DWPA SERVICES

A quick guide to publishing DWPA Services beginning with a blank service and end with publishing a dialog used in Chatbot.

QUICK REFERENCE

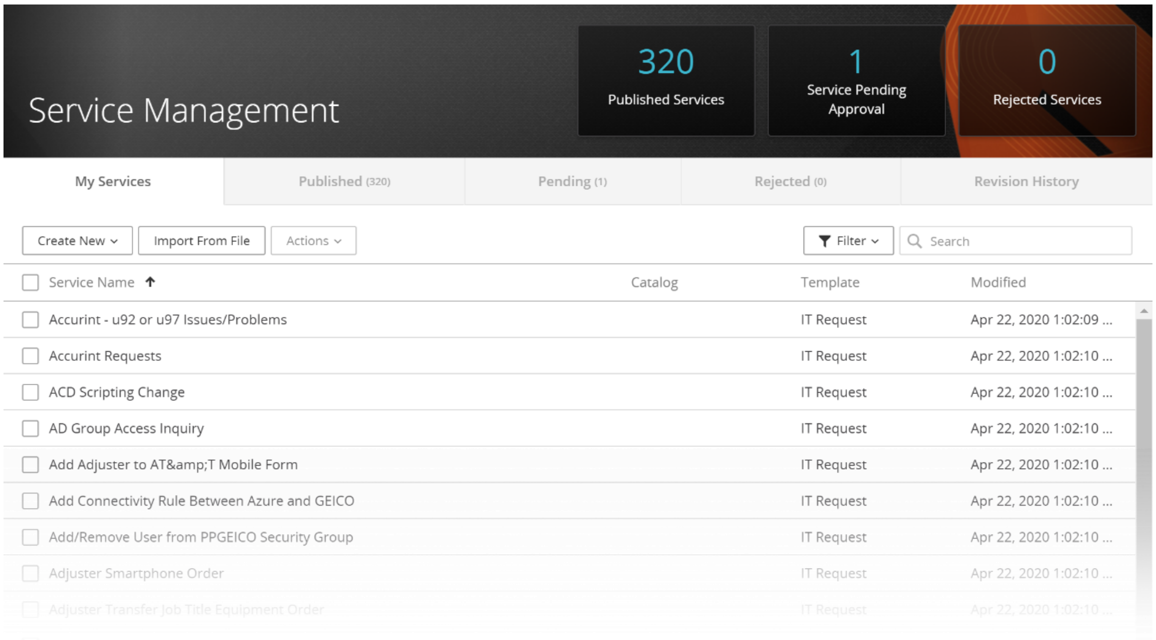
DWPA / ENHANCED CATALOG

Contents

Overview

This document serves as a quick reference guide to creating DWPA Services from beginning to end; creating a new DWPA Service, setting workflow behind that service and finally publishing that Service to Helix Chatbot.

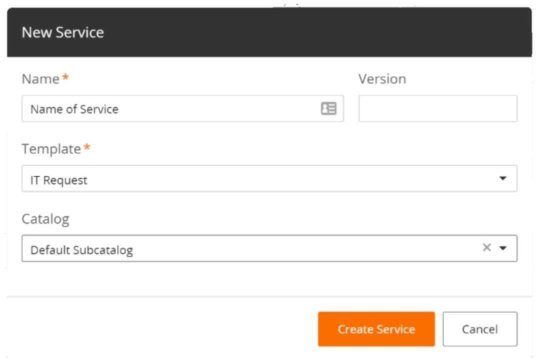
This document is not intended to be a complete guide. More information on BMC's Digital Workplace Advanced can be found at https://docs.bmc.com/docs/digitalworkplaceadvanced/1908/home-871979915.html.



DWPA Services

Creating A Service

1. Following the path [https://amwater-<*env*>-myitsbe.onbmc.com/myitsbe/services](https://amwater-<env>-myitsbe.onbmc.com/myitsbe/services) the list of DWPA Services will be displayed.
2. Click the Create New button and from the drop-down options, select ‘Service’
3. Name your service and for consistency sake with the system, select the ‘IT Request’ Template and the ‘Default Subcatalog’ Catalog



Service options as discussed below are available on the righthand side of the screen by double-clicking the service or by checking the service and clicking Actions/Open

