



BENEVOICE FOR SALESFORCE

Smart Routing configuration guide

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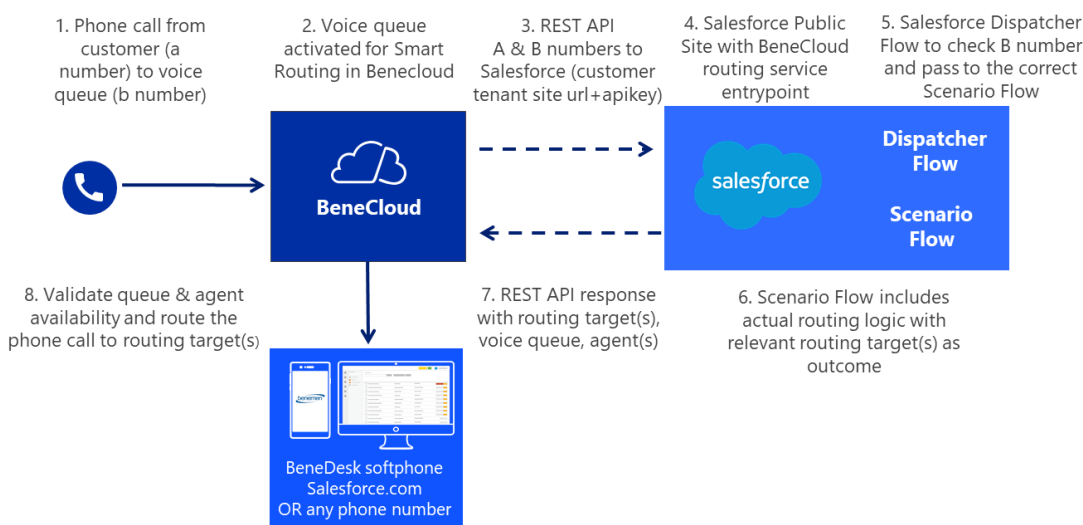
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1 Introduction

Smart Routing functionality enables customer to dynamically route incoming phone calls based on Salesforce data. Smart Routing is typically activated on voice queues level and requires activation also at BeneCloud configuration side. This configuration is optional and only used when Smart Routing is needed.

Native Salesforce Flows and Flow Builder are used to configure actual routing logic. Managed package includes two predefined Flow templates, which can be used and modified for specific customer scenario, when activating Smart Routing. Customer can freely create their own Scenario flows too.

The below diagram describes the overall design.



2 Configuration

2.1 Components description

Smart routing implementation consists of the following components in the Salesforce side:

- Site:
 - Public site is used for accessing to Smart Routing endpoint on Salesforce side.
- Classes:
 - RoutingInfoService – this class incorporates POST endpoint handling. It receives POST request with anum (caller A phone number), bnum (called B phone number, typically voice queue phone number) and apikey, verifies the apikey and pass anum and bnum to a flow. Once the flow is finished RequiredTarget, InitialTarget, FailTarget, AllocationTargets and Priority are got from the flow and placed to the response.
- Flows:
 - SmartRouting_Dispatcher – this flow should be created or cloned and updated from the provided template by customer’s admin. The goal of this flow is receiving of anum and bnum and passing it to the correct scenario flow depending on hardcoded bnums inside SmartRouting_Dispatcher flow. There aren’t restrictions about name of this flow, the name can be any.
 - SmartRouting_Scenario - this flow should be created or cloned and updated from the provided template by customer's admin. It incorporates the actual business logic for call routing. This flow gets anum and bnum from the Dispatcher and process the flow logic. There can be several flows for different processes and queue numbers (bnums). There aren’t restrictions about name of this flow, the name can be any.
- Fields:
 - Benemen Configuration.SmartRouting REST API Key – this field stores apikey on Salesforce side. Customer can set any apikey.
 - Benemen Configuration.SmartRouting Flow - this field stores name of the initial flow - dispatcher, it is entry point for the flows, usually it is ‘SmartRouting_Dispatcher’ (or the name of the dispatcher flow which was created by customer’s admin).
 - These fields are configured via BeneVoice lightning app -> Smart Routing tab

2.2 Configure Public Site

There are two options creating public site.

- The recommended option is to create dedicated public site, which is used only for Smart Routing purposes
- Some of the existing sites can be used for Smart Routing Service, but Site limits should be considered.
- Site Limits, each request to Salesforce endpoint will consume the following limits of the site:
 - Service request time (per rolling 24-hour period per site) - time which a request took will be counted to this limit
 - Page views - each request is treated as 1 page view

1) Go to Setup > User Interface > Sites and Domains > Sites and click New.

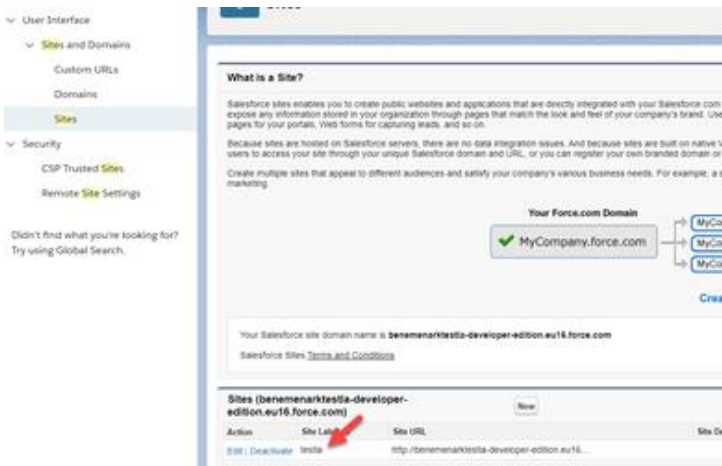
2) Set the name and fill the required fields, then save it.

3) Click Activate



4) Now the site is ready and next step is to add BenemenPhone.RoutingInfoService class to the site as it will grant access to Smart Routing endpoint from BeneCloud side.

5) Go to Setup > User Interface > Sites and Domains > Sites and select the appropriate site:



6) Click Public Access Settings

7) Click Assigned Users. Click site user and add 'Benemen_Site' Permission Set to the site user.

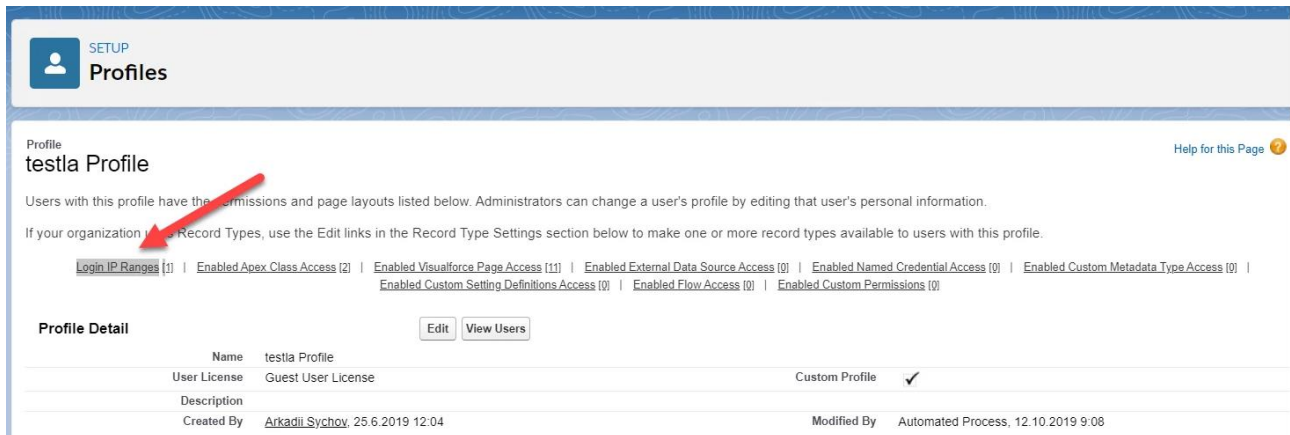
8) Copy the created site url and provide it to Benemen. This site url is used by Benemen at BeneCloud side as REST endpoint URL when activating Smart Routing.

