

# Setup and Installation Guide



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## Abstract

This guide details the integration between Amazon Connect and Salesforce Lightning. It covers the installation, configuration, and operation of the two primary components of the integration: the Amazon Connect CTI Adapter for Salesforce and the AWS Serverless Application Repository for Amazon Connect Salesforce integration.

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# Release Notes

## Important Notes

### Spring '22 Release

The Salesforce Spring '22 release introduces a change that will likely cause an install or update to any version of the adapter before 5.18 to fail. In addition if you are using the `ac_PhoneCallListView` component in any version of the adapter, the loading of your component may fail. This component has been deprecated in v5.18.

### WebRTC Plan-B Deprecation

The Plan-B deprecation should not affect any current users of the CTI Adapter, as we utilize the embedded CCP and do not build in connect-rtc-js separately.

## Installing as Admin

Please **confirm that the application was installed for admins only** (see [installation](#) for more details). If you did this by accident, then you will have to [manually edit the profiles](#) to remove the permissions to the objects and pages created by the app. If you are updating the package, please verify that all users have the proper AC permission set.

**Important:** when upgrading the CTI Adapter, please make sure that the Salesforce Lambdas are also updated to the newest version.

## 5.19 April 2022

- **Enhancement:** replace call recording audio streaming via cloudfront distribution with the connect native get-recording endpoint. This change makes it so that the cloudfront infrastructure and associated setup process is no longer necessary. Please note that this change will remove audio recording infrastructure from your AWS account, please make sure to test this change before fully deploying.
- **Enhancement:** add IgnorePermissionSet setting to FEATURE\_WISDOM\_PANEL feature. The setting determines whether the AC\_CallRecording/AC\_Administrator permission set is checked before showing Wisdom to the logged in user.
- **Bug fix:** CTI Flows on contact events will fire after the page was reloaded during a contact's life cycle
- **Bug fix:** Fixed an issue where we would create a CCACase or CCAContact batch job even if there were no updates to any related fields.

## 5.18 January 2022

- **Bug Fix:** Updated the **Get Salesforce Contact ID** block to accept E.164 numbers.
- **Bug Fix:** Fixed **onMessage** event name and label which was causing CTI flows to not trigger.
- **Bug Fix:** Fixed stray template tag in `ac_contactChannelListView` causing Spring '22 package installation failure.
- **Bug Fix:** Deprecated `ac_PhoneCallListView` LWC, as it is an artifact of an old version of the adapter and was causing Spring '22 package installation failure.
- **Bug Fix:** Fixed issue where switching contact tabs didn't update the CCP overlay attributes.
- **Bug Fix:** Fixed issue where some `sfInvoke` operations were returning complex JSON objects that don't work with Connect Contact Flows

## 5.17 November 2021

- **Feature:** Added the integration with Amazon Connect Wisdom, which delivers articles and article recommendations to agents. See [here](#) for more details.
- **Feature:** Added the integration with Voice id, which provides real-time caller authentication. See [here](#) for more details.
- **Bug Fix:** Fixed a bug where CTI Actions would only load if you switched overlay tabs. Now they will load immediately.
- **Bug Fix:** Fixed a few bugs with Contact Attributes Overlay.
  - Where you needed to set they would not populate in the overlay unless the CTI Attribute Name value was the same as the contact attribute key.
  - Selecting DisplayValue of `Key` did not show just the Key value.
  - When using the ShowAllAttributes feature, the already configured CTI Attributes did not maintain the same HTML formatting as before.
- **Bug Fix:** Fixed a bug where DialedNumber\_\_c was not filled on outbound calls.
- **Bug Fix:** Fixed a bug where Update Contact Attributes didn't work for Chat or Task contacts.
- **Bug Fix:** Fixed a bug where the CTI Flow payload would only contain the CTI Action Additional Data when both CTI Action Payload and Additional Data are configured. Now the CTI Flow payload will have both the CTI Action Payload and Additional Data
- **Enhancement:** Added two new CTI Flow Blocks - Destroy Live Contact and Clear Contact.

## 5.16 August 2021

- **Feature:** Added a `callIncomingDuration` field to the `Contact Interaction Metadata` CTI Flow block, which captures the time between the call coming into an agent and it being accepted/missed/declined.
- **Feature:** Moved the medialess popout page to be an optional feature. Learn how to enable it [here](#)
- **Bug Fix:** Fixed an issue where the `callInteractionDuration` would be too large if the call is missed. It is now defaulted to 0 if the call is not picked up.
- **Bug Fix:** Fixed an issue with the medialess adapter where media was still coming through the adapter and causing audio quality issues. Now, when the medialess option is checked, this will disable the `allowFramedSoftphone` option in CCP config, and media will not be sent through the CCP embedded on Salesforce.
- **Bug Fix:** Fixed an issue where Agents couldn't see some CTI Actions if more than 20 CTI Actions are set up. Now, a scroll bar should appear to navigate to all of them.
- **Bug Fix:** Fixed an issue with the `isInbound` CTI Flow block, which would return false if the Customer hangs up the error before the Agent could answer the call, even if it was inbound.

- **Bug Fix:** Fixed an issue with the InitialAgentStatus sub-feature of SetAgentStatusOnSessionEnd, which would not follow the IfProfileNameIncludes condition.
- **Bug Fix:** Fixed an issue with CCP overlay where if no additional data is added, including Title, Instructions and Fields, the right pointing caret icon will be displayed for detailed form view. Now the execute button will be displayed in this case.
- **Bug Fix:** Fixed an issue with CCP overlay where the order parameter was not affecting the sorting of the CTI Actions in the overlay.
- **Bug Fix:** Fixed an issue with the CCP Element Editor where typing the CTI Action name first caused the cursor to move out of the input box.
- **Bug Fix:** Fixed an issue with the Set Agent Salesforce State CTI Flow block.

## 5.15 July 2021

When installing v5.15, please **confirm that the application was installed for admins only** (see [installation](#) for more details). If you did this by accident, then you will have to [manually edit the profiles](#) to remove the permissions to the objects and pages created by the app.

- **Feature: Guided Setup** The Guided Setup feature helps make the setup process easier. See [Guided Setup](#) for more details.
- **Feature: Chat Widget Integration for SalesForce Experience Cloud(formerly Community Cloud)**  
Added VisualForce Page component that allows you to add Amazon Connect Chat Widget in your Salesforce Experience Cloud Site.
- **Enhancement:** Changed the default audio recording component in the Contact Channel Analytics for easier setup. See [Call Recording Playback](#) for more details.
- **Enhancement:** Created the ExecuteAwsService service for simpler communication between Salesforce and AWS. **WARNING:** If you are using Contact Lens for audio recording you *must* replace your existing AwsGenerateAudioRecordingUrl named credential with the ExecuteAwsService named credential. See [here](#) for more details.
- **Bug Fix:** Fixed an issue with the lambda package that caused Contact Lens Call Recording Streaming to be broken for redacted calls.
- **Bug Fix:** Fixed an issue that caused the "Clear All Properties" CTI Flow Block to clear properties important to the CTI adpater working.
- **Bug Fix:** Added the `DISCONNECT` field to the `Initiation Method` field in Contact Trace Records.

## 5.14 June 2021

- **BugFix:** Added batch processing to CCA Case Trigger and CCA Contact Trigger.

- **Bugfix:** The issue that caused an Attribute label to not display properly in the attributes panel has been fixed.
- **Bugfix:** The issue that caused AC Queue Metrics tab's name showing blank has been fixed.
- **Bugfix:** The issue that caused the Recording Panel button to fail when a url is used for connect instance alias has been fixed.
- **Enhancement:** We now make it possible for voicemail drops to work with queue callbacks.
- **Enhancement:** You can now configure the CT Action Recording Panel's initial state using contact attributes. If you're recording your call, make sure to add an attribute named `RECORDING_STARTED` whose value is `true` in your Contact Flow.
- **Enhancement:** We have added `IfCurrentAgentState` tag to `SetAgentStatusOnSessionEnd` feature, which allows customers to condition this feature on the Agent's current state.

## 5.13 April 2021

- **Feature: CTI Actions - programmable buttons within the CCP overlay**

In this release, we have added a feature called CTI Action which are programmable buttons for your CTI Flows. Each CTI Action is a button that can be programmed to trigger a CTI Flows whose source value is "CTI Action." In addition, CTI Actions can be programmed to ask the agent for additional information via a data entry form. You can use the agent's entry in your CTI Flow with the help of "Get Payload" block. This is a great way to ask your agents to enter ad-hoc data prior to running the CTI Flow to provide additional information as part of a workflow to automate case creation, or start a customer refund process. **If you are upgrading from a previous version of the CTI Adapter, please be sure to review the additional setup steps required for CTI Actions.**

- **Feature: CTI Actions: recording API integration within the CCP overlay**

The CTI Adapter now includes integration with Connect's recording API. This feature allows the agent to control when to start and stop recording a call. Once the recording has started, they can also pause and resume it. For example, agents can pause a recording before asking for sensitive information from your customers. Once the agent stops a recording, you cannot start it again. Use pause/resume buttons after you've started recording a call to control the recording.

- **Enhancement: Voicemail Drops (beta)**

The **beta Voicemail Drops** feature now integrates with CTI Actions. In the beta, voicemail drops were loaded directly into the CCP Overlay. As of 5.13, you will need to create a CTI Action, and use the newly added "Leave a Voicemail" block in the CTI Flow where you can configure the specific voicemail drop and the quick connect name to use for the voicemail.

- **Feature: CCP Overlay: Data panel to receive data from CTI Flows.**

You can now send data from a CTI Flow to the CCP Overlay. The Data panel on CCP Overlay will display any object you pass it from "Send Data to CCP Overlay" block.

- **Feature: CTI Flow Blocks: "Start Recording" and "Stop Recording"**

With "Start Recording" and "Stop Recording" blocks, you can control the voice recording of the call within your CTI Flows.

- **Feature: CTI Flow Block: "Update Contact Attributes"**

You can now update contract attributes using CTI Flows. This block accepts a list of key-value pairs and assigns them to the currently active contact. It may come handy for passing Case id and other important information to the next agent when transferring a call.

- **Feature: CTI Flow Block: "Get Payload"**

The `payload` object contains the arguments passed to the CTI Flow. Now you will be able to use "Get Payload" block to reference a payload key as an input in other blocks on your CTI Flow.

- **Feature: CTI Flow Block: "Send Data to CCP Overlay"**

This block allows you to send data to your agent from a CTI flow. The agent will see this information in the CCP Overlay in a panel entitled "Data."

- **Feature: CTI Flow Block: "Leave a Voicemail"**

This block works with the beta Voicemail Drops feature. When you configure the `voicemailDropName` and `quickConnectName`, it will pass the contact to an IVR to leave a voicemail on the agent's behalf.

- **Feature: CTI Flow Block: "Get Salesforce Lead ID":** This block allows you to get a Salesforce lead by using a phone number.
- **Enhancement:** "Get Salesforce Contact Id" block now uses FIND syntax to search across multiple fields.
- **BugFix:** For the `SetAgentStatusOnSessionEnd` feature, it would occasionally fail if the agent hadn't interacted with the webpage. We solve this by creating a popout to monitor the agent session.
- **Enhancement:** For the `SetAgentStatusOnSessionEnd` attribute, you can now specify multiple values.
- **Enhancement:** When `SetAgentStatusOnSessionEnd` feature is enabled, you can now configure which state the agent should be shown as when they login with the `InitialAgentState` setting.

- **Enhancement:** When `SetAgentStatusOnSessionEnd` feature is enabled, you can now configure which agent to logout when all tabs are closed by setting the Status to Logout.
- **Bugfix:** Addressed issue that caused CTI Flows to be run on every open Salesforce tab.
- **Bugfix:** Addressed an issue in "Get Salesforce Contact Id" block that caused the query to fail if the phone number was in E164 format.
- **Enhancement:** Added the `onDestroy` Event to certain CTI Flow Sources

## 5.12 March 2021

- **Feature:** Added custom setting which will allow customers to enable and disable non-essential triggers (They are disabled by default now). [More details in the troubleshooting section](#)
- **Bugfix:** Addressed additional trigger issue that prevented orgs with 200k+ CCA records from updating Case and Contact records.
- **Bugfix:** Addressed issue where AC Permission sets did not include the CustomerEndpointAddress field for the ContactChannelAnalytics object.
- **Bugfix:** Addressed issue where AC Permission sets did not include the MedialessPopout page.

## 5.11 March 2021

- **Bugfix:** Addressed trigger issue that prevented community and partner users from updating Contact and Case records.

## 5.10 February 2021

- **Feature:** *Contact Control Panel (CCP) Audio Device settings* option. Admins can toggle Phone type settings and the new [Audio Devices settings](#) for agents to see on their CCP. [Audio Device settings](#) allow the agents to choose audio devices for their speaker, microphone, and ringer.
- **Feature:** *Custom Ringtone for chat*. Admins can configure a custom ringtone for chat (separate from CCP) from the CTI Adapter configuration page.
- **Enhancement:** The Salesforce built-in Cross Site Request Forgery (CSRF) protection is enabled for Visualforce pages in the CTI Adapter package which improves organizational security to protect against cross site request forgeries.
- **Bugfix:** Decision blocks no longer requires both sockets to be connected.
- **Bugfix:** Click to Dial stopped working after first use until the agent refreshed the page.
- **Bugfix:** Error that prevented Contact Lens app resources from being hosted on a different domain than the Salesforce instance.

- **Bugfix:** Error that prevented Contact Lens app from displaying intermittently when Transcribe was enabled.
- **Bugfix:** Changed the logic for the IsContactTransfer CTI Flow Block which always returned true.
- **Bugfix:** Medialess popout not closing after Salesforce tabs are closed.
- **Bugfix:** Login window did not close automatically after logging into Connect.
- **Bugfix:** Unable to upgrade the package if the Case or Contact object contained encrypted fields.

## 5.9 December 2020

- **Feature:** Contact Lens Integration
- **Feature:** Tasks Integration - Added the Amazon Connect Task Contact as a source to CTI Flow in addition to Task specific events
- **Feature:** CTI Block - Is Task Contact? - Check if the contact is a task
- **Feature:** CTI Block - Create Task Contact - Creating a new task contact with certain inputs.
- **Feature:** CTI Block - Pop Task Contact's ReferenceUrls - Pop any reference urls that are related to the task contact
- Upgraded Salesforce API to v50.0.
- **Feature update:** If you have CCP open on multiple tabs, CTI Flows will be executed only on one of them. The execution will be performed on the current tab, by default. If the agent is currently looking at a different site, a random tab will be selected to perform the execution.
- **Enhancement:** \$User.ProfileId is now available through "userProfile" property.
- **Enhancement:** CTI Flow execution timeout window has been increased to 60 seconds.
- **Feature update:** When the CCP popout is opened, we now ask for a confirmation before refreshing or closing the tab that opened it. Note that if you do close the original tab, the pop out might also be closed.
- **Bugfix:** Voicemail Drops feature has been fixed.
- **Bugfix:** CTI Flow "Open Subtab" block has been fixed.

## 5.7 November 2020

- **Feature:** Localization into 9 languages.
- **Feature:** Add callType to return fields of "Get Contact Properties" block
- **Feature:** Add formatted phone number to return fields of "Get Contact Properties" block
- **Feature:** Add script name to CTI flow definition file.
- **Feature:** Remove context from log outputs
- **Bugfix:** Return field of "Open Primary Tab" was value, not id, as specified. We now provide it in both `value` and `id` fields for backward compatibility.

- **Feature:** Make the error message shown when the execution runs too long more informative.
- **Feature:** Make sure the attributes overlay doesn't open automatically when CCP is opened.  
Documentation: "Create and pop that task" default flow is fixed.
- **Bugfix:** update return value of "Get Agent Configuration" block to match the documentation.
- **Feature:** Increase CTI Flow timeout to 10 seconds.
- **Bugfix:** remove the leading wildcard matcher in "Get Salesforce Contact Id" block query. The wildcard matcher caused performance issues with the query. Going forward make sure the phone number is an exact match to the one in file.
- **Bugfix:** Ensure "Join Strings" block does not ignore boolean false values.
- **Bugfix:** Ensure "Log to Console" block does not ignore boolean false values.
- **Feature:** Add uid field on top of the block on the canvas.
- **Bugfix:** Remove the loginWindow object from log output because it errors with "Cannot convert object to primitive value."
- **Bugfix:** ContactChannel object updates to new agent if previous agent rejected or missed a contact
- **Bugfix:** Changing status to logout now correctly logs agent out
- **Feature:** Rename "Enable Click to Dial?" to "Can Make Outbound Calls?".
- **Feature:** CTI Flow Block - math function - "Multiply"
- **Feature:** CTI Flow Block - math function - "Divide"
- **Feature:** CTI Flow Block - "Get Tab Object Map"
- **Feature:** CTI Flow Block - "Close Salesforce Tab"
- **Feature:** CTI Flow Block - "Delay"
- **Feature:** CTI Flow Block - "Get Primary Tab Ids"
- **Feature:** Improve browser log formatting.
- **Feature:** CTI Flow Block - "Get Tabs With Matching Url"
- **Feature:** *Update Connect agent status when all Salesforce tabs are closed:* You can set the agent status to a specific state if the SetAgentStatusOnSessionEnd feature is turned on and the agent's routing profile name includes the value of IfProfileNameIncludes setting, such as "On-Call." By default, the agent status is set to "Offline" if the feature is enabled and nothing is specified for IfProfileNameIncludes. If this feature is enabled, the agent will be automatically shown as available when they login to Salesforce and the CCP.
- **Feature:** CTI Flow Block - Length"
- **Feature:** CTI Flow Block - "Slice"
- **Feature:** CTI Flow Block - "Cast a Value to a Type"
- **Bugfix:** Agent is able to accept calls when Medialess is turned on.
- **Feature:** CTI Flow Block - "Get CCP Logs" Remove "Initialization" and "Browser" sources

- **Feature:** CTI Flow Block - "Clear All Properties"
- **Feature:** CTI Flow Block - "Unset Property"
- **Feature:** CTI Flow Block - "Show All Attributes"
- **Bugfix:** Attributes panel can now display attributes of transferred contacts.

## 5.4 Late September 2020

- **Feature:** You can now provide additional ad-hoc fields to "Create a Task" block. (Note: the values of these fields don't have a lookup dropdown yet.)
- **Feature:** New CTI Block! - You can now create "counters" with the "Update Counter" and read the value of your counters using "Get Counter" block.
- **Feature:** You can now get the number of open tabs from `openAgentTabs` counter.
- **Feature:** You can now compare multiple things using "Is One Of?" block in CTI Flows.
- **Feature:** New CTI Block! - You can now extract a value from a complex value, such as an array or an object, using the "Extract Value" block. (This comes handy when you retrieve a Salesforce object.)
- **Feature:** New CTI Block! - You can use the Salesforce retrieve API to fetch a record from the server by id using "Retrieve Salesforce Record" block.
- **Feature:** New CTI Block! - You can use the "Get Salesforce Contact Id" to fetch the id of a Salesforce contact by its phone number.
- **Feature:** New CTI Block! - You can now show a window alert using "Alert" block.
- **Feature:** New CTI Block! - You can now use create a complex string using string templates and multiple variables with the help of "String Template" block.
- **Bugfix:** When a screenpop is "deferred," the CTI Block used to return an inexact match and the Id field in the return value of the block would be blank. This issue has been fixed in this release.
- **Bugfix:** Presence sync is working again. The current release also reduces the wait threshold between each presence sync update from 1 second to 100ms, i.e. co-occurring events won't get lost anymore (as much).
- **Bugfix:** The encoding issue affecting "SOQL Block" has been fixed. The single quotes in the SOQL query are no longer encoded as HTML entities.
- **Bugfix:** To access the return value of another block, power users use "magic strings," e.g. `\$.actions.<blockId>.results.<fieldName>`, but these strings used to be cleared in the UI when the block is selected on the canvas. This issue is now fixed.
- **Bugfix:** The spelling of `TaskSubtype` field in "Create a Task" block has been fixed. Your TaskSubtype won't get lost anymore.
- **Bugfix:** Call recording view for a Case has been fixed.
- **Bugfix:** "Is Contact Inbound?" block is working again.
- **Bugfix:** "Is Truthy?" block now works with boolean input values.
- **Bugfix:** Salesforce UI onNavigationChange event listener is working again.

- **Bugfix:** We now alert you to change your instance alias if you try to sign in with instance alias set to "default."

## 5.3 September 2020

- **Bugfix:** Fix the issue that caused ACSFCCP\_CallRecordingTask component to not work.

## 5.2 September 2020

- **Bugfix:** Fix the issue that prevented users from creating a new record using CTI Flows in Classic.
- **Bugfix:** Fix the issue that caused the contact channel analytics to not get updated at the end of a call.
- **Bugfix:** Fix the contact channel analytics recording view.
- **Feature:** Add a CTI block called "Get Chat Message."
- **Feature:** Add a CTI block called "SOQL Query." This block executes an arbitrary SOQL statement and returns the results.

## 5.1 Late August 2020

- **Bugfix:** Ensure "Get App View" CTI Flow block doesn't break the sidebar
- **Enhancement:** Add "queueARN" field to "Dial Number" CTI Flow block
- **Bugfix:** Ensure some required CTI Flow block fields are not shown as "optional"
- **Bugfix:** Ensure "Save (or Create) a Record" block works as expected
- **Bugfix:** Fix the validation error on "CallDurationInSeconds" field in "Create a Task" block
- **Bugfix:** Fix phantom scrollbar on Windows machines
- **Bugfix:** Fix issue where copying contact attributes to clipboard doesn't work
- **Bugfix:** Fix issue where "saveLog" CTI Flow block throws an error
- **Bugfix:** Fix issue with onOffline CTI Flow event not firing
- **Bugfix:** Fix various omnichannel presence sync bugs
- **Bugfix:** Ensure the CCP default dimensions are adjusted to CCPv2 defaults
- **Feature:** Add block "Set Agent Status By Name on Connect."

## 5.0 August 2020

- **This release has new features and updates:** Please test and validate version 5.0 in your Salesforce sandbox before upgrading this in production.
- **CTI Flows:** CTI Flows replace Lightning CTI Extensions in allowing customers to build their agent workflows for Lightning and Classic via a drag and drop UI. Many of the CTI blocks are similar to the Lightning CTI Extension script API calls and can be mapped similarly. Lightning CTI Extension scripts are NOT automatically migrated to CTI Flows. When upgrading the package with existing scripts, it will

give you the option to download the existing script for reference before building your CTI Flows. We strongly recommend you validate this install/upgrade in a test environment and fully test the CTI Flows against your previous scripts functionality. Please open a support ticket if there is additional functionality you require from your current scripting implementation.

- **Security Profile improvements:** Added AC Administrator, AC Agent, and AC Manager permission sets to enforces objects access and fields level security (FLS) as per Salesforce security guideline for managed package. To access Amazon Connect Objects and fields, user should either one of Amazon Connect permission sets AC Administrator, AC Agent, and AC Manager.
- **Attributes:** Amazon Connect CCP (Contact Control Panel) in Lightning and Classic now display an overlay for showing attributes consistently.
- **AWS Secrets Manager** support for storing Salesforce credentials.
- **VPC Support:** ability to place Lambdas in VPC
- **New Salesforce API integration:** Exposed new operations in sfinvokeapi to read or create Salesforce records(query, queryOne, createChatterPost, createChatterComment, lookup\_all, delete)
- **Upgrade:** Amazon Connect Streams API bumped up to version 1.5.
- **Bugfix:** Task creation issue for non-connect users - Fixed task trigger apex code, added a validation before evaluate security access check for Amazon Connect managed package objects
- **Bugfix:** Contact interaction duration fixed.
- **Other minor bugfixes and improvements**

## 4.5 April 2020

- **This release has new features and updates:** Please test and validate version 4.5 in your Salesforce sandbox before upgrading this in production.
- **Installation / Configuration:** AC\_Administrator role has been added to manage CTI Configuration in addition to AC\_Manager and AC\_Agent. See documentation for further information.
- **API:** Updated support for CCPv2 in Classic/Console. See documentation for Call Center settings.
- **Bugfix:** Updated attribute display to resolve duplicated attributes.
- **Security:** Improved enforced Salesforce sharing model (record and field level) support.

## 4.4 March 2020

- **This release has significant new features and updates:** Please test and validate version 4.3 in your Salesforce sandbox before upgrading this in production.
- **Documentation:** Guide has been rewritten and restructured based on feedback.
- **Installation / Configuration:** Improved installation and configuration guide
- **Installation / Configuration:** Added Enhanced Agent Logout functionality to Lightning.
- **API:** Updated to the latest Amazon Connect Streams and Chat libraries
- **API:** Additional extensibility methods provided

- **Setup:** Improved Presence Sync Rule editor
- **Setup:** CTI Adapter validation is performed upon initialization and will inform the user of common misconfigurations.
- **Setup:** Additional CTI Script examples are provided.
- **Setup:** The ability to place the lightning transcript view on Task, Contact Channel, and Contact Channel Analytics object has been added.
- **Bugfix:** OmniChannel workload related data not being usable has been resolved.
- **Bugfix:** CTI Attribute issue when processing multiple pieces of contact attribute data has been resolved.
- **Bugfix:** The call transcript now scrolls within a fixed region rather than consuming vertical space.
- **Bugfix:** Finding Task Record in Classic/Console fixed.
- **Security:** The ability to create, update, and delete AC\_CtiAdapter, AC\_CtiScript, AC\_CtiAttribute and AC\_PresenceSyncRule records has been removed from the AC\_Agent permission set.

## 4.2 December 2019

- **This release has significant new features and updates:** Please test and validate version 4.2 in your Salesforce sandbox before upgrading this in production.
- **Installation / Configuration:** Improved installation and configuration guide
- **API:** Lightning CCP Extension scripts and reference guide
- **Setup:** A default CTI adapter and scripts for click-to-dial, voice contact pop, and chat contact pop are not included in the base installation.
- **Editor:** A more robust script editor is included for use in CTI adapter / script configuration.
- **Bugfix:** SSO issue has been resolved

## 4.1 November 2019

- **This release has significant new features and updates:** Please test and validate version 4.0 in your Salesforce sandbox before upgrading this in production. As we look to simplify documentation, this release introduces a new [Amazon Connect CTI Adapter v4 for Salesforce Lightning](#) setup and installation guide. Please review this setup guide in detail to see all the latest changes for Lightning CTI Adapter installations.
- **Classic and Console CTI setup guide:** Please use the [Amazon Connect CTI Adapter v4 for Salesforce Classic](#) setup and installation guide for Classic and Console CTI Adapter installations.
- **Amazon Connect Chat and Contact Control Panel (CCP) v2:** support for Amazon Connect chat and integration of CCP v2. CCP v2 is required for Lightning CTI Adapter installations. CCP v1 is still supported for Classic / Console CTI Adapter installations.
- **Historical and Real-Time Reporting:** updated historical metric functionality with additional metrics and dashboards. Added real-time metrics and dashboards. This functionality requires an update of

AWS Serverless Lambda functions for Salesforce.

- **Lightning CCP Extensions and configuration:** We have revamped the approach for the Call Center config and have added a new AC CTI Adapters Lighting config page.
- **High Velocity Sales:** CTI Adapter integration supported for Salesforce High Velocity Sales product.

## 3.11 August 2019

- Added support for Salesforce platform encryption
- Fixed issue with logout action not re-rendering the sign-in button
- Fixed documentation issue regarding presence sync sources
- Fixed documentation issue regarding recorded conversations security configuration
- Updated documentation for presence sync rule configuration

## 3.10 July 2019

- Added support for enabling / disabling softphone popout
- Added support for previousWorkloadPct and newWorkloadPct operands in presence sync rules
- Fixed issue with presence sync rules loading

## 3.9 May 2019

- Added support for Opportunities for Task association
- Fixed issue with presence sync rules loading
- Fixed issue with state setting when no presence rules defined
- Fixed issue with Task pop in specific config scenarios

## 3.87 May 2019

- NOTE: The "mini" Task page has been deprecated in this release of the adapter. Users requiring custom functionality may use the page and controller code included in this document as a starting point for a custom Task page of their design.
- Added rules-based configuration of agent presence state between Amazon Connect and Salesforce
- Added enhanced contact attribute display and configuration including clickable hyperlinks, key-value display options, and key-value formatting
- Added option to enable/disable automatic call duration updating on the Task object
- Added functionality to directly pop associated record on click-to-dial avoiding search and pop behavior
- Fixed issue with callback Task pops not occurring in some cases

## **3.7 May 2019**

- Unpublished version

## **3.6 April 2019**

- NOTE: Automatic association of accounts, contacts, leads, or contacts to call activity (Task) records based upon tab navigation has been deprecated. Automatic association of accounts, contact, leads or contacts to call activity (Task) records when a single match is made via ANI lookup OR by contact attribute is supported.
- NOTE: The "mini" Task page will be deprecated in future releases. The default setting is now "DEFAULT\_TASK\_LAYOUT".
- NOTE: Automatic pop of Tasks in an object's (Account, Contact, Lead, Case) subtab is only supported with the object (Account, Contact, Lead, Case) is open in a primary tab.
- Added support for queued callback calls
- Added support for specifying call types for which to create Task objects
- Added support for enabling / disabling automatic call duration updates of call activity (Task) objects.
- Fixed issue with secondary click-to-dial in console mode
- Fixed issue with Task pop occurring during call connecting when set to start of call
- Fixed issue with call context data remaining after a call has ended
- Fixed issue with contact attributes being displayed after a call has ended or has been missed
- Fixed issue with click to dial with ani match to multiple Salesforce objects

## **3.1 March 2019**

- Added ability to specify DEFAULT\_TASK\_LAYOUT for the Call Activity Page setting
- Added ability to specify static values used during initial task creation
- Added support for Standard Lightning navigation
- Added support for secondary click-to-dial in Console mode
- Fixed issue with primary tab closing upon call activity (Task) save
- Fixed issue with Case handling and Task association

## **3.0 February 2019**

- Removed requirement for Omni-channel to be enabled to perform installation
- Added ability to specify custom ringtone
- Added ability to enable or disable the automatic creation of task (call activity) objects
- Added ability to specify a page to select creation of Lead or Contact when an object with matching ANI is not found

- Added ability specify task (call activity) object pop at the start of call, end of call, or to disable pop
- Added ability to edit task (call activity) subject
- Added automatic setting of whold and whatId on task (call activity) objects
- Added ability to specify a custom task pop page
- Added ability to include agent friendly name when creating task (call activity) objects for calls delivered to agent queues
- Added ability to add third call participant via click to dial
- Added call attributes display in classic mode
- Fixed call attributes display being persistent when no attributes are defined
- Added ability for automatic task creation on outbound calls
- Upgraded API to amazon connect streams 1.3
- Added support for Lightning Flow Setup

## Further Reading

For additional information, see the following:

- Amazon Connect CTI Adapter for Salesforce: <https://appexchange.salesforce.com/appxListingDetail?listingId=a0N3A00000EJH4yUAH>
- Amazon Connect User Guide: <https://docs.aws.amazon.com/connect/latest/userguide/using-amazon-connect.html>
- Amazon Connect Admin Guide: <https://docs.aws.amazon.com/connect/latest/adminguide/what-is-amazon-connect.html>
- Amazon Connect API Reference:  
<https://docs.aws.amazon.com/connect/latest/APIReference/Welcome.html>
- Amazon Connect Release Notes: <https://docs.aws.amazon.com/connect/latest/adminguide/amazon-connect-release-notes.html>
- Amazon Connect FAQ: <https://aws.amazon.com/connect/faqs>

 Edit this page

## Key Benefits and Requirements

# Key Benefits

The key benefits of the adapter include:

- **Amazon Connect Voice and Chat:** ability to take voice and chat calls in the salesforce agent experience and advanced screen pop on the incoming phone number, case, account or contact. Agents can also click to dial a number within their contacts.
- **Single Sign-On support:** seamless login with Connect and Salesforce with any standard SAML 2.0 provider.
- **IVR data dips:** easily inject salesforce data into the customer experience. Businesses can offer personalized greetings and dynamic routing based on customer information.
- **Call disposition and activity management:** configure post call workflows to support your Agent's after call work.
- **Omnichannel Presence Sync:** enable Salesforce chat, sms and email to share presence with Amazon Connect. Amazon Connect will know when an agent is handling a Salesforce chat and make them unavailable for a voice call, and vice versa.
- **Call logging and recording:** Voice and chat interactions can be logged as Salesforce activities and Amazon Connect call recordings can be played within the Salesforce.
- **Contact center real-time reports:** display real-time contact center metrics within Salesforce from Amazon Connect.
- **Contact center historical reports:** display historical contact center metrics within Salesforce from Amazon Connect.
- **Lightning CCP extensions:** easily customize and extend behaviors within the CTI Adapter such as screenpop and activity management. Default scripts along with the API guide provide key examples.
- **High-velocity sales (HVS):** using Salesforce HVS, enable your inside sales team to follow a repeatable pre-define sales cadence for your business. It enables sales managers and reps to work on prioritize list of prospects and follow best sequence of sales outreach activities defined by your sales process.

We recommend that you initially install the package into your Salesforce sandbox. After the package is installed, you can configure your Salesforce Call Center configuration within Salesforce.

The next step is to allowlist your Salesforce Visualforce domain within your Amazon Connect Approved Origins. This allows cross-domain access to your Amazon Connect instance.

If you want to quickly get setup with basic CTI capabilities in Lightning, we suggest you walk through our Salesforce trailhead available at <https://sfdc.co/Amazon-Connect>.

# Requirements

To successfully create, configure, and implement the Amazon Connect CTI Adapter for Salesforce, you must ensure that the requirements and prerequisites described in this section are in place before you start.

## Prerequisites

To install the Amazon Connect CTI package, you must:

1. Have a running instance of Salesforce Classic, Salesforce Console, or Lightning Experience
2. Create an Amazon Connect instance (<https://aws.amazon.com/connect/>)

## Browser Compatibility

Amazon Connect requires WebRTC to enable soft-phone voice media stream and Websockets to enable soft-phone signaling. Consequently, users are required to use the latest version of either Google Chrome or Mozilla Firefox. For more information, please see the Amazon Connect documentation (<https://aws.amazon.com/connect/resources/#Documentation>)

## Salesforce Lightning Support

Please note that following features are currently not supported in Salesforce Lightning:

- Outbound Campaign Calls using Salesforce Omni can be routed to the agent, but the automated screen pops and the dialing of the phone number will not work. The agent will have to click on the record links to open the records and use Salesforce's Click-to-Dial feature to make the phone call.
- Lightning Standard Navigation is not currently supported in App Options for the Amazon Connect CTI Adapter. Console navigation is fully supported.

 [Edit this page](#)

# Installing the CTI Adapter and Salesforce Lambdas

# Amazon Connect Salesforce CTI Adapter Managed Package

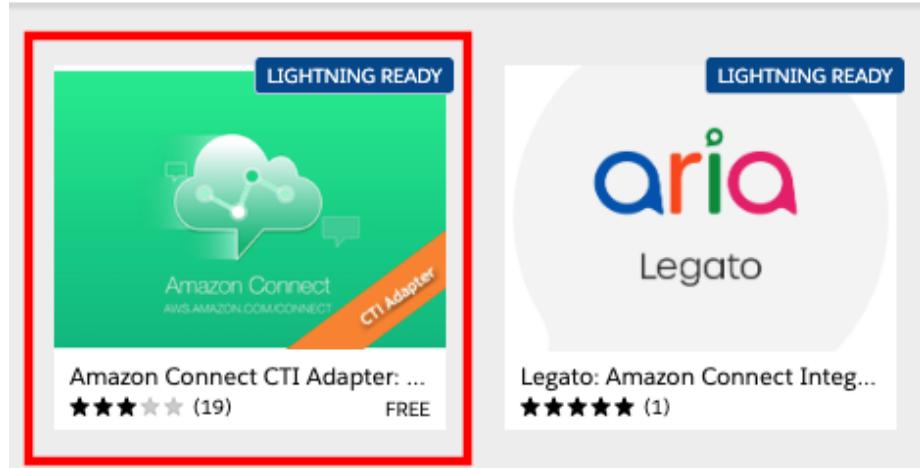
The Amazon Connect CTI Adapter for Salesforce provides the core integration between the two platforms. It embeds the Amazon Connect Contact Control Panel into Salesforce which provides telephony control as well as access to event data coming from Amazon Connect. Using this adapter, you can configure screen pops based on customer data, automate contact center telephony functions like click-to-dial, and establish presence syncing rules for integration with Salesforce Omni-Channel. This is the base of the integration.

The first step in the deployment of the integration is to install the Amazon Connect CTI Adapter managed package from the AppExchange Marketplace.

1. Log in into your Salesforce org and go to **Setup**
2. In the **Quick Find**, type **AppExchange** (the results will populate without hitting enter)
3. Select **AppExchange Marketplace** from the links provided
4. In the AppExchange window, enter **Amazon Connect** into the **Search AppExchange** field and press enter
5. In the **Search Results**, select **Amazon Connect CTI Adapter**

[◀ BACK](#)  
Search Results for "Amazon Connect"

48 Apps · Sorted by Relevance



6. On the **Amazon Connect CTI Adapter** detail page, select **Get It Now**

< BACK

## Amazon Connect CTI Adapter: CTI | Contact Center | IVR | ACD | Call Recording

by Amazon Web Services

Bring the Power of Intelligent CTI to Salesforce Service Cloud



★★★★★

Free



DETAILS

REVIEWS

PROVIDER



Amazon Connect CTI Adapter for Salesforce Overview and Demo



### Highlights

Setting up Amazon Connect is easy. With only a few clicks in the AWS Management Console, agents can take calls within minutes. The drag-and-drop interface makes it easy to build complex contact center flows.

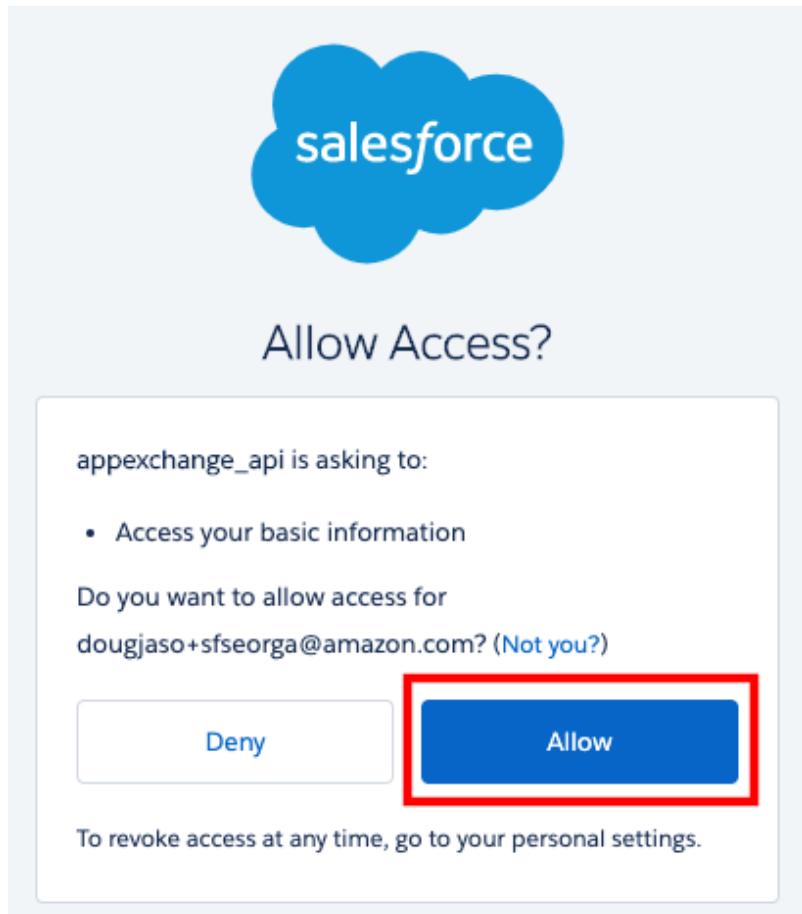
### Contact Information

<https://aws.amazon.com/contact-us/>

Watch Demo

Get It Now

7. If you are presented with the Log In to AppExchange screen, select **Open Login Screen**. You should then be presented with an Allow Access Screen. Choose **Allow**



8. On the **Where do you want to install Amazon Connect CTI Adapter** page, choose the **Install Here** button in the **Install in This Org** section

Where do you want to install Amazon Connect CTI Adapter: CTI | Contact Center | IVR | ACD | Call Recording?

Before you install in a production org, we recommend testing in a sandbox first.

Install in This Org

Get going in the org where you're logged in right now.

**Install Here**

Install in a Sandbox Org

Test in a copy of a production org.

**Install in Sandbox**

**Cancel**

9. On the **Confirm installation details** screen, fill out the **Tell us about yourself** form, check the box to **agree with the terms and conditions**, and optionally select the box to **allow the provider to contact you**. Then select **Confirm and Install**

I have read and agree to the [terms and conditions](#).

Salesforce.com Inc. is not the provider of this application but has conducted a limited security review. Please [click here](#) for detailed information on what is and is not included in this review.

Allow the provider to contact me by email, phone, or SMS about other products or services I might like

**Cancel**

**Confirm and Install**

10. Select **Install for Admins Only**, then choose **Install**. **THIS SELECTION IS VERY IMPORTANT** - if you select the wrong option, then standard users may have access to objects and pages that they shouldn't have access to.



## Install Amazon Connect - Universal Package

By

Install for Admins Only

Install for All Users

Install for Specific Profiles...

**Install**

**Cancel**

11. The CTI Adapter will take some time to install. While it installs, you will be presented with the **This app is taking a long time to install** screen.

12. Choose **Done**.

## aws Install Amazon Connect CTI Adapter: CTI | Contact Center | IVR | ACD | Call Recording

By Amazon Web Services



**This app is taking a long time to install.**

You will receive an email after the installation has completed.

**Done**

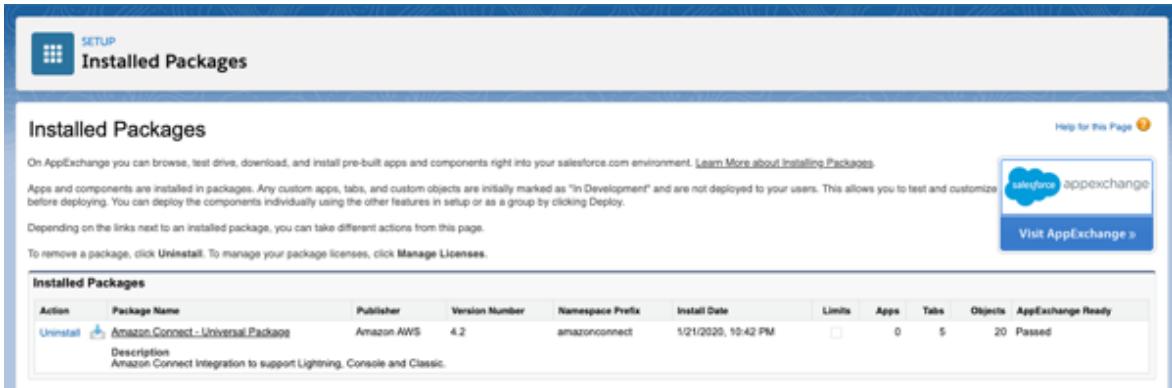
13. Once you receive confirmation that the **installation has completed** via email, return to the browser

14. Close the **Amazon Connect CTI Adapter** detail page (if still open)

15. In Quick Find, enter **Installed**, then select Installed Packages from the result

The screenshot shows the 'Quick Find' interface with a search bar containing the text 'Installed'. Below the search bar, there is a list of results. The first result, 'Installed Packages', is highlighted with a red box. The rest of the interface includes a navigation bar with 'Setup', 'Home', and 'Object' tabs, and a sidebar with sections like 'Apps' and 'Packaging'.

16. Once the **Installed Packages** page opens, validate that the **Amazon Connect -- Universal Package** is installed



The screenshot shows the 'Installed Packages' section of the Salesforce Setup. At the top, there's a message about AppExchange and a link to 'Learn More about Installing Packages'. Below that, a note says 'Apps and components are installed in packages. Any custom apps, tabs, and custom objects are initially marked as "In Development" and are not deployed to your users. This allows you to test and customize before deploying. You can deploy the components individually using the other features in setup or as a group by clicking Deploy.' There's also a note about removing packages and managing licenses. On the right, there's a 'Visit AppExchange' button. The main table lists one package:

Action	Package Name	Publisher	Version Number	Namespace Prefix	Install Date	Limits	Apps	Tabs	Objects	AppExchange Ready
Uninstall	Amazon Connect - Universal Package	Amazon AWS	4.2	amazonconnect	1/21/2020, 10:42 PM		0	5	20	Passed

Description: Amazon Connect Integration to support Lightning, Console and Classic.

## Amazon Connect Salesforce Lambda package

The Amazon Connect Salesforce Lambda package adds considerable capability to the integration. It includes data connectivity between Amazon Connect and Salesforce for typical tasks like lookups, case creation, and updates. Additionally, it adds new features like real-time and historical data imports, contact trace record imports, recording import, transcription, and contact analytics functions. These capabilities are configurable and can be activated or deactivated on a call-by-call basis.

The Amazon Connect Salesforce Lambda package is delivered via the AWS Serverless Application Repository. The AWS Serverless Application Repository enables you to quickly deploy code samples, components, and complete applications. Each application is packaged with an AWS Serverless Application Model (SAM) template that defines the AWS resources used. There is no additional charge to use the Serverless Application Repository - you only pay for the AWS resources used in the applications you deploy.

1. In a new browser tab, login to the [AWS console](#)
2. Make sure you are in the same region as your Amazon Connect instance
3. Once you have selected the region, navigate to the [Amazon Connect Console](#)
4. Verify that the Amazon Connect instance that you wish to configure is listed
5. Once you have verified your Amazon Connect instance, Open the [Serverless Application Repository Console](#)
6. In the left navigation, select **Available Applications**

# Serverless Application Repository

X

## Available applications

## Published applications

7. In the search area, make sure that **Public applications** is selected, check the box for **Show apps that create custom IAM roles or resource policies**, and enter **Salesforce** in the search field, this will automatically filter the available packages

The screenshot shows the 'Available applications' section of the Serverless Application Repository. At the top, there are two tabs: 'Public applications (4)' (which is selected) and 'Private applications'. Below the tabs is a search bar containing the text 'Salesforce'. Underneath the search bar is a checked checkbox labeled 'Show apps that create custom IAM roles or resource policies'. The main area displays a list of applications, with the third item, 'AmazonConnectSalesForceLambda', highlighted by a red box.

8. Select AmazonConnectSalesForceLambda

The screenshot shows the details page for the 'AmazonConnectSalesForceLambda' application. The application title is 'AmazonConnectSalesForceLambda'. Below it, a note says 'Creates custom IAM roles or resource policies'. A description states: 'The AWS Serverless application package contains a set of common Lambda functions to be used by Amazon Connect to interact with Salesforce, allowing lookup, create and update operations for different Salesforce objects, like Contacts and Cases.' The application has several tags: 'Integration', 'Connect', 'Amazon', 'Salesforce', and 'AmazonConnectSalesforceLambda'. It also has deployment statistics: '26 deployments' and '685 deploy...'. To the right, other applications are listed: 'salesforce-api-access-manager-monitor-logger' and 'alexa-salesforce-notes-sample'. The 'alexa-salesforce-notes-sample' application is associated with 'Alexa for Business' and has '46 deployments'.

9. When the Application loads, scroll down to the **Application settings** section

10. If you would like to use the Guided Setup feature, **don't change any parameters in the template** and select **Deploy**, and wait for the stack to finish deployment. Then, follow the section below on setting up the ExecuteAwsService named credential. If you are not using the Guided Setup feature, navigate to [here](#) and follow the instructions (skipping the rest of the instructions on the page).

## Deployment status for serverlessrepo-SFConsolidatedLambdaPackage

[Create a new app](#)[Test app](#)

Your application has been deployed

Review the application's README for what to do next.

[Permissions](#)[Resources](#)[View CloudFormation Stack](#)

## Setting up the ExecuteAwsService Named Credential

The ExecuteAwsService Named Credential is the entrypoint for the CTI Adapter to communicate with your AWS account. The Apex code uses the Named Credential to call the `sfExecuteAwsService.py` lambda, which uses boto3 to make changes in and retrieve data from your AWS account. Setting up this Named Credential is **not required** if you do not wish to use the features that rely on it (Guided Setup and Contact Lens). In addition, you can alter the permissions given to the `sfExecuteAwsService` lambda to match your security requirements (NOTE: if you choose to do so, do so after you configure up the lambdas as some permissions are added/removed based on how the lambdas are configured).

Before you create the ExecuteAwsService Named Credential, **confirm that the application was installed for admins only**. If not, then standard users may be able to invoke methods that call named credentials. If you did this by accident, then you will have to [manually edit the profiles](#) to remove the permissions to the objects and pages created by the app.

### Install Amazon Connect - Universal Package

By

Install for Admins Only     Install for All Users     Install for Specific Profiles...

[Install](#)    [Cancel](#)

1. Navigate to the IAM console in your AWS account, select the **Users** tab, and select **Add Users** to create a new user.

Identity and Access Management (IAM)

Introducing the new Users experience  
We've redesigned the Users experience to make it easier to use. Let us know what you think.

IAM > Users

IAM users (7) [Info](#)  
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

[Add users](#)

User name	Groups	Last activity	MFA	Console last sign-in
user1	group1	2023-10-01 12:00:00	N/A	2023-10-01 12:00:00
user2	group2	2023-10-01 12:00:00	N/A	2023-10-01 12:00:00
user3	group3	2023-10-01 12:00:00	N/A	2023-10-01 12:00:00
user4	group4	2023-10-01 12:00:00	N/A	2023-10-01 12:00:00
user5	group5	2023-10-01 12:00:00	N/A	2023-10-01 12:00:00
user6	group6	2023-10-01 12:00:00	N/A	2023-10-01 12:00:00
user7	group7	2023-10-01 12:00:00	N/A	2023-10-01 12:00:00

2. Give your IAM user a name (like `sfExecuteAwsServiceIamUser`). For the Access type, select **Programmatic access**. Click Next.

3. Select **Attach existing policies directly**, then search for and select `invokeSfExecuteAWSServicePolicy`.

### Add user

1    2    3    4    5

Set permissions

Add user to group    Copy permissions from existing user    Attach existing policies directly

Create policy

Filter policies ▾    sfexecute

Policy name ▾	Type	Used as
<input checked="" type="checkbox"/> invokeSfExecuteAWSServicePolicy	Customer managed	None

4. Click next until the user is created. In the final screen, copy down the **Access Key ID** and the **Secret Access Key**.

Access key ID	Secret access key
[REDACTED]	[REDACTED]

5. Next, navigate to the Lambda Console. In the functions tab, search for `sfExecuteAWSService`.

Lambda > Functions

Functions (36)    Last fetched 20 seconds ago    Actions ▾    Create function

Filter by tags and attributes or search by keyword    2 matches    < 1 >    ⚙

"sfExecuteAWSService" X    Clear filters

Function name	Description	Runtime	Code size	Last modified
[REDACTED]-sfExecuteAWSService-[REDACTED]		Python 3.7	3.8 MB	22 days ago

6. Copy down the name of the function. Make sure you are not copying any extra characters.

7. Navigate to your setup section of your Salesforce instance, and search for *Named Credentials*.



Search Setup

Setup

Home

Object Manager ▾

named cr

Security

Named Credentials

Didn't find what you're looking for?  
Try using Global Search.



SETUP

## Named Credentials

## Named Credentials

A named credential specifies a callout endpoint and its required authentication parameter

View: All ▾ Create New View

New Named Credential

8. Select **New Named Credential**. For the values in the next screen, enter the following:

- **Label:** ExecuteAwsService
- **URL:** `https://lambda.{insert AWS region}.amazonaws.com/2015-03-31/functions/{insert lambda function name (copied above)}/invocations`
- **Identity Type:** Named Principle
- **Authentication Protocol:** AWS Signature Version 4
- **AWS Access Key ID:** Access Key ID copied above
- **AWS Secret Access Key:** Secret Access Key
- **AWS Region:** {insert AWS region}
- **AWS Service:** lambda

[Save](#)[Cancel](#)Label Name URL 

#### ▼ Authentication

Certificate  Identity Type Authentication Protocol AWS Access Key ID AWS Secret Access Key AWS Region AWS Service 

9. Click **Save**.

After following the above instructions, follow [these instructions](#) to navigate to the Guided Setup feature.

