Designer User's Guide

User Input Block

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- Administrator

This block enables you to collect information from the customer.

Related documentation:

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You can use the **User Input** block in the **Self Service** phase to collect information from the user, such as an account number or credit-card information, and store it in a variable for processing. In the **Assisted Service** phase, you can use this block to gather more information from the user.

Optionally, you can specify whether retries are allowed if the input is not recognized, and whether to play a retry message, along with the original prompt message.

> **Tip**
> If the user enters invalid information or no input, then the value of the results variable is undefined. This must be considered before any later block can process the result. For example, a **Segmentation** block could determine whether the results variable stores a valid value and, based on the result, branches to different paths.

Prompts tab

Disable barge-in

Select this option to prevent callers from interrupting a prompt while it is still playing. For example, you might want a "Welcome" message to play all the way through before the caller can enter another command and skip to the next menu prompt.

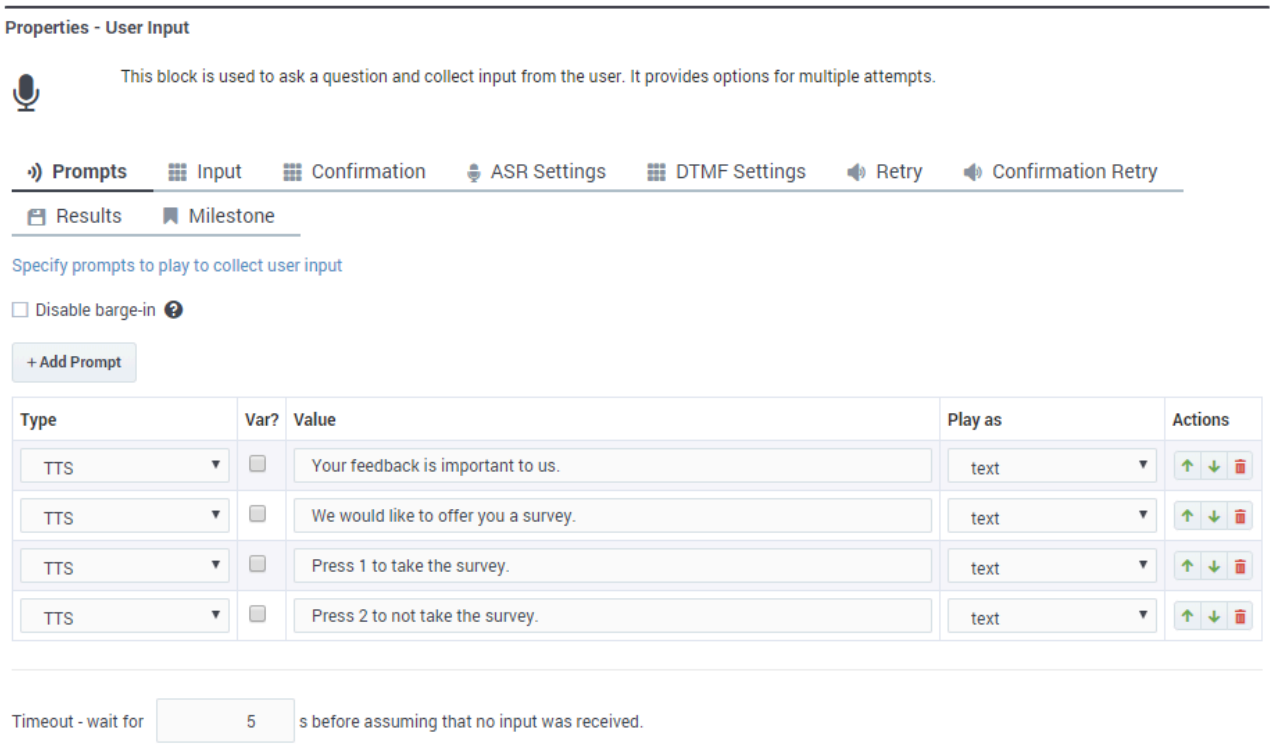
If this option is not selected, barge-in is enabled, and the prompt can be interrupted by the caller.