Note: Overall REST endpoint url format is, <https://<configured site url>/services/apexrest/BenemenPhone/routinginfo>

2.2.1 Optional - Configuring Login IP Ranges restriction

It is possible to activate Login IP Ranges restriction for the Public Site guest user. It allows to accept and process requests from the client in the configured IP address range only. Please follow the instructions below to configure it.

- a. Request the used IP address range from Benemen.
- b. Go to Setup > User Interface > Sites and Domains > Sites and select the appropriate site. Important point: the site should be used for Smart Routing functionality only, to not impact functionality of other sites.
- c. Click 'Public Access Settings'.
- d. Click 'Login IP Ranges'.



The screenshot shows the Salesforce 'Profiles' configuration page. At the top, there's a navigation bar with 'SETUP' and 'Profiles'. Below that, the page title is 'testla Profile'. A red arrow points to the 'Login IP Ranges' link in the permissions section. The permissions section lists various access types like 'Enabled Apex Class Access', 'Enabled Visualforce Page Access', etc. Below the permissions, there are 'Edit' and 'View Users' buttons. The 'Profile Detail' section shows a table with the following information:

Name	testla Profile		
User License	Guest User License	Custom Profile	<input checked="" type="checkbox"/>
Description			
Created By	Arkadii Sychov, 25.6.2019 12:04	Modified By	Automated Process, 12.10.2019 9:08

e. Click 'new' button.

f. Set the IP address range received from Benemen, and click 'Save'.

2.3 Configure Flows

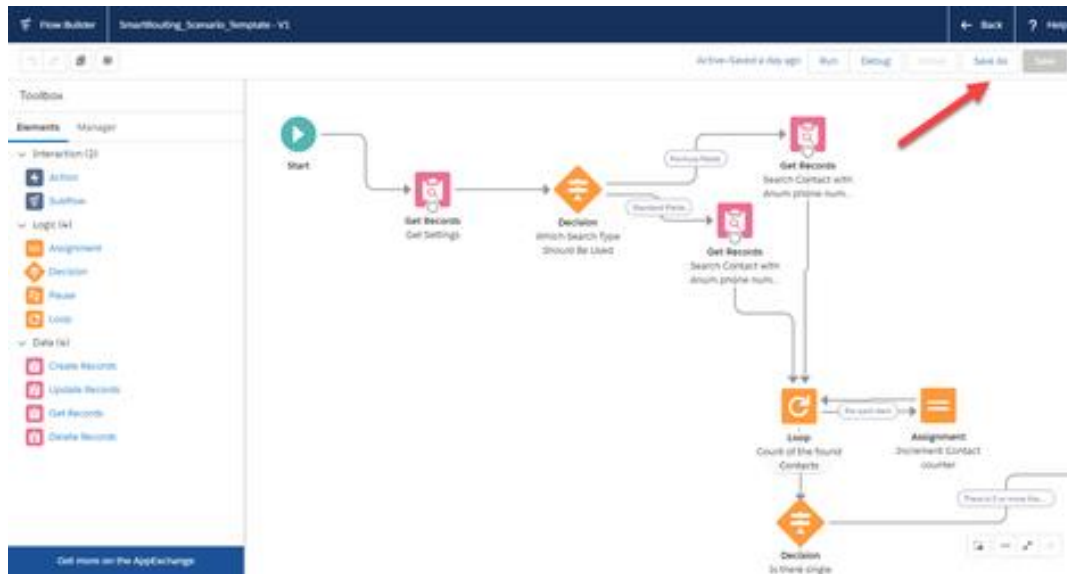
Managed package includes two Smart Routing flow templates

- SmartRouting_Dispatcher_Template – it is foundation of the future scaling; this flow checks the bnum (called phone number, typically voice queue number) and routes it to Scenario (sub)flow which describes exact routing logic. The default template includes single bnum check and sub(flow), but more rules can be freely added to the dispatcher flow for the other bnum's.
- SmartRouting_Scenario_Template – it is actual (sub)flow template which incorporates logic of routing. This is predefined example, which can be freely used and modified for a specific customer routing scenario. Customer can freely create other scenario flows and invoke them from Smart Routing Dispatcher flow.

The following steps describes configuration steps to use the provided flow templates as baseline for your own smart routing logic.

1) Go to Setup -> Flows and click on the SmartRouting_Scenario_Template flow template name, the flow will be opened.

2) Click 'Save As'



3) Set Flow Label (Flow API Name will be populated automatically) and save it as a new flow. Name e.g. SmartRouting_Scenario1

4) Next open SmartRouting_Dispatcher_Template flow and click 'Save As' to save it a new flow. Name e.g. SmartRouting_Dispatcher

5) Still on newly saved SmartRouting_Dispatcher flow

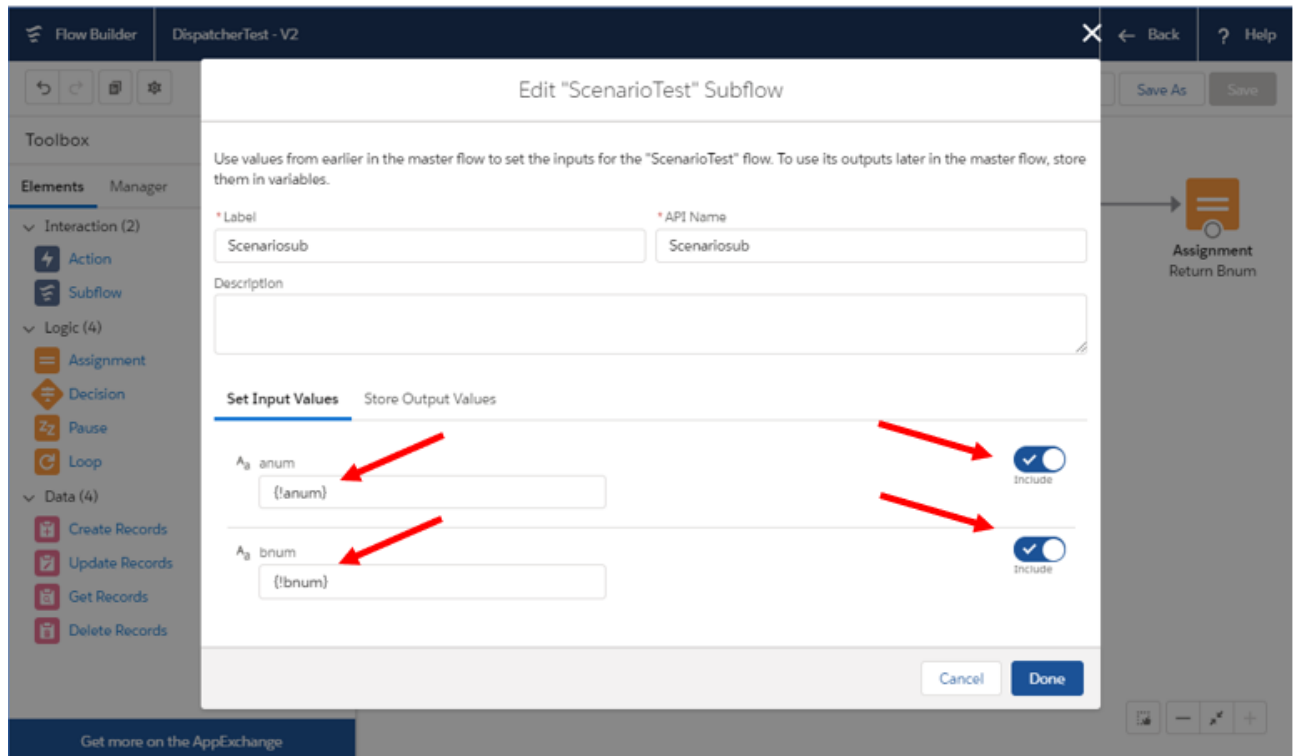
- Remove original Subflow element, by going over it and click recycle bin icon
- Drag & drop a new Subflow element to the page