[!\[\]\(f809fcc3c44d8d5d604b15b5c66db369\_img.jpg\) Edit this page](#)

# Setting Up The CTI Adapter Using Guided Setup

## Guided Setup

### Provision Amazon Connect Instance?

This setting will provision an Amazon Connect instance in your AWS account. You cannot provision an instance the same time you configure the Adapter or the Lambdas.



### Set up Amazon Connect Salesforce CTI Adapter?

This setting will configure the Salesforce CTI Adapter in your Salesforce instance.



### Set up Amazon Connect Salesforce Lambdas?

This setting will help you set up the Amazon Connect Salesforce Lambdas in your AWS account.

[Next](#)

In order to navigate to the Guided Setup feature, perform the following steps (NOTE: If you are not an admin user then you must first add yourself to the AC\_Administrator permission set, see [here](#) for more details):

1. Navigate to the Setup section in your Salesforce instance.

2. Search for Visualforce Pages, and select **AC\_GuidedSetup**.

3. Select **Preview**.

# Guided Setup Prerequisites

The below sections are linked to from the Guided Setup feature. Only perform the below steps when the Guided Setup feature links to them.

## Create Named Credential

See [here](#) for instructions on setting up the Named Credential.

## Create Connected App

The Lambda function access Salesforce using the Salesforce REST API. To get access to the environment, a Connected App must be configured with OAuth settings enabled.

1. Log in to Salesforce

2. Navigate to Setup > Create > Apps

### Apps

Help for this Page

An app is a group of tabs that work as a unit to provide functionality. Users can switch between apps using the app drop-down menu at the top-right corner of every page.

You can customize existing apps to match the way you work, or build new apps by grouping standard and custom tabs.

Apps				Quick Start	New	Reorder	Apps Help
Action	App Label	Console	Custom	Description			
Edit	App Launcher	<input type="checkbox"/>	<input type="checkbox"/>	App Launcher tabs			
Edit	Community	<input type="checkbox"/>	<input type="checkbox"/>	Salesforce CRM Communities			
Edit	Content	<input type="checkbox"/>	<input type="checkbox"/>	Salesforce CRM Content			
Edit	Marketing	<input type="checkbox"/>	<input type="checkbox"/>	Best-in-class on-demand marketing automation			
Edit	Platform	<input type="checkbox"/>	<input type="checkbox"/>	The fundamental Lightning Platform			
Edit	Sales	<input type="checkbox"/>	<input type="checkbox"/>	The world's most popular sales force automation (SFA) solution			
Edit	Salesforce Chatter	<input type="checkbox"/>	<input type="checkbox"/>	The Salesforce Chatter social network, including profiles and feeds			
Edit	Sample Console	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(Salesforce Classic) Lets agents work with multiple records on one screen			
Edit	Service	<input type="checkbox"/>	<input type="checkbox"/>	Manage customer service with accounts, contacts, cases, and more			
Edit	Site.com	<input type="checkbox"/>	<input type="checkbox"/>	Build pixel-perfect, data-rich websites using the drag-and-drop Site.com application, and manage content and published sites.			

Subtab Apps			Subtab Apps Help
Action	App Label	Description	
Edit	Profile (Others)	The tabs displayed when users view someone else's profile	
Edit	Profile (Self)	The tabs displayed when users view their own profile	

Connected Apps			Connected Apps Help
Action	Connected App Name	Description	Version

3. Click on the "New" button for the Connected Apps at the bottom of the page

4. In the following form, fill out the Connected App Name, API Name and Contact Email with values of your choice. We recommend "Amazon Connect Integration" as the Connected App Name and the default value for the API name.

# New Connected App

## Basic Information

Connected App Name	<input type="text" value="Amazon Connect Integration"/>
API Name	<input type="text" value="Amazon_Connect_Integration"/>
Contact Email	<input type="text"/>

5. Select the checkbox next to "Enable OAuth Settings" as shown below.

## ▼ API (Enable OAuth Settings)

Enable OAuth Settings

6. Ensure the Callback URL is set to <https://www.salesforce.com>

## API (Enable OAuth Settings)

Enable OAuth Settings	<input checked="" type="checkbox"/>
Enable for Device Flow	<input type="checkbox"/>
Callback URL	<input type="text" value="https://www.salesforce.com"/>

7. Ensure Selected OAuth Scopes has the following values selected:

- a. Access the identity URL service (id, profile, email, address, phone)
- b. Manage user data via APIs (api)

8. Select the checkbox "Require Secret for Web Server Flow", and the checkbox "Require Secret For Refresh Token Flow"

## ▼ API (Enable OAuth Settings)

Enable OAuth Settings	<input checked="" type="checkbox"/>						
Enable for Device Flow	<input type="checkbox"/>						
Callback URL	<input type="text" value="https://www.salesforce.com"/>						
Use digital signatures	<input type="checkbox"/>						
Selected OAuth Scopes	<table><tr><td><b>Available OAuth Scopes</b></td><td><b>Selected OAuth Scopes</b></td></tr><tr><td><input type="checkbox"/> Access Analytics REST API Charts Geodata resources (eclair_api) <input type="checkbox"/> Access Analytics REST API resources (wave_api) <input type="checkbox"/> Access Connect REST API resources (chatter_api) <input type="checkbox"/> Access Lightning applications (lightning) <input type="checkbox"/> Access Visualforce applications (visualforce) <input type="checkbox"/> Access chatbot services (chatbot_api) <input type="checkbox"/> Access content resources (content) <input type="checkbox"/> Access custom permissions (custom_permissions) <input type="checkbox"/> Access unique user identifiers (openid) <input type="checkbox"/> Full access (full)</td><td><input type="checkbox"/> Access the identity URL service (id, profile, email, address, phone) <input type="checkbox"/> Manage user data via APIs (api)</td></tr><tr><td><input type="button" value="Add"/> <input type="button" value="Remove"/></td><td></td></tr></table>	<b>Available OAuth Scopes</b>	<b>Selected OAuth Scopes</b>	<input type="checkbox"/> Access Analytics REST API Charts Geodata resources (eclair_api) <input type="checkbox"/> Access Analytics REST API resources (wave_api) <input type="checkbox"/> Access Connect REST API resources (chatter_api) <input type="checkbox"/> Access Lightning applications (lightning) <input type="checkbox"/> Access Visualforce applications (visualforce) <input type="checkbox"/> Access chatbot services (chatbot_api) <input type="checkbox"/> Access content resources (content) <input type="checkbox"/> Access custom permissions (custom_permissions) <input type="checkbox"/> Access unique user identifiers (openid) <input type="checkbox"/> Full access (full)	<input type="checkbox"/> Access the identity URL service (id, profile, email, address, phone) <input type="checkbox"/> Manage user data via APIs (api)	<input type="button" value="Add"/> <input type="button" value="Remove"/>	
<b>Available OAuth Scopes</b>	<b>Selected OAuth Scopes</b>						
<input type="checkbox"/> Access Analytics REST API Charts Geodata resources (eclair_api) <input type="checkbox"/> Access Analytics REST API resources (wave_api) <input type="checkbox"/> Access Connect REST API resources (chatter_api) <input type="checkbox"/> Access Lightning applications (lightning) <input type="checkbox"/> Access Visualforce applications (visualforce) <input type="checkbox"/> Access chatbot services (chatbot_api) <input type="checkbox"/> Access content resources (content) <input type="checkbox"/> Access custom permissions (custom_permissions) <input type="checkbox"/> Access unique user identifiers (openid) <input type="checkbox"/> Full access (full)	<input type="checkbox"/> Access the identity URL service (id, profile, email, address, phone) <input type="checkbox"/> Manage user data via APIs (api)						
<input type="button" value="Add"/> <input type="button" value="Remove"/>							
Require Secret for Web Server Flow	<input checked="" type="checkbox"/>						
Require Secret for Refresh Token Flow	<input checked="" type="checkbox"/>						
Introspect All Tokens	<input type="checkbox"/>						
Configure ID Token	<input type="checkbox"/>						
Enable Asset Tokens	<input type="checkbox"/>						
Enable Single Logout	<input type="checkbox"/>						

9. Click "Save" at the bottom of the screen.

10. Click "Continue" on the next screen

## New Connected App

Allow from 2-10 minutes for your changes to take effect on the server before using the connected app.

[Continue](#) [Cancel](#)

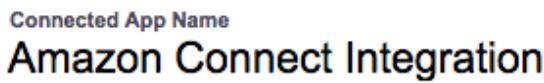
11. Once the app has been created, on the app's detail screen, please copy the "Consumer Key" value to your installation notes



API (Enable OAuth Settings)  
Consumer Key: 3MVG9TSaZ8f...  
Consumer Secret: bOcgUMSvusvy  
Consumer Secret: [Click to reveal](#)

12. Select "Click to reveal" next to Consumer Secret and record this value to "Consumer Secret" in your installation notes.

13. Click "Manage" at the top of the page



Connected App Name  
**Amazon Connect Integration**

[« Back to List: Custom Apps](#)

[Edit](#) [Delete](#) [Manage](#)

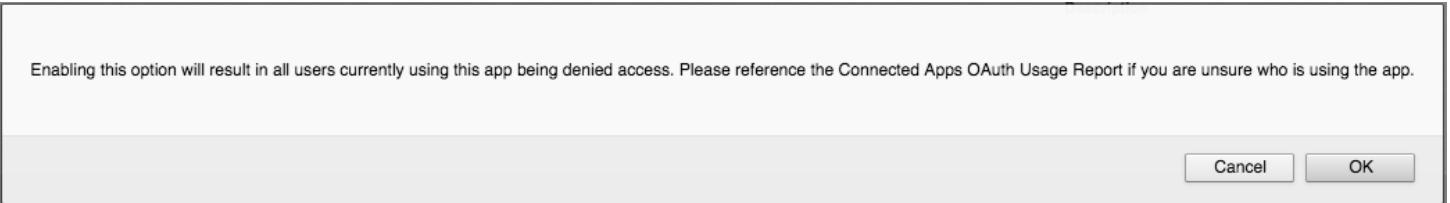
14. On the page that appears, click "Edit Policies"

15. Set "Permitted Users" to "Admin approved users are pre-authorized"



**OAuth policies**  
Permitted Users: Admin approved users are pre-authorized

16. Click "OK" on the pop-up dialog:



Enabling this option will result in all users currently using this app being denied access. Please reference the Connected Apps OAuth Usage Report if you are unsure who is using the app.

[Cancel](#) [OK](#)

17. Set "IP Relaxation" to "Relax IP restrictions"



IP Relaxation: Relax IP restrictions

18. Click "Save"

## Guided Setup Additional Instructions

The below sections are linked to from the Guided Setup feature. Only perform the below steps when the Guided Setup feature links to them.

# Retrieve Amazon Connect Instance Url

1. Navigate to the [Amazon Connect Console](#)
2. Select your Instance Alias
3. On the Overview page for your instance, copy the Login URL (if your Amazon Connect instance uses the `https://(instancename).awsapps.com/connect/login` domain, then remove everything after ".com"):

The screenshot shows the 'Account overview' section of the Amazon Connect console. Under 'Access information', it displays the 'Access URL' as <https://guidedsetuptest-instance-w3dgh2.my.connect.aws>. The URL is highlighted with a blue box.

## Add users to the Call Center

1. Log in into your Salesforce org and go to **Setup**
2. In the **Quick Find** field, enter **Call Center**, then select **Call Centers** from the result list



A screenshot of the Salesforce Setup hierarchy. The path is: Feature Settings > Service > Call Center > Call Centers. The 'Call Centers' button is highlighted with a red border.

- Feature Settings
- Service
- Call Center
- Call Centers

3. If you see the **Say Hello to Salesforce Call Center** page, select **Continue**
4. Select **AC Lightning Adapter**

# All Call Centers

A call center corresponds to a single computer-telephony integration (CTI) system already in place. You can manage multiple call centers from the Call Center features.

Action	Name ↑
Edit   Del	AC Lightning Adapter
Edit   Del	Amazon Connect CCP Adapter Classic 3.11
Edit   Del	Amazon Connect CCP Adapter Console 3.11

5. On the **AC Lightning Adapter** detail page, select **Edit**.
6. On the **AC Lightning Adapter: Manage Users** page, select **Add More Users**.
7. Set filters (if desired) and then choose **Find**.
8. Select the checkbox next to the user to add, then choose **Add to Call Center**.

Add to Call Center		
<input type="checkbox"/>	Full Name	Alias
<input checked="" type="checkbox"/>	Douglas Jason	JDou
<input type="checkbox"/>	User_Integration	Integ
<input type="checkbox"/>	User_Security	SEC
	Username	
		integration@00d69000004zrnwseak.com
		insightssecurity@00d69000004zrnwseak.com
	Role	Profile
		System Administrator
		Analytics Cloud Integration User
		Analytics Cloud Security User

9. Repeat the steps to add more users.

## Add users to a Permission Set

All users must be assigned the required permission set to access Salesforce metadata. The Amazon Connect CTI Adapter includes two Permission Sets, one for agents and one for managers, that grant users the appropriate access for their role. More information on assigning user permissions can be found in the [Salesforce help documentation](#).

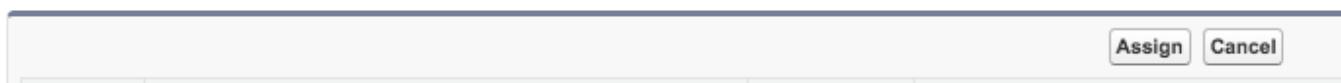
1. Log in into your Salesforce Org.
2. Navigate to **Setup > Manage Users > Permission Sets**.

Permission Sets	
On this page you can create, view, and manage permission sets.	
In addition, you can use the Salesforce mobile app to assign permission sets to a user. Download Salesforce from the App Store or Google Play: <a href="#">iOS</a>   <a href="#">Android</a>	
<a href="#">All Permission Sets</a>  <a href="#">Edit</a>   <a href="#">Delete</a>   <a href="#">Create New View</a>	
Action	Permission Set Label ↑
<input type="checkbox"/>	Toolkit for Amazon Connect - Agent
<input type="checkbox"/>	Toolkit for Amazon Connect - Manager
Description	Permissions to all components that an agent would need to use the toolkit.
Description	Permissions required to access the toolkit reports.

2. Choose **AC\_Manager**.

## Assign Users All Users

View: All Users  Edit | Create New View



3. Choose **Manage Assignments**.

4. Choose **Add Assignments**.

5. Select the users to assign the permissions, then choose **Assign**. More information on assigning user permissions can be found at: [https://help.salesforce.com/articleView?id=perm\\_sets\\_mass\\_assign.htm&type=5](https://help.salesforce.com/articleView?id=perm_sets_mass_assign.htm&type=5)

## AC\_Administrator

Object Name	Object Permissions	Total Fields	Tab Settings
AC Agent Performance	Read, Create, Edit, Delete, View All, Modify All	124	--
AC CCP Overlay Elements	No Access	9	--
AC Contact Channel Analytics	Read, Create, Edit, Delete, View All, Modify All	31	Visible
AC Contact Channels	Read, Create, Edit, Delete, View All, Modify All	24	--
AC Contact Trace Records	Read, Create, Edit, Delete, View All, Modify All	50	Visible
Accounts	No Access	25	--
AC CTI Adapters	Read, Create, Edit, Delete, View All, Modify All	22	Visible
AC CTI Attributes	Read, Create, Edit, Delete, View All, Modify All	11	--
AC CTI Scripts	Read, Create, Edit, Delete, View All, Modify All	10	--
AC Events	No Access	--	--
AC Features	Read, Create, Edit, Delete, View All, Modify All	6	--
AC Guided Setup	--	--	Visible
AC Historical Queue Metrics	Read, Create, Edit, Delete, View All, Modify All	119	--
AC Phone Calls	No Access	22	--
AC Presence Sync Rules	Read, Create, Edit, Delete, View All, Modify All	13	--
AC QueueMatrices	No Access	16	--
AC Queue Metric Events	No Access	--	--
AC Queue Metrics	--	--	Visible
AC Real Time Queue Metrics	Read, Create, Edit, Delete, View All, Modify All	16	--
AC Voice Id Channel	Read, Create, Edit, Delete, View All, Modify All	15	--
AC Voicemail Drops	Read, Create, Edit, Delete, View All, Modify All	10	Visible
AC Wisdom	--	--	Visible

## AC\_Manager

Object Name	Object Permissions	Total Fields	Tab Settings
AC Agent Performance	Read, View All	124	--
AC CCP Overlay Elements	No Access	9	--
AC Contact Channel Analytics	Read, Create, Edit, Delete, View All, Modify All	31	Visible
AC Contact Channels	Read, Create, Edit, View All	24	--
AC Contact Trace Records	Read, Create, Edit, Delete, View All, Modify All	50	--
Accounts	No Access	25	--
AC CTI Adapters	Read	22	Visible
AC CTI Attributes	Read	11	--
AC CTI Scripts	Read	10	--
AC Events	Read, Create	--	--
AC Features	Read	6	--
AC Guided Setup	--	--	--
AC Historical Queue Metrics	Read, View All	119	--
AC Phone Calls	No Access	22	--
AC Presence Sync Rules	Read, View All	13	--
AC QueueMatrices	No Access	16	--
AC Queue Metric Events	Read	--	--
AC Queue Metrics	--	--	Visible
AC Real Time Queue Metrics	Read, View All	16	--
AC Voice Id Channel	Read, Create, Edit, Delete, View All, Modify All	15	--
AC Voicemail Drops	Read, Create, Edit, Delete	10	Available
AC Wisdom	--	--	--

## AC\_Agent

Object Name	Object Permissions	Total Fields	Tab Settings
AC Agent Performance	Read	124	--
AC CCP Overlay Elements	No Access	9	--
AC Contact Channel Analytics	Read, View All	31	Visible
AC Contact Channels	Read, Create, Edit, View All	24	--
AC Contact Trace Records	Read, Edit, View All	50	--
Accounts	No Access	25	--
AC CTI Adapters	Read	22	--
AC CTI Attributes	Read	11	--
AC CTI Scripts	Read	10	--
AC Events	Read, Create	--	--
AC Features	Read	6	--
AC Guided Setup	--	--	--
AC Historical Queue Metrics	Read	119	--
AC Phone Calls	No Access	22	--
AC Presence Sync Rules	Read, View All	13	--
AC QueueMatrices	No Access	16	--
AC Queue Metric Events	Read	--	--
AC Queue Metrics	--	--	Visible
AC Real Time Queue Metrics	No Access	16	--
AC Voice Id Channel	Read, Create, Edit, Delete, View All, Modify All	15	--
AC Voicemail Drops	Read, Create, Edit, Delete	10	Available
AC Wisdom	--	--	--

## Create the Softphone Layout

Next, we need to create a softphone layout for the solution.

1. In the **Quick Find** box, type *Softphone Layouts*, then choose **Softphone Layouts**.

2. Choose **New**.

### Softphone Layout Edit

Help for this Page

Each softphone layout allows you to customize the appearance of a softphone for inbound, outbound, and internal calls. Assign softphone layouts to user profiles by clicking Layout Assignment in the Softphone Layouts page.

Name	Is Default Layout
<input type="text"/>	<input type="checkbox"/>

Select Call Type: **Inbound**

**Softphone Layout** Help about this section [?](#)

Display these call-related fields:

- Caller ID, Dialed Number

Edit

Display these salesforce.com objects:

- Account, Contact, Lead

Add / Remove Objects

If single Account found, display: Account Name  
If multiple matches are found, only the Account Name is displayed in Salesforce Classic. In Lightning Experience, all the selected fields are displayed.

If single Contact found, display: Name  
If multiple matches are found, only the Name is displayed in Salesforce Classic. In Lightning Experience, all the selected fields are displayed.

If single Lead found, display: Name  
If multiple matches are found, only the Name is displayed in Salesforce Classic. In Lightning Experience, all the selected fields are displayed.

3. Enter a name for the layout, such as *AmazonConnectDefault*, then select the **Is Default Layout** checkbox.

## Softphone Layout Edit

Each softphone layout allows you to customize the appearance of a softphone for inbound, outbo

The screenshot shows the top portion of the 'Softphone Layout Edit' page. It includes a 'Save' and 'Cancel' button at the top right, a 'Name' field containing 'AmazonConnectDefault', and a checked 'Is Default Layout' checkbox.

4. Expand "Display these salesforce.com objects" and select objects that CTI Connector should be able to search, for a screen-pop query. In this example, besides default selection, I'm adding "Case", as I want to search and screen-pop by CaseID.

This screenshot shows the 'Display these salesforce.com objects' section. It lists available objects (Campaign, Event, Opportunity, Task, User) and selected objects (Account, Contact, Lead, Case). Buttons for 'Add', 'Up', 'Down', and 'Remove' are visible.

5. If necessary, configure the search behavior in the case that one or multiple records are found upon CTI search.

► If single Account found, display: Account Name If multiple matches are found, only the Account Name is displayed in Salesforce Classic. In Lightning Experience, all the selected fields are displayed.	Edit
► If single Contact found, display: Name If multiple matches are found, only the Name is displayed in Salesforce Classic. In Lightning Experience, all the selected fields are displayed.	Edit
► If single Lead found, display: Name If multiple matches are found, only the Name is displayed in Salesforce Classic. In Lightning Experience, all the selected fields are displayed.	Edit
► If single Case found, display: Case Number If multiple matches are found, only the Case Number is displayed in Salesforce Classic. In Lightning Experience, all the selected fields are displayed.	Edit

6. In this example, keep the default configuration, then choose **Save**.

## Softphone Layout Edit

Each softphone layout allows you to customize the appearance of a softphone for inbound, outbound, a

The screenshot shows the top portion of the 'Softphone Layout Edit' page. It includes a 'Save' and 'Cancel' button at the top right, a 'Name' field containing 'AmazonConnectDefault', and a checked 'Is Default Layout' checkbox.

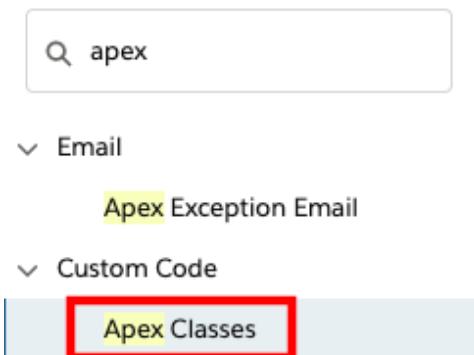
### Softphone Layouts

A softphone is a customizable call control tool that appears in the sidebar of every salesforce.com page if a user is assigned to a call center and is working on a machine on which a CTI adapter has been installed. Similar to page lay

Action	Name	Default	Created By Alias	Created Date	Last Modified By Alias	Last Modified Date
Edit	AmazonConnectDefault	✓	ASFDC	23/05/2018 13:48	ASFDC	23/05/2018 13:48

## Retrieve the Salesforce API Version

1. Log in into your Salesforce org and go to **Setup**
2. In the **Quick Find** field, type **apex**, then select **Apex Classes** from the results

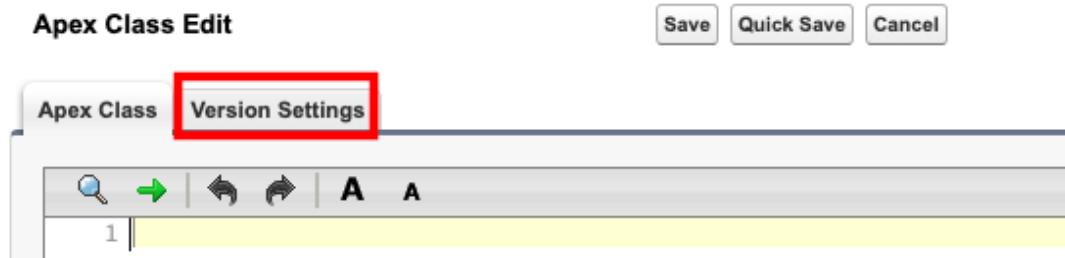


3. Select New



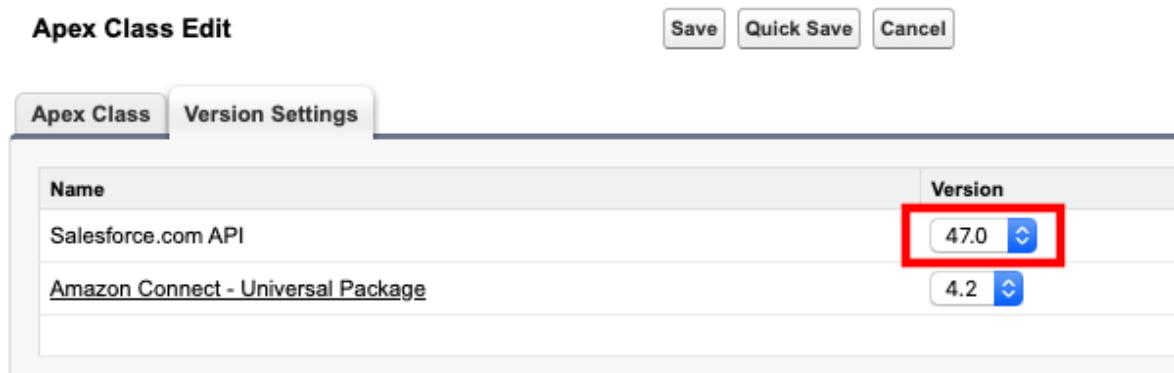
4. Select the Version Settings tab

## Apex Class



5. Note the Salesforce.com API version in your notepad. The pattern of this value is `vXX.X`.

## Apex Class



# Setting up the Salesforce API User

The Lambda functions authenticate with Salesforce via user credentials. It is a common practice to create an API user account for this purpose.

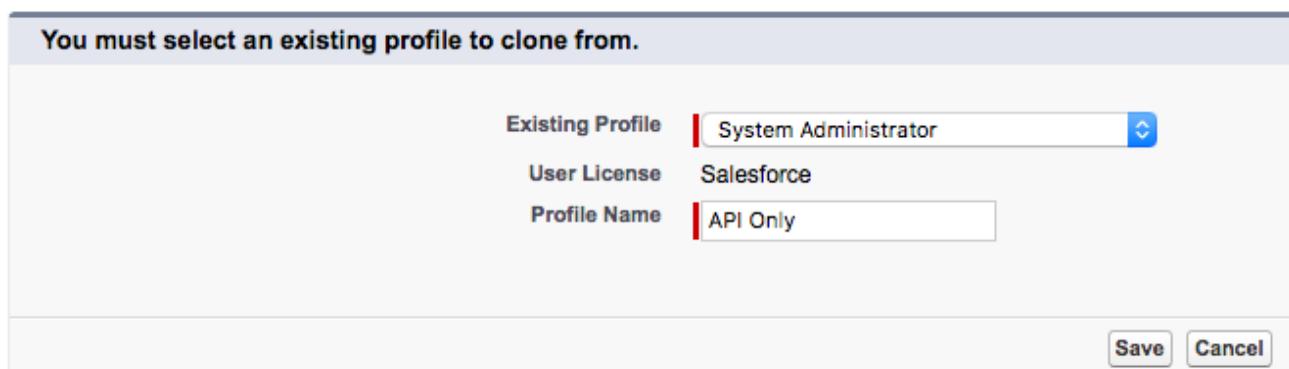
1. Log in to Salesforce
2. Navigate to Setup > Manage Users > Profiles
3. Click "New Profile"
4. Enter the Profile Name (i.e. "API Only")
5. Select the existing profile to clone (The integration user's access to just those objects required for the integration)

Enter the name of the new profile.

You must select an existing profile to clone from.

Existing Profile	System Administrator
User License	Salesforce
Profile Name	API Only

**Save** **Cancel**



NOTE: You're advised to use a full Salesforce License for the user to be able to set the below permissions and have full access to avoid any other errors.

6. Click "Save". A New Profile is created:

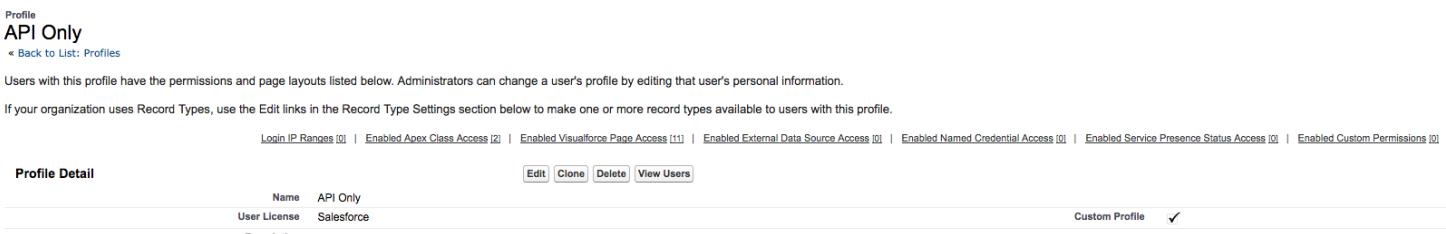
**Profile**  
**API Only**  
[Back to List: Profiles](#)

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

[Login IP Ranges](#) | [Enabled Apex Class Access](#) | [Enabled Visualforce Page Access](#) | [Enabled External Data Source Access](#) | [Enabled Named Credential Access](#) | [Enabled Service Presence Status Access](#) | [Enabled Custom Permissions](#)

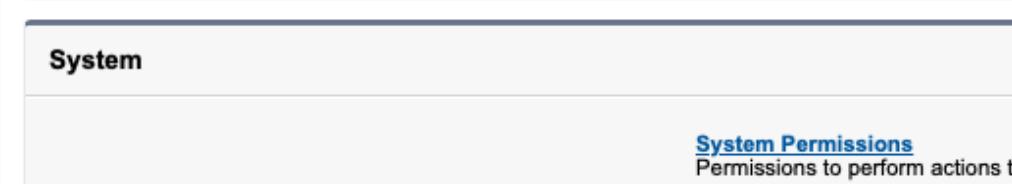
Profile Detail		Edit	
Name	API Only	Clone	Delete
User License	Salesforce	View Users	
Description	Custom Profile ✓		



7. Once the new profile page opens, select the **System Permissions** button

**System**

**System Permissions**  
Permissions to perform actions



8. If the Lightning Experience User checkbox is selected, clear it

**Lightning Experience User**



9. Save the system permissions, then go back to Profile Overview

10. Select the *Password Policies* link, click edit

**System**

---

Settings that apply across all apps, such as record and user management [Learn More](#)

**System Permissions**  
Permissions to perform actions tha

**Login Hours**  
Settings that control when users ca

**Login IP Ranges**  
Settings that control the IP address

**Service Providers**  
Permissions that let users switch to

**Session Settings**  
Settings that control required sessi

**Password Policies**  
Profile Based password policies

**Default Experience**  
Setting for assigning a default com

---

Password Policies	
User passwords expire in	90 days
Enforce password history	3 passwords remembered
Minimum password length	8
Password complexity requirement	Must mix alpha and numeric characters
Password question requirement	Cannot contain password
Maximum invalid login attempts	10
Lockout effective period	15 minutes
Obscure secret answer for password resets	<input type="checkbox"/>
Require a minimum 1 day password lifetime	<input type="checkbox"/>
Don't immediately expire links in forgot password emails	<input type="checkbox"/>

[Edit](#) [Clone](#) [Delete](#) [View Users](#)

11. Set **User password expire in** to **Never expires** **NOTE:** Failure to this may lead to production outages.

**Password Policies**

---

User passwords expire in	<input type="text" value="Never expires"/>
Enforce password history	<input type="text" value="No passwords remembered"/>
Minimum password length	<input type="text" value="8"/>
Password complexity requirement	<input type="text" value="Must mix alpha and numeric characters"/>
Password question requirement	<input type="text" value="Cannot contain password"/>
Maximum invalid login attempts	<input type="text" value="10"/>
Lockout effective period	<input type="text" value="15 minutes"/>
Obscure secret answer for password resets	<input type="checkbox"/>
Require a minimum 1 day password lifetime	<input type="checkbox"/>
Don't immediately expire links in forgot password emails	<input type="checkbox"/> <a href="#">i</a>

12. Select **Save**

13. Navigate to Setup > Manage Apps > Connected Apps

14. Select the app you have created in the previous step (i.e. Amazon Connect Integration)

## Connected Apps

Manage access to apps that connect to this Salesforce organization.

**App Access Settings**

Allow users to install canvas personal apps

**Edit**

View: All [Create New View](#)

Action	Master Label ↑
<a href="#">Edit</a>	<a href="#">Amazon Connect Integration</a>

15. Click "Manage Profiles"

**Profiles**

No profiles associated with this app.

**Manage Profiles**

16. Ensure the "API Only" profile is selected:

## Application Profile Assignment

[« Back to Connected App Detail](#)

Select the appropriate profiles to choose which users have access to this application.

Select	Profiles
<input type="checkbox"/>	<a href="#">Analytics Cloud Integration User</a>
<input type="checkbox"/>	<a href="#">Analytics Cloud Security User</a>
<input checked="" type="checkbox"/>	<a href="#">API Only</a>

17. Click "Save" at the bottom of the page

18. Navigate to Setup > Manage Users > Users

19. Click "New User"

## All Users

On this page you can create, view, and manage users.

In addition, download SalesforceA to view and edit user details, reset passwords, and perform other administrative tasks from your mobile devices: [iOS](#) | [Android](#)

View: [All Users](#) [Edit | Create New View](#)

The screenshot shows the top navigation bar of the Salesforce 'All Users' page. It includes a search bar, a 'View' dropdown set to 'All Users', and a link to 'Edit | Create New View'. On the right side of the bar are three buttons: 'New User', 'Reset Password(s)', and 'Add Multiple Users'.

20. Set necessary fields: Last Name, Alias, Email, Username, Nickname

## New User

The screenshot shows the 'User Edit' screen under the 'General Information' tab. The form contains the following fields with their values:

Field	Value
First Name	
Last Name	APIUser
Alias	apiuser
Email	
Username	apiuser
Nickname	apiuser
Title	
Company	
Department	
Division	

21. On the right-hand side, set the User License and Profile

The screenshot shows the right sidebar of the 'User Edit' screen with three dropdown menus:

- Role: <None Specified>
- User License: Salesforce
- Profile: API Only

22. Click "Save"

23. In **Quick Find**, search for "Permission Sets". Select the **AC\_Administrator** permission set.



Search Setup

Setup

Home

Object Manager

Q Perm

Users

Permission Set Groups

Permission Sets

Custom Code

Custom Permissions

Didn't find what you're looking for?  
Try using Global Search.

SETUP  
Permission Sets

## Permission Sets

On this page you can create, view, and manage permission sets.

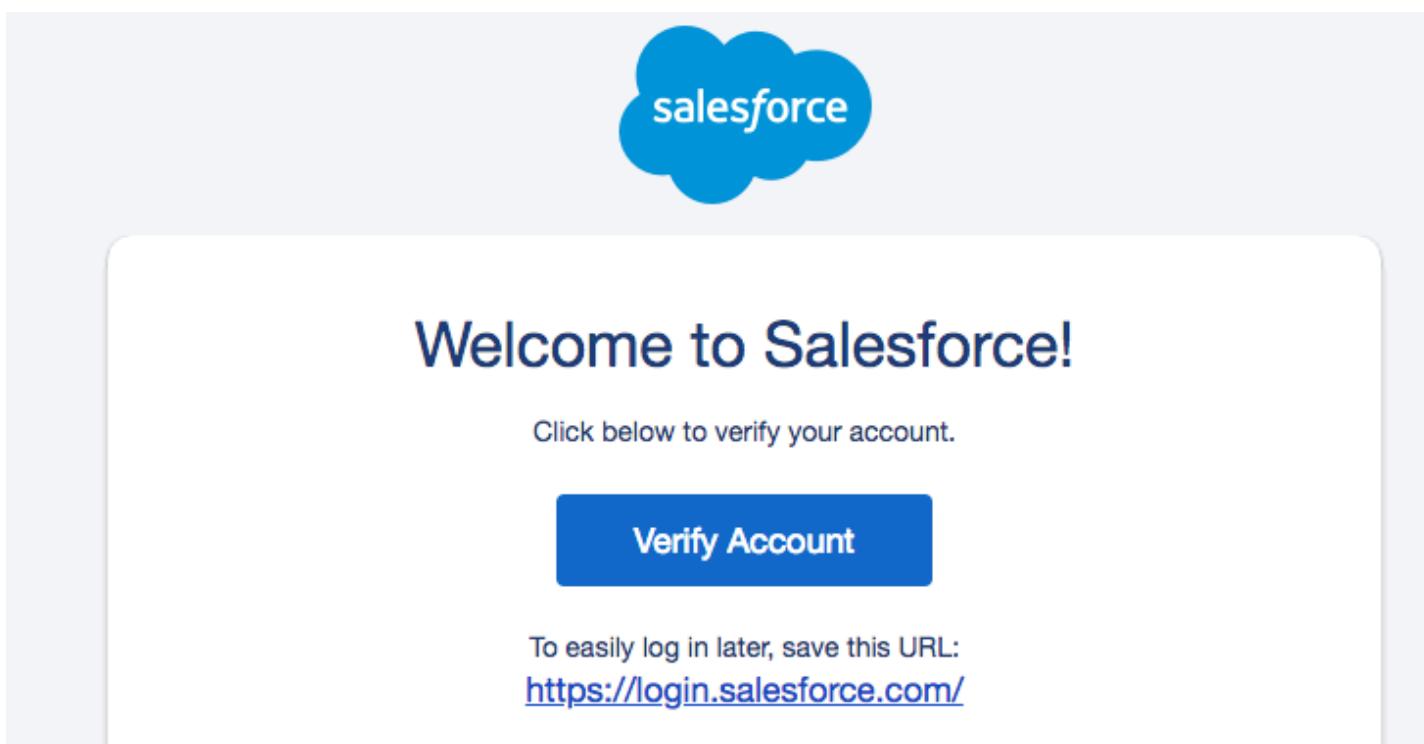
In addition, you can use the Salesforce mobile app to assign permission sets to a user. Download Salesforce from the App Store or Google Play: [iOS](#) | [Android](#)All   

A | B | C | D | E | F | G | H | I | J | K | L | M

Action	Permission Set Label	Description	Licenses
<input type="checkbox"/>	AC Administrator	Allows the user to configure Amazon Connect setup and provides ...	
<input type="checkbox"/>	AC Agent		
<input type="checkbox"/>	AC CallRecording		
<input type="checkbox"/>	AC Manager		

24. Select **Manage Assignments**. Add the apiuser you just created to the permission set.

25. A confirmation email will be sent, with an activation link. Click the link to activate your user.



Change (set) a password for apiuser (Considered a strong that contains at least 20 random characters):



## Change Your Password

Enter a new password for apiuser@acsfcdryrun.com.

Your password must have at least:

- 8 characters
- 1 letter
- 1 number

\* New Password

|

\* Confirm New Password

Security Question

▼ In what city were you born?

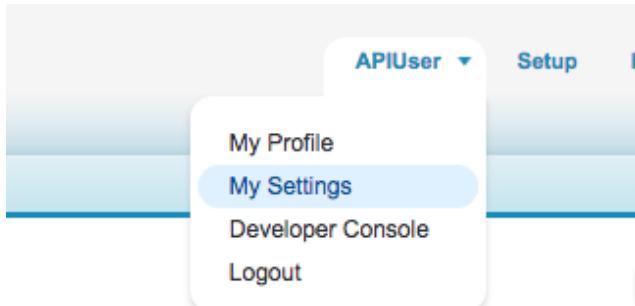
\* Answer

Change Password

Password was last changed on 18/09/2018 17:29.

26. Click "Change Password"

27. Access the apiuser personal settings by selecting the username in the top right corner, then "My Settings".



28. Type "Security Token" in the Quick Find box and click "Reset My Security Token".

## Reset My Security Token

When you access Salesforce from an IP address that isn't trusted for your company, and you use a desktop client, you can't use your old token in API applications and desktop clients.



After you reset your token, you can't use your old token in API applications and desktop clients.

**Reset Security Token**

29. Your security token will be emailed to you

## Reset My Security Token Check Your Email



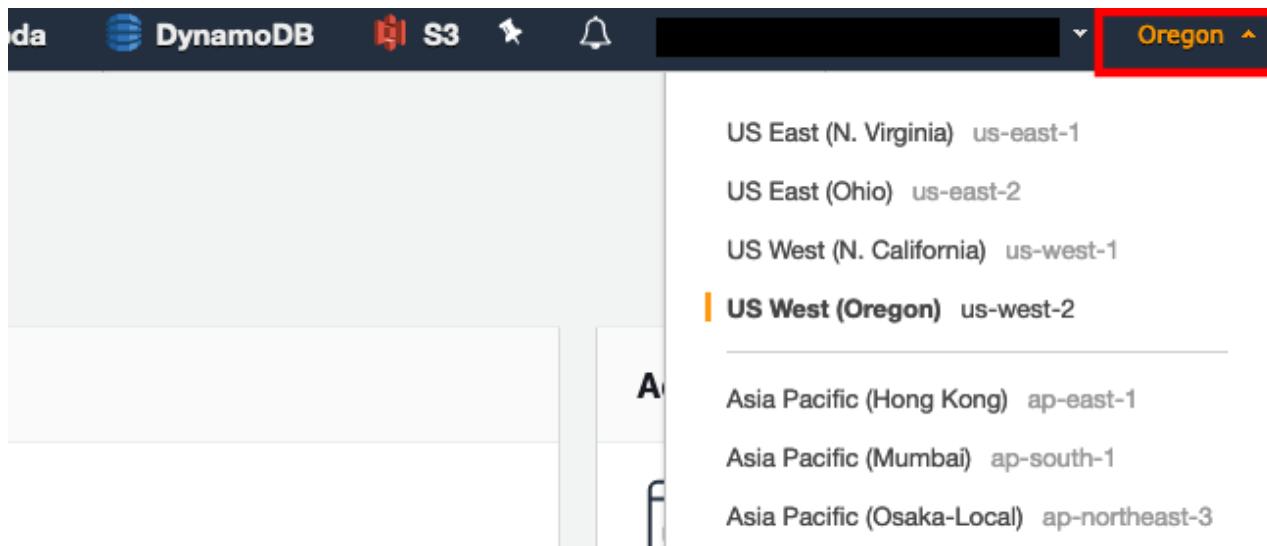
We sent a new security token to the email address for your account,

30. Copy the security token from the email in to your installation notes for the "Access Token" value.

## Setting up the SecretsManager Secret

To ensure that your Salesforce credentials are secure, the Lambdas require that the credentials are stored in AWS Secrets Manager. AWS Secrets Manager is a highly secure service that helps you store and retrieve secrets.

1. In a new browser tab, login to the AWS console
2. Make sure you are in the same region as your Amazon Connect instance. You can set the region by expanding the region selector in the upper right and choosing the region



3. Navigate to the [Secrets Manager](#) console

4. Select **Secrets**

5. Select **Store a new secret**

6. Select **Other types of secrets**

7. Make sure **Secret key/value** is selected

8. Enter key value pairs that match the following:

a. **Key:** Password, **Value:** the password for the API user that you configured in the previous section

b. **Key:** ConsumerKey, **Value:** the Consumer Key for the Connected App you created in the previous section

c. **Key:** ConsumerSecret, **Value:** the Consumer Secret for the Connected App you created in the previous section

d. **Key:** AccessToken, **Value:** this is the access token for the API user that you configured in the previous section

9. For the encryption key, click **Add new key**

10. Select **Create Key**

11. Make sure key type is set to **symmetric**

12. Give your key an **alias**, like *SalesforceCredentialsSecretsManagerKey*

13. Click Next

14. Select administrators you want to have access permission to change the key policy. Make sure you are being as restrictive as possible

15. Click Next

16. Select the users and roles you want to have access to the Salesforce credentials in Secrets Manager. Make sure you are being as restrictive as possible

17. Click Next

18. Click Finish

19. Click on the managed key that you just created (which is *SalesforceCredentialsSecretsManagerKey* in this case).

20. Note down the ARN. This is *SalesforceCredentialsKMSKeyARN* that will be used later when installing the Amazon Connect Salesforce Lambda package.

21. Navigate back to the Secrets Manager setup tab

22. Select the key you just created

**Specify the key/value pairs to be stored in this secret [Info](#)**

**Secret key/value**      **Plaintext**

Password	Password	<b>Remove</b>
ConsumerKey	ConsumerKey	<b>Remove</b>
ConsumerSecret	ConsumerSecret	<b>Remove</b>
AccessToken	AccessToken	<b>Remove</b>

**+ Add row**

**Select the encryption key [Info](#)**

Select the AWS KMS key to use to encrypt your secret information. You can encrypt using the default service encryption key that AWS Secrets Manager creates on your behalf or a customer master key (CMK) that you have stored in AWS KMS.

SalesforceCredentialsSecretsManagerKey	▼	C
<a href="#">Add new key</a>		

**Cancel**      **Next**

23. Click Next

24. Give your secret a name, like *SalesforceCredentials*

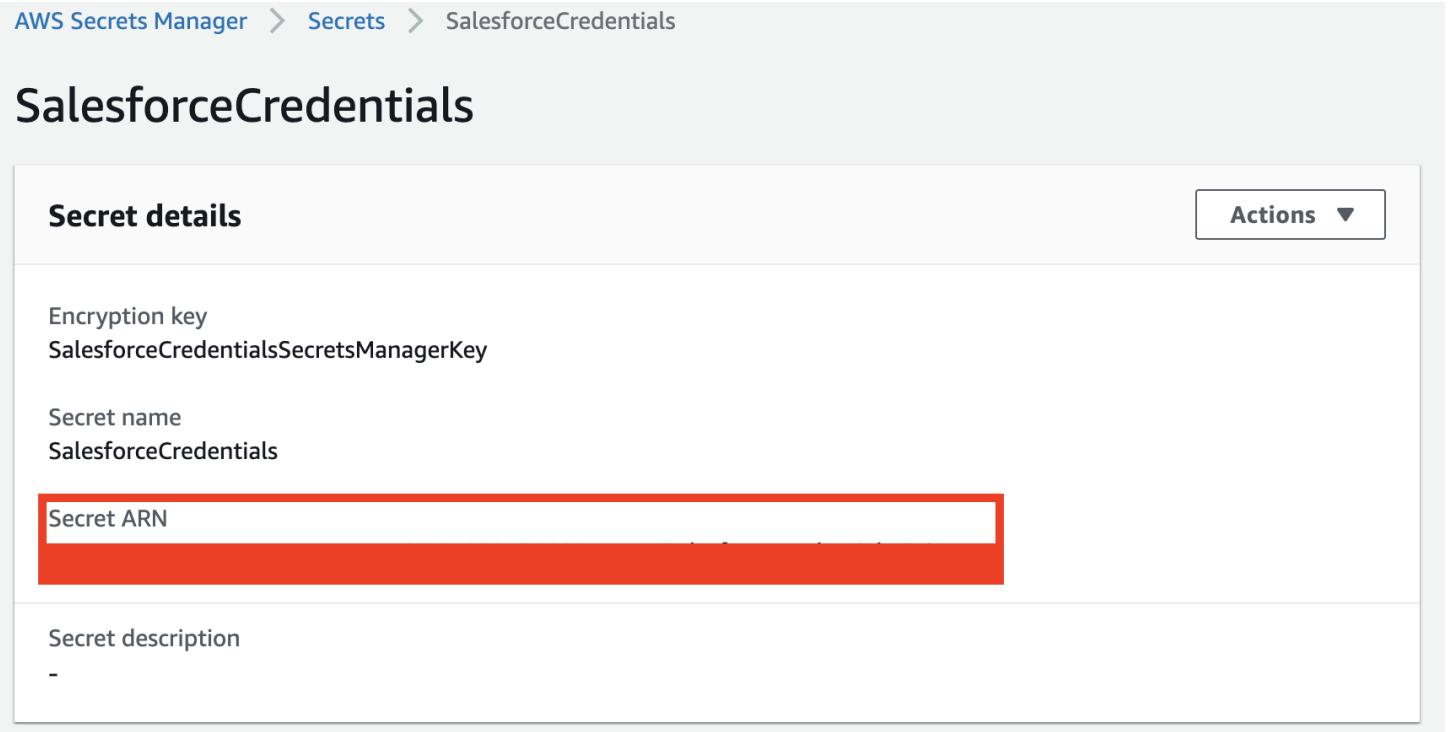
25. Click Next

26. Make sure **automatic rotation** is disabled.

27. Click Next

28. Click Store

29. Select the secret you just created, and copy the Secret ARN



The screenshot shows the AWS Secrets Manager interface. At the top, there's a breadcrumb navigation: AWS Secrets Manager > Secrets > SalesforceCredentials. Below this, the title "SalesforceCredentials" is displayed. A table-like structure follows, with columns for "Secret details" and "Actions". Under "Secret details", there are three rows: "Encryption key" (SalesforceCredentialsSecretsManagerKey), "Secret name" (SalesforceCredentials), and "Secret ARN" (which is highlighted with a red border). The "Secret description" row contains a single dash (-).

 [Edit this page](#)

# Setting Up The CTI Adapter Managed Package Manually

Below are manual setup instructions for the Salesforce CTI Adapter Managed Package. After following the below steps, be sure to follow the instructions for setting up the Salesforce Lambdas [here](#).

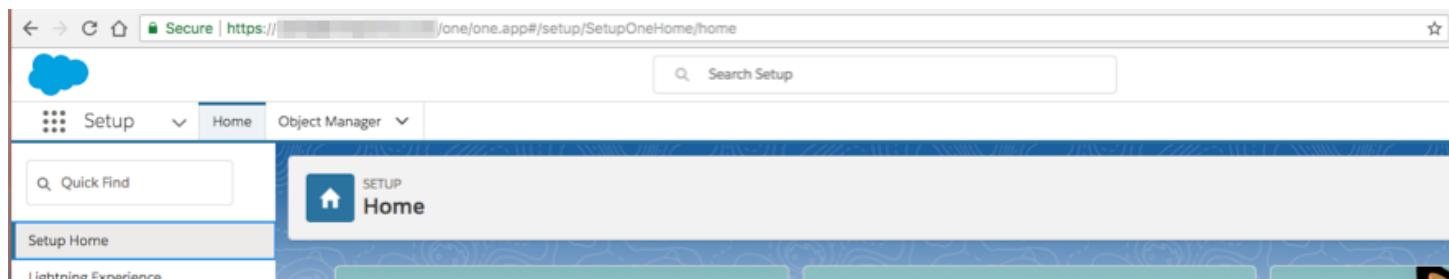
Before proceeding, please **confirm that the application was installed for admins only** (see [installation](#) for more details). If you did this by accident, then you will have to [manually edit the profiles](#) to remove the permissions to the objects and pages created by the app.

# Lightning Flow Setup Installation

1. Navigate to **Service Setup** within the Lightning UI under the gear icon.
2. Click **View All**
3. Search for or select **Add Phone Support**
4. Click **Start** on the **Voice Setup** screen
5. Under **Select Your Voice Provider**, select Amazon Connect CTI Adapter
6. Agree to the terms and conditions and click **Install Package**
7. Under **Add Voice Service Provider Details**, add the URL to your Amazon Connect instance (see instructions below if you are unsure). You will also need to allowlist your Salesforce domain within Amazon Connect.
8. Under **Who's Answering the Phone?**, select the name of the users you would like to access the phone configuration. This can be modified later under the Call Center configuration.
9. Click **Finish**. You can also launch the Amazon Connect Setup Guide.

## Installing from the Salesforce AppExchange

1. Log in into your Salesforce instance and open **Setup**.



2. Open the [Amazon Connect CTI Package URL](#), then choose **Install for Admins Only**.



## Install Amazon Connect - Universal Package

By

Install for Admins Only

Install for All Users

Install for Specific Profiles...

