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Introduction

This document provides Operations Center personnel with step-by-step instructions for the complete setup of AWS Connect, encompassing LEX bot integration, chat widget deployment, detailed call flow creation, and other critical configuration elements.

A guide designed for the Operations Center, detailing the necessary steps to configure AWS Connect, including the integration of LEX bots for automated responses, implementation of chat widgets for web interactions, and design of robust call flows for efficient routing.

This how-to document provides clear instructions for Operations Center employees on configuring AWS Connect, covering instance setup, LEX bot integration, chat widget implementation, call flow design, and other advanced configuration options to ensure optimal operational performance.

Scope of the Document

- Configuration of AWS Connect instance, including number claiming and user management.
- Design and implementation of call flows for routing and handling.
- Integration and setup of Amazon LEX bots for automated customer interactions.
- Deployment and configuration of chat widgets for web-based support.
- Configuration of queues, routing profiles, and agent availability.
- Access and basic utilization of AWS Connect reporting and dashboards.
- Testing and validation of all configured elements.
- Basic troubleshooting of common setup issues.

Out of Scope:

- Advanced custom integrations or coding.
- Detailed network configuration.
- In-depth reporting customization.

Process of Implementation

How to enable Amazon Connect

1. Log in to the AWS Management Console using the created AWS account.
2. In the AWS Management Console, in the search box, type Amazon Connect. Choose Amazon Connect, as shown in the following image.

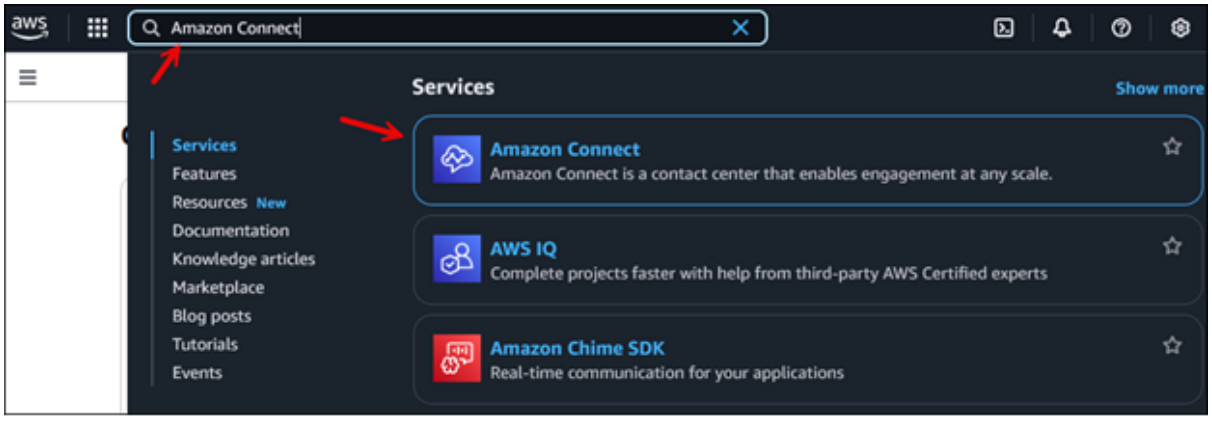


Figure 1: Showing how to get to AWS Connect from the AWS Portal

3. On the **Amazon Connect virtual contact center instances** page, choose the instance alias to enable Amazon Connect.
4. In the navigation pane, choose Amazon Connect, and then select **Enable**.

How to disable Amazon Connect

1. On the **Amazon Connect virtual contact center instances** page, choose the instance alias to disable Amazon Connect.
2. In the navigation pane, choose **Amazon Connect**, and then select **Disable**.

Create an Amazon Connect instance.

NOTE: *The first step in setting up an Amazon Connect contact center is to create a virtual contact center instance. Each instance contains all the resources and settings related to the contact center.*

Things to Know Before Setting Up Amazon Connect

1. **AWS Account Setup and Billing**

- When creating an AWS account, every AWS service is available.
- Resources are billed by usage.
- If assistance is required for creating an account, check the official guide on setting up and activating an AWS account.

2. **Permission to Create an Instance**

- To successfully create an Amazon Connect instance, a user must have **sufficient IAM permissions**.
- The simplest way is to attach the **AmazonConnect_FullAccess** policy to the user or role.
- Alternatively, a user can grant specific permissions by following the guidelines under "Required permissions for using custom IAM policies to manage access to the Amazon Connect console."

3. **Choosing Identity Management**

- While setting up the instance, a decision has to be made on preferred **user management** (for example, using AWS Directory Service, SAML, or another method).
- **Important:** Once an identity management option is selected, it **cannot be changed**. Plan carefully before the choice is finalized.
-

- **Step 1: Set identity**

To configure identity management for the instance

1. Open the Amazon Connect console at https://console.aws.amazon.com/connect/.
2. Choose **Get Started**. If an instance was created previously, choose **Add an instance** instead.
3. Choose one of the following options:

- **Store users in Amazon Connect** - Use Amazon Connect to create and manage user accounts. Users cannot be shared with other applications.
- **Link to an existing directory** - Use an AWS Directory Service directory to manage users. Each directory can be utilized with one Amazon Connect instance at a time.
- **SAML 2.0-based authentication** - Use an existing identity provider (IdP) to federate users with Amazon Connect.

4. If **Store users within Amazon Connect** or **SAML 2.0-based authentication** has been selected, provide the left-most label for the **Access URL**. This label must be unique across all Amazon Connect instances in all Regions. **The access URL after you create your instance cannot be changed**.
5. If the **Link to an existing directory** is selected, choose the AWS Directory Service directory for **Directory**. The directory name is used as the left-most label for the **Access URL**.
6. Choose **Next**.

Step 2: Add an administrator

After specifying the user name of the administrator for the Amazon Connect instance, a user account is created in Amazon Connect, and the user is assigned the **Admin** security profile.

To specify the administrator for the instance (Optional)

1. Do one of the following, based on the option that was chosen in the previous step:

- Select **Store users within Amazon Connect**, then **specify an administrator**, and provide a name, password, and email address for the user account in Amazon Connect.
- Choose **Link to an existing directory**, for **Username**, type the name of an existing user in the AWS Directory Service directory. The password for this user is managed through the directory.
- Select **SAML 2.0-based authentication**, select **Add a new admin,** and provide a name for the user account in Amazon Connect. The password for this user is managed through the IdP.

2. Select **No Administrator** if an administrator is not required for the instance.
3. (Optional) Add tags to the instance. For more information, see Tagging an Amazon Connect instance.

4. Choose **Next**.

Step 3: Set telephony

Use the options in this section to choose whether agents are required to receive calls from customers, make outbound calls, and hear early media audio.

Early media

When early media audio is enabled, for outbound calls, the agents can hear pre-connection audio such as busy signals, failure-to-connect errors, or other informational messages provided by telephony providers.

NOTE: The early media feature is not supported for transfers that are dialed through the Transfer to phone number block inflows.

By default, early media is enabled. Note the following exception:

- If the instance was created before April 17, 2020, and there was no enrollment in the preview program. It is recommended to enable early media audio. For instructions, see Update telephony and chat options.

To configure telephony options for your instance

1. To allow inbound calls to the contact center, choose **Receive inbound calls with Amazon Connect**.
2. To enable outbound calling from the contact center, choose **Make outbound calls with Amazon Connect**.
3. To enable agents to hear pre-connection audio, choose **Enable early media**.
4. To enable up to six participants on a call, choose **Enable Multi-Party Calls and Enhanced Monitoring for Voice**.
5. To enable up to six participants in a chat, choose **Enable Multi-Party Chats and Enhanced Monitoring for Chat**.
6. Choose **Next**.

Step 4: Data storage

NOTE: *Amazon Connect does not support Amazon S3 Object Lock in compliance mode to store objects using a Write-Once-Read-Many (WORM) model.*

When an instance is created, by default, an **Amazon S3 bucket** is created. Data, such as reports and recordings of conversations, is encrypted using **AWS Key Management Service** and then stored in the **Amazon S3 bucket**.

This bucket and key are used for both recordings of conversations and exported reports. Alternatively, separate buckets can be specified and keys for recordings of conversations and exported reports. For instructions, see Update settings for the Amazon Connect instance.

By default, Amazon Connect creates buckets for storing call recordings, chat transcripts, exported reports, flow logs, and email messages.

- When a bucket is created to store call recordings, call recording is enabled at the instance level. The next step for setting up this functionality is to enable contact recording in a flow.
- When a bucket is created to store chat transcripts, chat transcription is enabled at the instance level. Now, all chat transcripts will be stored.
- When a bucket is created to store email messages, a default Amazon Connect email domain is created for the instance. This email domain cannot be customized. After the Amazon Connect instance is created, up to five custom email domains can be added that have been onboarded to **Amazon SES**. For more information, see Enable email for the Amazon Connect instance.

Important ‼️

- Choose **Enable Attachments sharing** for the instance, and configure a **CORS** policy on the attachments bucket. If not, the email channel will not work for your instance. For instructions, see Step 5: Configure a CORS policy on the attachments bucket.
- Live media streaming is not enabled by default.
- Screen recording is not enabled by default. For more information, see Enable screen recording for the Amazon Connect instance.

By default, Amazon Connect creates a Customer Profiles domain, which stores profiles that combine customer contact history with customer information such as account number, address, billing address, and birth date. Data is encrypted using AWS Key Management Service. Configure Customer Profiles to use a customer-managed key after the instance is set up. For more information, see Create a KMS key to be used by Customer Profiles to encrypt data (required).

Review and copy the location of the S3 bucket, flow logs, and whether to enable Customer Profiles.

1. If desired, copy the location of the S3 bucket where data encryption is stored and the location of the flow logs in **CloudWatch**.
2. Choose **Next**.

Step 5: Review and create

To create your instance

1. Review the configuration choices. Remember that you cannot change the identity management options after creating the instance.

2. (Optional) To change any of the configuration options, choose **Edit**.
3. (Optional) Add tags to the instance. For more information, see Tagging an Amazon Connect instance.
4. Choose **Create instance**.
5. (Optional) To continue configuring the instance, choose **Get Started** and then choose **Let's Go**. If preferred, access the instance and configure it later on. For more information, see Next steps.

If there is a choice to manage users directly within Amazon Connect or through an **AWS Directory Service** directory, the instance can be accessed using its **Access URL**.

If the choice is made to manage users through **SAML-based authentication**, access can be gained by the instance using the **IdP(Identity Provider)**.

Next steps

After creating an instance, **assign a contact center a phone number** or **import your own phone number**. For more information, see Set up contact center phone numbers for Amazon Connect instance.

Create an IT help desk in Amazon Connect

This tutorial shows how to create an **IT Help Desk**. It shows how to create an **Amazon Lex** bot that finds out why the customer is calling. Create a **flow** to use the customer's input to **route** them to the right **queue**.

Prerequisites

- **An AWS account**
- **A configured Amazon Connect instance**
- **An Amazon Connect administrative account**
- **A claimed phone number**

Contents

- Step 1: Create an Amazon Lex bot
- Step 2: Add permissions to the Amazon Lex bot
- Step 3: Set up routing
- Step 4: Create a contact flow
- Step 5: Assign the contact flow to the phone number

- Step 6: Test a custom voice and chat experience

Step 1: Create an Amazon Lex bot

Bots provide an efficient way to offload repetitive tasks from the agents. This tutorial shows how to use the bot to find out why customers are calling the IT Help Desk. Later, we use the customer's response to route them to the right queue.

In previous tutorials, you used the Amazon Connect console. In this tutorial, to set up a bot, utilize the Amazon Lex console.

This step has five parts to it.

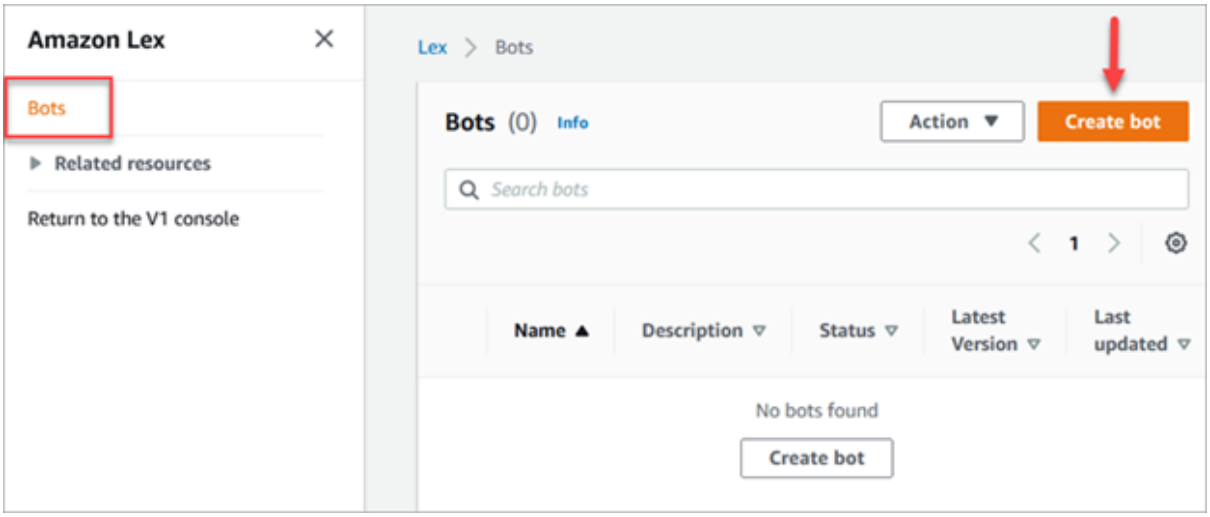
Contents

- Part 1: Create an Amazon Lex bot
- Part 2: Add intents
- Part 3: Build and test

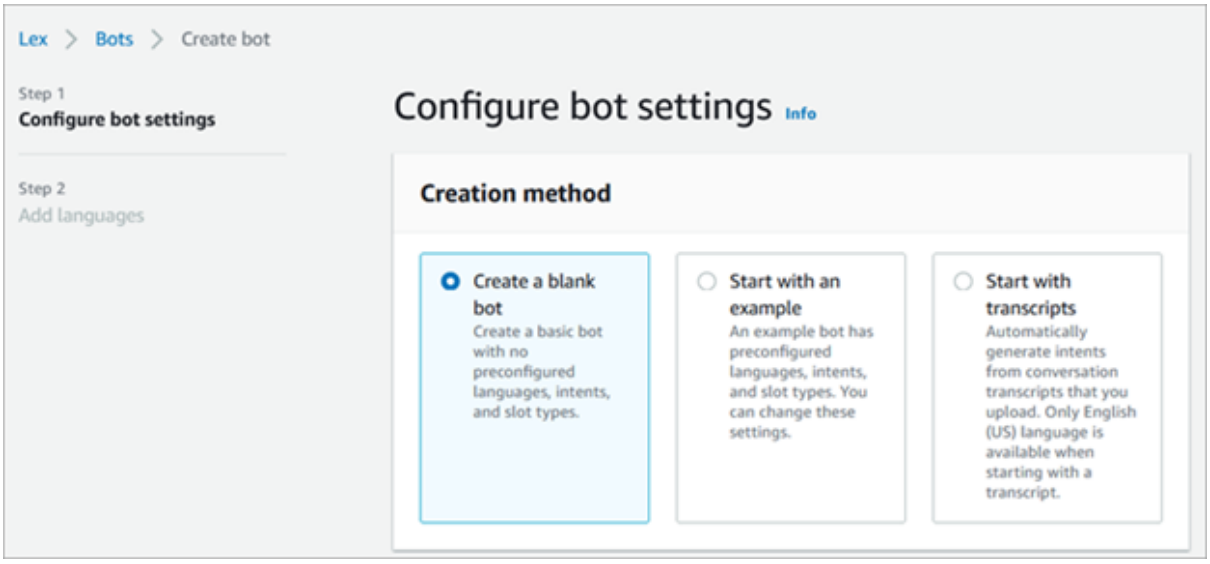
Part 1: Create an Amazon Lex bot

This step assumes it's the first time the Amazon Lex console has been opened. If an Amazon Lex bot has been created before, the steps differ slightly from the ones in this section.

1. Choose the following link to open the Amazon Lex console, or enter the URL in the web browser: https://console.aws.amazon.com/lex/.
2. If this is the first time creating an **Amazon Lex** bot, choose **Get Started**.