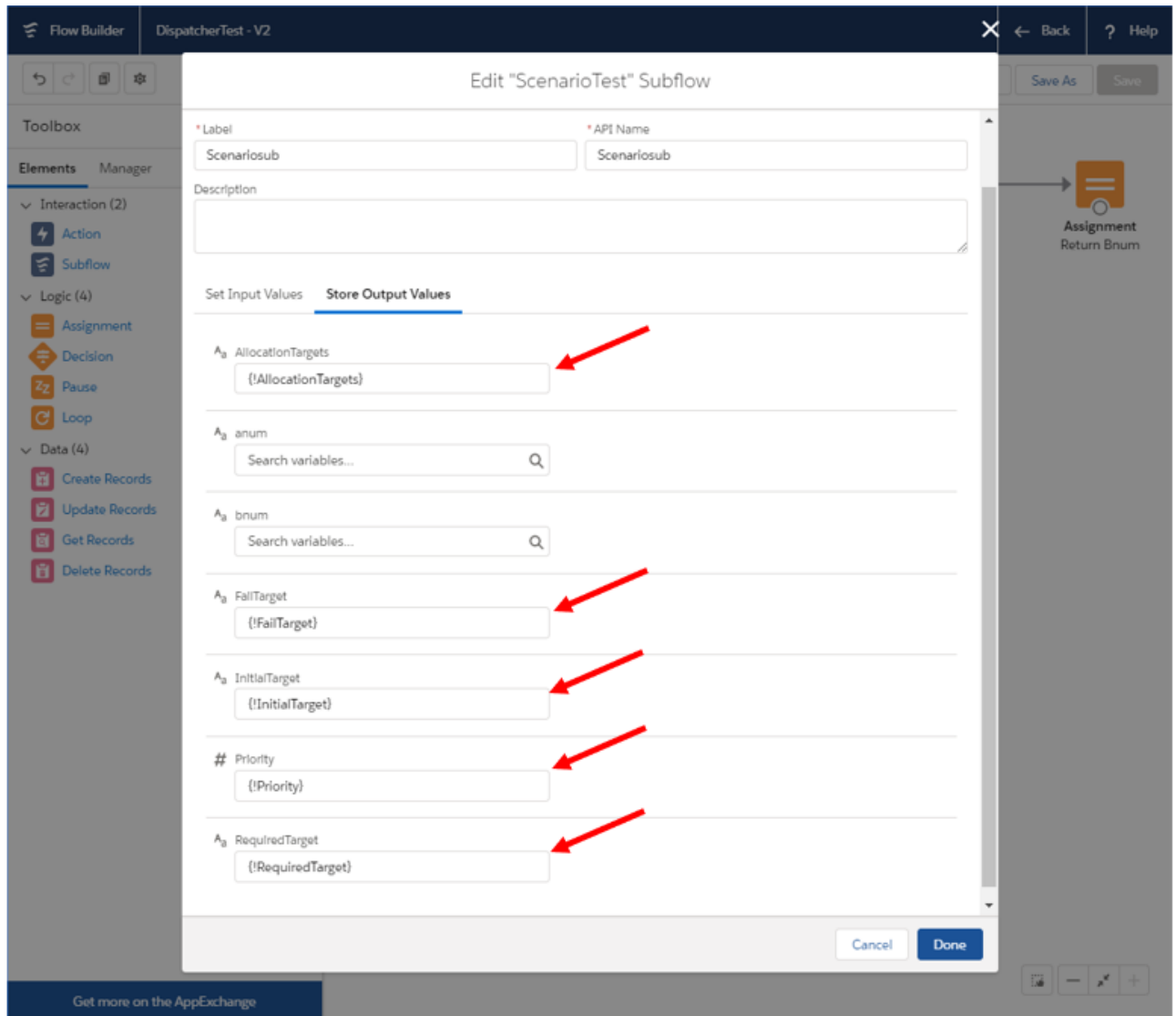
6) On the new page select SmartRouting_Scenario1, which you saved in step 3)

7) On the new page

- Components anum and bnum must be set and included under **'Set Input Values'** while setting the subflow.



- The following components must also be set under **'Store Output Values'**; allocationTargets , FailTarget, InitialTarget, Priority and RequiredTarget. (anum and bnum are left empty here)

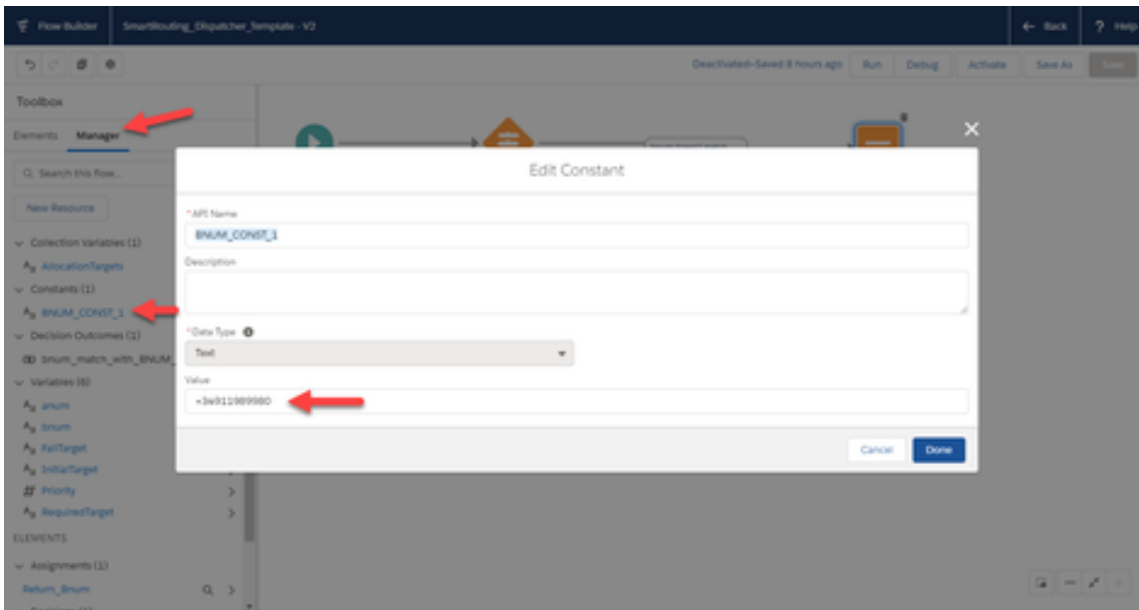


- After that click 'Done'.