**Install**

**Cancel**



## Install Amazon Connect - Universal Package

By Amazon AWS



**Installation Complete!**

Please review the instructions below to properly configure this app. [View in another browser](#)

**Done**

3. Choose **Done**. The **Installed Packages** page opens.

**SETUP**

## Installed Packages

Help for this Page 

On AppExchange you can browse, test drive, download, and install pre-built apps and components right into your salesforce.com environment. [Learn More about Installing Packages](#).

Apps and components are installed in packages. Any custom apps, tabs, and custom objects are initially marked as "In Development" and are not deployed to your users. This allows you to test and customize before deploying. You can deploy the components individually using the other features in Setup or as a group by clicking Deploy.

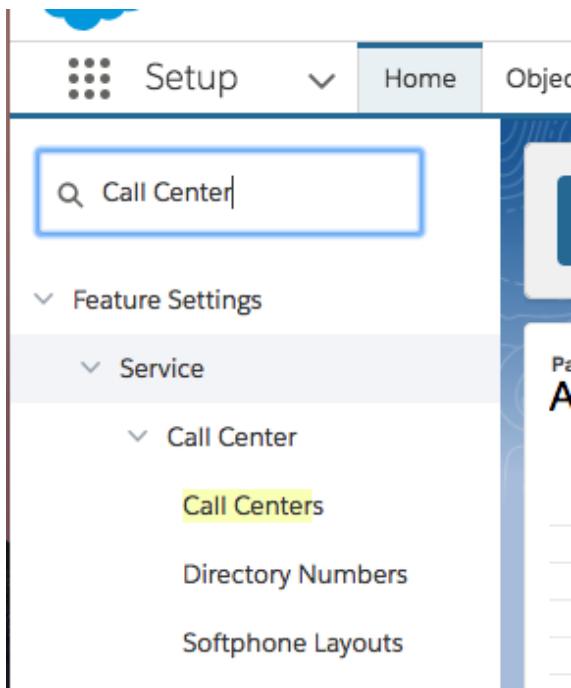
Depending on the links next to an installed package, you can take different actions from this page.

To remove a package, click **Uninstall**. To manage your package licenses, click **Manage Licenses**.

**Installed Packages**

Action	Package Name	Publisher	Version Number	Namespace Prefix	Install Date	Limits	Apps	Tabs	Objects	AppExchange Ready
<a href="#">Uninstall</a>  <a href="#">Amazon Connect - Universal Package</a>	Amazon Connect - Universal Package	Amazon AWS	2.3	amazonconnect	20/09/2018 14:47	<input type="checkbox"/>	0	0	2	Passed
Description Amazon Connect Integration to support Lightning, Console and Classic.										

4. In the **Quick Find** box, type *Call Center*, then choose **Call Centers**.



The screenshot shows the Salesforce Setup interface. The top navigation bar includes 'Setup', 'Home', and 'Objects'. A 'Quick Find' search bar contains the text 'Call Center'. The left sidebar has a tree structure: 'Feature Settings' is expanded, showing 'Service' which is also expanded, revealing 'Call Center'. Under 'Call Center', the 'Call Centers' item is highlighted with a yellow box. Other items in this list include 'Directory Numbers' and 'Softphone Layouts'.

The Call Centers page opens. You should see 3 Call Center configurations: Classic, Console and Lightning.

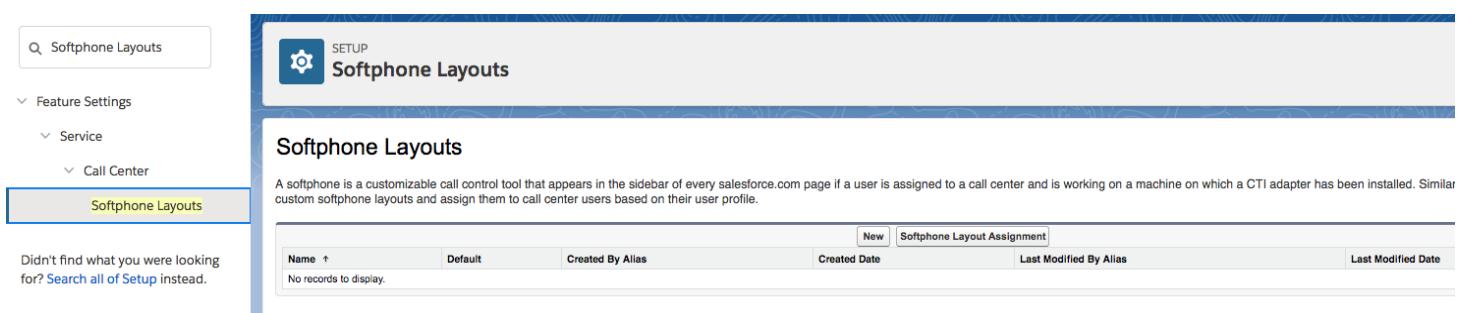
## All Call Centers

A call center corresponds to a single computer-telephony integration (CTI) system already in place at your organization. Salesforce.com users must be assigned to a call center before they can use any Call Center features.

Action	Name	Version	Created Date	Last Modified Date
<a href="#">Edit</a>   <a href="#">Del</a>	Amazon Connect CCP Adapter Classic	23/05/2018 13:27	23/05/2018 13:27	23/05/2018 13:27
<a href="#">Edit</a>   <a href="#">Del</a>	Amazon Connect CCP Adapter Console	23/05/2018 13:27	23/05/2018 13:27	23/05/2018 13:27
<a href="#">Edit</a>   <a href="#">Del</a>	Amazon Connect CCP Adapter Lightning	23/05/2018 13:27	23/05/2018 13:27	23/05/2018 13:27

# Create the Softphone Layout

Next, we need to create a softphone layout for the solution.



The screenshot shows the Salesforce Setup interface. The top navigation bar includes 'Setup', 'Home', and 'Objects'. A 'Quick Find' search bar contains the text 'Softphone Layouts'. The left sidebar has a tree structure: 'Feature Settings' is expanded, showing 'Service' which is expanded, then 'Call Center', and finally 'Softphone Layouts' which is highlighted with a yellow box. Below the sidebar, a message says 'Didn't find what you were looking for? Search all of Setup instead.' The main content area is titled 'Softphone Layouts' and contains a brief description: 'A softphone is a customizable call control tool that appears in the sidebar of every salesforce.com page if a user is assigned to a call center and is working on a machine on which a CTI adapter has been installed. Similar custom softphone layouts and assign them to call center users based on their user profile.' At the bottom, there is a table with columns: 'Name', 'Default', 'Created By Alias', 'Created Date', 'Last Modified By Alias', and 'Last Modified Date'. A note below the table says 'No records to display.'

6. In the **Quick Find** box, type *Softphone Layouts*, then choose **Softphone Layouts**.

## 7. Choose New.

### Softphone Layout Edit

Help for this Page

Each softphone layout allows you to customize the appearance of a softphone for inbound, outbound, and internal calls. Assign softphone layouts to user profiles by clicking Layout Assignment in the Softphone Layouts page.

The screenshot shows the 'Softphone Layout Edit' page. At the top, there are 'Save' and 'Cancel' buttons. Below them, a 'Name' field contains 'AmazonConnectDefault' and an 'Is Default Layout' checkbox is checked. A 'Select Call Type' dropdown is set to 'Inbound'. The main section is titled 'Softphone Layout' and includes a 'Display these call-related fields:' section with 'Caller ID, Dialed Number' selected. A 'Display these salesforce.com objects:' section is expanded, showing 'Account, Contact, Lead' selected. Below this, three rules are listed: 'If single Account found, display: Account Name', 'If single Contact found, display: Name', and 'If single Lead found, display: Name'. Each rule has an 'Edit' link next to it. There are also 'Add / Remove Objects' and 'Edit' links for managing objects.

8. Enter a name for the layout, such as **AmazonConnectDefault**, then select the **Is Default Layout** checkbox.

## Softphone Layout Edit

Each softphone layout allows you to customize the appearance of a softphone for inbound, outbo

The screenshot shows the 'Softphone Layout Edit' page with the 'Name' field set to 'AmazonConnectDefault' and the 'Is Default Layout' checkbox checked. The 'Save' and 'Cancel' buttons are visible at the top.

9. Expand "Display these salesforce.com objects" and select objects that CTI Connector should be able to search, for a screen-pop query. In this example, besides default selection, I'm adding "Case", as I want to search and screen-pop by CaseID.

The screenshot shows the 'Display these salesforce.com objects' configuration. Under 'Available' objects, 'Account, Contact, Lead, Case' are listed. Under 'Selections', 'Account', 'Contact', 'Lead', and 'Case' are selected. An 'Add' button is between the two columns, and 'Up' and 'Down' buttons are on the right side of the 'Selections' column.

10. If necessary, configure the search behavior in the case that one or multiple records are found upon CTI search.

The screenshot shows the search behavior configuration section. It lists four rules:

- If single Account found, display: Account Name
- If single Contact found, display: Name
- If single Lead found, display: Name
- If single Case found, display: Case Number

Each rule includes a descriptive note about its behavior in Lightning Experience and an 'Edit' link.

11. In this example, keep the default configuration, then choose **Save**.

## Softphone Layout Edit

Each softphone layout allows you to customize the appearance of a softphone for inbound, outbound, all, and missed calls.

The screenshot shows the 'Softphone Layout Edit' page. At the top, there are 'Save' and 'Cancel' buttons. Below them, a 'Name' field contains 'AmazonConnectDefault' and a checked checkbox labeled 'Is Default Layout'. A large black bar covers the bottom portion of the screen. Below the bar, the heading 'Softphone Layouts' is visible, followed by a descriptive text about softphones and a table listing the layout.

Action	Name	Default	Created By Alias	Created Date	Last Modified By Alias	Last Modified Date
Edit	AmazonConnectDefault	✓	ASFDC	23/05/2018 13:48	ASFDC	23/05/2018 13:48

## Set Access Permissions

All users must be assigned the required permission set to access the Salesforce metadata included in this package. The Amazon Connect CTI integration package comes with two Permission Sets, one for agents and one for managers, that grant the users all necessary access to use the softphone.

1. Log in into your Salesforce Org.
2. Navigate to **Setup > Manage Users > Permission Sets**.

The screenshot shows the 'Permission Sets' page under 'SETUP'. The title is 'Permission Sets'. Below it, a sub-section titled 'Permission Sets' says: 'On this page you can create, view, and manage permission sets. In addition, you can use the Salesforce mobile app to assign permission sets to a user. Download Salesforce from the App Store or Google Play: iOS | Android'. There are buttons for 'All Permission Sets', 'Edit', 'Delete', and 'Create New View'. A table lists permission sets:

Action	Permission Set Label	Description
Clone	Toolkit for Amazon Connect - Agent	Permissions to all components that an agent would need to use the toolkit.
Clone	Toolkit for Amazon Connect - Manager	Permissions required to access the toolkit reports.

2. Choose **AC\_Manager**.

The screenshot shows the 'Assign Users' page under 'All Users'. It has a 'View' dropdown set to 'All Users' and buttons for 'Edit | Create New View'. A large empty table area is at the bottom, with 'Assign' and 'Cancel' buttons in the bottom right corner.

3. Choose **Manage Assignments**.
4. Choose **Add Assignments**.

5. Select the users to assign the permissions, then choose **Assign**. More information on assigning user permissions can be found at: [https://help.salesforce.com/articleView?id=perm\\_sets\\_mass\\_assign.htm&type=5](https://help.salesforce.com/articleView?id=perm_sets_mass_assign.htm&type=5)

## AC\_Administrator

Object Name	Object Permissions	Total Fields	Tab Settings
AC Agent Performance	Read, Create, Edit, Delete, View All, Modify All	124	--
AC CCP Overlay Elements	No Access	9	--
AC Contact Channel Analytics	Read, Create, Edit, Delete, View All, Modify All	31	Visible
AC Contact Channels	Read, Create, Edit, Delete, View All, Modify All	24	--
AC Contact Trace Records	Read, Create, Edit, Delete, View All, Modify All	50	Visible
Accounts	No Access	25	--
AC CTI Adapters	Read, Create, Edit, Delete, View All, Modify All	22	Visible
AC CTI Attributes	Read, Create, Edit, Delete, View All, Modify All	11	--
AC CTI Scripts	Read, Create, Edit, Delete, View All, Modify All	10	--
AC Events	No Access	--	--
AC Features	Read, Create, Edit, Delete, View All, Modify All	6	--
AC Guided Setup	--	--	Visible
AC Historical Queue Metrics	Read, Create, Edit, Delete, View All, Modify All	119	--
AC Phone Calls	No Access	22	--
AC Presence Sync Rules	Read, Create, Edit, Delete, View All, Modify All	13	--
AC QueueMatrices	No Access	16	--
AC Queue Metric Events	No Access	--	--
AC Queue Metrics	--	--	Visible
AC Real Time Queue Metrics	Read, Create, Edit, Delete, View All, Modify All	16	--
AC Voice Id Channel	Read, Create, Edit, Delete, View All, Modify All	15	--
AC Voicemail Drops	Read, Create, Edit, Delete, View All, Modify All	10	Visible
AC Wisdom	--	--	Visible

## AC\_Manager

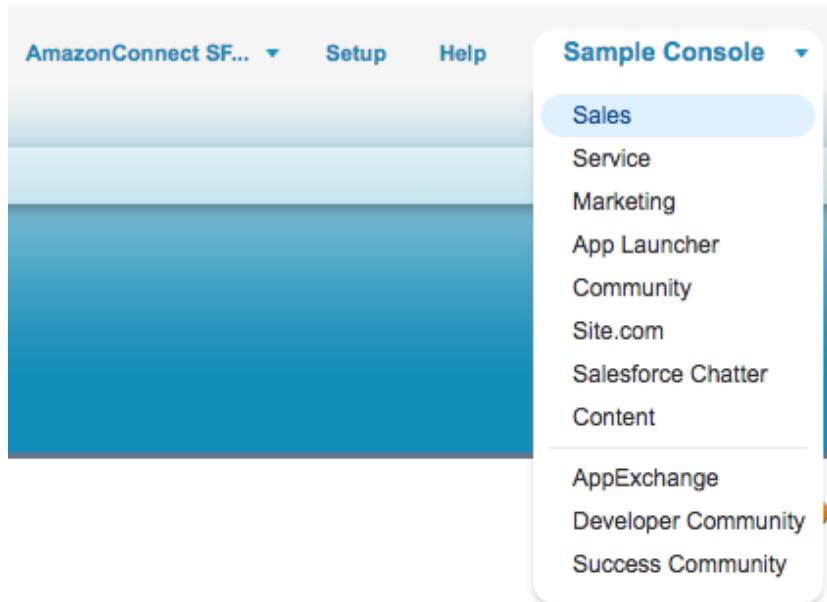
Object Name	Object Permissions	Total Fields	Tab Settings
AC Agent Performance	Read, View All	124	--
AC CCP Overlay Elements	No Access	9	--
AC Contact Channel Analytics	Read, Create, Edit, Delete, View All, Modify All	31	Visible
AC Contact Channels	Read, Create, Edit, View All	24	--
AC Contact Trace Records	Read, Create, Edit, Delete, View All, Modify All	50	--
Accounts	No Access	25	--
AC CTI Adapters	Read	22	Visible
AC CTI Attributes	Read	11	--
AC CTI Scripts	Read	10	--
AC Events	Read, Create	--	--
AC Features	Read	6	--
AC Guided Setup	--	--	--
AC Historical Queue Metrics	Read, View All	119	--
AC Phone Calls	No Access	22	--
AC Presence Sync Rules	Read, View All	13	--
AC QueueMatrices	No Access	16	--
AC Queue Metric Events	Read	--	--
AC Queue Metrics	--	--	Visible
AC Real Time Queue Metrics	Read, View All	16	--
AC Voice Id Channel	Read, Create, Edit, Delete, View All, Modify All	15	--
AC Voicemail Drops	Read, Create, Edit, Delete	10	Available
AC Wisdom	--	--	--

## AC\_Agent

Object Name	Object Permissions	Total Fields	Tab Settings
AC Agent Performance	Read	124	--
AC CCP Overlay Elements	No Access	9	--
AC Contact Channel Analytics	Read, View All	31	Visible
AC Contact Channels	Read, Create, Edit, View All	24	--
AC Contact Trace Records	Read, Edit, View All	50	--
Accounts	No Access	25	--
AC CTI Adapters	Read	22	--
AC CTI Attributes	Read	11	--
AC CTI Scripts	Read	10	--
AC Events	Read, Create	--	--
AC Features	Read	6	--
AC Guided Setup	--	--	--
AC Historical Queue Metrics	Read	119	--
AC Phone Calls	No Access	22	--
AC Presence Sync Rules	Read, View All	13	--
AC QueueMatrices	No Access	16	--
AC Queue Metric Events	Read	--	--
AC Queue Metrics	--	--	Visible
AC Real Time Queue Metrics	No Access	16	--
AC Voice Id Channel	Read, Create, Edit, Delete, View All, Modify All	15	--
AC Voicemail Drops	Read, Create, Edit, Delete	10	Available
AC Wisdom	--	--	--

# Configure Console Experience

For the Console experience, we are going to use Sample Console application, but the procedure is the same for other applications.



In the top navigation bar, select the "+" icon.

## All Tabs

Use the links below to quickly navigate to a tab. Alternatively, you can [add a tab](#) to your display to better suit the way you work.

**View:** All Tabs ▾

 <a href="#">AC Contact Channel Analytics</a>	 <a href="#">Documents</a>
 <a href="#">AC Contact Trace Records</a>	 <a href="#">Duplicate Record Sets</a>
 <a href="#">Accounts</a>	 <a href="#">Engagement Channel Types</a>
 <b>AC CTI Adapters</b>	 <a href="#">External Managed Accounts</a>
 <a href="#">AC Real Time Queue Metrics</a>	 <a href="#">Files</a>
 <a href="#">AC Voicemail Drops</a>	 <a href="#">Forecasts</a>
 <a href="#">Analytics</a>	 <a href="#">Groups</a>
 <a href="#">App Launcher</a>	 <a href="#">Home</a>

Select "AC CTI Adapters"

Create a new adapter. Fill in the CTI Adapter Name. For the Call Center Definition Name, type in ACConsoleAdapter. For the Amazon Connect Instance, type in the login url to the instance (this can be found in the Amazon Connect Instance details page), removing everything after ".com".

Amazon Connect > 

<b>Overview</b> <ul style="list-style-type: none"> <li><a href="#">Telephony</a></li> <li><a href="#">Data storage</a></li> <li><a href="#">Data streaming</a></li> <li><a href="#">Application integration</a></li> <li><a href="#">Contact flows</a></li> </ul>	<b>Overview</b> <table border="0"> <tbody> <tr> <td>Instance ARN</td> <td></td> </tr> <tr> <td>Directory</td> <td></td> </tr> <tr> <td>Service-linked role</td> <td>AWSServiceRoleForAmazonConnect_x8eOtNYvgBDc9F1XHHQc <a href="#">Learn more</a></td> </tr> <tr> <td>Login URL</td> <td><a data-bbox="763 1361 922 1394" href="https://&lt;img alt=" redacted="" url"="">.awsapps.com/connect/login"&gt;https://.awsapps.com/connect/login</a></td> </tr> </tbody> </table>	Instance ARN		Directory		Service-linked role	AWSServiceRoleForAmazonConnect_x8eOtNYvgBDc9F1XHHQc <a href="#">Learn more</a>	Login URL	<a data-bbox="763 1361 922 1394" href="https://&lt;img alt=" redacted="" url"="">.awsapps.com/connect/login"&gt;https://.awsapps.com/connect/login</a>
Instance ARN									
Directory									
Service-linked role	AWSServiceRoleForAmazonConnect_x8eOtNYvgBDc9F1XHHQc <a href="#">Learn more</a>								
Login URL	<a data-bbox="763 1361 922 1394" href="https://&lt;img alt=" redacted="" url"="">.awsapps.com/connect/login"&gt;https://.awsapps.com/connect/login</a>								

Select Save.

In the Quick Find field, type Visualforce Pages and select Visual Force Pages:



Take Salesfo

Run your business

## Visualforce Pages



Expand All | Collapse All

## Build

 Develop

Visualforce Pages

Security	<a href="#">AC_RecordingViewer</a>	<a href="#">AC_RecordingViewer</a>	amazonconnect
Security	<a href="#">AC_CtiScriptEditor</a>	<a href="#">AC_CtiScriptEditor</a>	amazonconnect
Security	<a href="#">AC_LightningAdapter</a>	<a href="#">AC_LightningAdapter</a>	amazonconnect
Security	<a href="#">AC_LightningScriptIncludes</a>	<a href="#">AC_LightningScriptIncludes</a>	amazonconnect
Security	<a href="#">AC_RealTimeQueueMetrics</a>	<a href="#">AC_RealTimeQueueMetrics</a>	amazonconnect
Security	<a href="#">AC_ClassicScriptIncludes</a>	<a href="#">AC_ClassicScriptIncludes</a>	amazonconnect
Security	<a href="#">AC_ConsoleAdapter</a>	<a href="#">AC_ConsoleAdapter</a>	amazonconnect
Security	<a href="#">AC_ConsoleScriptIncludes</a>	<a href="#">AC_ConsoleScriptIncludes</a>	amazonconnect
Security	<a href="#">ACSFCCP_CallTask</a>	<a href="#">ACSFCCP_CallTask</a>	amazonconnect
Security	<a href="#">ACSFCCP_ObjectType</a>	<a href="#">ACSFCCP_ObjectType</a>	amazonconnect
Security	<a href="#">ACSFCCP_PostCallUpdateTask</a>	<a href="#">ACSFCCP_PostCallUpdateTask</a>	amazonconnect
Security	<a href="#">AC_ClassicAdapter</a>	<a href="#">AC_ClassicAdapter</a>	amazonconnect
Security	<a href="#">ACSFCCP_CallRecordingTask</a>	<a href="#">ACSFCCP_CallRecordingTask</a>	amazonconnect
Security	<a href="#">ACSFCCP_CallLogging_View</a>	<a href="#">ACSFCCP_CallLogging_View</a>	amazonconnect

As we are currently setting up the Console experience, click on AC\_ConsoleAdapter page.

Visualforce Page

## amazonconnect\_AC\_ConsoleAdapter

Page Detail		Where is this used?	Preview	
Label	AC_ConsoleAdapter			
Namespace Prefix	amazonconnect	Available for Lightning Experience, Lightning Communities, and the mobile app		
Require CSRF protection on GET requests	<input type="checkbox"/>		Description	

Click on the **Preview** button. A new browser tab will open with the URL of this page. It's going to be in this format:

`https://sfdcInstance--amazonconnect.visualforce.com/apex/AC_ConsoleAdapter`

This is what we are going to use as "Origin URL" in our Amazon Connect configuration. From AWS Console, select Amazon Connect service and then select your Amazon Connect instance, and select "Approved Origins" on the left-hand side:

Domains
Once you have integrated with a CRM product, add the origins (scheme + host + port) that Amazon Connect will need to have access to your organization's data.
<input type="text"/> Find resources
<input type="text"/> URL

Click on "Add origin" link and enter the origin URL

Add domain

Enter domain URL

`https://sfdcInstance--amazonconnect.visualforce.com`

Cancel Add domain

Click "Add" button

## Approved domains

Amazon Connect can integrate with other products including Customer Relationship Management (CRM) and Workforce Management (WFM) products. Click on the link for details on how to set up integrations with Amazon Connect. [Learn more](#)

**Domains**

Once you have integrated with a CRM product, add the origins (scheme + host + port) that Amazon Connect will need to have access to.

Find resources

**URL**

[https://\[REDACTED\].visualforce.com](https://[REDACTED].visualforce.com)

From the Setup screen, type Apps in Quick Find field and select Build>Create>Apps:

The screenshot shows the Salesforce Setup interface. At the top, there's a navigation bar with links for Home, Chatter, Libraries, and Contact Center. Below that is a banner with the text "Take Salesfo" and "Run your business". In the main content area, there's a search bar with "Apps" typed in, followed by "Expand All | Collapse All" buttons. On the left, there's a sidebar with sections for Administer (Manage Apps, Connected Apps, OAuth, Usage, App Menu) and Build (Create, Apps). The "Create" section is expanded, and "Apps" is highlighted with a blue selection bar. The overall theme is light blue and white.

You will be able to see all applications that are available in your account.

Apps					<a href="#">Quick Start</a>	<a href="#">New</a>	<a href="#">Reorder</a>
Action	App Label	Console	Custom	Description			
Edit	<a href="#">App Launcher</a>	<input type="checkbox"/>	<input type="checkbox"/>	App Launcher tabs			
Edit	<a href="#">Community</a>	<input type="checkbox"/>	<input type="checkbox"/>	Salesforce CRM Communities			
Edit	<a href="#">Content</a>	<input type="checkbox"/>	<input type="checkbox"/>	Salesforce CRM Content			
Edit	<a href="#">Marketing</a>	<input type="checkbox"/>	<input type="checkbox"/>	Best-in-class on-demand marketing automation			
Edit	<a href="#">Platform</a>	<input type="checkbox"/>	<input type="checkbox"/>	The fundamental Lightning Platform			
Edit	<a href="#">Sales</a>	<input type="checkbox"/>	<input type="checkbox"/>	The world's most popular sales force automation (SFA) solution			
Edit	<a href="#">Salesforce Chatter</a>	<input type="checkbox"/>	<input type="checkbox"/>	The Salesforce Chatter social network, including profiles and feeds			
Edit	<a href="#">Sample Console</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(Salesforce Classic) Lets agents work with multiple records on one screen			
Edit	<a href="#">Service</a>	<input type="checkbox"/>	<input type="checkbox"/>	Manage customer service with accounts, contacts, cases, and more			
Edit	<a href="#">Site.com</a>	<input type="checkbox"/>	<input type="checkbox"/>	Build pixel-perfect, data-rich websites using the drag-and-drop Site.com application, and manage content and published sites.			

Click "Edit" next to the Sample Console application.

Scroll to the bottom of the page and "Assign to Profiles"

Assign to Profiles	Profile	<input type="checkbox"/> Visible	<input type="checkbox"/> Default
	Analytics Cloud Integration User	<input type="checkbox"/>	<input type="checkbox"/>
Analytics Cloud Security User	<input type="checkbox"/>	<input type="checkbox"/>	
Contract Manager	<input type="checkbox"/>	<input type="checkbox"/>	
Cross Org Data Proxy User	<input type="checkbox"/>	<input type="checkbox"/>	
Custom: Marketing Profile	<input type="checkbox"/>	<input type="checkbox"/>	
Custom: Sales Profile	<input type="checkbox"/>	<input type="checkbox"/>	
Custom: Support Profile	<input type="checkbox"/>	<input type="checkbox"/>	
Force.com - App Subscription User	<input type="checkbox"/>	<input type="checkbox"/>	
Identity User	<input type="checkbox"/>	<input type="checkbox"/>	
Marketing User	<input type="checkbox"/>	<input type="checkbox"/>	
Partner App Subscription User	<input type="checkbox"/>	<input type="checkbox"/>	
Read Only	<input type="checkbox"/>	<input type="checkbox"/>	
Solution Manager	<input type="checkbox"/>	<input type="checkbox"/>	
Standard Platform User	<input type="checkbox"/>	<input type="checkbox"/>	
Standard User	<input type="checkbox"/>	<input type="checkbox"/>	
System Administrator	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

In this example, I'm assigning Sample console as Visible to System Administrator.

Choose **Save**.

From Setup, type Call Centers in the Quick Find field and select Call Centers.

salesforce 18

Search...

Home Chatter Libraries Content Subscriptions

**Take Salesforce with you**  
Run your business from any mobile device

Call Centers [i] [?] [Search]

Expand All | Collapse All

**Build**

- Customize
- Call Center

Call Centers

**Getting Started**



Build  
Generate or copy

**Recent Items beta**

## All Call Centers

A call center corresponds to a single computer-telephony integration (CTI) system already in place at your organization. Salesforce.com users must...

Action	Name	Import	Version
<a href="#">Edit   Del</a>	<a href="#">Amazon Connect CCP Adapter Classic</a>		
<a href="#">Edit   Del</a>	<a href="#">Amazon Connect CCP Adapter Console</a>		
<a href="#">Edit   Del</a>	<a href="#">Amazon Connect CCP Adapter Lightning</a>		

Select "Amazon Connect CCP Adapter Console 3.9"

### Call Center AC Console Adapter

[All Call Centers](#) » AC Console Adapter

#### Call Center Detail

[Edit](#) [Delete](#) [Clone](#)

#### General Information

InternalName	ACConsoleAdapter
Display Name	AC Console Adapter
CTI Adapter URL	/apex/amazonconnect__AC_ConsoleAdapter?ccpVersion=2
Softphone Height	544
Softphone Width	325
Use CTI API	true
Salesforce Compatibility Mode	Classic
Default CallCenter	true
Package Namespace	amazonconnect

Replace the **CTI Adapter URL** with the AC Lightning Adapter visualforce page url you copied in the previous section. If you wish to specify your version of the ccp user interface, add "?ccpVersion=x", where x is the version of the ccp (either 1 or 2). Click on the Save button.

Click on the "Manage Call Center Users" button at the bottom of the page.

Full Name	Alias	Username
No records to display.		

## Call Center Amazon Connect CCP Adapter Console: Manage Users

All Call Centers » Amazon Connect CCP Adapter Console » Manage Users

View: All Create New View

Add More Users Remove Users

Full Name	Alias	Username
No records to display.		

Call Center

## Amazon Connect CCP Adapter Console: Search for New Users

All Call Centers » Amazon Connect CCP Adapter Console » Manage Users » Search for New Users

Set the search criteria below and then click Search to find salesforce.com users who should be enabled as i

--None-- AND  
--None-- AND  
--None-- AND  
--None-- AND  
--None-- AND

Filter By Additional Fields (Optional):

- You can use "or" filters by entering multiple items in the third column, separated by commas.
- For date fields, enter the value in following format: 23/05/2018
- For date/time fields, enter the value in following format: 23/05/2018 15:07

Find

Set filters and click on the Find button. Select the checkbox next to the user and click "Add to Call Center" button.

Full Name	Alias	Username	Role	Profile
SFDCDryRun_AmazonConnect	ASFDC	acsfddryrun@[REDACTED]	System Administrator	System Administrator
User_Integration	integ	integration@00d0n000001bsn5uaa.com	Analytics Cloud Integration User	Analytics Cloud Integration User
User_Security	sec	insightssecurity@00d0n000001bsn5uaa.com	Analytics Cloud Security User	Analytics Cloud Security User

Repeat the steps to add more users.

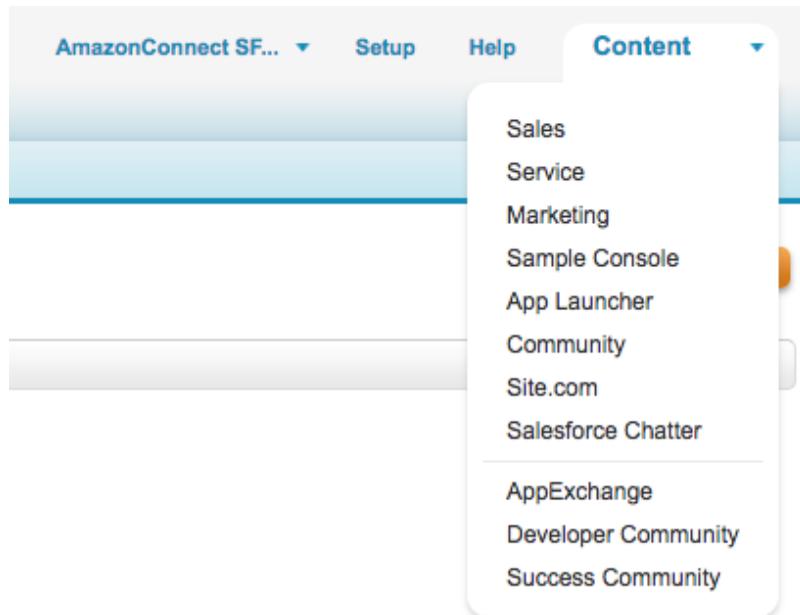
# Amazon Connect CCP Adapter Console: Manage Users

All Call Centers » Amazon Connect CCP Adapter Console » Manage Users

View: All Create New View

		Add More Users Remove Users	
Action	Full Name ↑	Alias	Username
<input type="checkbox"/> Remove	SFDCDryRun, AmazonConnect	ASFDC	acsfdcdryrun

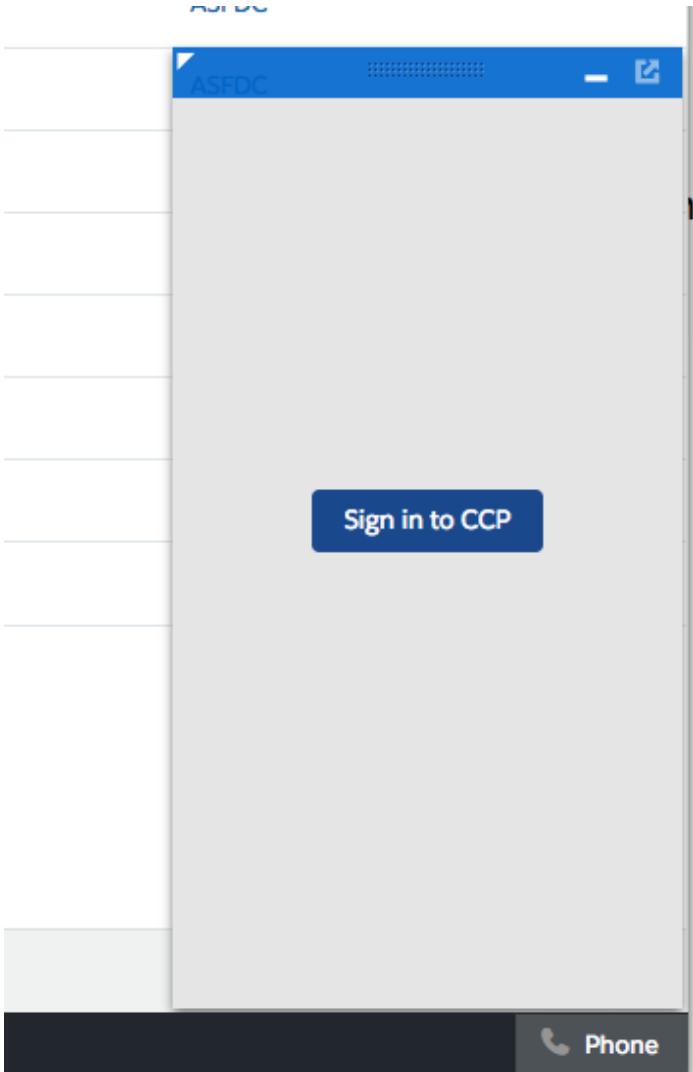
From the top-right corner, select Sample Console application.



In the bottom-right corner, you will be able to see the Phone button.



Click on the Phone button to open the softphone pop-up.



You will need to Sign in into your Amazon Connect CCP. Click on the Sign in to CCP button. A new modal pop-up will show, asking you to enter your credentials.

test10 - AWS Apps Authentication

O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | All

Secure | https://[REDACTED]-test10.awsapps.com/auth/?clie...

ACCOUNT OWNER ALIAS

ASFDC

ASFDC

ASFDC

ASFDC

ASFDC

Sign in to CCP

Sign In

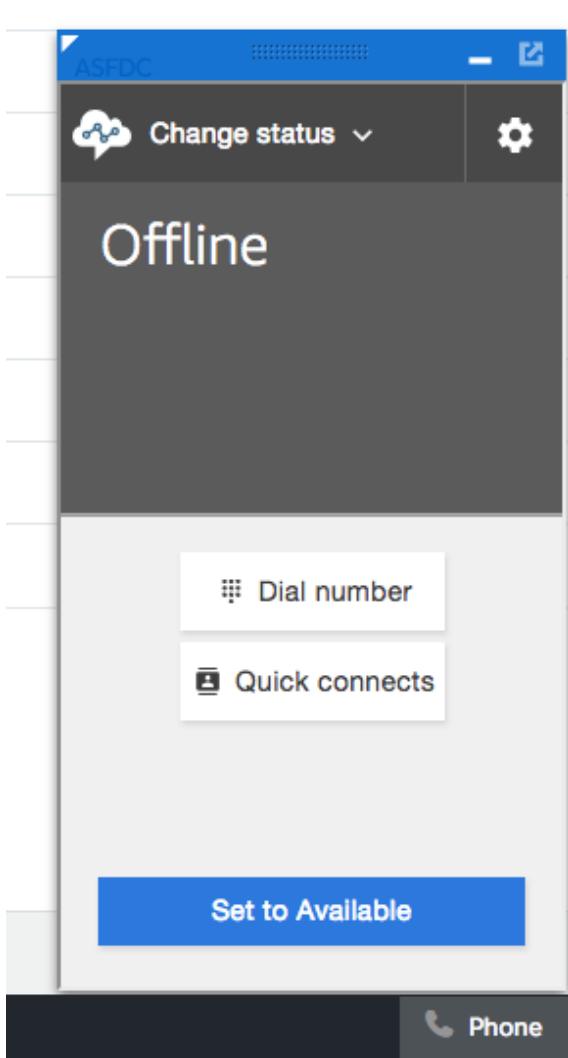
Forgot Password?

Phone

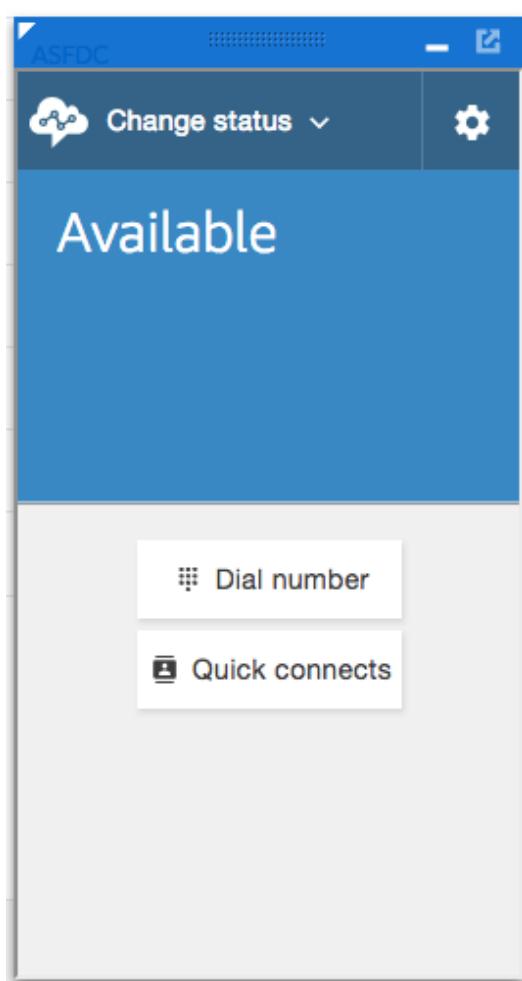
Page 1 of 1

The screenshot shows a web browser window with the title "test10 - AWS Apps Authentication". At the top, there's a navigation bar with links for O, P, Q, R, S, T, U, V, W, X, Y, Z, Other, and All. Below that is a secure connection indicator and the URL "https://[REDACTED]-test10.awsapps.com/auth/?clie...". The main content area has a heading "Amazon Connect" with a cloud icon. It says "Please log in with your [REDACTED] test10 credentials". There are fields for "Username" and "Password", a "Sign In" button, and a "Forgot Password?" link. To the right of the login form is a list titled "ACCOUNT OWNER ALIAS" with four entries: "ASFDC" repeated four times. Below this is a small window titled "ASFDC" with a "Sign in to CCP" button. At the bottom of the page, there are navigation icons for back, forward, and search, along with a "Page 1 of 1" indicator and a "Phone" button.

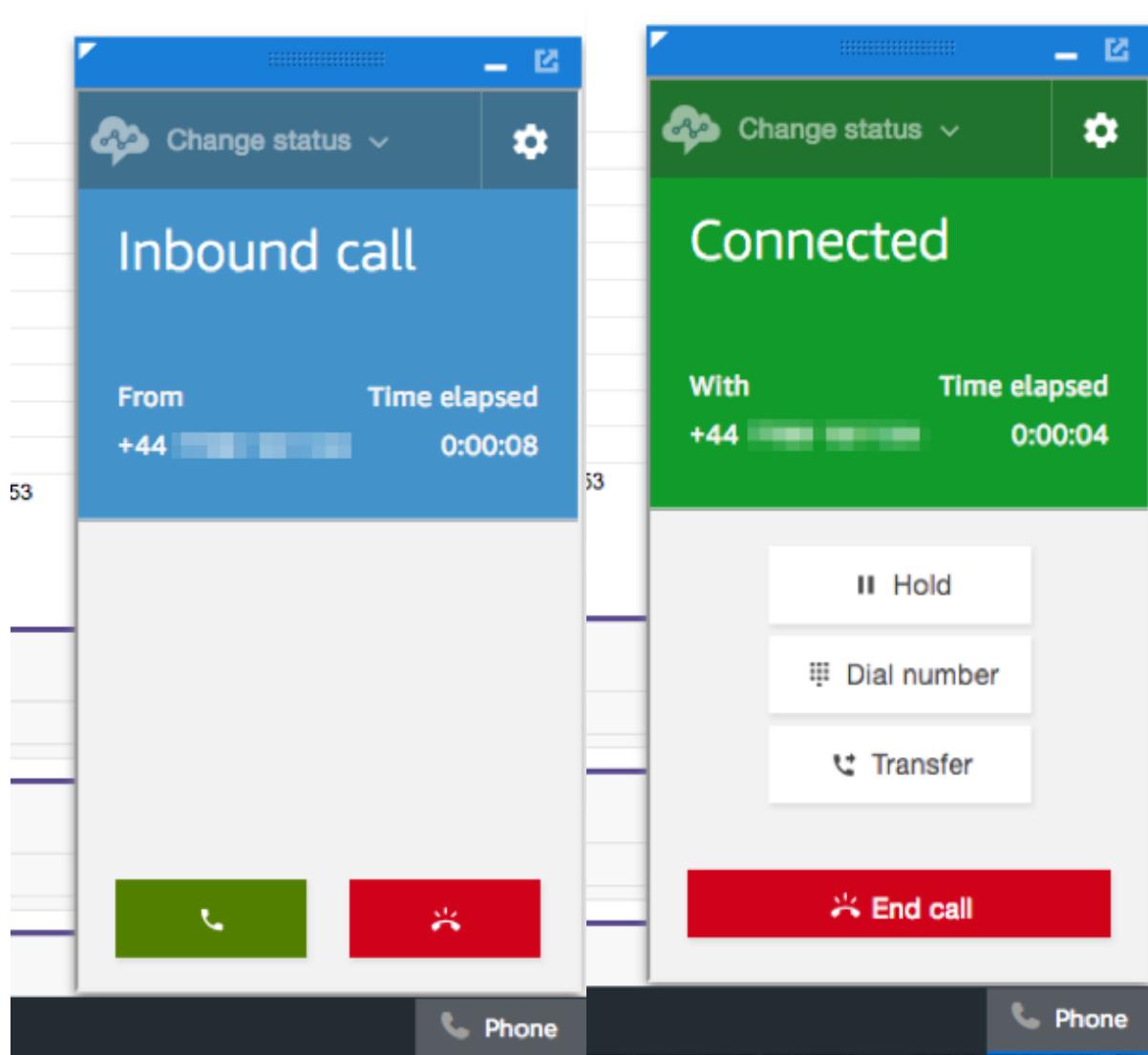
Enter your credentials and click Sign in. Allow Microphone access (if asked by browser). Once login is successful, the pop-up window will automatically close.



Select "Change status" and select "Available".



Make an inbound phone call to your Amazon Connect instance. The CCP is going to "ring" and you can answer the call.



## Configure Classic Experience

The Salesforce Classic is the easiest to configure, but it has some limitations. Most important limitation is that, with Classic layout, there are no tabs and modal containers, so each time new object is selected, a full page reload occurs. This full reload causes softphone to be reloaded too, which could cause an issue in the voice call audio stream. Because of that, in the Classic environment, we have to run a separate instance of softphone (CPP) which will carry the audio, while embedded instance of CCP can be used for call control and screen-pop functionality.

First, we have to configure Amazon Connect integration.

The screenshot shows a navigation menu titled "Sample Console". The "Sales" option is highlighted with a blue background. Other options listed include Service, Marketing, App Launcher, Community, Site.com, Salesforce Chatter, Content, AppExchange, Developer Community, and Success Community.

From the top right corner, select the Sales application.

In the top navigation bar, select the "+" icon.

The screenshot shows the "All Tabs" page. A dropdown menu labeled "View: All Tabs" is open. Below it, a list of tabs is displayed with icons. The "AC CTI Adapters" tab is highlighted with a red box. Other tabs include AC Contact Channel Analytics, AC Contact Trace Records, Accounts, AC Real Time Queue Metrics, AC Voicemail Drops, Analytics, App Launcher, Documents, Duplicate Record Sets, Engagement Channel Types, External Managed Accounts, Files, Forecasts, Groups, and Home.

Select "AC CTI Adapters"

Create a new adapter. Fill in the CTI Adapter Name. For the Call Center Definition Name, type in ACConsoleAdapter. For the Amazon Connect Instance, type in the login url to the instance (this can be found in the Amazon Connect Instance details page), removing everything after ".com".

**Overview**

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

**Overview**

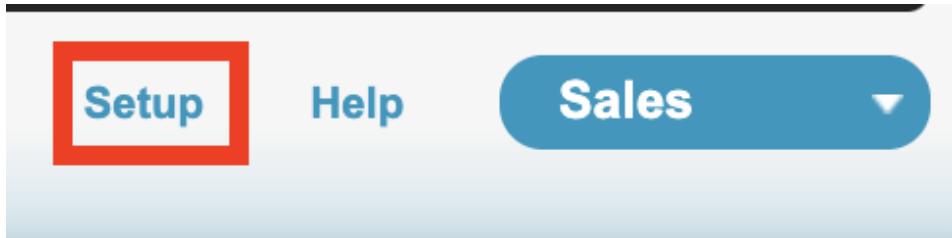
Instance ARN: [REDACTED]

Directory: [REDACTED]

Service-linked role ⓘ AWSServiceRoleForAmazonConnect\_x8eOtNYvgBDc9FlXHHQc [Learn more](#)

Login URL: [https://\[REDACTED\].awsapps.com/connect/login](https://[REDACTED].awsapps.com/connect/login)

Select Save.



In the Quick Find field, type Visualforce Pages and select Visual Force Pages:



Take Salesfo

Run your business

## Visualforce Pages



Expand All | Collapse All

## Build

 Develop

Visualforce Pages

Security	<a href="#">AC_RecordingViewer</a>	<a href="#">AC_RecordingViewer</a>	amazonconnect
Security	<a href="#">AC_CtiScriptEditor</a>	<a href="#">AC_CtiScriptEditor</a>	amazonconnect
Security	<a href="#">AC_LightningAdapter</a>	<a href="#">AC_LightningAdapter</a>	amazonconnect
Security	<a href="#">AC_LightningScriptIncludes</a>	<a href="#">AC_LightningScriptIncludes</a>	amazonconnect
Security	<a href="#">AC_RealTimeQueueMetrics</a>	<a href="#">AC_RealTimeQueueMetrics</a>	amazonconnect
Security	<a href="#">AC_ClassicScriptIncludes</a>	<a href="#">AC_ClassicScriptIncludes</a>	amazonconnect
Security	<a href="#">AC_ConsoleAdapter</a>	<a href="#">AC_ConsoleAdapter</a>	amazonconnect
Security	<a href="#">AC_ConsoleScriptIncludes</a>	<a href="#">AC_ConsoleScriptIncludes</a>	amazonconnect
Security	<a href="#">ACSFCCP_CallTask</a>	<a href="#">ACSFCCP_CallTask</a>	amazonconnect
Security	<a href="#">ACSFCCP_ObjectType</a>	<a href="#">ACSFCCP_ObjectType</a>	amazonconnect
Security	<a href="#">ACSFCCP_PostCallUpdateTask</a>	<a href="#">ACSFCCP_PostCallUpdateTask</a>	amazonconnect
Security	<a href="#">AC_ClassicAdapter</a>	<a href="#">AC_ClassicAdapter</a>	amazonconnect
Security	<a href="#">ACSFCCP_CallRecordingTask</a>	<a href="#">ACSFCCP_CallRecordingTask</a>	amazonconnect
Security	<a href="#">ACSFCCP_CallLogging_View</a>	<a href="#">ACSFCCP_CallLogging_View</a>	amazonconnect

Security | ACSFCCP\_CallRecordingCase ACSFCCP\_CallRecordingCase amazonconnect

Security | AC\_HelperIncludes AC\_HelperIncludes amazonconnect

Security | AC\_HelperIncludesCcpV1 AC\_HelperIncludesCcpV1 amazonconnect

As we are currently setting up the Classic experience, click on AC\_ClassicAdapter page

Visualforce Page

amazonconnect\_\_AC\_ClassicAdapter

Page Detail		Where is this used?	Preview
Label	AC_ClassicAdapter		Name
Namespace Prefix	amazonconnect	Available for Lightning Experience, Lightning Communities, and the mobile app	AC_ClassicAdapter
Require CSRF protection on GET requests	<input type="checkbox"/>	Description	

Click on the Preview button. New browser tab will open with the URL of this page. It's going to be in this format:

`https://sfdcInstance--amazonconnect.visualforce.com/apex/AC_ClassicAdapter`

This is what we are going to use as "Origin URL" in our Amazon Connect configuration. From AWS Console, select Amazon Connect service and then select your Amazon Connect instance, then select "Approved origins" on the left-hand side:

The screenshot shows the AWS Lambda function configuration page. On the left, there is a sidebar with the following menu items: Instances, Overview, Telephony, Data storage, Data streaming, Contact flows, Analytics tools, and Approved origins (which is highlighted in orange). The main content area has the following sections: "Approved domains" (with a sub-section "Domains" containing a search bar and a "Find resources" link), "URL" (with a text input field), and a "Status" section (with a "Success" status indicator and a "View logs" link).

Click on "Add origin" link and enter the origin URL

The screenshot shows the "Add domain" dialog box. It has a title bar "Add domain" with a close button. Below the title is a label "Enter domain URL" followed by a text input field containing the URL "https://f...visualforce.com". At the bottom right are two buttons: "Cancel" and "Add domain" (which is highlighted in orange).

Click "Add" button

## Approved domains

Amazon Connect can integrate with other products including Customer Relationship Management (CRM) and Workforce Management (WFM) products. Click on the link for details on how to set up integrations with Amazon Connect. [Learn more](#)

Domains	Actions
Once you have integrated with a CRM product, add the origins (scheme + host + port) that Amazon Connect will need to have access to.	<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Add domain</a>
<input type="text"/> Find resources	
URL	
<input checked="" type="radio"/> <a href="https://[REDACTED].visualforce.com">https://[REDACTED].visualforce.com</a>	

From the Salesforce Classic layout, select Setup then type Call Centers in the Quick Find field and select Call Centers.

The screenshot shows the Salesforce classic interface. At the top, there's a blue header bar with the Salesforce logo, a user icon, and a search bar labeled "Search...". Below the header, a navigation bar includes links for Home, Chatter, Libraries, Content, and Subscriptions. The main content area has a banner that says "Take Salesforce with you" and "Run your business from any mobile device". On the left, a sidebar titled "Build" contains sections for "Customize" (with "Call Center" checked) and "Call Centers". The main panel features a "Getting Started" section with a hammer icon and a "Recent Items" section with a green square icon. A blue bar at the bottom of the sidebar has a search bar with "Call Centers" typed in, an info icon, and a magnifying glass icon.