> **Important**
> The selected barge-in setting applies irrespective of whether Global DTMF Commands are used or not.

Click **Add Prompt** to play prompts when the menu starts.

Set the timeout period, in seconds, to wait before assuming that no input was received from the caller. Refer to the **Retry** tab to specify which actions are taken if the timeout period is reached. If retries are not permitted and the timeout period is reached, the application moves onto the next block.

Example



Input Tab

Choose one of the following options:

Built-in Grammar

Select this option to use a built-in grammar. You can select from the following types:

- boolean
- currency
- date
- digits
- number

- phone
- time

If you select **digits**, you can also set the following options:

- **Minimum number of input digits** — Specify the minimum number of digits that the caller must enter.
- **Maximum number of input digits** — Specify the maximum number of digits that the caller can enter.

Next, specify the input mode for the grammar. You can select **DTMF**, **Speech**, or both. (If you select only **Speech** mode, **DTMF** grammars remain active but are not matched.)

Languages for built-in grammars can be managed using the *AppLanguageName* system variable (see System variables) or the Change Language block.

External Grammars

Select this option if you have created your own speech grammar. Next, click **Add Grammar** to add one or more speech grammars to use with this block. Provide the following information:

- **Var?** - Enable this check box to indicate that the selected speech grammar will be determined by a variable.
- **Dynamic?** - Enable this check box to indicate that the selected speech grammar contains dynamic values that can change over time (for example, an employee directory). For more information, see Dynamic Grammars.
- **Service?** - If selected, **Var?** is enabled and you can select the variable for the desired service. **Important:** A grammar can either be **Dynamic** or a **Service**; it cannot be both at the same time.
- **Name** - Select the speech grammar name (or variable) that you want to add to this block.
- **Mode** - Specifies whether this speech grammar is for voice or DTMF.
- **Arg** - If **Service** is selected, you must specify the variable to be matched against the query string contained within the **Service** variable. **Important:** If you don’t specify an **Arg** variable, you'll get a validation error prompting you to include an argument in the **Service** grammar.

Confirmation tab

Use the settings on this tab to enable and configure user input confirmation. This allows callers to review and confirm any spoken or DTMF inputs they have provided.

Never

Disable user input confirmation.

Always

Enable user input confirmation.