8) Connect Decision element to new Subflow element by connector arrow from Decision element

9) Still on SmartRouting_Dispatcher flow, click Manager and then BNUM_CONST_1 constant

- Modify Value by the appropriate service pool queue phone number, which you would like to use in your smart routing scenario
- Click Done



9) You have now completed the needed flow configuration to use predefined smart routing logic 'as is' with the service pool queue you defined in BNUM_CONST_1 Value

10) It's almost certain that you need to modify saved SmartRouting_Scenario1 flow with your own business logic and routing targets. Please see [Scenario \(sub\)flow detailed description](#) for more details.

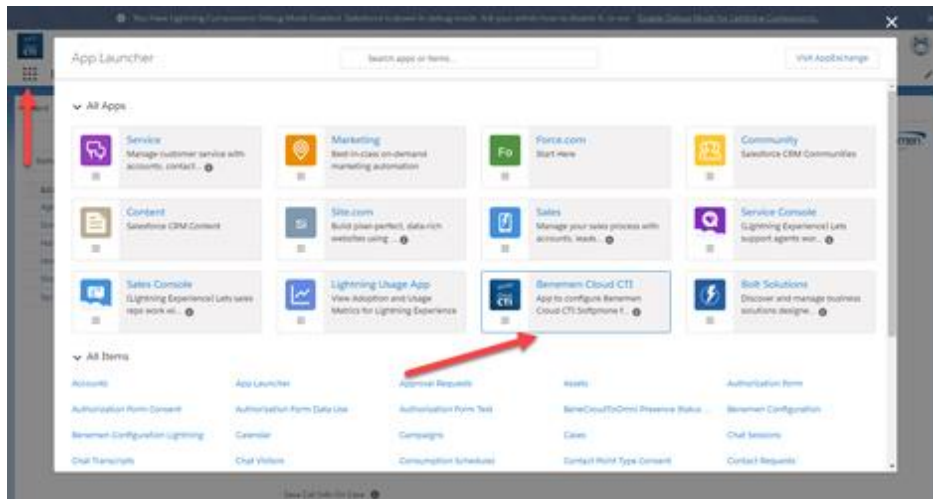
11) When finished, make sure you have activated your dispatcher and scenario flows. You may deactivate the original flow templates installed with the managed package

12) Please proceed to the next chapter to finalize baseline configuration on the Salesforce side

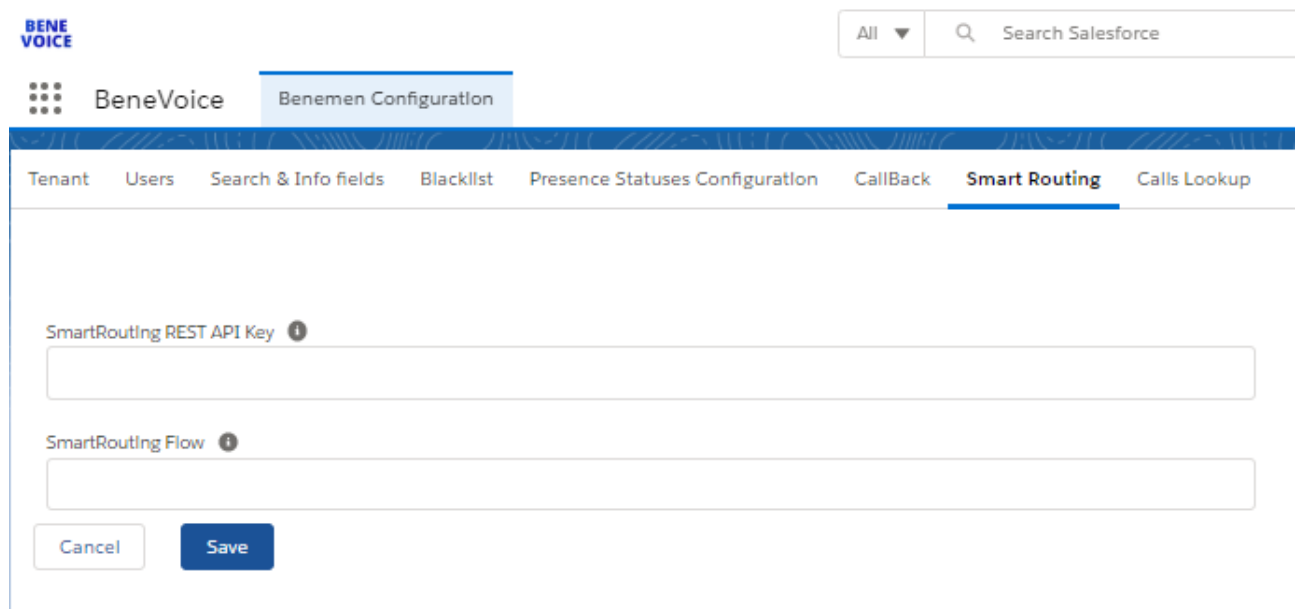
2.4 BeneVoice configurator app – Smart Routing activation

Complete the following steps to activate Smart Routing at Salesforce side. Please note that this will not have any affect for actual call routing until also Benemen has completed smart routing activation at BeneCloud side for the wanted voice queues.

- 1) Go to App Launcher and select 'BeneVoice' app



- 2) Select 'Smart Routing' tab, click 'Edit'



- 3) SmartRouting REST API Key: Set any API Key and provide this to Benemen. This is used as API key secret for REST endpoint.
- 4) SmartRouting Flow: Name of the dispatcher flow e.g. SmartRouting_Dispatcher
- 5) Click 'Save'

2.5 BeneCloud – Smart Routing activation

As a final step smart routing shall be activated at BeneCloud side.

- 1) Provide configured [Public site URL](#) and [REST API key](#) values to Benemen
- 2) Provide voice queue numbers / names, where smart routing should be activated to. In this baseline config BNUM_CONST_1 you configured in the [flow setup](#).
- 3) Agree on possible additional logic on BeneCloud side which should be applied
 - a. Maximum waiting time for preferred agent

- b. Possible caching timeouts. E.g. if customer calls in again within 5 minutes, should BeneCloud send smart routing query to Salesforce or use previously used routing logic
 - c. Etc.
- 4) Benemen to activate smart routing on agreed time
 - 5) Once smart routing is activated on BeneCloud side for the given voice queue, customer may freely modify routing logic via the scenario flow

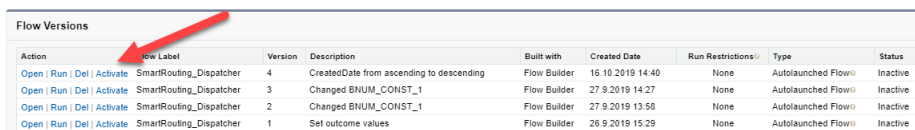
3 Detailed information about predefined flows

Flows are used for relatively simple configuration of business processes, in our case - routing scenarios related to a customer caller number and called voice queue number.