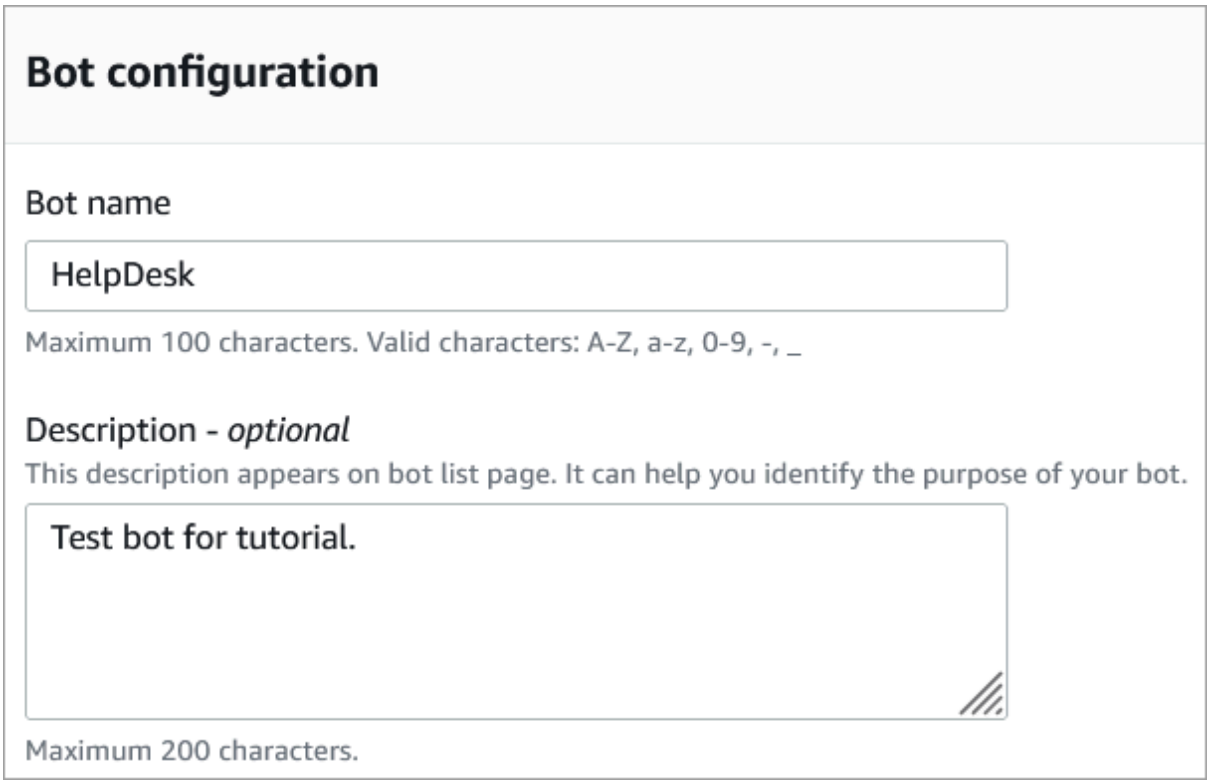


3. Choose **Create a blank bot**.

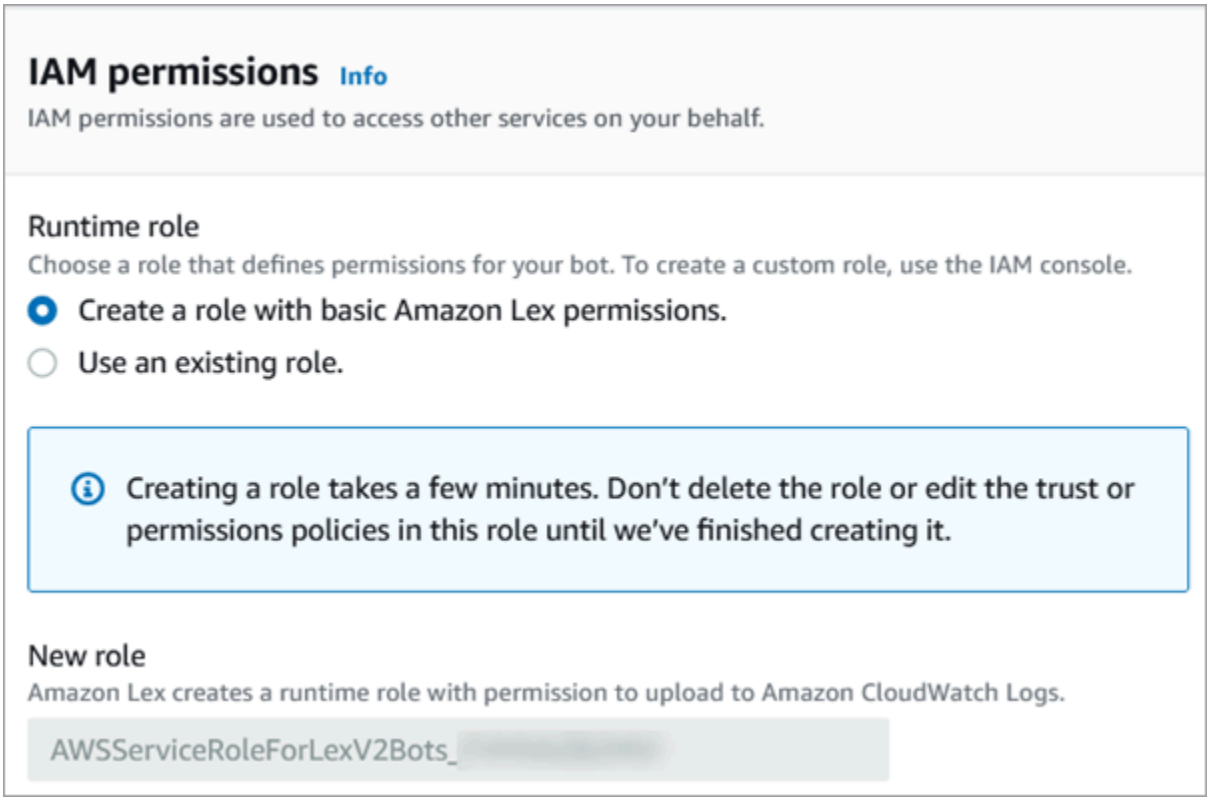


4. Enter the following information:

- **Bot name** — For this tutorial, name the bot **HelpDesk**.



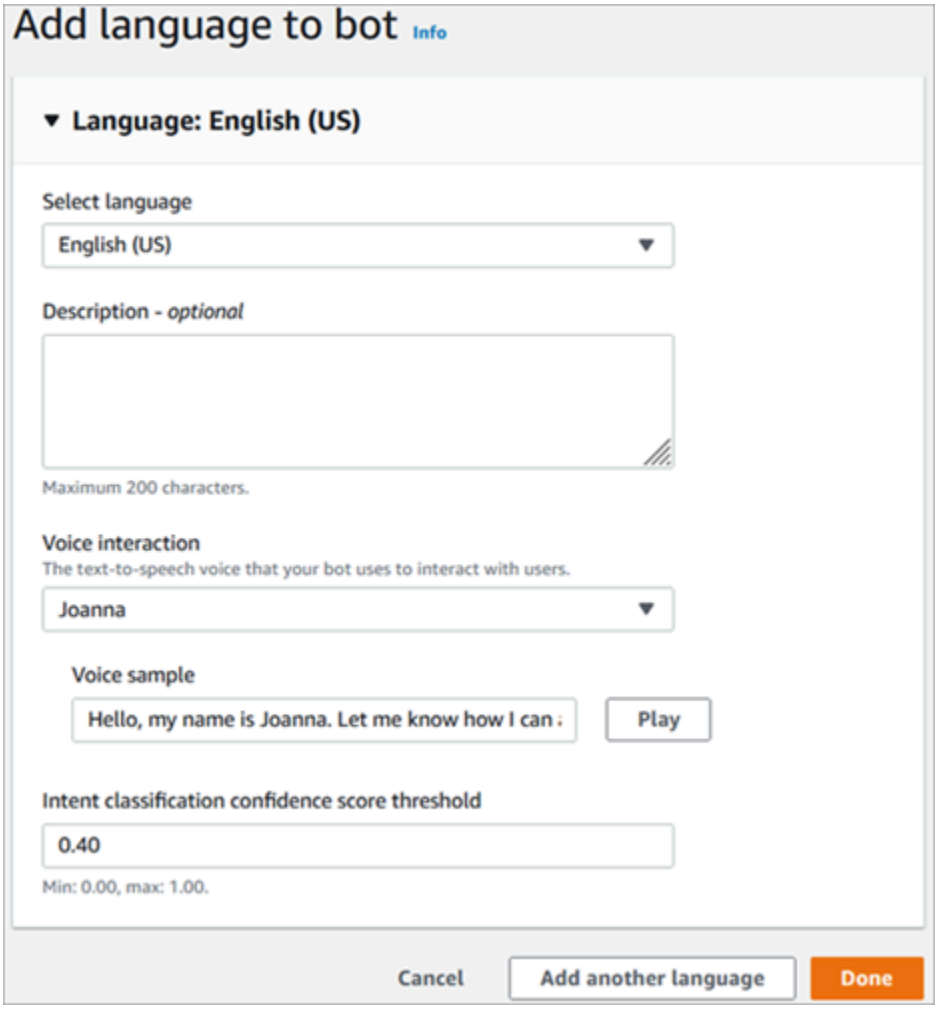
- IAM permissions: **Choose Create a role with basic Amazon Lex permissions.**



- **COPPA**— Choose whether the bot is subject to the Children's Online Privacy Protection Act.
- **Idle session timeout**— Choose how long the bot should wait to get input from a caller before ending the session.

5. Choose **Next**.

6. On the **Add language to bot** page, choose the language and voice for the bot to use when speaking to callers. The default voice for Amazon Connect is Joanna.

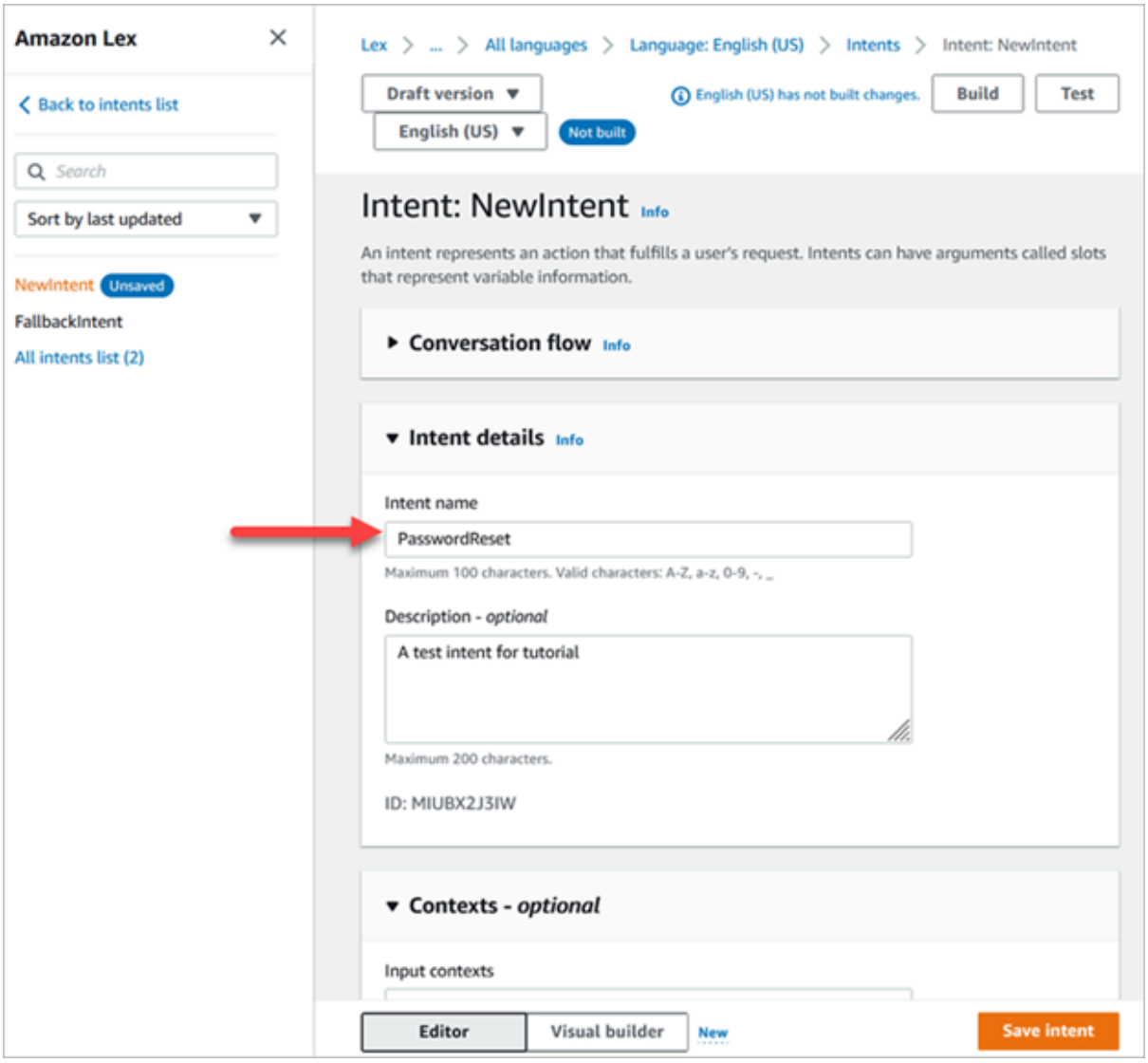


7. Choose **Done**.

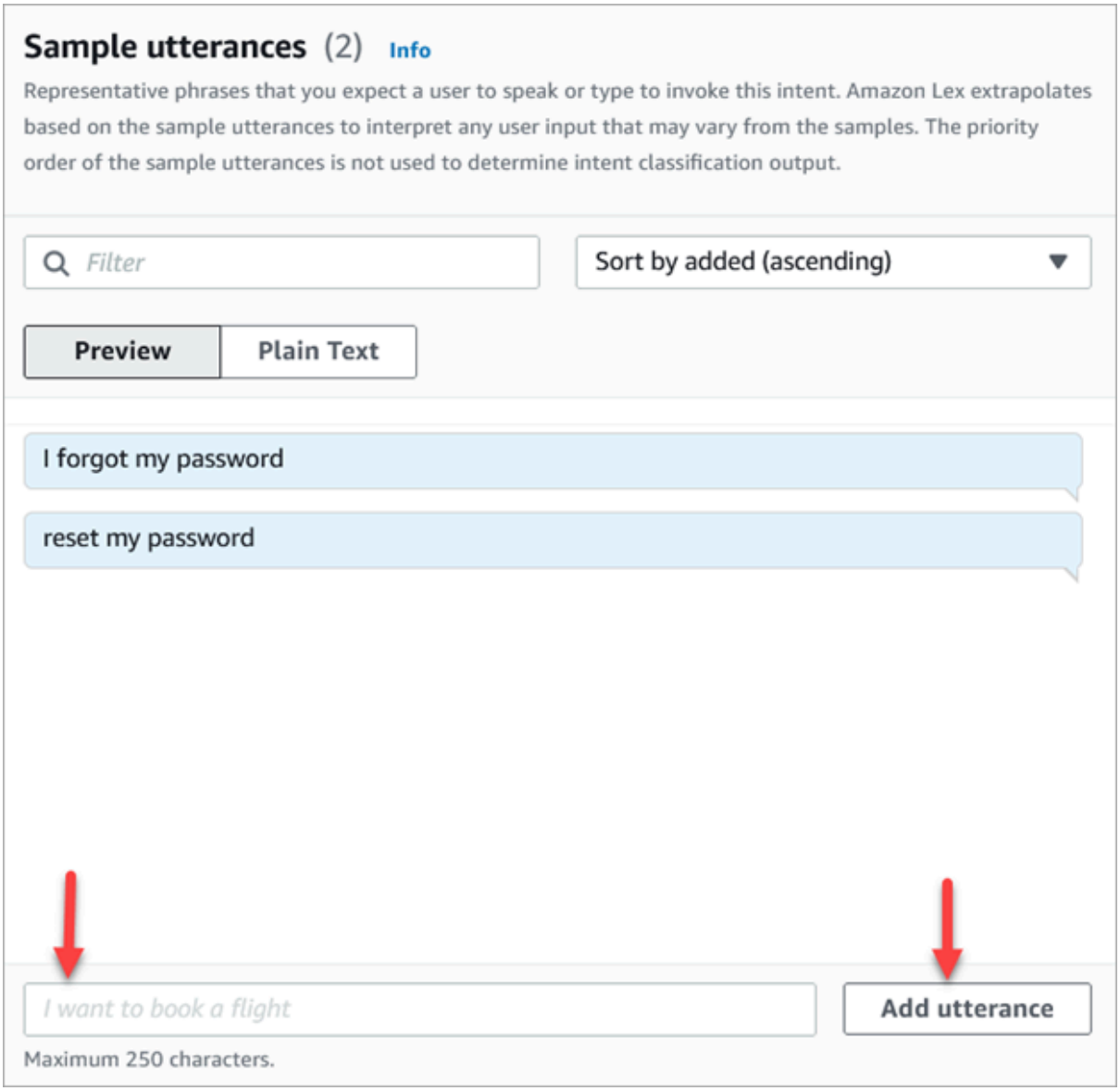
Part 2: Add intents to your Amazon Lex bot

An intent is the action the user wants to perform. In this part, add two intents to the bot. Each intent represents a reason that users call the Help Desk: password reset and network issues.

