

Amazon Connect Integration

MODULE 4 – LEX CONFIGURATION



Amazon Connect Lex

Machine Learning (ML) and Artificial Intelligence (AI)

Amazon Connect uses the following services for ML/AI:

- **Amazon Lex**— Lets you create a chatbot to use as Interactive Voice Response (IVR).
- **Amazon Polly**— Provides text-to-speech in all contact flows.
- **Amazon Transcribe**— Grabs conversation recordings from Amazon S3, and transcribes them to text so you can review them.
- **Amazon Comprehend**— Takes the transcription of recordings, and applies speech analytics machine learning to the call to identify sentiment, keywords, adherence to company policies, and more.

Amazon Connect Lex

Languages Supported in Amazon Lex

Amazon Lex supports a variety of languages and locales. The languages supported and the features that support them are listed in the following tables.

Code	Language and locale
de-DE	German (German)
en-AU	English (Australian)
en-GB	English (British)
en-US	English (US)
es-419	Spanish (Latin American)
es-ES	Spanish (Spain)
es-US	Spanish (US)
fr-CA	French (Canadian)
fr-FR	French (French)
it-IT	Italian (Italy)
ja-JP	Japanese (Japan)

Voices in Polly

Amazon Polly provides a variety of different voices in multiple languages for synthesizing speech from text.

Amazon Connect Lex

Chat and Amazon Lex

- You can use the same bot for both the voice and chat channels. However, you may want the bot to respond differently based on the channel. For example, you want to return SSML for voice so a number is read as a phone number, but you want to return normal text to chat. You can do this by passing the **Channel** attribute.
- For voice, some words are best spelled phonetically to get the correct pronunciation, such as last names. If this is the case with your scenario, include it in the design of your bot. Or, you can keep the voice and chat bots separate.
- Tell agents about the bot. When a contact is connected to the agent, the agent sees the entire transcript in their window. The transcript includes text from both the customer and the bot.

Amazon Connect Lex

Create an Amazon Lex bot

Bots provide an efficient way to offload repetitive tasks from your agents. We use the customer's response to route them to the right queue.

This step has five parts to it.

Contents

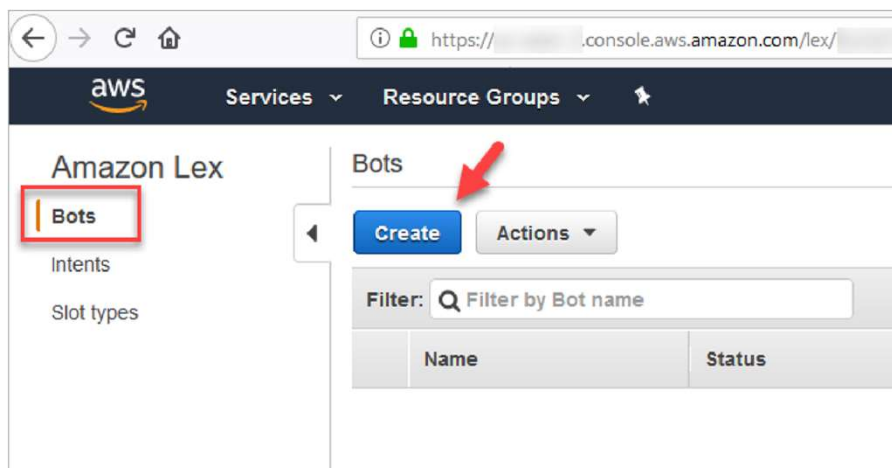
- Part 1: Create an Amazon Lex bot
- Part 2: Add intents to your Amazon Lex bot
- Part 3: Add sample utterances
- Part 4: Build and test the Amazon Lex bot
- Part 5: Publish the Amazon Lex bot and create an alias

Amazon Connect Lex

Create an Amazon Lex bot

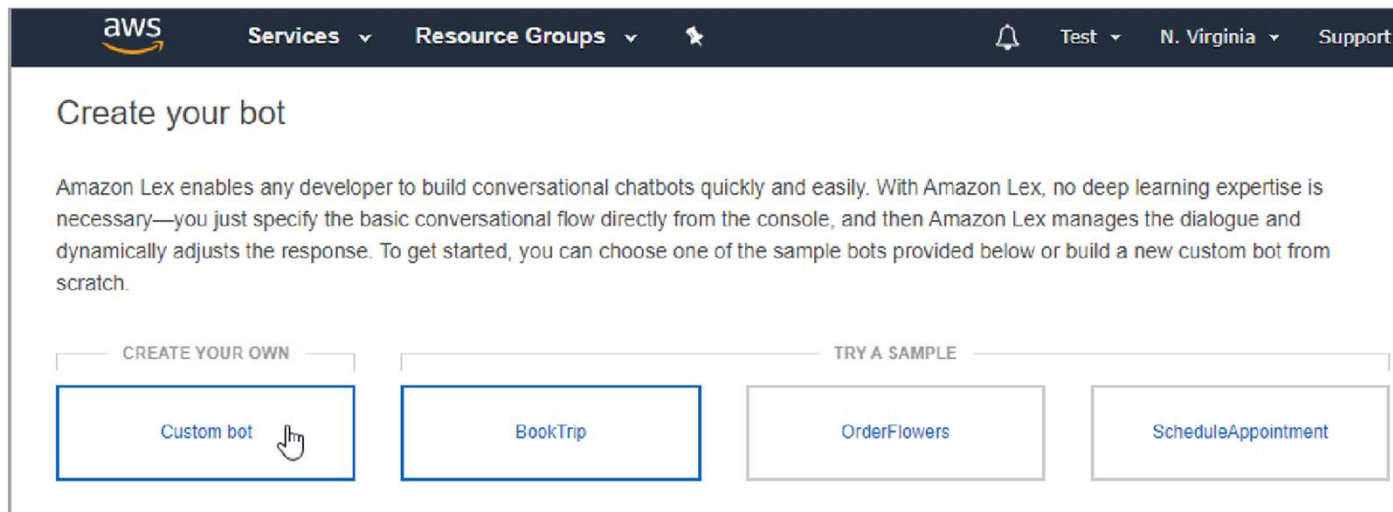
This step assumes it's the first time you've opened the Amazon Lex console. If you've created a Amazon Lex bot before, your steps differ slightly from the ones in this section.