## All Call Centers

A call center corresponds to a single computer-telephony integration (CTI) system already in place at your organization. Salesforce.com users must

Action	Name	Import	Version
<a href="#">Edit   Del</a>	<a href="#">Amazon Connect CCP Adapter Classic</a>		
<a href="#">Edit   Del</a>	<a href="#">Amazon Connect CCP Adapter Console</a>		
<a href="#">Edit   Del</a>	<a href="#">Amazon Connect CCP Adapter Lightning</a>		

Select "Amazon Connect CCP Adapter Classic 3.9"

## Call Center Detail

[Edit](#)[Delete](#)[Clone](#)

### General Information

InternalName	ACClassicAdapter
Display Name	AC Classic Adapter
CTI Adapter URL	/apex/amazonconnect__AC_ClassicAdapter?ccpVersion=2
Softphone Height	460
Softphone Width	200
Use CTI API	true
Salesforce Compatibility Mode	Classic
Default CallCenter	true
Package Namespace	amazonconnect

Replace the **CTI Adapter URL** with the AC Lightning Adapter visualforce page url you copied in the previous section. If you wish to specify your version of the ccp user interface, add "?ccpVersion=x", where x is the version of the ccp (either 1 or 2). Click on the Save button.

Click on the "Manage Call Center Users" button at the bottom of the page.

The screenshot shows a table with a single row. The first column is labeled 'Call Center Users by Profile' and contains the text 'Total 0'. The second column is labeled 'Manage Call Center Users' and contains a blue link.

Call Center Users by Profile	Total 0	Manage Call Center Users
------------------------------	---------	--------------------------

### Call Center Amazon Connect CCP Adapter Classic: Manage Users

All Call Centers » Amazon Connect CCP Adapter Classic » Manage Users

View: [All](#) [Create New View](#)

The screenshot shows a table with three columns: 'Full Name', 'Alias', and 'Username'. There is a header row with buttons for 'Add More Users' and 'Remove Users'. Below the table, a message says 'No records to display.'

Full Name	Alias	Username
No records to display.		

Click on the "Add More Users" button.

# Amazon Connect CCP Adapter Classic: Search for New Users

All Call Centers » Amazon Connect CCP Adapter Classic » Manage Users » Search for New Users

Set the search criteria below and then click Search to find salesforce.com users who should be enabled as

The screenshot shows a search form with five pairs of dropdown menus for filtering user criteria. Each pair consists of a dropdown menu on the left, a dropdown menu with a downward arrow on the right, and an empty text input field to the right of the second dropdown. Below the filters is a section titled "Filter By Additional Fields (Optional)" containing three bullet points:

- You can use "or" filters by entering multiple items in the third column, separated by commas.
- For date fields, enter the value in following format: 23/05/2018
- For date/time fields, enter the value in following format: 23/05/2018 15:42

At the bottom right of the form is a "Find" button.

Set filters and click on the Find button. Select the checkbox next to the user and click "Add to Call Center" button.

	Full Name	Alias	Username	Role	Profile
<input checked="" type="checkbox"/>	SFDCDryRun_AmazonConnect	ASFDC	acsfdcdryrun	System Administrator	
<input type="checkbox"/>	User_Integration	integ	integration@00d0n000001bsn5uaa.com	Analytics Cloud Integration User	
<input type="checkbox"/>	User_Security	sec	insightsecurity@00d0n000001bsn5uaa.com	Analytics Cloud Security User	

Repeat the steps to add more users.

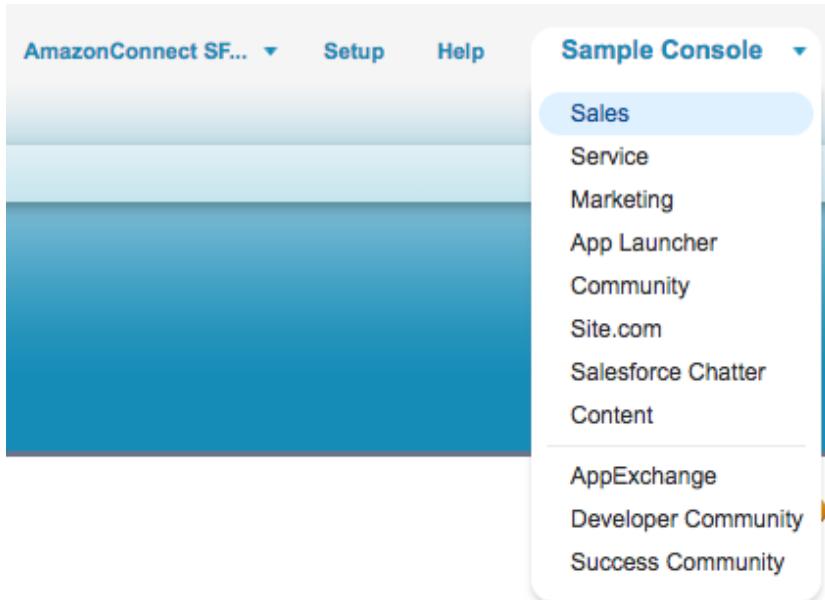
# Amazon Connect CCP Adapter Classic: Manage Users

All Call Centers » Amazon Connect CCP Adapter Classic » Manage Users

View: All

	Action	Full Name	Alias	Username	Add More Users	Remove Users
<input type="checkbox"/>	Remove	SFDCDryRun_AmazonConnect	ASFDC	acsfdcdryrun		

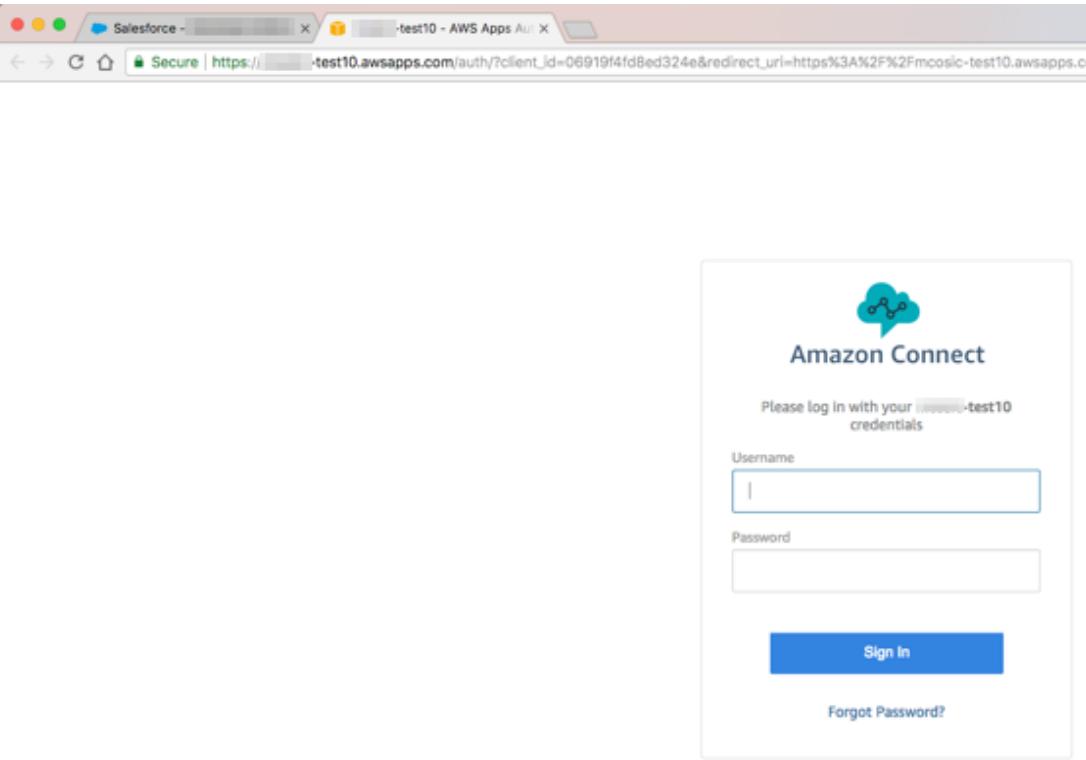
From the top-right corner, select Sales application.



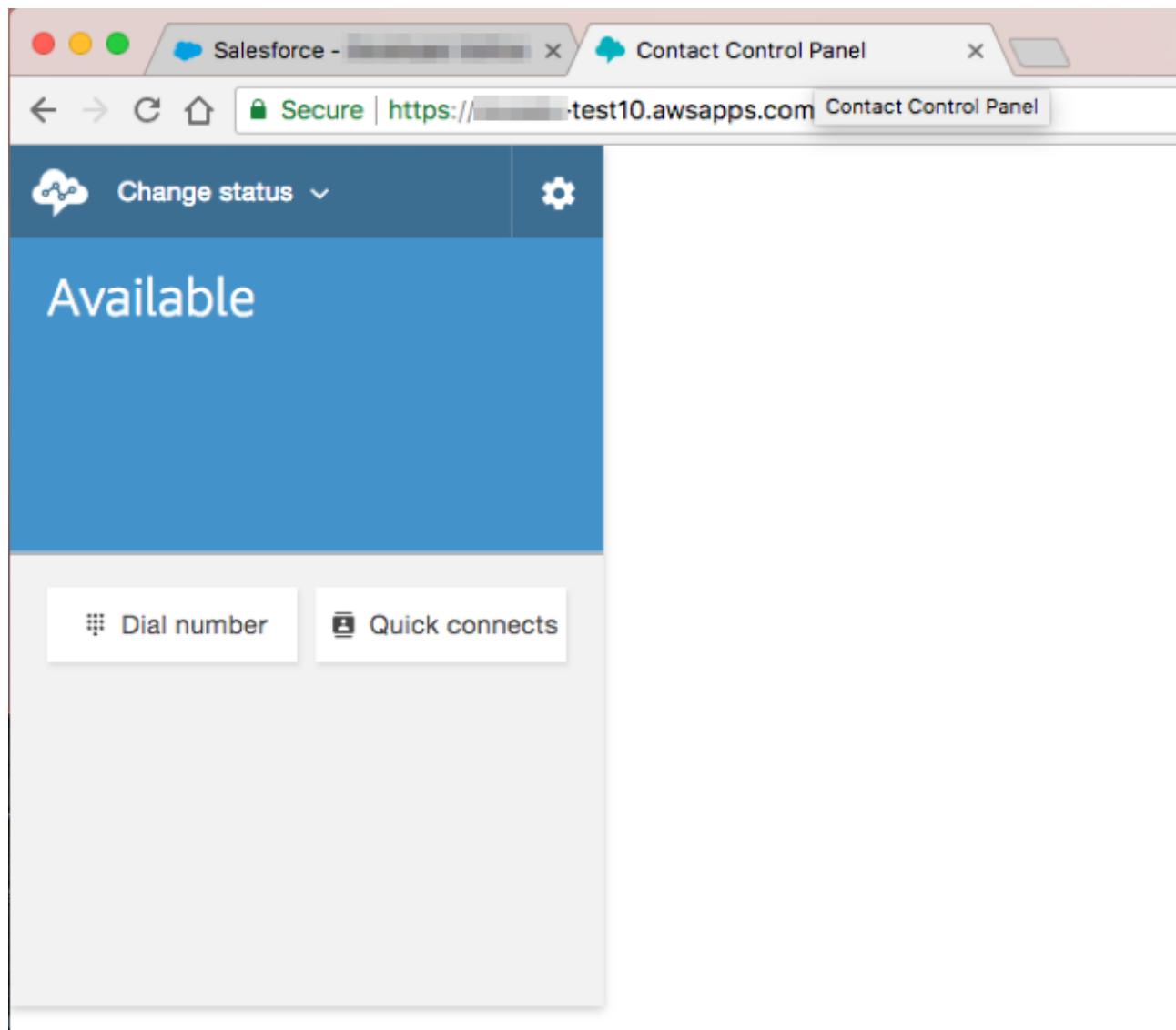
On the left-hand side, you will be able to see the Phone container.

A screenshot of the Salesforce Chatter feed. The top navigation bar includes links for Home, Chatter, Campaigns, Leads, Accounts, Contacts, Opportunities, Forecasts, Contracts, Orders, and Cases. On the far left, there is a sidebar with a 'Sign in to CCP' button and a 'Create New...' button. The main content area shows a post from a user named 'AmazonConnect SFDCDryRun' dated 'Wednesday 23 May 2018'. The post has a 'Post' button, a 'File' button, a 'New Event' button, and a 'More' dropdown. Below the post is a text input field for sharing an update, a search bar, and a 'Sort By Latest Posts' dropdown. A message states 'There are no updates.' At the bottom, there is a 'Calendar' section with a 'New Event' button and a message stating 'Today 23/05/2018 You have no events scheduled for the next 7 days.'

You will need to Sign in into your Amazon Connect CCP. Click on the Sign in to CCP button. A new browser tab will open, asking you to enter your credentials.



Enter your credentials and click Sign in. Allow Microphone access (if asked by browser). Once Login is successful, the new tab with CCP will stay open, as this tab is going to carry the audio for voice calls.



Switch back to Salesforce tab in your browser.

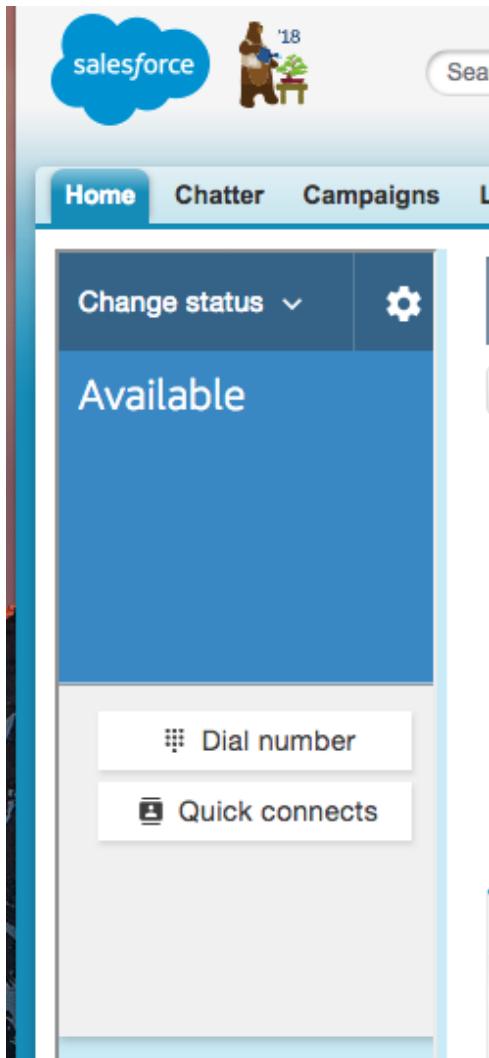
The screenshot shows the Salesforce Contact Control Panel interface. At the top, there are tabs for Home, Chatter, Campaigns, Leads, Accounts, Contacts, Opportunities, Forecasts, Contracts, Orders, and Cases. The Chatter tab is active.

In the Chatter feed, there is a post from 'AmazonConnect SFDCDryRun' dated Wednesday 23 May 2018. The feed includes options to Post, File, New Event, More, and Share. A search bar and a sorting option ('Sort By Latest Posts') are also present.

The sidebar on the left shows status controls: 'Change status' (set to Offline), 'Dial number', 'Quick connects', and a large blue button labeled 'Set to Available'.

The Calendar section shows 'Today 23/05/2018' and a message stating 'You have no events scheduled for the next 7 days.' A 'New Event' button is available.

Select "Change status" and select "Available".



Make an inbound phone call to your Amazon Connect instance. The CCP is going to "ring" and you can answer the call.

Two side-by-side screenshots of the Salesforce mobile application home screen. Both screens show a "Change status" dropdown set to "Connected" and a gear icon. The left screen shows an "Inbound call" status with "From +44 [REDACTED]" and "Time elapsed". The right screen shows a "Connected" status with "With +44 [REDACTED]" and "Time elapsed". Both screens have a "Hold" button with a pause icon, a "Dial number" button with a telephone icon, a "Transfer" button with a person icon, and a large red "End call" button with a hang-up icon. Below the buttons is a light blue footer bar.

Some CTI Flow features will reload the page the agent is currently on. The page is fully reloaded, but the softphone preserved the audio stream, as another instance of CCP was running in the 2<sup>nd</sup> tab. If the 2nd tab is closed, the audio will be lost. The 2<sup>nd</sup> CCP instance can also run in a separate browser window, if preferred.

Go to Salesforce Setup page and type Call Centers in Quick Find, then select Call Centers.

## All Call Centers

A call center corresponds to a single computer-telephony integration (CTI) system already in place at your organization. Salesforce.com users must

Action	Name ↑	Import	Version
Edit   Del	<a href="#">Amazon Connect CCP Adapter Classic</a>		
Edit   Del	<a href="#">Amazon Connect CCP Adapter Console</a>		
Edit   Del	<a href="#">Amazon Connect CCP Adapter Lightning</a>		

Select "Amazon Connect CCP Classic"

Call Center	
<b>Amazon Connect CCP Adapter Classic</b>	
<a href="#">All Call Centers</a> » <a href="#">Amazon Connect CCP Adapter Classic</a>	
<b>Call Center Detail</b>	<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Clone</a>
<b>Amazon Connect Salesforce CCP Adapter</b>	
Internal Name	AmazonConnectSFCCPAdapterClassic
Display Name	Amazon Connect CCP Adapter Classic
Description	Amazon Connect Call Center
CTI Adapter URL	/apex/ACSFCCP_Classic
Use CTI API	true
Softphone Height	400
Softphone Width	250
Salesforce Compatibility Mode	Classic

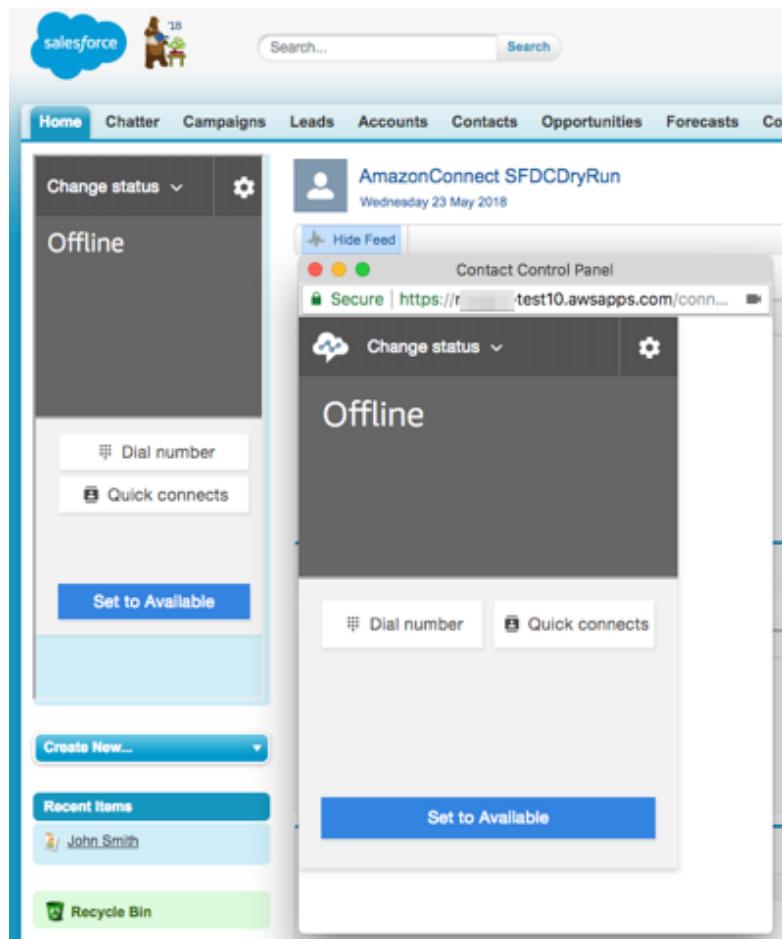
Click on the Edit button and find the "Amazon Connect CCP Login Popup" field. By default, this field is set to "false", which means that Login Popup will be opened in a 2nd tab. If we change this value to "true", then Login Popup will be opened in a new browser window.

You may also notice that "Amazon Connect CCP Medialess" field is set to "true". This basically means that embedded CCP instance will not carry any media. Set the value to "true" and click on the Save button. Go back to Sales application. If CCP is already logged in, please log out.

Click on the "Sign in to CCP" button and new browser window will open, asking you for credentials.

Enter your credentials and click Sign In. The CCP application will login, but popup window will stay open and it will host the 2<sup>nd</sup> CCP which will carry the audio stream. This window can be minimized or moved

to 2<sup>nd</sup> screen.

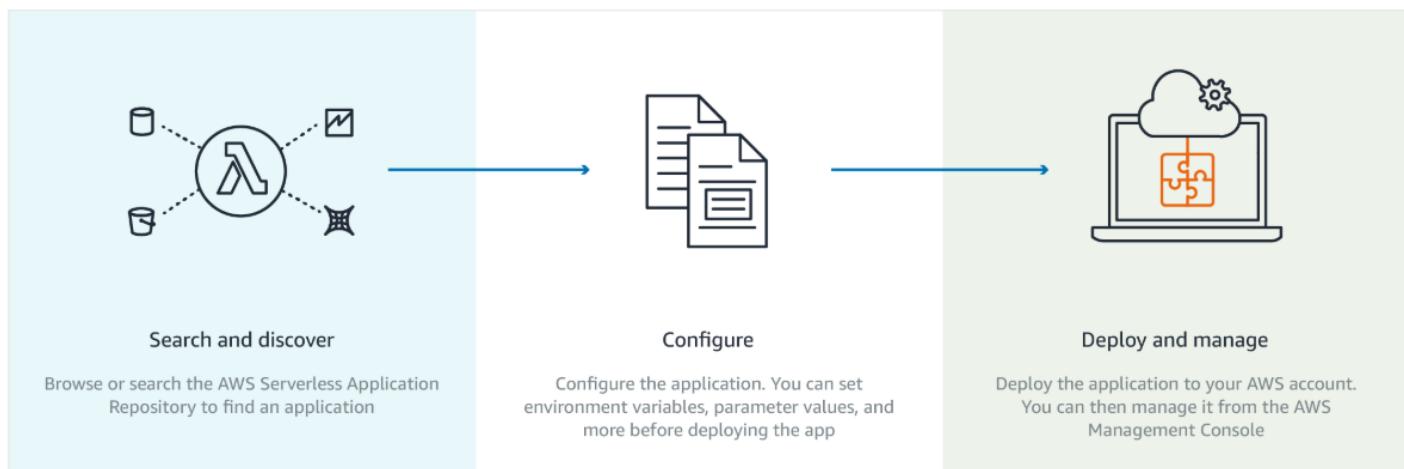


[Edit this page](#)

# Setting Up The Salesforce Lambdas Manually

Below are manual setup instructions for the Salesforce Lambdas.

## How it works: Deploying applications



# Salesforce Lambda Prerequisites

Consider the following prerequisites before you install the Lambda package.

## Determine your production Environment

In your installation notes, enter the value for "Production Environment" as "true" or "false", depending on whether the Salesforce environment that you are deploying the package into is a production or a sandbox. For Production, enter "true". For Sandbox enter "false".

## Determine your Consumer Key and Secret

To leverage the full potential of the integration, Salesforce data needs to be accessed from AWS environment. The AWS Serverless package comes with a set of pre-built queries to lookup, update and create Salesforce objects within Amazon Connect Contact Flows, in form of AWS Lambda functions.

The Lambda function access Salesforce using the Salesforce REST API. To get access to the environment, a Connected App must be configured with OAuth settings enabled.

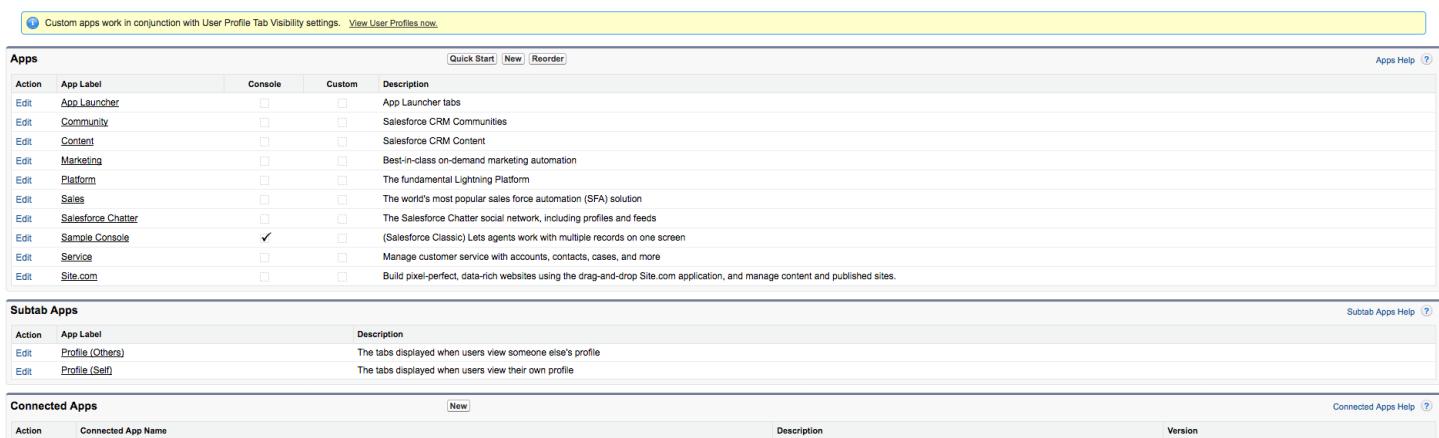
1. Log in to Salesforce
2. Navigate to Setup > Create > Apps

### Apps

Help for this Page 

An app is a group of tabs that work as a unit to provide functionality. Users can switch between apps using the app drop-down menu at the top-right corner of every page.

You can customize existing apps to match the way you work, or build new apps by grouping standard and custom tabs.



Apps				
Action	App Label	Console	Custom	Description
Edit	App Launcher	<input type="checkbox"/>	<input type="checkbox"/>	App Launcher tabs
Edit	Community	<input type="checkbox"/>	<input type="checkbox"/>	Salesforce CRM Communities
Edit	Content	<input type="checkbox"/>	<input type="checkbox"/>	Salesforce CRM Content
Edit	Marketing	<input type="checkbox"/>	<input type="checkbox"/>	Best-in-class on-demand marketing automation
Edit	Platform	<input type="checkbox"/>	<input type="checkbox"/>	The fundamental Lightning Platform
Edit	Sales	<input type="checkbox"/>	<input type="checkbox"/>	The world's most popular sales force automation (SFA) solution
Edit	Salesforce Chatter	<input type="checkbox"/>	<input type="checkbox"/>	The Salesforce Chatter social network, including profiles and feeds
Edit	Sample Console	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(Salesforce Classic) Lets agents work with multiple records on one screen
Edit	Service	<input type="checkbox"/>	<input type="checkbox"/>	Manage customer service with accounts, contacts, cases, and more
Edit	Site.com	<input type="checkbox"/>	<input type="checkbox"/>	Build pixel-perfect, data-rich websites using the drag-and-drop Site.com application, and manage content and published sites.

Subtab Apps		
Action	App Label	Description
Edit	Profile (Others)	The tabs displayed when users view someone else's profile
Edit	Profile (Self)	The tabs displayed when users view their own profile

Connected Apps		
Action	Connected App Name	Description

3. Click on the "New" button for the Connected Apps at the bottom of the page
4. In the following form, fill out the Connected App Name, API Name and Contact Email with values of your choice. We recommend "Amazon Connect Integration" as the Connected App Name and the default value for the API name.

# New Connected App

## Basic Information

Connected App Name	<input type="text" value="Amazon Connect Integration"/>
API Name	<input type="text" value="Amazon_Connect_Integration"/>
Contact Email	<input type="text"/>

5. Select the checkbox next to "Enable OAuth Settings" as shown below.

## ▼ API (Enable OAuth Settings)

Enable OAuth Settings

6. Ensure the Callback URL is set to <https://www.salesforce.com>

## API (Enable OAuth Settings)

Enable OAuth Settings	<input checked="" type="checkbox"/>
Enable for Device Flow	<input type="checkbox"/>
Callback URL	<input type="text" value="https://www.salesforce.com"/>

7. Ensure Selected OAuth Scopes has the following values selected:

- a. Access the identity URL service (id, profile, email, address, phone)
- b. Manage user data via APIs (api)

8. Select the checkbox "Require Secret for Web Server Flow", and the checkbox "Require Secret For Refresh Token Flow"

## ▼ API (Enable OAuth Settings)

Enable OAuth Settings	<input checked="" type="checkbox"/>						
Enable for Device Flow	<input type="checkbox"/>						
Callback URL	<input type="text" value="https://www.salesforce.com"/>						
Use digital signatures	<input type="checkbox"/>						
Selected OAuth Scopes	<table><tr><td><b>Available OAuth Scopes</b></td><td><b>Selected OAuth Scopes</b></td></tr><tr><td><input type="checkbox"/> Access Analytics REST API Charts Geodata resources (eclair_api) <input type="checkbox"/> Access Analytics REST API resources (wave_api) <input type="checkbox"/> Access Connect REST API resources (chatter_api) <input type="checkbox"/> Access Lightning applications (lightning) <input type="checkbox"/> Access Visualforce applications (visualforce) <input type="checkbox"/> Access chatbot services (chatbot_api) <input type="checkbox"/> Access content resources (content) <input type="checkbox"/> Access custom permissions (custom_permissions) <input type="checkbox"/> Access unique user identifiers (openid) <input type="checkbox"/> Full access (full)</td><td><input type="checkbox"/> Access the identity URL service (id, profile, email, address, phone) <input type="checkbox"/> Manage user data via APIs (api)</td></tr><tr><td><input type="button" value="Add"/> <input type="button" value="Remove"/></td><td></td></tr></table>	<b>Available OAuth Scopes</b>	<b>Selected OAuth Scopes</b>	<input type="checkbox"/> Access Analytics REST API Charts Geodata resources (eclair_api) <input type="checkbox"/> Access Analytics REST API resources (wave_api) <input type="checkbox"/> Access Connect REST API resources (chatter_api) <input type="checkbox"/> Access Lightning applications (lightning) <input type="checkbox"/> Access Visualforce applications (visualforce) <input type="checkbox"/> Access chatbot services (chatbot_api) <input type="checkbox"/> Access content resources (content) <input type="checkbox"/> Access custom permissions (custom_permissions) <input type="checkbox"/> Access unique user identifiers (openid) <input type="checkbox"/> Full access (full)	<input type="checkbox"/> Access the identity URL service (id, profile, email, address, phone) <input type="checkbox"/> Manage user data via APIs (api)	<input type="button" value="Add"/> <input type="button" value="Remove"/>	
<b>Available OAuth Scopes</b>	<b>Selected OAuth Scopes</b>						
<input type="checkbox"/> Access Analytics REST API Charts Geodata resources (eclair_api) <input type="checkbox"/> Access Analytics REST API resources (wave_api) <input type="checkbox"/> Access Connect REST API resources (chatter_api) <input type="checkbox"/> Access Lightning applications (lightning) <input type="checkbox"/> Access Visualforce applications (visualforce) <input type="checkbox"/> Access chatbot services (chatbot_api) <input type="checkbox"/> Access content resources (content) <input type="checkbox"/> Access custom permissions (custom_permissions) <input type="checkbox"/> Access unique user identifiers (openid) <input type="checkbox"/> Full access (full)	<input type="checkbox"/> Access the identity URL service (id, profile, email, address, phone) <input type="checkbox"/> Manage user data via APIs (api)						
<input type="button" value="Add"/> <input type="button" value="Remove"/>							
Require Secret for Web Server Flow	<input checked="" type="checkbox"/>						
Require Secret for Refresh Token Flow	<input checked="" type="checkbox"/>						
Introspect All Tokens	<input type="checkbox"/>						
Configure ID Token	<input type="checkbox"/>						
Enable Asset Tokens	<input type="checkbox"/>						
Enable Single Logout	<input type="checkbox"/>						

9. Click "Save" at the bottom of the screen.

10. Click "Continue" on the next screen

## New Connected App

Allow from 2-10 minutes for your changes to take effect on the server before using the connected app.

[Continue](#) [Cancel](#)

11. Once the app has been created, on the app's detail screen, please copy the "Consumer Key" value to your installation notes



12. Select "Click to reveal" next to Consumer Secret and record this value to "Consumer Secret" in your installation notes.

13. Click "Manage" at the top of the page

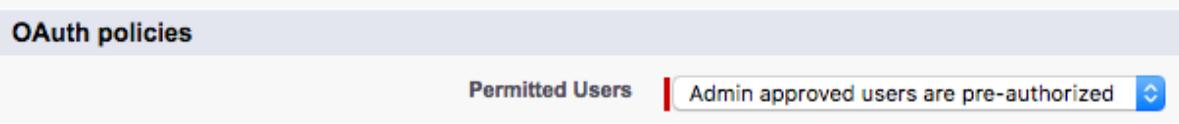
## Connected App Name Amazon Connect Integration

[« Back to List: Custom Apps](#)

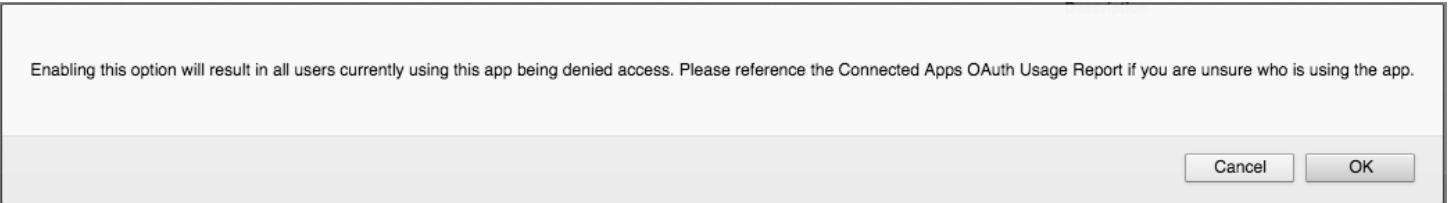
[Edit](#) [Delete](#) [Manage](#)

14. On the page that appears, click "Edit Policies"

15. Set "Permitted Users" to "Admin approved users are pre-authorized"



16. Click "OK" on the pop-up dialog:



17. Set "IP Relaxation" to "Relax IP restrictions"



18. Click "Save"

## Determine your Username, Password and Security Token

The authentication of the Lambda Functions requires valid user credentials. It is a common practice to create an API user account for this purpose.

1. Log in to Salesforce

2. Navigate to Setup > Manage Users > Profiles

3. Click "New Profile"

4. Enter the Profile Name (i.e. "API Only")

5. Select the existing profile to clone (The integration user's access to just those objects required for the integration)

Enter the name of the new profile.

You must select an existing profile to clone from.

Existing Profile	System Administrator
User License	Salesforce
Profile Name	API Only

**Save** **Cancel**

NOTE: You're advised to use a full Salesforce License for the user to be able to set the below permissions and have full access to avoid any other errors.

6. Click "Save". A New Profile is created:

Profile  
**API Only**  
[« Back to List: Profiles](#)

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

[Login IP Ranges](#) | [Enabled Apex Class Access](#) [2] | [Enabled Visualforce Page Access](#) [11] | [Enabled External Data Source Access](#) [0] | [Enabled Named Credential Access](#) [0] | [Enabled Service Presence Status Access](#) [0] | [Enabled Custom Permissions](#) [0]

Profile Detail		Edit		Clone		Delete		View Users	
Name	API Only								
User License	Salesforce								
Description									

Custom Profile ✓

7. Once the new profile page opens, select the **System Permissions** button

**System**

**System Permissions**  
Permissions to perform actions t

8. If the Lightning Experience User checkbox is selected, clear it

Lightning Experience User	<input checked="" type="checkbox"/>
---------------------------	-------------------------------------

9. Save the system permissions, then go back to Profile Overview

10. Select the *Password Policies* link, click edit

## System

**System Permissions**  
Permissions to perform actions tha

**Login Hours**  
Settings that control when users ca

**Login IP Ranges**  
Settings that control the IP address

**Service Providers**  
Permissions that let users switch to

**Session Settings**  
Settings that control required sessi

**Password Policies**  
Profile Based password policies

**Default Experience**  
Setting for assigning a default com

### Password Policies

User passwords expire in	90 days
Enforce password history	3 passwords remembered
Minimum password length	8
Password complexity requirement	Must mix alpha and numeric characters
Password question requirement	Cannot contain password
Maximum invalid login attempts	10
Lockout effective period	15 minutes
Obscure secret answer for password resets	<input type="checkbox"/>
Require a minimum 1 day password lifetime	<input type="checkbox"/>
Don't immediately expire links in forgot password emails	<input type="checkbox"/>

[Edit](#) [Clone](#) [Delete](#) [View Users](#)

11. Set **User password expire in** to **Never expires** **NOTE:** Failure to do this may lead to production outages.

### Password Policies

User passwords expire in	<input type="text" value="Never expires"/>
Enforce password history	<input type="text" value="No passwords remembered"/>
Minimum password length	<input type="text" value="8"/>
Password complexity requirement	<input type="text" value="Must mix alpha and numeric characters"/>
Password question requirement	<input type="text" value="Cannot contain password"/>
Maximum invalid login attempts	<input type="text" value="10"/>
Lockout effective period	<input type="text" value="15 minutes"/>
Obscure secret answer for password resets	<input type="checkbox"/>
Require a minimum 1 day password lifetime	<input type="checkbox"/>
Don't immediately expire links in forgot password emails	<input type="checkbox"/> <a href="#">i</a>

12. Select **Save**

13. Navigate to Setup > Manage Apps > Connected Apps

14. Select the app you have created in the previous step (i.e. Amazon Connect Integration)

# Connected Apps

Manage access to apps that connect to this Salesforce organization.

**App Access Settings**

Allow users to install canvas personal apps

[Edit](#)

View: [All](#) [Create New View](#)

Action	Master Label ↑
<a href="#">Edit</a>	<a href="#">Amazon Connect Integration</a>

15. Click "Manage Profiles"

**Profiles**

No profiles associated with this app.

[Manage Profiles](#)

16. Ensure the "API Only" profile is selected:

## Application Profile Assignment

[« Back to Connected App Detail](#)

Select the appropriate profiles to choose which users have access to this application.

Select	Profiles
<input type="checkbox"/>	<a href="#">Analytics Cloud Integration User</a>
<input type="checkbox"/>	<a href="#">Analytics Cloud Security User</a>
<input checked="" type="checkbox"/>	<a href="#">API Only</a>

17. Click "Save" at the bottom of the page

18. Navigate to Setup > Manage Users > Users

19. Click "New User"

## All Users

On this page you can create, view, and manage users.

In addition, download SalesforceA to view and edit user details, reset passwords, and perform other administrative tasks from your mobile devices: [iOS](#) | [Android](#)

View: [All Users](#) [Edit](#) | [Create New View](#)

<input type="checkbox"/> Action	Full Name ↑	<a href="#">Alias</a>	<a href="#">Username</a>	<a href="#">New User</a>	<a href="#">Reset Password(s)</a>	<a href="#">Add Multiple Users</a>

20. Set necessary fields: Last Name, Alias, Email, Username, Nickname

# New User

User Edit

General Information

First Name	<input type="text"/>
Last Name	APIUser
Alias	apiuser
Email	<input type="text"/>
Username	apiuser
Nickname	apiuser <a href="#">i</a>
Title	<input type="text"/>
Company	<input type="text"/>
Department	<input type="text"/>
Division	<input type="text"/>

21. On the right-hand side, set the User License and Profile

Role	<None Specified>	<a href="#">i</a>
User License	Salesforce	<a href="#">i</a>
Profile	API Only	<a href="#">i</a>

22. Click "Save"

23. In **Quick Find**, search for "Permission Sets". Select the **AC\_Administrator** permission set.

The screenshot shows the Salesforce Setup interface. The left sidebar has sections for Users, Custom Code, and Global Search. The 'Permission Sets' section is selected under 'Permission Set Groups'. The main area is titled 'Permission Sets' and contains a table of permission sets. One row is highlighted with a red box around the 'AC Administrator' label in the 'Permission Set Label' column. The table columns are Action, Permission Set Label, Description, and License.

Action	Permission Set Label	Description	Licenses
<input type="checkbox"/>	AC Administrator	Allows the user to configure Amazon Connect setup and provides ...	
<input type="checkbox"/>	AC Agent		
<input type="checkbox"/>	AC_CallRecording		
<input type="checkbox"/>	AC_Manager		

24. Select **Manage Assignments**. Add the apiuser you just created to the permission set.

25. A confirmation email will be sent, with an activation link. Click the link to activate your user.



# Welcome to Salesforce!

Click below to verify your account.

**Verify Account**

To easily log in later, save this URL:

<https://login.salesforce.com/>

Change (set) a password for apiuser (Considered a strong that contains at least 20 random characters):



## Change Your Password

Enter a new password for apiuser@acsfcdryrun.com.

Your password must have at least:

- 8 characters
- 1 letter
- 1 number

\* New Password

|

\* Confirm New Password

Security Question

▼ In what city were you born?

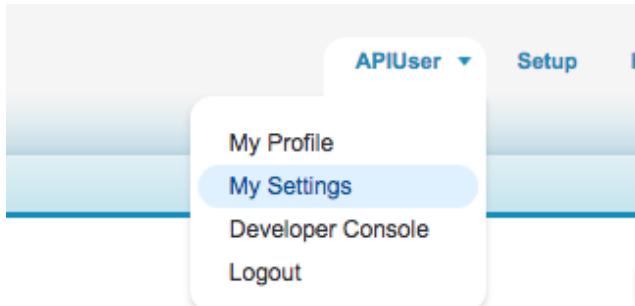
\* Answer

Change Password

Password was last changed on 18/09/2018 17:29.

26. Click "Change Password"

27. Access the apiuser personal settings by selecting the username in the top right corner, then "My Settings".



28. Type "Security Token" in the Quick Find box and click "Reset My Security Token".

## Reset My Security Token

When you access Salesforce from an IP address that isn't trusted for your company, and you use a desktop client, you can't use your old token in API applications and desktop clients.



After you reset your token, you can't use your old token in API applications and desktop clients.

**Reset Security Token**

29. Your security token will be emailed to you

## Reset My Security Token Check Your Email



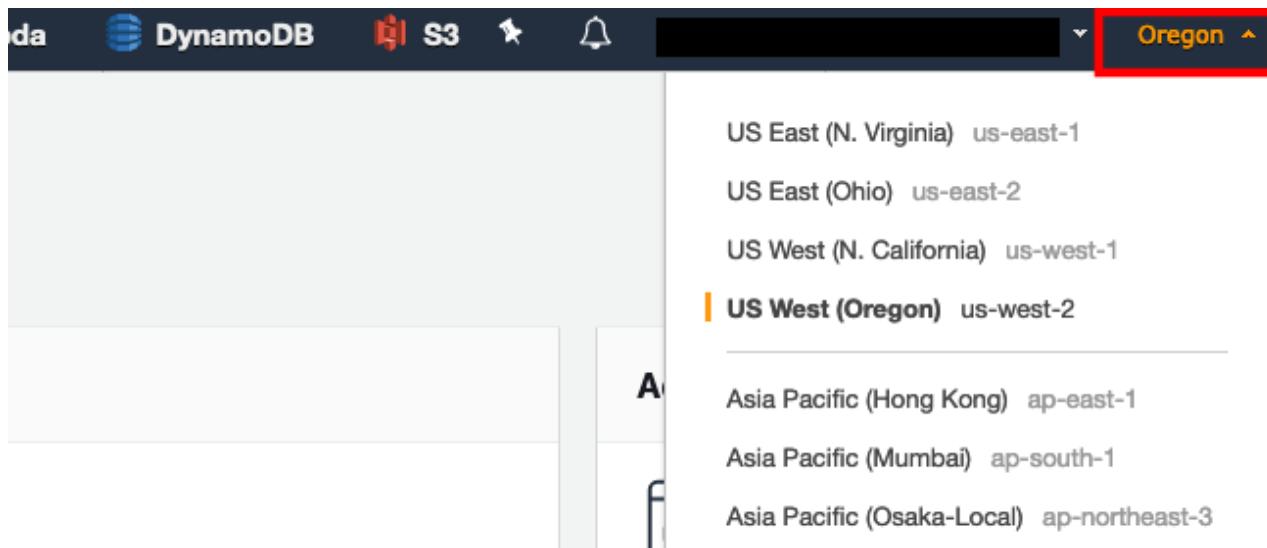
We sent a new security token to the email address for your account.

30. Copy the security token from the email in to your installation notes for the "Access Token" value.

## Store Salesforce credentials in AWS Secrets Manager

To ensure that your Salesforce credentials are secure, the Lambdas require that the credentials are stored in AWS Secrets Manager. AWS Secrets Manager is a highly secure service that helps you store and retrieve secrets.

1. In a new browser tab, login to the AWS console
2. Make sure you are in the same region as your Amazon Connect instance. You can set the region by expanding the region selector in the upper right and choosing the region



3. Navigate to the [Secrets Manager console](#)

4. Select **Secrets**

5. Select **Store a new secret**

6. Select **Other types of secrets**

7. Make sure **Secret key/value** is selected

8. Enter key value pairs that match the following:

a. **Key:** Password, **Value:** the password for the API user that you configured in the previous section

b. **Key:** ConsumerKey, **Value:** the Consumer Key for the Connected App you created in the previous section

c. **Key:** ConsumerSecret, **Value:** the Consumer Secret for the Connected App you created in the previous section

d. **Key:** AccessToken, **Value:** this is the access token for the API user that you configured in the previous section

9. For the encryption key, click "Add new key"

10. Select **Create Key**

11. Make sure key type is set to **symmetric**

12. Give your key an **alias**, like *SalesforceCredentialsSecretsManagerKey*

13. Click Next

14. Select administrators you want to have access permission to change the key policy. Make sure you are being as restrictive as possible

15. Click Next

16. Select the users and roles you want to have access to the Salesforce credentials in Secrets Manager. Make sure you are being as restrictive as possible

17. Click Next

18. Click Finish

19. Navigate back to the Secrets Manager setup tab

20. Select the key you just created

**Specify the key/value pairs to be stored in this secret [Info](#)**

**Secret key/value**      **Plaintext**

Password	Password	Remove
ConsumerKey	ConsumerKey	Remove
ConsumerSecret	ConsumerSecret	Remove
AccessToken	AccessToken	Remove

+ Add row

**Select the encryption key [Info](#)**  
Select the AWS KMS key to use to encrypt your secret information. You can encrypt using the default service encryption key that AWS Secrets Manager creates on your behalf or a customer master key (CMK) that you have stored in AWS KMS.

SalesforceCredentialsSecretsManagerKey ▼ C

Add new key ✚

[Cancel](#) Next

21. Click Next

22. Give your secret a name, like *SalesforceCredentials*

23. Click Next

24. Make sure **automatic rotation** is disabled.

25. Click Next

26. Click Store

27. Select the secret you just created, and copy the Secret ARN

The screenshot shows the AWS Secrets Manager interface. The top navigation bar includes 'AWS Secrets Manager > Secrets > SalesforceCredentials'. Below this, the title 'SalesforceCredentials' is displayed. A 'Secret details' section contains the following information:

- Encryption key: SalesforceCredentialsSecretsManagerKey
- Secret name: SalesforceCredentials
- Secret ARN: (This field is highlighted with a red rectangle.)
- Secret description: -

A 'Actions' button is located in the top right corner of the secret details section.

28. You should now have all of the information you need to install the package

## Install the Amazon Connect Salesforce Lambda package

1. Login into your AWS Account

2. Navigate AWS Serverless Application Repository (<https://aws.amazon.com/serverless/serverlessrepo/>)

The screenshot shows the AWS Serverless Application Repository homepage. The top navigation bar includes the AWS logo, 'Contact Sales', 'Support', 'English', 'My Account', and links for 'Products', 'Solutions', 'Pricing', 'Learn', 'Partner Network', 'AWS Marketplace', 'Explore More', and a search icon. The main header is 'AWS Serverless Application Repository' with tabs for 'Home', 'Publishing Applications', 'Resources', and 'FAQs and Terms'. A large banner at the bottom features the text 'Discover, deploy, and publish serverless applications' and a 'Browse all applications' button. The background of the page has a dark, abstract pattern of binary code.

3. Click on the Search (magnifying glass) and type in Amazon Connect Salesforce.

amazon connect salesforce| X

4. Select AmazonConnectSalesForceLambdas and click "Deploy"

AWS Lambda X

Lambda > Functions > Create function > Review, configure and deploy

Dashboard

**Functions**

## AmazonConnectSalesForceLambdas — Version

Review details and configure parameters below to deploy the application

5. Fill in all Salesforce related fields in "Configure application parameters". All values should be available in your installation notes:

## Configure application parameters

### Application name

The stack name of this application created via AWS CloudFormation

### SalesforceAccessToken

The security token of the Salesforce API user account used above.

### SalesforceConsumerKey

Your Salesforce consumer key

### SalesforceConsumerSecret

Your Salesforce consumer secret is available in Salesforce immediately to the right of your Salesforce Consumer Key

### SalesforceHost

Your Salesforce Host

### SalesforcePassword

The password of a valid Salesforce API account for your environment. This account must be the same one as entered in the "Salesforce API Configuration Username" parameter above.

### SalesforceProduction

True for Production Environment, False for Sandbox

### SalesforceUsername

The username of a valid Salesforce API account for your environment. For example, user@domain.com

### SalesforceVersion

To find the Salesforce Edition and API Version please visit  
<https://help.salesforce.com/articleView?id=000199268&type=1>

[Cancel](#)[Previous](#)[Deploy](#)

6. The Lambda package includes additional features which can be enabled or disabled, based on particular use-case:

- a. *PostcallCTRImportEnabled* -- if set to true, the package will include a feature to import Amazon Connect CTRs into your Salesforce Org. Once enabled, you can decide which CTR records should be imported, by setting a custom attribute (*postcallCTRImportEnabled*) in your Contact Flow. This feature requires you to provide *CTRKinesisARN*.
- b. *PostcallRecordingImportEnabled* -- if set to true, the package will include a feature to import Amazon Connect Call Recording (wav) files into your Salesforce Org. This feature is not required if you only need a call recording link in your Salesforce Org. Once enabled, you can decide which Call Recordings should be imported, by setting a custom attribute (*postcallRecordingImportEnabled*) in your Contact Flow. This feature requires you to provide: *CTRKinesisARN*, *ConnectRecordingS3BucketName* and *TranscribeOutputS3BucketName*
- c. *PostcallTranscribeEnabled* -- if set to true, the package will include a feature to transcribe Amazon Connect Call Recordings, using Amazon Transcribe, and provide Speech Analytics, using Amazon Comprehend, then import results into your Salesforce Org. Once enabled, you can decide which Call Recordings should be transcribed and analyzed, by setting custom attributes (*postcallTranscribeEnabled*, *postcallTranscribeLanguage* and *postcallTranscribeComprehendAnalysis*) in your Contact Flow. This feature requires you to provide: *CTRKinesisARN*, *ConnectRecordingS3BucketName* and *TranscribeOutputS3BucketName*
- d. *RealtimeReportImportEnabled* -- if set to true, the package will include a feature to publish Amazon Connect Queue Metrics into your Salesforce Org. This feature requires you to provide *AmazonConnectInstanceId*
- e. *HistoricalReportingImportEnabled* -- if set to true, the package will include a feature to import Amazon Connect Queue and Agent Historical Metrics into your Salesforce Org. This feature requires you to provide *ConnectReportingS3BucketName*
- f. *CTRKinesisARN* -- please set Amazon Kinesis Stream ARN that is attached to your Amazon Connect instance as Contact Trace Records destination. Amazon Kinesis Firehose is not supported. This parameter is mandatory for certain features, please see above.
- g. *ConnectRecordingS3BucketName* -- this is the S3 bucket where Amazon Connect stores call recordings. This parameter is mandatory for certain features, please see above.
- h. *ConnectReportingS3BucketName* -- this is the S3 bucket name where Amazon Connect stores schedule reports. This parameter is mandatory for Historical Reporting Import.
- i. *AmazonConnectInstanceId* -- this parameter is mandatory for Realtime Reporting Import

j. *TranscribeOutputS3BucketName* -- this is the S3 bucket where Amazon Transcribe stores the output. You can use an existing bucket, or create a new one, as the installation process doesn't create one for you. This parameter is mandatory for certain features, please see above.

k. *SalesforceHost*: The full domain for your salesforce org. For example `https://mydevorg-dev-ed.my.salesforce.com`. Please make sure that the host starts with `https`, and that the url ends with `.my.salesforce.com`. This url can be found in `Setup` -> `My Domain`.