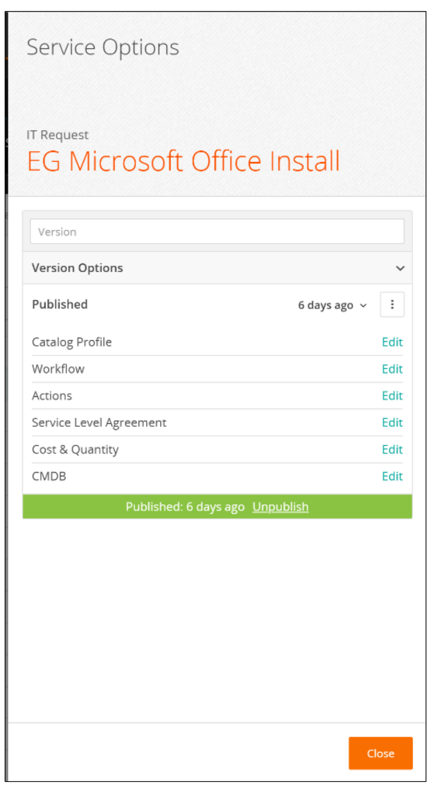


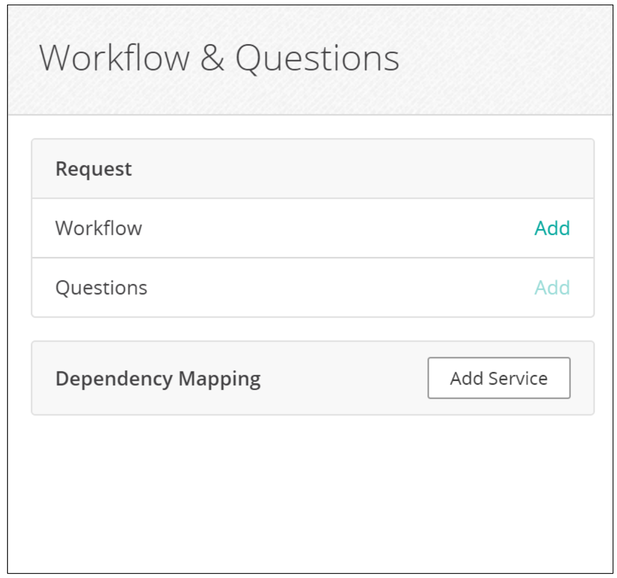
Figure 1 - Service Options

Catalog Profile Screen

This screen sets what you will see in DWP and is accessed through Catalog Profile/Edit. Set the icon and description here.

Workflow

Workflows is where you set the lifecycle or workflow of the service and where you create your service variables. Select Workflow/Edit to access Workflow and Questions. To create a Workflow, click Add and on the following fly-out screen select Actions/New Workflow.

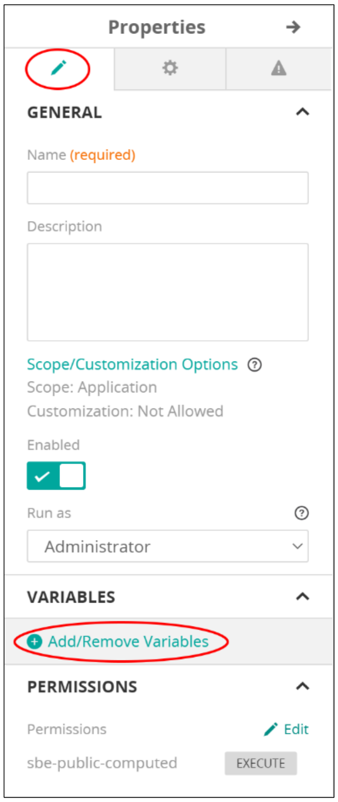


Best Practice: Name your workflow the same as the Service name and use the same Catalog as your Service (Default Subcatalog)

Start and End of a process

The starting and ending of a process is denoted by circles. When you're ready to begin laying out the Service's workflow, you do it here by placing steps between the starting and end circles. A service can have more than one end to allow for conditional branching but it can only have one start. A service must have a path from start to end to be published.

Best practice: To get the variables and questions set for your Service, just connect the Start and End steps as below before proceeding on to questions