We can find flows here: Setup > Process Automation > Flows. Each flow can have many versions, but only one version can be active, so this version will be invoked when the flow is started.

If you want to activate a flow you can go to Setup > Process Automation > Flows, click arrow on the right side of the flow and select 'View Details and Versions'

After that you can click 'Activate' on the appropriate version:



Action	Flow Label	Version	Description	Built with	Created Date	Run Restrictions	Type	Status
Open Run Del Activate	SmartRouting_Dispatcher	4	CreatedDate from ascending to descending	Flow Builder	16.10.2019 14:40	None	Autolaunched Flow	Inactive
Open Run Del Activate	SmartRouting_Dispatcher	3	Changed BNUM_CONST_1	Flow Builder	27.9.2019 14:27	None	Autolaunched Flow	Inactive
Open Run Del Activate	SmartRouting_Dispatcher	2	Changed BNUM_CONST_1	Flow Builder	27.9.2019 13:58	None	Autolaunched Flow	Inactive
Open Run Del Activate	SmartRouting_Dispatcher	1	Set outcome values	Flow Builder	26.9.2019 15:29	None	Autolaunched Flow	Inactive

If you want to change logic in a flow, you need to click 'Open' under actions.

The flow builder will be opened (the version which is currently activate will be opened), you can do your changes (for example change phone number of the target queue), after that you can click 'Save As' button and save it as a new version, you can set some description for this version. After that you can activate the new version.

While the flow builder is open you can easily debug your flow by clicking 'Debug' in top right corner.

This will open debugger where you can test the current flow by providing wanted caller phone number (anum) and called voice queue number (bnum). Click then 'Run' and you will see the results.

Debug the flow

Debug options

Run the latest version of each flow called by subflow elements

Show details of what's executed and render flow in Lightning runtime ⓘ

Input variables

Enter values for the flow's input variables. For each value left blank, the flow starts with the variable's default value. You can't enter values for collection or record variables.

anum

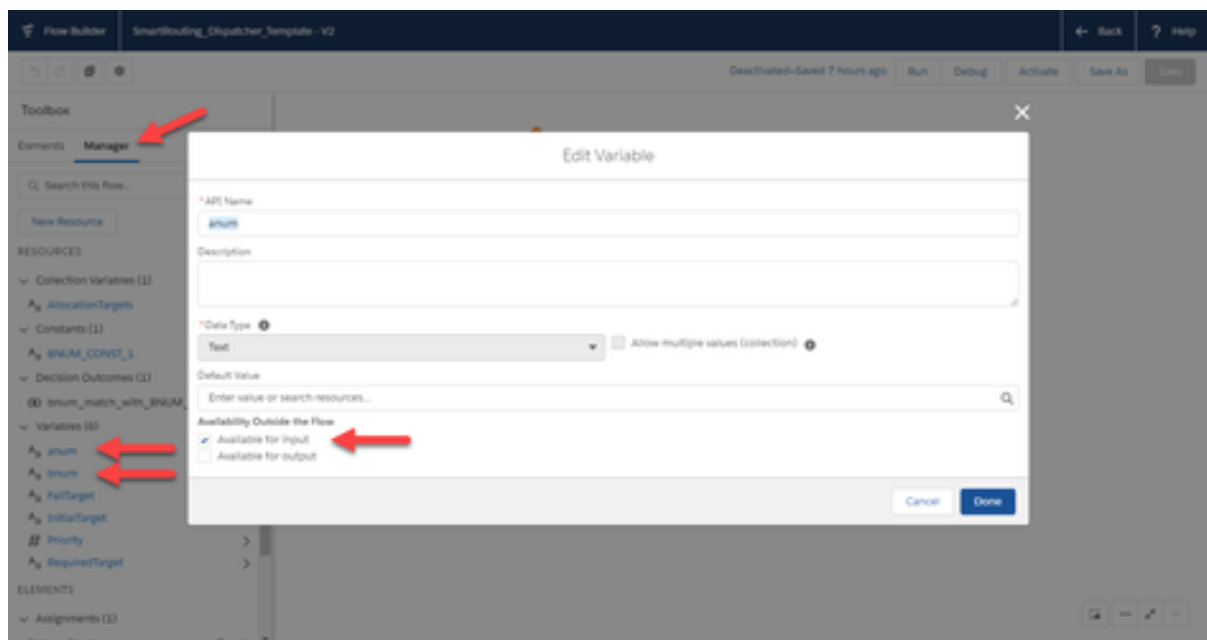
bnum

[Run](#)

3.1 Dispatcher Flow detailed description

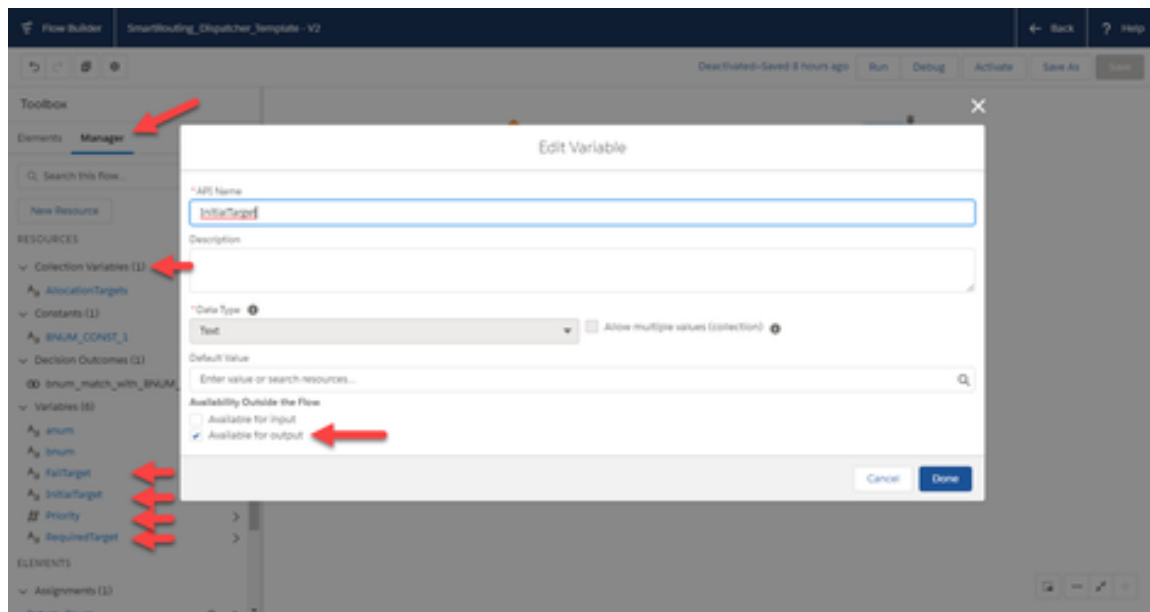
The flow has the following **variables available for input**:

1. **anum** - text variable which receives anum. This is a caller number, typically end customer's phone number. This is used for identifying caller and making routing decision based on the described logic in the scenario flow.
2. **bnum** - text variable which receives bnum. This is a called number, typically voice queue phone number which end customer called. This is used to find if dispatcher flow has smart routing rule for this bnum. Bnum can also be used as default outcome i.e. when we can't find any smart routing logic, we return bnum back and phone call is routed by standard routing logic. Note: empty response is normally recommended option, when smart routing logic is not found.



