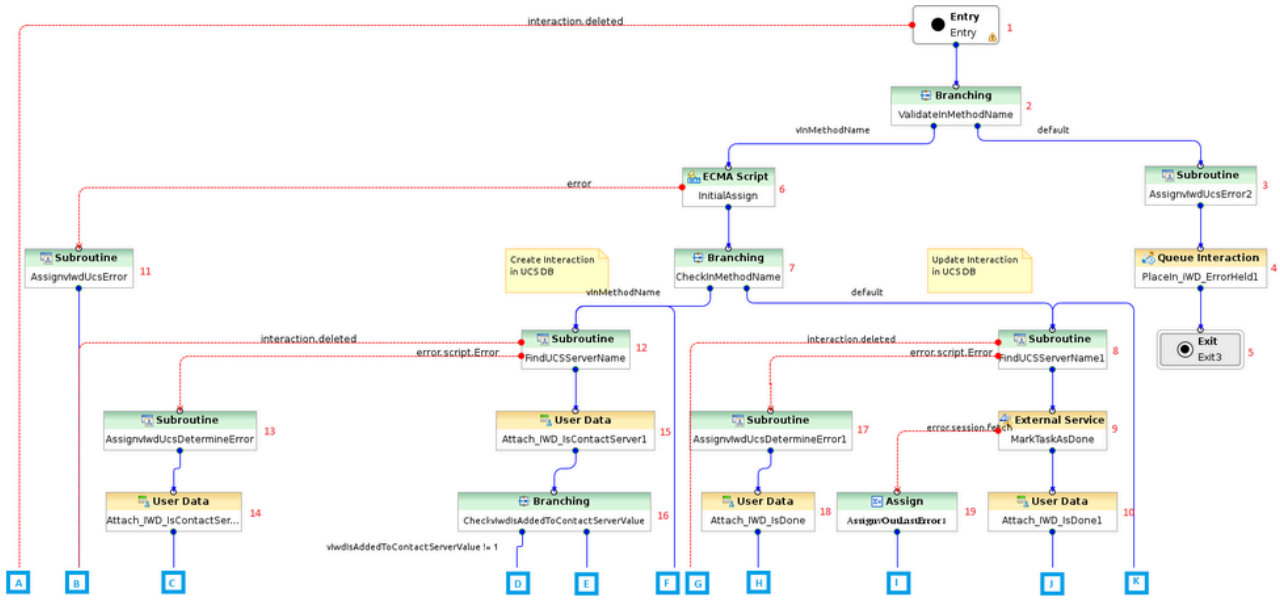
6. Exit Prioritization workflow.

Invoke UCS Strategy

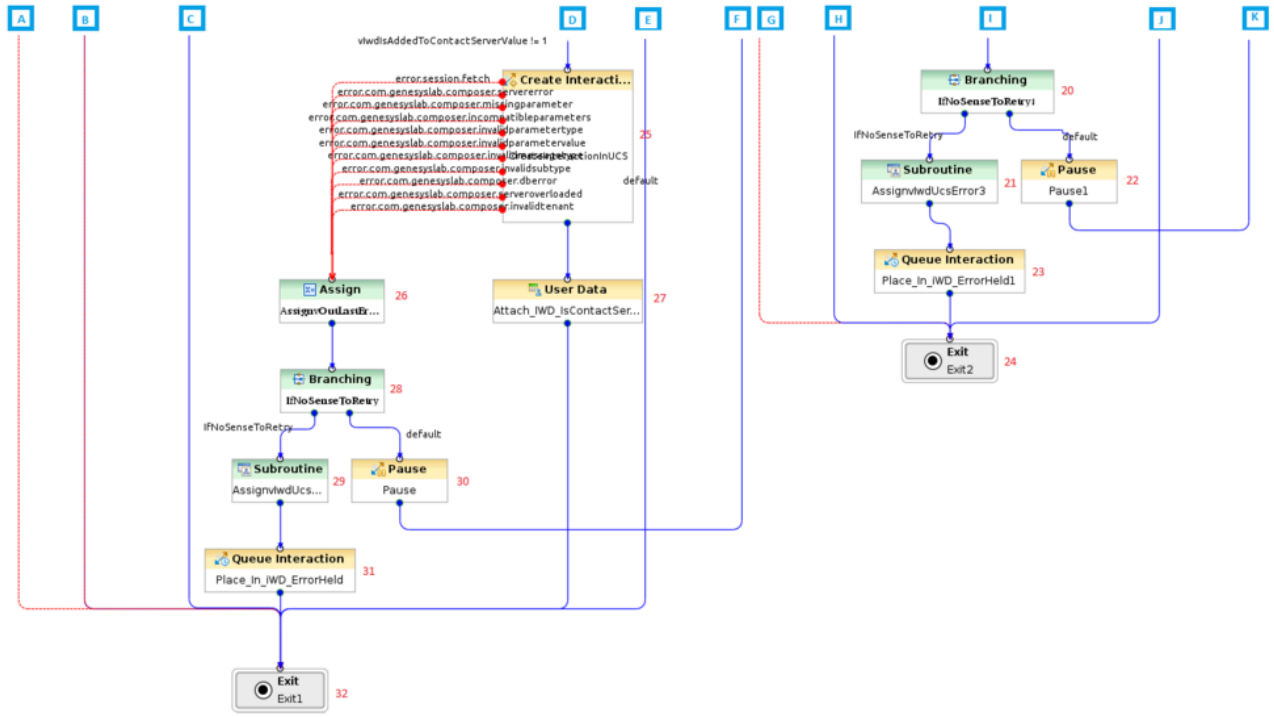
The purpose of this workflow is to create an interaction in the UCS database if UCS is configured.

Flow Summary

Part 1



Part 2



Flow Detail

1. Entry InvokeUCS strategy.
2. Check if `in_method_name = 'Create' | in_method_name = 'OMInteractions'`.
3. Invoke AssignLastError subroutine with attributes:
   - `vInLastErrorkey`—`IWD_UCS_Error`
   - `vInLastErrorString`—Error informs that: `vInMethodName + ' is not valid'`
4. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.
5. Exit InvokeUCS workflow.
6. Variables are initialized:
   - `vExternalId`—Read from task attribute `ExternalId`
   - vMediaType—Read from task attribute
   - `vSubmittedBy`—Read from task attribute `attr_itx_submitted_by`
   - `vType`—Read from task attribute '`InteractionType`'
   - `vSubType`—Read from task attribute '`InteractionSubtype`'
   - `vIwdIsAddedToContactServerValue`—Read from task attribute '`IWD_isAddedToContactServer`'