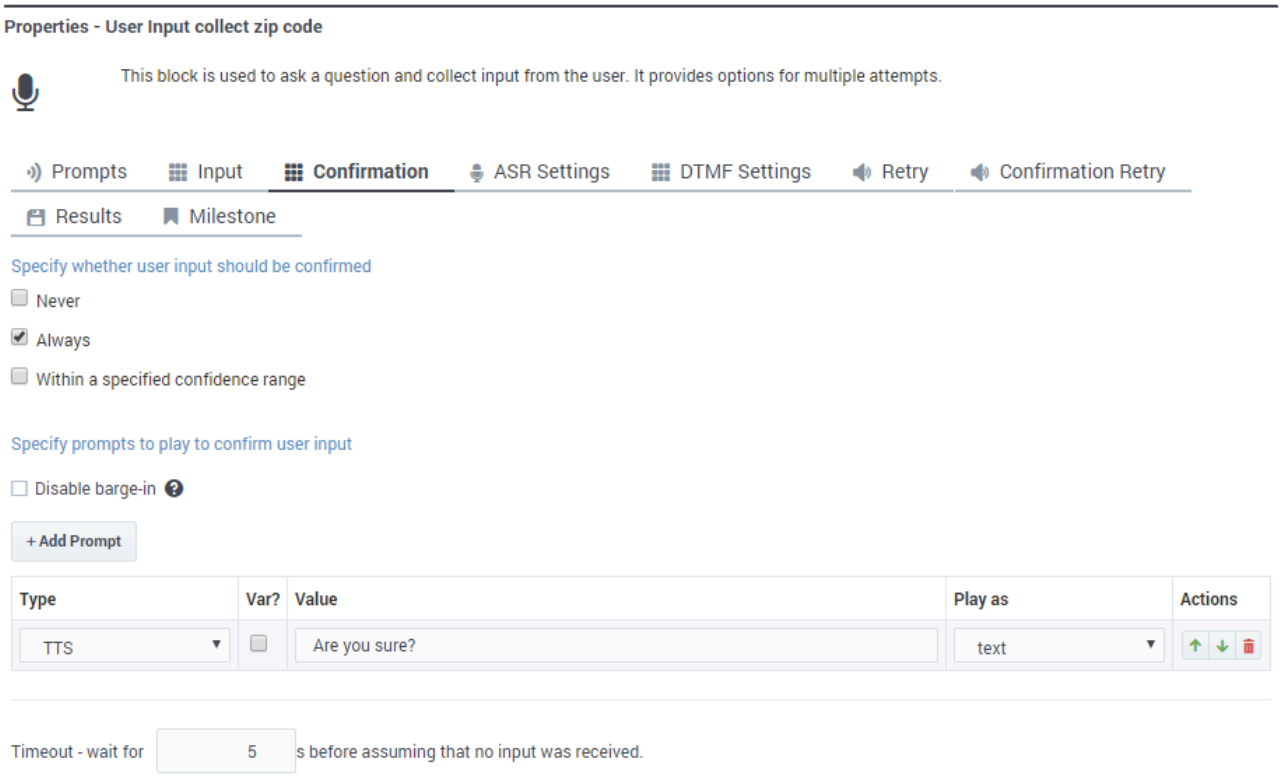
Within a specified confidence range

Enable user input confirmation for callers that meet the defined confidence threshold. If selected, you can then define the lower and upper thresholds.

Specify prompts...

If user input confirmation is enabled, specify the prompt(s) to play. You can also enable or disable barge-in (see the Prompts tab} for more information about this setting).

Example



ASR Settings tab

Use application-wide ASR settings

Enable this check box to use the default ASR (Automatic Speech Recognition) settings for your application. You can view or change these settings by clicking **Settings** in the Toolbar.

If you disable the **Use application-wide ASR settings** check box, you can set the following options for this block:

- **Confidence Level** - Specifies the speech recognition confidence level. If the caller's input is below this threshold, the input is determined as **No Match**. A value of `0.0` specifies that minimum confidence is needed for a match. A value of `1.0` specifies that maximum confidence is required before a match is determined.
- **Sensitivity** - Specifies the sensitivity level. A value of `1.0` specifies that speech recognition is highly sensitive to quiet input. A value of `0.0` specifies that speech recognition is least sensitive to noise.
- **Speed vs. Accuracy** - Specifies the balance between how fast the application responds to the input versus how accurate the response is interpreted. A value of `0.0` specifies that quick recognition is preferred. A value of `1.0` specifies that high accuracy is preferred.
- **Complete Timeout** - Specifies the required length of silence, in seconds, following user speech before the application determines a result (match, **No Match**, or **No Input**).
- **Incomplete Timeout** - Specifies the required length of silence, in seconds, following user speech before the application determines a result. This property is used in the following situations:
  - If the speech prior to the silence does not match all active grammars, this property specifies how long to wait before the partial result is rejected as **No Match**.
  - If the speech prior to the silence matches an active speech grammar, but it is still permissible to continue speaking and match the speech grammar. By contrast, **Complete Timeout** applies when the speech prior to the silence matches an active speech grammar and no further words are permissible.
- **Max Speech Timeout** - Specifies the maximum amount of time, in seconds, for which speech input is allowed before it is determined to be **No Match**.

> **Tip**
>
> If you change a setting and you later want to revert the setting to the default value, click **Global**.

DTMF Settings tab

Configure the following settings for DTMF input:

- **Input termination character** - Specify a termination character that the caller can enter to mark the end of the input string. Commonly, * or # are used as termination characters. If the caller does not enter a termination character, the application waits until the **Terminating Timeout** period has passed before processing the input.
  Example: You set this value to #. The caller enters 1234#. The input is **1234** and **#** signals that no more characters will be entered.
- **Interdigit Timeout** is the amount of time, in seconds, that the application waits between digit inputs before assuming the end of the input string. If the user entered too few or too many digits, a retry is attempted. If retries are not allowed, the application moves on to the next block.
  Example: You set this value to 3 and specify that the input can be between three and five digits. The caller enters 1234. The application waits **3** seconds before assuming a fifth digit will not be entered.
- **Terminating Timeout** is the amount of time, in seconds, that the application waits for the **Input Termination Character** before processing the input string. If the input is always a static length (for example, four characters), then you can set this value to `0` for the application to immediately process

the input after the last digit is entered.
Example: If this value is **5** and the caller enters 1234, the application waits **5** seconds before processing the input.