1. Choose the following link to open the Amazon Lex console, or enter the URL in your web browser: **<https://console.aws.amazon.com/lex/>**.
2. If this is the first time you've created Amazon Lex bot, choose **Get Started**. Otherwise, you are already in the Amazon Lex dashboard.



3. Choose **Custom bot**.

Amazon Connect Lex



4. Enter the following information:


- **Bot name** — For this tutorial, name the bot **HelpDesk**.
- **Output voice** — Select the voice for your bot to use when speaking to callers. The default voice for Amazon Connect is Joanna.
- **Session timeout** — Choose how long the bot should wait to get input from a caller before ending the session.
- **COPPA** — Choose whether the bot is subject to the Children's Online Privacy Protection Act.


Amazon Connect Lex


Bot name


Language English (US)


Output voice



Session timeout 

Sentiment analysis ☐ Yes ☒ No 

IAM role [AWSServiceRoleForLexBots](#) 
Automatically created on your behalf

COPPA Please indicate if your use of this bot is subject to the [Children's Online Privacy Protection Act \(COPPA\)](#). [Learn more](#) 
☐ Yes ☒ No

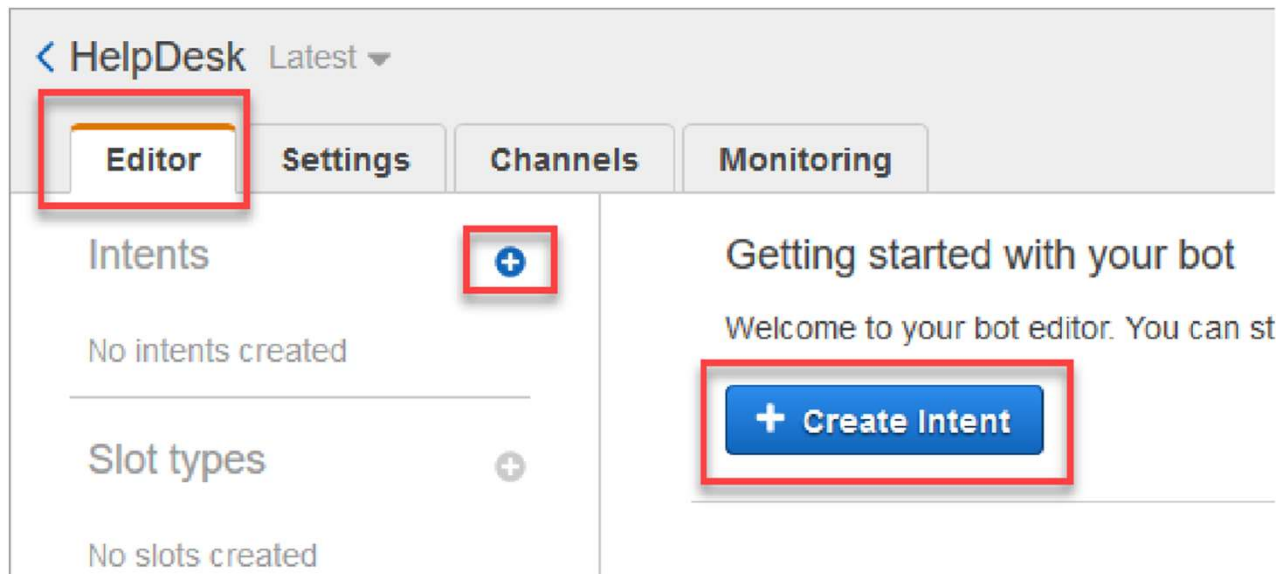
5. Choose Create

Amazon Connect Lex

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.

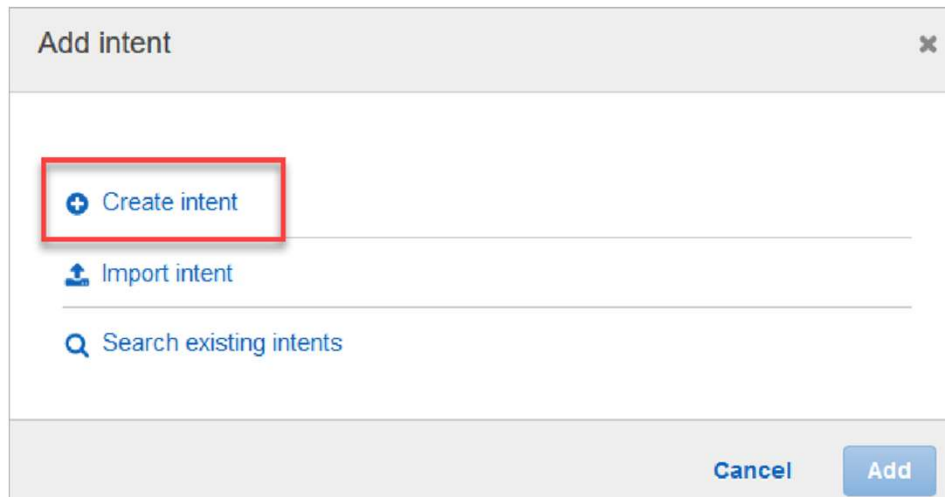
1. In the Amazon Lex console, choose the **Editor** tab.
2. Choose the **+** icon next to **Intents**, and choose **Create new intent**.