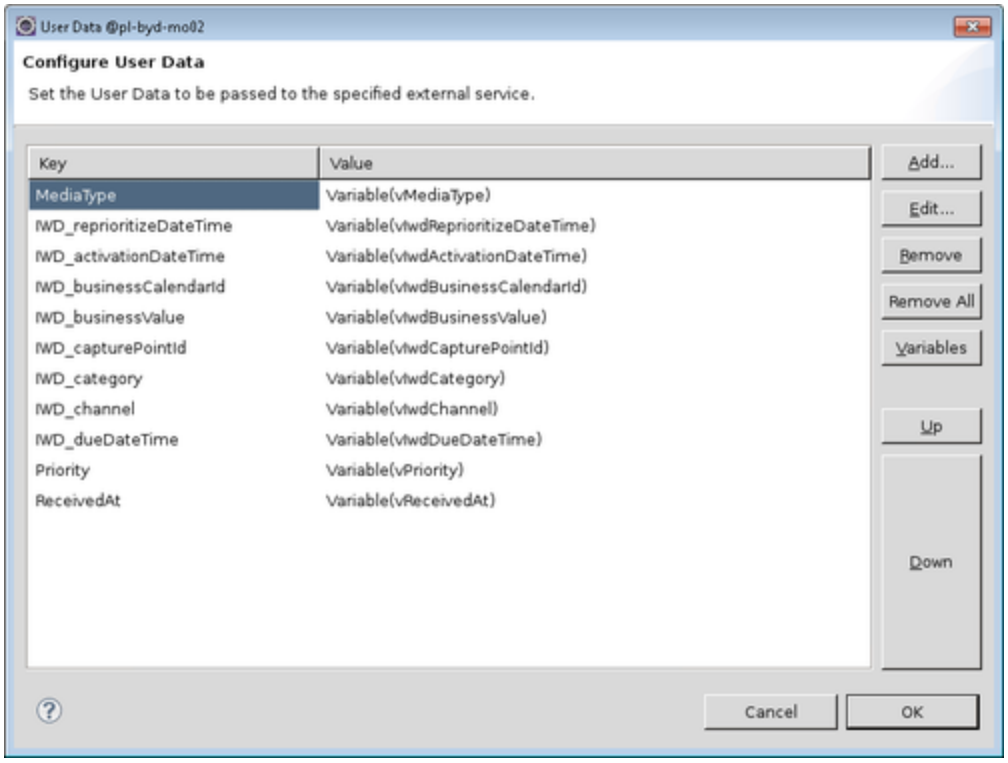
7. Check if `in_method_name = 'Create'`.
8. The FindListObjectItem subroutine is invoked to determine the name of the UCS Application. The subroutine uses the List Object list GREServerList:
   - `vInItemName—ContactServerList`
   - `vInListName—Iwd_Esp_List`
9. The strategy calls a method on the Universal Contact Server to set the status of the interaction to 3, indicating that the interaction is done.
10. The value of the user data key `IWD_isDone` is set to 1.
11. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey—IWD_UCS_Error'`
    - `vInLastErrorString`—Error description that occurred when variables were initialized
12. The FindListObjectItem subroutine is invoked to determine the name of the UCS Application. The subroutine uses the List Object list GREServerList:
    - `vInItemName—ContactServerList`
    - `vInListName—Iwd_Esp_List`
13. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey—IWD_UCS_Determination_Error'`
    - `vInLastErrorString`—Error description that occurred in FindListObjectItem subroutine.
14. The value of the user data key `IWD_isContactServer` is set to `0`.
15. The value of the user data key `IWD_isContactServer` is set to 1.
16. Check if `IWD_isContactServer` is set to 1.
17. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey—IWD_UCS_Determination_Error`
    - `vInLastErrorString`—Error description that occurred in FindListObjectItem subroutine.
18. The value of the user data key `IWD_isDone` is set to `0`.
19. An error is extracted from user data and assigned in `vLastError` variable.
20. If it makes sense to retry updating the interaction record in UCS.
21. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey—IWD_UCS_Error`
    - `vInLastErrorString`—Information that it does not make sense to retry update interaction in UCS.
22. A delay is introduced into the processing. Flow returns to step 8.
23. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.
24. Exit InvokeUCS workflow.
25. A new interaction is created in the UCS database, for this iWD task.
26. An error is extracted from user data and assigned in `vLastError` variable.

27. The user data key `IWD_isAddedToContactServer` is updated to 1 to indicate that the task was successfully added to the interaction history in UCS. The result returned from the ESP call to UCS (from See A new interaction is created in the UCS database, for this iWD task. If that function is successful is written to the variable `IWD_UCS_Result`.
28. If it makes sense to retry creating the interaction record in UCS.
29. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey`—`IWD_UCS_Error`
    - `vInLastErrorString`—Information that it does not make sense to retry create interaction in UCS
30. A delay is introduced into the processing. Flow returns to step 12.
31. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.
32. Exit InvokeUCS workflow.

InvokeGRE Strategy

> ### Important
> **For Composer/ORS versions prior 8.1.400.48**—If custom task attributes will be used in the Standard Rules Template, you must add them in the External Service block called `InvokeGRE` in the InvokeGRE workflow. All user-defined attributes need to be added in the User Data attribute, otherwise they will not be attached to the task and so will not be sent in the ESP request to the external ESP service.

Composer configuration



Pause block configuration

During the task lifecycle, GRE changes interaction properties. This is done asynchronously, so sometimes ORS does not have enough time to receive confirmation event from Interaction Server and continue execution of the workflow. This could lead to unexpected behavior—for example, tasks could go to the `ErrorHeld` queue sporadically without visible reasons.

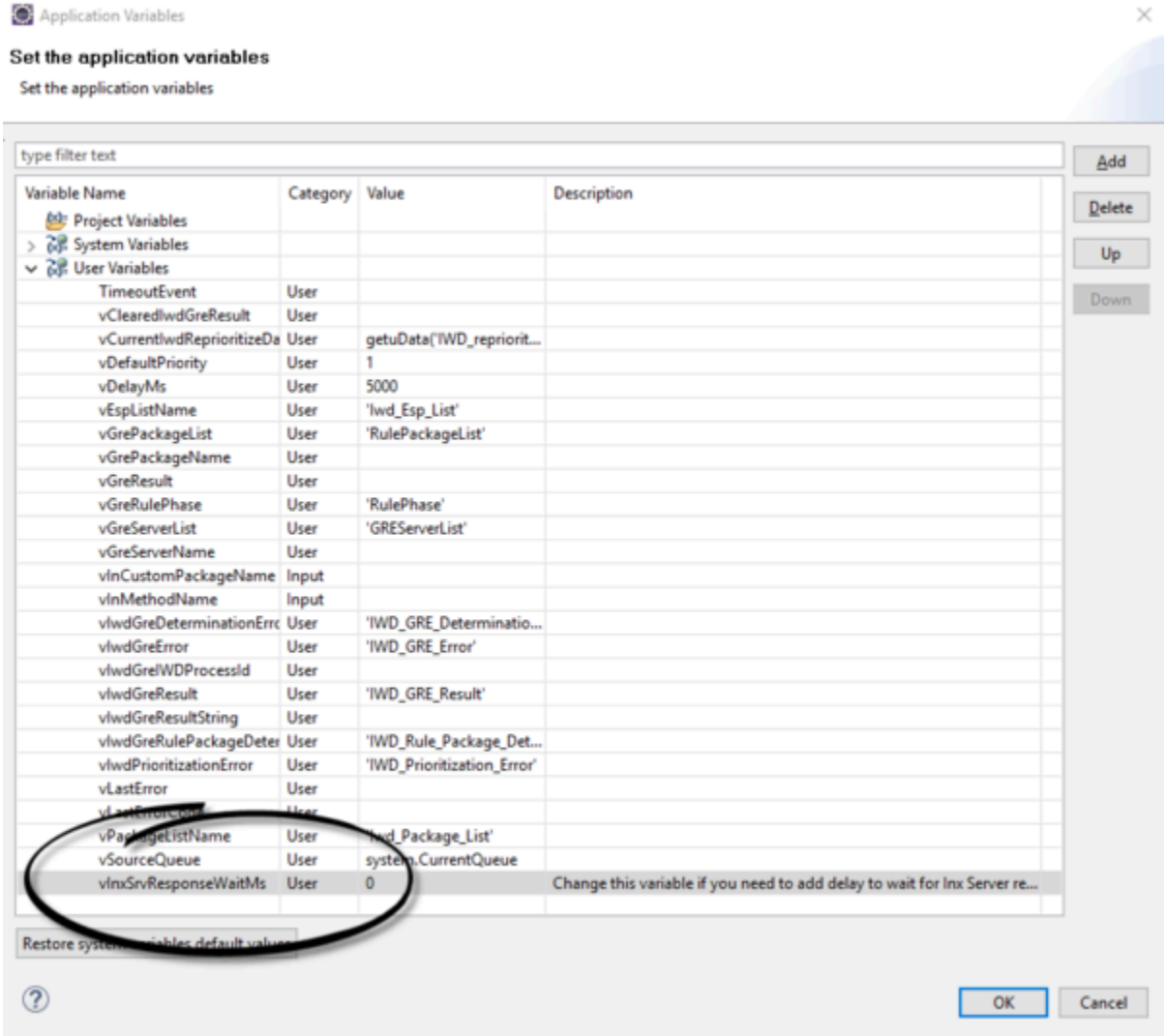
A **Pause** block with a configurable delay has been added into the InvokeGRE workflow after the **AfterESPCallActivities** block to guarantee that interaction updates will be received. This delay is set in milliseconds. By default it is set to `0`.