7. Once completed, click "Deploy" function:

The screenshot shows the AWS Lambda Functions page. At the top, there is a search bar with the text "keyword : aws-serv" and a clear button. Below the search bar is a table header with columns: "Function name", "Description", and "Runtime". The table contains one row, which is highlighted. The function name is "aws-serverless-repository-AmazonConnec-sfInvokeAPI-2R3T34AMGSWS", the runtime is "Python 3.6", and there is a small circular icon to its left.

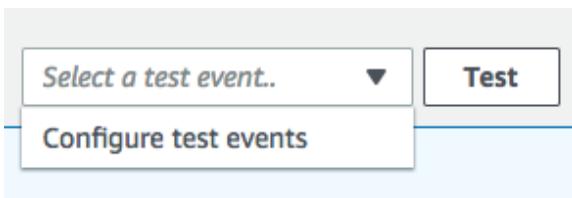
8. The package provides a single Lambda function (sfInvokeAPI) that supports multiple operations, like lookup, create and update. For the initial validation, sample events are provided within the function. Click on the function name and check the list of files in the editor.

The screenshot shows the AWS Lambda Function Editor for the "sfInvokeAPI" function. On the left, there is a sidebar titled "Environment" with a tree view showing a folder named "aws-serverless-repository-AI" containing several files: "phonenumbers", "event-create.json", "event-lookup.json", "event-phoneLookup.json", "event-update.json", and "README.md". At the top, there is a menu bar with "File", "Edit", "Find", "View", and "Go to".

9. To validate a phone number lookup, double-click on event-phoneLookup.json file and copy the text in your clipboard.

```
1 {  
2     "Details": {  
3         "Parameters": {  
4             "sf_operation" : "phoneLookup",  
5             "sf_phone": "+441122334455",  
6             "sf_fields": "Id, Name, Email"  
7         }  
8     }  
9 }
```

10. In the top-right corner, click the drop-down arrow next to the "Test" button and select "Configure test events"



11. Select "Create new test event", set Event name (i.e. phoneLookup) and paste the JSON payload you've copied in the previous step.

**Configure test event**

A function can have up to 10 test events. The events are persisted so you can switch to another computer or web browser and test your function with the same events.

Create new test event  
 Edit saved test events

Event template

Hello World

Event name

eventLookup

```
1 {  
2     "Details": {  
3         "Parameters": {  
4             "sf_operation": "phoneLookup",  
5             "sf_phone": "+441122334455",  
6             "sf_fields": "Id, Name, Email"  
7         }  
8     }  
9 }
```

12. Click "Create" button

13. From the drop-down list, select your "eventLookup" and click "Test" button



14. If successful, the result will contain fields defined in "sf\_fields" parameter in the invocation event

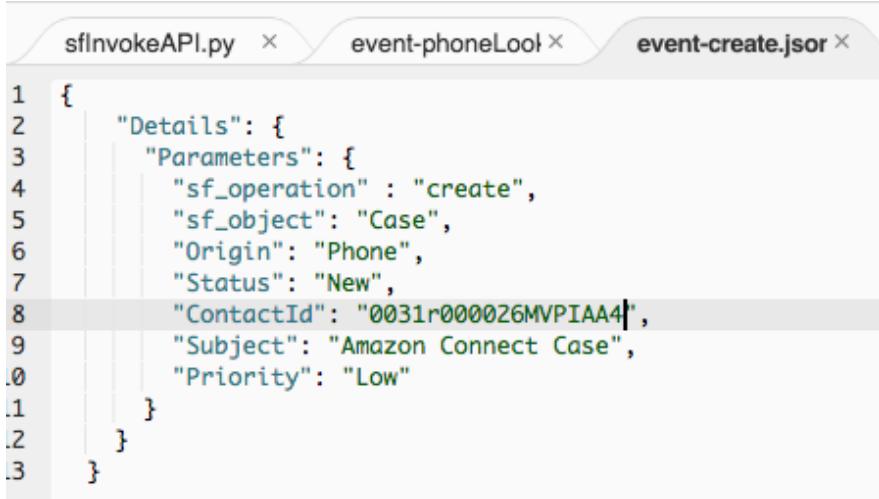
## Execution result: succeeded (logs)

### ▼ Details

The area below shows the result returned by your function execution.

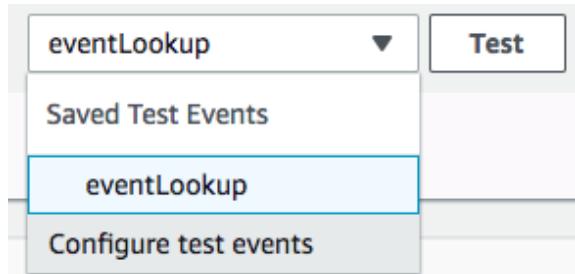
```
{  
  "Id": "0031r000026MVPAA4",  
  "Name": "Milos Cosic",  
  "Email": "mcosic@amazon.com",  
  "sf_count": 1  
}
```

15. As a next step, we are going to use the ContactId provided and create a Case in Salesforce. Double-click on "event-create.json" file and set the ContactId value from the previous step. Copy the JSON text into your clipboard.



```
sfInvokeAPI.py x event-phoneLookup x event-create.json x  
1 {  
2   "Details": {  
3     "Parameters": {  
4       "sf_operation" : "create",  
5       "sf_object": "Case",  
6       "Origin": "Phone",  
7       "Status": "New",  
8       "ContactId": "0031r000026MVPAA4",  
9       "Subject": "Amazon Connect Case",  
0       "Priority": "Low"  
.1     }  
.2   }  
.3 }
```

16. In the top-right corner, click the drop-down arrow next to the "Test" button and select "Configure test events"



17. Select "Create new test event", set Event name (i.e. createCase) and paste the JSON payload you've copied in the previous step.

## Configure test event

X

A function can have up to 10 test events. The events are persisted so you can switch to another computer or web browser and test your function with the same events.

- Create new test event
- Edit saved test events

Saved Test Event

createCase



```
1  [ {  
2    "Details": {  
3      "Parameters": {  
4        "sf_operation": "create",  
5        "sf_object": "Case",  
6        "Origin": "Phone",  
7        "Status": "New",  
8        "ContactId": "0031r000026MVPAA4",  
9        "Subject": "Amazon Connect Case",  
10       "Priority": "Low"  
11     }  
12   }  
13 }
```

18. Click "Create" button

19. From the drop-down list, select your "createCase" and click "Test" button

createCase



Test

20. If successful, the result will contain a Case Id for newly created case:

Execution result: succeeded ([logs](#))

Details

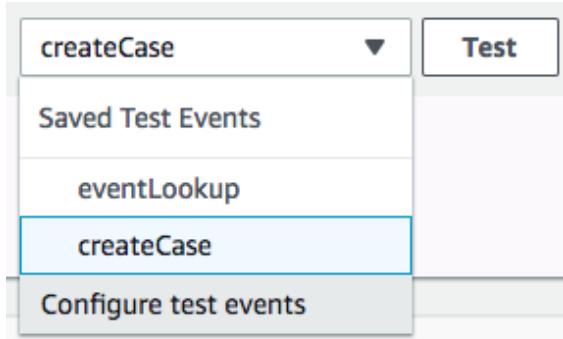
The area below shows the result returned by your function execution.

```
{  
  "Id": "5001r000023QcAcAAK"  
}
```

21. As defined in the event payload, Status is "New" and Priority is "Low". We are going to use the update operation to close the case. Copy the Case Id provided in the previous step, then double-click on "event-update.json" file and paste the Case Id in "sf\_id" parameter:

```
sflnvokeAPI.py x event-phoneLoot x event-create.json x event-update.json x
1 {
2     "Details": {
3         "Parameters": {
4             "sf_operation" : "update",
5             "sf_object": "Case",
6             "sf_id": "5001r000023QcAcAAK",
7             "Status": "Closed"
8         }
9     }
10 }
```

22. In the top-right corner, click the drop-down arrow next to the "Test" button and select "Configure test events"



23. Select "Create new test event", set Event name (i.e. closeCase) and paste the JSON payload you've copied in the previous step.

A screenshot of the 'Configure test event' dialog box. At the top, it says 'Configure test event' and has a close button. Below that, a message states: 'A function can have up to 10 test events. The events are persisted so you can switch to another computer or web browser and test your function with the same events.' There are two radio buttons: 'Create new test event' (unchecked) and 'Edit saved test events' (checked). Under 'Saved Test Event', there is a dropdown menu showing 'closeCase' (selected) and a clear icon. Below the dropdown is a code editor containing the JSON payload from the previous step:

```
1 [
2     "Details": {
3         "Parameters": {
4             "sf_operation": "update",
5             "sf_object": "Case",
6             "sf_id": "5001r000023QcAcAAK",
7             "Status": "Closed"
8         }
9     }
10 ]
```

24. Click "Create" button

25. From the drop-down list, select your "closeCase" and click "Test" button

closeCase



Test

26. If successful, the result will be HTTP code 204 ("No Content" success code):

✓ Execution result: succeeded ([logs](#))

▼ Details

The area below shows the result returned by your function execution.

204

27. Login in to Salesforce and search for Case and it's details. The Case status should be "Closed".

[Edit this page](#)

# Upgrading from an Earlier Version

If you are upgrading from an earlier version of CTI Adapter, there are a few additional things you need to do.

1. Go to the **Setup** section and search for **Object Manager**.

2. In Object Manager section, search for "AC CTI"

LABEL	API NAME	DESCRIPTION	LAST MODIFIED	DEP
AC CTI Adapter	amazonconnect__AC_CtiAdapter__c		8/6/2020	✓
AC CTI Attribute	amazonconnect__AC_CtiAttribute__c		8/6/2020	✓
AC CTI Flow	amazonconnect__AC_CtiScript__c		8/6/2020	✓

3. Open up **AC CTI Adapter**

4. On the left sidebar, click on **Page Layouts**

5. Click on **Page Layout Assignment**

6. On the next page, click on **Edit Assignments**

7. Click on the grey bar at the top of the table to select all rows.

**SETUP > OBJECT MANAGER**

## AC CTI Adapter

Details
Edit Page Layout Assignment
Help for this Page 

Fields & Relationships
Page Layouts

Lightning Record Pages
Buttons, Links, and Actions

Compact Layouts
Field Sets

Object Limits
Record Types

Related Lookup Filters
Search Layouts

Search Layouts for Salesforce Classic
Triggers

Save	Cancel
Page Layout To Use: <input type="button" value="-- Select Page Layout --"/>	
0 Selected    0 Changed	
Profiles	Page Layout
Analytics Cloud Integration User	AC CTI Adapter Layout
Analytics Cloud Security User	AC CTI Adapter Layout
Chatter External User	AC CTI Adapter Layout
Chatter Free User	AC CTI Adapter Layout
Chatter Moderator User	AC CTI Adapter Layout
Contract Manager	AC CTI Adapter Layout
Cross Org Data Proxy User	AC CTI Adapter Layout
Custom: Marketing Profile	AC CTI Adapter Layout
Custom: Sales Profile	AC CTI Adapter Layout
Custom: Support Profile	AC CTI Adapter Layout
Force.com - App Subscription User	AC CTI Adapter Layout
Force.com - Free User	AC CTI Adapter Layout
Gold Partner User	AC CTI Adapter Layout
Identity User	AC CTI Adapter Layout
Marketing User	AC CTI Adapter Layout
Minimum Access - Salesforce	AC CTI Adapter Layout
Partner App Subscription User	AC CTI Adapter Layout

**SETUP > OBJECT MANAGER**

## AC CTI Adapter

Details
Edit Page Layout Assignment  
**AC CTI Adapter**
Help for this Page ⓘ

Fields & Relationships
The table below shows the page layout assignments for different profiles. Use SHIFT + click or click and drag to select a range of adjacent cells. Use CTRL + click to select multiple cells that are not adjacent. Then choose a new page layout from the drop-down.

Page Layouts	Save	Cancel																									
<b>Profiles</b> <ul style="list-style-type: none"> <li><b>Analytics Cloud Integration User</b></li> <li><b>Analytics Cloud Security User</b></li> <li>Chatter External User</li> <li>Chatter Free User</li> <li>Chatter Moderator User</li> <li>Contract Manager</li> <li>Cross Org Data Proxy User</li> <li><b>Custom: Marketing Profile</b></li> <li>Custom: Sales Profile</li> <li>Custom: Support Profile</li> <li>Force.com - App Subscription User</li> <li>Force.com - Free User</li> </ul>	<b>Page Layout</b> <div style="display: flex; justify-content: space-between; align-items: center;"> <span style="margin-right: 10px;">Page Layout To Use:</span> <input style="width: 150px;" type="button" value="-- Select Page Layout --"/> <span style="margin-left: 10px;">26 Selected</span> <span style="margin-left: 10px;">0 Changed</span> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 5px;">Profile</th> <th style="text-align: left; padding: 5px;">Page Layout</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Analytics Cloud Integration User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Analytics Cloud Security User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Chatter External User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Chatter Free User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Chatter Moderator User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Contract Manager</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Cross Org Data Proxy User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;"><b>Custom: Marketing Profile</b></td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Custom: Sales Profile</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Custom: Support Profile</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Force.com - App Subscription User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> <tr> <td style="padding: 5px;">Force.com - Free User</td> <td style="padding: 5px;">AC CTI Adapter Layout</td> </tr> </tbody> </table>	Profile	Page Layout	Analytics Cloud Integration User	AC CTI Adapter Layout	Analytics Cloud Security User	AC CTI Adapter Layout	Chatter External User	AC CTI Adapter Layout	Chatter Free User	AC CTI Adapter Layout	Chatter Moderator User	AC CTI Adapter Layout	Contract Manager	AC CTI Adapter Layout	Cross Org Data Proxy User	AC CTI Adapter Layout	<b>Custom: Marketing Profile</b>	AC CTI Adapter Layout	Custom: Sales Profile	AC CTI Adapter Layout	Custom: Support Profile	AC CTI Adapter Layout	Force.com - App Subscription User	AC CTI Adapter Layout	Force.com - Free User	AC CTI Adapter Layout
Profile	Page Layout																										
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Custom: Support Profile	AC CTI Adapter Layout																										
Force.com - App Subscription User	AC CTI Adapter Layout																										
Force.com - Free User	AC CTI Adapter Layout																										

8. Open the **Page Layout to Use** dropdown and select **AC CTI Adapter Layout -- August 2020**.

9. Click **Save** and go back to **Page Layouts**.

10. Click on the dropdown next to the item labelled **AC CTI Adapter Layout** and click **Delete**.

11. Confirm **Yes** in the next dialogue where you will be asked "Are you sure?"

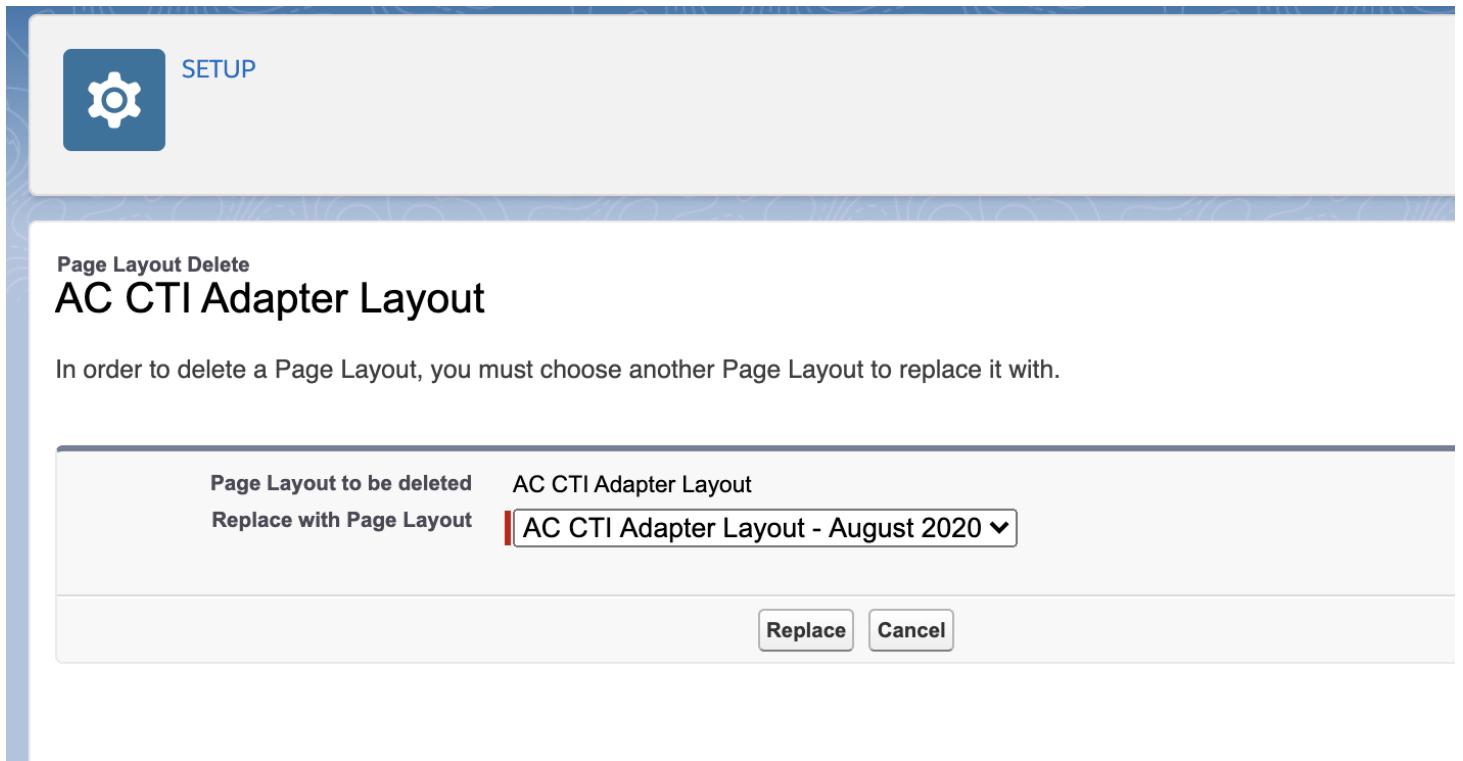
12. If you see a screen titled **Deletion Problems**, find and click **Delete**.



[Back to Previous Page](#)

 The attempted delete was invalid for your session. Please refresh your page and try again.  
[Delete](#)

13. You will be asked which layout you want to replace it with. Select **AC CTI Adapter Layout -- August 2020** and click **Replace**.



Now we are going to do the same thing for **AC CTI Script Layout**.

1. Open up **AC CTI Script Layout**
2. On the left sidebar, click on **Page Layouts**
3. Click on **Page Layout Assignment**
4. On the next page, click on **Edit Assignments**
5. Click on the grey bar at the top of the table to select all rows.

Details

Fields &amp; Relationships

**Page Layouts**

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

**Edit Page Layout Assignment**  
**AC CTI Flow**

Help for this Page ?

The table below shows the page layout assignments for different profiles. Use SHIFT + click or click and drag to select a range of adjacent cells. Use CTRL + click to select multiple cells that are not adjacent. Then choose a new page layout from the drop-down.

Save Cancel

Page Layout To Use: -- Select Page Layout -- 0 Selected 0 Changed

**Profiles**

Analytics Cloud Integration User  
Analytics Cloud Security User  
Chatter External User  
Chatter Free User  
Chatter Moderator User  
Contract Manager  
Cross Org Data Proxy User  
Custom: Marketing Profile

**Page Layout**

AC CTI Script Layout  
AC CTI Script Layout



Details

Fields &amp; Relationships

**Page Layouts**

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

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Object Limits

Record Types

**Edit Page Layout Assignment**  
**AC CTI Flow**

Help for this Page ?

The table below shows the page layout assignments for different profiles. Use SHIFT + click or click and drag to select a range of adjacent cells. Use CTRL + click to select multiple cells that are not adjacent. Then choose a new page layout from the drop-down.

Save Cancel

Page Layout To Use: -- Select Page Layout -- 26 Selected 0 Changed

**Profiles**

Analytics Cloud Integration User  
Analytics Cloud Security User  
Chatter External User  
Chatter Free User  
Chatter Moderator User  
Contract Manager  
Cross Org Data Proxy User  
Custom: Marketing Profile

**Page Layout**

AC CTI Script Layout  
AC CTI Script Layout

6. Open the **Page Layout to Use** dropdown and select **AC CTI Flow Layout**.

7. Click **Save** and go back to **Page Layouts**.

8. Click on the dropdown next to the item labelled **AC CTI Script Layout** and click **Delete**.

9. Confirm **Yes** in the next dialogue where you will be asked "Are you sure?"

10. If you see a screen titled **Deletion Problems**, find and click **Delete**.

**Deletion problems**[Back to Previous Page](#)

The attempted delete was invalid for your session. Please refresh your page and try again.

[Delete](#)

11. You will be asked which layout you want to replace it with. Select **AC CTI Flow Layout** and click **Replace**.



SETUP

Page Layout Delete

## AC CTI Script Layout

In order to delete a Page Layout, you must choose another Page Layout to replace it with.

Page Layout to be deleted	AC CTI Script Layout
Replace with Page Layout	<input type="button" value="AC CTI Flow Layout ▾"/>
<input type="button" value="Replace"/> <input type="button" value="Cancel"/>	

12. Go to your **CTI Adapter**.

13. Click on any of the CTI Flows and scroll down to the section labeled **CTI Flow**. You should see something like this:

### Invalid Script

Please note that starting from version 4.6, your scripts will need to be migrated to our new CTI Flows.

You can download your current script below



When you are ready to try out the CTI Flow editor, click Continue.

14. Click **Download** and save your script before clicking **Continue**.

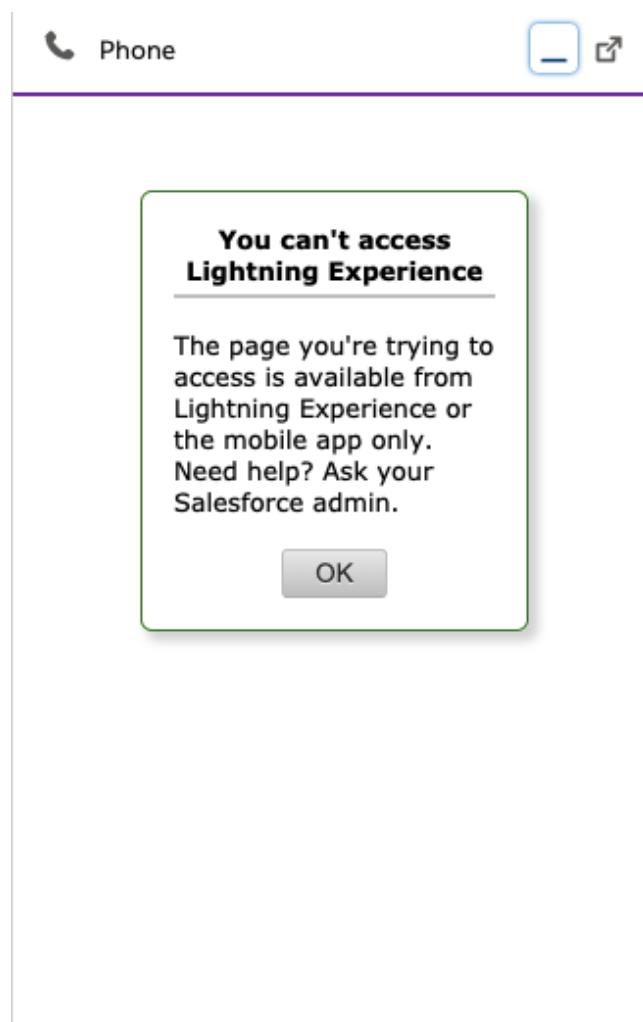
15. Use the CTI Block primitives in the editor to re-create your script as a CTI Flow.

16. Refer to the Sample Flows in the Appendix of this manual.

# CTI Adapter Installation Troubleshooting and Common Issues

## I upgraded my adapter to v5.10, but I cannot see the CCP Config changes

There is a bug with Salesforce that doesn't update a page layout when you upgrade a package. To fix this, go to Setup and search for **Objects** and click the option under **Create**. Once you're on the Custom Object page, search for the **AC CTI Adapter** object and click on it. Then go into **Page Layouts** and click **Edit** on the layout you are using (Typically **AC CTI Adapter Layout – August 2020**). Then, drag and drop the **Audio Device Settings** and **Page Layout Settings** into the desired spot on the page. Finally hit save.



Error “refused to run the JavaScript URL because it violates the following Content Security Policy directive...”

This is an allowlisting issue, please review the installation and ensure that both URLs are properly allowlisted.

## Error “refused to frame” Visualforce page

The screenshot shows a browser's developer tools console with two error messages. The first message is a red box containing the text: "Refused to frame 'https://[REDACTED]amazonconnect.[REDACTED].visual.force.com/' because an ancestor violates the following Content Security Policy directive: 'frame-ancestors 'self''. The second message is a yellow box containing the text: "DevTools failed to load SourceMap: Could not load content for https://c.la1-c1.cs-ord.salesforceliveagent.com/content/dev/resources/js/scrt.min.js.map: HTTP". To the right of the browser window, there is a dark sidebar with icons for Word, Excel, and Microsoft Teams.

This can happen if the customer has checked “Enable clickjack protection” on Salesforce session settings. The solution is to uncheck that.

The screenshot shows the Salesforce Setup - Session Settings page. In the Clickjack Protection section, there are three checkboxes under the heading "Setup pages": "Enable clickjack protection for Setup pages" (checked), "Enable clickjack protection for non-Setup Salesforce names" (unchecked), and "Enable clickjack protection for customer Visualforce pages with standard headers" (unchecked). A red box highlights the second checkbox, and a red arrow points to it from below. A tooltip for the second checkbox says: "Protect against clickjack attacks and allow framing on whitelisted external domains". Below this section, there is a "Whitelisted Domains for Visualforce and Survey Inline Frames" table with three entries: https://equinix-uat2.my.salesforce.com, https://equinixtest2.bigmachines.com, and https://uatbcsc.equinix.com. An "Add Domain" button is located at the top right of the table.

## I upgraded my adapter to v5, but I don't see the CTI Flows feature.

See the [Upgrading from an Earlier Version](#) section of the installation guide.

## I upgraded my adapter from v3 to v5 and we lost some screenpop functionality.

All screenpop functionality native to v3 now needs to be recreated using CTI Flows. Please review the [CTI Flow Examples](#) for more details, all screenpop functionality from v3 has been recreated.

## Certain picklists are missing picklist items.

When upgrading from a version of the package to a higher version of the package in which new picklist items were added to a picklist, those new picklist items won't be installed. This is a [known Salesforce issue](#).

## How to remove permissions to Visualforce pages, Apex classes for a desired profile

1. Navigate to **Setup** and search for "Profiles".

2. Select the desired profile.

3. Select either **Visualforce Page Access** or **Apex Class Access**.

The screenshot shows the Salesforce Setup interface. In the top navigation bar, 'Setup' is selected. Below it, there's a search bar with 'profiles' typed in. On the left, a sidebar has 'Users' expanded, with 'Profiles' listed under it. A message says 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'SETUP Profiles'. It shows two permission sets: 'Apex Class Access' (Permissions to execute Apex classes) and 'Visualforce Page Access' (Permissions to execute Visualforce pages).

4. Select **Edit** and remove any desired permissions. All permissions can be removed because permissions are managed through permission sets, not through profiles.

## What are the Disable X Trigger options in the Custom Settings?

The screenshot shows the 'Edit Toolkit for Amazon Connect' page. At the top, there are 'Save' and 'Cancel' buttons. Below that, a section titled 'Toolkit for Amazon Connect Information' contains a 'Location' table. The table has four rows, each with a checkbox next to its label: 'Disable the CCA Case Trigger' (checked), 'Disable the CCA Contact Trigger' (checked), 'Disable the Case Contact CCA Trigger' (checked), and 'Disable the Task Trigger' (checked). Below the table is a 'Url' field with a placeholder 'http://'. The entire page is titled 'Edit Toolkit for Amazon Connect'.

These are options we provide that allow you to toggle certain functionality in the adapter.

- CCA Case Trigger - This trigger looks for any ContactChannelAnalytics records that could be related to a updated/inserted Case, and creates a relationship between the two records. This trigger uses batching to process the update requests.
- CCA Contact Trigger - This trigger looks for any ContactChannelAnalytics records that could be related to a updated/inserted Contact, and creates a relationship between the two records. This trigger uses batching to process the update requests.
- Case Contact CCA Trigger - This trigger looks for any Case/Contact records that could be related to an updated/inserted ContactChannelAnalytics record, and creates a relationship between the records.
- Task Trigger - This trigger creates a ContactChannel record for any inserted/updated task that with a **CallObject** field that does not currently have a ContactChannel record created before.

# CTI Adapter Configuration

The CTI Adapter installed by the managed package provides a number of features that change or enhance the functionality of the integration. By default, many of these features have been configured during install with a default setting. This section will detail the options available.

AC CTI Adapter Detail		<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Clone</a>
CTI Adapter Name	ACLightningAdapter			
Amazon Connect Instance	<a href="https://sfadaptest.awsapps.com/">https://sfadaptest.awsapps.com/</a>			
Custom Ringtone				
Softphone Popout Enabled	<input checked="" type="checkbox"/>			
Medialess	<input type="checkbox"/>			
Audio Device Settings	<input type="checkbox"/>			
Owner				
Amazon Connect Instance Region	us-east-1			
Call Center Definition Name	ACLightningAdapter			
Debug Level	Off			
Presence Sync Enabled	<input checked="" type="checkbox"/>			
Phone Type Settings	<input checked="" type="checkbox"/>			

## CTI Adapter Details

- 1. CTI Adapter Name:** provide a unique name for this CTI adapter definition
- 2. Amazon Connect Instance:** This was configured in a previous section. This is the instance url for your Amazon Connect instance.
- 3. Amazon Connect Instance Region:** This is the code for the region that you have deployed your Amazon Connect instance to. This is required for the Amazon Connect chat APIs to work correctly. If you do not use the chat feature of Amazon Connect, this field is not necessary
- 4. Custom Ringtone:** This allows for overriding the built-in ringtone with any browser-supported audio file accessible by the user.
- 5. Call Center Definition Name:** This was configured in a previous section. This is the internal name of the Call Center configured in Salesforce setup. This value links the CTI Adapter to the Call Center, and ultimately to the agents.
- 6. Softphone Popout Enabled:** Salesforce supports softphone pop out in Console and Lightning Experience modes. When the softphone is popped out, it opens in a new browser window external to the Salesforce UI. This is helpful in use cases where the call controls are regularly needed but the agent also needs full access to the entire console.
- 7. Debug Level:** For future use
- 8. Medialess:** Amazon Connect supports running in VDI environments, however best practice is to send the actual audio stream via a separate CCP. Selecting the medialess option will configure the Salesforce CCP to run in medialess mode, which provides the data that Salesforce needs for screenpop while the audio is streamed to a local CCP.

**9. Presence Sync Enabled:** This setting allows the adapter to use the presence rules to sync state from Amazon Connect to Salesforce Omni-Channel.

**10. Audio Device Settings** Turning this setting on allows the Agent to setup a custom audio device for their speaker, microphone and ringer in the adapter (Speaker and Ringer settings not available on Firefox). You may have to add this field to the layout manually. [See troubleshooting](#).

**11. Phone Type Settings** Turning this setting on allows the Agent to change their Phone Type in the CCP. You may have to add this field to the layout manually. [See troubleshooting](#)

## Medialess Popout CCP

To enable a popout CCP for agents to use, you need to enable it using [Features](#).

1. Open the CTI Adapter that you have medialess enabled on.
2. In the bottom tabs, select the [Features](#) section and click [New](#).
3. Set the [AC Feature Name](#) to be **EnableMedialessPopout**
4. Set the [Value](#) to be **Enabled:true**
5. Ensure that the [Active](#) checkbox is checked, then hit Save.
6. Now refresh your page, and you should see the a popup created, which you can use to handle media.

# Single Sign On Settings

The Amazon Connect CTI Adapter supports single sign on(SSO) via SAML integration. This allows customers that use a SAML provider for authentication into Amazon Connect. You will need the SSO URL for your provider and the Relay State settings for your Amazon Connect instance.

For general information on configuring SAML for Amazon Connect, please refer to: [Amazon Connect Administrator Guide: Configure SAML for Identity Management in Amazon Connect](#).

If you wish to use **Salesforce** as your identity provider for Single Sign On, please follow the setup instructions in [Appendix B - Configuring Salesforce as Your Identity Provider](#).

For information about configuring specific SAML providers to work with Amazon Connect:

- [AWS Single Sign-On](#)
- [Okta](#)

Once you have your SAML integration working with Amazon Connect, you will need to create the Amazon Connect Single Sign On URL and validate that it works correctly, then configure the Lightning CTI adapter and login the agent.

Note: With the new Amazon Connect instance urls (\*.my.connect.aws) you must put the full URL into the **Amazon Connect Instance** field in the AC CTI Adapter record for SSO to work. Ex: using <https://myinstance.my.connect.aws> instead of [my instance](#).

## Identify the SSO URL components

In order to authenticate with Amazon Connect, you need your IdP login URL from your SAML provider and a relay state URL that will redirect the authenticated user to your Amazon Connect instance.

Your IdP Login URL will resemble the following (Salesforce is shown):

```
https://mXXXXXXrun-dev-ed.my.salesforce.com/idp/login?app=0sp0N000000Caid
```

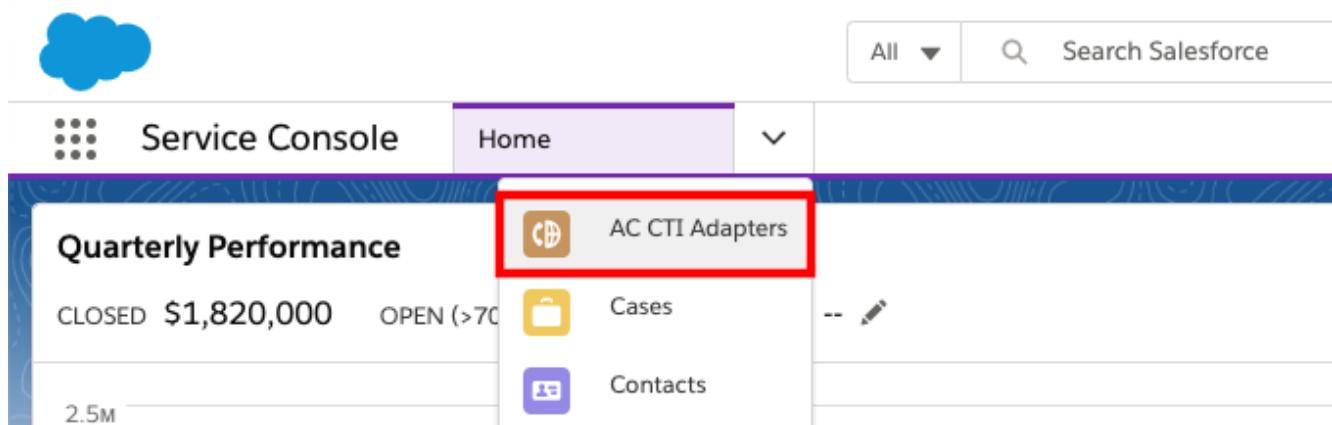
The 'RelayState' will be in the following format (replace [us-west-2](#) with the region you are using):

```
https://us-west-2.console.aws.amazon.com/connect/federate/[object Object]?destination=%2Fconnect%2Fccp
```

## Configure the CTI Lightning Adapter in Salesforce

Now we are ready to complete the last step in the configuration process: Adding the SSO settings to the Lightning Adapter. This will configure the adapter to authenticate via SSO and redirect to the Amazon Connect Contact Control Panel once authentication completes.

1. Log in into your Salesforce org and go to the **Service Console**
2. Expand the **navigation menu** by selecting the down arrow and choose **AC CTI Adapters**.



3. Select **ACLightningAdapter**
4. Scroll down to the Single SignOn (SSO) section and choose the pencil icon of either field to edit

## ▼ Single SignOn (SSO)

SSO Url

SSO Relay State



5. For the SSO Url, paste your IdP login URL up to the first question mark (if one exists). A couple of examples are provided:

Salesforce:

```
https://mXXXXXXrun-dev-ed.my.salesforce.com/idp/login?app=0sp0N00000Caid
```

Microsoft ADFS:

```
https://sts.yourcorp.com/adfs/ls/idpinitiatedsignon.aspx
```

6. Paste this portion of the URL into the **SSO Url** field

## ▼ Single SignOn (SSO)

SSO Url

```
https://sample-dev-ed.my.salesforce.com/idp/login
```

7. For the SSO Relay State:

If you had a question mark in your login URL, paste everything AFTER the question mark into the SSO Relay state field, then add &RelayState= to the end, and append your relay state URL. For example:

```
app=0sp0N00000Caid&RelayState=https://us-west-  
2.console.aws.amazon.com/connect/federate/[object Object]?  
destination=%2Fconnect%2Fccp
```

If you did not have a Question Mark, then enter &RelayState= into the SSO Relay State field and append your relay state URL to it. For example:

```
&RelayState=https://us-west-  
2.console.aws.amazon.com/connect/federate/[object Object]?  
destination=%2Fconnect%2Fccp
```

8. Example of a completed SSO section (Salesforce is shown)

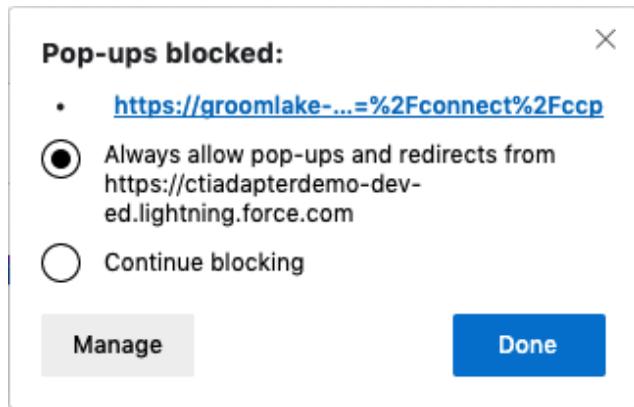
## ▼ Single SignOn (SSO)

SSO Url	<input type="text" value="https://sample-dev-ed.my.salesforce.com/idp/login"/>
SSO Relay State	<input type="text" value="app=0sp6g000000XZyd&amp;RelayState=https://us-west-2.console.aws.amazon.com/connect/federate/YOUR-INSTANCE-ID?destination=%2Fconnect%2Fccp"/>

9. Choose **Save**

10. **Refresh** your browser to make the changes take effect

- a. **NOTE:** If you receive a blocked popup warning, select the warning and change the setting to always allow popups from your Salesforce org, then refresh the browser again



11. Select the **phone icon** in the console toolbar to open the CCP Note: You may also receive popups to allow notifications and microphone access. Please accept both.

12. Click the Sign into CCP button

13. You should now see the authenticated and logged in CCP

ACLightningAdapter | Sale X Lightning

AdapterTest Burner Accounts -...

Service Console AC CTI Adapters

Recently Viewed ▾

1 item · Updated 4 minutes ago

Search this list...

Amazon Connect

Offline

Welcome Jason

Quick connects

Number pad

Amazon Connect History

SSO Configuration is complete

Edit this page

# Omnipresence Agent State Sync

Amazon Connect CTI Connector supports the bidirectional synchronization of Amazon Connect agent states with Salesforce omnichannel presence states.

Omnipresence Agent State Sync Enabled true

NOTE: After Salesforce Winter '22 Release, users need to have View Setup and Configuration OR View DeveloperName permission via a profile or permission set to use this feature. See [New Permission Requirements for DeveloperName Field](#) for more information.

## Enable Omnichannel

In order to sync your Connect User status with your Omni-Channel agent status, you must configure Omni-Channel Presence Syncing. This will make your Omni-Channel presence status match your Amazon Connect Agent Status and vice versa.

First, we must enable omni-channel. To do this, navigate to "Setup" and type "omni" into the Quick Find box, then select "Omni-Channel Settings" from the menu.

 omni

Feature Settings

Service

Omni-Channel

Agent Work

Agent Work Limits

Agent Work Triggers

Agent Work Validatio...

Limits

Omni-Channel Settings



Presence Configurations

Presence Decline Reaso...

Place a check in the checkbox for "Enable Omni-Channel".



SETUP

## Omni-Channel Settings

### Omni-Channel Settings

Welcome to Omni-Channel!

Work Limits  
Work Triggers  
Work Validatio...

Omni-Channel Settings  
Configurations  
Decline Reasons  
Presences  
Configurations  
Channels  
Services  
Presence Limits  
Presence Triggers  
Presence Validatio...

looking for?

Omni-Channel is a comprehensive customer service solution that lets contact centers push work to agents. Omni-Channel lets you create work items from your Salesforce records—including cases, chats, leads, and objects—and route them to the most qualified, available agents in your organization, all in real time. It integrates seamlessly into the Salesforce console, so it's easy for your support agents to use.

With Omni-Channel, you can manage the priority of work items to make sure that critical assignments get handled quickly. You can manage your agents' capacity and availability for work to ensure that they're given assignments that they can handle. You can also define which agents can work on different types of work items. Omni-Channel routes all of these assignments to the correct agents automatically. Agents no longer have to search for work items manually from a queue, and managers no longer have to triage or dispatch work to agents based on the most qualified available agent in real time!

Show diagram ▾

First, you need to enable Omni-Channel. Then, [create Service Channels](#).

Enable Omni-Channel  This must be checked

Use Skills-Based Routing

Save Cancel

## Create Presence Statuses

In this step, we need to add and map Presence Statuses to what is defined in Amazon Connect under Users -> Agent Status.



## Manage agent status

Create new agent status, and drag table To maintain integrity of historical metrics

Status name	Description
Available	Available
Wrap Up	Updating
Day Dreaming	Don't Disturb
Break	Taking a Break
Lunch	Going to Lunch
Offline	Offline

Open the Setup in your Salesforce Org and type "presence", then select "Presence Statuses" from the menu. Click the "New" button and add statuses to match what is defined in Amazon Connect.

# Presence Statuses

Let agents indicate when they're online and available to receive work items from a

View: [All ▾](#) [Create New View](#)

Action	Status Name	↑
Edit	<a href="#">Available</a>	
Edit	<a href="#">Break</a>	
Edit	<a href="#">Day Dreaming</a>	
Edit	<a href="#">Lunch</a>	
Edit	<a href="#">Offline</a>	
Edit	<a href="#">Wrap Up</a>	

Each status is flagged as either Online or Busy. For each status that is marked as Online, you will need to specify a service channel to associate the presence status.

# Presence Statuses

Let agents indicate when they're online and available to receive work items from a specific service.

The screenshot shows the 'Basic Information' section with 'Status Name' set to 'Available' and 'Developer Name' also set to 'Available'. In the 'Status Options' section, 'Online' is selected. Under 'Service Channels', 'Live Agent' and 'Outbound Campaign Chan' are selected. The 'Save' and 'Cancel' buttons are at the top right.

**Basic Information**

Status Name: Available  
Developer Name: Available

**Status Options**

Choose whether agents are online or busy when they use this status. Online statuses let agents accept work items.

Online  
 Busy

**Service Channels**

Select one or more service channels to assign to this presence status. Agents logged into these channels will see this status.

Available Channels	Selected Channels
[Empty list]	Live Agent Outbound Campaign Chan

Add Remove

Save Cancel

## Configure Enabled Service Presences Status Access

Next, we need to assign access to these statuses by going to Profiles in Salesforce Setup, and ensure that the agent will be able to access the statuses that map to their Amazon Connect statuses.

In the Salesforce Setup, under Manage Users, select Profiles, then select the user profile to edit. Scroll down the page until you find the section labeled "Enabled Service Presence Status Access".



SETUP

## Profiles

[StdExceptionTemplate](#)[Unauthorized](#)[UnderConstruction](#)

### Enabled External Data Source Access

[Edit](#)

No External Data Sources enabled

### Enabled Named Credential Access

[Edit](#)

No Named Credential enabled



### Enabled Service Presence Status Access

[Edit](#)**Service Presence Status Name**[Available](#)[Day\\_Dreaming](#)

Matches Connect Statuses

[Offline](#)[On Break](#)

### Enabled Custom Permissions

[Edit](#)

Click the "Edit" button and on the next page, "Add" presence statuses you want to have enabled for the user.

# Enable Service Presence Status Access

The screenshot shows a configuration interface for enabling service presence status access. At the top right are 'Save' and 'Cancel' buttons. Below them are two lists: 'Available Service Presence Statuses' (containing '--None--') and 'Enabled Service Presence Statuses' (containing Available, Break, Day Dreaming, Lunch, Offline, Wrap Up). Between the lists are 'Add' and 'Remove' buttons.

Available Service Presence Statuses	Enabled Service Presence Statuses
--None--	Available Break Day Dreaming Lunch Offline Wrap Up

Add      Remove

## Amazon Connect System Statuses

The following Amazon Connect CCP statuses are system statuses that can be used in presence sync. Please note however that these statuses are restricted and you cannot set the Amazon Connect status to the below.

- Busy - agent is in a call
- Pending - agent is receiving a request for a queue callback
- PendingBusy - agent is receiving call
- CallingCustomer - agent is calling customer
- AfterCallWork - agent is in the after call work screen

## Configure Presence Status Synchronization Rules

The Amazon Connect Salesforce CTI Adapter provides a rules-based presence status synchronization system allowing for flexibility in mapping agent states between Amazon Connect and Salesforce Omnichannel.

Presence synchronization actions may be configured based upon manual agent state changes (agent goes on break), system agent state changes (answering a call), omnichannel agent work (agent accepts an email), and omnichannel workload changes (agent completes an email) as examples.

## Presence Status Configuration Rules

Presence Sync Rules are evaluated based on specific events. The available events are:

- **Connect Agent State Change:** The Connect agent's state has changed.
- **Salesforce Agent State Change:** The Salesforce agent's state has changed.
- **Salesforce Agent Logout:** The Salesforce agent has logged out.
- **Salesforce Work Accepted:** The Salesforce agent has accepted work.
- **Salesforce Workload Changed:** The Salesforce agent's workload has changed.

Once the event is triggered, the CTI adapter will evaluate the provided criteria. The criteria is established by comparing Operand A, using standard comparator options, against Operand B. Possible options for Operand A and B are:

- **Connect Agent New State:** The Connect agent's new state value
- **Connect Agent Old State:** The Connect agent's old (previous) state value
- **Salesforce Agent New State:** The Salesforce agent's new state value
- **Salesforce Service Channel:** The service channel upon which the Salesforce agent has accepted work
- **Salesforce Previous Workload:** The Salesforce agent's previous workload
- **Salesforce Previous Workload Pct:** The Salesforce agent's previous workload expressed as a percent of configured capacity
- **Salesforce New Workload:** The Salesforce agent's new workload
- **Salesforce New Workload Pct:** The Salesforce agent's new workload expressed as a percent of configured capacity
- **Salesforce Configured Capacity:** The Salesforce agent's configured capacity
- **Static Value:** The user may provide a value. For example, a custom agent state name or other alphanumeric value. When Static Value is selected a "Value" field becomes visible to accept the users

static value input.

Available comparators are:

- **Equal to:** Are Operand A and Operand B equal
- **Not equal to:** Are Operand A and Operand B not equal
- **Greater than:** Is Operand A greater than Operand B
- **Greater than or equal to:** Is Operand A greater than or equal to Operand B
- **Less than:** Is Operand A less than Operand B
- **Less than or equal to:** Is Operand A less than or equal to Operand B

AC CTI Adapter  
ACClassicAdapter

« Back to List: Call Centers      Attributes [0] | CTI Flows [0]

**AC CTI Adapter Detail**

CTI Adapter Name	ACClassicAdapter	Edit	Delete	Clone
Amazon Connect Instance Alias	testinglogin123			
Custom Ringtone				
Softphone Popout Enabled	<input checked="" type="checkbox"/>			
Medialess	<input type="checkbox"/>			

**Single SignOn (SSO)**

SSO Url
SSO Relay State

**Customizations**

User Defined	Created By <u>Bomi Lee</u> , 8/3/2020, 1:19 PM	Edit	Delete	Clone
--------------	--	------	--------	-------

**Attributes**

No records to display	New AC CTI Attribute
-----------------------	----------------------

**CTI Flows**

No records to display	New AC CTI Flow
-----------------------	-----------------

**Presence Sync Rules**

No records to display	New AC Presence Sync Rule
-----------------------	---------------------------

The configuration setting illustrated in the previous example, are described below:

- source -- The triggered event. In this case, an Amazon Connect agent state change is the triggering event
- destination -- The target system on which to execute the action
- criteria -- The values and comparator that will be evaluated to determine whether or not to trigger the action

- operandA -- The left side of the criteria statement
- operandB -- The right side of the criteria statement
- comparator -- The comparison operator used to evaluate the criteria statement
- state -- The target agent state of the destination system

Example rule:

The screenshot shows the 'AC Presence Sync Rule Edit' interface. The rule name is 'Connect agent switches to Lunch'. The configuration includes:

- Presence Sync Rule Name:** Connect agent switches to Lunch
- CTI Adapter:** ACclassicAdapter
- Source:** Connect Agent State Change
- Operand A:** Connect Agent New State
- Operand A Value:** (empty input field)
- Comparator:** Equal to
- Destination:** Salesforce Agent State
- Operand B:** Static Value
- Operand B Value:** Lunch
- Value:** Lunch

The 'Active' checkbox is checked.

Summary: This rule is triggered when the Connect agent's state is changed (Source). If their state is changed to the static value (Operand B) "Lunch" (Operand B Value), then the Salesforce Agent's state (Destination) is set to Lunch (Value).

[Edit this page](#)

# Contact Attributes Display

Amazon Connect allows for user defined Contact Attributes to be attached to a phone call within Contact Flows. This can be used to track caller inputs, IVR selections, outcomes of an interaction with Amazon Lex, or data lookup from backend systems through Lambda. Some of those values can be useful to be displayed to the agent to speed up data input or skip processes such as authenticating the customer.

Amazon Connect allows data classifications for contact's attributes. The classification engines scans configured metadata and identifies text and links attributes to display in Attributes and Links sections respectively.

To configure a contact attribute for display within embedded CCP:

In the top navigation bar, select the "+" icon.

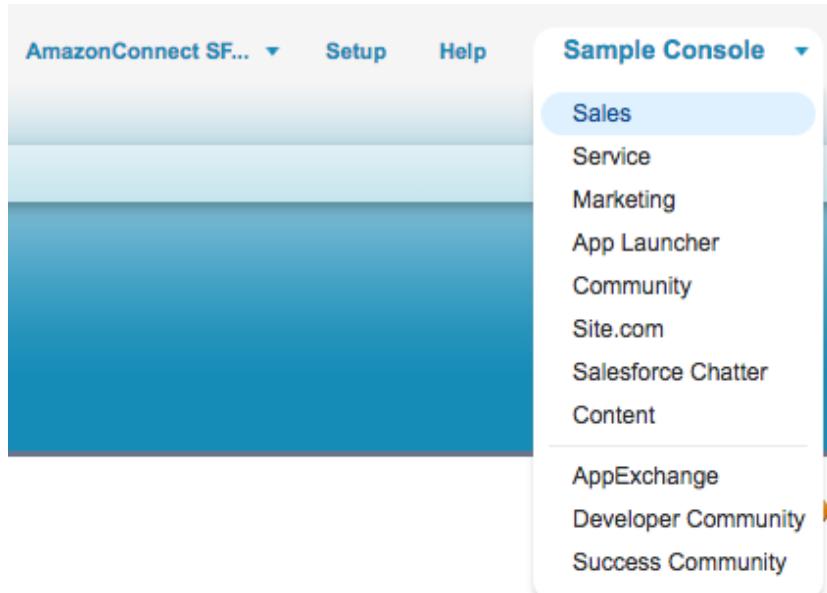


Select "AC CTI Adapters"

Create a new adapter. Fill in the CTI Adapter Name, and Amazon Connect Instance Alias. For the Call Center Definition Name, type in ACConsoleAdapter. Select Save.