Retry tab

Use application-wide retry

Enable this option to use the default retry settings for your application. You can view or change these settings by clicking **Settings** in the Toolbar.

Allow retries

If you disable the **Use application-wide retry** check box, you can enable **Allow retries** to specify retry rules for this block. You can set the following options:

- **Number of No Input retries allowed**
  Select the number of retries to allow for callers whom do not provide input. For each retry, you can specify whether a prompt is played by clicking the corresponding section beneath this field. For example, if you allow two no-input retries and you want to play a prompt after the first retry, select the **No Input #1** line and add a prompt. Enable the **Play original menu prompt after this retry prompt** check box to repeat the menu prompts for the caller.
- **Number of No Match retries allowed**
  Select the number of retries to allow for callers whom do not provide a match for a **Menu Block**. For each retry, you can specify whether a prompt is played by clicking the corresponding section beneath this field. For example, if you allow two no-input retries and you want to play a prompt after the first retry, select the **No Match #1** line and add a prompt. Enable the **Play original menu prompt after this retry prompt** check box to repeat the menu prompts for the caller.
- **After Final No Input**
  Add the prompt to play after the maximum number of permitted No Input retries is reached. If this block is in the Self Service phase, you can also specify a target destination for the application to jump to, such as another block in the Self Service phase or to the Assisted Service or Finalize phase of the application.
- **After Final No Match**
  Add the prompt to play after the maximum number of permitted No Match retries is reached. If this block is in the Self Service phase, you can also specify a target destination for the application to jump to, such as another block in the Self Service phase or to the Assisted Service or Finalize phase of the application.

Confirmation Retry tab

Enable and configure the settings for user input confirmation retries.

Use default confirmation strategy

Select this option to use the default settings.