If it is observed that ORS has already moved to the next workflow step but has still not received a confirmation event from Interaction Server, then this delay needs to be configured. The value should be calculated individually and specifically, depending on the delay in the Interaction Server response.

> ### Important
> The delay must be set accurately, taking into account that this pause will happen during each InvokeGRE execution. If there are many interactions, the total delay could be substantial.

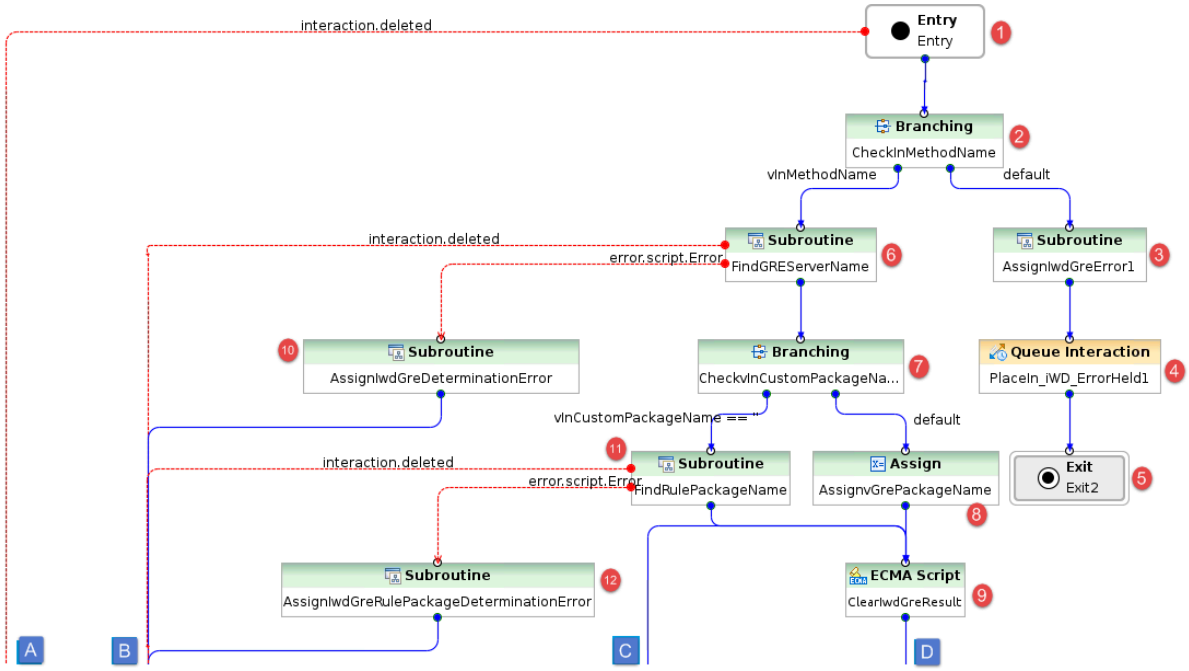
The delay can be set via the `vInxSrvResponseWaitMs` variable. To set its value, do the following:

1. Click on the **Entry** block of the **InvokeGRE** strategy.
2. Select the **Properties** tab at the bottom of the Composer window.
3. Click on the dots next to **Global Settings -> Variables** to open the **Application Variables** window.
4. Expand the **User Variables** item and set the `vInxSrvResponseWaitMs` value.