1. Log in to your Salesforce Org.

2. From the top right corner, select the **Sales** application.



## All Tabs

Use the links below to quickly navigate to a tab. Alternatively, you can add a tab to your display to better suit the way you work.

View: All Tabs	
<a href="#">AC Contact Channel Analytics</a>	<a href="#">Documents</a>
<a href="#">AC Contact Trace Records</a>	<a href="#">Duplicate Record Sets</a>
<a href="#">Accounts</a>	<a href="#">Engagement Channel Types</a>
<a href="#">AC CTI Adapters</a>	<a href="#">External Managed Accounts</a>
<a href="#">AC Real Time Queue Metrics</a>	<a href="#">Files</a>
<a href="#">AC Voicemail Drops</a>	<a href="#">Forecasts</a>
<a href="#">Analytics</a>	<a href="#">Groups</a>
<a href="#">App Launcher</a>	<a href="#">Home</a>

3. Select \*\*AC CTI Adapters\*\* and select your adapter

4. Scroll down to the attributes section and select **New AC CTI Attribute**

Attributes	New AC CTI Attribute
No records to display	

5. Provide a **CTI Attribute Name**, for example: authenticated

6. Provide the **Label** name, for example:

7. Select the **Display** option, in this case: Key-Value

8. Select Text as the **Type**

9. For **Style**, enter the following: `color: red`

10. In the **Format** field, enter `{{phone_number}}` to reference the incoming contact attribute

11. Set **Default Value** to `unk`

12. Choose **Save**

AC CTI Attribute Edit

Information

CTI Adapter: ACClassicAdapter

CTI Attribute Name: Authenticated

Label: Is Authenticated?

Type: Text

Format: {{authenticated}}

Display: Key-Value

Style: color:red

Active:

Save Save & New Cancel

13. Open the Amazon Connect Contact Flow Designer and drop *Set > Set Contact Attributes* block to your Contact Flow. Set the attribute based on your business logic. For example:

### Set contact attributes

Stores key / value pairs as contact attributes.

Contact attributes are accessible by other areas of Amazon Connect, such as the Contact Control Panel (CCP) and Contact Trace Records (CTRs).

Attribute to save

Use text

Destination key

authenticated

Value

true

14. Place and inbound call and ask to speak with an agent. Accept the incoming call and check if Contact Attribute is displayed in the embedded CCP.

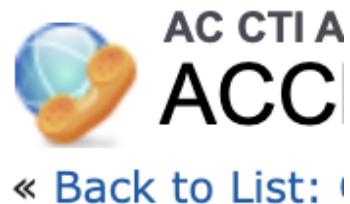


Search...

Home Chatter Campaigns Leads Accounts

Attributes

Is Authenti... bfc5c3t



AC CTI Adapter

Amazon Connect

Softphone

Call Center Definition Name

There are additional features that can be used to further customize CTI attributes.



ACClassicAdapter

« Back to List: Call Centers

[Attributes \[1\]](#) | [CTI Flows \[0\]](#) | [Presence Sync Rules \[0\]](#) | [Features \[0\]](#)

#### AC CTI Adapter Detail

[Edit](#) [Delete](#) [Clone](#) [Sharing](#)

CTI Adapter Name	ACClassicAdapter	Owner
Amazon Connect Instance Alias	ac-test-east-1	Amazon Connect Instance Region
Custom Ringtone		Call Center Definition Name
Softphone Popout Enabled	<input checked="" type="checkbox"/>	Debug Level
Medialess	<input type="checkbox"/>	Presence Sync Enabled

1. In the Sales application, navigate to your CTI Adapter

**Features**

New AC Feature

No records to display

2. Scroll down to the Features section. Select **New AC Feature**.

3. Set the AC Feature Name to **FEATURE\_CTI\_ATTRIBUTES**

4. Fill the value text box to contain the following settings:

- a. **ShowAttributesIfEmpty** (Boolean, default true): show attributes text box when contact has no attributes
- b. **ShowAllAttributes** (Boolean, default false): show all attributes, including attributes with no value

**AC Feature Edit****Save****Save & New****Cancel****Information****AC Feature Name****FEATURE\_CTI\_ATTRIB****Value****ShowAttributesIfEmpty: true  
ShowAllAttributes: true****Active****CTI Adapter****ACClassicAdapter****Save****Save & New****Cancel**

5. Select **Save**

[!\[\]\(3e3a63c61b8715e5d8c4f269df7dddcf\_img.jpg\) Edit this page](#)

# Call Recording Playback

The Adapter comes with a Visualforce component that provides users with the ability to download a call recording created within Amazon Connect from a Salesforce page. You can play the call recordings on either the Contact Channel Analytics page or the Task page.

# Cloudformation Template

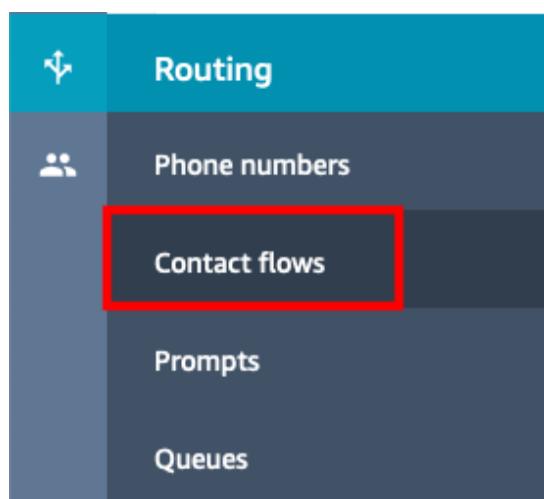
To make sure that the AWS resources are set up, make sure that the *PostcallRecordingImportEnabled* parameter is set to true in your Cloudformation stack:

The screenshot shows the AWS CloudFormation console with the 'Parameters' tab selected. A list of parameters is displayed, and one specific parameter, 'PostcallRecordingImportEnabled', is highlighted with a red box around its value field, which contains the value 'true'.

**Note:** If you are expecting more than 1000 concurrent calls, you may have to increase the timeout for the `sfnCTRTrigger` lambda.

## Enabling call recording streaming

1. Login to your Amazon Connect instance as an Administrator
2. From the left navigation, choose **Routing** then select **Contact flows**



3. Open the contact flow that you want to use to enable call recording import. This contact flow must have Amazon Connect's native recording turned on.

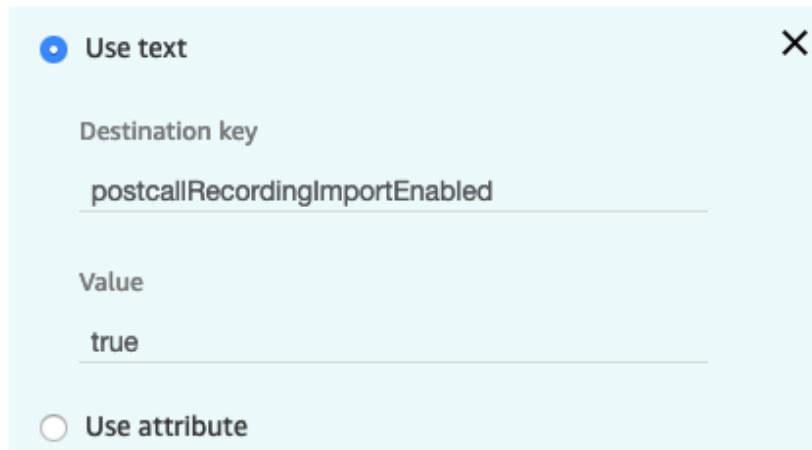
4. In your contact flow, before you transfer to queue, add a new **Set contact attributes** block

5. Configure the block to set a contact attribute as follows:

a. **Destination key:** postcallRecordingImportEnabled

b. **Value:** true

Attribute to save



6. **Save** the Set contact attributes block. Make sure it is appropriately connected to your contact flow, and **Publish** the flow.

7. Wait approximately 2 minutes to give the contact flow time to publish.

8. Place a call, connect to your agent, speak for a few moments to test the audio, then end the call. Make sure the agent exits after call work

9. After a minute or so, the recording should import.

## Adding users to the AC\_CallRecording permission set

This step is only necessary for non admin user accounts.

1. In the setup search box, search for "Permission sets". Select the "AC\_CallRecording" permission set. Select "Manage Assignments".



Setup

Home

Object Manager ▾

 Perm

Users

Permission Set Groups

Permission Sets

Custom Code

Custom Permissions

Didn't find what you're looking for?  
Try using Global Search.



## Permission Sets

Permission Set

**AC\_CallRecording** Find Settings...

Clone

Delete

Edit Properties

Manage Assignments

### Permission Set Overview

Description

License

Session Activation Required



Last Modified By

Bomi Lee, 10/12/2020, 5:07 PM

### Apps

#### Assigned Apps

Settings that specify which apps are visible in the app menu

#### Assigned Connected Apps

Settings that specify which connected apps are visible in the app menu

2. Select "Add Assignments". Add the users that should have access to the audio recordings and select "assign".

Assign Users  
All Users

View: All Users ▾ Edit | Create New View

Action	Full Name	Alias	Username	Assign	Cancel
<input type="checkbox"/>	Edit				
<input checked="" type="checkbox"/>	Edit   Login				
<input checked="" type="checkbox"/>	Edit   Login				
<input checked="" type="checkbox"/>	Edit   Login				
<input type="checkbox"/>	Edit   Login				
<input type="checkbox"/>	Edit   Login				
<input type="checkbox"/>	Edit   Login				
<input type="checkbox"/>	Edit   Login				
<input type="checkbox"/>	Edit   Login				
<input type="checkbox"/>	Edit   Login				

## Enable call recording streaming on the Contact Channel Analytics page

1. Navigate to the Sales Console, and select the + button on the top bar.

salesforce '21

Search... Search

Switch to Lightning Experience

Home Getting Started Chatter Profile Groups Files Leads Accounts Contacts Opportunities Reports Dashboards Products +

2. Select AC Contact Channel Analytics.

# All Tabs

Use the links below to quickly navigate to a tab. Alternatively, you can [add a tab](#) to your display to better suit the way you work.

**View:** All Tabs

 <a href="#">AC Contact Channel Analytics</a>	 <a href="#">Individuals</a>
 <a href="#">AC Contact Trace Records</a>	 <a href="#">Knowledge</a>
 <a href="#">Accounts</a>	 <a href="#">Leads</a>
 <a href="#">AC CTI Adapters</a>	 <a href="#">Libraries</a>
 <a href="#">AC Guided Setup</a>	 <a href="#">Licenses</a>
 <a href="#">AC Voicemail Drops</a>	 <a href="#">List Emails</a>
 <a href="#">App Launcher</a>	 <a href="#">Locations</a>
 <a href="#">Article Management</a>	 <a href="#">Location Trust Measures</a>

3. Select into a record and then select **Edit Layout**.

 AC Contact Channel Analytics  
CCA 000000

Customize Page 

[Notes & Attachments \[0\]](#)

**AC Contact Channel Analytics Detail** [Edit](#) [Delete](#) [Clone](#)

Contact Channel Analytics Name	CCA 000000
Contact Id	512d2ff1-f9d6-4680-90fc-b4af0afa1008
Keywords	
Named Entities	
Sentiment	
Dominant Language	
Channel	

4. Select **Visualforce Pages** and then drag **AC\_RecordingViewer** into your desired location.

**AC Contact Channel Analytics Layout ▾**

**Save ▾ Quick Save Preview As... Cancel Undo**

**Buttons**  
**Quick Actions**  
**Mobile & Lightning Actions**  
**Expanded Lookups**  
**Related Lists**  
**Report Charts**  
**Visualforce Pages**

**Quick Find**   
**Section**  
**Blank Space**  
**AC\_RecordingViewer**  
**AC\_Something**

5. Select **Save**, and observe that the audio recording component in the Contact Channel Analytics page.

The screenshot shows the 'AC Contact Channel Analytics Detail' page for 'CCA 000000'. At the top right are 'Edit', 'Delete', and 'Clone' buttons. Below them is a 'Notes & Attachments [0]' link. The main section displays contact channel analytics details: Name (CCA 000000), Contact Id (512d2ff1-f9d6-4680-90fc-b4af0afa1008), Keywords, Named Entities, Sentiment, Dominant Language, and Channel. A large media player at the bottom shows a recording from 0:00 to 0:02. The page has a header 'AC Contact Channel Analytics' with a yellow icon and 'CCA 000000'.

## Enable call recording streaming on the Task page

The below steps will add an audio recording component to tasks created from [this CTI flow](#) (or any tasks with the CallObject field set to the contactId of the call).

1. Click into a task in your Salesforce org

2. Click "Edit Layout"

The screenshot shows the 'Task Detail' page for a 'New Call' task. At the top right is an 'Edit Layout' button, which is highlighted with a red box. Below it is a 'Help for this Page' link. The main section includes a 'Click to add topics:' input field, a toolbar with icons for contacts, accounts, and documents, and a date selector showing '1 7 31'. At the bottom are 'Attachments [0]', 'Task Detail' buttons (Edit, Delete, Create Follow-Up Task, Create Follow-Up Event), and a 'Back to List: Activities' link.

3. Drag the "ACSFCCP\_CallRecordingTask" item to the desired area of the layout to have that information appear on the agent's screen.

## Task Layout ▾

Save ▾ Quick Save Preview As... Cancel Undo Redo Layout Properties

Buttons  
Quick Actions  
Mobile & Lightning Actions  
Expanded Lookups  
Related Lists  
Report Charts  
**Visualforce Pages**

Quick Find Page Name

Section	ACSFCCP_CallTask
Blank Space	ACSFCCP_PostCallU...
AC_CallRecordingTask	
ACSFCCP_CallRecor...	

### New Call

Click to add topics:



« Back to List: Activities

#### Task Detail

#### ▼ Task Information

Assigned To Bomi Lee

Re

Subject New Call

Due Date

▶ 0:00 / 0:00

4. To have access to the recording, the user must have an active session with Amazon Connect. This can be achieved by either logging in to the CCP softphone, or by logging in to Amazon Connect outside of Salesforce. After the session is established, a page refresh should make the player appear.

[Edit this page](#)

# Call Display on the Account Page

The Adapter comes with a Visualforce Page that displays all phone calls made using Amazon Connect for an Account. It differs from the standard Activity Related List because it filters all other activities out and focuses on the phone calls only.

To show the recent calls on the Account details page, add the "ACSFCCP\_CallLogging\_View" Visualforce Page to the Account Page layout. It is recommended to create a dedicated section with a 1-Column layout for this purpose, and to make the Visualforce Page scrollable.

1. Log in to your Salesforce Org

2. Navigate to **Setup** then in type *Object Manager* in Quick Find

The screenshot shows the Salesforce Setup navigation bar with 'Setup' selected. Below it is a search bar containing 'object manager'. Under the 'Objects and Fields' section, 'Object Manager' is listed.

3. Click on the "Account" object

The screenshot shows the 'Object Manager' page with 'Account' selected. The table displays one item:

LABEL	API NAME	DESCRIPTION
Account	Account	

4. Click on the "Page Layouts"

The screenshot shows the 'Account' object page with the 'Page Layouts' tab selected. The right panel lists four page layouts:

PAGE LAYOUT NAME
Account (Marketing) Layout
Account (Sales) Layout
Account (Support) Layout
Account Layout

5. Click on the "Account layout" and the layout designer will open

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Object Limits

**Account Layout**

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

**Fields**

Section	Account Owner	Annual Revenue	Customer Priority	D-U-N-S Number	Last Modified By	Ownership
Blank Space	Account Site	Billing Address	D&B Company	Employees	NAICS Code	Parent Ac
Account Name	Account Source	Clean Status	Data.com Key	Fax	NAICS Description	Phone
Account Number	Active	Created By	Description	Industry	Number of Locations	Rating

Quick Find Field Name

Account Sample

6. From the left-hand side menu, select "Fields"

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

**Fields**

- Buttons
- Custom Links
- Quick Actions
- Mobile & Lightning Actions
- Expanded Lookups
- Related Lists
- Report Charts

Section	Account Owner	Annual Revenue
Blank Space	Account Site	Billing Address
Account Name	Account Source	Clean Status
Account Number	Active	Created By

6. Drag and Drop "Section" item to add a new section on the layout

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

**Fields**

- Buttons
- Custom Links
- Quick Actions
- Mobile & Lightning Actions
- Expanded Lookups
- Related Lists
- Report Charts

Section	Account Owner	Annual Revenue
Blank Space	Account Source	Clean Status
Account Name	Active	Created By

Quick Find Field Name

Section

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

**Fields**

- Buttons
- Custom Links
- Quick Actions
- Mobile & Lightning Actions
- Expanded Lookups
- Related Lists
- Report Charts

Customer Priority	Sample Text	SLA	Sample Text
SLA Expiration Date	20/09/2018	SLA Serial Number	Sample Text
Number of Locations	518	Upsell Opportunity	Sample Text
Active	Sample Text		

System Information (Header visible on edit only)

Created By Sample Text Last Modified By Sample Text

Description Information (Header visible on edit only)

Description Sample Text

Custom Links (Header not visible)

Billing

Section

Mobile Cards (Salesforce mobile only)

8. On the pop-up form, set Section Name ("Call Logging View") and 1-Column Layout

## Section Properties

Section Name	Call Logging View
Display Section Header On	<input checked="" type="checkbox"/> Detail Page <input checked="" type="checkbox"/> Edit Page
<b>Layout</b>	
 	
<input checked="" type="radio"/> 1-Column	<input type="radio"/> 2-Column
<b>OK</b> <b>Cancel</b>	

9. Click "OK"

Description Information (Header visible on edit only)

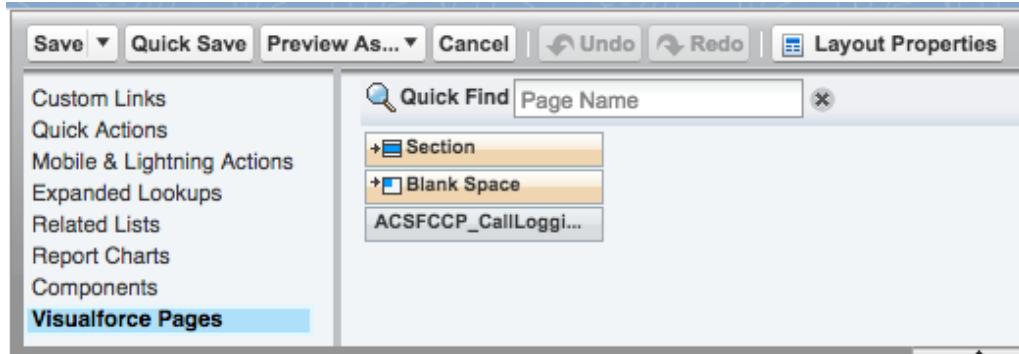
Description Sample Text

Custom Links (Header not visible)

Billing

Call Logging View

10. From the left-hand side menu, select Visualforce Pages:



11. Drag and drop "ACSFCCP\_CallLogging\_View" item to the "Call Logging View" section

Description Information (Header visible on edit only)

Description      Sample Text

Call Logging View

ACSFCCP\_CallLogging\_View

12. Hover the newly added component and click on the "Setting" icon

Properties

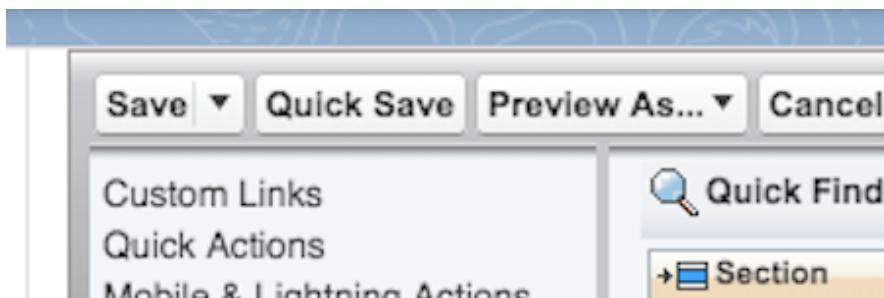
Check "Show scrollbars" and click "OK"

## Visualforce Page Properties

Width (in pixels or %)	100%
Height (in pixels)	200
Show scrollbars	<input checked="" type="checkbox"/>
Show label	<input type="checkbox"/>

**OK** **Cancel**

13. Click the "Save" button in the top-left corner



14. Make some phone calls, ask to speak with an agent. Open the Account, then select "Details" tab

The screenshot shows an Account details page for 'TestAccount1'. At the top left is a blue icon representing an account. To its right is the word 'Account' and the account name 'TestAccount1'. To the right of the name is a small grey icon. Below this section are three tabs: 'Type', 'Phone', and 'Website'. A horizontal blue bar spans across the page. At the bottom are three more tabs: 'RELATED', 'DETAILS' (which is highlighted with a blue underline), and 'NEWS'.

15. Scroll down the Details page until you see the "Call Logging View" section

## Call Logging View

CALL DATE	PHONE NUMBER	CALL TYPE	PHONE CALL DURATION	CALL IDENTIFIER
Thu Jun 07 16:59:54 GMT 2018	+44 [REDACTED]	Inbound	0 min 31 sec	805f8089-3646-4f9b-ae73-be9236aa26a1
Thu Jun 07 08:17:07 GMT 2018	+44 [REDACTED]	Inbound	0 min 23 sec	a0a42712-6d3d-4700-b650-d6b8aae189cc
Thu May 17 06:55:21 GMT 2018	+44 [REDACTED]	Inbound	0 min 10 sec	37491b40-85a7-4feb-a388-fd2c69ea8eb2
Tue May 08 18:26:50 GMT 2018	+44 [REDACTED]	Inbound	0 min 38 sec	994fbea6-94a6-4cf1-a118-a7c31cc39099
Tue May 08 18:00:11 GMT 2018	+44 [REDACTED]	Outbound	0 min 4 sec	40c6ad53-429a-42a2-b4c0-d46b20c109b6

For more information on how to add a Visualforce Page to a Page layout, please visit:

[https://trailhead.salesforce.com/en/modules/visualforce\\_mobile\\_salesforce1/units/visualforce\\_mobile\\_salesforce1\\_layouts\\_cards](https://trailhead.salesforce.com/en/modules/visualforce_mobile_salesforce1/units/visualforce_mobile_salesforce1_layouts_cards)

 [Edit this page](#)

# Outbound Campaign Calls

The package allows for running Outbound Call Campaigns using Salesforce Omni Channel routing and Amazon Connect. To enable outbound campaigns, the Custom Object called **Amazon Connect Call Campaign**, which comes bundled with the Adapter, must be configured to be routed by Salesforce Omni.

Outbound call campaigns are a feature of the package that utilizes Omni-Channel routing and Amazon Connect. To use the Call Campaigns, we must first configure the following items:

1. Create a Queue for users to manage a workload and configure it for the custom object.
2. Create a Service Channel and configure it for the custom object.
3. Create a Routing Configuration.
4. Associate the Routing Configuration with the Agents and the Queue.
5. Create a Presence Status and Configuration and assign it to the Users.

First, we must enable omni-channel. To do this, navigate to "Setup" and type "omni" into the Quick Find box, then select "Omni-Channel Settings" from the menu.

 omni

Feature Settings

Service

Omni-Channel

Agent Work

Agent Work Limits

Agent Work Triggers

Agent Work Validatio...

Limits

Omni-Channel Settings



Presence Configurations

Presence Decline Reaso...

Place a check in the checkbox for "Enable Omni-Channel".



SETUP

## Omni-Channel Settings

### Omni-Channel Settings

Welcome to Omni-Channel!

Work Limits  
Work Triggers  
Work Validatio...

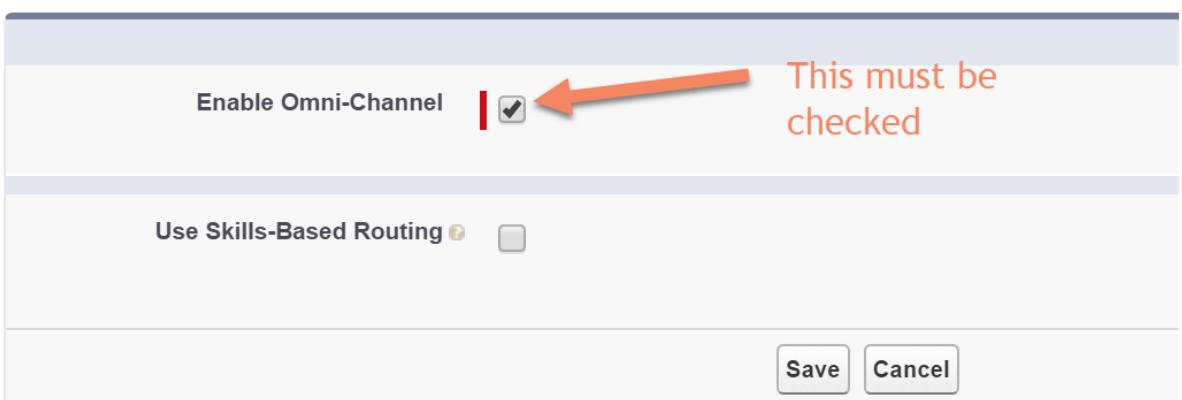
nel Settings  
onfigurations  
ecline Reaso...  
atuses  
nfigurations  
nnels  
ices  
ience Limits  
ience Triggers  
ience Valida...  
  
looking for?

Omni-Channel is a comprehensive customer service solution that lets contact centers push work to Omni-Channel. Omni-Channel lets you create work items from your Salesforce records—including cases, chats, lead objects—and route them to the most qualified, available agents in your organization, all in real time. It integrates seamlessly into the Salesforce console, so it's easy for your support agents to use.

With Omni-Channel, you can manage the priority of work items to make sure that critical assignments get handled quickly. You can manage your agents' capacity and availability for work to ensure that they're given assignments that they can handle. You can also define which agents can work on different types of work items. Omni-Channel routes all of these assignments to the correct agents automatically. Agents no longer have to search for work items manually from a queue, and managers no longer have to triage or dispatch work to agents based on the most qualified available agent in real time!

Show diagram ▾

First, you need to enable Omni-Channel. Then, [create Service Channels](#).



Enable Omni-Channel  This must be checked

Use Skills-Based Routing

Save Cancel

## Create a Queue

Navigate to "Setup" and type "queue" into the Quick Find box, then select "Queues" from the menu.



Search Setup



Setup

Home

Object Manager

 queues

▼ Users

Queues

Didn't find what you're looking for?  
Try using Global Search.



SETUP

## Queues

### Queues

Queues allow groups of users to manage a shared workload more effectively. A queue is a location where records can be routed to await processing by a group member. The records remain in the queue until a user accepts them for processing or they are transferred to another queue. You can specify the set of objects that are supported by each queue, as well as the set of users that are allowed to retrieve records from the queue.

View:  [Edit](#) | [Create New View](#)

You may see some entries if you are already using Omni-Channel for other things in your instance. We want to create a new queue for the purpose of handling these outbound call campaigns.

Action	Label	Queue Name	Queue Email	Supported Objects	Modified By	Last Modified
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">TestChatQueue</a>	<a href="#">TestChatQueue</a>		Amazon Connect Historical Report Data; Amazon Connect Call Campaign; Agent Work; Case; Goal; Knowledge Article Version; Lead; Live Agent Session; Live Chat Transcript; Macro; Metric; Order; Quick Text; Scorecard; User Provisioning Request; User Presence; Coaching; Feedback; Feedback Question; Feedback Question Set; Feedback Request; Feedback Template; Performance Cycle		15/09/2018

On the Queues screen, click the "New" button. Fill-in the required fields and then scroll down the screen until you see "Supported Objects". Select the Amazon Connect Call Campaign object and click the "Add" button.



SETUP

## Queues

### Supported Objects

Select the objects you want to assign to this queue. Individual records for those objects can then be owned by this queue.

Available Objects	Selected Objects
Amazon Connect Historical Report Data	--None--
Agent Work	
Amazon Connect Call Campaign	1
Case	
Goal	
Knowledge Article Version	
Lead	
Live Agent Session	
Live Chat Transcript	
Macro	
Metric	
Order	
Quick Text	
Scorecard	

The interface shows a list of available objects on the left and selected objects on the right. A red arrow points from the 'Amazon Connect Call Campaign' entry in the available list to the 'Selected Objects' list. A red circle highlights the 'Add' button between the two lists. Red numbers '1' and '2' are placed near the 'Selected Objects' list and the 'Add' button respectively.

### Queue Members

To add members to this queue, select a type of member, then choose the group, role, or user from the "Available Members". If the Queue is Public Read/Write/Transfer, you do not need to assign users to the queue, as all users already have

Search:  for:

Available Members	Selected Members
User: User: User: User:	--None--

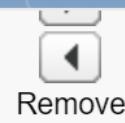
Scroll down to the Queue members to select the members of the queue. You can assign the queue by Public Groups, Roles, Roles and Subordinates, or Users. If you need to wade through many users, groups, or roles, feel free to use the "Find" feature.

Once you have found the entity you'd like to add, select it and click Add, just like we did with the object in the previous step.



## SETUP Queues

- User Presence
- Coaching
- Feedback
- Feedback Question
- Feedback Question Set
- Feedback Request
- Feedback Template
- Performance Cycle



### Queue Members

To add members to this queue, select a type of member, then choose the group, role, or user from the "Available Members" list. If the Queue is Public Read/Write/Transfer, you do not need to assign users to the queue, as all users already

Search:  for:

#### Available Members

- User:
- User: **User:** 1
- User:
- User:

#### Selected Members

- None--

Add   
Remove

Now, our queue has been created and assigned to users.



## Queues

[Help for this Page](#)

Queues allow groups of users to manage a shared workload more effectively. A queue is a location where records can be routed to await processing by a group member. The records remain in the queue until a user accepts them for processing or they are transferred to another queue. You can specify the set of objects that are supported by each queue, as well as the set of users that are allowed to retrieve records from the queue.

View: [All ▾](#) [Edit](#) | [Create New View](#)

[A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [F](#) | [G](#) | [H](#) | [I](#) | [J](#) | [K](#) | [L](#) | [M](#) | [N](#) | [O](#) | [P](#) | [Q](#) | [R](#) | [S](#) | [T](#) | [U](#) | [V](#) | [W](#) | [X](#) | [Y](#) | [Z](#) | Other [All](#)

[New](#)

Action	Label	Queue Name	Queue Email	Supported Objects	Modified By	Last Modified Date
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call Campaign</a>	Call_Campaign		Amazon Connect Call Campaign	[REDACTED]	21/09/2018 04:07

Amazon Connect Historical Report Data; Amazon Connect Call Campaign; Agent Work; Case; Goal;

# Create a Service Channel

Click into the Setup search box in the left navigation panel and type "Service Channel". Then click "Service Channels".

 service channel

✓ Feature Settings

✓ Service

✓ Omni-Channel

Service Channels



Didn't find what you're looking for?

Try using Global Search.

Click "New" to create our new Service Channel.



SETUP

## Queues

## Queues

Queues allow groups of queue until a user accept allowed to retrieve record

View:  [Edit](#) | [Cr](#)

Action	Label ↑
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Call Campaign</a>



SETUP

## Service Channels

Service Channels let you turn any Salesforce object—such as a case, lead, SOS session, or even a custom object—into a work record. Omni-Channel then plucks these work items from their queues—like flowers from the garden of agent productivity—and routes them to your agents in real time.

Does your organization use Live Agent for chats or SOS for video calls? If so, you'll notice that Salesforce creates those Service Channels for you automatically, so you can get up and running using Live Agent and SOS with Omni-Channel right away.

Show diagram ▾

Let's get this party started and create a new Service Channel. After you create a Service Channel, [create a Routing Configuration](#) to determine how work items are pushed to your agents.

View: All ▾ [Create New View](#)

A | B | C | D | E | F | G | H | I | J | K | L | M | N | C

New



Action Service Channel Name ↑

Developer Name

Edit [Live Agent](#)

SETUP

## Service Channels

Service Channels let you turn any Salesforce object—such as a case, lead, SOS session, or even a custom object—into a work record. Omni-Channel then plucks these work items from their queues—like flowers from the garden of agent productivity—and routes them to your agents in real time.

Show me an example ▾

After you create a Service Channel, [create a Routing Configuration](#) to determine how work items are pushed to your agents.

We have resources that will help you up Omni-Channel for your organizational

[Create Service Channels](#)  
Need help creating your first Service Salesforce help.

[Service Channel Settings](#)  
Learn more about what individual se

[Set Up Omni-Channel - implemen](#)  
Snuggle up with a cup of cocoa and end-to-end process of setting up On

Save Cancel

### Basic Information

Service Channel Name

Call Campaign Channel



Developer Name

Call\_Campaign\_Channel

Salesforce Object

Amazon Connect Call Campaign



Custom Console Footer Component

3

Save Cancel

In the new Service Channel form, enter your desired Service Channel Name (step 1). The Developer Name field will auto-populate based on the Service Channel Name content. Then, select the [Amazon Connect Call Campaign]{.ul} object (step 2). Finally, save the new Service Channel (step 3).



SETUP

# Service Channels

[« Back to List: Service Channels](#)

## Basic Information

[Edit](#) [Delete](#)

Service Channel Name	Call Campaign Channel
Developer Name	Call_Campaign_Channel
Salesforce Object	Amazon Connect Call Campaign

Custom Console Footer Component

# Create a Routing Configuration

Now, we need to create a routing configuration. Enter "routing" into the search box in the left navigation and click "Routing Configurations".

 routing

## Feature Settings

## Service

## Omni-Channel

Routing Configurations

Didn't find what you're looking for?  
Try using Global Search.



SET

## Service

« [Back to List:](#)

## Basic Info

S

## Custom Conso

1. On the Routing Configurations landing page, click "New".

**SETUP**

## Routing Configurations

**Routing Configurations**

Routing Configurations determine how work items are routed to agents. They let you prioritize the relative importance and size of work items across your Omni-Channel Queues. Since not all work items take the same amount of effort, Routing Configurations let you control the relative size of items in your Queues so agents can focus the right amount of attention on their work. That way, the most important work items are handled accordingly, and work is evenly distributed to your agents. After all, we want to make sure every agent gets to have an equal amount of fun, right?

**Show diagram ▾**

After you create your Routing Configuration, you need to associate Routing Configurations with **Queues**. The items in that Queue are pushed to your agents based on the settings in your Routing Configuration. For routing to work correctly, make sure all of your agents are assigned to your Omni-Channel Queues.

**View:** All ▾ [Create New View](#)

Action	Routing Configuration Name ↑	Developer Name	Routing Priority	Routing Model
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">TestRouting</a>	<a href="#">TestRouting</a>	1	Most Available

**New**

**SETUP**

## Routing Configurations

Routing Configurations determine how work items are routed to agents. They let you prioritize the relative importance and size of work items across your Omni-Channel Queues. Since not all work items take the same amount of effort, Routing Configurations let you control the relative size of items in your Queues so agents can focus the right amount of attention on their work. That way, the most important work items are handled accordingly, and work is evenly distributed to your agents. After all, we want to make sure every agent gets to have an equal amount of fun, right?

**Show diagram ▾**

After you create your Routing Configuration, you need to associate Routing Configurations with **Queues**. The items in that Queue are pushed to your agents based on the settings in your Routing Configuration. For routing to work correctly, make sure all of your agents are assigned to your Omni-Channel Queues.

**Basic Information**

Routing Configuration Name	<input type="text" value="Call Campaign Routing"/> 1
Developer Name	<input type="text" value="Call_Campaign_Routing_C"/>
Overflow Assignee	If you don't give the overflow assignee access to the object types in your queues and set an overflow assignment won't work.
User	<input type="text"/>

**Optional**

**Routing Settings**

The routing priority determines the order in which work items across your Omni-Channel queues get pushed to your agents. Lower-priority items

The routing model determines how to evenly distribute work items to your agents. It acts as a tiebreaker if two or more agents qualify to take c

the fewest number of open work items. Most Available routes to the agent with the most open capacity in proportion to their set capacity.

Enter the Routing Configuration Name (step 1), and the Developer Name will auto-populate. If you'd like to set an Overflow Assignee, you can optionally do that at this point. The overflow assignee will receive work if your organization reaches its Omni-Channel limits. This setting has no effect until the limits are reached.

The screenshot shows the 'Routing Settings' configuration page. At the top, there is a dropdown menu labeled 'User' and a save/cancel button. Below the dropdown is a section titled 'Routing Settings' with descriptive text about routing priority and models. Three input fields are present: 'Routing Priority' (set to 2), 'Routing Model' (set to 'Most Available'), and 'Push Time-Out (seconds)'. Red numbers 1 through 4 are overlaid on the page to indicate steps:

- Step 1: An arrow points to the 'Routing Priority' input field.
- Step 2: An arrow points to the 'Routing Model' dropdown.
- Step 3: An arrow points to the 'Units of Capacity' input field.
- Step 4: An arrow points to the 'Save' button at the bottom right.

**Work Item Size**

Specify the size of the work items in the queues associated with this configuration. You can size items by number of units or percentage of the agent's capacity, but not both.

Units of Capacity: 5  
Percentage of Capacity:

Next, you must configure the Routing Settings. First, (step 1) enter the priority of the work across the Omni-Channel queues. Second (step 2), select the model to use to act as the tie-breaker between agents. Third, (step 3) specify the units of capacity or percentage of capacity of the work items in the queue. Finally, (step 4), click "Save".



SETUP

# Routing Configurations

[« Back to List: Routing Configurations](#)

## Basic Information

[Edit](#)

[Delete](#)

Routing Configuration Name Call Campaign Routing Config

Developer Name Call\_Campaign\_Routing\_Config

Overflow Assignee

## ▼ Routing Settings

Routing Priority 2

Routing Model Most Available

Push Time-Out (seconds)



Units of Capacity 5.00

Percentage of Capacity

## ▼ Related Queues

Label	Queue Name

You have created your Routing Configuration.

Now, we need to assign the Routing Configuration to our queue. From the Quick Find in Setup, enter "queues" and then select "Queues" (step 1).

A screenshot of the AWS Lambda Queues page. At the top left, there is a global search bar with the query "queues". Below it, a sidebar shows navigation links: "Users" and "Queues", with "Queues" being highlighted and having a yellow background. A red arrow labeled "1" points to this yellow background. The main content area has a title "Queues" with a blue icon. It contains a section titled "Queues" with a description of what queues are used for. Below this is a "View:" dropdown set to "All" and a link to "Create New View". At the bottom, there is a table with columns: Action, Label, Queue Name, Queue Email, and Supported Objects. The table lists two entries: "Call Campaign" and "TestChatQueue". A red arrow labeled "2" points to the "Edit | Del" link for the "Call Campaign" row.

Action	Label	Queue Name	Queue Email	Supported Objects
Edit   Del	Call Campaign	Call_Campaign		Amazon Connect Call Campaign
Edit   Del	TestChatQueue	TestChatQueue		Amazon Connect Historical Report Data; Amazon Connect Call Campaign; Agent Work Log; Knowledge Article Version; Lead; Live Agent Session; Live Chat Transcript; Macro; Memento; Text; Scorecard; User Provisioning Request; User Presence; Coaching; Feedback; Feedback Question Set; Feedback Request; Feedback Template; Performance Cycle

Click on the "Edit" link next in the row of the queue that was created earlier (step 2).

Enter the name of the queue and the email address to use when sending notifications (for example, `queue@example.com`). When an object is assigned to a queue, only the queue members will be notified.

Label	<input type="text" value="Call Campaign"/> 
Queue Name	<input type="text" value="Call_Campaign"/> 
Queue Email	<input type="text"/>
Email to Members	<input type="checkbox"/>

## Configuration with Omni-Channel Routing

If your organization uses Omni-Channel, you can link queues to a routing configuration. This Configurations.

## Routing Configuration

## Supported Objects

Use the magnifying glass button to search for our new Routing Configuration created earlier.



# Lookup

**Go!**

You can use "\*" as a wildcard next to other characters to improve your search results.

## Search Results

Routing Configuration Name	Developer Name	Routing Priority	Routing Model	Units of Capacity	Percentage
TestRouting	<u>TestRouting</u>	1	Most Available	5.00	
Call Campaign Routing Config	<u>Call_Campaign_Routing_Config</u>	2	Most Available	5.00	

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Select our Routing Configuration from the Lookup window.

## Queues

### Edit Queue Call Campaign

#### Queue Edit

**Queue Name and Email Address**

Enter the name of the queue and the email address to use when sending notifications (for example, when a case is assigned to a queue). When an object is assigned to a queue, only the queue members will be notified.

Label	<input type="text" value="Call Campaign"/>
Queue Name	<input type="text" value="Call_Campaign"/>
Queue Email	<input type="text"/>
Send Email to Members	<input type="checkbox"/>

#### Configuration with Omni-Channel Routing

If your organization uses Omni-Channel, you can link queues to a routing configuration. This will push work from the queue to the routing configuration.

**Routing Configuration** Campaign\_Routing\_Config

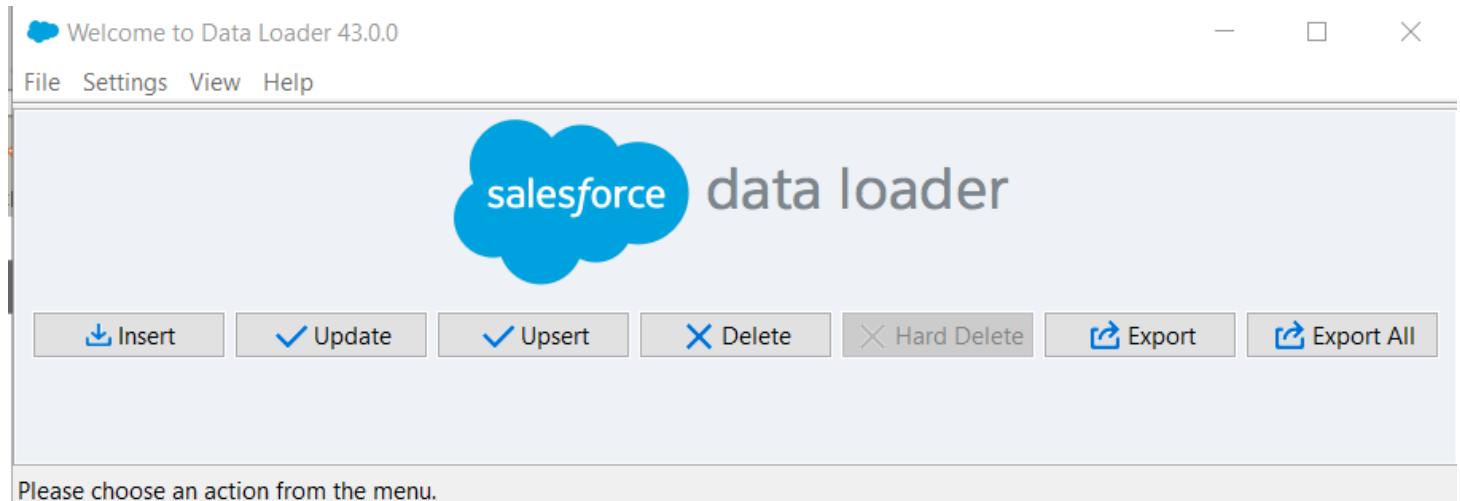
#### Supported Objects

Click "Save" to store our changes.

The next steps are to create and configure the Presence Statuses.

# Outbound Campaign Custom Object Using Salesforce Data Loader

The following is a description of the steps using the Salesforce Data Loader to insert outbound call campaign records. The Data Loader can be obtained from <https://dataloader.io/>



Start by exporting the call campaign custom object. From the Data Loader UI, click the "Export" button.

You will be prompted to Login. Select OAuth as the method and then provide your Salesforce login credentials.

From the list of Salesforce objects select the **Amazon Connect Call Campaign** and export it to CSV file.



## Step 2: Select Data Objects

Select your Salesforce object and your target file



Select Salesforce Object:

Show all Salesforce objects

Account (Account)

Amazon Connect Call Campaign (actoolkit\_Call\_Campaign\_c)

Amazon Connect Historical Report Data (actoolkit\_ACT\_HistoricalReportData\_c)

Case (Case)

Contact (Contact)

Event (Event)

Lead (Lead)

Opportunity (Opportunity)

Choose a target for extraction:

< Back

Next, we need the Object ID of the Queue that was created earlier. To obtain that, use the Data Loader to extract a listing of Queues. You will want to query for the QueueId.

Choose the query fields below.

<input checked="" type="checkbox"/> Id	<input checked="" type="checkbox"/> QueueId	<input type="checkbox"/> SubjectType
<input type="checkbox"/> CreatedById	<input type="checkbox"/> SystemModstamp	
< >		

Create the where clauses to your query below.

Fields	Operation	Value

Add condition      Clear all conditions

Select all fields    Clear all fields

The generated query will appear below. You may edit it before finishing.

Select Id, QueueId FROM QueueSubject

In this example, we want to pop Contact records when the outbound call is presented to the agent, so let's export a list of Contact to be called.

Select Salesforce Object:

Show all Salesforce objects

- Account (Account)
- Amazon Connect Call Campaign (actoolkit\_Call\_Campaign\_c)
- Amazon Connect Historical Report Data (actoolkit\_ACT\_HistoricalReportData\_c)
- Case (Case)
- Contact (Contact)
- Event (Event)
- Lead (Lead)
- Opportunity (Opportunity)
- Price Book (Pricebook2)

Choose a target for extraction:

< Back

Next >

Finish

Cancel

Query for all or specific Contacts, based on pre-defined criteria. At a minimum, you will need to extract a list of the Id and Phone number of the Contact.

Choose the query fields below.

<input checked="" type="checkbox"/> Id	<input type="checkbox"/> IsDeleted	<input type="checkbox"/> MasterRecordId
<input type="checkbox"/> Name	<input type="checkbox"/> RecordType	<input type="checkbox"/> Status
<input type="checkbox"/> AccountId	<input type="checkbox"/> ContactId	<input type="checkbox"/> LeadId
<input type="checkbox"/> CaseId	<input type="checkbox"/> ParentId	<input type="checkbox"/> OpportunityId
<input type="checkbox"/> LeadSource	<input type="checkbox"/> PersonId	<input type="checkbox"/> QualifiedLead
<input type="checkbox"/> PersonEmail	<input type="checkbox"/> PersonName	<input type="checkbox"/> QualifiedOpportunity
<input type="checkbox"/> PersonPhone	<input type="checkbox"/> PersonTitle	<input type="checkbox"/> QualifiedUser
<input type="checkbox"/> PersonType	<input type="checkbox"/> RecordTypeId	<input type="checkbox"/> SystemModstamp
<input type="checkbox"/> Type	<input type="checkbox"/> WorkPhone	<input type="checkbox"/>

Create the where clauses to your query below.

Fields	Operation	Value
<input type="text"/>	<input type="button"/>	<input type="text"/>
<input type="button"/> Add condition	<input type="button"/> Clear all conditions	

Select all fields  Clear all fields

The generated query will appear below. You may edit it before finishing.

Select Id, Phone FROM Contact

< Back  Next >  Finish  Cancel

Using the data extracted in the Queue listing and the Contact listing files, construct the outbound campaign, by using the first file what was exported as a template. Open the exported "**Amazon Connect Call Campaign**" in a spreadsheet application, such as Microsoft Excel, and build a list of Contacts to be called.

	A	B	C	D	E	F	G
1	OWNERID	ACCOUNT__C	CASE__C	CONTACT__C	LEAD__C	OPPORTUNITY__C	PHONE_NUMBER__C
2	00G1U0000000EIDcUAK			0031U000004WGR5QAO			(702) 555-0111
3	00G1U0000000EIDcUAK			0031U000004WGR6QAO			(702) 555-0112
4	00G1U0000000EIDcUAK			0031U000004WGR7QAO			(702) 555-0113
5	00G1U0000000EIDcUAK			0031U000004WGR8QAO			(702) 555-0114
6	00G1U0000000EIDcUAK			0031U000004WGR9QAO			(702) 555-0115
7	00G1U0000000EIDcUAK			0031U000004WGRAQAA4			(702) 555-0116
8	00G1U0000000EIDcUAK			0031U000004WGRBQAA4			(702) 555-0117
9	00G1U0000000EIDcUAK			0031U000004WGRCAAA4			(702) 555-0118

In the example above, the **OWNERID** column contains the QueueId obtained from the export of Queues. The **CONTACT\_\_C** column contains the Id of the Contact we want presented to the agent, when the outbound call is initiated, and the **PHONE\_NUMBER\_\_C** field contains the phone number to be automatically dialed by Amazon Connect CCP.

Once you have built the campaign file, save it as a CSV file and then import it into Salesforce, using the Data Loader. Select "**Amazon Connect Call Campaign**" as the target of the upload.

Select Salesforce object:

Show all Salesforce objects

Account (Account)

Amazon Connect Call Campaign (actoolkit\_Call\_Campaign\_c)

Amazon Connect Historical Report Data (actoolkit\_ACT\_HistoricalReportData\_c)

Case (Case)

Contact (Contact)

Event (Event)

Lead (Lead)

Opportunity (Opportunity)

Once the campaign has been uploaded, the campaign records will be added to the queue and the agents who are assigned to that queue should start receiving the outbound requests in their Omni-Channel widget.

The screenshot shows the Salesforce Omni-Channel interface. At the top, there are two tabs: "Customer - Channel" and "DDEBA". Below these tabs, there is a list of agents: "Customer - Direct", "Custom", "Custom", "Custom", and "Custom". A modal window titled "DDEBA" is open, displaying a list of five requests. The modal has a blue header bar with the title "DDEBA" and a close button. The main area of the modal shows the status "Available" with a green dot and "(5) Requests". Below this, the first three requests are listed: "CC-0010" (status: Available), "CC-0005" (status: Available), and "CC-0002" (status: Available). Each request row includes a small blue square icon and an "Accept" button. At the bottom of the modal, there is a navigation bar with arrows and a "1" indicating the current page. Below the modal, there is a dark footer bar with three buttons: "Omni-Channel" (with a checkmark icon), "Phone" (with a phone receiver icon), and another "Omni-Channel" button.

Edit this page

# Amazon Connect Reports in Salesforce

Out of the box, within Amazon Connect, you can generate a number of real-time and historical metric reports to monitor efficiency and utilization, agent performance, and other information about your contact center.

Real-time metrics reports show real-time or near-real time metrics information about activity in your contact center. Historical metrics reports include data about past, completed activity and performance in your contact center. You can customize the default report settings to get the view of the data that is most meaningful to you and your organization. You can change the time frame for the report, which metrics are included in the report, and how the data is grouped within the report.

Amazon Connect provides you the ability to export reports to the S3 bucket of your choice, in comma separated value (CSV) format. This enables broad compatibility across many analytics and WFM tools. Encryption is enabled by default for all saved reports, using S3 server-side encryption with KMS. Disabling encryption is not recommended. You can schedule reports run hourly, daily, and monthly. The output will be stored in the S3 bucket. Each report can have different name and prefix.

For the particular integration, at 30-minute intervals, Amazon Connect generates CSV reports which contain statistics for the last (30 minute) period. Two different reports are available to transport Agent and Queue interval data from Amazon Connect to Salesforce.

Each time a new report is exported, S3 is going to trigger a Lambda function from Amazon Connect Salesforce Lambda package (AWS Serverless Application Repository), which is going to import the date into your Salesforce instance.

Amazon Connect scheduled, Agent and Queue reports, are not automatically configured by the Amazon Connect Salesforce Lambda package, therefore the first step would be to create and schedule these reports.

In your Amazon Connect instance, navigate to Metrics and Quality > Historical metrics. By default, you will be able to see the two reports needed for this integration: "Contact metrics" and "Agent Performance".



A screenshot showing two sections. The top section is "Queues" with a "Contact metrics" button and a gear icon. The bottom section is "Agents" with an "Agent performance" button and a gear icon.

Click on the "Contact metrics" to open the report and then click on the grey gear icon on the right-hand side to configure it.

A screenshot of the "Historical metrics" configuration screen. It shows "Queues" selected. Configuration options include Interval (Total), Time range (Nov 16, 2018, 12:00 AM - Nov 23, 2018, 12:00 AM), Time Zone (UTC), and a "Save" button.