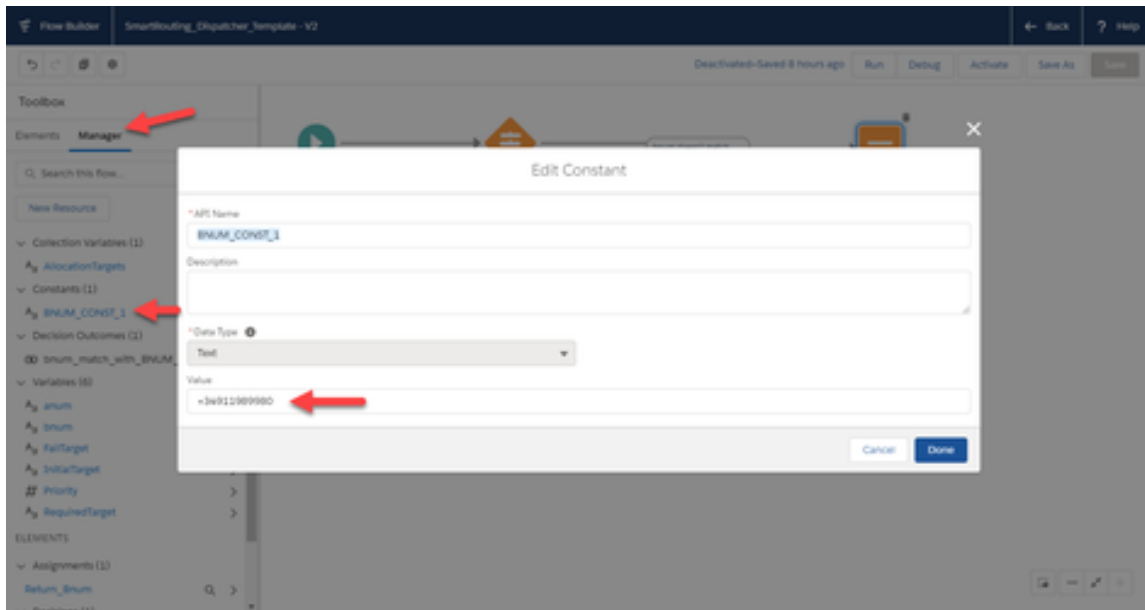
The flow has the following **variables available for output**:

Key	Type	Values	Description	Mandatory
InitialTarget	string	<ul style="list-style-type: none"> ○ Any number (external) ○ Queue number ○ Queue GUID ○ Agent number ○ Agent email-ID ○ Agent GUID 	Primary target. If target is Queue, preferred agents can be specified with RequiredTarget and AllocationTargets	No
FailTarget	string	<ul style="list-style-type: none"> ○ Any number (external) ○ Queue number ○ Queue GUID ○ Agent number ○ Agent email-ID ○ Agent GUID 	Secondary target. Target if InitalTarget fails.	No
RequiredTarget	string	<ul style="list-style-type: none"> ○ Agent email-ID ○ Agent number ○ Agent GUID 	Primary allocation target (agent). If agent is busy, call will be waited specified time, default (20 secs)	No
AllocationTargets	string	<ul style="list-style-type: none"> ○ Agent email-ID ○ Agent number ○ Agent GUID 	List of preferred allocation targets, if primary allocation target fails or is not specified.	No
Priority	int		Priority for this call, makes call x seconds "older". Calls in queue are ordered based on how long they have been waiting, oldest call is allocated first.	No



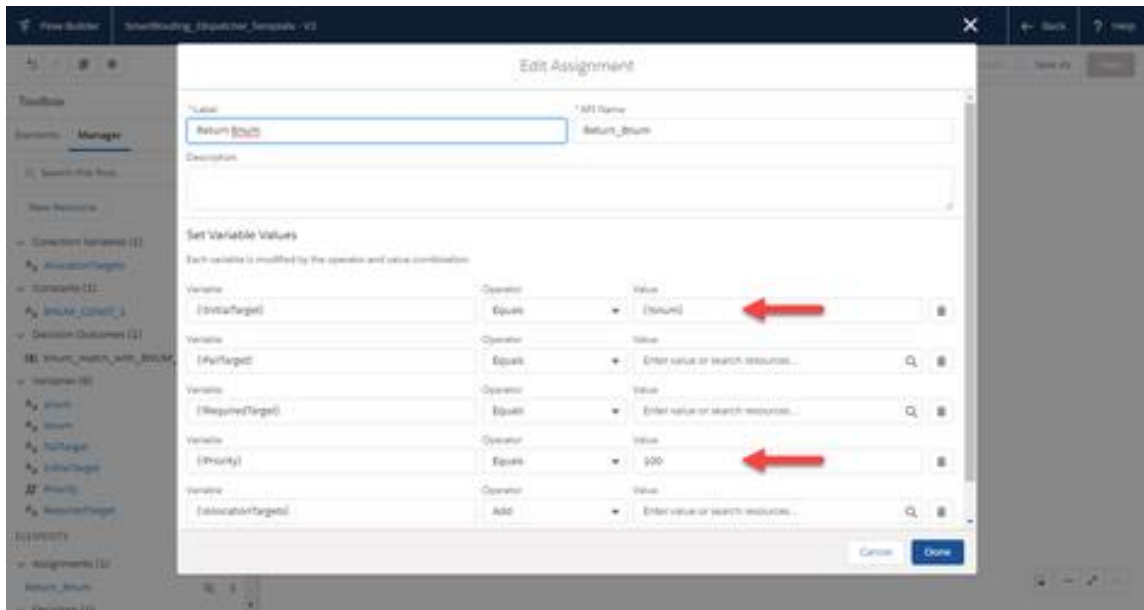
There should be **at least 1 constant which keeps phone number** of the bnum which should have smart routing scenario flow, but there can be several constants with different bnum's:

- BNUM_CONST_1 - text constant, contains phone number which will be compared with bnum.



The flow should contain **default assignment** element which initialize 5 output variables. It fills InitialTarget with bnum and set Priority = 100, the rest 3 variables are leaved blank. The default assignment is used, when smart routing rule can't be found, and we just return original bnum to route the phone call by standard routing logic.