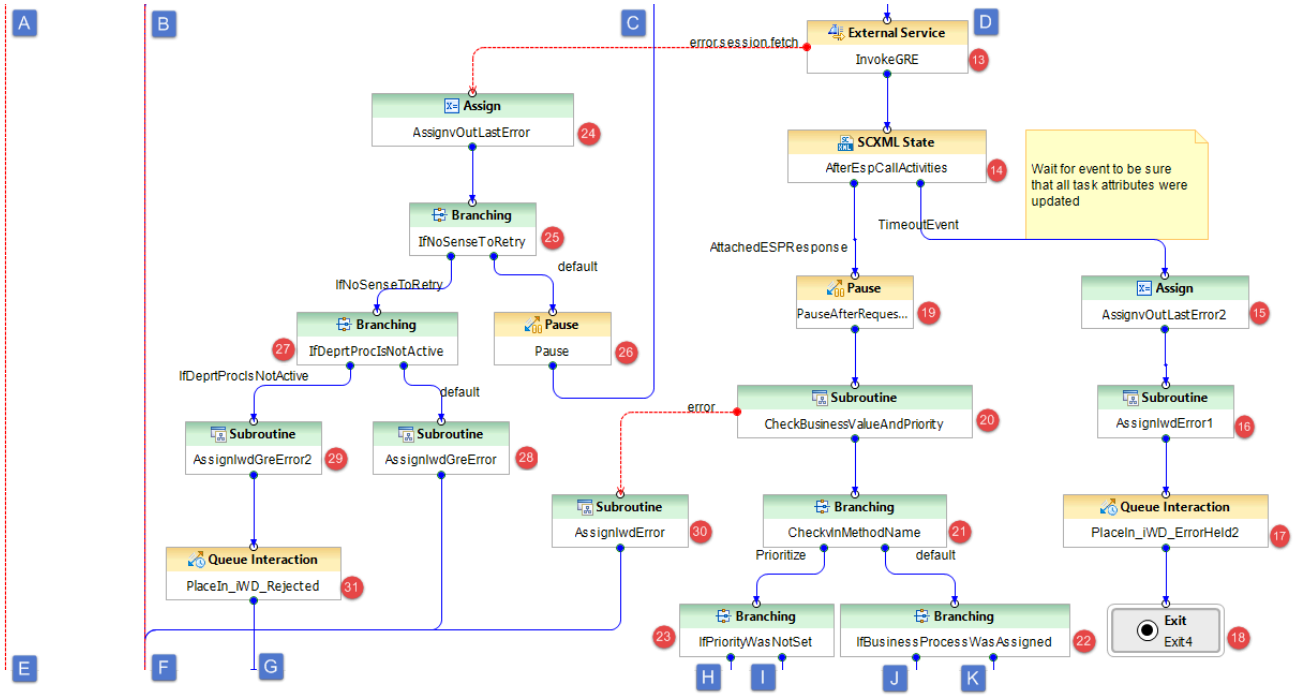


Flow Summary

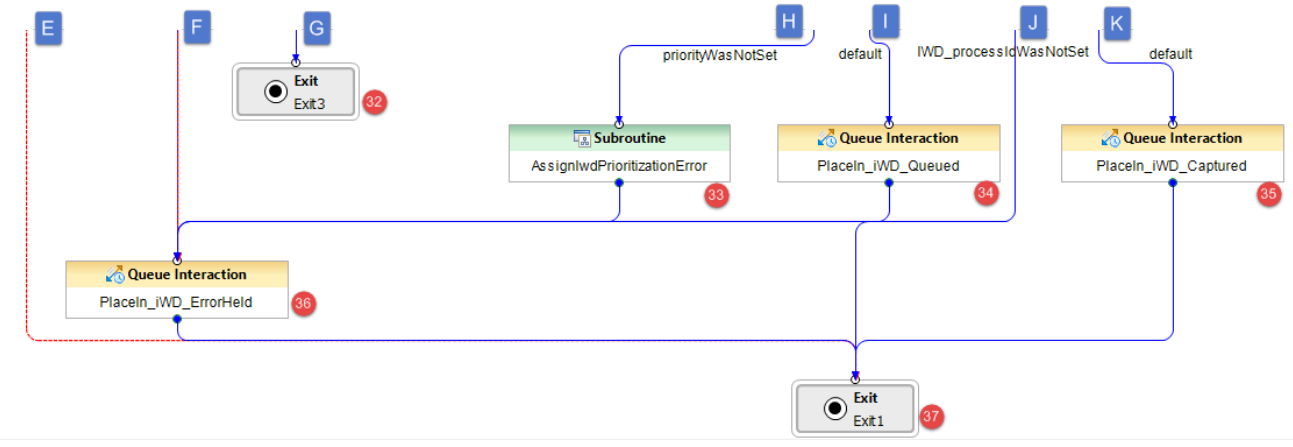
Part 1



Part 2



Part 3



Flow Detail

1. Entry to `InvokeGRE` strategy.
2. Check if `in_method_name` is set to `SetBusinessContext` or `Prioritize`.
3. Invoke `AssignLastError` subroutine with attributes:

- vInLastErrorkey—IWD_GRE_Error
- vInLastErrorString—Error informs that: vInMethodName + ' is not valid'

4. The interaction is placed in the iwd_bp_comp.Main.iWD_ErrorHeld queue.
5. Exit InvokeGRE workflow.
6. The FindListObjectItem subroutine is invoked to determine the name of the Genesys Rules Engine Application. The subroutine uses the List Object list GREServerList:
   - vInItemName—GREServerList
   - vInListName—Iwd_Esp_List
7. Check if vInCustomPackageName was published to this subroutine. If it is set then vInCustomPackageName will be run. Otherwise package name needs to be found in Iwd_Package_List.
8. Assign vInCustomPackageName to vGrePackageName.
9. Delete IWD_GRE_Result, IWD_Error, RulePhase before Invoke GRE.
10. Invoke AssignLastError subroutine with attributes:
    - vInLastErrorkey—IWD_GRE_Determination_Error
    - vInLastErrorString—Error description that occurred in FindListObjectItem subroutine.
11. The FindListObjectItem subroutine is invoked to determine the name of the rule package that the Genesys Rules Engine will be invoking to evaluate the classification rules:
    - vInItemName—RulePackageList
    - vInListName—Iwd_Package_List
12. Invoke AssignLastError subroutine with attributes:
    - vInLastErrorkey—IWD_Rule_Package_Determination_Error
    - vInLastErrorString—Error description that occurred in FindListObjectItem subroutine.
13. An ESP request is sent to the Genesys Rules Engine to evaluate the classification rules.

> **Important**
> All user data that needs to be added to ESP request must be added in User Data attributes.

14. Parse ESP result and attach to the interaction all attributes modified by the GRE.
15. Assign the string AfterEspCallActivities timeout to the vLastError variable.
16. Invoke AssignLastError subroutine with attributes:
    - vInLastErrorkey—IWD_GRE_Error
    - vInLastErrorString—Error informs that: Attach GreResult timeout
17. The interaction is placed in the iwd_bp_comp.Main.iWD_ErrorHeld queue.
18. Exit InvokeGRE workflow.
19. A delay is introduced, based on the value of the vInxSrvResponseWaitMs variable which can be set in

the Entry block.

20. CheckBusinessValueAndPriority subroutine is called to verify if `IWD_businessValue` and `Priority` have correct values.
21. Check if `in_method_name` is set to `SetBusinessContext` or `Prioritize`.
22. Check if `IWD_processId` was set by any rules or when task was created.
23. Check is made to see if this is the first time that prioritization rules are being evaluated for the interaction, and the priority was not set up by any rules.
24. Get last error that was occured in GRE call and assign it to `vLastError` variable.
25. A check is done to see if the error code is related to the ESP server communication.
26. A delay is introduced, based on the value of the `_delay_ms` variable. The flow goes back to step 11 to retry the connection to the ESP server.
27. The last Interaction Server-related error is extracted from a variable.
28. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey`—`IWD_GRE_Error`
    - `vInLastErrorString`—The last Interaction Server-related error is extracted from a variable.
29. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey`—`IWD_GRE_Error`
    - `vInLastErrorString`—The last Interaction Server-related error is extracted from a variable.
30. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey`—`IWD_GRE_Error`
    - `vInLastErrorString`—The last Interaction Server-related error is extracted from a variable
31. The interaction is placed in the `iwd_bp_comp.Main.iWD_Rejected` queue.
32. Exit InvokeGRE workflow.
33. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey`—`IWD_Prioritization_Error`
    - `vInLastErrorString`—Error description: `'Priority is not set up by rules'`.
34. The interaction is placed in the `iwd_bp_comp.Main.iWD_Queued` queue.
35. The interaction is placed in the `iwd_bp_comp.Main.iWD_Captured` queue.
36. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.
37. Exit InvokeGRE workflow.

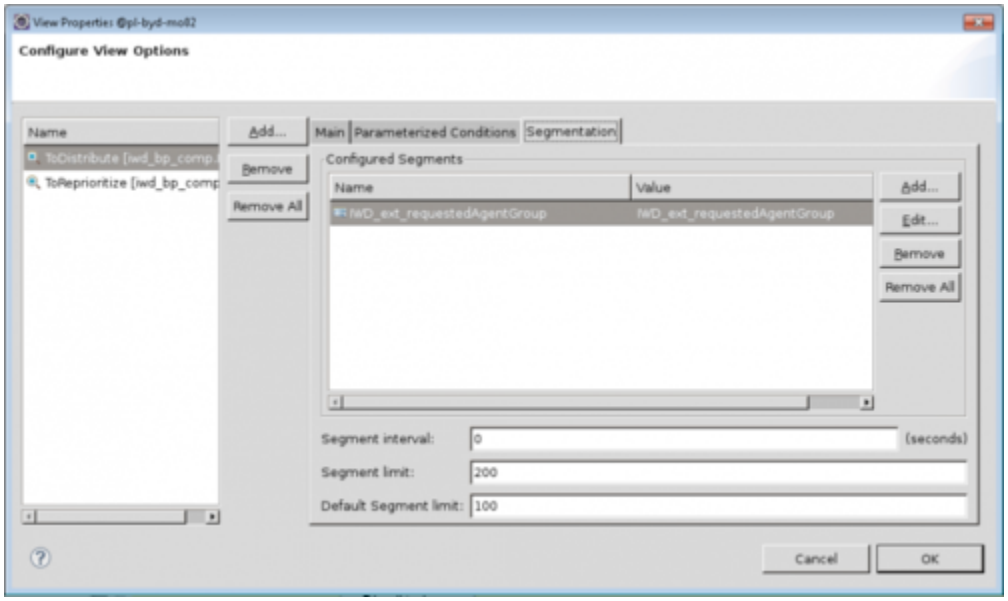
Distribution Strategy

This strategy routes interactions to a requested Agent, requested Agent Group, requested Skill, or to the default iWD Agent Group. This strategy processes interactions from the following queues:

- `iwd_bp_comp.Main.iWD_Queued`—Interactions have to satisfy the following conditions:
  - Interactions that are not subject for immediate reprioritization (interactions that do not have the property `IWD_reprioritizeDateTime` set, or that have this property set to a time stamp that is in the future).
  - Interactions are taken in order of priority (highest priority first)

A Segmentation feature ensures that all agents can be kept busy by distributing tasks in each segment separately. As a result, even in a Distribution strategy that is populated by high-priority tasks assigned to small groups of agents, the strategy will not become so saturated that distribution of tasks to other agents is blocked. Segmentation settings are found in the **ToDistribute** view of the Distribution routing strategy. The Distribution strategy can make a call to the segmentation setting and add an `IWD_Segment` attribute to the interaction data.