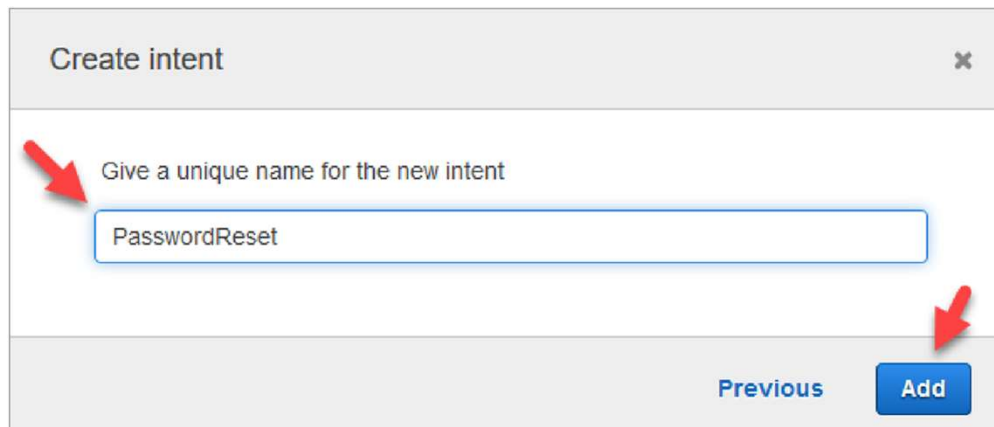
Amazon Connect Lex

Add intents to your Amazon Lex bot

3. In the **Add intent** box, choose **+ Create intent**.



4. Name the intent **PasswordReset** and choose **Add**.



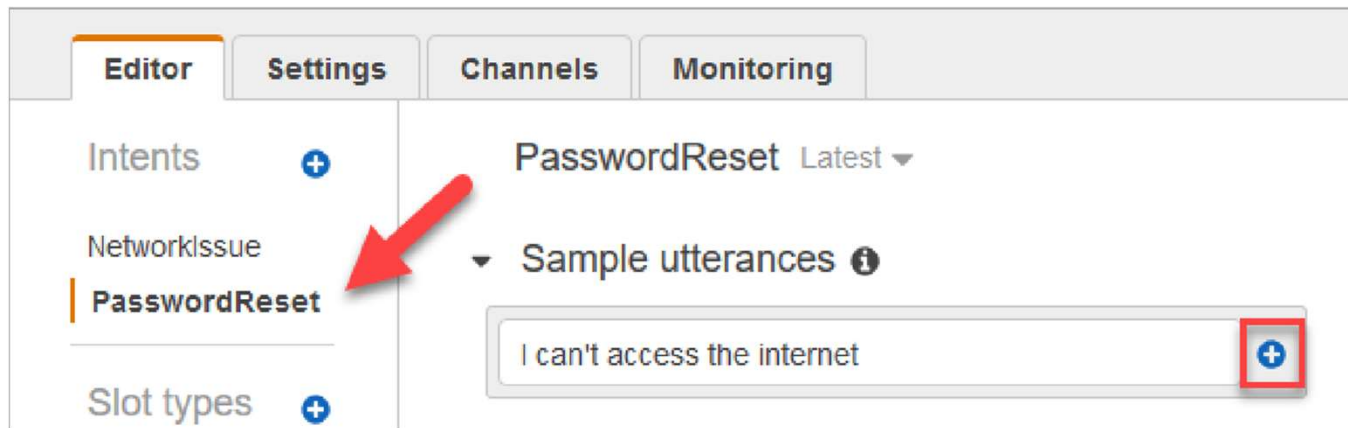
5. Choose the **+** icon next to **Intents** again, and add an intent for **NetworkIssue**.

Amazon Connect Lex

Add sample utterances

After defining the intents, add some sample utterances. Utterances are what a customer might say or chat to the bot.

1. In the Amazon Lex console, select the **PasswordReset** intent.



2. Add the sample utterance *I forgot my password*, and choose the + icon.
3. Add the utterance *reset my password*.

Amazon Connect Lex

The screenshot shows the Amazon Connect Lex console interface. At the top, there's a navigation bar with a back arrow, the text 'HelpDesk', and a 'Latest' dropdown. Below this is a tabbed interface with 'Editor', 'Settings', 'Channels', and 'Monitoring'. The 'Editor' tab is active. On the left sidebar, under 'Intents', 'PasswordReset' is selected. The main area shows the 'PasswordReset' intent details, including a 'Sample utterances' section with three entries: 'e.g. I would like to book a flight.', 'reset my password', and 'I forgot my password'.

4. Select the **NetworkIssue** intent.

This screenshot shows the Amazon Connect Lex console with the 'NetworkIssue' intent selected. A red arrow points from the 'NetworkIssue' option in the left sidebar to the main content area. The main area displays the 'NetworkIssue' intent details, including a 'Sample utterances' section with one entry: 'I can't access the internet'. A red box highlights the '+' button next to this entry, indicating where to click to add more sample utterances.

Amazon Connect Lex

5. Add a sample utterance, such as **I can't access the internet**, and choose +.
6. Repeat step 5 to add the utterance **my email is down**.