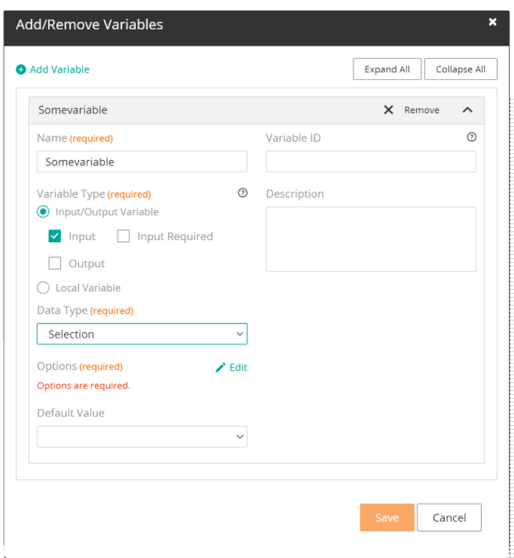
Setting Variables

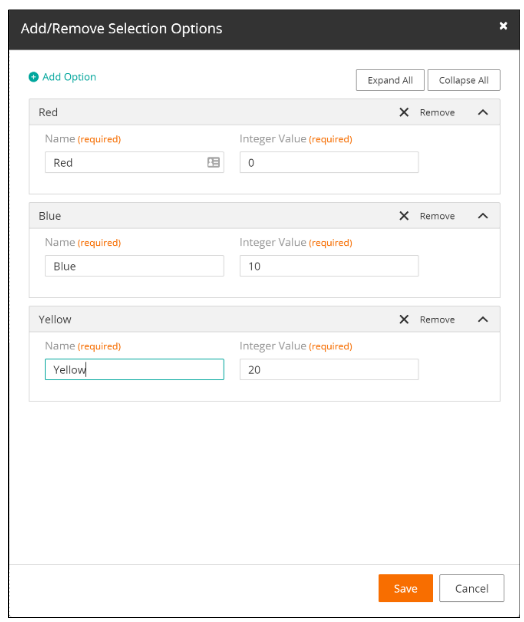
Set your Service variables in the Add/Remove Variables section. Access the dialog by ensuring you're looking at the Service's properties and clicking on Add/Remove Variables

Variable Types

Adding variables is straightforward and is probably much as you'd expect. Name your variable, choose a variable type and set if its required. Some of the optional settings are a field id (if left blank, one will be assigned), a default value and a description.

For variables of type Selection option values are required. Click on the Edit button between 'Options' to set your options. Integer Values will be automatically assigned but may be overridden.





The Service Broker Context variable

The Service Broker Context variable provides a lot of values to the service that you'll probably find yourself needed; especially if you're interacting with ITSM. It provides information about the service; id, name, etc., the request; id, order id, name, etc., the Requested By and Requested For; login id, email, full name, etc. and other useful pieces of information that can be used throughout the workflow.

Best Practice: Always include a Service Broker Context variable. Common practice is to simply name it 'context'.

Questions

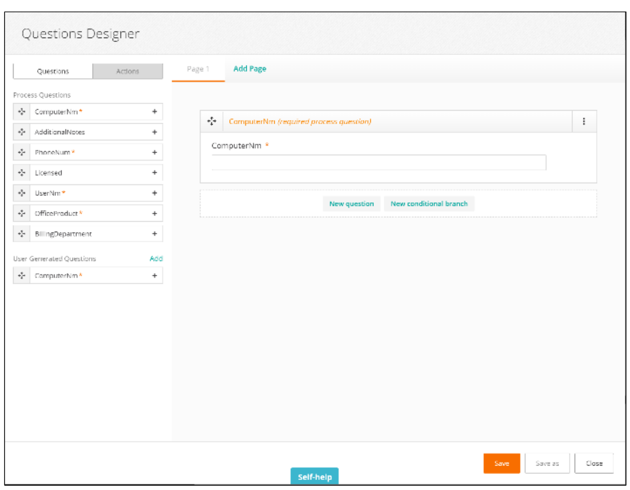
Questions act as the Service's user-interface to your users. If you're familiar with the Questions and Answers in SRDs then you already know about questions. They query the users for the information that will be stored in your Service's variables.

To get started, Service Options/Workflow/Questions and click Add. Before you can created questions there must be variables defined in the Workflow so if the Question's Add button is disabled then you don't have variables designed in your Workflow.

Best Practice: Name your question set the same as the Service name

Questions Designer

The Questions Designer allows you to layout your questions to the user as the user would see them. Here you set the order, wording, and conditions of your questions.



The Questions presented on the left are from the variables defined in the Service. Dragging a variable onto the Questions palette prompts you to set the control type; textbox, text area, drop down, option buttons, etc., and a few other properties that can help best present the question to the user discussed in the next section.

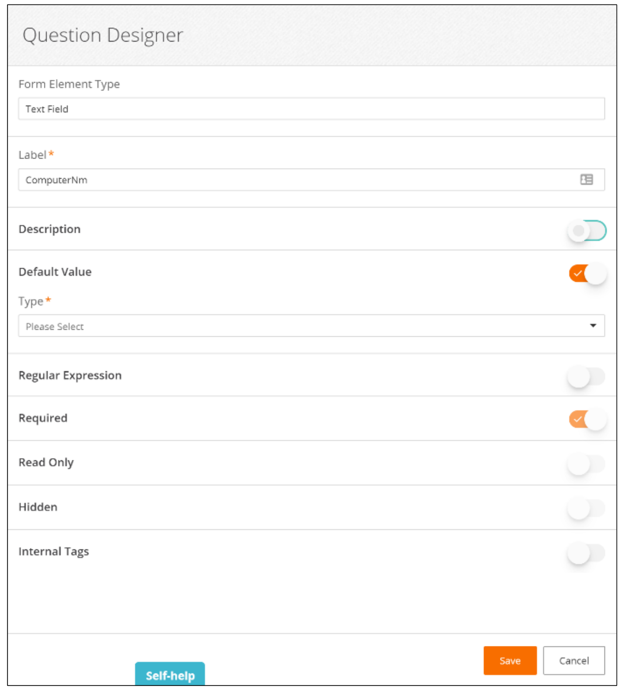
Question Options

The Question Designer allows you to fine tune your questions. Listed below are the common options.