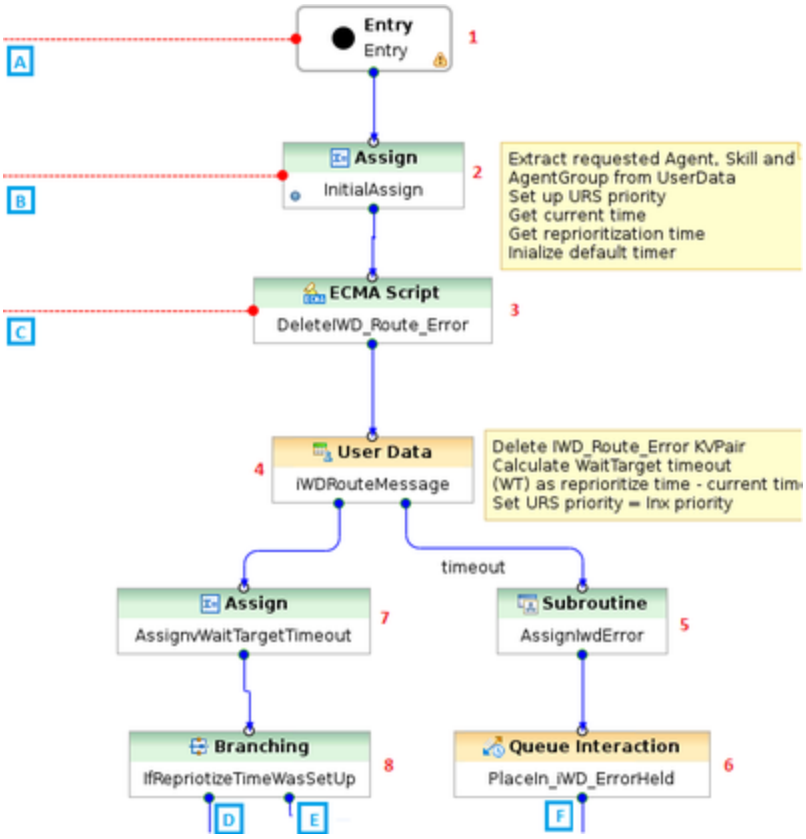
Composer Configuration - Segmentation View



Flow Summary

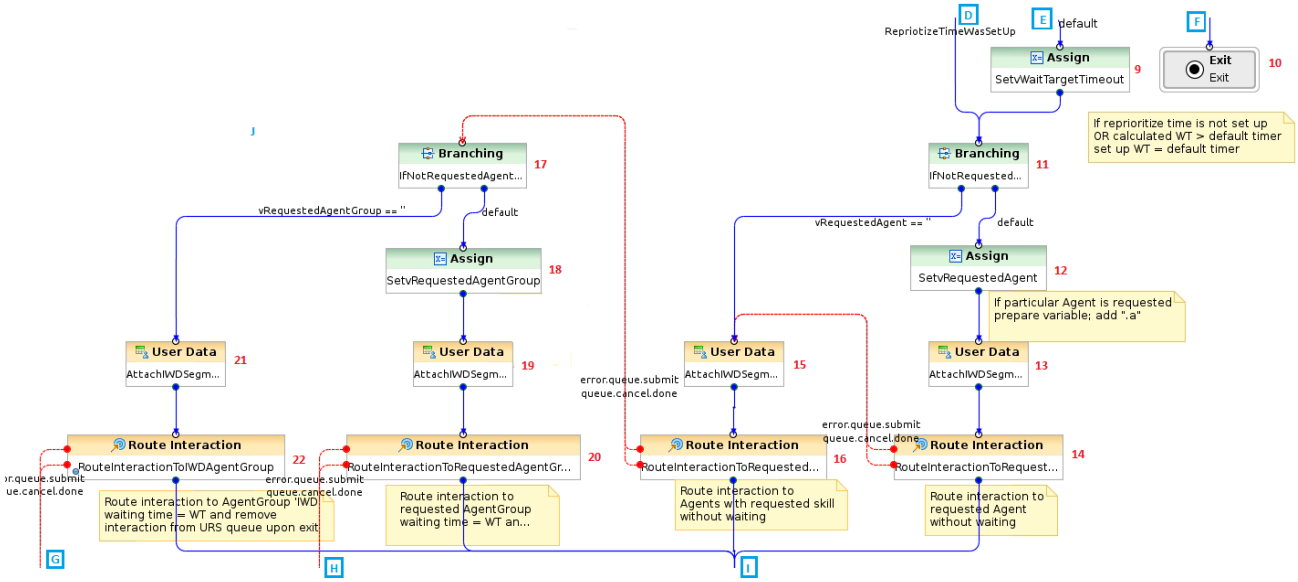
Part 1

Click to enlarge.



Part 2

Click to enlarge.



Part 3

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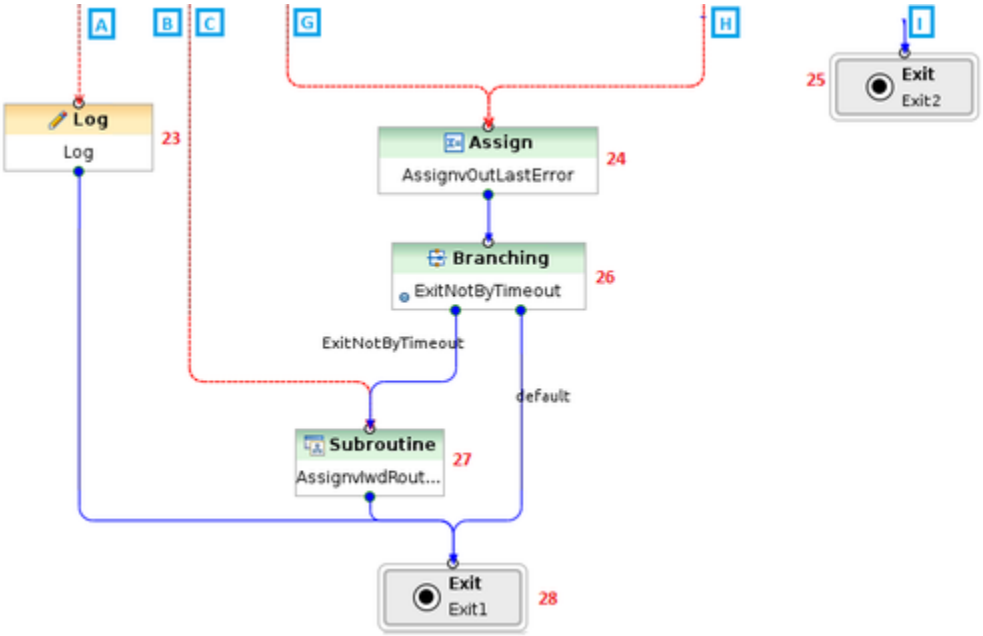


Flow Detail

1. Entry to Distribution workflow.
2. Variables are initialized:
   - `vRequestedAgentGroup`—Read from task attribute `IWD_ext_requestedAgentGroup`
   - `vRequestedAgentGroup`—Read from task attribute `IWD_ext_requestedAgent`
   - `vRequestedSkill`—Read from task attribute `IWD_ext_requestedSkill`
   - `vCurrentTint`—Current time in seconds
   - `vReprioritizeDint`—Read from task attribute `IWD_businessValue`
   - `vDefaultTargetTimeout`—Default target timeout set to `3600` seconds
   - `vInxPriority`—Read from task attribute `Priority`
3. Delete `IWD_Route_Error` from attached data. Calculate `WaitTarget` timeout based on `vReprioritizeDTInt` and `vCurrentDTInt`. Sets URS priority.
4. Set information about clear `IWD_Route_Error` attribute.
5. Invoke `AssignLastError` subroutine with attributes:
   - `vInLastErrorkey`—`IWD_Error`
   - `vInLastErrorString`—Error description: `'Update IWD_Route_Error timeout'`
6. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.