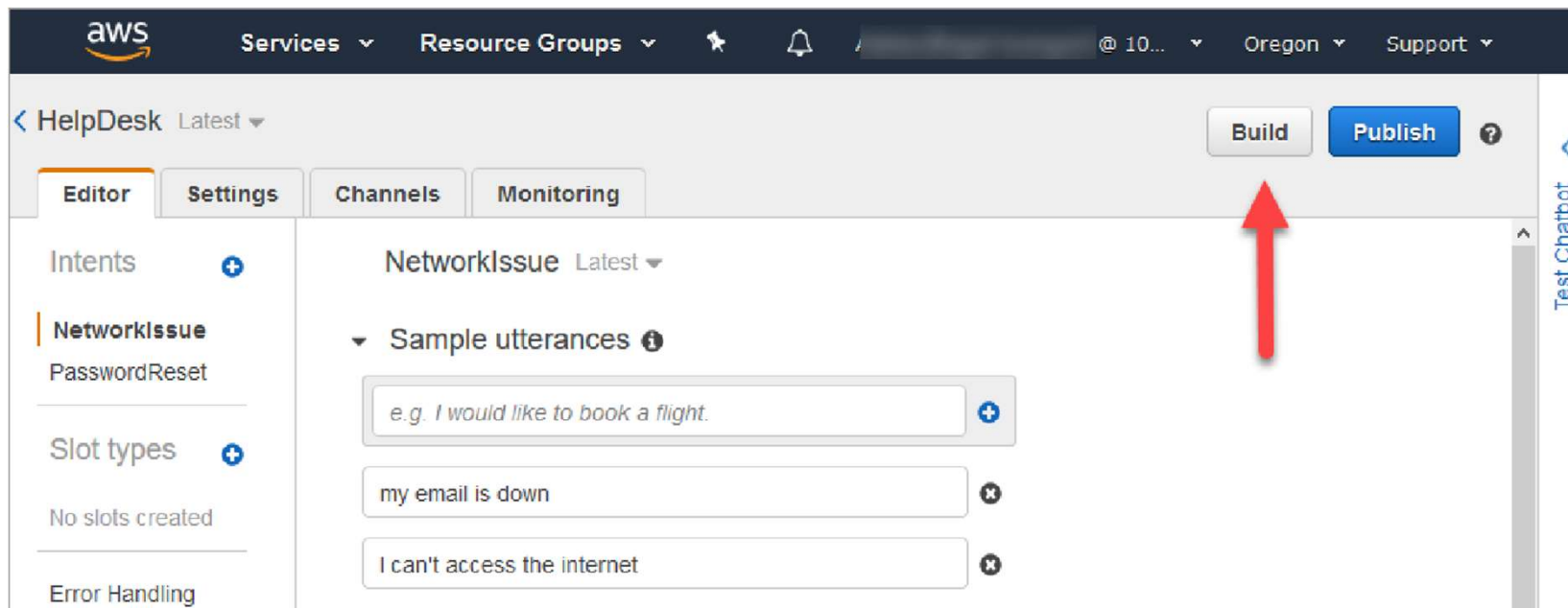
The screenshot shows the Amazon Connect Lex console interface. At the top, there's a navigation bar with a back arrow, 'HelpDesk', and a 'Latest' dropdown. Below this is a tabbed interface with 'Editor', 'Settings', 'Channels', and 'Monitoring'. The 'Editor' tab is active. On the left sidebar, under 'Intents', 'NetworkIssue' is selected. Below it are 'PasswordReset', 'Slot types', 'No slots created', and 'Error Handling'. The main area shows the 'NetworkIssue' intent details, including a 'Latest' dropdown and a 'Sample utterances' section with an information icon. Three sample utterances are listed: 'e.g. I would like to book a flight.' (with a '+' icon), 'my email is down' (with an 'x' icon), and 'I can't access the internet' (with an 'x' icon).

Amazon Connect Lex

Build and test the Amazon Lex bot

Build and test your bot to make sure that it works as intended before you publish it.

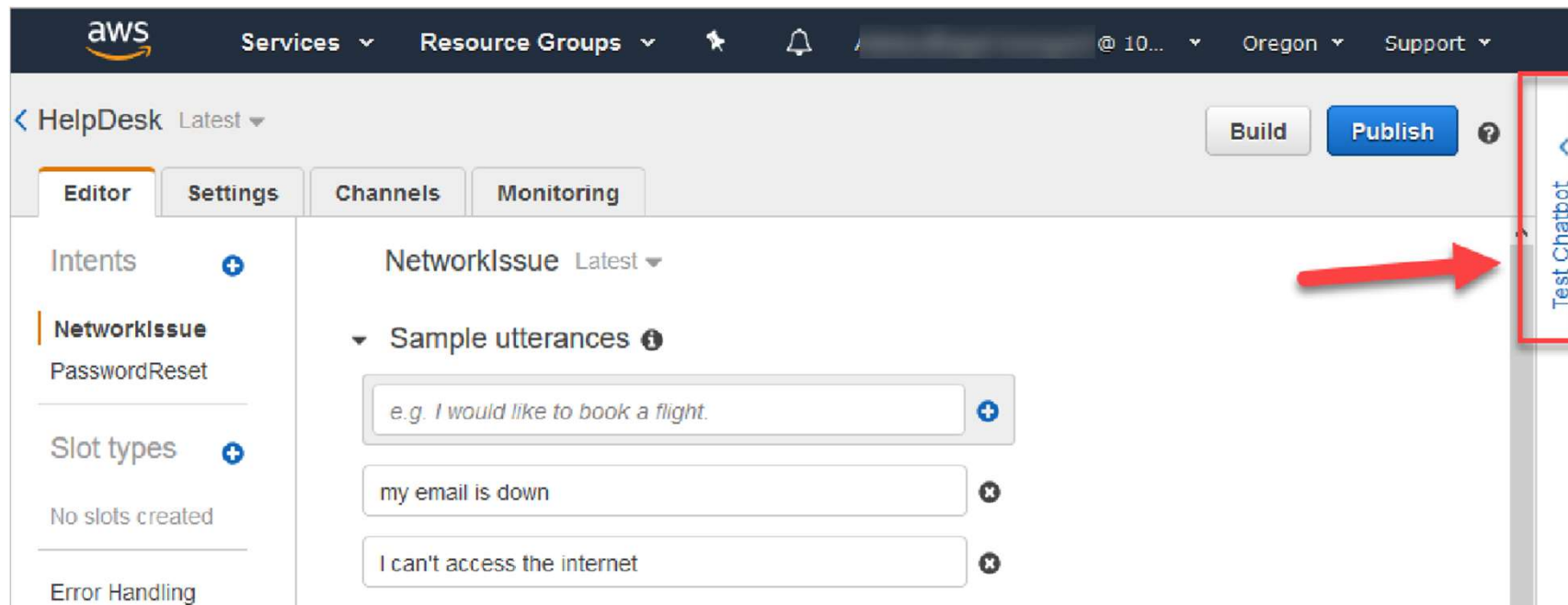
1. In the Amazon Lex console, choose **Build**. The build may take a minute or two.