1. In the Amazon Lex console, in the **Intent details** section, enter **PasswordReset** as the name of the intent.



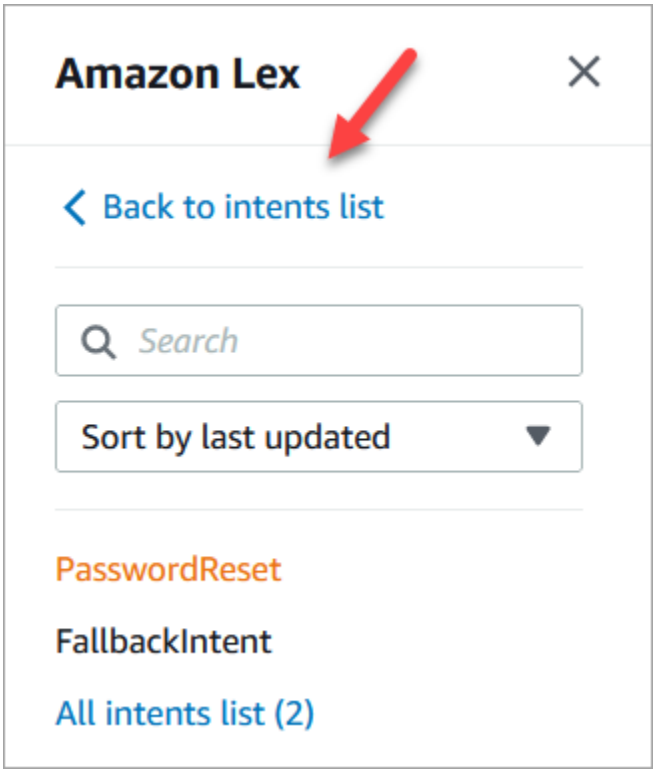
2. Scroll to the **Sample utterances** section.



3. Type **I forgot my password**, and then choose **Add utterance**.

Then add **reset my password** and choose **Add utterance agai**n.

4. Choose the **Save intent**.
5. On the left navigation menu, choose the **All intents** list.
6. On the left navigation menu, choose **Back to intents** list.



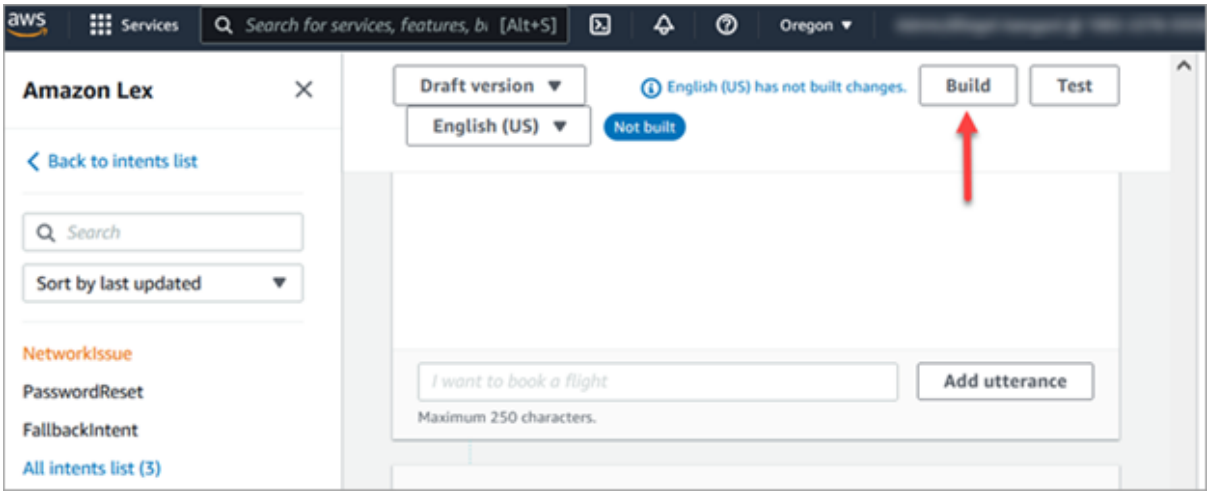
7. Choose A**dd intent**, **Add empty intent**, and assign the name **NetworkIssue**. Scroll down the page and add the following sample utterances:

- **I can't access the internet**
- **My email is down**

Part 3: Build and test the Amazon Lex bot

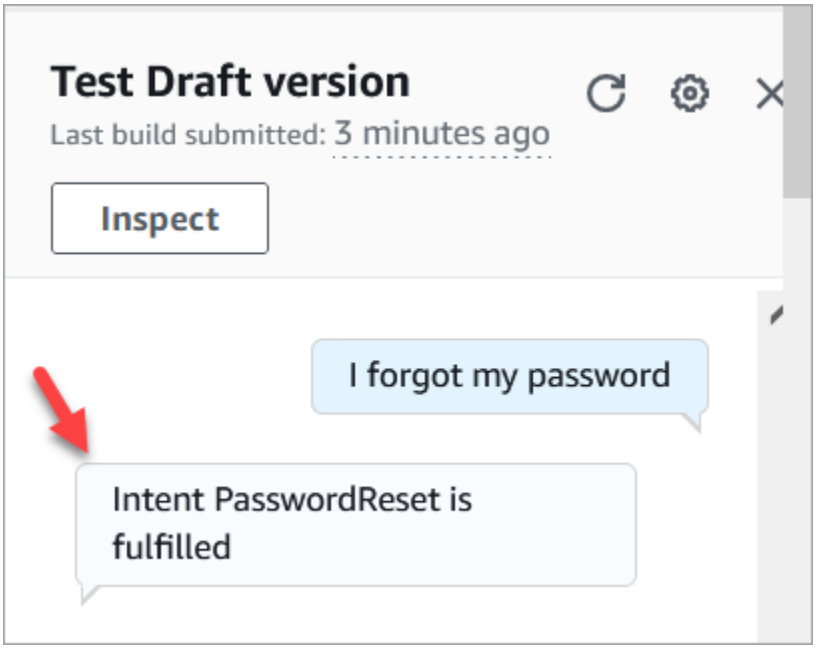
Build and test the bot to make sure that it works as intended before publishing it.

1. In the Amazon Lex console, choose **Build**. The build may take a minute or two.

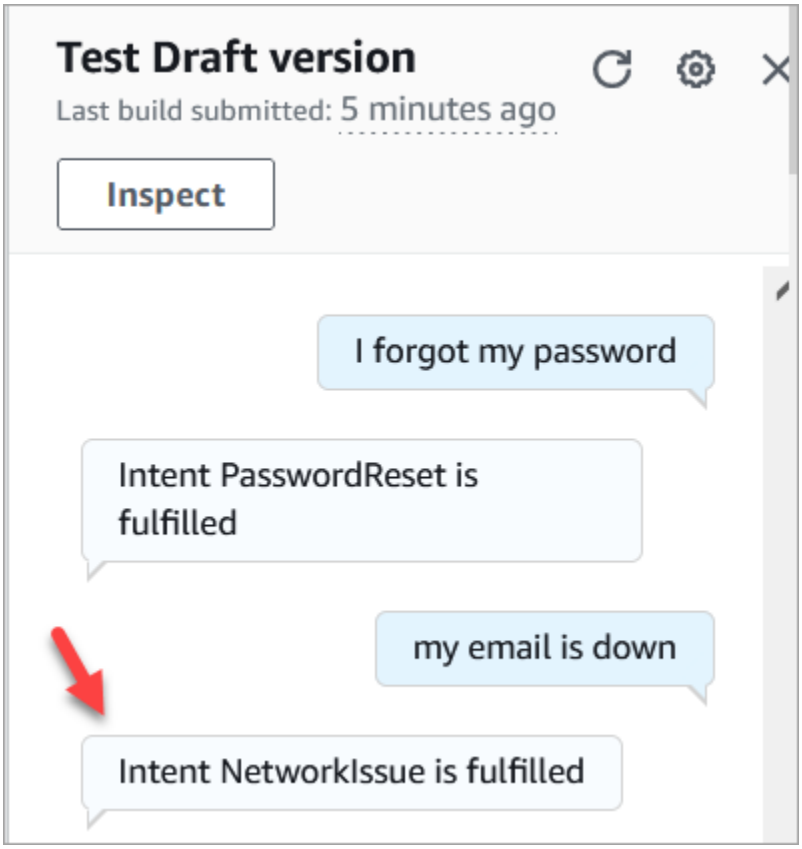


2. When it's finished building, choose **Test**.
3. Test the **PasswordReset** intent. In the **Test Draft version** pane, type **I forgot my password**, and press **Enter**.

4. The verification looks like what's shown in the following image.



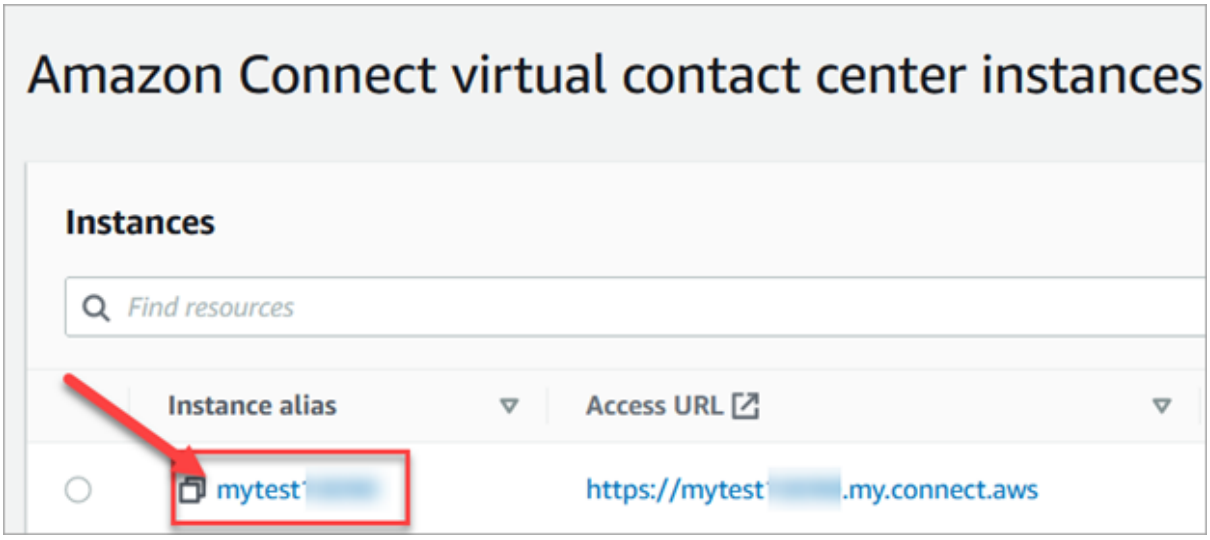
5. To confirm that the **NetworkIssue** intent is working, type **my email is down**. The verification looks like what's shown in the following image.



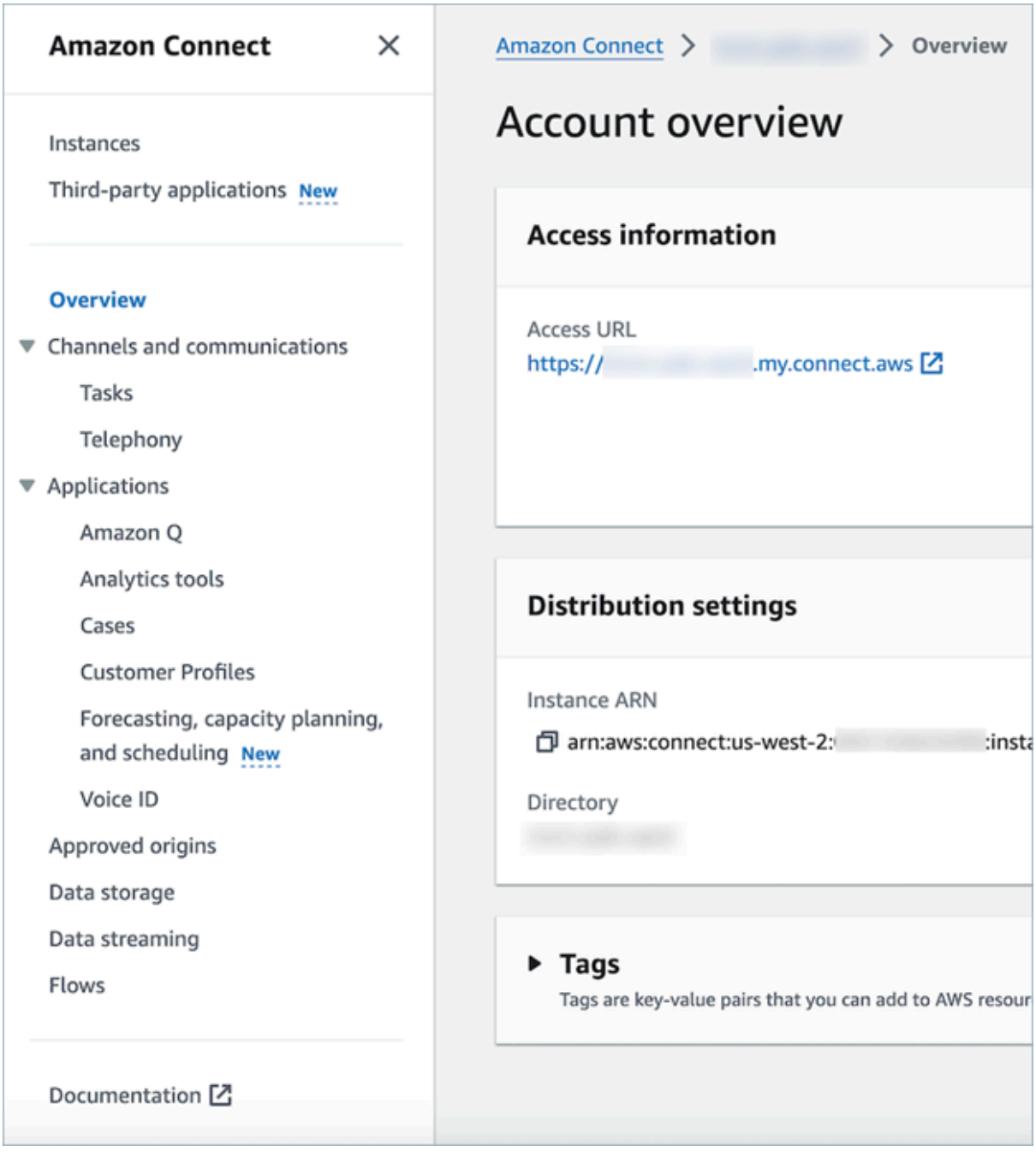
Step 2: Add permissions to the Amazon Lex bot

To use a bot in the flow, add it to the Amazon Connect instance.

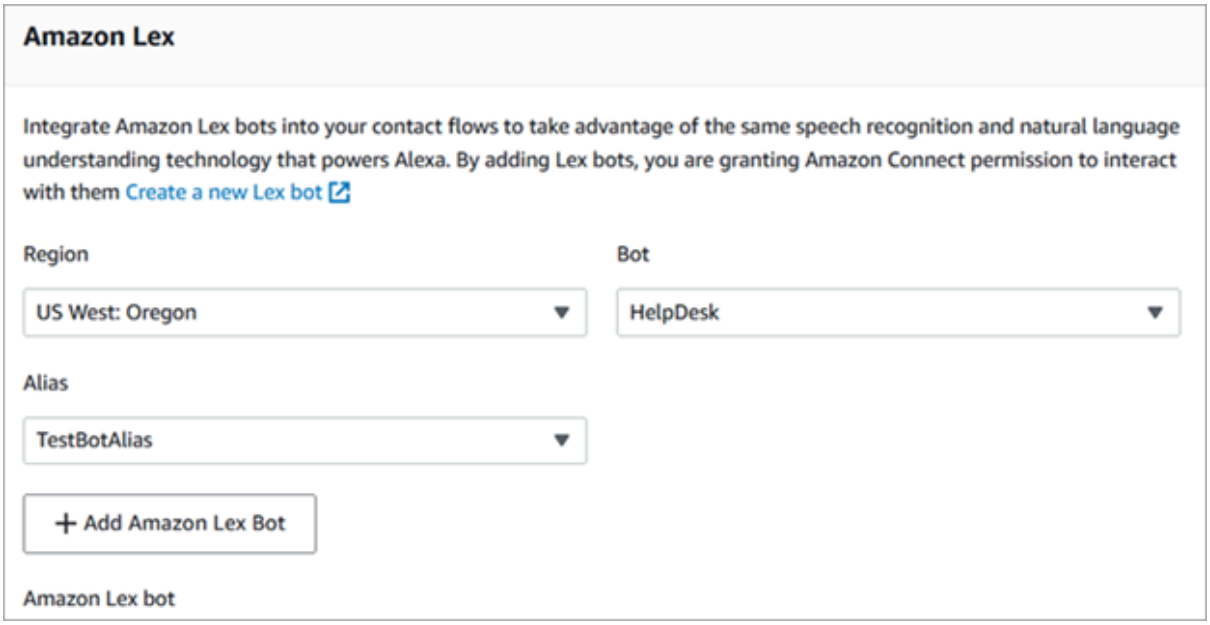
1. Open the Amazon Connect console (https://console.aws.amazon.com/connect/).
2. Choose the name of the instance that was created.