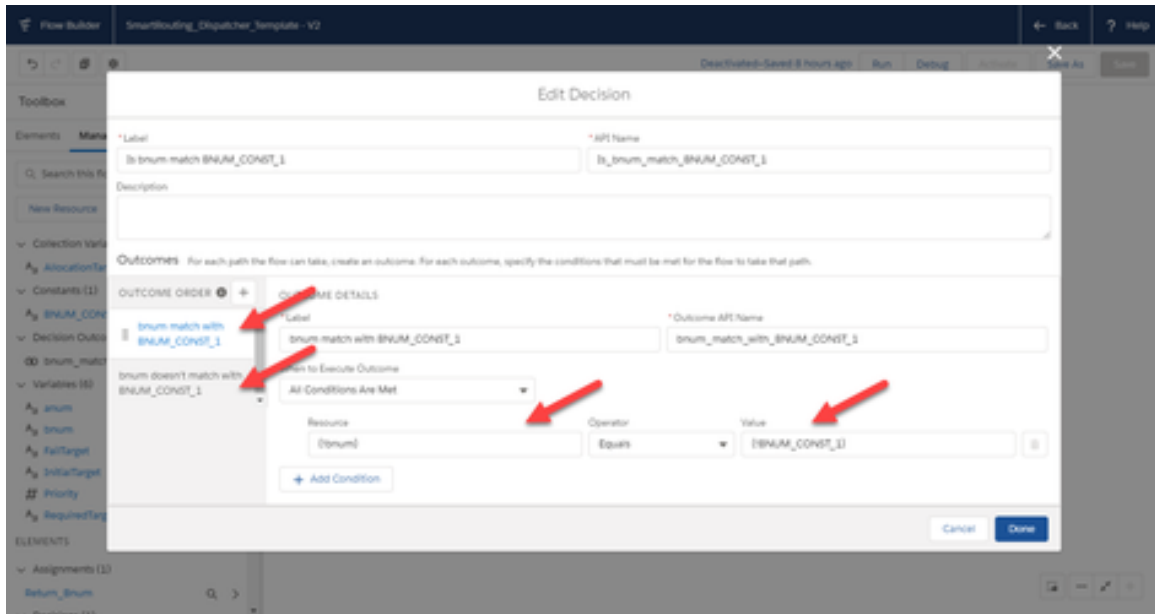


The flow should contain at least **1 decision block which checks if inbound bnum have scenario flow**. If there are more constants with other bnum's, there should be decision for each of them:



The decision have **two outcomes**:

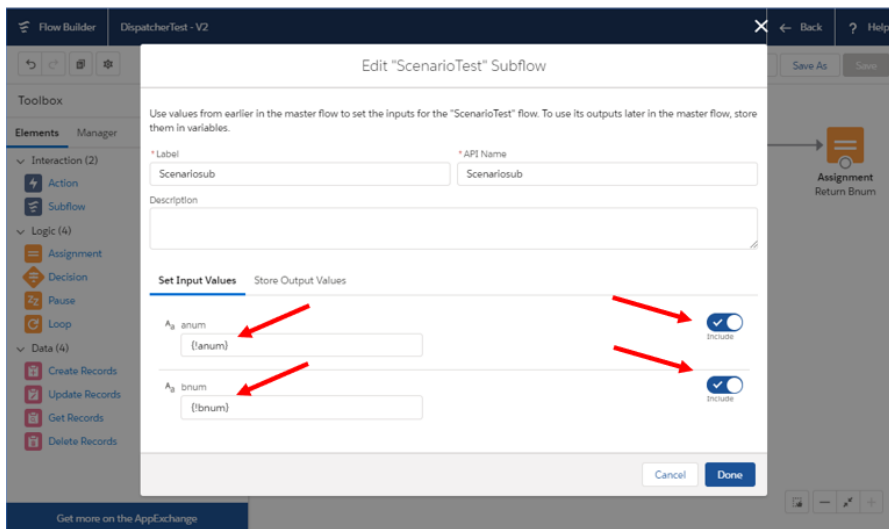
1. The first contains condition
2. The second is just default outcome (without condition)



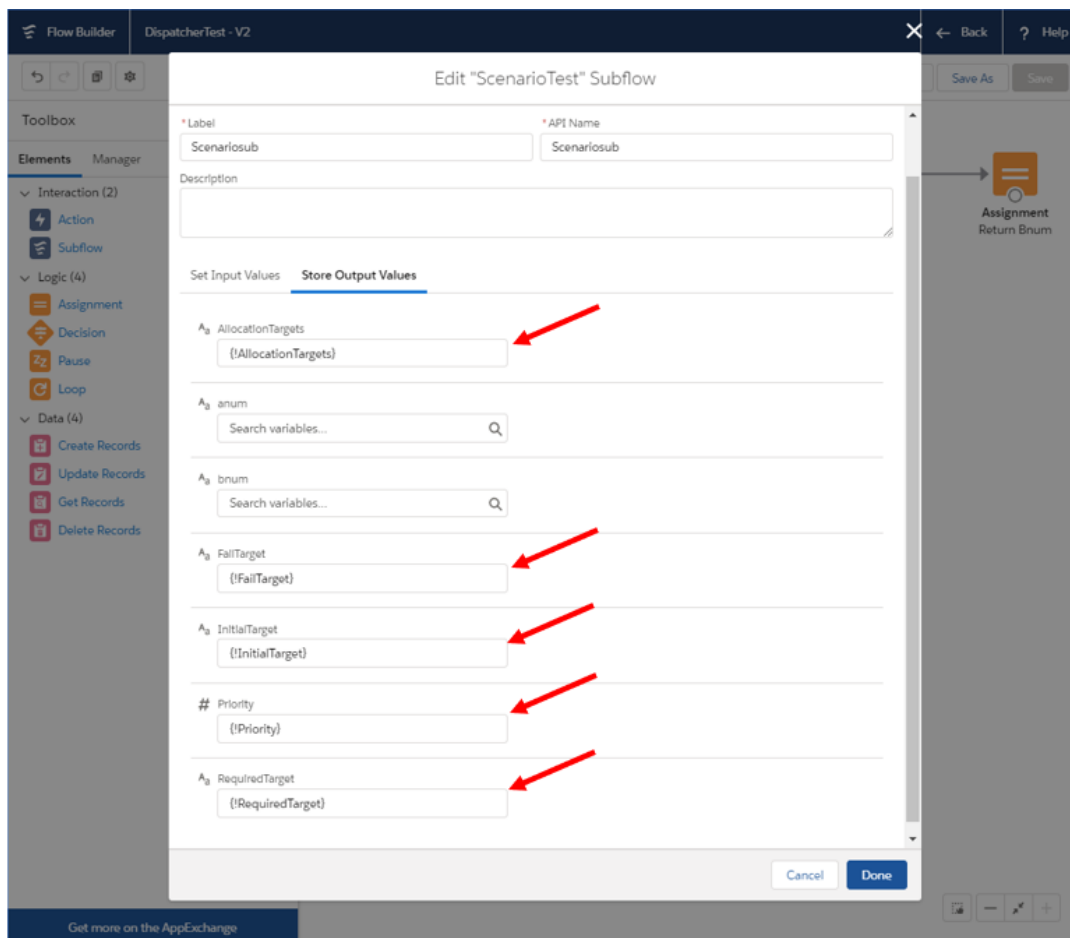
Finally the flow should have **Scenario (sub)flow invocation**. Subflow element can be drag and dropped from 'Elements' tab to flow area, the appropriate subflow is selected from the drop-down:



Components anum and bnum must be set and included under **'Set Input Values'** while setting the subflow.



The following components must also be set under **'Store Output Values'**; allocationTargets , FailTarget, InitialTarget, Priority and RequiredTarget. (anum and bnum are left empty here)



3.2 Scenario (sub)flow detailed description

The flow where actual business logic for routing decision is made.

The same input and outcome variables are used as with dispatcher flow.