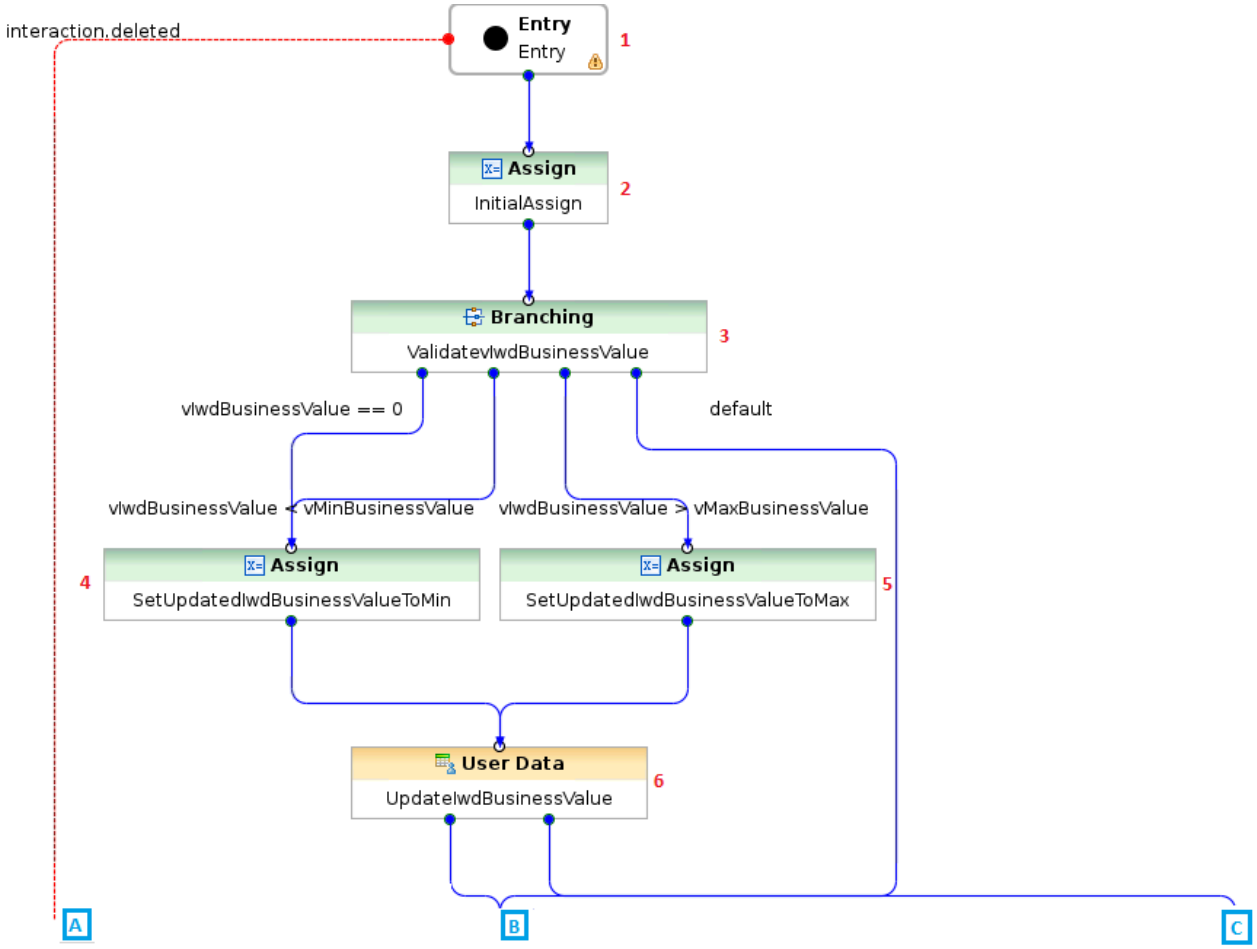
7. Calculate vWaitTargetTimeout.
8. Check if calculated vWaitTargetTimeout is in range (0, vDefaultTargetTimeout>.
9. Set vWaitTargetTimeout to vDefaultTargetTimeout.
10. Exit Distribution workflow.
11. Check if particular Agent is requested.
12. Assign vRequestedAgent + '.a' to vRequestedAgent variable.
13. Set vIWDSegment to '_requested_agent'.
14. Route interaction to requested vRequestedAgent without waiting.
15. Set vIWDSegment to '_requested_skill'.
16. Route interaction to requested vRequestedAgent with requested skill without waiting.
17. Check if particular AgentGroup is requested.
18. Assign vRequestedAgentGroup + '.qa' to vRequestedAgentGroup variable.
19. Set vIWDSegment to '_requested_agent_group'.
20. Route interaction to requested vRequestedAgentGroup with vWaitTargetTimeout.
21. Set vIWDSegment to 'default'.
22. Route interaction to IWD Agent Group with vWaitTargetTimeout.
23. Log message in case if interaction was from some reasons deleted.
24. Assign last route interaction error to vLastError.
25. Exit Distribution workflow.
26. Check if route interaction finished with an error.
27. Invoke AssignLastError subroutine with attributes:
    - vInLastErrorkey—IWD_Route_Error
    - vInLastErrorString—Error description that occurred in route interaction
28. Exit Distribution workflow.