Set the report configuration by following the screenshots below:

## Table Settings

X

### Interval & Time range

### Groupings

### Filters

### Metrics

Interval

30 Minutes

Time Zone

UTC

Time range

Last 24 hours

## Table Settings

X

### Interval & Time range

### Groupings

### Filters

### Metrics

Select the values you'd like to group your metrics by, and add them to the right in the order you prefer.

Grouping options

Selected groupings (Maximum 5)

Agent

+

Queue

-

Agent Hierarchy Level One

+

i

2

Agent Hierarchy Level Two

+

i

3

Agent Hierarchy Level Three

+

i

4

Agent Hierarchy Level Four

+

i

5

Agent Hierarchy Level Five

+

i

Routing Profile

+

Phone Number

+

Optionally set the filters:

## Table Settings

X

Interval & Time range

Groupings

Filters

Metrics

Queues that match these filters will be displayed on the table

Queue

Routing profile

Agent hierarchy

Phone number

Queue

Show metrics only for contacts handled in these queues:

 Search

And most importantly, select the correct metrics in the last tab:

## Table Settings



Interval & Time range    Groupings    Filters    Metrics

Metrics are displayed to the right of grouping columns.

Contact metrics     Agent metrics

Search

Metrics definitions

Agent Name

Agent Last Name

After contact work time

Agent idle time

Average queue abandon time

Average queue answer time

Average customer hold time

Average agent interaction time

Contacts abandoned in 15 seconds

Contacts abandoned in 25 seconds

Contacts abandoned in 45 seconds

Contacts abandoned in 90 seconds

Contacts abandoned in 180 seconds

Contacts abandoned in 300 seconds

Contacts agent hung up first

Contacts handled

Agent First Name

Agent on contact time

Non-Productive Time

Average after contact work time

Average handle time

Average agent interaction and customer hold time

Contacts abandoned

Contacts abandoned in 20 seconds

Contacts abandoned in 30 seconds

Contacts abandoned in 60 seconds

Contacts abandoned in 120 seconds

Contacts abandoned in 240 seconds

Contacts abandoned in 600 seconds

Contacts consulted

Contacts handled incoming

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Contacts handled outbound           | <input type="checkbox"/> Callback contacts handled   |
| <input type="checkbox"/> API contacts handled                           | <input checked="" type="checkbox"/> Contacts put on hold   |
| <input checked="" type="checkbox"/> Contacts hold disconnect            | <input checked="" type="checkbox"/> Contacts hold agent disconnect   |
| <input checked="" type="checkbox"/> Contacts hold customer disconnect   | <input checked="" type="checkbox"/> Contacts incoming  |
| <input type="checkbox"/> Callback Contacts                              | <input type="checkbox"/> API Contacts  |
| <input checked="" type="checkbox"/> Contacts answered in 15 seconds     | <input checked="" type="checkbox"/> Contacts answered in 20 seconds  |
| <input type="checkbox"/> Contacts answered in 25 seconds                | <input checked="" type="checkbox"/> Contacts answered in 30 seconds  |
| <input checked="" type="checkbox"/> Contacts answered in 45 seconds     | <input checked="" type="checkbox"/> Contacts answered in 60 seconds  |
| <input checked="" type="checkbox"/> Contacts answered in 90 seconds     | <input checked="" type="checkbox"/> Contacts answered in 120 seconds   |
| <input checked="" type="checkbox"/> Contacts answered in 180 seconds    | <input checked="" type="checkbox"/> Contacts answered in 240 seconds   |
| <input checked="" type="checkbox"/> Contacts answered in 300 seconds    | <input checked="" type="checkbox"/> Contacts answered in 600 seconds   |
| <input checked="" type="checkbox"/> Contacts queued                     | <input checked="" type="checkbox"/> Contacts transferred in  |
| <input checked="" type="checkbox"/> Contacts transferred out            | <input type="checkbox"/> Contacts transferred out internal   |
| <input type="checkbox"/> Contacts transferred out external              | <input checked="" type="checkbox"/> Contacts transferred in from queue   |
| <input checked="" type="checkbox"/> Contacts transferred out from queue | <input type="checkbox"/> Error status time  |

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Customer hold time                      | <input checked="" type="checkbox"/> Agent answer rate                        |
| <input checked="" type="checkbox"/> Maximum queued time                     | <input checked="" type="checkbox"/> Contacts missed                          |
| <input checked="" type="checkbox"/> Contact handle time                     | <input checked="" type="checkbox"/> Contact flow time                        |
| <input checked="" type="checkbox"/> Occupancy                               | <input checked="" type="checkbox"/> Service level 15 seconds                 |
| <input checked="" type="checkbox"/> Service level 20 seconds                | <input checked="" type="checkbox"/> Service level 25 seconds                 |
| <input checked="" type="checkbox"/> Service level 30 seconds                | <input checked="" type="checkbox"/> Service level 45 seconds                 |
| <input checked="" type="checkbox"/> Service level 60 seconds                | <input checked="" type="checkbox"/> Service level 90 seconds                 |
| <input checked="" type="checkbox"/> Service level 120 seconds               | <input checked="" type="checkbox"/> Service level 180 seconds                |
| <input checked="" type="checkbox"/> Service level 240 seconds               | <input checked="" type="checkbox"/> Service level 300 seconds                |
| <input checked="" type="checkbox"/> Service level 600 seconds               | <input type="checkbox"/> Online time <span style="color: #f08080;">!</span>  |
| <input checked="" type="checkbox"/> Agent interaction and hold time         | <input checked="" type="checkbox"/> Agent interaction time                   |
| <input checked="" type="checkbox"/> Agent interaction and hold time         | <input checked="" type="checkbox"/> Agent interaction time                   |
| <input checked="" type="checkbox"/> Average outbound agent interaction time | <input checked="" type="checkbox"/> Average outbound after contact work time |
| <input type="checkbox"/> Lunch time <span style="color: #f08080;">!</span>  | <input type="checkbox"/> Break time <span style="color: #f08080;">!</span>   |

---

[Cancel](#)

[Apply](#)

Once metrics are selected, click the Apply button. Next, click the drop-down arrow on the right-hand side and select Schedule.

**Save**



Save as

Download CSV

Share report

**Schedule**

Set the report name, for instance *sflIntervalQueue* and click Continue

## Schedule report

X

---

First, name your report.

Name sflIntervalQueue

---

Cancel

Continue

## Schedule report

X

### Note

Once you schedule a report, it will be published to your organization, and all individuals who have proper permissions will be able to access it.

---

Cancel

Continue

On the next screen, set Recurrence as:

## Recurrence

## Delivery Options

Generate this report

Hourly ▼ every 0.5 ▼ hour(s)

Starting at

Time zone

1 am ▼ UTC

For the previous

0.5 ▼ hour(s)

Switch to Delivery Options tab and set the Prefix as SFDC/Queue

## Recurrence

## Delivery Options

Default location

connect-62 [REDACTED] d2/connect/[REDACTED]-test8/Reports

Prefix

SFDC/Queue



| Click the Create button to create the Schedule for the report. The report can be found in Metrics and quality > Saved Reports > Historical metrics



# Metrics and quality



## Real-time metrics



## Historical metrics

## Contact search

## Login/Logout report

## Saved reports

[Dashboard](#)[Real-time metrics](#)[Historical metrics](#)[Login/Logout report](#)

Search by report name

Name	Schedule report
sfIntervalQueue	



Click on the Clock (Schedule Report) icon to see the configuration. Please note the File name and the Path for the CSV file to be created.

### Schedule 1

Repeats: HOURLY - runs every 0.5 hour(s), starting at 01:00 (UTC), for the previous 0.5 hour(s).

File name: connect-62[REDACTED]2/connect/[REDACTED]-test8/Reports/SFDC/Queue/sfIntervalQueue-YYYY-MM-DDThh:mm:ssZ.csv

Next run: Friday, November 23, 2018 6:00:00 PM UTC

Last run: Friday, November 23, 2018 5:15:26 PM UTC

The Queue Interval report has been created and scheduled to export the data. After a while, you will be able to see CSV files in the S3 bucket.

Name	Last modified	Size	Storage class
sfIntervalQueue-2018-11-22T12:00:00Z.csv	Nov 22, 2018 12:15:27 PM GMT+0000	625.0 B	Standard
sfIntervalQueue-2018-11-22T12:30:00Z.csv	Nov 22, 2018 12:45:27 PM GMT+0000	512.0 B	Standard
sfIntervalQueue-2018-11-22T13:00:00Z.csv	Nov 22, 2018 1:15:27 PM GMT+0000	512.0 B	Standard

Repeat the steps for the Agent Interval report:

In your Amazon Connect instance, navigate to Metrics and Quality > Historical metrics.

The screenshot shows the 'Metrics and quality' navigation bar with three main options: 'Real-time metrics', 'Historical metrics', and 'Agent metrics'. Below this, there are two sections: 'Queues' and 'Agents'. The 'Agents' section is currently selected, displaying 'Agent performance' metrics. To the right of each section are grey gear icons for configuration.

Choose the "Agent Performance" metrics to open the report and then click on the grey gear icon on the right-hand side to configure it.

This screenshot shows the 'Agent performance' report configuration. It includes fields for 'Historical metrics' (set to 'Agents'), time range (from Nov 16, 2018, 12:00 AM to Nov 23, 2018, 12:00 AM), time zone (UTC), and a 'Save' button. A gear icon is located in the top right corner of the configuration area.

Set the report configuration by following the screenshots below:

## Table Settings

X

### Interval & Time range

### Groupings

### Filters

### Metrics

Interval

30 Minutes

Time Zone

UTC

Time range

Last 24 hours

## Table Settings

X

### Interval & Time range

### Groupings

### Filters

### Metrics

Select the values you'd like to group your metrics by, and add them to the right in the order you prefer.

Grouping options

Selected groupings (Maximum 5)

Agent Hierarchy Level One



Agent



Agent Hierarchy Level Two



2

Agent Hierarchy Level Three



3

Agent Hierarchy Level Four



4

Agent Hierarchy Level Five



5

Queue



Routing Profile



Phone Number



Optionally set the filters:

## Table Settings

X

Interval & Time range

Groupings

Filters

Metrics

Queues that match these filters will be displayed on the table

Queue

Routing profile

Agent hierarchy

Phone number

Queue

Show metrics only for contacts handled in these queues:

 Search

And most importantly, select the correct metrics in the last tab:

## Table Settings

[Interval & Time range](#)[Groupings](#)[Filters](#)[Metrics](#)

Metrics are displayed to the right of grouping columns.

 Contact metrics Agent metrics Search[Metrics definitions](#)  Agent Name Agent First Name Agent Last Name After contact work time Agent on contact time Agent idle time Non-Productive Time Average queue abandon time Average after contact work time Average queue answer time Average handle time Average customer hold time Average agent interaction and customer hold time Average agent interaction time Contacts abandoned Contacts abandoned in 15 seconds Contacts abandoned in 20 seconds Contacts abandoned in 25 seconds Contacts abandoned in 30 seconds Contacts abandoned in 45 seconds Contacts abandoned in 60 seconds Contacts abandoned in 90 seconds Contacts abandoned in 120 seconds Contacts abandoned in 180 seconds Contacts abandoned in 240 seconds Contacts abandoned in 300 seconds Contacts abandoned in 600 seconds Contacts agent hung up first Contacts consulted Contacts handled Contacts handled incoming

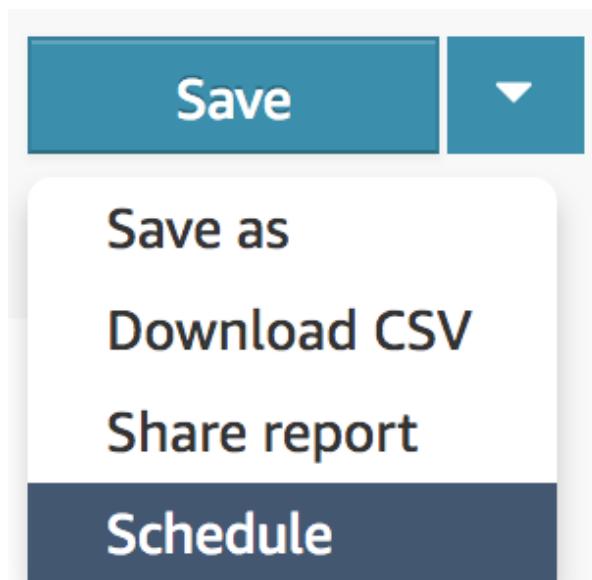
- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Contacts handled outbound         | <input type="checkbox"/> Callback contacts handled                    |
| <input type="checkbox"/> API contacts handled                         | <input checked="" type="checkbox"/> Contacts put on hold              |
| <input checked="" type="checkbox"/> Contacts hold disconnect          | <input checked="" type="checkbox"/> Contacts hold agent disconnect    |
| <input checked="" type="checkbox"/> Contacts hold customer disconnect | <input type="checkbox"/> Contacts incoming                            |
| <input type="checkbox"/> Callback Contacts                            | <input type="checkbox"/> API Contacts                                 |
| <input type="checkbox"/> Contacts answered in 15 seconds              | <input type="checkbox"/> Contacts answered in 20 seconds              |
| <input type="checkbox"/> Contacts answered in 25 seconds              | <input type="checkbox"/> Contacts answered in 30 seconds              |
| <input type="checkbox"/> Contacts answered in 45 seconds              | <input type="checkbox"/> Contacts answered in 60 seconds              |
| <input type="checkbox"/> Contacts answered in 90 seconds              | <input type="checkbox"/> Contacts answered in 120 seconds             |
| <input type="checkbox"/> Contacts answered in 180 seconds             | <input type="checkbox"/> Contacts answered in 240 seconds             |
| <input type="checkbox"/> Contacts answered in 300 seconds             | <input type="checkbox"/> Contacts answered in 600 seconds             |
| <input type="checkbox"/> Contacts queued                              | <input type="checkbox"/> Contacts transferred in                      |
| <input checked="" type="checkbox"/> Contacts transferred out          | <input checked="" type="checkbox"/> Contacts transferred out internal |
| <input checked="" type="checkbox"/> Contacts transferred out external | <input type="checkbox"/> Contacts transferred in from queue           |
| <input type="checkbox"/> Contacts transferred out from queue          | <input checked="" type="checkbox"/> Error status time                 |

- |   |  |
|---|--|
| <input type="checkbox"/> Customer hold time                                 | <input checked="" type="checkbox"/> Agent answer rate                        |
| <input type="checkbox"/> Maximum queued time                                | <input checked="" type="checkbox"/> Contacts missed                          |
| <input type="checkbox"/> Contact handle time                                | <input type="checkbox"/> Contact flow time                                   |
| <input checked="" type="checkbox"/> Occupancy                               | <input type="checkbox"/> Service level 15 seconds                            |
| <input type="checkbox"/> Service level 20 seconds                           | <input type="checkbox"/> Service level 25 seconds                            |
| <input type="checkbox"/> Service level 30 seconds                           | <input type="checkbox"/> Service level 45 seconds                            |
| <input type="checkbox"/> Service level 60 seconds                           | <input type="checkbox"/> Service level 90 seconds                            |
| <input type="checkbox"/> Service level 120 seconds                          | <input type="checkbox"/> Service level 180 seconds                           |
| <input type="checkbox"/> Service level 240 seconds                          | <input type="checkbox"/> Service level 300 seconds                           |
| <input type="checkbox"/> Service level 600 seconds                          | <input checked="" type="checkbox"/> Online time                              |
| <input checked="" type="checkbox"/> Agent interaction and hold time         | <input checked="" type="checkbox"/> Agent interaction time                   |
| <input checked="" type="checkbox"/> Average outbound agent interaction time | <input checked="" type="checkbox"/> Average outbound after contact work time |

[Cancel](#)

[Apply](#)

Once metrics are selected, click the Apply button. Next, click the drop-down arrow on the right-hand side and select Schedule.



Set the report name, for instance *sfIntervalAgent* and click Continue

## Schedule report

X

---

First, name your report.

Name sflIntervalAgent

Cancel

Continue

---

## Schedule report

X

### Note

Once you schedule a report, it will be published to your organization, and all individuals who have proper permissions will be able to access it.

---

Cancel

Continue

On the next screen, set Recurrence as:

## Recurrence

## Delivery Options

Generate this report

Hourly ▾ every 0.5 ▾ hour(s)

Starting at

Time zone

1 am ▾ UTC

For the previous

0.5 ▾ hour(s)

Switch to Delivery Options tab and set the Prefix as SFDC/Agent

## Recurrence

## Delivery Options

Default location

connect-627[REDACTED]d2/connect/[REDACTED]-test8/Reports

Prefix

SFDC/Agent



Click the Create button to create the Schedule for the report. The report can be found in Metrics and quality > Saved Reports > Historical metrics



# Metrics and quality



Real-time metrics



Historical metrics

Contact search

Login/Logout report

Saved reports

Dashboard

Real-time metrics

Historical metrics

Login/Logout report

Search by report name

Name

sflIntervalQueue

Schedule report

SfIntervalAgent



Click on the Clock (Schedule Report) icon to see the configuration. Please note the File name and the Path for the CSV file to be created.

## Schedule 1

Repeats: HOURLY - runs every 0.5 hour(s), starting at 01:00 (UTC), for the previous 0.5 hour(s).

File name: connect-62[REDACTED]d2/connect/[REDACTED]-test8/Reports/SFDC/Agent/SfIntervalAgent-YYYY-MM-DDThh:mm:ssZ.csv

Next run: Friday, November 23, 2018 6:30:00 PM UTC

Last run: Friday, November 23, 2018 5:45:07 PM UTC

The Agent Interval report has been created and scheduled to export the data. After a while, you will be able to see CSV files in the S3 bucket.

Viewing 1 to 98			
Name	Last modified	Size	Storage class
SfIntervalAgent-2018-11-21T17:00:00Z.csv	Nov 21, 2018 5:15:08 PM GMT+0000	413.0 B	Standard
SfIntervalAgent-2018-11-21T17:30:00Z.csv	Nov 21, 2018 5:45:07 PM GMT+0000	413.0 B	Standard
SfIntervalAgent-2018-11-21T18:00:00Z.csv	Nov 21, 2018 6:15:11 PM GMT+0000	413.0 B	Standard

Amazon Connect Salesforce Lambda package (AWS Serverless Application Repository) deploys two Lambda functions to handle the reporting integration: *sfnIntervalQueue* and *sfnIntervalAgent*. In the next step, we are going to set Triggers for these functions.

From the AWS Console, select Lambda service and choose *sfnIntervalQueue* Lambda function. On the left-hand side, select S3 as a trigger.

Kinesis

S3

Add triggers from the list on the left

After the trigger is selected:

Kinesis

S3



We need to set the trigger configuration. Select the Bucket where the CSV files are stored (from the Filename in previous steps). Set Event type to PUT and set Prefix to the Queue path (from the Filename in previous steps). Click the Add button and Save the function.

#### Configure triggers

##### Bucket

Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.

connect-62

##### Event type

Select the events that you want to trigger the Lambda function. You can optionally set up a prefix or suffix for an event. However, for each bucket, individual events cannot have multiple configurations with overlapping prefixes or suffixes that could match the same object key.

PUT

##### Prefix

Enter a single optional prefix to limit the notifications to objects with keys that start with matching characters.

connect/[[REDACTED]-testB/Reports/SFDC/Queue/

##### Suffix

Enter a single optional suffix to limit the notifications to objects with keys that end with matching characters.

e.g. jpg

Lambda will add the necessary permissions for Amazon S3 to invoke your Lambda function from this trigger. [Learn more](#) about the Lambda permissions model.

##### Enable trigger

Enable the trigger now, or create it in a disabled state for testing (recommended).

Cancel

Add

The final configuration should look like this:

S3

**connect-62** d2

Event type: ObjectCreatedByPut Notification name: caf30f0e-7111-404b-a881-4324cd62a503 Prefix: connect/ -test8/Reports/SFDC/Queue/

Enabled Delete

This Lambda function transfers the Queue reporting data to your SFDC instance. Next, we have to repeat steps for Agent reporting Lambda function.

From the AWS Console, select Lambda service and choose *sfInterval/Agent* Lambda function. On the left-hand side, select S3 as a trigger.

Kinesis

S3

Add triggers from the list on the left

After the trigger is selected:

Kinesis

S3

**S3** Configuration required

We need to set the trigger configuration. Select the Bucket where the CSV files are stored (from the Filename in previous steps). Set Event type to PUT and set Prefix to the Agent path (from the Filename in previous steps). Click the Add button and Save the function.

**Configure triggers**

**Bucket**  
Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.  
connect-62 d2

**Event type**  
Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for an event. However, for each bucket, individual events cannot have multiple configurations with overlapping prefixes or suffixes that could match the same object key.  
PUT

**Prefix**  
Enter a single optional prefix to limit the notifications to objects with keys that start with matching characters.  
connect/-test8/Reports/SFDC/Agent/

**Suffix**  
Enter a single optional suffix to limit the notifications to objects with keys that end with matching characters.  
.jpg

Lambda will add the necessary permissions for Amazon S3 to invoke your Lambda function from this trigger. [Learn more](#) about the Lambda permissions model.

**Enable trigger**  
Enable the trigger now, or create it in a disabled state for testing (recommended).

Cancel Add

The final configuration should look like this:

**S3**

**connect-62** d2

Event type: **ObjectCreatedByPut** Notification name: **6d7b80c0-e705-454d-9ae1-ec5cd63cd03d** Prefix: **connect/** Enabled Delete

This Lambda function transfers the Agent reporting data to your SFDC instance.

The Amazon Connect CTI Adapter comes with a predefined set of reports, which can be customized or additional reports can be created by leveraging the imported data. To see the list of built-in reports, login into your SFDC instance and open the App Launcher, then choose Reports.

App Launcher  Visit AppExchange

<b>Service</b> Manage customer service with accounts, contacts, cases, and more	<b>Marketing</b> Best-in-class on-demand marketing automation	<b>Sample Console</b> (Salesforce Classic) Lets agents work with multiple records ... ⓘ	<b>Community</b> Salesforce CRM Communities
<b>Salesforce Chatter</b> The Salesforce Chatter social network, including profiles and feeds	<b>Content</b> Salesforce CRM Content	<b>Sales Console</b> (Lightning Experience) Lets sales reps work with multiple rec... ⓘ	<b>Service Console</b> (Lightning Experience) Lets support agents work with multiple... ⓘ
<b>Sales</b> Manage your sales process with accounts, leads, opportunities, and more	<b>Lightning Usage App</b> View Adoption and Usage Metrics for Lightning Experience	<b>Amazon Connect Toolkit Console</b> Sample Salesforce Console application for the Amazon Connect ... ⓘ	

▼ All Items

Accounts	App Launcher	Approval Requests	Assets	Calendar
Campaigns	Cases	Chatter	Contacts	Contracts
Dashboards	Duplicate Record Sets	Email Templates	Files	Forecasts
Groups	Home	Leads	Lightning Bolt Solutions	Lightning Usage
List Emails	Live Agent Sessions	Live Chat Transcripts	Live Chat Visitors	Macros
Omni Supervisor	Opportunities	Orders	People	Price Books
Products	Quick Text	Reports	Scorecards	Streaming Channels
Tasks	User Provisioning Requests			

All Amazon Connect built-in reports are deployed in Amazon Connect Reports folder:

## Reports

## Recent

14 items

REPORTS	REPORT NAME	DESCRIPTION	FOLDER
Recent	Agent All Interval 30 Today		Amazon Connect Reports
Created by Me	Queue All Interval 30 Today		Amazon Connect Reports
Private Reports	Contacts Agent Hung Up First This ...		Amazon Connect Reports
Public Reports	Contacts Handled This Week		Amazon Connect Reports
All Reports	Contacts Queued This Week		Amazon Connect Reports
FOLDERS	Trend of Calls Abandoned This Week		Amazon Connect Reports
All Folders	Agent Service Level 60 Today		Amazon Connect Reports
Created by Me	Contacts Transferred In This Week		Amazon Connect Reports
Shared with Me	Contacts Transferred Out This Week		Amazon Connect Reports
FAVORITES	Contacts Handled Outbound This W...		Amazon Connect Reports
All Favorites	Contacts Handled Incoming/Outgoi...		Amazon Connect Reports
	Average Occupancy Today		Amazon Connect Reports
	Average Handle Time Today		Amazon Connect Reports
	Agent Answer Rate This Week		Amazon Connect Reports

To see the exact layout of imported data for Queue, select the Queue All Interval 30 Today report:

REPORT Queue All Interval 30 Today																			
Total Records 1																			
STARTINTERVAL ↑	AC OBJECT NAME	AFTER CONTACT WORK TIME	AGENT ON CONTACT TIME	AGENT IDLE TIME	AVERAGE QUEUE ANSWER TIME	AVERAGE AFTER CONTACT WORK TIME	AVERAGE HANDLE TIME	AVERAGE CUSTOMER HOLD TIME	AVG AGENT INTERACTION AND CUST HOLD TIME	AVERAGE AGENT INTERACTION TIME	CONTACTS ABANDONED	CONTACTS ABANDONED IN 15 SECONDS	CONTACTS ABANDONED IN 20 SECONDS	CONTACTS ABANDONED IN 25 SECONDS	CONTACTS ABANDONED IN 30 SECONDS	CONTACTS ABANDONED IN 45 SECONDS	CONTACTS ABANDONED IN 60 SECONDS	CONTACTS ABANDONED IN 90 SECONDS	CONTACTS ABANDONED IN 120 SECONDS
23/11/2018 16:00	BasicQueue	461	991	18	19	461	992	-	531	531	0	-	-	-	-	-	-	-	
Grand Total (1 record)																			

To see the exact layout of imported data for Agent, select the Agent All Interval 30 Today report:

REPORT Agent All Interval 30 Today																				
Total Records 1																				
STARTINTERVAL ↑	USER	AC OBJECT NAME	AFTER CONTACT WORK TIME	AGENT ON CONTACT TIME	AGENT IDLE TIME	NONPRODUCTIVE TIME	AVERAGE AFTER CONTACT WORK TIME	AVERAGE HANDLE TIME	AVERAGE CUSTOMER HOLD TIME	AVG AGENT INTERACTION AND CUST HOLD TIME	AVERAGE AGENT INTERACTION TIME	CONTACTS AGENT HUNG UP FIRST	CONTACTS CONSULTED	CONTACTS HANDLED	CONTACTS HANDLED INCOMING	CONTACTS HANDLED OUTBOUND	CONTACTS PUT ON HOLD	CONTACTS HOLD DISCONNECT	CONTACTS HOLD AGENT DISCONNECT	CONTACTS HOLD CUSTOMER DISCONNECT
23/11/2018 16:00	-	rmosic	461	991	18	-	461	992	-	531	531	1	-	1	1	0	0	0	0	
Grand Total (1 record)																				

 Edit this page

# CTI Flows

The CTI Adapter provides a mechanism to customize the behavior of the adapter based on your business needs without needing to edit the underlying Visualforce pages, which could negatively impact overall adapter function. This is accomplished through CTI Flows.

A CTI Flow consists of "actions" that represent an API call to parts of Salesforce or Amazon Connect API. Like a JavaScript function, each action can take inputs and provide outputs, or return values, that you can use from other actions.

## CTI Flows

New AC CTI Flow

No records to display

CTI Flow, go to your Adapter page and find a section called "CTI Flows."

AC CTI Flow Edit

Save Save & New Cancel

Information

CTI Flow Name: Create Screenpop

Source: Amazon Connect Voice Contact

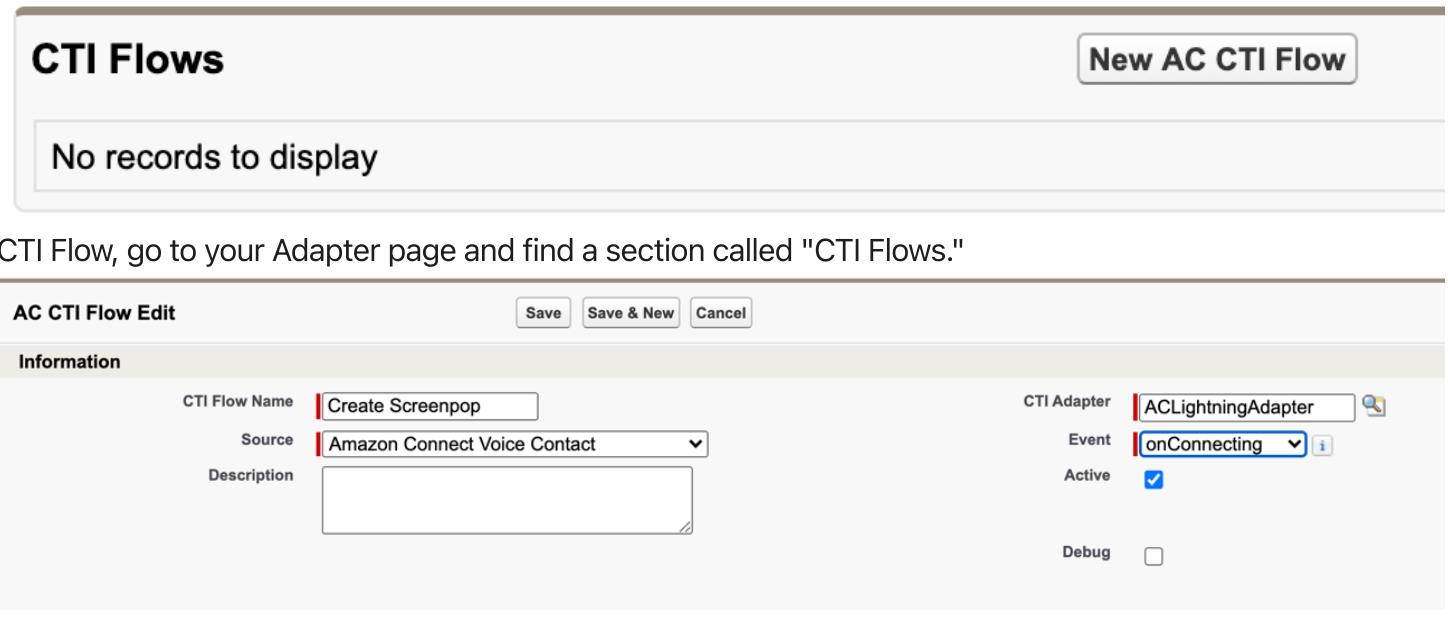
Description:

CTI Adapter: ACLightningAdapter

Event: OnConnecting

Active:

Debug:



This will take you to a form where you can fill in name and adapter of the CTI Flow. There are a couple of fields that you may be unfamiliar with: "Source" and "Event."

CTI Flow Name

--None--

Source

✓ Initialization

Amazon Connect Agent

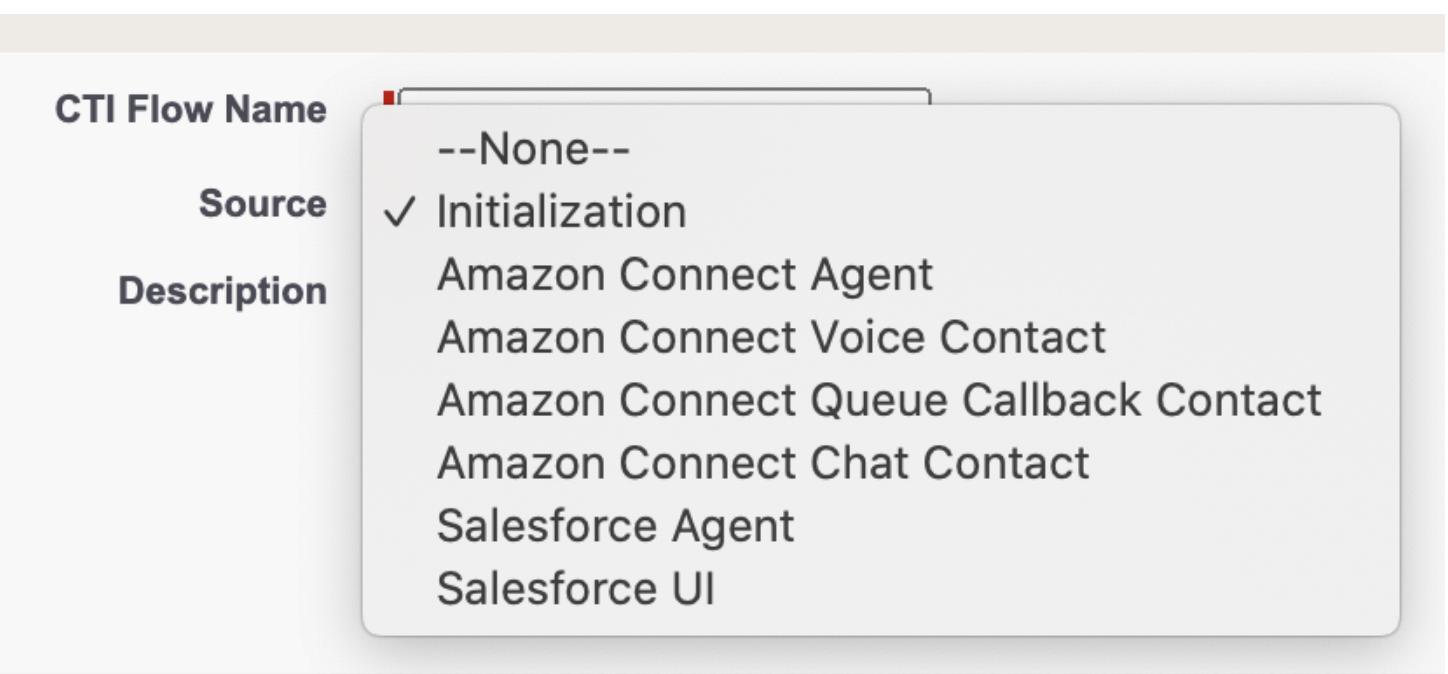
Amazon Connect Voice Contact

Amazon Connect Queue Callback Contact

Amazon Connect Chat Contact

Salesforce Agent

Salesforce UI



You can think of Source as the "origin" of the CTI Flow. There are currently 7 sources: Initialization, an Agent on Connect, Voice Contact on Connect, Queue Callback Contact on Connect, Chat on Connect, Salesforce Agent or Salesforce UI.

Each source comes with a set of events that you can hook into, i.e. your CTI Flow will be executed when one of these events fire. Typically, you will have only one flow for a combination of a source and an event. (You can find out more about sources and events in Appendix A.)

For the purposes of this example, we selected "Amazon Connect Voice Contact" source and "onConnecting" event. Now click Save and on the next page scroll down till you find the "CTI Flow"

section.

## AC CTI Flow

# Create Screenpop

### AC CTI Flow Detail

[Edit](#) [Delete](#) [Clone](#)

#### ▼ Information

CTI Flow Name Create Screenpop

Source Amazon Connect Voice Contact

Description

Created By Amazon Connect, 7/23/2020 9:10 AM

#### ▼ CTI Flow

### Main Menu

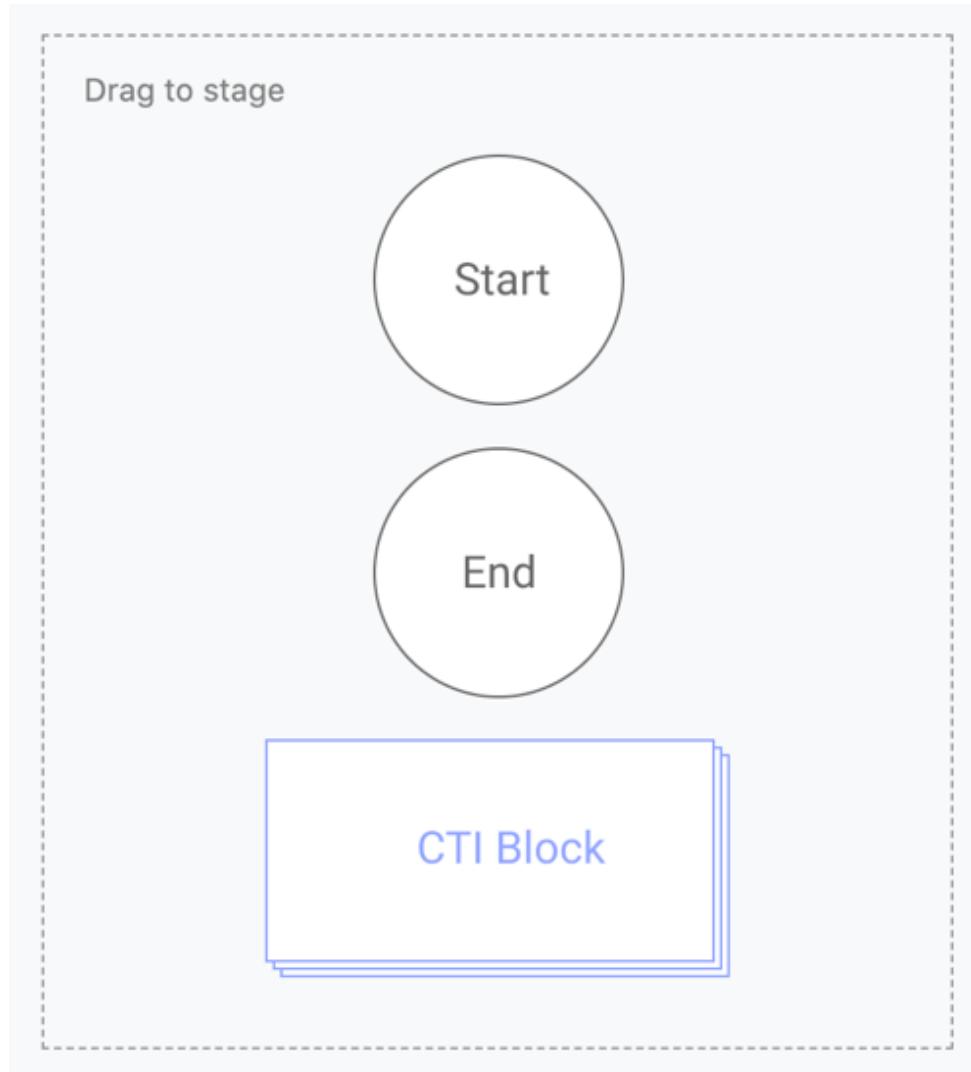
[Save](#)

[Download](#)  [Upload](#) 

Drag to stage

Start

Let's build a CTI Flow that opens a screenpop in Salesforce when a voice call comes.



You can start using by dragging the item called "CTI Block" from the sidebar in the Main Menu over the stage, which is marked by a grid pattern.

When you drop the block, you will see a modal titled "Explorer." This modal contains a list of actions you can choose from.

## Explorer

Search	Format Phone Number	Format Phone Number (E164)
phone	Formats a phone number for a country code. <a href="#">Parameters &gt;</a>  What it calls: <code>ac.Utils.Common.formatPhoneNumber(...)</code>	Formats a phone number for a country code in E164 format. <a href="#">Parameters &gt;</a>  What it calls: <code>ac.Utils.Common.formatPhoneNumberE164(...)</code>
Categories Filter by category	Select	Select
Tags Filter by tag		
Showing 13 actions		
<a href="#">Save search</a>		
Searches (Clear) phone date		
Get Softphone Layout	Show Softphone Panel	
The query to get softphone layout.  What it calls: <code>ac.Utils.Salesforce.getSoftphoneLayout()</code>	The command to show softphone panel.  What it calls: <code>ac.Utils.Salesforce.showSoftphonePanel()</code>	

In the "Search" field, search for "Phone" and Select the action called "Get Customer Phone Number" from the results on the right.

Change type ▾

## Get Customer Phone Number

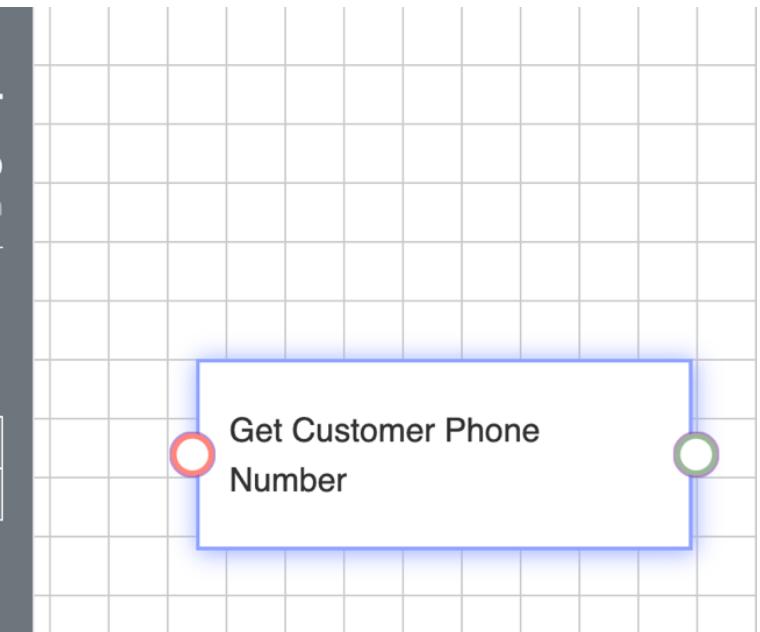
ID: uid-0

Remove About this action

### Return Values

This action has a return value. It returns the following fields. You may use these fields in the input fields of connected actions.

phone	Phone number of the caller.
country	Country of the phone number.



You should now see a block on the stage for the action you selected, and the sidebar will display some information about this action, including its return value.

Some actions can be configured using input fields to provide arguments to function calls, as well. This action does not have any input fields, and returns two values ---- "phone" and "country."

Now let's drag another CTI Block over the stage and find an action called "Search and Screenpop."

Change type ▾

## Search And Screenpop

ID: uid-9

Remove About this action

### Arguments

searchParams ⓘ

Enter a value

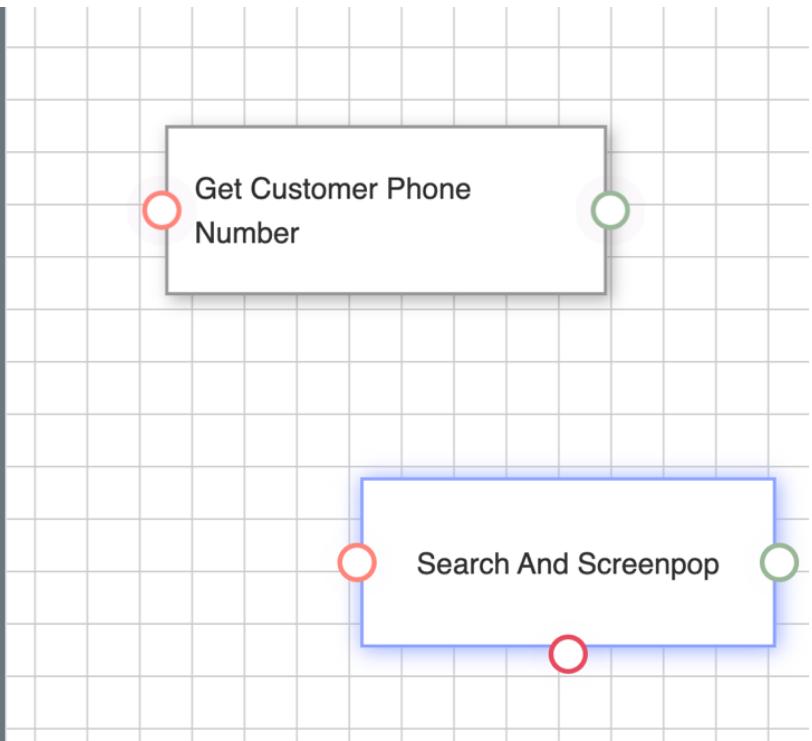
queryParams ⓘ

Enter a value

defaultFieldValues ⓘ

Add a field

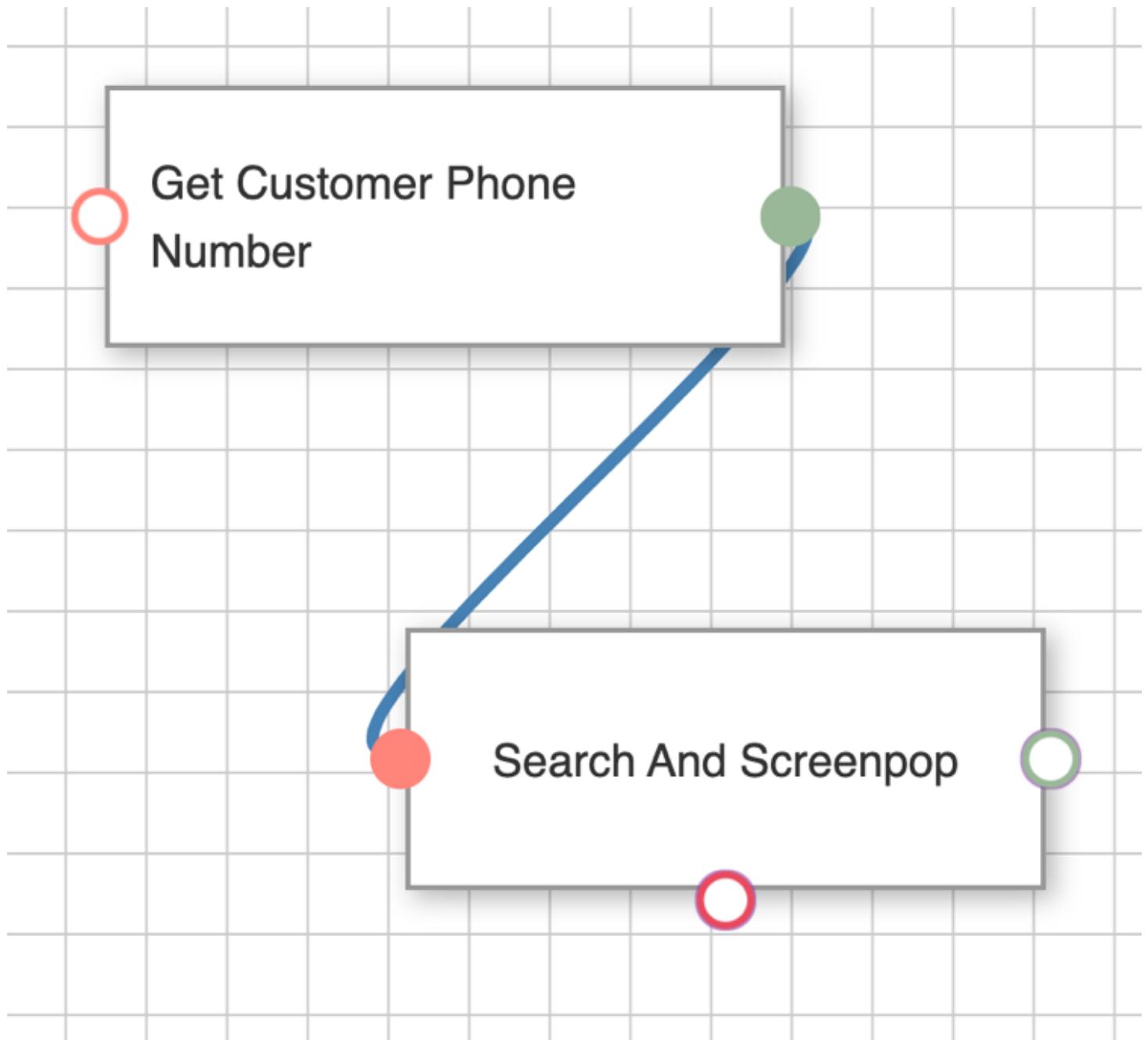
deferred ⓘ



Connect these blocks by clicking the green socket (green means "done") on "Get Customer Phone," which will display a blue line that tracks your mouse cursor around the stage.

Now, click on the pink socket, i.e. the "input" socket, which is to the left of the "Search and Screenpop" block. If the connection is successful, the sockets will turn into a solid color and the blue line will connect them. (There are some restrictions on which sockets you can connect together. For example, you cannot

connect output of an action to its own input socket or connect two inputs.) If you are not happy with this connection, you can hover over it and double click to remove.



Now we'd like to get the phone number of the customer and use it in "Search and Screenpop." Here is a tip: if two actions are connected, you can use the return values of the first action in the input fields of the next action. (You can even use the return values of actions connected to the last action, and the ones connected to that, and so on.)

This action has only two options, and we want to use the one called "phone" for this field.

Change type ▾

## Search And Screenpop

ID: uid-2

Remove

About this action

### Arguments

searchParams

GET CUSTOMER PHONE NUMBER (UID-0)

phone

country

Add a field

deferred

callType

## Search And Screenpop

ID: uid-9

Remove

About this action

### Arguments

searchParams

ValueOf

queryParams

Add New Value

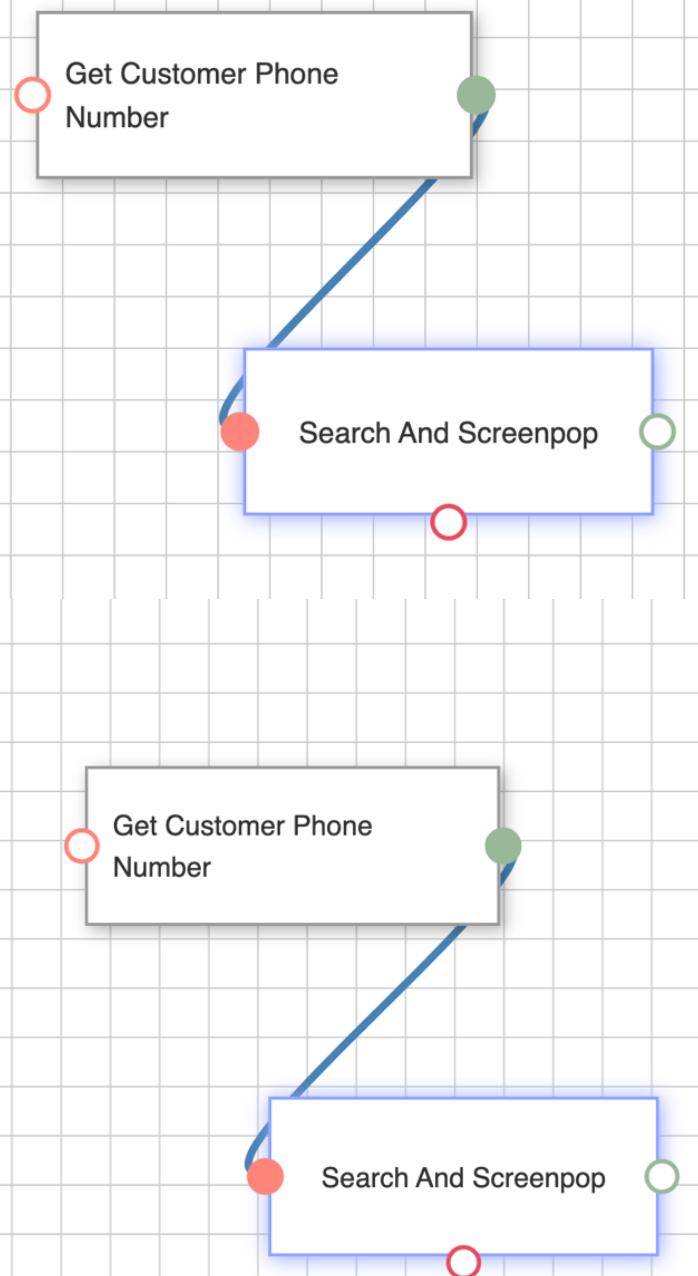
Add a field

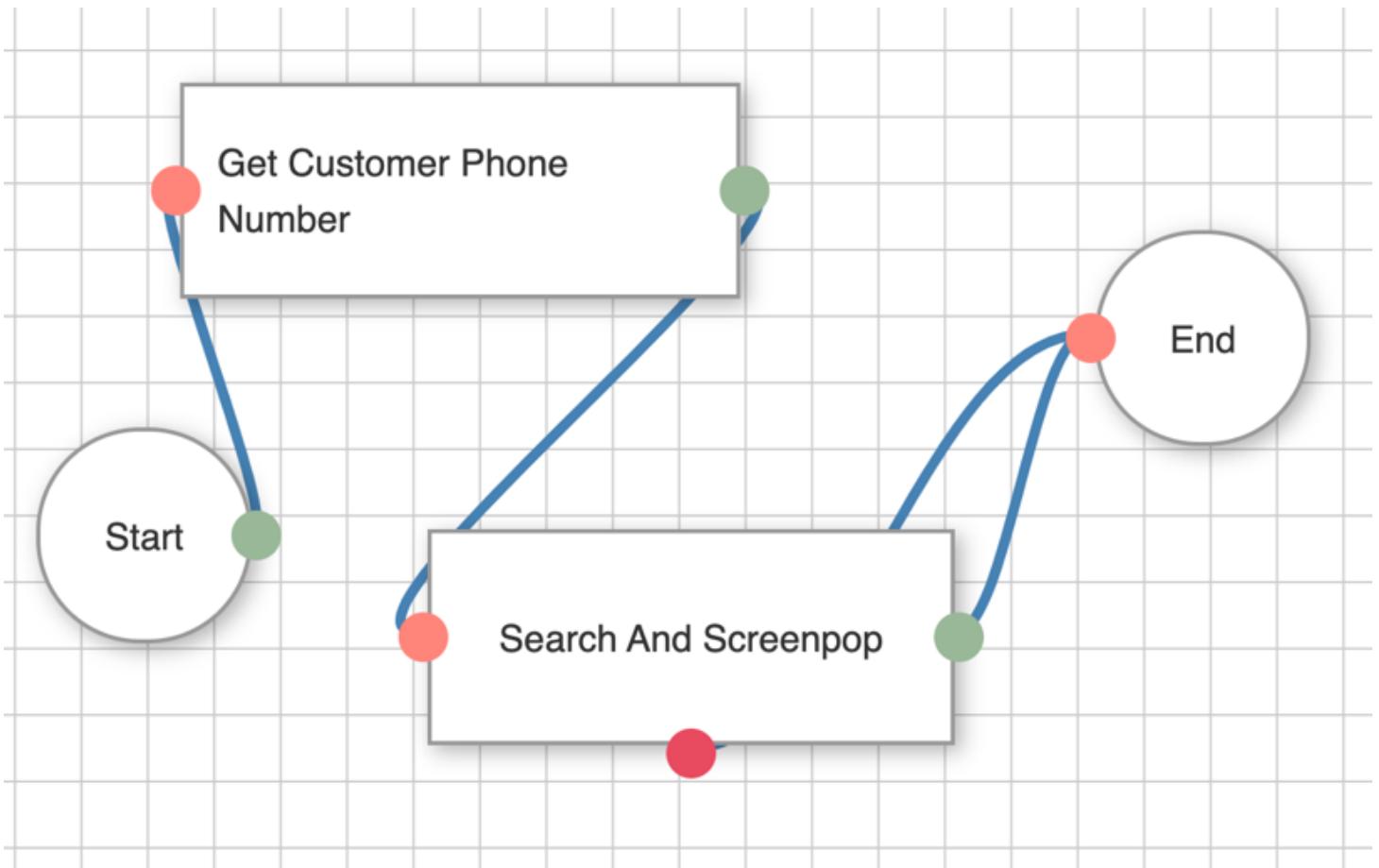
deferred

callType

If you want to enter a custom input value, you can type that, and select "Add New Value" from the dropdown.