Form Element Type

Depending on the variable type, you may have options for how the question is presented to the user. Variables of type Text allow for single line Text Fields or multiline Text Areas. Variables of type Select allow from Dropdowns, Radio Buttons, or Lookups (text fields that autofill the more you type.

Some variable types don't give an option of form element. Booleans only allow for toggle buttons and Date, Time, and DateTime variables only use the Calendar/Time picker.



Best Practice: Use the Lookup field element For Select variables that have more than 20 options. It renders quicker and is easier for users to select a value.

Question Text

Question Text is the question as presented to the user. By default, Questions are worded the same as the variable but you can change that.

Required

A simple toggle setting the field to be required. If the variable is set to Input Required, this option is disabled and the Question is set to required.

Description

If you set a description in the variable or add a description here, you can toggle it to display or not display.

Setting your descriptions in the Question allows you to include hyperlinks and a bit of light formatting since you can bold and italicize words.

Default Value

The default value will be pulled from the variable if one was set or you can add one here. The benefit to adding your default values to the question instead of the variable is that besides using standard text as a default, the Custom Value setting, Question default values can leverage Service and Request properties such as Requested By and Requested For login ids, full names, and email addresses by using Default Type 'Service Broker Context'.

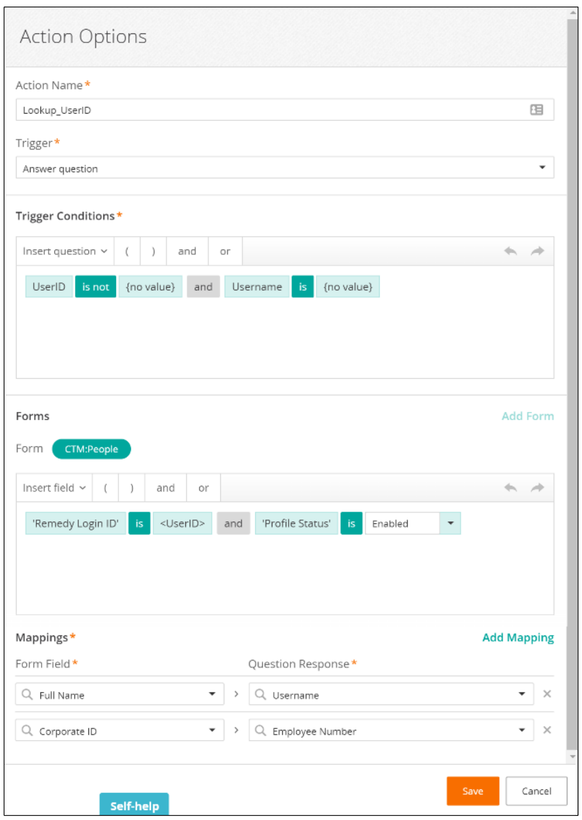
Regular Expressions

Regular Expressions can be used to guide user input into a standard text variable. For instance, phone numbers follow a 0-000-000-0000 format and a regular expression will enforce that format.

The option provides you with some common regular expressions like Phone Number, Email Address, and URL but you can set your own if required. https://regexone.com/ and https://www.rexegg.com/regex-quickstart.html are excellent resources if you're new to regular expression but a quick Google search will provides hundreds if not thousands of pages devoted to regular expressions.

Actions

Actions allow to retrieve data from an external system, like Remedy ITSM and use it in your Service. This provides us a way to grab data from ITSM and use it as defaults for our questions.



In this example, we're setting the default values for the UserID and Username questions. The Action runs when each question is answered (Trigger) if the UserId and Username fields are blank (Trigger Conditions). It sets the Username and UserID answers to the Full Name and the Corporate Id (Mappings) pulled from Remedy ITSM by querying CTM:People where the Remedy Login Id equals whatever value the user enters into the UserID field and their Profile is set to Enabled (Forms).

Creating an Action

On the Question Designer form, click the Actions button and Create New Action.

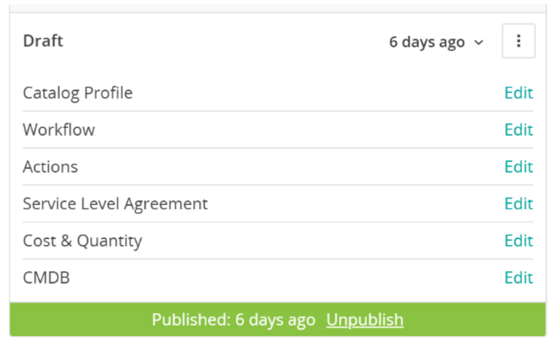
Give your Action a name and determine the Trigger. The trigger determines when the action fires and the two options are 'Open questionnaire' which fires when the service first request by a user and 'Answer question' which fires whenever a question is answered. Note Answer question fires on every question answered. To limit when it should fire, use the Trigger Conditions.