Amazon Connect Lex

Build and test the Amazon Lex bot

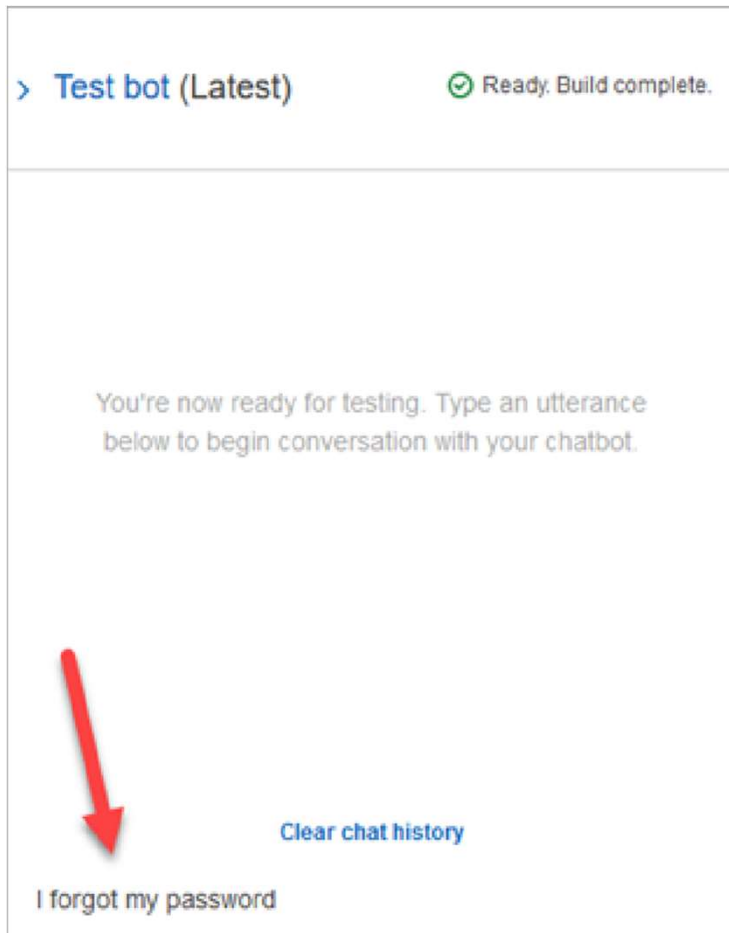
2. When it's finished building, choose **Test Chatbot**.



Amazon Connect Lex

Build and test the Amazon Lex bot

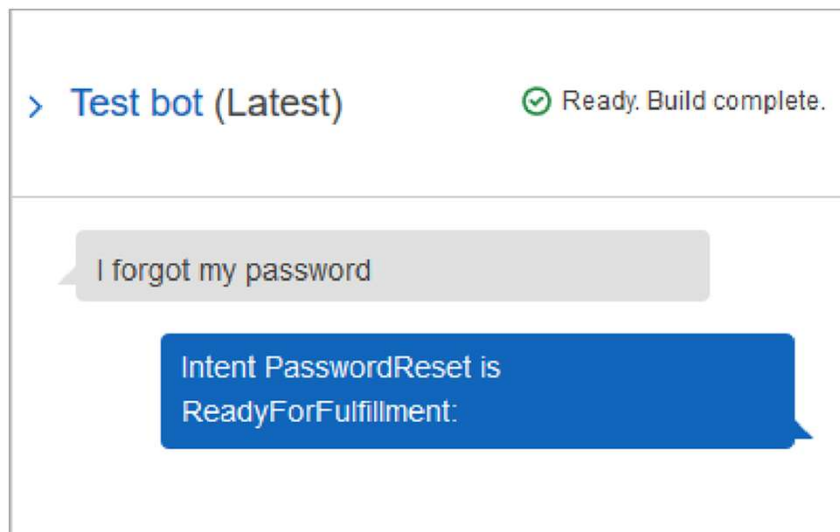
3. Test the **PasswordReset** intent. In the **Test Chatbot** pane, type **I forgot my password**, and press **Enter**.



Amazon Connect Lex

Build and test the Amazon Lex bot

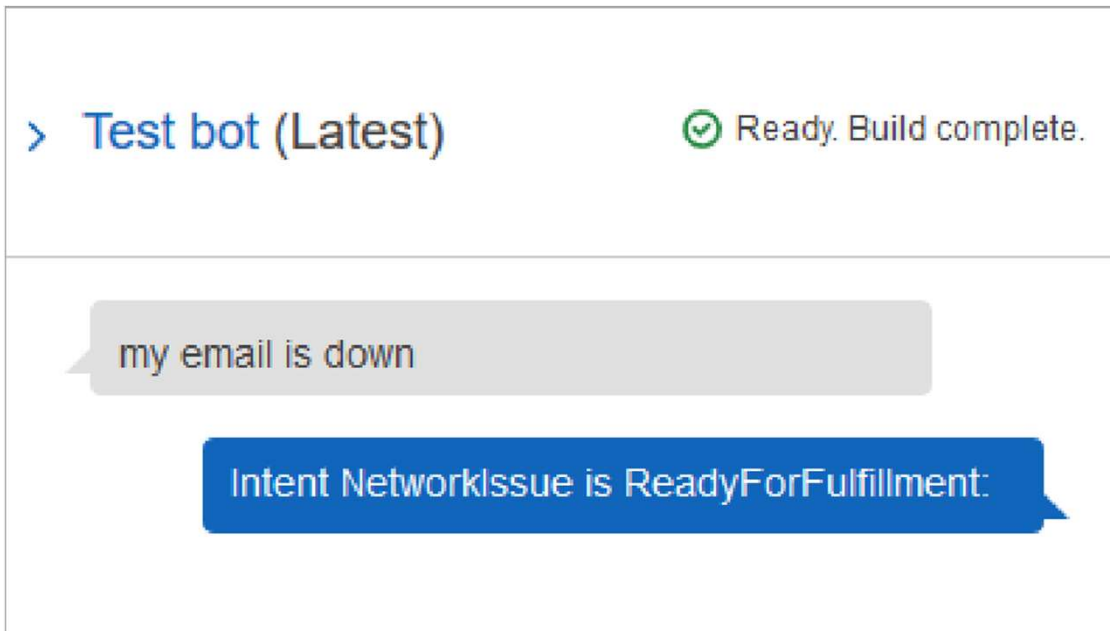
4. The verification looks like what's shown in the following image.



Amazon Connect Lex

Build and test the Amazon Lex bot

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.