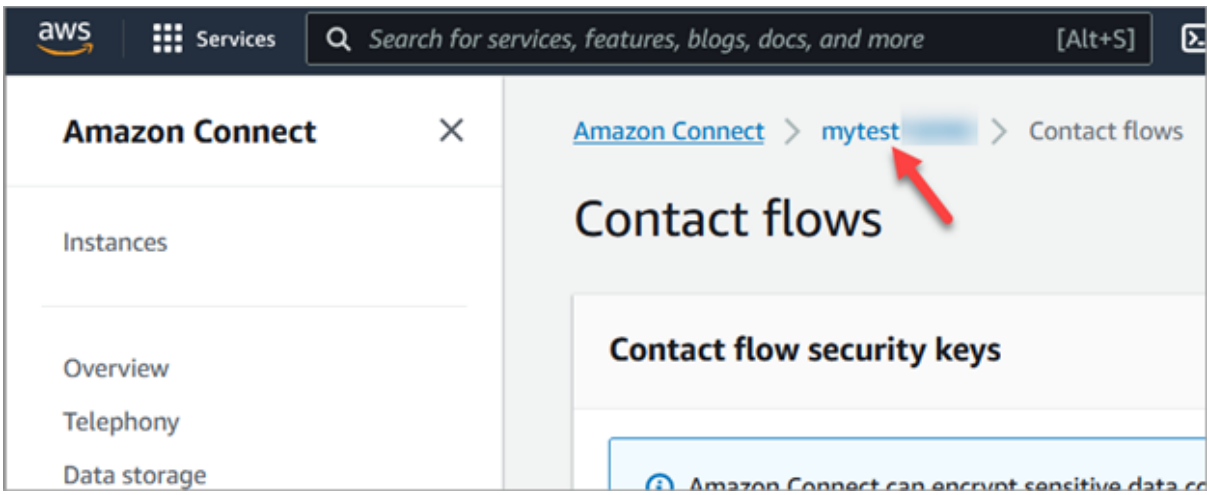
3. Do not log in on the name page (this method of logging in is for emergency access only). Rather, choose **Flows**.



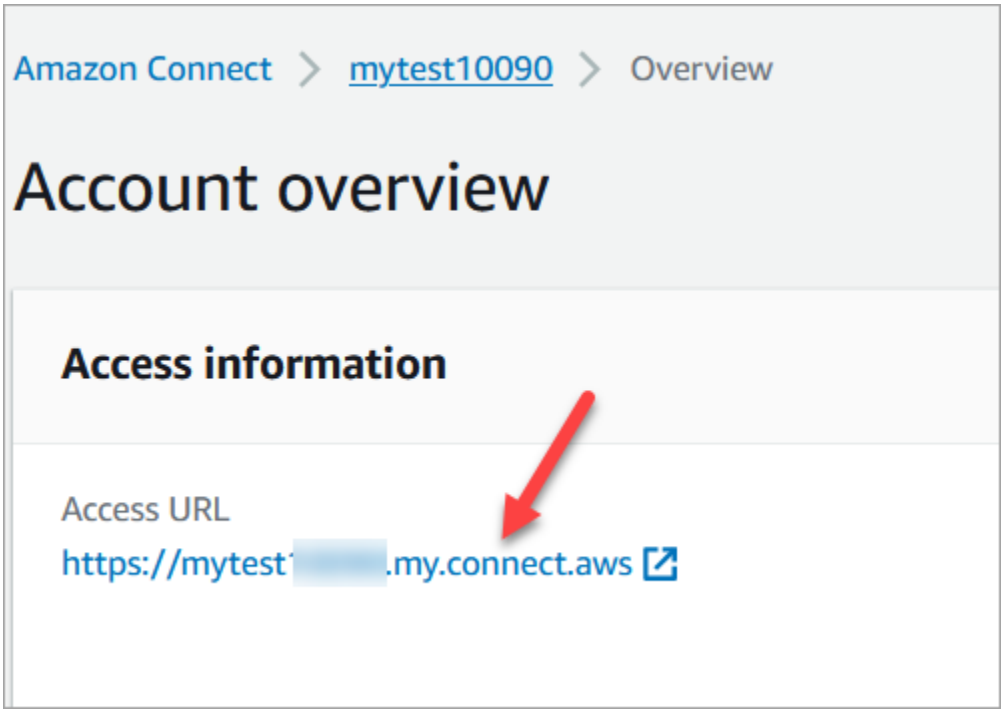
4. Under A**mazon Lex**, use the drop-down arrow to choose **HelpDesk**. Under **Alias**, choose **TestBotAlias**, and then choose **+ Add Lex Bot**, and then choose **Add Amazon Lex Bot**.



5. When completed, choose Amazon Connect to navigate back to the instances page.



6. Choose the access URL of the instance.

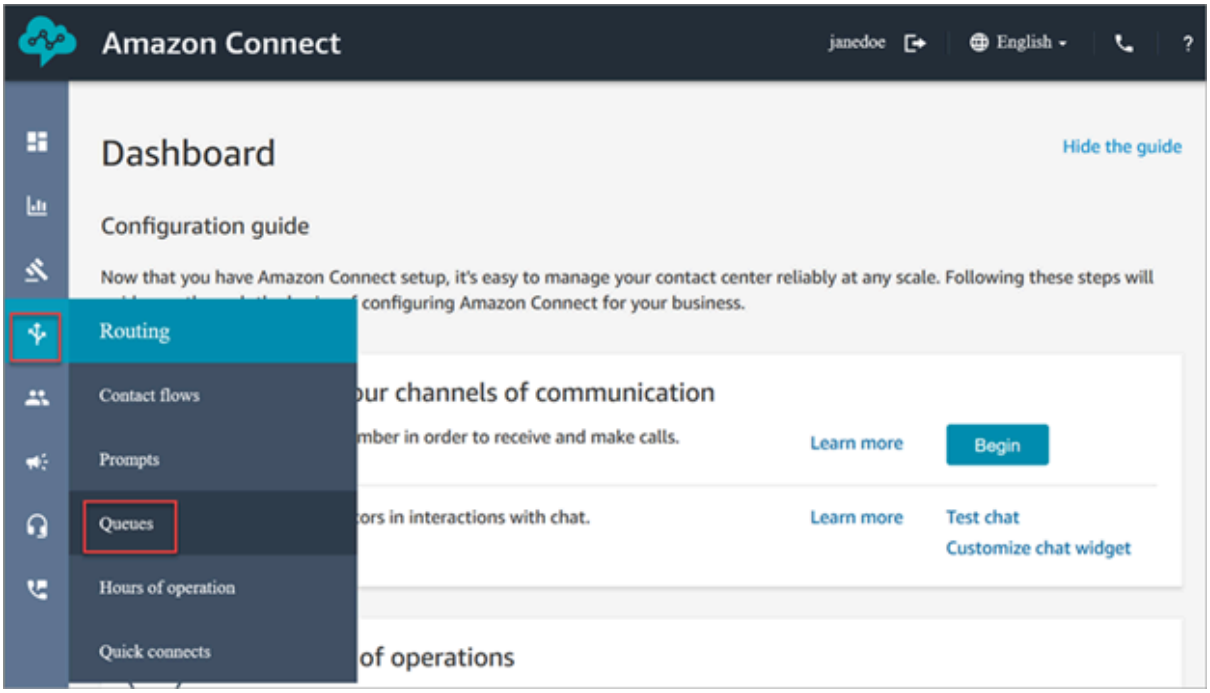


The **Access URL** provides a return to the Amazon Connect dashboard.

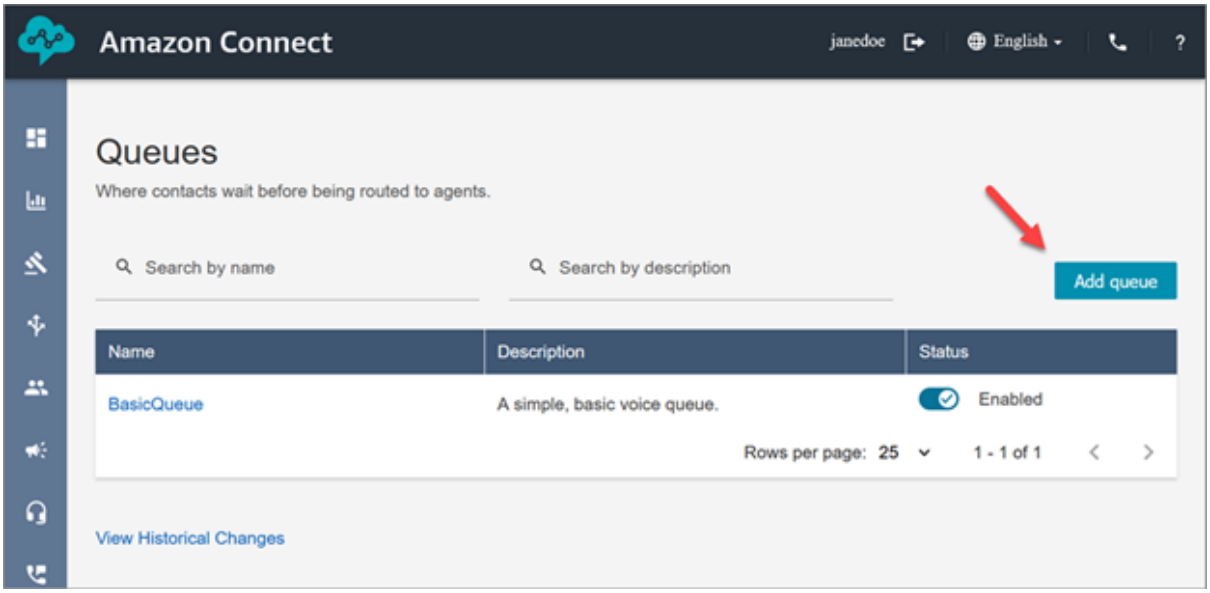
Step 3: Set up routing

In this step, start at the Amazon Connect console for the instance. This step shows how to set up queues, create a routing profile, and then assign the user account to the profile.

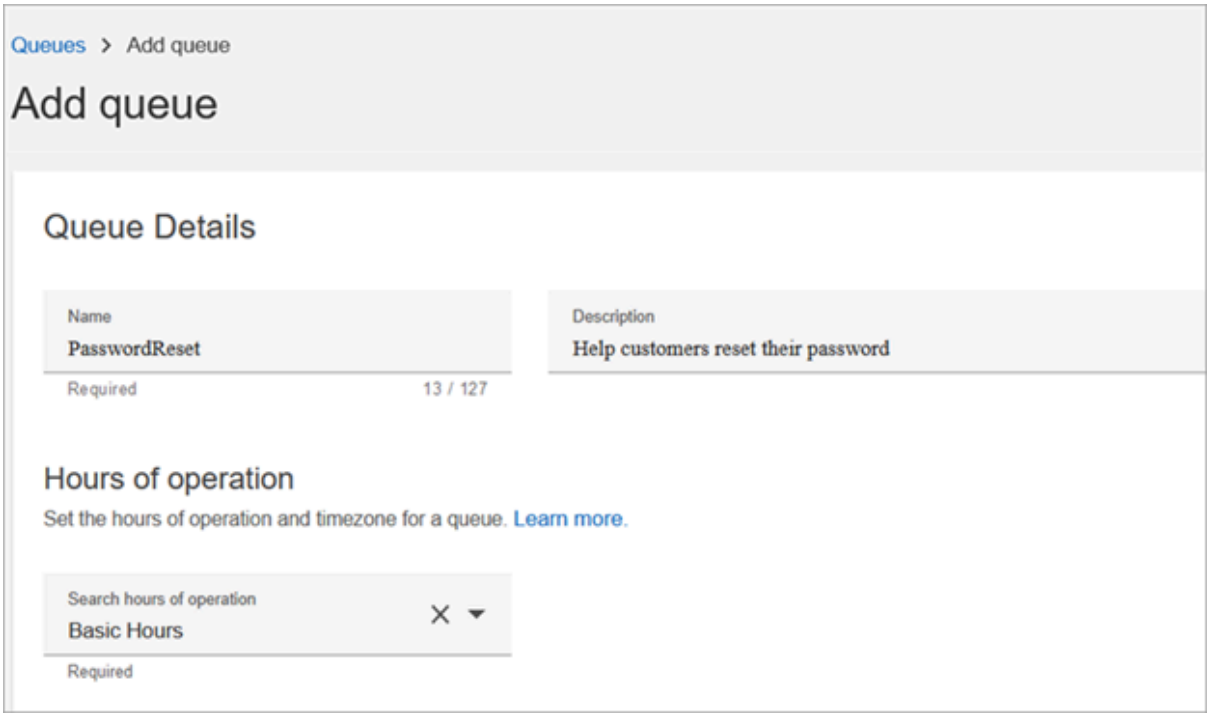
1. On the navigation menu, go to **Routing, Queues**.



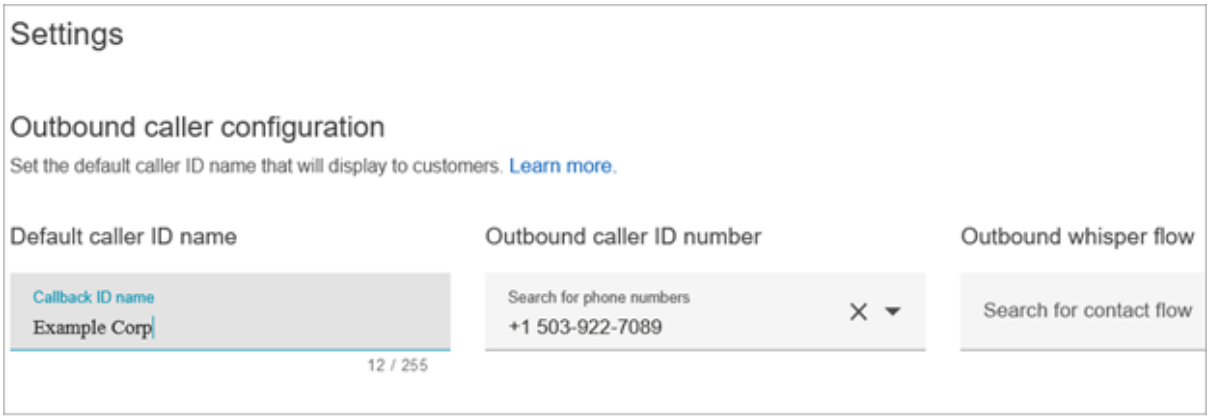
2. Choose **Add queue**.



3. Complete the **Add queue** page, as shown in the following image, to add a queue named **PasswordReset**. When done, choose **Save**.

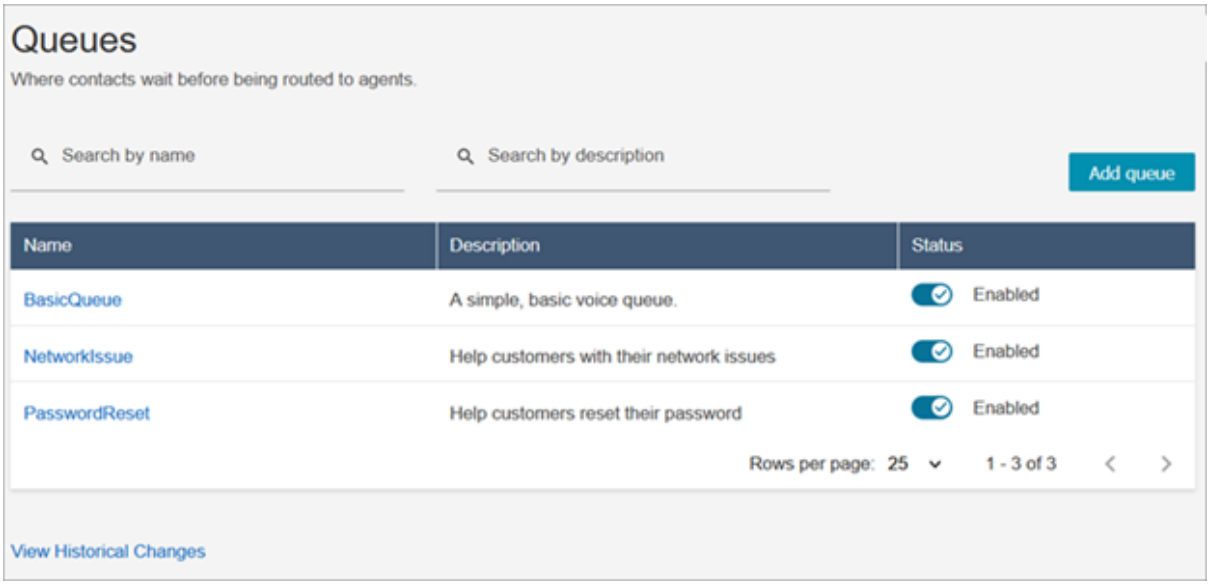


The following image shows the **Settings** section of the **Add queue** page. Add the default caller ID name and outbound caller ID number.