Trigger Conditions lets you set criteria that lets the action fire. It would be analogous to the Run If condition on Active Links and Filters in ITSM. You can use questions from the questionnaire to check for specific values in the answer or if the answers are null and run the condition if the condition is met.

The Forms section determines the data table from which retrieve the external data. The Remedy connector is configured on your system making all Remedy Forms from ITSM are available to you, even custom forms.

Approve & Publish

Once you have created your Workflow and Questions you can publish your work and see your results in DWP.

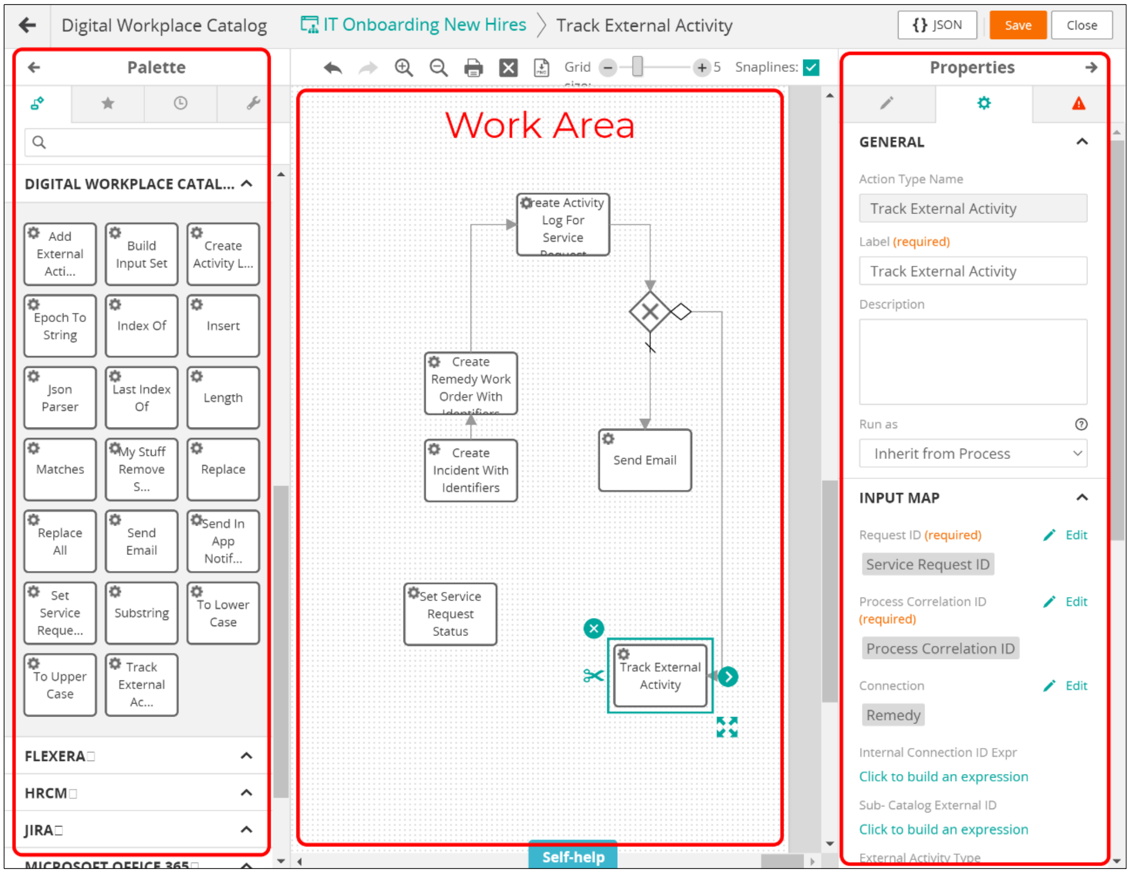


If you are used to working with SRDs, this would be equivalent to setting your service request to Online. To publish your service, click ⋮ and choose Approve & Publish.

Workflow

Workflow determines the process path that your services follows. As we saw in Start and End of a process it has a beginning, it has end, but we determine what happens in between.

Workflow Workspace



The workspace is broken up into 3 main areas: the Palette, the Work Area/Canvas /Design Area...you can call it whatever you want because BMC didn't name it, and the Properties.

Palette

The Palette is where you'll find the available steps for your process flow. The Palette is categorized into areas by use like general steps for sending email and error checking and by application; Jira, Digital Workplace Catalog, Remedy, Flexera, Azure and more.

Work Area

I've elected to call the middle section Work Area. The Work Area is where you'll place the steps selected from the Palette and connect them in order of the workflow.