CheckBusinessValueandPriority Subroutine

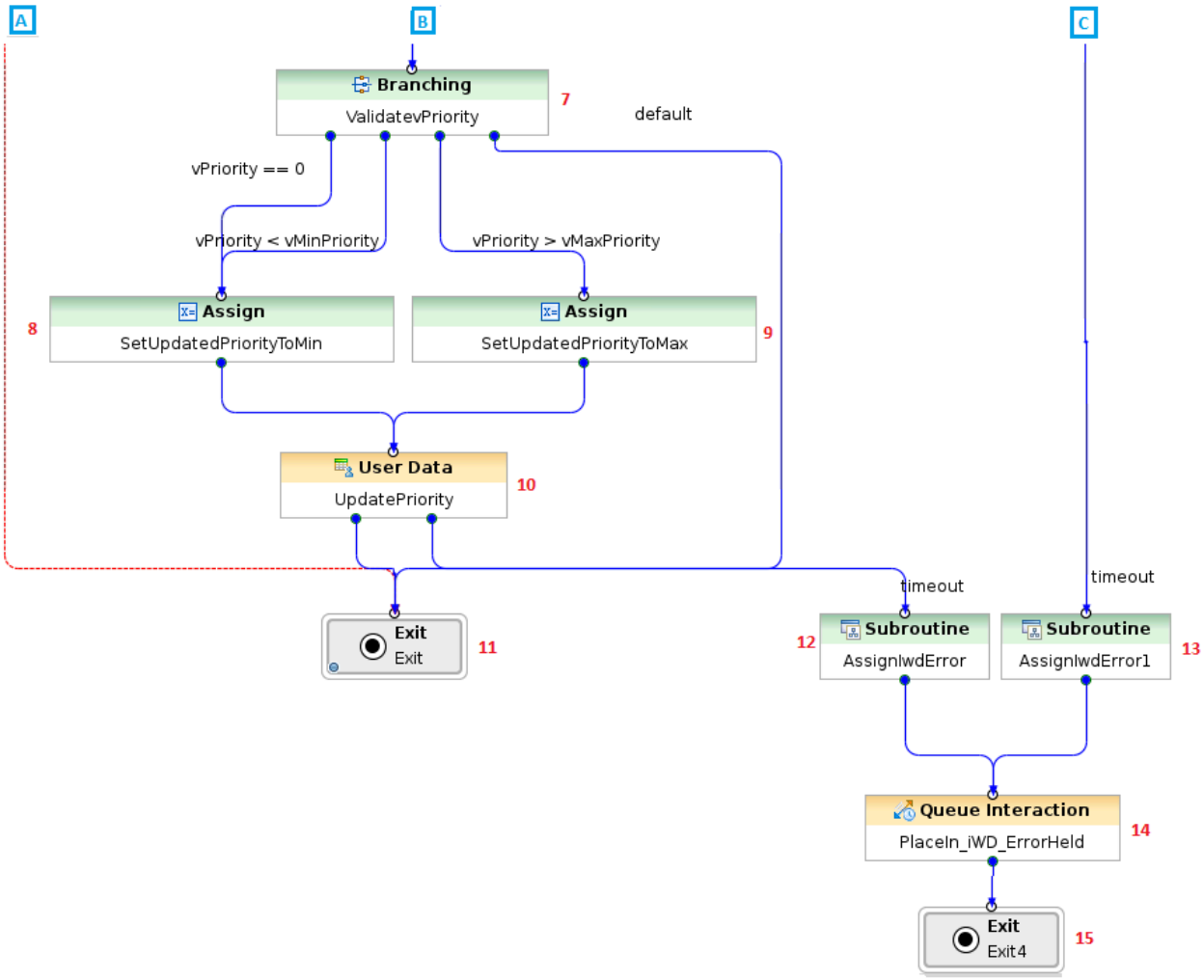
The purpose of this workflow is to verify if Priority and IWD_businessValue have correct values.

Flow Summary

Part 1



Part 1



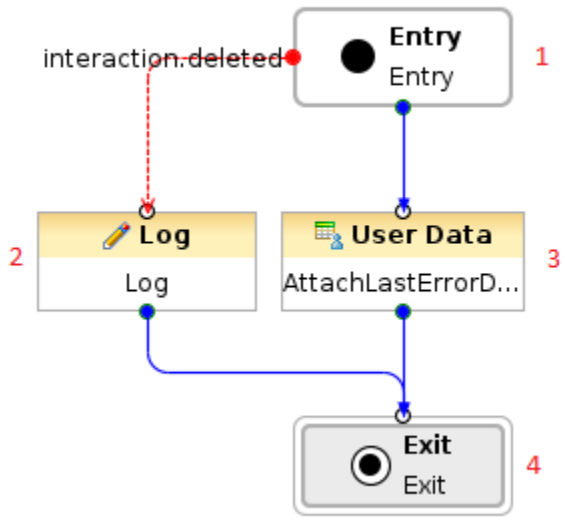
Flow Detail

1. Entry to CheckBusinessValueAndPriority workflow.
2. Variables are initialized:
   - `vIwdBusinessValue`—Read from task attribute `IWD_businessValue`
   - `vIwdPriority`—Read from task attribute `Priority`
3. Validate if `vIwdBusinessValue` is valid.
4. Set `vIwdBusinessValue` to `vMinBusinessValue`.
5. Set `vIwdBusinessValue` to `vMaxBusinessValue`.
6. Update `IWD_businessValue` to `vIwdBusinessValue`.

7. Validate if `vIwdPriority` is valid.
8. Set `vIwdPriority` to `vMinPriority`.
9. Set `vIwdPriority` to `vMaxPriority`.
10. Update Priority to `vIwdPriority`.
11. Exit `CheckBusinessValueAndPriority` workflow.
12. Invoke `AssignLastError` subroutine with attributes:
    - `vInLastErrorkey`—`IWD_Error`
    - `vInLastErrorString` - Error description: `'Update Priority timeout'`
13. Invoke AssignLastError subroutine with attributes:
    - `vInLastErrorkey`—`IWD_Error`
    - `vInLastErrorString`— Error description: `'Update iWD_businessValue timeout'`
14. The interaction is placed in the `iwd_bp_comp.Main.iWD_ErrorHeld` queue.
15. Exit `CheckBusinessValueAndPriority` workflow.

AssignLastError Subroutine

Flow Summary



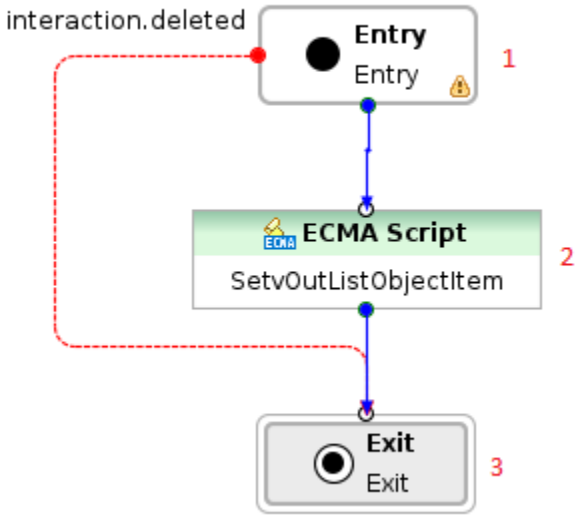
Flow Detail

1. Entry to AssignLastError workflow.
2. The last error is attached to user data as a key-value pair with the key `vInLastErrorkey` and value `vInLastErrorString`.

   `vInLastErrorkey` and `vInLastErrorString` are workflow attributes that need to be set before calling this workflow.
3. Log message if interaction was from some reasons deleted.
4. Exit AssignLastError workflow.

FindListObjectItem Subroutine

Flow Summary



Flow Detail

1. Entry to FindListObjectItem workflow.
2. Search `vKeyToFindInListObject` in `vInListName`.
   - `vInItemName`—Section in `vInListName`
   - `vInListName`—List object where `vKeyToFindInListObject` should be searched

- vKeyToFindInListObject—Option in vInItemName that should be found

3. When vKeyToFindInListObject is found in vInListName, then the value assigned to this option will be assigned to vOutListObjectItem.
4. Exit FindListObjectItem workflow.

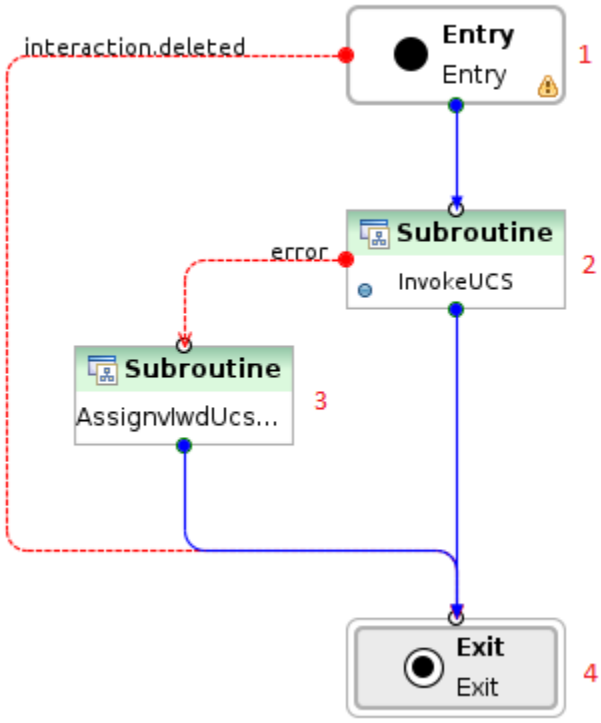
MarkInteractionAsDone Strategy

The purpose of this strategy is to update the Universal Contact Server (UCS) database to mark the interaction as done. This equates to setting the value in the Status column of the Interactions table to 3. UCS clients, such as Interaction Workspace, will then display the status of this interaction as done when the user looks at interactions they have previously processed.