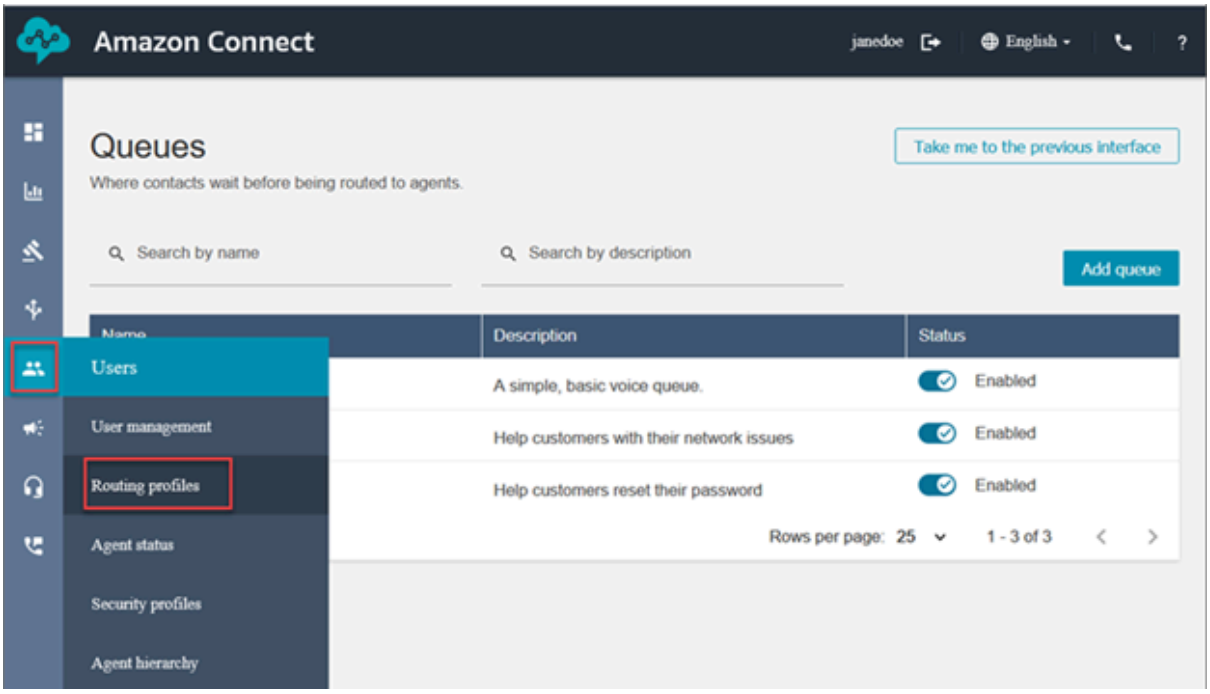


For the purposes of this tutorial, leave the following empty: Outbound whisper flow, Quick connect, and Maximum contact in queue.

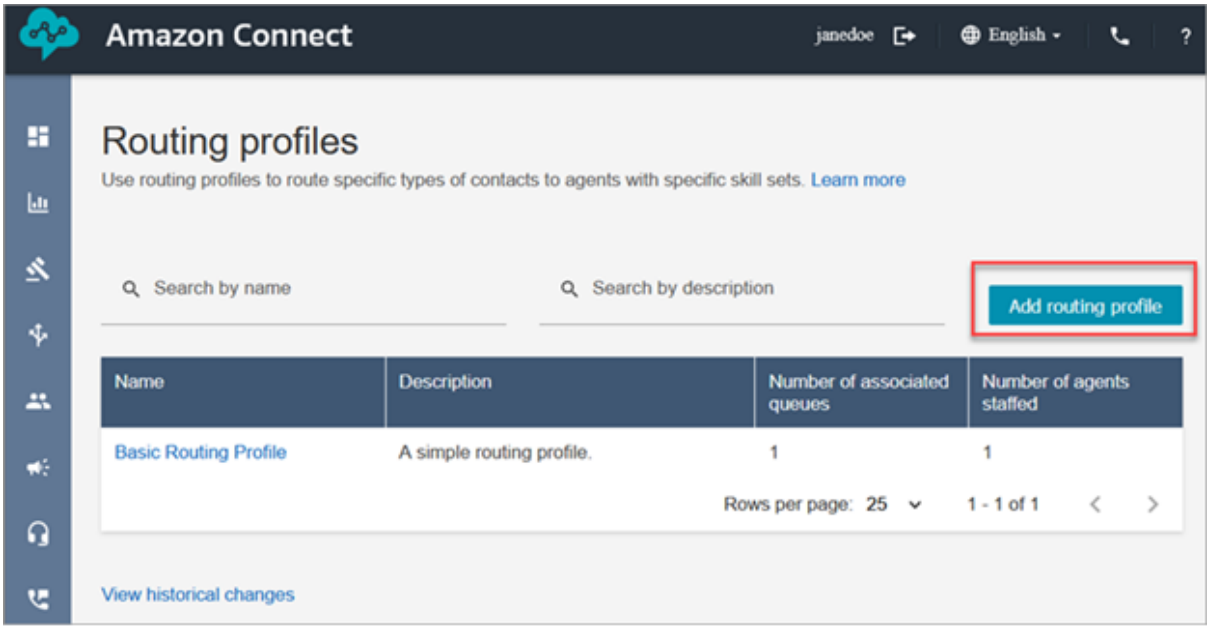
4. Add a queue named **NetworkIssue**. Complete the **Add queue** page as done for the **PasswordReset queue**.
   When done, there will be three queues.



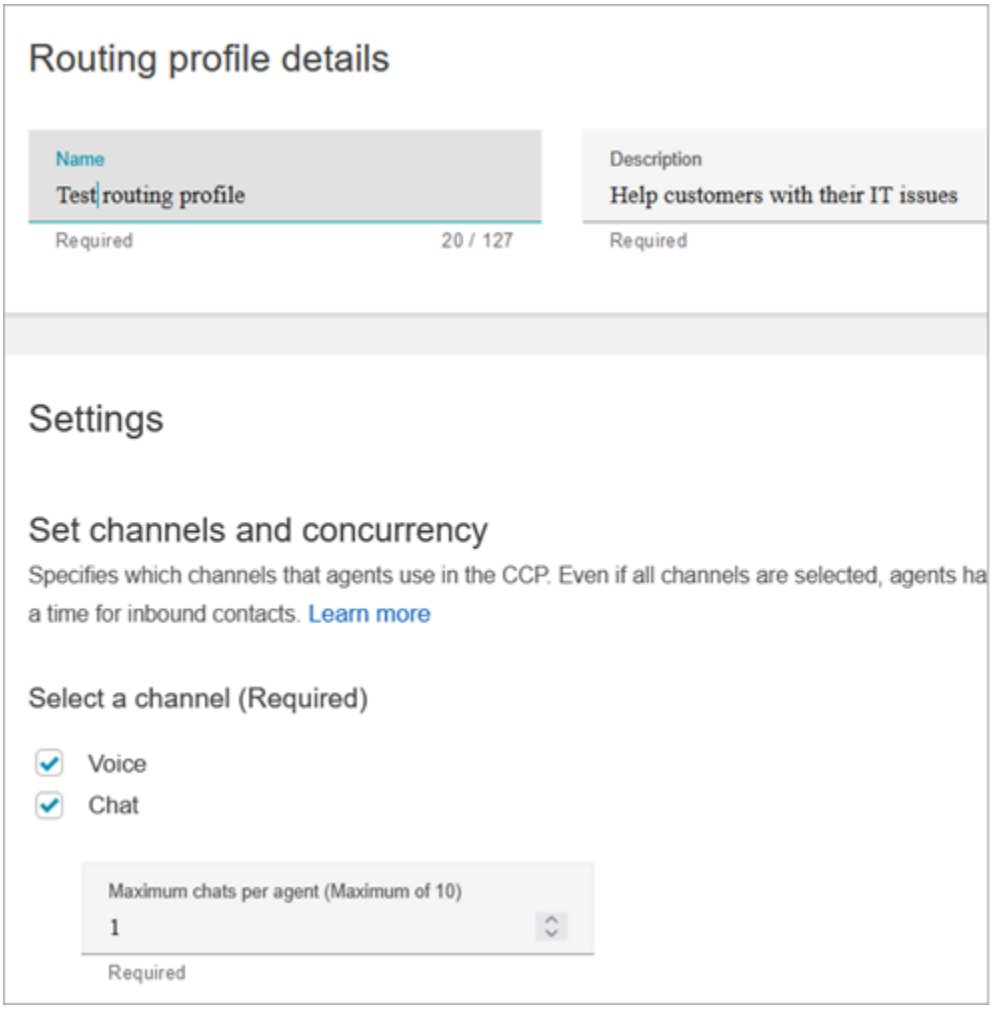
5. On the navigation menu, go to **Users, Routing Profiles**.



6. Choose **Add routing profile**.

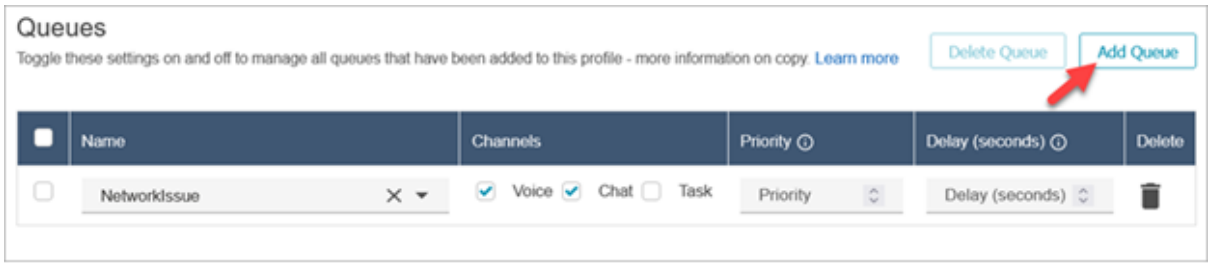


7. Assign a name to the new profile (for example, **Test routing profile**). Enter a description, select **Voice, Chat**, and set **Maximum chats** to **1**.

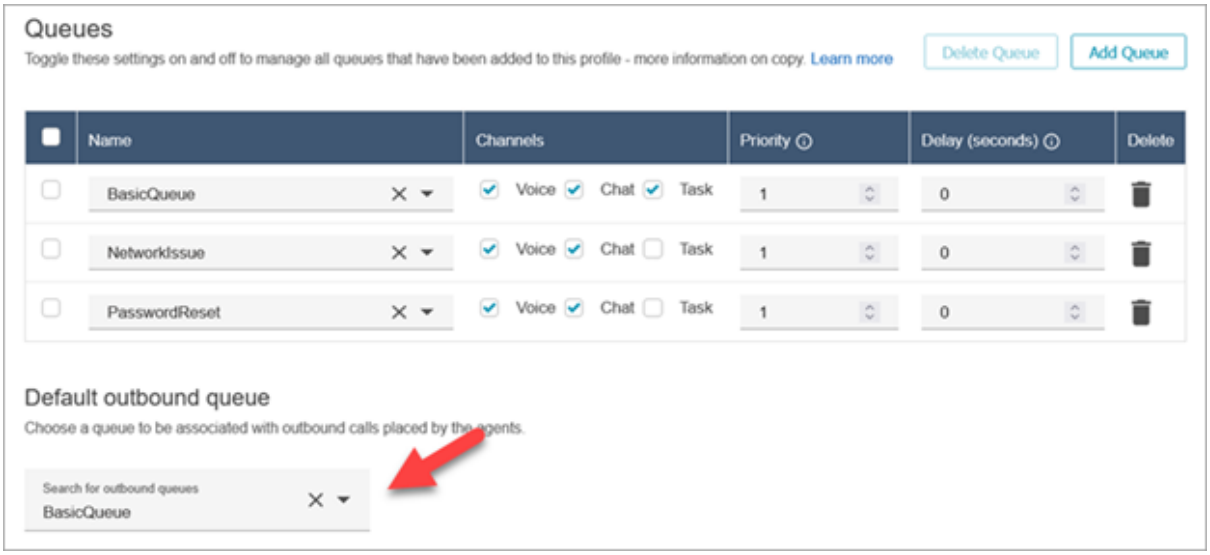


8. In the **Queues** section, use the drop-down arrow to search for the queues you just created. Choose **NetworkIssue**, select **Voice** and **Chat**.

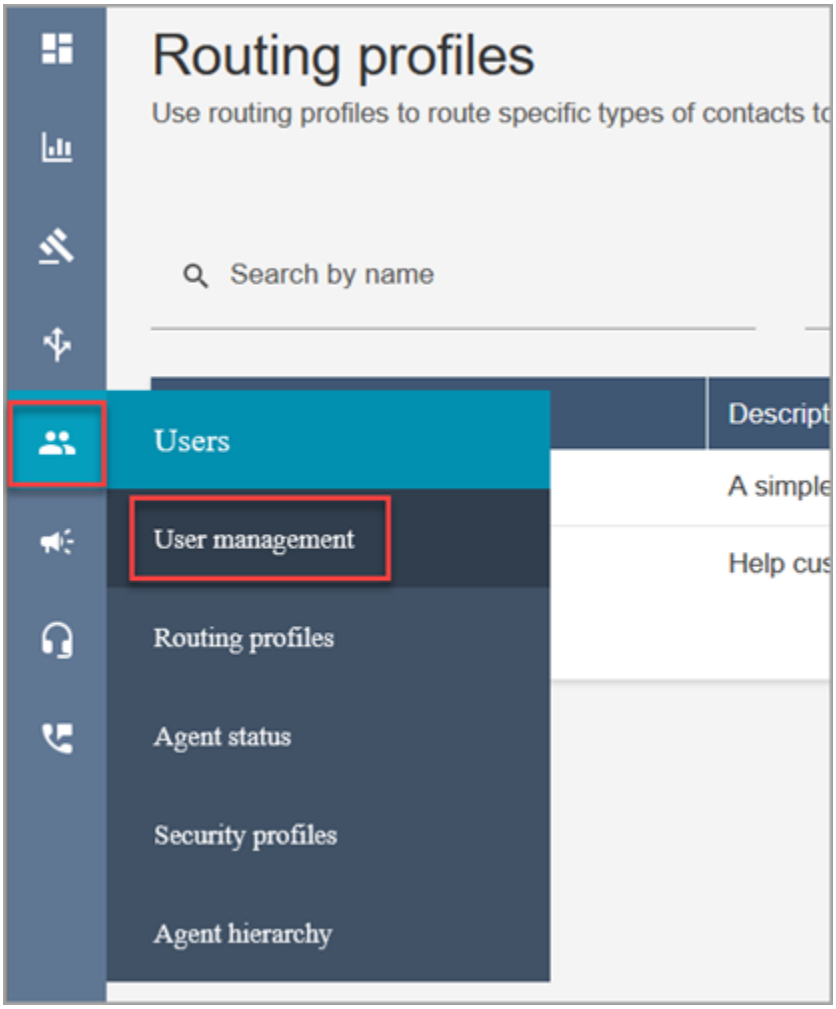
Choose **Add Queue**.



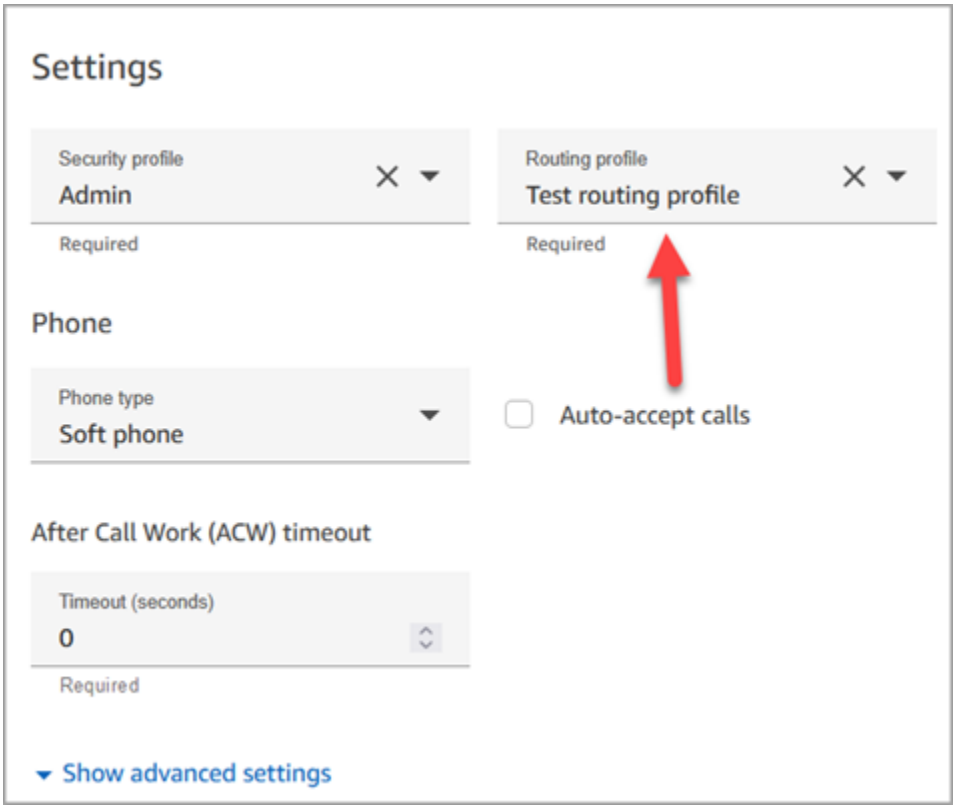
9. Add the **PasswordReset** queue. Select **Voice** and **Chat**, and then choose **Save**.
10. Under **the Default outbound queue**, use the drop-down arrow to choose **BasicQueue**.



11. When done, scroll to the top of the page and choose **Save** to save the profile.
12. On the navigation menu, go to **Users, User management**.



13. On the **User management** page, select the login name.
14. On the **Edit page**, in the **Settings** section, in the **Routing profile** dropdown menu, choose the routing profile created, for example, **Test routing profile**. **Choose Save**.