Properties

When you select a step in the Work Area, you set its properties using the Properties window. Most steps have unique properties so the Properties section updates itself to offer the relevant properties. You can set properties by hard-coding the properties (hard-coding values requires putting the values in quotes. Quotes are *not* assumed) or by using values from the service variables or the output of other steps.

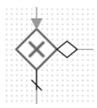
Common Steps

During the request's life, there are common-day things we do such as notify the user, send email, update the status of the request, and add comments.

Sending Email

The Send Email step is found in the Digital Workplace Catalog category and has 3 simple properties: the email address of the recipient (Receiver), the subject of the email (Title), and the body of the email (Content).

If/Then/Else Conditions

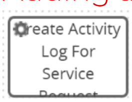


The Exclusive step is found in the Gateways category and is used as an if/then/else condition. The Exclusive step connects to 2 or more steps based on a condition set on each connector and one connector without a condition set to act as the Else.

Error Trapping

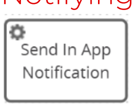
The Error End step is found in the Events category and is used to trap and communicate errors. It has 1 property: And error message, a text string, which you can set.

Adding an Activity Log to the Request



An Activity Log is analogous to a Worklog and it can be beneficial to add to the Activity Log to log updates to the request and inform the user of updates. The Activity Log takes 2 properties: Request Id, which can be taken from the context variable, and the text for the Activity Log, which is any text string you set.

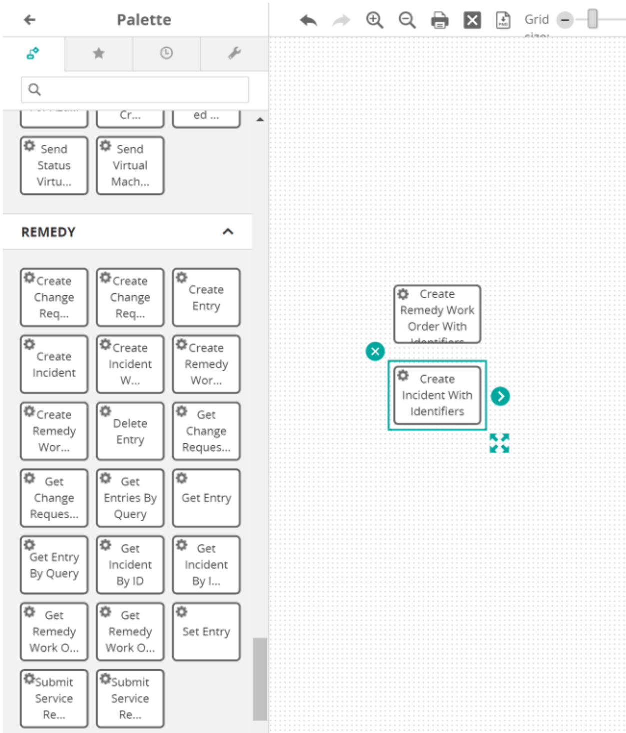
Notifying a user in-app



To send a user a notification that they can retrieve with the alarm bell in DWP, use this step. The step is found in the Digital Workplace Catalog category and takes 3 properties: the user id of the receiver (Recipient), a title for the notification (Title) and the notification message (Content).

While these steps are commonly used, there is a whole Palette to explore. To get information on all the steps available, visit https://docs.bmc.com/docs/digitalworkplaceadvanced/1902/workflow-designer-elements-overview-871495317.html

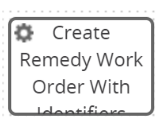
Creating ITSM Workflows and Incidents



The Workflow Palette has a section dedicated to interfacing with Remedy.

Work Orders

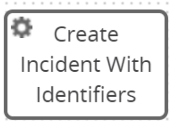
Create Work Orders with the Create Remedy Work Order With Identifiers step.



Connection Id	Connection > Remedy	Default Connection ID for this connector.
Contact Login Id	context > Requested By Login Name	Login ID of the user who submitted the request.
Summary	Text string that you set	The summary of the work order

Incidents

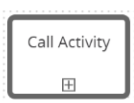
Create Incidents with the Create Incident With Identifiers step.



Connection Id	Connection > Remedy	Default Connection ID for this connector.
Login	context > Requested For Login Name	Login ID of the user who requires the service.
Service Type	One of the text strings below: • User Service Restoration • User Service Request • Infrastructure Restoration • Infrastructure Event	Specify the most appropriate value or offer the user a selection. *Tip: In the questionnaire, you can build a list of values by using Map to Dataset to select a list that matches the parameter name.*

Approvals

The approval process in DWPA leverages Approval Central in ITSM. Any of the processes available in ITSM, even custom approval processes, can be used in DWPA.