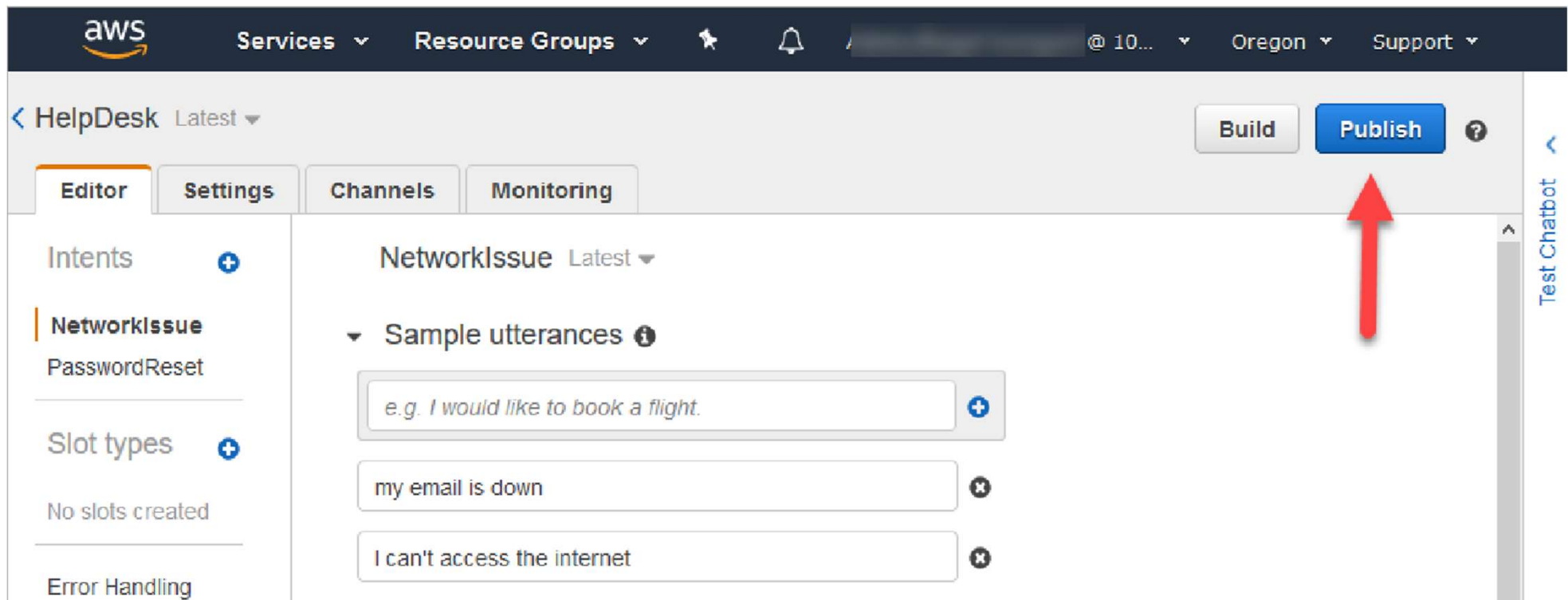


Amazon Connect Lex

Publish the Amazon Lex bot and create an alias

Next, publish the bot so you can add it to a contact flow in Amazon Connect.

1. In the Amazon Lex console, choose **Publish**.



Amazon Connect Lex

Publish the Amazon Lex bot and create an alias

2. In the **Publish HelpDesk** dialog box, use the drop-down to choose the alias that you created for your bot, such as **Test**.

Publish HelpDesk

Publishing is the last step before you can connect your bot to your mobile app or chatbot.

Choose an alias

Test

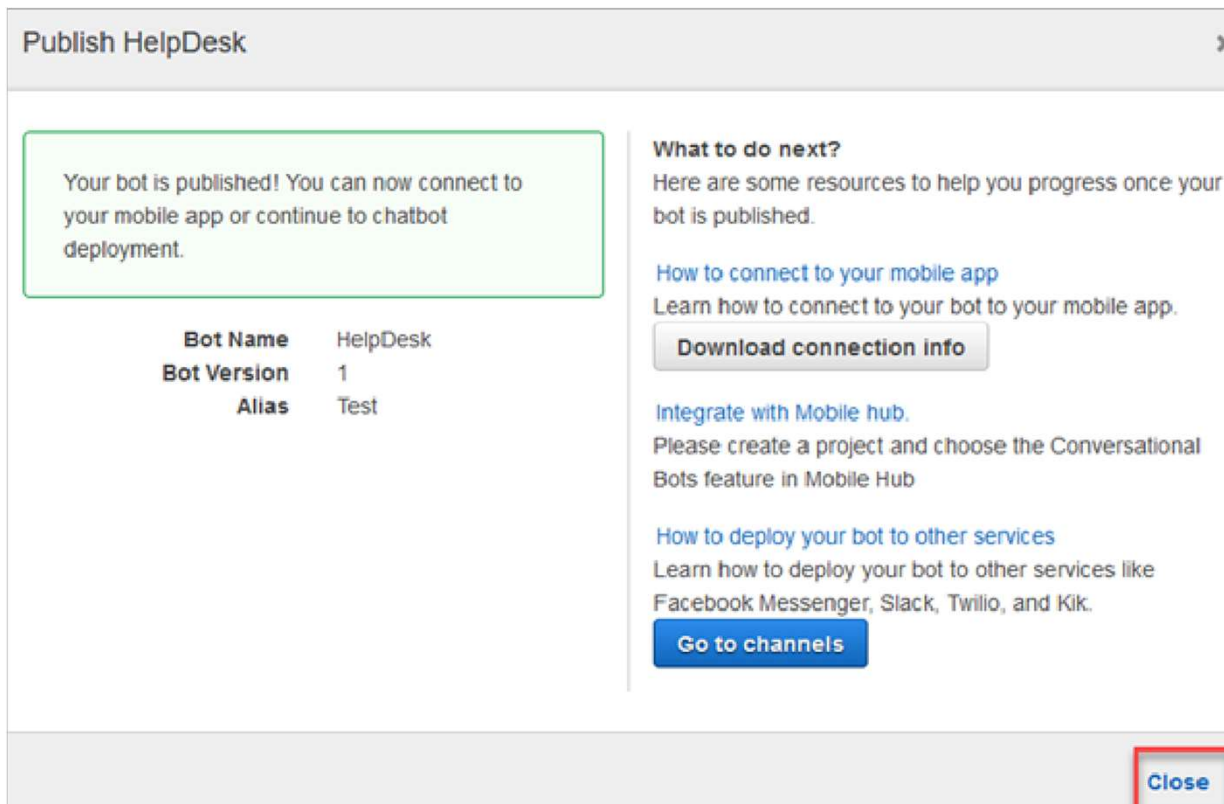


[Create a new alias](#)