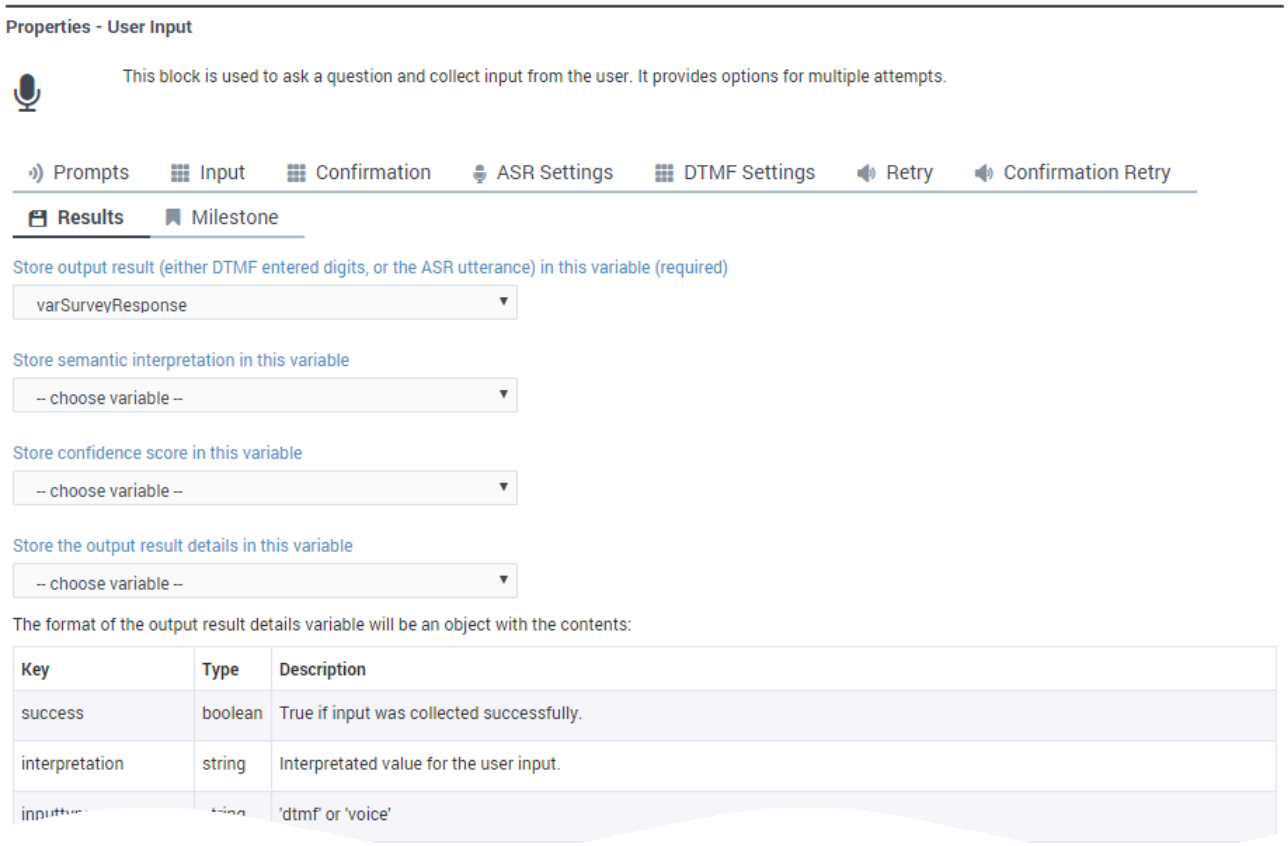
Allow retries

Enable retries. Specify the number of retries that are allowed for **No Match**, **No Input**, and **Disconfirmations**.

Results tab

Specify the variables in which to store the results of the interaction, semantic interpretation, confidence score, and output result for speech recognition (such as the **Confidence Level** value).

Example



Milestone tab

Specify a milestone for this block.

Example scenario

If you want to:

- Collect a single digit and allow for two retries. The caller can start collecting input only after the entire audio prompt has finished playing.
  - **Disable barge-in:** Enabled
  - **Minimum number of input digits**: 1
  - **Maximum number of input digits**: 1
  - **Allow retries**: Enabled
  - **Number of No Input retries allowed**: 2
  - **Number of No Match retries allowed**: 2

Dynamic Grammars

A dynamic grammar contains an array of values that automatically update in response to external input. Whereas traditional grammars are static and must be updated manually for each change, dynamic grammars are always current and do not require manual updates. This is useful for situations in which the grammar contents change frequently, such as employee or customer lists.

Consider the following example. You have created a voice application with a **User Input** block that allows the caller to contact specific employees in your company. You are using an external grammar that contains the names of all of your employees as valid inputs for this block. However, if an employee leaves the company or your company hires a new employee, the grammar is no longer current and must be updated. A dynamic grammar, however, can use an array of values from a variable and update itself based on external input. You do not need to manually update a dynamic grammar each time there is a change to the list.

There are two ways to create an array for use with dynamic grammars:

- Use an HTTP REST block.
- Use an Assign Variables block.

Using an **HTTP REST** Block

This method uses an **HTTP REST** block to fetch an array from a web service.

In this example, we are using a web service that returns the following JSON data:

```
{
        "success": true,
        "employees": ["John", "Julie", "Mark"]
```

```
}
```

Next, in the **Output Parameters** section of the **HTTP REST** block, we can assign **employees** to a User Variable that we previously created, called **varEmployees**.

Finally, in the **User Input** block, we can select **varEmployees** as a dynamic grammar. Each time the application runs, the **HTTP REST** block fetches the employee list and uses its contents as a dynamic grammar for the **User Input** block.

Using an **Assign Variables** Block

This method uses an **Assign Variables** block to push values to an array.

In this example, we have initialized a variable called **varEmployees** with a value of `'[]'` (an empty array).

Next, in the **Assign Variables** block, we use the expression `varEmployees.push('John')` to add an employee, **John**, to the employee list.

You can use multiple **Assign Variables** blocks to add items to the array.

```
}}
```