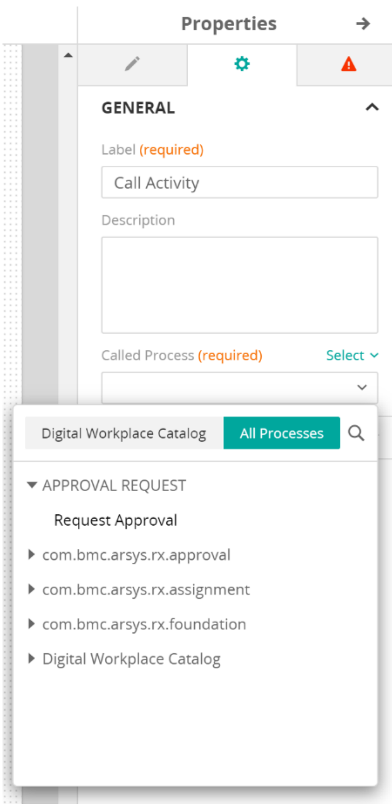


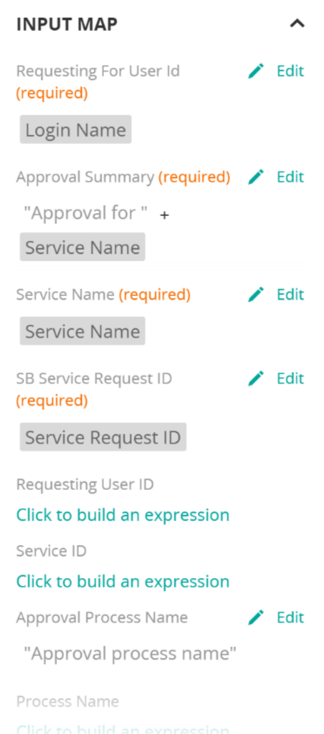
The Call Activity step, found at the top of the Palette, calls external process like the approval process. To choose the approval process, choose the Approval Process from the Called Process drop down and set the properties of the approval, shown below.

The 4 required properties for approvals are the Requesting for User Id, typically context>Requested by>Login Name, the Approval Summary, a text string that you set, the Service Name and Request ID, which are also found in the context variable; context>Service>Service Name and context>Service Request>Service Request ID respectively. Setting these calls the default approval process 'SB Request Manager Approval'.

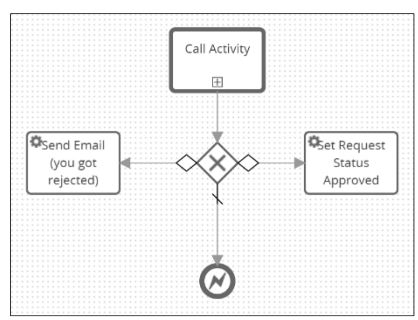
The Approval Process Name property allows you to call a specific approval process, including any custom processes you have created. This is done simply by setting the name found in the AP Admin console. Property settings shown below.

Table 1 - Approval Process settings





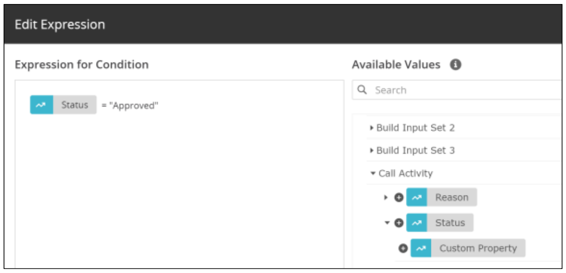
Approval Workflow

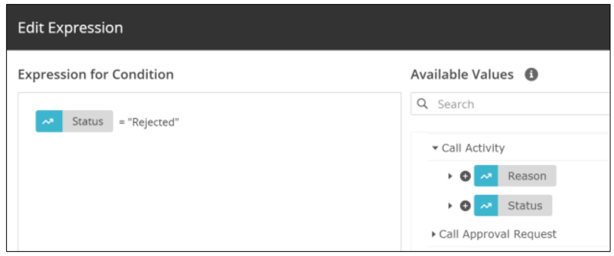


Calling an approval process will return one of 3 values; Approved, Rejected, or some other error. We can trap those responses with an Exclusive gate.

After calling the activity, we check the result and if the Status is Approved, we follow the approved chain. In this case, we're merely setting the request's status to Approved. If the Status is Rejected we send them a rejection email and if there's any other type of response we're assuming an error and ending the workflow reporting an error.

The lynchpin in this workflow is the Exclusive gate. We set two of the conditional branches to Approved and Rejected as shown below leave the third branch to follow an error path.