Interactions have to satisfy the following conditions:

- The value of the attached data key IWD_isContactServer is 1
- The value of the attached data key IWD_isDone is either null or 0 (zero)

Flow Summary



Flow Detail

1. Entry to MarkInteractionAsDone workflow.
2. The InvokeUCS subroutine is invoked to complete interaction in the UCS database.
3. Invoke AssignLastError subroutine with attributes:
   - `vInLastErrorkey`—`IWD_UCS_Error`
   - `vInLastErrorString`—Error description that occurred in InvokeUCS subroutine
4. Exit MarkInteractionAsDone workflow.

Removal Strategy

The purpose of this strategy is to delete expired interactions from the Interaction Server database.

A key-value pair in user data with the key `IWD_expirationDateTime` contains information about when an interaction has to be deleted.

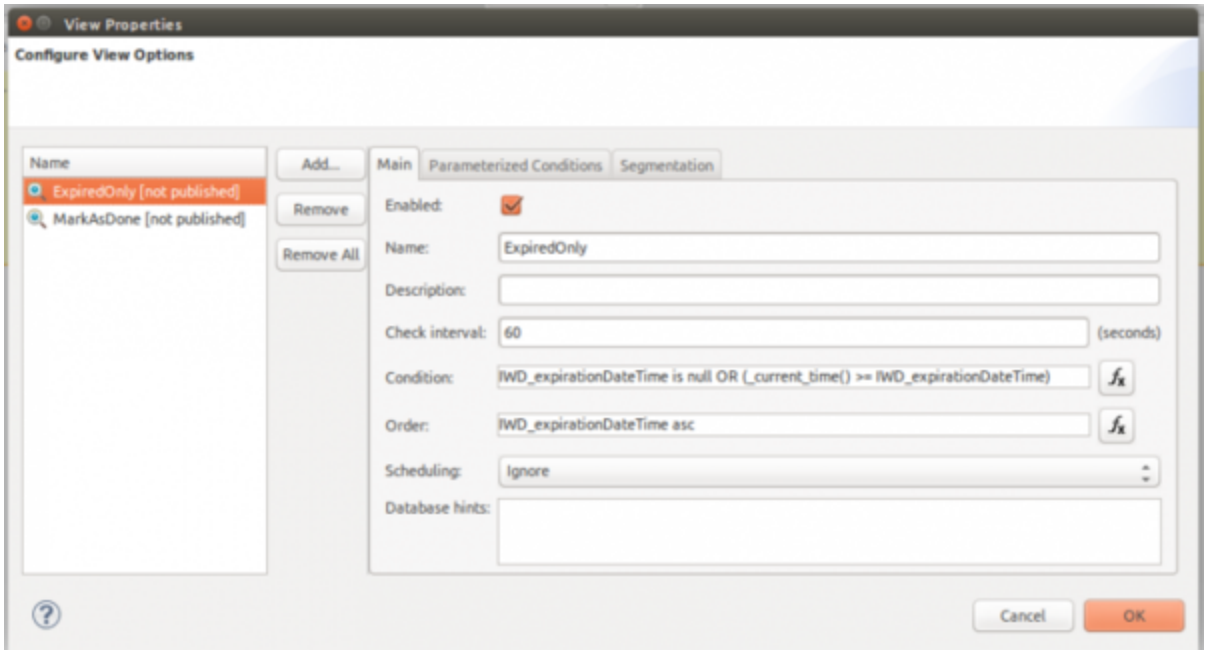
This strategy processes interactions from the following queues:

- `iwd_bp_comp.Main.iWD_Completed`
- `iwd_bp_comp.Main.iWD_Canceled`
- `iwd_bp_comp.Main.iWD_Rejected`

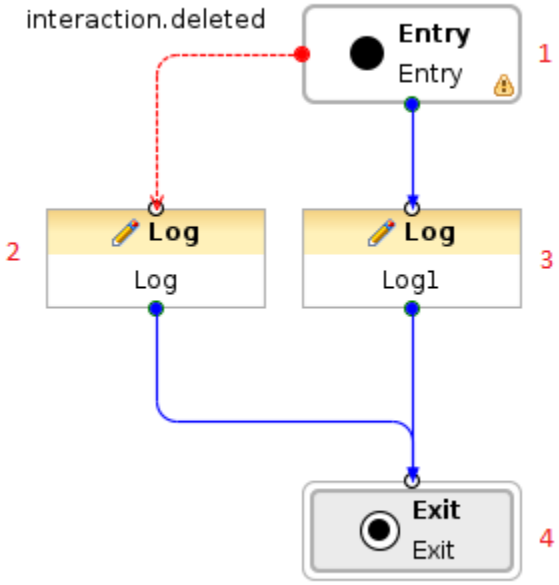
Interactions have to satisfy the following conditions:

- Interactions must either have the property `IWD_expirationDateTime` not set, or this property must have a time stamp which is in the past.
- Interactions are taken in the order they were submitted.

Composer Configuration



Flow Summary



Flow Detail

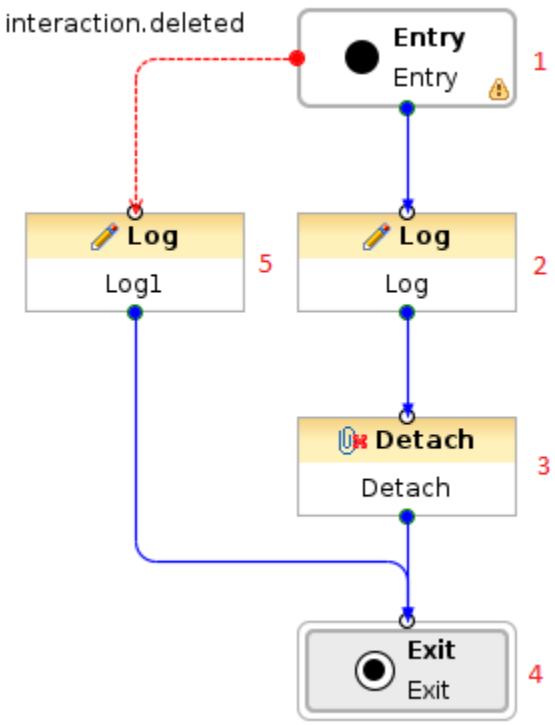
1. Entry to Removal workflow.
2. Log message in case if interaction was from some reasons deleted.
3. Log message: `Task will be terminated on exit`
4. Exit Removal workflow.

Finish Strategy

This workflow detaches interactions from the session. This workflow processes interactions from the following queues:

- `iwd_bp_comp.Main.iWD_Errorheld`

Flow Summary



Flow Detail

1. Entry to Finish workflow.
2. Log message :'Task processing completed'.
3. Detach interaction. After this operation, the interaction will not be processed any more.
4. Log message in case if interaction was for some reason deleted.
5. Exit Finish workflow.