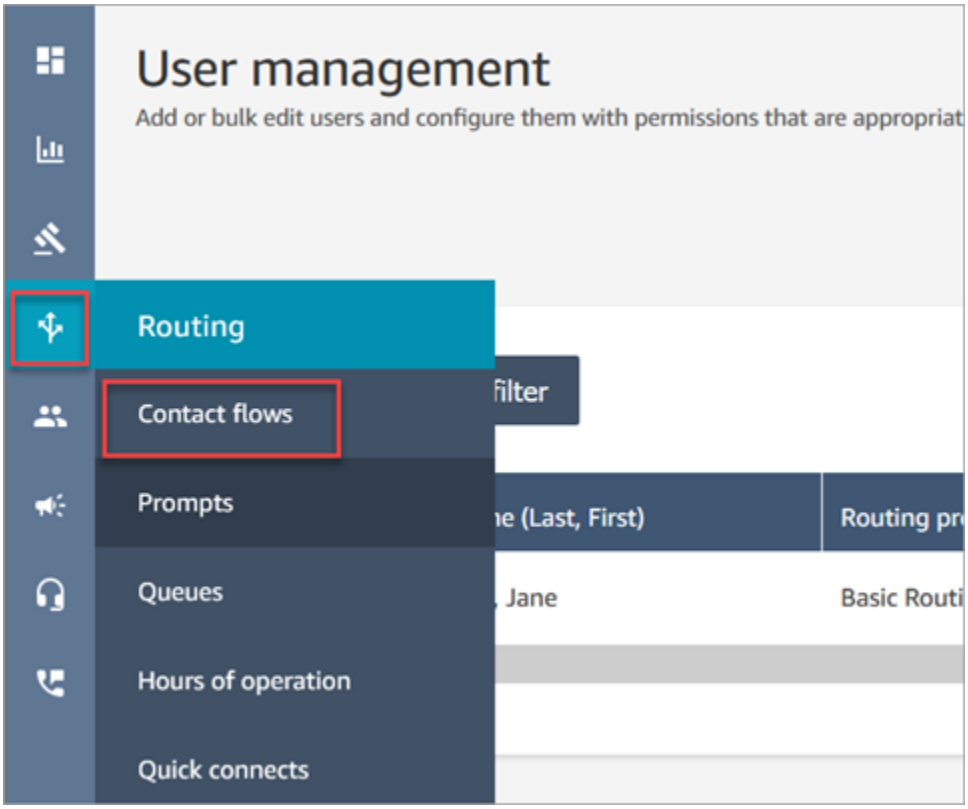
Routing is all set up and ready to go.

Step 4: Create a contact flow

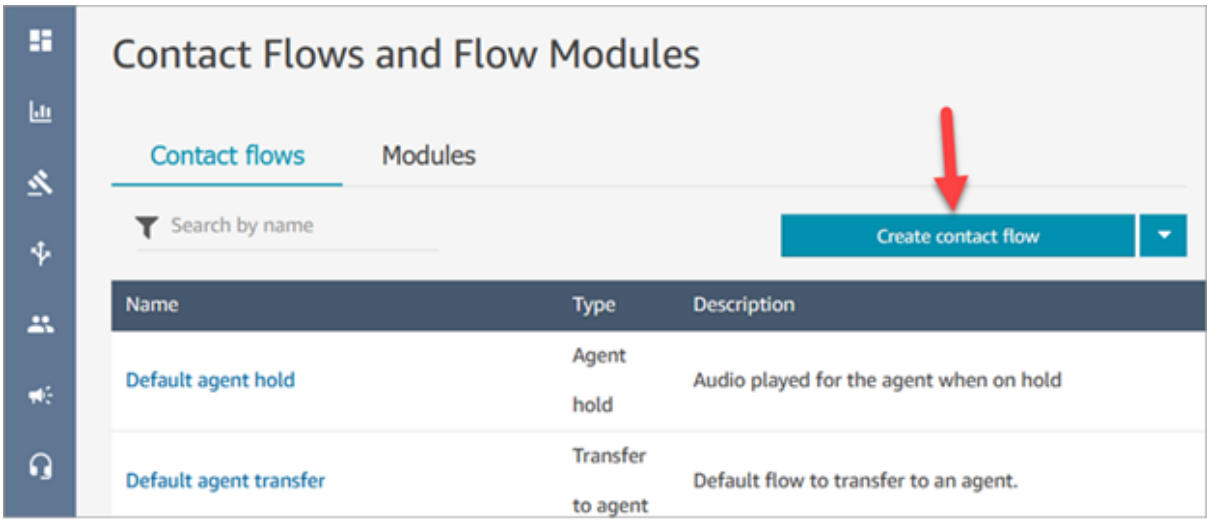
Although Amazon Connect comes with a set of built-in flows, it's possible to create flows to determine how a customer experiences the contact center. The flows contain the prompts that customers hear or see, and they transfer them to the right queue or agent, among other things.

In this step, create a flow that's specific to the IT Help Desk experience that is intended.

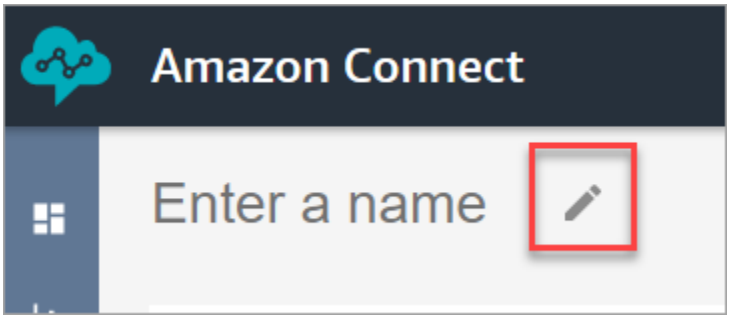
1. On the Amazon Connect navigation menu, go to **Routing, Flows**.



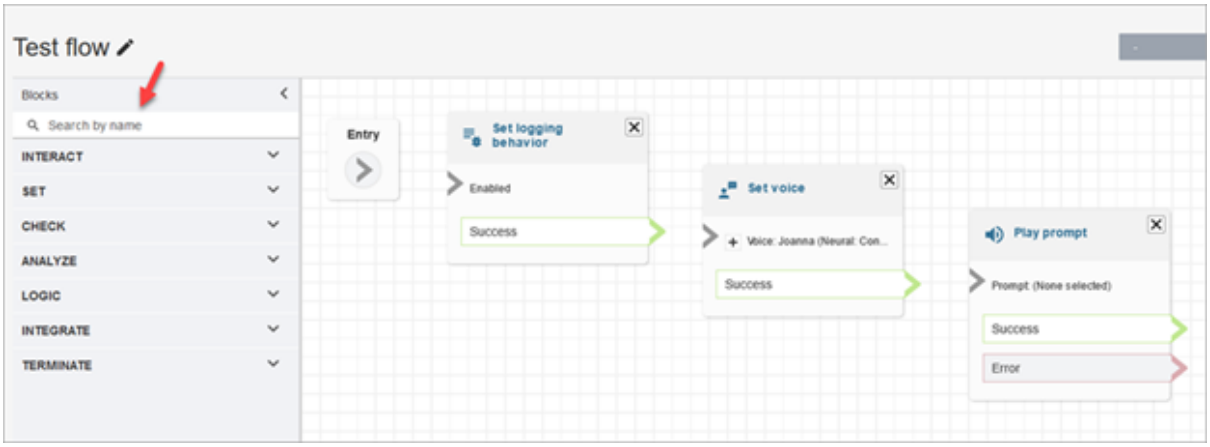
2. Choose **Create flow**.



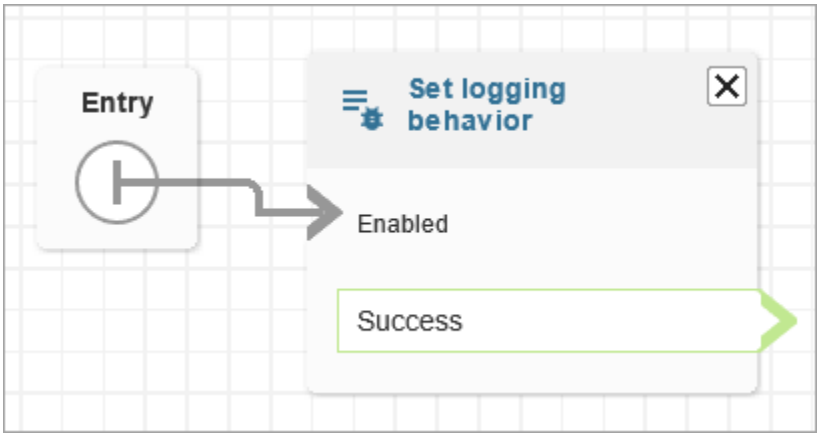
3. The flow designer opens. Enter a name for the flow, such as **Test flow**.



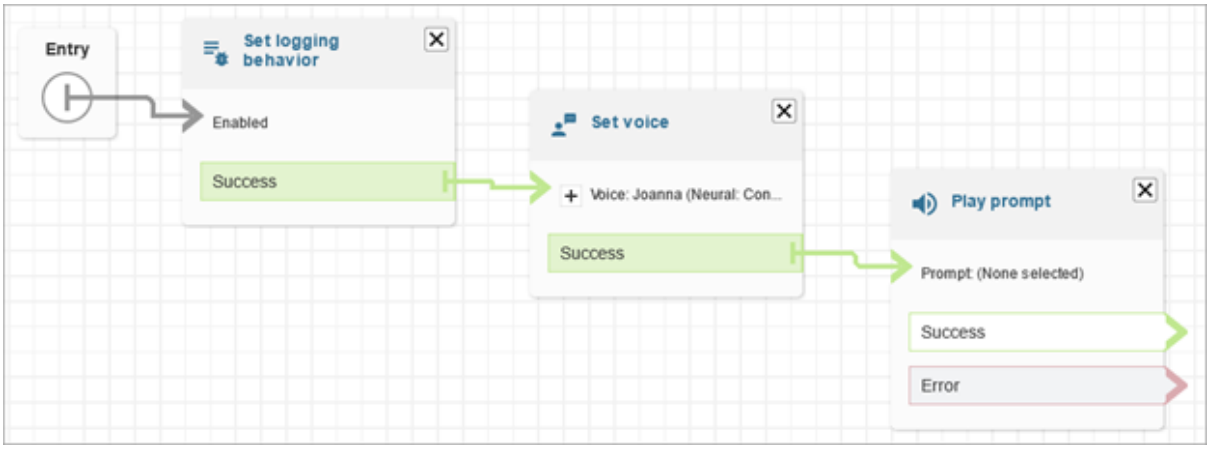
4. Use the search box to search for the following block, and drag them onto the grid: Set logging behavior, Set voice, and Play prompt.



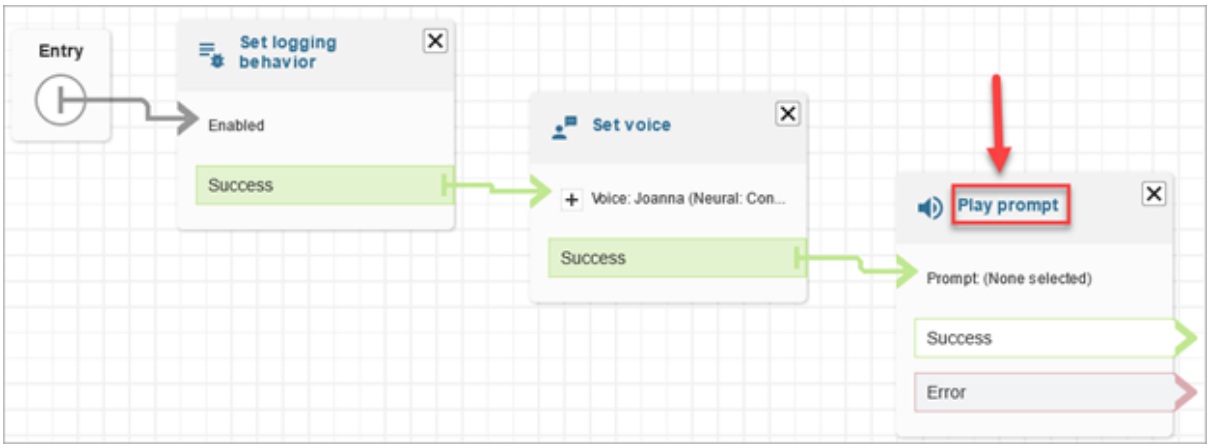
5. Use the mouse to drag an arrow from the **Entry** block to the **Set logging behavior** block.



6. Connect the remaining blocks, as shown in the following image.

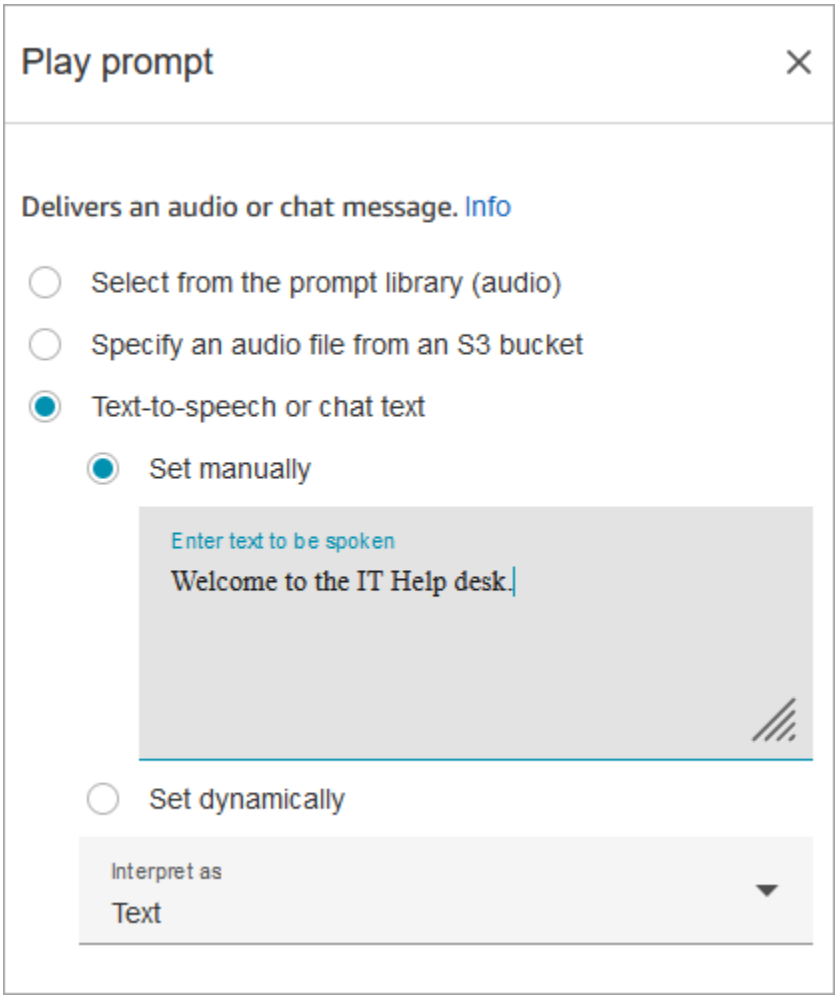


7. Choose the **Play prompt** title to open its properties page.

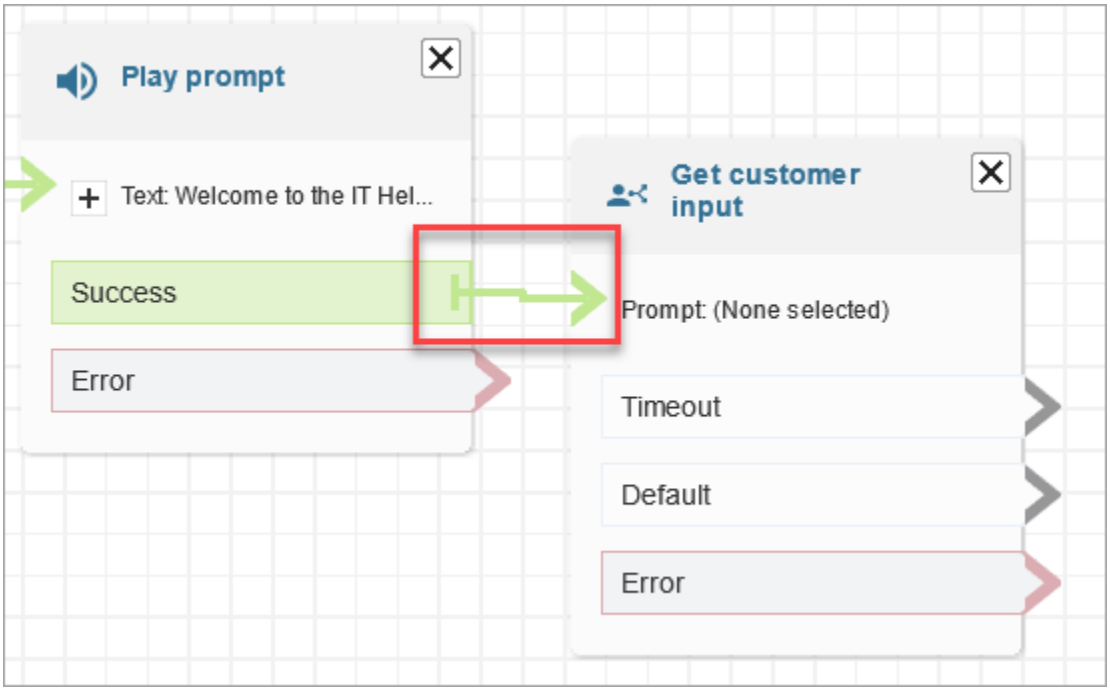


8. Configure the **Play prompt** block, as shown in the following image, and then choose **Save**. Choose **Text-to-speech or chat text**, choose **Set manually**, and enter *Welcome to the IT Help desk*.