Input variables:

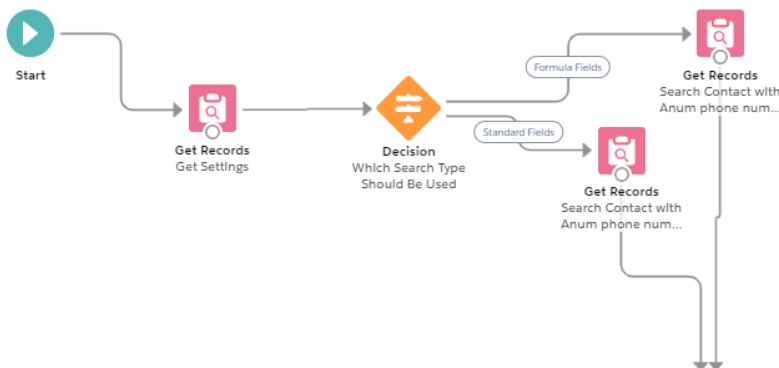
1. **anum** - text variable which receives anum. This is a caller number, typically end customer's phone number. This is used for identifying caller and making routing decision based on the described logic in the scenario flow.
2. **bnum** - text variable which receives bnum. This is a called number, typically voice queue phone number which end customer called. This is used to find if dispatcher flow has smart routing rule for this bnum. Bnum can also be used as default outcome i.e. when we can't find any smart routing logic, we return bnum back

Outcome variables (actual routing target(s)):

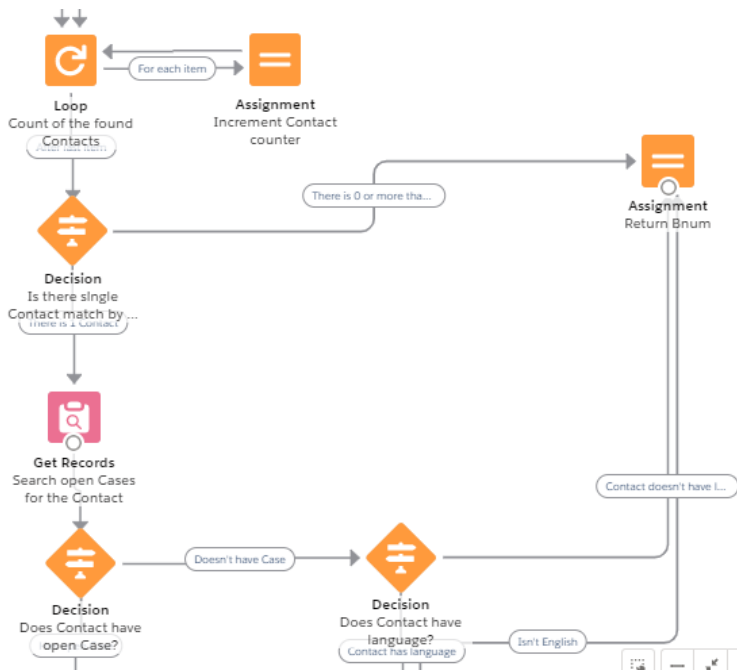
Key	Type	Values	Description	Mandatory
InitialTarget	string	<ul style="list-style-type: none"> o Any number (external) o Queue number o Queue GUID o Agent number o Agent email-ID o Agent GUID 	Primary target. If target is Queue, preferred agents can be specified with RequiredTarget and AllocationTargets	No
FailTarget	string	<ul style="list-style-type: none"> o Any number (external) o Queue number o Queue GUID o Agent number o Agent email-ID o Agent GUID 	Secondary target. Target if InitialTarget fails.	No
RequiredTarget	string	<ul style="list-style-type: none"> o Agent email-ID o Agent number o Agent GUID 	Primary allocation target (agent). If agent is busy, call will be waited specified time, default (20 secs)	No
AllocationTargets	string	<ul style="list-style-type: none"> o Agent email-ID o Agent number o Agent GUID 	List of preferred allocation targets, if primary allocation target fails or is not specified.	No
Priority	int		Priority for this call, makes call x seconds "older". Calls in queue are ordered based on how long they have been waiting, oldest call is allocated first.	No

Customer may build any wanted business logic, but predefined scenario flow includes the following logic:

- 1) Search Contact database based on caller's phone number (anum)



2) If single identified Contact is found, check if the contact has open Cases



3) If yes, check who is the owner of the newest case , route the call directly to the owner based on the owner's phone number in User.Phone field

The flowchart snippet for step 3 shows a 'Decision' block labeled 'Does Contact have open Case?'. A path leads to a 'Get Records' block labeled 'Search Case Owner'. From 'Get Records', the flow goes to an 'Assignment' block labeled 'Return Case Owner's Info'.

Edit Assignment

*Label: Return Case Owner's Info

*API Name: Return_Case_Owner_s_Info

Description:

Set Variable Values

Each variable is modified by the operator and value combination.

Variable	Operator	Value
{!InitialTarget}	Equals	{!User.Phone}
{!FallTarget}	Equals	{!bnum}
{!RequiredTarget}	Equals	Enter value or search resources...
{!AllocationTargets}	Add	Enter value or search resources...
{!AllocationTargets}	Add	Enter value or search resources...
{!AllocationTargets}	Add	Enter value or search resources...

Cancel Done

4) If no, check if the contact has preferred language identified and if it is one of the determined languages.
 Note: the predefined flow has Contact.Description field configured as field containing the language.
 Customer may naturally change this field to appropriate one. When doing so you need change the field in the following 6 resources:

Toolbox

Elements **Manager**

Search this flow...

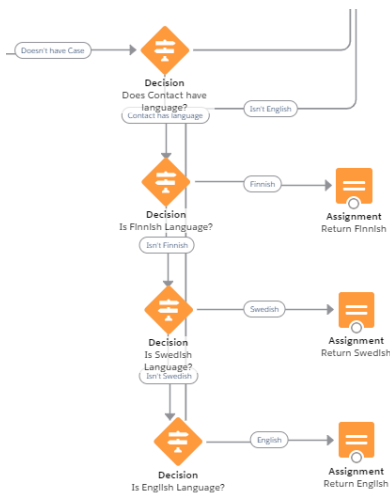
New Resource

- Does_Contact_have_language
- Does_Contact_have_open_Cases
- Is_English_Language
- Is_Finnish_Language
- Is_Swedish_Language
- Is_there_single_Contact_match...
- Which_Search_Type_Should_Be...

Get Records (5)

- Get_Settings
- Search_Case_Owner
- Search_Contact_with_Annum_ph...
- Search_Contact_with_Annum_ph...
- Search_open_Cases_for_the_Co...

5) If yes, route the call to given language voice queue based on hard coded voice queue phone number / guid



Edit Assignment

* Label: Return Finnish * API Name: Return_Finnish

Description:

Set Variable Values

Each variable is modified by the operator and value combination.

Variable	Operator	Value
{InitialTarget}	Equals	9902
{FallTarget}	Equals	{tbrnum}

6) In general, if conditions are not met the flow sends back original bnum and the call would be routed based on standard routing logic

Set Variable Values

Each variable is modified by the operator and value combination.

Variable	Operator	Value
{InitialTarget}	Equals	{tbrnum}
{FallTarget}	Equals	Enter value or search resources...
{RequiredTarget}	Equals	Enter value or search resources...
{AllocationTargets}	Add	Enter value or search resources...
{AllocationTargets}	Add	Enter value or search resources...
{Priority}	Equals	100

+ Add Assignment

Cancel Done