Amazon Connect Lex

Publish the Amazon Lex bot and create an alias

3. Choose **Publish**. The publishing takes a few minutes.
4. When Amazon Lex finishes publishing, choose **Close**.

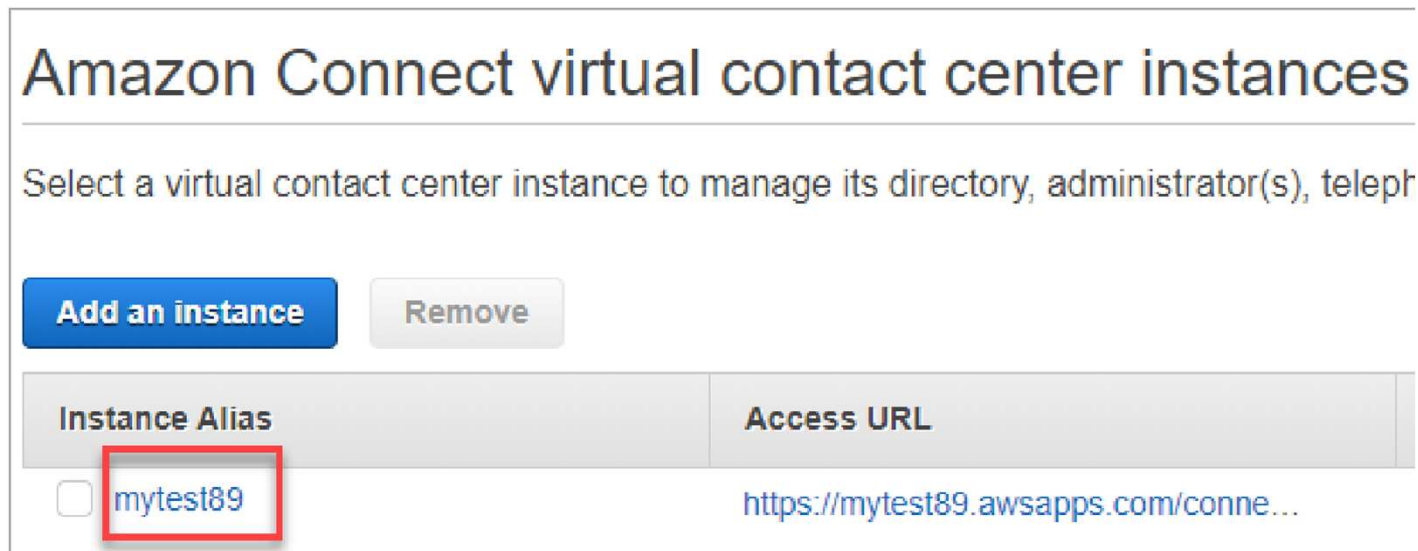


Amazon Connect Lex

Add permissions to Amazon Lex bot

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

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



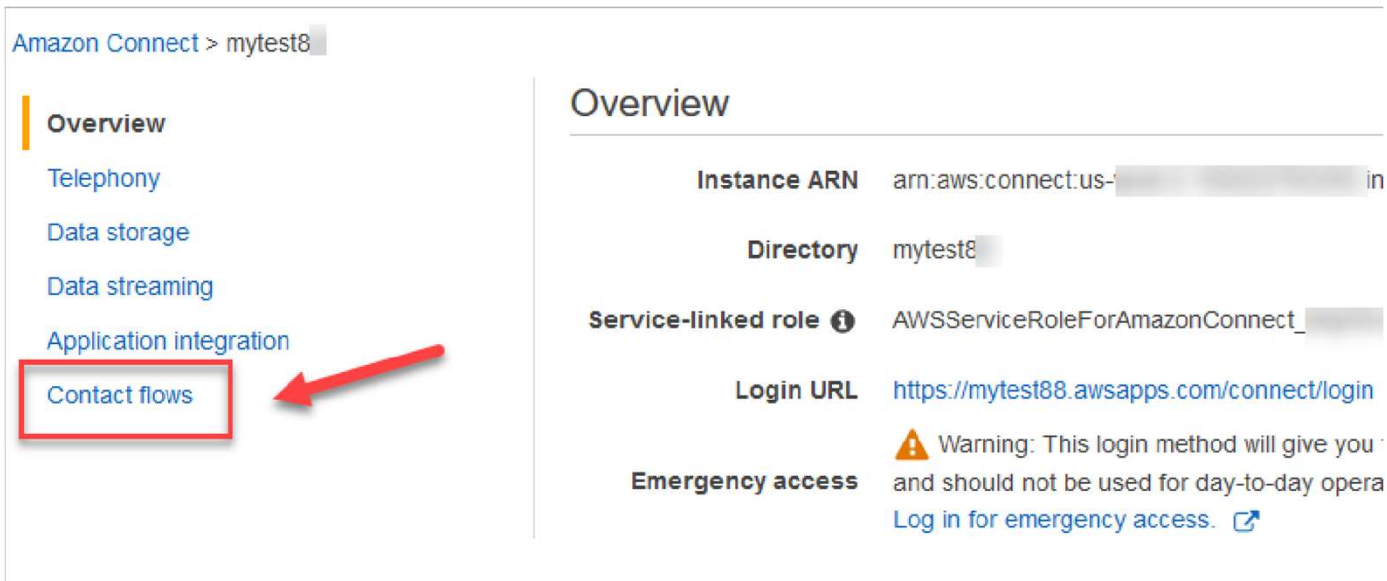
The screenshot shows the 'Amazon Connect virtual contact center instances' page. At the top, there's a title and a description: 'Select a virtual contact center instance to manage its directory, administrator(s), teleph...'. Below this, there are two buttons: 'Add an instance' (blue) and 'Remove' (grey). A table lists the instances with columns 'Instance Alias' and 'Access URL'. One instance is listed with the alias 'mytest89' and the URL 'https://mytest89.awsapps.com/conne...'. The 'mytest89' alias is highlighted with a red box.