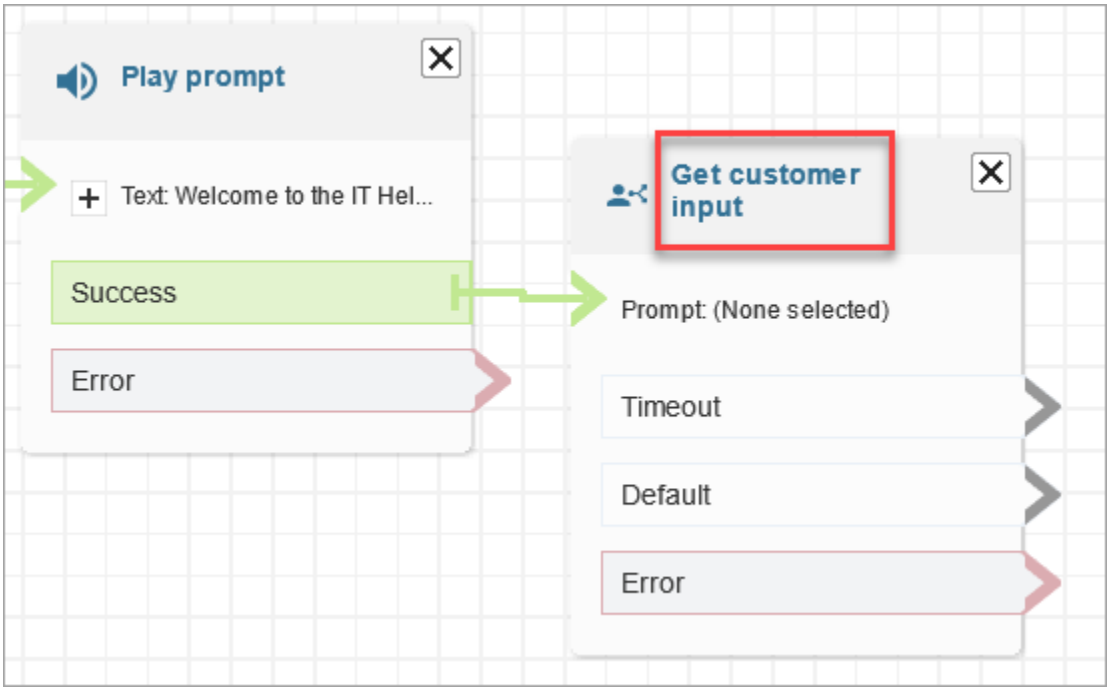
9.



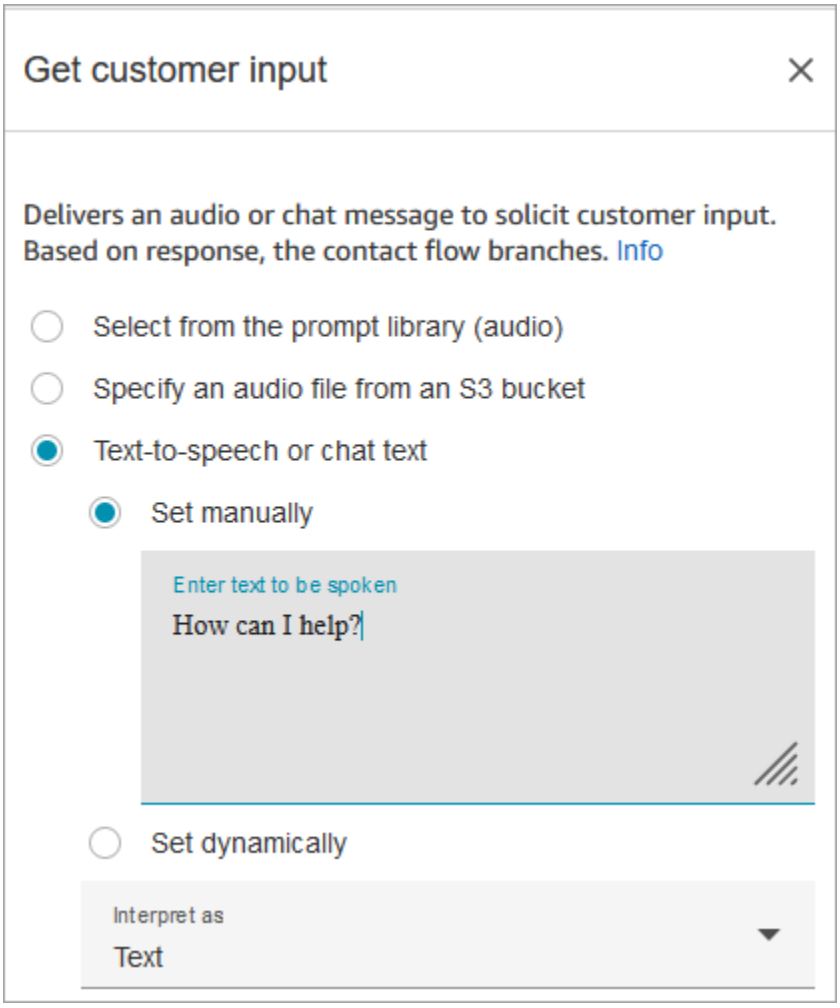
9. Add a Get customer input block and connect to the **Play prompt** block.



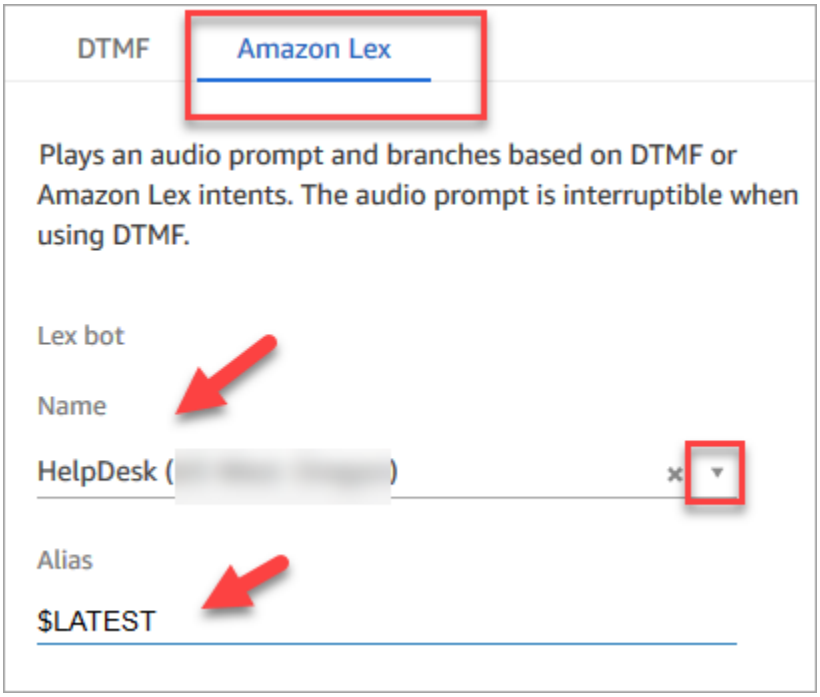
10. Choose the title of the Get customer input block to open the properties page.



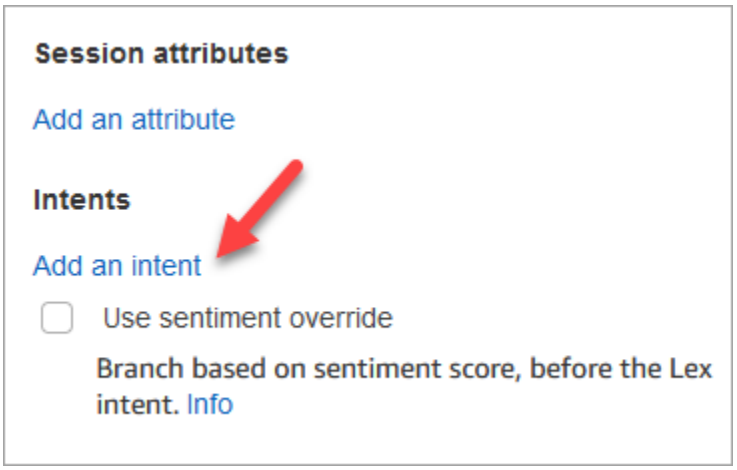
11. Configure the **Get customer input** block, as shown in the following images. Choose **Text-to-speech or chat text**, **Set manually**, and enter *How can I help* in the text box. Set the **Interpret as** a dropdown box to **Text**.



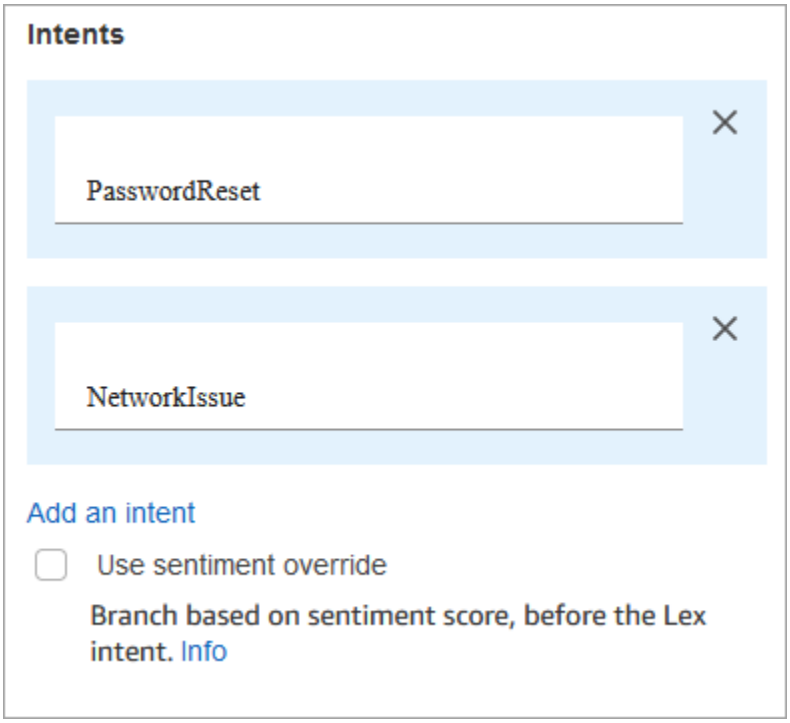
12. The following image shows the Amazon Lex tab. Choose the name of the Amazon Lex bot from the dropdown list. For **Alias,** enter **$LATEST**.



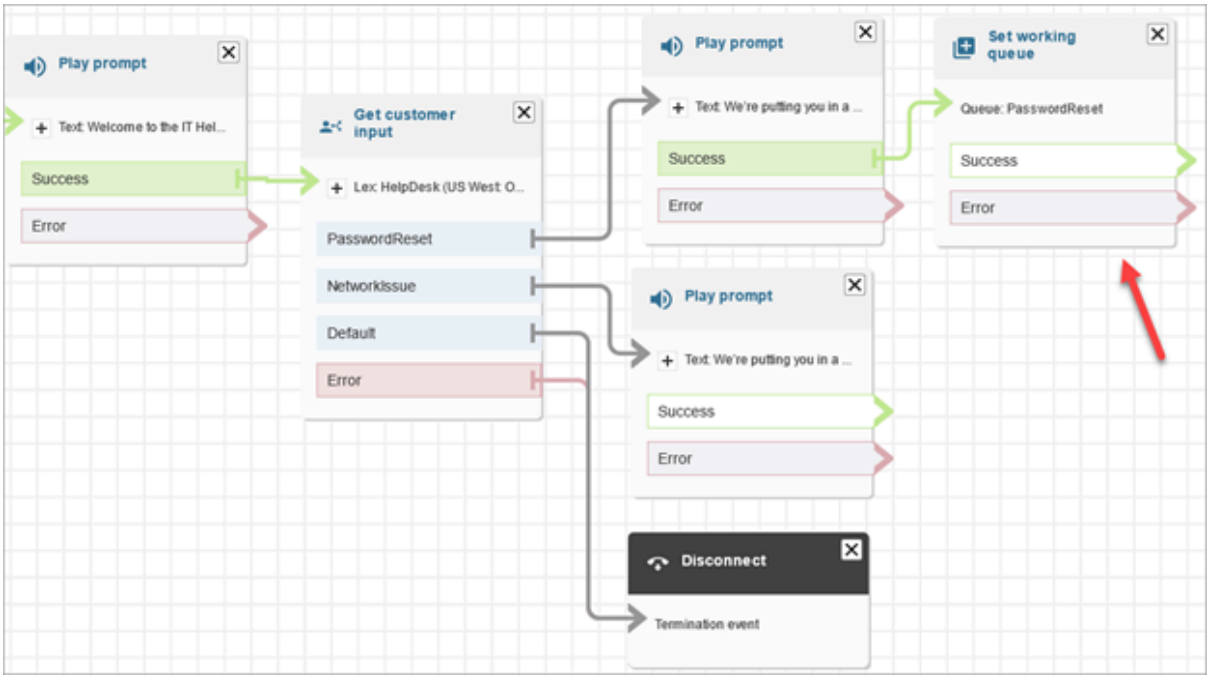
13. While still in the **Get customer input** block, choose **Add an intent**.



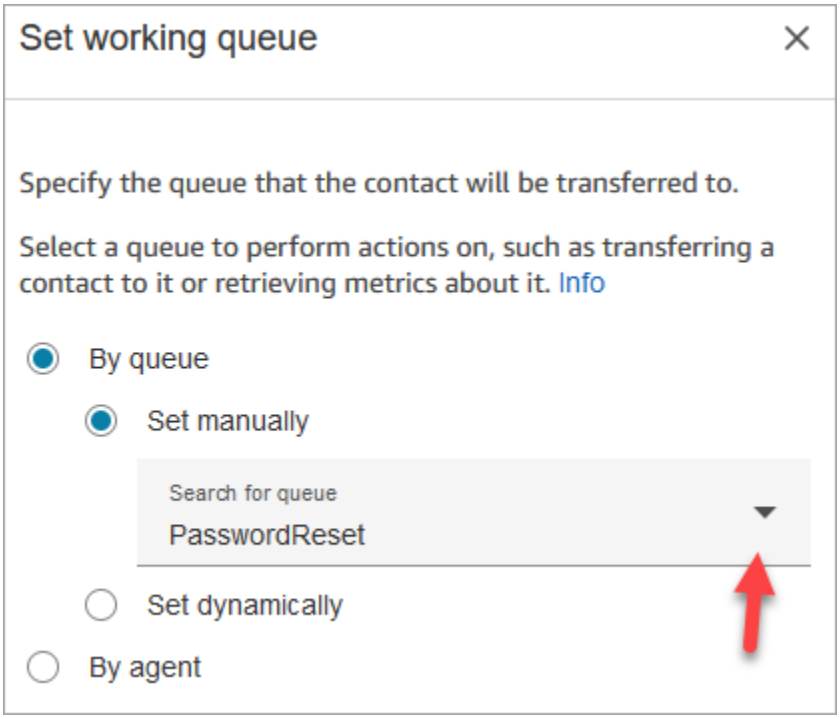
14. Enter the names of the intents created in the Amazon Lex bot, such as **PasswordReset** and **NetworkIssue**. They are case-sensitive!



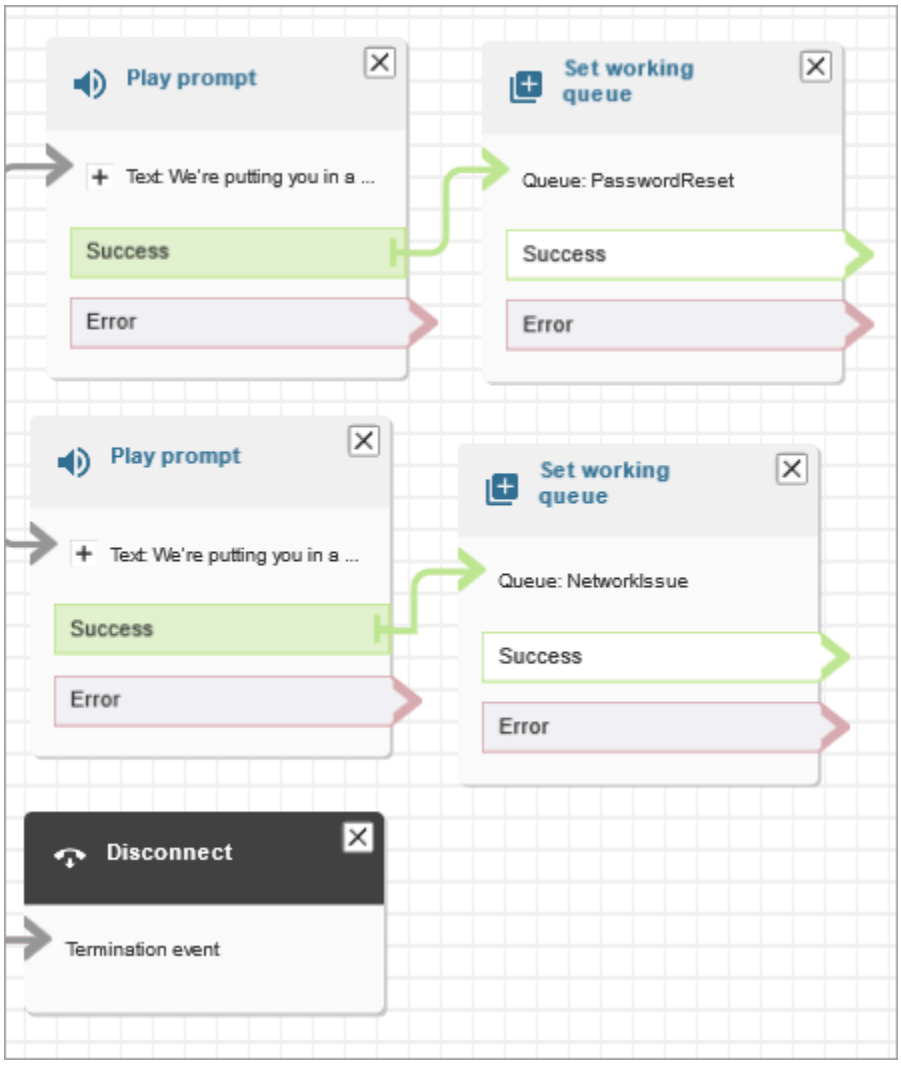
15. Choose **Save**.
16. Add a **Play prompt** block and connect it to the **PasswordReset** branch.
17. Choose the **Play prompt** title to open its properties page. Configure the Play prompt block with the message *We're putting you in a queue to help you with password reset.* Choose **Save**.
18. Add a second **Play prompt** block and connect it to the **NetworkIssue** branch.
19. Choose the **Play prompt** title to open its properties page. Configure the **Play prompt** block with the message *We're putting you in a queue to help you with your network issues.* Choose **Save**.
20. Add a Disconnect/hang-up block to the grid. Connect the **Default** and **Error** branches to it.
21. Add a Set working queue block to the grid. Connect the **Play prompt** block for **PasswordReset**.