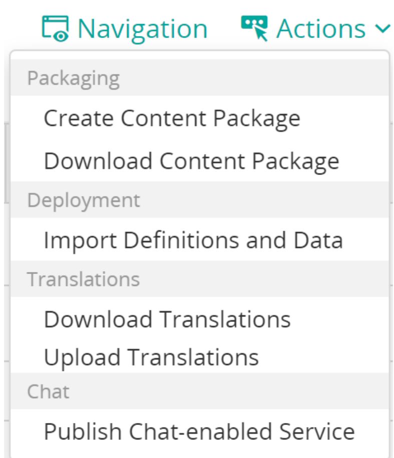


Chatbot

Publishing a Service through Chatbot

Publishing a Service to Chatbot is a straightforward process involving a wizard-styled interface. There are 5 steps to the wizard, 2 of which are crucial to publishing your Service

In Innovation Studio, https://amwater-tailoring-is.onbmc.com/innovationstudio/index.html#/app/home/workspace?type=all, click on BMC Chatbot to get into the BMC Chatbot application. Then click Actions/Publish Chatbot-enabled Service. This will launch a Chatbot wizard.



Step 1 – Choose your Chatbot

For those that have more than one Chatbot available to the end users, you choose which Chatbot you're publishing to here. This usually involves no more effort than clicking the Next button.

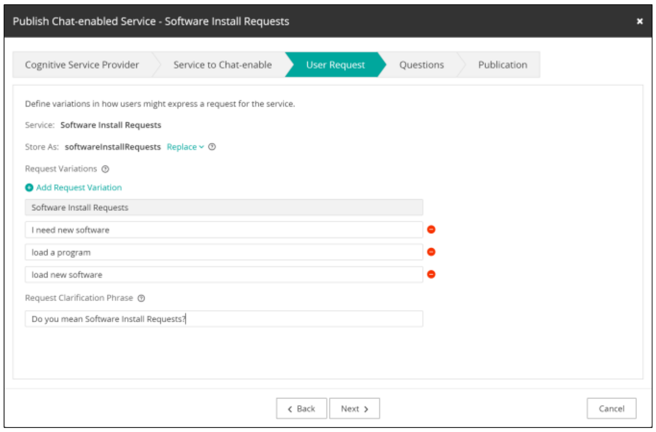
Pick your Service

A list of all DWPA Services are available here. Choose which one you wish to publish.

Set the intent of the Service

This is like adding keywords to your Service. Chatbot will use these words and phrases as clues to which Service the end user is asking for. You may add as many examples as you would like and more can be added by republishing a Service.

Eg. For a "Password Reset" Service: "I need to change my password", "I'm locked out", "I can't login", "My password is dead", "I need to reset my password"

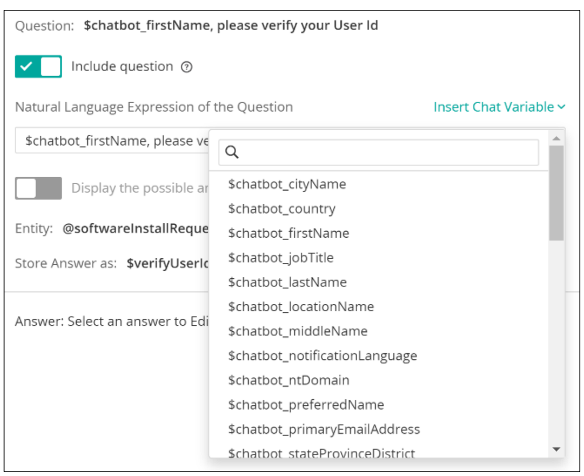


Setting the dialog

This is the section where you set how Chatbot talks with your user. All your questions are presented here allowing you to fine-tune how they'll interact with the user.

Rephrasing questions

You can rephrase your questions so they feel more conversational. Using Chat Variables, you can insert information into your question. Variables are general information from the user's profile like first name, full name, and email address and answers from previous questions.

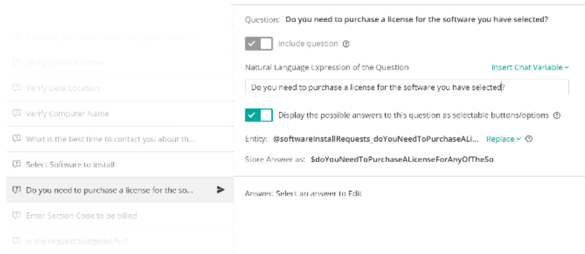


Hiding questions

You can choose not to present questions to the user, however there are cases where hiding questions will not be allowed:

- Question cannot be part of a conditional branch
- Question cannot be hidden
- Question cannot be required

Displaying Options



If your question can display options to the user you can choose whether or not to display them. Best practice is to display them since its never a good idea to have your user guess.

If your Question is of type Boolean or Select, you can display the options to the user. Booleans display YES/NO options to the user while Selects display any of the values set in the Question's Options. A user may then select a response or type in a response.

Publish the Chatbot

The final step is almost anti-climactic. Click the Publish button 

to publish to service to Chatbot.

What to avoid

Multi-select questions cannot be presented in the Chatbot. The question will be displayed but the options will not be displayed leaving the user to wonder what the valid options are available to request.