Instance Alias	Access URL
<input type="checkbox"/> mytest89	https://mytest89.awsapps.com/conne...

Amazon Connect Lex

Add permissions to Amazon Lex bot

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





The screenshot shows the Amazon Connect console interface. On the left sidebar, under the 'Overview' section, the 'Contact flows' option is highlighted with a red rectangular box. A red arrow points from this box towards the main content area. The main content area displays the 'Overview' page for a specific Amazon Connect instance, showing details such as Instance ARN, Directory, Service-linked role, Login URL, and Emergency access.

Amazon Connect > mytest8

Overview

- Telephony
- Data storage
- Data streaming
- Application integration
- Contact flows**

Overview

Instance ARN	arn:aws:connect:us- [redacted] in
Directory	mytest8 [redacted]
Service-linked role ⓘ	AWSServiceRoleForAmazonConnect_ [redacted]
Login URL	https://mytest88.awsapps.com/connect/login
Emergency access	 Warning: This login method will give you and should not be used for day-to-day opera Log in for emergency access. 

Amazon Connect Lex

Add permissions to Amazon Lex bot

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

TIP: Only published Amazon Lex bots appear in the drop-down list.

Amazon Lex

Integrate Amazon Lex bots into your contact flows to take advantage of the same speech recognition and natural language understanding technology that powers Alexa.

Note: By adding Lex bots, you are granting Amazon Connect permission to interact with them [Create a new Lex bot](#)

Region US East: N. Virginia ▼

Bot HelpDesk ▼

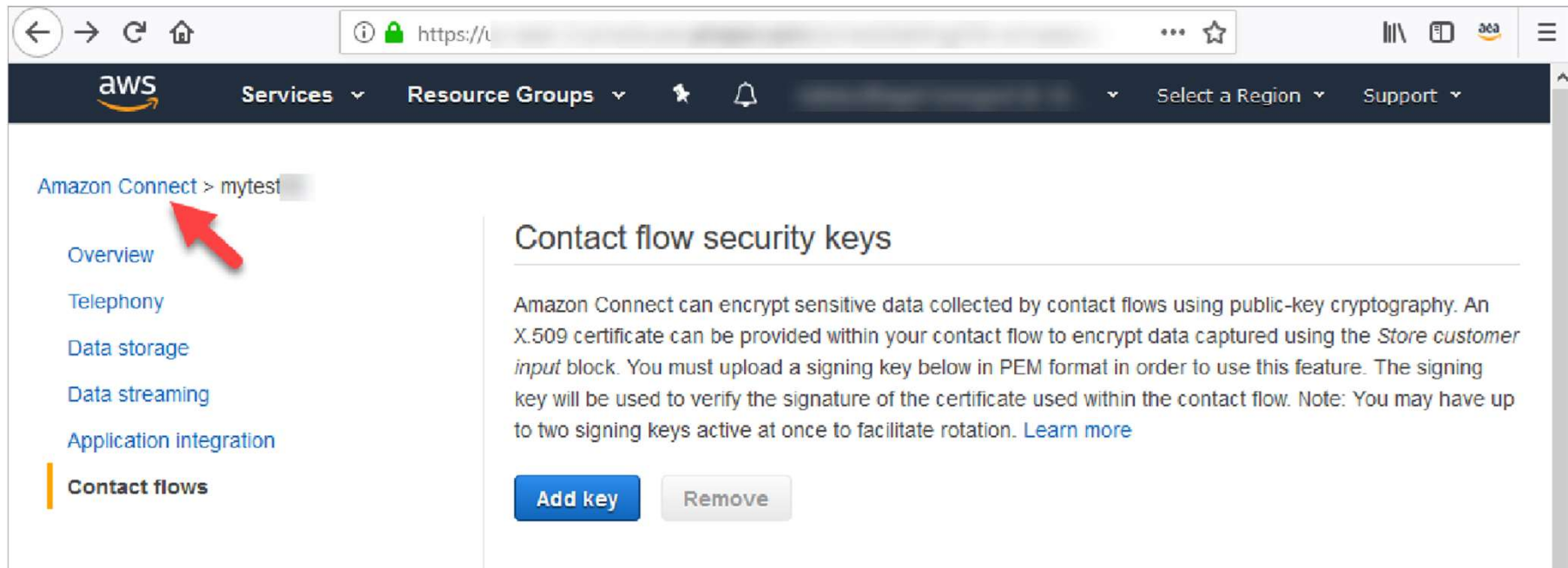
+ Add Lex Bot

Lex bots

Amazon Connect Lex

Add permissions to Amazon Lex bot

5. When you're done, choose Amazon Connect to navigate back to instances page



Amazon Connect Lex

Add permissions to Amazon Lex bot

6. Choose the access URL of your instance.

The screenshot shows the AWS Management Console interface for Amazon Connect virtual contact center instances. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and a star icon. The main heading is 'Amazon Connect virtual contact center instances', followed by a subheading: 'Select a virtual contact center instance to manage its directory, administrator(s), teleph...'. Below this, there are two buttons: 'Add an instance' (blue) and 'Remove' (gray). A table with two columns, 'Instance Alias' and 'Access URL', is displayed. The first row shows an instance with the alias 'mytest89' (preceded by a checkbox) and an 'Access URL' of 'https://mytest89.awsapps.com/conne...'. A red arrow points from the 'mytest89' alias to the 'Access URL' cell, which is also highlighted with a red border.

Instance Alias	Access URL
<input type="checkbox"/> mytest89	https://mytest89.awsapps.com/conne...

Amazon Connect Lex

Exercise:

Create an Amazon Lex bot