22. Choose the **Set working queue** title to open its properties page. Configure the **Set working queue** block by using the drop-down arrow to choose the **PasswordReset** queue. Choose **Save**

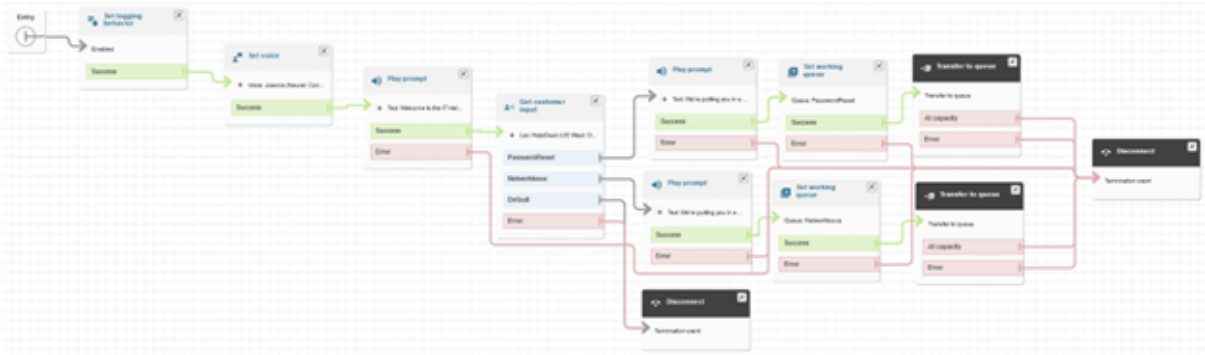


23. Add a **Set working queue** block for **NetworkIssue**, and configure it with the NetworkIssue queue.

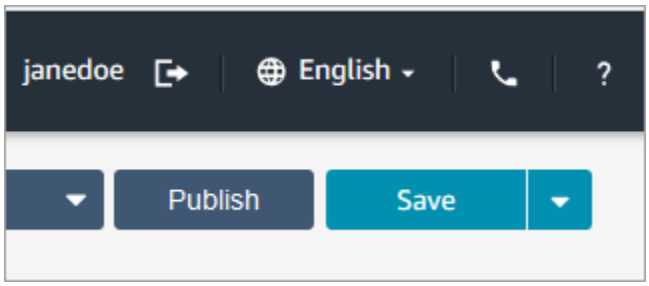


24. Drag two **Transfer to queue** blocks (from the **Terminate/Transfer** group) onto the grid.
25. Connect each of the **Set working queue blocks** to a **Transfer to queue** block.
26. Drag another **Disconnect/hang up** block onto the grid. Connect all of the remaining **Error** and **At capacity** branches to it.

27. The completed flow should look similar to the following image.



28. Choose **Save**, and then choose **Publish**.



Any blocks that aren't connected or configured correctly generate an error. If this happens, double-check that all branches are connected.

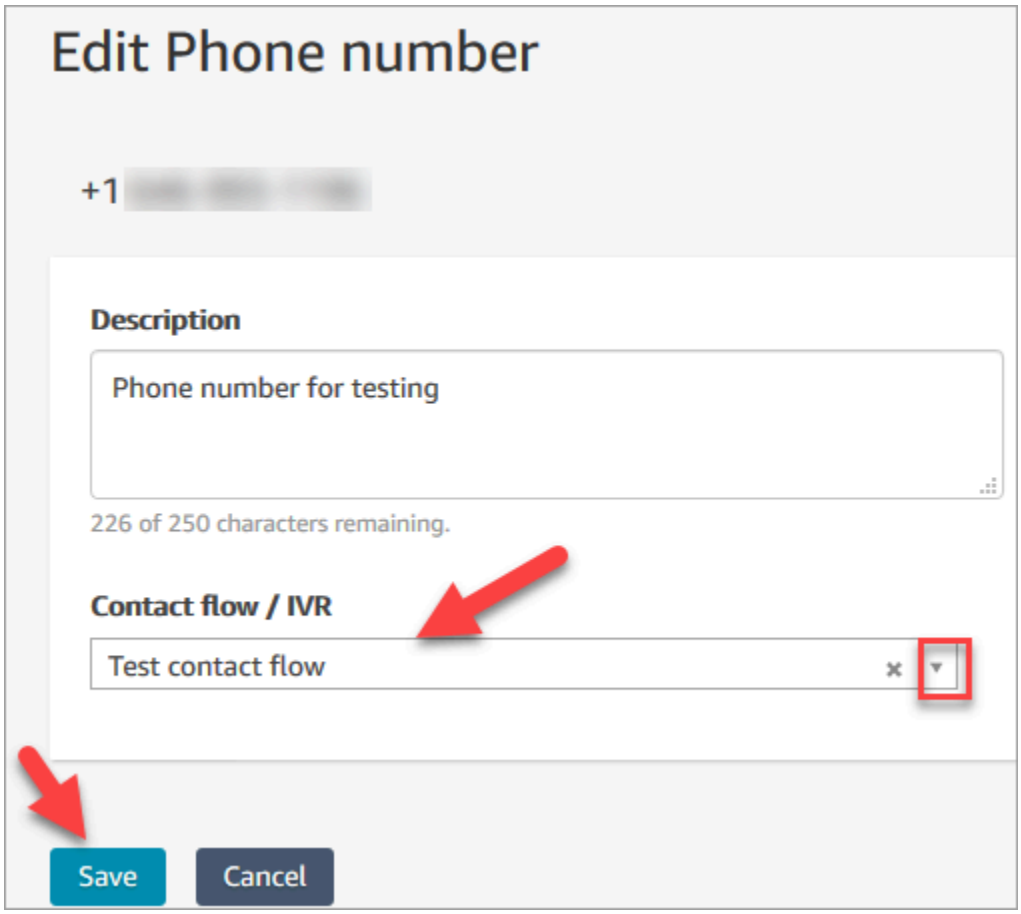
29. When the flow publishes, it displays the message that it saved successfully.

If the flow doesn't save, double-check that all the branches are connected to blocks. That's the most common reason flows don't publish.

Step 5: Assign the contact flow to the phone number

1. On the navigation menu, go to **Channels, Phone Numbers**.
2. On the **Manage Phone Numbers** page, choose a phone number.

3. Use the drop-down box to choose the flow just created, and then choose **Save**.

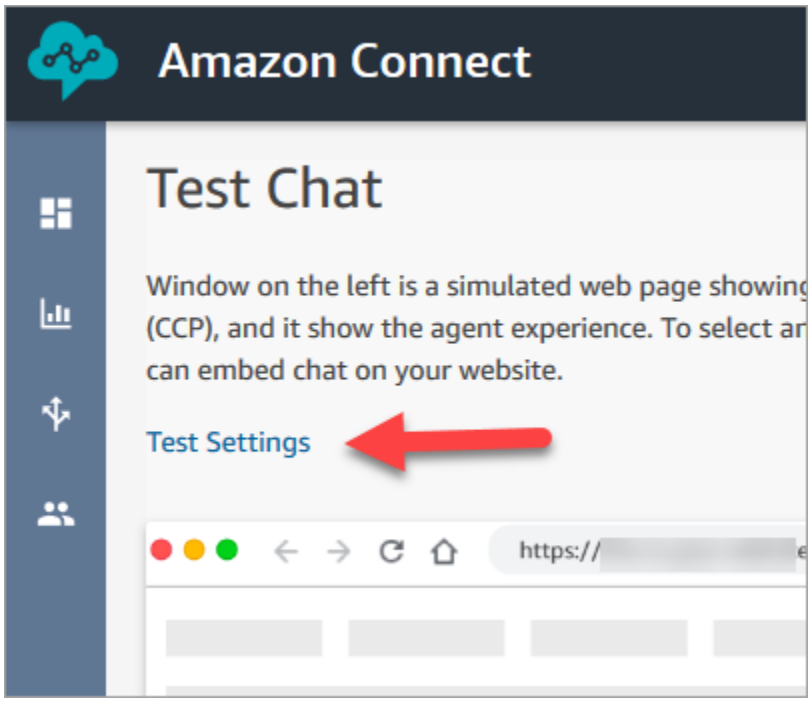


Everything is all set up! Now the IT Help Desk is ready. Continue on to Step 6: Test a custom voice and chat experience.

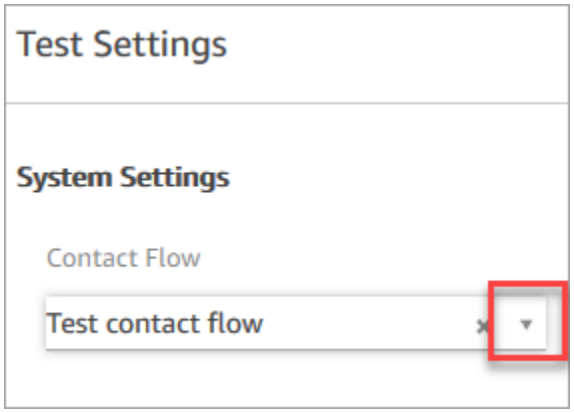
Step 6: Test a custom voice and chat experience

Try out the Amazon Lex bot, routing, and flow. The first step is to tell Amazon Connect which flow is to be tested.

1. On the navigation menu, go to the **Dashboard** and choose **Test chat**.
2. Choose **Test Settings**.

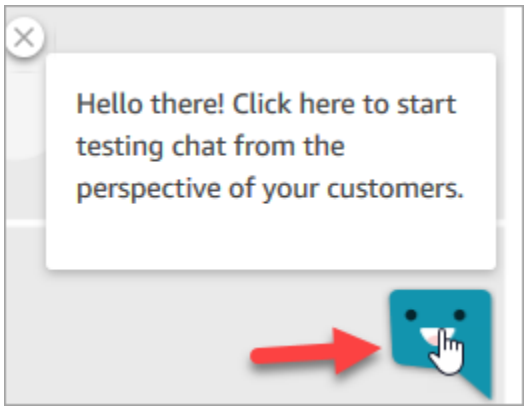


3. Use the drop-down box to choose the flow created, for example, **Test flow**. Choose **Apply**.

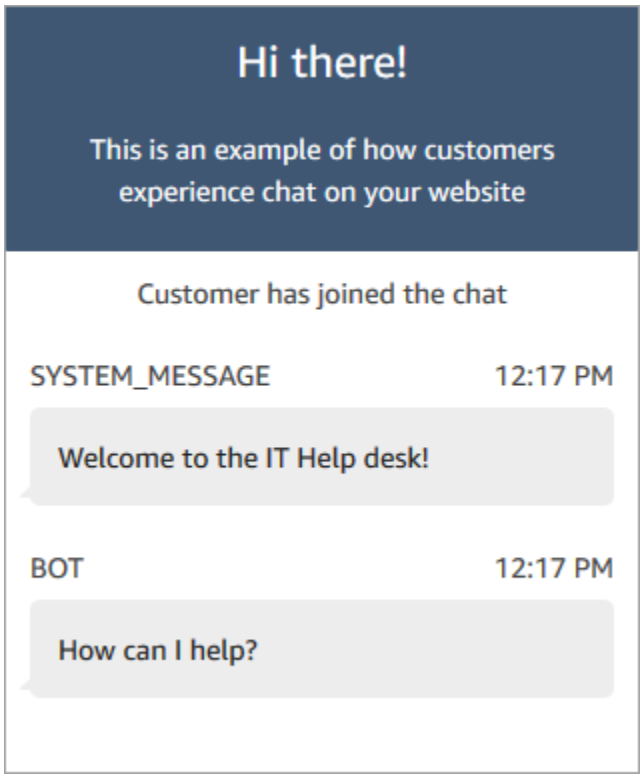


Test a custom chat experience.

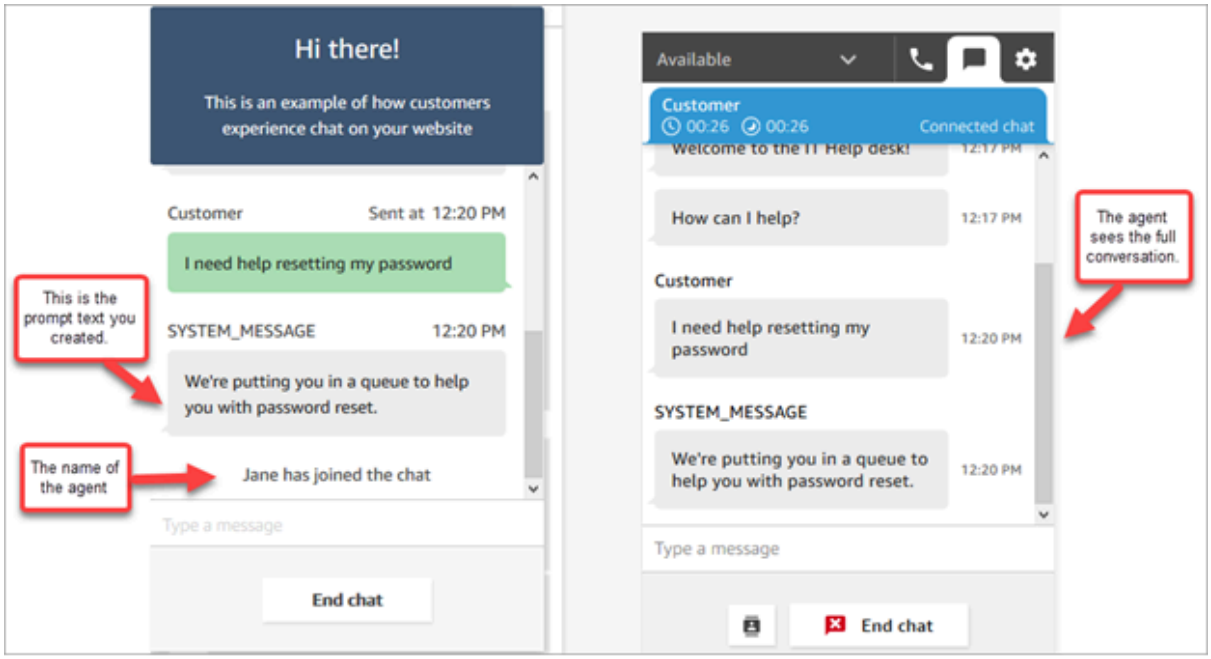
1. If needed, choose the chat bubble to start a chat.



2. Amazon Connect automatically detects a contact and runs the flow created. It displays messages from the flow.



3. Enter that you need help resetting a password. Then accept the incoming chat. The following image will show what the chat and agent interfaces look like when contacted.



4. In the customer pane on the right, choose **End chat** to close the chat window.
5. In the test CCP, choose **Close contact** to end the After Contact Work (ACW).

Test a custom voice experience.

1. If the test chat window is still open, choose **End chat** to close it. Then try the voice experience.
2. Call the claimed phone number.
3. When prompted, say *I'm having trouble accessing the internet*. The message that you're *being transferred to the NetworkIssue queue* should be heard.

Tip: *After you're transferred, this message will be heard:*
Thank you for calling. Your call is very important to us and will be answered in the order it was received.
This message is generated by a default flow named Default customer queue.

4. Switch to the test CCP and accept the incoming call.
5. After accepting the call, but before connecting to the customer, an inbound whisper stating what queue the contact is in will be heard, for example, NetworkIssue. This helps notify what the customer is calling about.
   The inbound whisper is generated by a default flow named Default agent whisper.
6. When done, end the call.
7. In the CCP, choose **Clear contact** to end After Contact Work (ACW).

Summary of Document