And make sure to set "callType" to "inbound." Finally, add the "Start" and "End" nodes and connect everything together.





When you're finished, click "Save" in the sidebar. That's it. You created your first CTI Flow.

To test your flow, go to your Service Console, and make a call from a number that is in the profile of a Contact. As the call is displayed in your CCP dashboard, Salesforce will pop open the contact of the caller in a separate tab.

[Edit this page](#)

# Localization

## Prerequisites

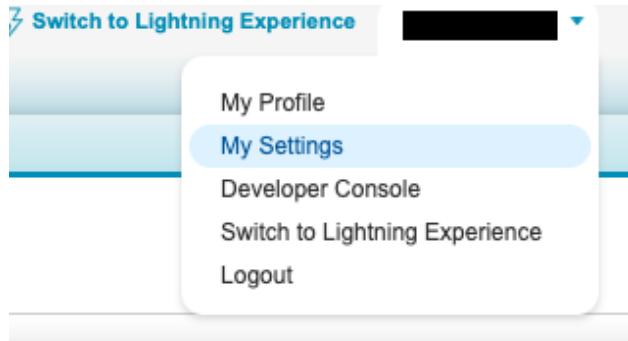
CTI Adapter will use Translation Workbench to maintain translated values for metadata and data labels in your Salesforce org. In order for that to work, you need to enable Translation Workbench in your org.

1. From Setup, in the Quick Find box, enter Translation Language Settings, and then select Translation Language Settings.
2. On the welcome page, click Enable.

## Setting your preferred language

Starting from v5.6, Amazon Connect Salesforce CTI adapter is localized in nine new languages: Spanish, French, Brazilian Portuguese, Korean, Italian, German, (Simplified/Traditional) Chinese, and Japanese.

Change the language by selecting the username in the top right corner, then click on "My Settings".



On the setting page on the left panel go to "Personal" and then select "Language & Time Zone".

A screenshot of the 'My Settings' page in the Salesforce Lightning Experience. The left sidebar has a 'Quick Find' search bar at the top. Below it, the 'My Settings' header is shown. Under the 'Personal' section, which is highlighted with a blue icon, the 'Language &amp; Time Zone' option is also highlighted with a blue bar. Other options in the 'Personal' section include 'Personal Information', 'Change My Password', 'Grant Account Login Access', 'My Groups', 'Reset My Security Token', 'Connections', 'Login History', 'Approver Settings', 'Advanced User Details', and 'Authentication Settings for External Systems'. The 'Language &amp; Time Zone' option is clearly distinguished by both its position in the 'Personal' section and the blue highlighting.

You can then select your preferred language. Note that CTI adapter only have nine languages built within the package.

## Language & Time Zone

### Settings

Time Zone (GMT-07:00) Pacific Daylight Time (America/Los\_Angeles) ▾

Locale English (United States) ▾ ⓘ

Language

- ✓ English
- Deutsch
- Español
- Français
- Italiano
- 日本語
- Svenska
- 한국어
- 中文 (繁體)
- 中文 (简体)
- Português (Brasil)
- Nederlands
- Dansk
- ภาษาไทย
- Suomi
- Русский
- Español (México)
- Norsk (bokmål)

Email Encoding Europe (ISO-8859-1, ISO-LATIN-1) ▾ ⓘ

**Save** **Cancel**

Click save and the page will reload. That's it. You can check in other pages to see if it actually applies your change. For example here is a screenshot of CTI Flow Editor in Spanish.

## Explorer



## Buscar

Buscar por nombre

## Categorías

Filtrar por categoría

## Etiquetas

Filtrar por etiqueta

Mostrar 100 acciones

Guardar búsqueda

## If-else

Cambie el flujo del script en función del valor de los campos que obtenga o almacene. Se trata de una utilidad "if-else" sencilla para el flujo.

[Parámetros >](#)

## Qué llama:

```
ac.Utils.Common.decision(..  
.)
```

[Seleccionar](#)

## CoreCast

Cast an input value to a Javascript type, such as Number or String.

[Parámetros >](#)[Seleccionar](#)

## Solicitud HTTP

## Obtener la propiedad

Click on Phone pannel on the bottom to see if CCP has been localized. If not right click on CCP and reload.

The screenshot shows a browser context menu open over a page. The menu items include:

- Back
- Forward
- Reload** (highlighted in blue)
- Save As...
- Print...
- Cast...
- Send to DESKTOP-H7MR6HB
- Amazon Enterprise Access ▶
- Autofill ▶
- View Page Source
- View Frame Source
- Reload Frame
- Inspect
- Speech ▶

At the bottom of the screen, there is a navigation bar with icons for Phone, History, Notes, Macros, and Omnicom.

# Additional Notes

Please note that not all fields can be localized to different languages due to a couple reasons. Here are places that cannot be localized:

- Dashboard. Salesforce dashboards do not support localization.
- Flexipages. This means the page with tabs that you can find in AC CTI Adapter page in lightning.

The screenshot shows a navigation bar with four tabs: Attributes (underlined in blue), CTI Flows, Presence Sync Rules, and Features. Below the tabs is a section titled "Attributes (0)" with a small orange icon containing a "C" and a "B".

- Reports. This is a missing functionality in Salesforce.

[Edit this page](#)

# CTI Actions

Customers can now extend their Contact Control Panel (CCP) with customizable buttons called CTI Actions. These buttons can be configured in Salesforce and used to simplify common agent actions. For example, you can add a button that starts and stops recordings, automate case creation, or start a customer refund process. CTI Actions are configured in the CTI Adapter's Actions Admin panel to execute [CTI Flows](#) which are process blocks that enable you to easily design agent workflows within our Salesforce integration.

You can configure a CTI Action in the CCP Element Editor page.

**Actions****Step 1: Name and Flow****Save**

Quick Save

**Delete**

Cancel

**Step 2: Payload** (optional)

This section asks you for some required information about your action. It is the only required section you need to fill to create an action.

**Action Name**

Leave Voicemail

The name agents will see.

**CTI Flow**

Leave a Voicemail

In this field, you will see all CTI Flows in this account whose source field is [CCP Overlay](#).**Order**

0

Position of the action in the overlay.

Make sure that you have created a CTI Flow and it uses the source "CTI Action." Only these CTI Flows will be displayed in the dropdown field.

You can optionally specify a payload to pass to the CTI Flow. This allows your agents to enter additional data about the customer or information about the call to pass into the CTI Flow. The CCP Element Editor gives you the ability to add input fields into your form. These fields can be accessed in the CTI Flow through `$.payload.fieldKey`.

## Actions

Step 1: Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
Step 2: Payload (optional)	In this section, you will build a form that will be displayed to the agents prior to triggering the CTI Flow. The form data will be passed as a payload to the executed flow.
Step 3: Additional Data (optional)	<b>Overview</b> Form fields <b>New field +</b>

This section collects some basic information about the form, such as title and instructions. Both fields are optional.

(optional)

**Title**  
Enter a short title for the form.

(optional)

**Instructions**  
Enter a few lines about how to fill out this form.

**Form fields ▶**

## Actions

Step 1: Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
Step 2: Payload (optional)	In this section, you will build a form that will be displayed to the agents prior to triggering the CTI Flow. The form data will be passed as a payload to the executed flow.
Step 3: Additional Data (optional)	<b>Overview</b> Form fields <b>New field +</b>

**Field Name**  
This is the name of the field in your payload. It should be a camelCased word.

**Label**  
The label is a human readable text shown to the agent next to the input field.

**Field Type** Text **Order** 0  
You have the option to select a text input or a dropdown.

**Field Required**

**Cancel** **Finish**

**◀ Overview**

## CCP Overlay

The **Actions** panel in the CCP overlay drawer displays the CTI Action buttons where your agents have easy access to them as they are interacting with customers.

*The screenshots below are showcasing the CTI Actions and their behavior in the CCP Overlay panel, not the individual CTI Flows shown.*



Attributes	Actions	
Send Customer Giftcard		▶
Activate Customer Account	Execute	
Transfer to Manager	Execute	
Give customer refund	Execute	
Open a Case	Execute	
▶ Find Cases for Customer	Execute	
Create Task and Contact and Screenpop	Execute	
VIP	Execute	
Transfer to Manager	Execute	
Transfer to Peer	Execute	

If a CTI Action requires additional input by the agent, its name will be followed by an arrow and when the agent clicks on this button, it will open the configured form. Otherwise, it will be shown with an "Execute" button next to its name.

Phone

Attributes Actions

Go back

## Customer Gift Card

Please fill in these details about the user.

First name\*

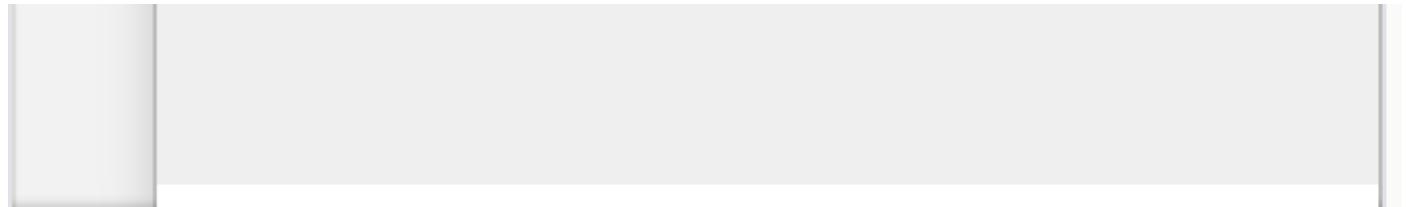
John

Last name\*

Doe

Telephone

Submit



## Example

In this section we demonstrate how to use CTI Actions and how they interact with CTI Flows through an example.

Here we setup a CTI Action and Flow to create a Salesforce Task to callback a customer and pop it. The end goal is to have a Task with the subject *Callback - FirstName - LastName* and the number to callback in the comments section of the Task. If a contact exists for that number, we will also link it in the Task. We use a CTI Action to do this to let the agent enter the customer's first and last name and callback number if it is different from the number used to call in. This action looks like this in the CCP Overlay.



Go back

## Customer Callback Information

If the callback number is the different from the number used to dial in enter it in the form, otherwise keep it empty.

**First Name\***

- is a required property

**Last Name\***

- is a required property

Callback Number

**Submit**

To achieve this, we need to setup a CTI Action then a CTI Flow.

First, we setup the CTI Action. To do that we need to have created a CTI Flow with the **CTI Actions** as source. For now we create an empty Flow, which we will build later, just to reference it in the Action.

The first step is to name and link the Action to a Flow.

**Actions**

<b>Step 1:</b> Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
<b>Step 2:</b> Payload (optional)	This section asks you for some required information about your action. It is the only required section you need to fill to create an action.
<b>Step 3:</b> Additional Data (optional)	

Action Name  
Create Callback Task

The name agents will see.

CTI Flow  
Create Callback Task

In this field, you will see all CTI Flows in this account whose source field is CCP Overlay.

Order  
0

Position of the action in the overlay.

The second step is to add hardcoded fields to the payload, if desired. In this example we add part of the Task subject as hardcoded fields to demonstrate the functionality.

**Actions**

<b>Step 1:</b> Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
<b>Step 2:</b> Payload (optional)	The payload allows you to pass hardcoded values to the CTI Flow. Your payload may include values that are specific to this action and are not already available through a CTI Flow block.
<b>Step 3:</b> Additional Data (optional)	

**Payload** (optional)

Key SubjectPrepend	Value Callback	trash
-----------------------	-------------------	-------

New key

Finally, as shown previously, the action is a form, that means it has additional data that the agent can provide. Below are images showing how they are setup for this example.

## Actions

<b>Step 1:</b> Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
<b>Step 2:</b> Payload <small>(optional)</small>	In this section, you will build a form that will be displayed to the agents prior to triggering the CTI Flow. The form data will be passed as a payload to the executed flow.
<b>Step 3:</b> Additional Data <small>(optional)</small>	<b>Overview</b> Form fields <b>New field +</b>

This section collects some basic information about the form, such as title and instructions. Both fields are optional.

**Title** (optional)  
Customer Callback Information

Enter a short title for the form.

**Instructions** (optional)  
If the callback number is the different from the number used to dial in enter it in the form, otherwise keep it empty.

Enter a few lines about how to fill out this form.

**Form fields ▶**

<b>Step 1:</b> Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
<b>Step 2:</b> Payload <small>(optional)</small>	In this section, you will build a form that will be displayed to the agents prior to triggering the CTI Flow. The form data will be passed as a payload to the executed flow.
<b>Step 3:</b> Additional Data <small>(optional)</small>	<b>Overview</b> Form fields <b>New field +</b>

This is a list of fields that will appear in your form. They are shown in the order they will appear.

First Name  
Last Name  
Callback Number

**◀ Overview**

<b>Step 1:</b> Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
<b>Step 2:</b> Payload <small>(optional)</small>	In this section, you will build a form that will be displayed to the agents prior to triggering the CTI Flow. The form data will be passed as a payload to the executed flow.
<b>Step 3:</b> Additional Data <small>(optional)</small>	<b>Overview</b> Form fields <b>New field +</b>

**Field Name** FirstName  
This is the name of the field in your payload. It should be a camelCased word.

**Label** First Name  
The label is a human readable text shown to the agent next to the input field.

**Field Type** Text  
You have the option to select a text input or a dropdown.

Field Required

**Cancel** **Finish**

**◀ Overview**

## Actions

Step 1: Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
Step 2: Payload	(optional)
Step 3: Additional Data	(optional)

In this section, you will build a form that will be displayed to the agents prior to triggering the CTI Flow. The form data will be passed as a payload to the executed flow.

Overview Form fields

Field Name LastName  
This is the name of the field in your payload. It should be a camelCased word.

Label Last Name  
The label is a human readable text shown to the agent next to the input field.

Field Type Text  
You have the option to select a text input or a dropdown.

Field Required

Order 1

Cancel **Finish**

**Overview**

## Actions

Step 1: Name and Flow	<b>Save</b> Quick Save <b>Delete</b> Cancel
Step 2: Payload	(optional)
Step 3: Additional Data	(optional)

In this section, you will build a form that will be displayed to the agents prior to triggering the CTI Flow. The form data will be passed as a payload to the executed flow.

Overview Form fields

Field Name CallbackPhone  
This is the name of the field in your payload. It should be a camelCased word.

Label Callback Number  
The label is a human readable text shown to the agent next to the input field.

Field Type Text  
You have the option to select a text input or a dropdown.

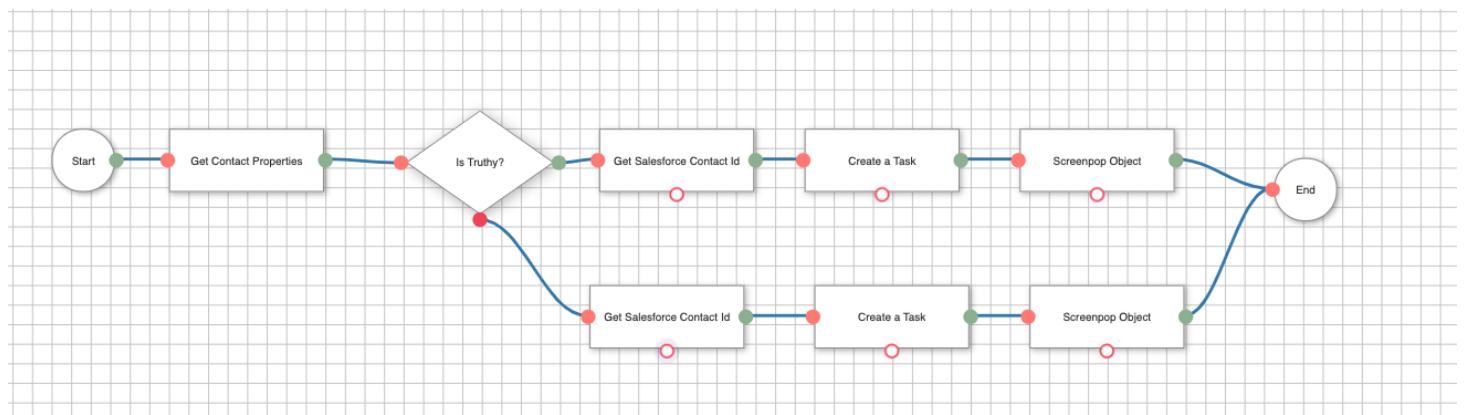
Field Required

Order 2

Cancel **Finish**

**Overview**

Then, we setup the CTI Flow. As mentioned above, it's possible to have the callback number different from the number used to call in, or it could be the same. If it's the same, we don't want the agent to enter the number again, in fact we can get that number in the CTI Flow. In the flow we use the **Get Contact Properties** block to get the phone number of the contact. Then using the **Is Truthy?** block, we check if the agent entered a callback number in the form or not. Depending on whether they did or not, we get the Salesforce Contact and create a Task using the correct callback number. In the Flow we reference the CTI Action fields by using `$.payload.fieldKey` for both the hardcoded payload and the fields in the additional data form (Take a look at the **Create a Task** blocks in the flow below).



[Download Flow](#)

To test this action, you can place or accept a call from the CCP, open the overlay, fill in the form then submit it. If everything is setup correctly, a Task should pop up with the desired information.

## Receiving Data from CTI Flows

In addition to agents sending data to the CTI Flow, they can also receive data from a CTI Flow.. When a CTI Flow sends some information to the CCP overlay, it will be displayed in the Data panel.



Phone



Attributes

Data



+1 3

Data Sink

foo

bar



Here is how you would configure your CTI Flow to send data back to the CCP overlay.

## Send Data to CCP Overlay

ID: uid-9 ⓘ

### Arguments

value ⓘ optional

foo

bar



Add a field

## Upgrading from an earlier version

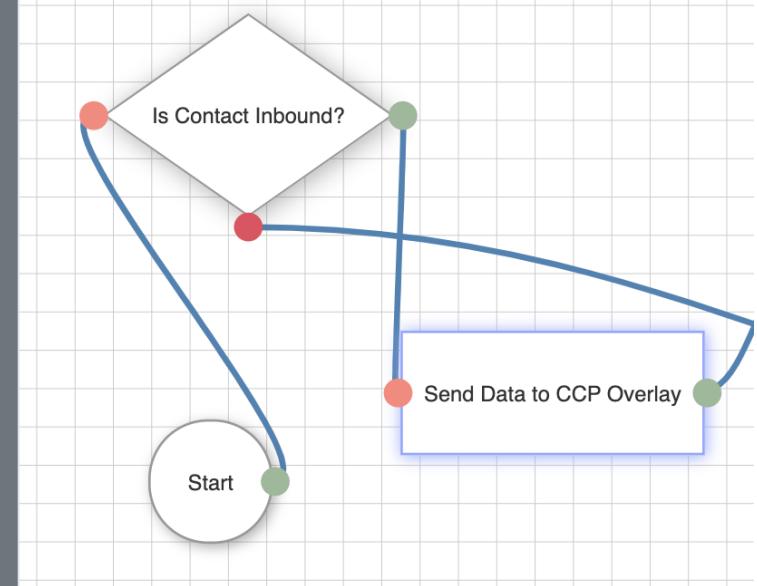
If you are upgrading the Salesforce package from an earlier version of CTI Adapter, there are a few additional steps to follow:

1. Go to Setup
2. In "Quick Find," search for "Picklist Value Sets" and click on the result.
3. Select "AC\_CtiScriptSource" on "Picklist Value Sets" page.
4. Scroll down to "Values" section
5. Click "New" to add a new value.
6. In the textarea, enter "ctiAction" and save
7. Scroll down to the new field you added, "ctiAction," and click "Edit."
8. Update the label to "CTI Action" and save.

Edit this page

## Recording Controls

Recording Controls panel in the CCP Overlay allows your agents to control the recording behavior of the call.



Phone



Attributes

Recording Controls



Start recording

Pause recording



This panel integrates to Amazon Connect [call recording API](#). To use it, make sure to add [Set recording behavior block](#) in your Contact Flow. The controls will be activated during a call.

This can be useful when you don't want to record every call, and give the agent the ability to pause and resume a recording.

Note that once a recording is stopped, it cannot be restarted. After starting a recording, you should use pause/resume button to control it.

This panel is disabled by default. You can enable it by adding `FEATURE_RECORDING_PANEL` feature flag to your CTI Adapter, with the setting `Enabled:true`.

## Setup

First, create an IAM user and give it the managed policy `AmazonConnect_FullAccess`. (Make sure to create this in the same AWS account as the one that owns your Connect instance.)

The screenshot shows the AWS IAM Permissions Policies page. At the top, there are tabs for **Permissions**, **Groups**, **Tags**, and **Security credentials**. The **Permissions** tab is selected. Below the tabs, a section titled **▼ Permissions policies (1 policy applied)** is shown. A blue button labeled **Add permissions** is visible. Under the policy list, there is a section titled **Attached directly** containing a single policy named **AmazonConnect\_FullAccess**, which is highlighted with a blue background. The policy icon is an orange cube.

Copy the access key and secret of this user (from the "Security credentials" tab.) Next, go to your Salesforce instance Setup section. Search for Named Credentials in the left sidebar, and create a new credential named `AmazonConnectAPI`. (The name and the label should be identical.)

# Named Credential Edit: AmazonConnectAPI

Specify the callout endpoint's URL and the authentication settings that are required for

The screenshot shows the 'Named Credential Edit' interface. At the top right are 'Save' and 'Cancel' buttons. Below them, the 'Label' field contains 'AmazonConnectAPI' with a person icon. The 'Name' field also contains 'AmazonConnectAPI'. The 'URL' field contains 'https://connect.us-east-1.amazonaws.com'. A section titled 'Authentication' is expanded, showing fields for 'Certificate' (with a browse icon), 'Identity Type' set to 'Named Principal', 'Authentication Protocol' set to 'AWS Signature Version 4', 'AWS Access Key ID' containing 'AKIAUYVLTXECVPVW5', 'AWS Secret Access Key' (redacted), 'AWS Region' set to 'us-east-1', and 'AWS Service' set to 'connect'.

Fill in `https://connect.us-east-1.amazonaws.com` as the url. For Identity Type, select "Named Principal" and for "Authentication Protocol" select "AWS Signature Version 4." Then fill in the "AWS Access Key Id" and "AWS Access Secret" fields with your IAM user credentials. And for AWS Region, use the region of your Connect instance. And for the AWS Service, fill in `connect`.

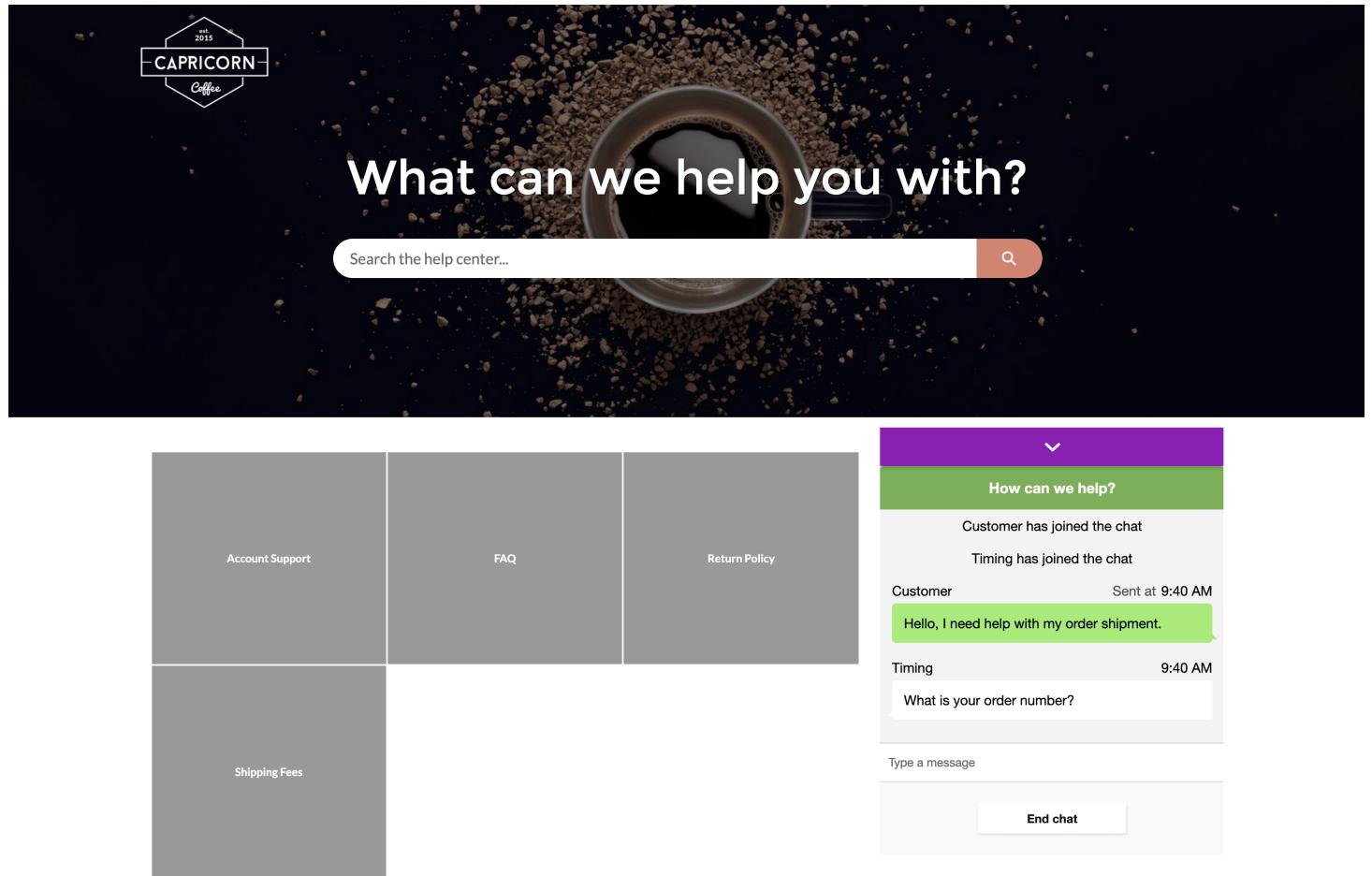
[Edit this page](#)

## Chat Widget Integration

SalesForce Experience Cloud allows you to setup a website for your customers easily, with the included template, you can setup a help center, or a customer service website with just a few clicks. Amazon

Connect CTI Adapter now provides you a chat-widget component, and you can use it in the Experience Cloud Builder App to add the Amazon Connect Chat Widget to any page you want.

The screenshot below shows an example of having the chat widget added to a help center website. Please note that this feature does not support **Build Your Own(LWR)** and **Salesforce Tabs + Visualforce** template.



powered by salesforce

To start using this feature, you can either follow the steps below to setup an Experience Cloud Site for testing purpose, or you can skip to the next section if you are already familiar with SalesForce Experience Cloud. **\*\*Setup experience cloud site:\*\***

- Go to Setup
- Search for Digital Experience
- Enable Digital Experience

- Create a new Site by clicking New button

The screenshot shows the Salesforce Digital Experiences page. At the top, there's a banner with the text "It's Better in Lightning" and "Move to Lightning Experience and give your users a productivity boost." Below the banner, there are two buttons: "Tell Me More" and "Check Readiness". On the left, there's a sidebar with sections for "Lightning Experience Transition Assistant" (with a "Get Started" button), "Salesforce Mobile Quick Start", "Home", and "Administrator" (with links for Release Updates, Manage Users, Manage Apps, and Manage Territories). The main content area is titled "Digital Experiences" and contains a table titled "All Sites" with one row: "Workspaces | Builder". A note at the top of the table says "The list shows Experience Cloud sites in your org. Clicking on the URL takes you directly to the site. If you're not a member, the URL isn't linked." and "Maximum number of sites (including active, inactive, and preview): 100".

- Choose Help center template to create a new site

The screenshot shows the "Choose the Experience You Love" page. At the top, there's a back button ("← Back to Setup"), a Salesforce logo, and a "Help & Training" link. The main heading is "Choose the Experience You Love". Below it, there's a "BROWSE BY:" section with categories: All, Sales, Service, Commerce, and Installed. The page displays six digital experience templates:

- Build Your Own (LWR) by Salesforce**: "Unparalleled Performance" (New). Description: Develop blazing fast digital experiences, such as websites, microsites, and portals, using the Lightning... Features: Unparalleled Performance • Standards-Based Customization •.
- B2C Commerce by Salesforce**: "Organic bars, gels, and drinks". Description: Create a responsive ecommerce store that provides easy customization of store layout and template, configure... Features: Live search • Product filtering • Einstein Product Recommendations •.
- Help Center by Salesforce**: "What can we help you with?". Description: Give your customers the answers they're looking for. Customers can search for and read articles and contact... Features: Self-Service • Curated Knowledge • Case Deflection • Guest Case Creation.
- Customer Account Portal by Salesforce**: "Explore more on your travels with our premier travel benefits".
- Customer Service by Salesforce**: "Acme Co.". Description: Handle customer inquiries and support requests efficiently.
- Build Your Own by Salesforce**: "Unparalleled Performance".

- Go to Builder of the new site

The screenshot shows the 'My Workspaces' section of the Experience Cloud Site Builder. It displays seven workspace cards:

- Builder**: Build, brand, and customize your site's pages.
- Moderation**: Monitor posts and comments, create rules.
- Content Management**: Organize, manage, and build collections for your Experience Cloud site.
- Gamification**: Keep your members engaged with recognition badges.
- Dashboards**: Examine the health of your site with reports and dashboards and engage with members.
- Administration**: Configure settings and properties for your experience.
- Guided Setup**: Configure features and integrations with step-by-step instructions.

- This will be the place to setup chat widget feature in the following sections. You can get yourself familiar with this Builder before moving to the next section.

## Setup chat widget for your experience cloud sites.

- Option 1: Setting up using out-of-box VisualForce page. Choose this if you need the chat widget only on one specific page.
- Option 2: Setting up using Lightning Component based on VisualForce page. Choose this if you need the chat widget only on one specific page but you don't have the license for the VisualForce page component in the experience cloud builder. It is a workaround for Option1.
- Option 3: Setting up using custom header. Choose this if you want the chat widget exists across all pages.

### Option 1: Setting up using VisualForce page.

- Follow instructions [here](#) to setup your Chat Widget and copy the script to a text editor.
- Go to Service Console
- Go to AC CTI Adapter. If the CTI Adapter Owner is [Amazon Connect – Universal Package](#), please update it to yourself or any other real user.
- Go to Features tab
- Click New to create a new Feature

- In the Name field, put FEATURE\_CHAT\_WIDGET
- In the Value field, input the following key value pairs based on your chat widget script. If you didn't enable the security feature of chat widget, you don't need to add the key value pair for authEndpoint

Example ChatWidget key value pairs input

```
{
  "cloudfrontId": "dg9yx063wiht",
  "widgetId": "5338d219-92c7-427e-8b10-26a8f4dfb3d1",
  "openChatColor": "white",
  "openChatBackgroundColor": "#826359",
  "closeChatColor": "white",
  "closeChatBackgroundColor": "#940eb9",
  "snippetId": "QVFJREFIaUpTVGJkNWhNc0Q1WHpHYnFQTkJyYXN0.....",
  "authEndpoint": "https://www.yourdomain.com/yourAuthEndpoint"
}
```

The input above is for the following example ChatWidget Script

```
<script type="text/javascript">
(function(w, d, x, id){
  s=d.createElement('script');
  s.src='https://dg9yx063wiht.cloudfront.net/amazon-connect-chat-interface-client.js';
  s.async=1;           cloudfrontId
  s.id=id;
  d.getElementsByTagName('head')[0].appendChild(s);
  w[x] = w[x] || function() { (w[x].ac = w[x].ac || []).push(arguments) };           widgetId
})(window, document, 'amazon_connect', '5338d219-92c7-427e-8b10-26a8f4dfb3d1');
amazon_connect('styles', { openChat: { color: 'white', backgroundColor: '#826359' },
closeChat: { color: 'white', backgroundColor: '#940eb9' } });
amazon_connect('snippetId', 'QVFJREFIaU...');           snippetId
</script>
```

script:

```
<script type="text/javascript">
  (function(w, d, x, id){
    s=d.createElement('script');
    s.src='https://dg9yx063wiht.cloudfront.net/amazon-connect-chat-
interface-client.js';
    s.async=1;
    s.id=id;
    d.getElementsByTagName('head')[0].appendChild(s);
    w[x] = w[x] || function() { (w[x].ac = w[x].ac || []).push(arguments) };
  })(window, document, 'amazon_connect', '5338d219-92c7-427e-8b10-
```

```

26a8f4dfb3d1');
    amazon_connect('styles', { openChat: { color: 'white', backgroundColor: '#826359' }, closeChat: { color: 'white', backgroundColor: '#940eb9' } });
    amazon_connect('snippetId',
'QVFJREFIaUpTVGJkNWhNc0Q1WHpHYnFQTkJyYXN0.....=');
</script>

```

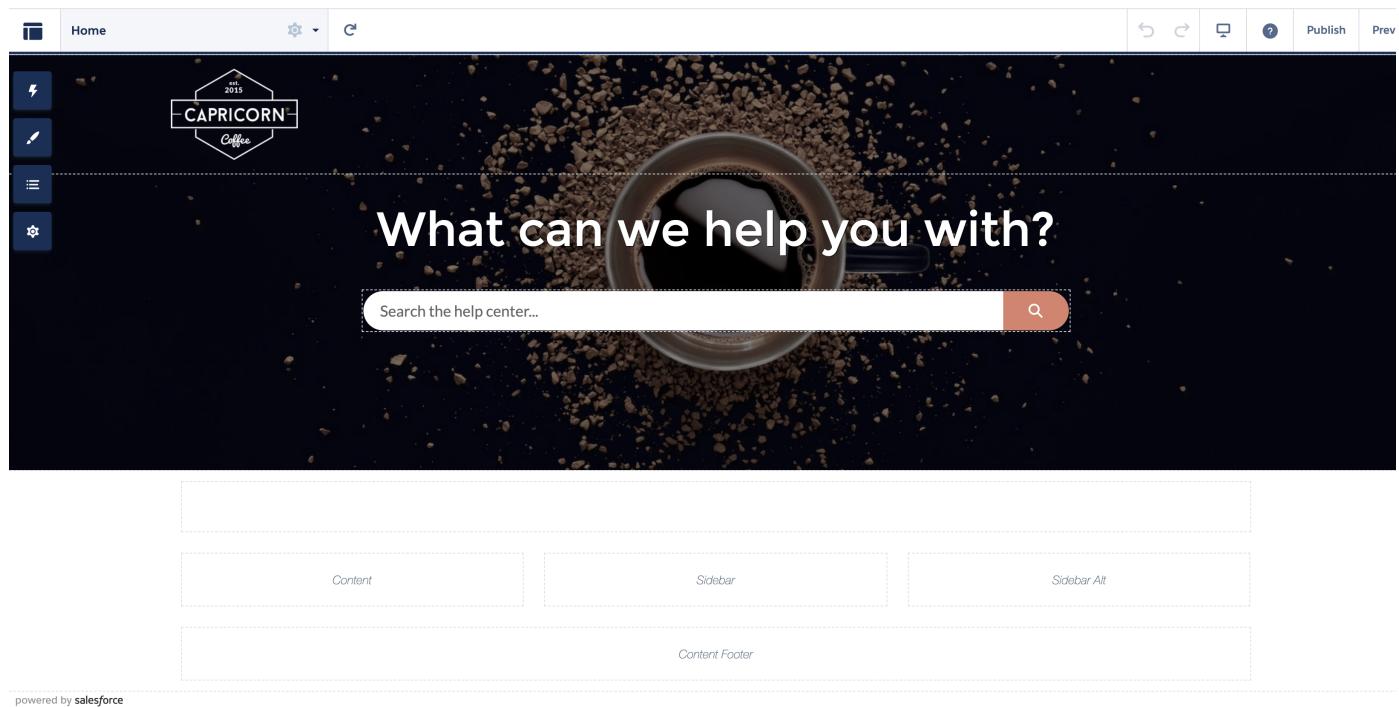
## Example Call back function for JWT

```

amazon_connect('authenticate', function(callback) {
  window.fetch('https://www.yourdomain.com/yourAuthEndpoint').then(res => {
    res.json().then(data => {
      callback(data.data);
    });
  });
});

```

- Click Save
- Go to Setup
- Go to VisualForce page
- Select AC\_ChatWidget
- Click Preview
- You should see a chat icon on the right bottom corner. If not, check browser console for error messages
- Copy the AC\_ChatWidget visualforce page URL.
- Go to your Experience Cloud Builder



- Open Components

IT

Home

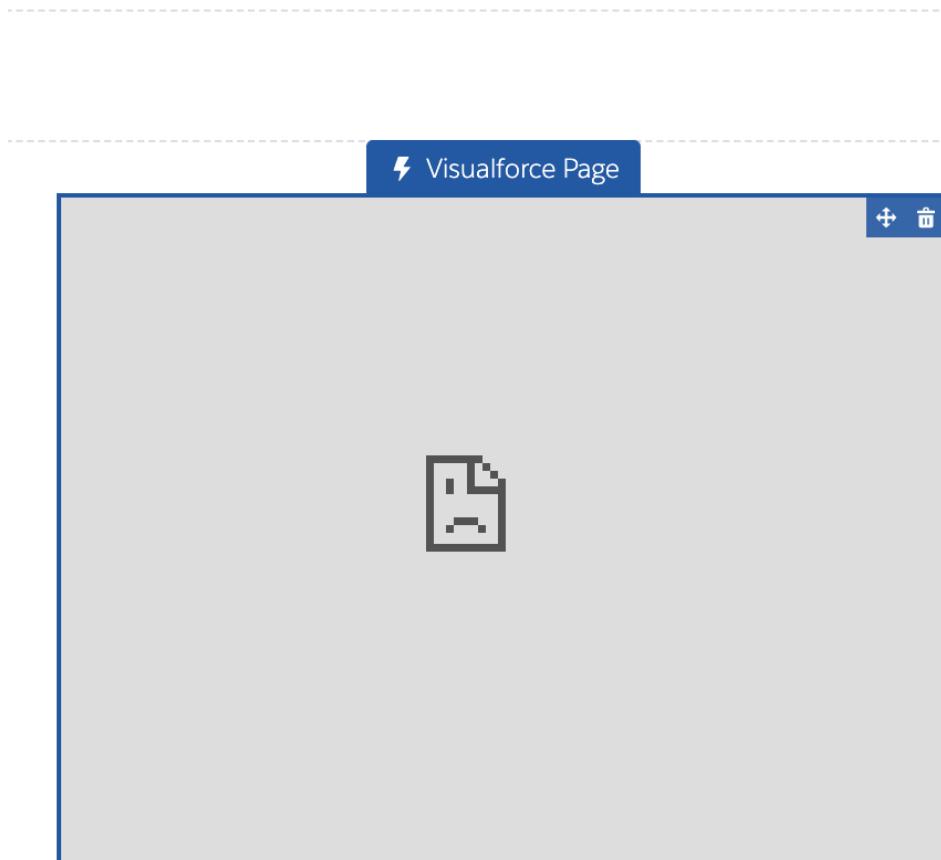
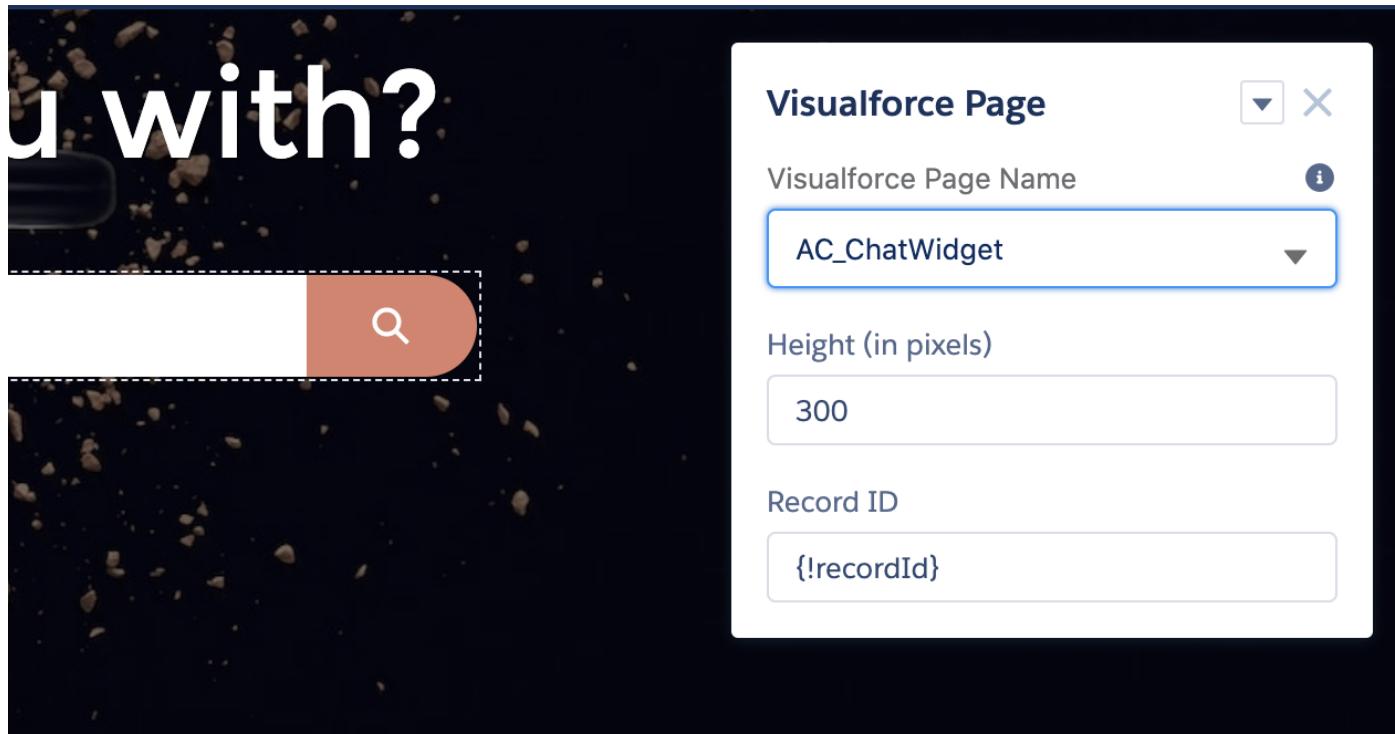
Components

Search...

CONTENT (12)

- CMS Collection
- CMS Connect (HTML)
- CMS Connect (JSON)
- CMS Single Item
- Headline
- HTML Editor
- Language Selector
- Recommendations Carousel
- Rich Content Editor
- Tabs
- Tile Menu
- Visualforce Page

- Drag and drop Visualforce Page to your page. If you didn't enable chat widget security, you need to change the Visualforce Page Name to AC\_ChatWidget. If you enabled security for ChatWidget, change it to AC\_ChatWidgetWithJWT



- Go to Settings→General→Guest User Profile and click in to the Guest User Profile

## Guest User Profile

Configure access for guest or unauthenticated users. [Learn More](#)  
[dev3test Profile](#)

- Inside Guest user profile, go to Enabled Visualforce Page Access
- Add amazonconnect.AC\_ChatWidget( or AC\_ChatWidgetWithJWT if you have enabled security for chat widget)

## Enable Visualforce Page Access

Select the Visualforce pages that you want to make accessible at this Salesforce site.

The screenshot shows a configuration interface for enabling Visualforce pages. At the top right are 'Save' and 'Cancel' buttons. Below them are two main sections: 'Available Visualforce Pages' and 'Enabled Visualforce Pages'. The 'Available' section contains a long list of page names, many of which begin with 'amazonconnect.AC\_'. The 'Enabled' section contains a similar list, also with many entries starting with 'amazonconnect.AC\_'. The 'amazonconnect.AC\_ChatWidget' page is specifically highlighted with a blue border around its entry in the 'Enabled' list, indicating it has been selected. Between the two sections are 'Add' and 'Remove' buttons with arrows.

Available Visualforce Pages	Enabled Visualforce Pages
amazonconnect.ACSFCCP_ObjectType	CommunitiesLogin
amazonconnect.ACSFCCP_PostCallUpdateTask	CommunitiesSelfReg
amazonconnect.AC_AgentStatusSessionEnd	CommunitiesSelfRegConfirm
amazonconnect.AC_CCPElementEditor	CommunitiesTemplate
amazonconnect.AC_CallRecordingTask	Exception
amazonconnect.AC_ClassicAdapter	FileNotFoundException
amazonconnect.AC_ClassicScriptIncludes	ForgotPassword
amazonconnect.AC_ConsoleAdapter	ForgotPasswordConfirm
amazonconnect.AC_ConsoleScriptIncludes	InMaintenance
amazonconnect.AC_CtiFlowEditor	SiteLogin
amazonconnect.AC_CtiScriptEditor	SiteRegister
amazonconnect.AC_HelperIncludes	SiteRegisterConfirm
amazonconnect.AC_HelperIncludesCcpV1	UnderConstruction
amazonconnect.AC_HelperIncludesCcnV2	amazonconnect.AC_ChatWidget

- Click Save

- Go to Enable Apex Class Access and add amazonconnect.AC\_ChatWidgetController

## Enable Apex Class Access

Select the Visualforce pages that you want to make accessible at this Salesforce site.

**Available Apex Classes**

- amazonconnect.AC\_CTCF\_PostComputeTaskController
- amazonconnect.AC\_AmazonConnectAPI
- amazonconnect.AC\_CCAContactLens
- amazonconnect.AC\_CCPElementEditorController
- amazonconnect.AC\_CCPOverlayController
- amazonconnect.AC\_CTIFlowController
- amazonconnect.AC\_CaseCCATriggerBatch
- amazonconnect.AC\_ContactCCATriggerBatch
- amazonconnect.AC\_ContactChannelController
- amazonconnect.AC\_ContactChannelWrapper
- amazonconnect.AC\_CtiScriptExtension
- amazonconnect.AC\_PhoneCallController
- amazonconnect.AC\_PhoneCallWrapper
- amazonconnect.AC\_PostInstallHandler
- amazonconnect.AC\_QueueMetricsController

**Enabled Apex Classes**

- amazonconnect.AC\_ChatWidgetController

Add      Remove

Save      Cancel

- Click Publish button on the top right to publish the website

Home

General

View and edit the main properties of your site.

Site Details

Template Help Center

Public Access i

Public can access the site

Publish

- Copy the published website URL in Settings→Published Status
- Go back to Amazon Connect Chat Widget website, add following url to the allow-list Domains:
  - The AC\_ChatWidget visualforce page URL, remove everything after .com
  - The published website URL to chat widget allow-list origin, remove everything after .com
- Go to Setup→Sharing Settings. Search for AC CTI Adapter Sharing Rules. Create a new Rule for Guest user so that they have the object access. Make sure in Step2 the Rule Type is Guest user access, the Steps 3 you put a proper criteria, for testing purpose you can put CTI Adapter Name not equal to 1. In Step 4 Share with the Guest user profile of the community website you are working on, and change

the Access level to Read Only

SETUP

## Sharing Settings

Setup Help for this Page ?

### AC CTI Adapter Sharing Rule

Use sharing rules to make automatic exceptions to your organization-wide sharing settings for defined sets of users.

Note: "Roles and subordinates" includes all users in a role, and the roles below that role. This includes portal roles that may give access to users outside the organization.

You can use sharing rules only to grant wider access to data, not to restrict access.

**Step 1: Rule Name** |= Required Information

Label	<input type="text" value="test"/>
Rule Name	<input type="text" value="test"/> <small>i</small>
Description	<input type="text"/>

**Step 2: Select your rule type**

Rule Type  Based on record owner  Based on criteria  Guest user access, based on criteria

**Step 3: Select which records to be shared**

This sharing rule grants access to guest users without login credentials. By modifying the default settings in accordance with these criteria, you're allowing immediate and unlimited access to all records matching these criteria to anyone accessing the site, even without logging in. To secure your site and its data from guest users, consider all the use cases and implications, and implement security controls that you think are appropriate for the sensitivity of your data. Salesforce isn't responsible for any exposure of your data to guest users related to this change from default settings.

Criteria	Field	Operator	Value	
	--None--	--None--		AND
	--None--	--None--		AND
	--None--	--None--		AND
	--None--	--None--		AND
	--None--	--None--		

[Add Filter Logic...](#)

Additional Options  Include records owned by high-volume users i

**Step 4: Select the users to share with**

Share with

**Step 5: Select the level of access for the users**

Access Level

**Save** **Cancel**

**Verify the change:** Open your published website in a incognito window, you should be able to use chat widget to chat as a customer and chat to your agent without login Note: If you want to setup chat widget for authorized user group only, you could change the settings to the guest profile to the authorized user profile.

### Option 2: Setting up using out-of-box Lightning Component.

- Follow instructions [here](#) to setup your Chat Widget and copy the script to a text editor.
- Go to Service Console
- Go to AC CTI Adapter. If the CTI Adapter Owner is [Amazon Connect – Universal Package](#), please update it to yourself or any other real user.

- Go to Features tab
- Click New to create a new Feature
- In the Name field, put FEATURE\_CHAT\_WIDGET
- In the Value field, input the following key value pairs based on your chat widget script. If you didn't enable the security feature of chat widget, you don't need to add the key value pair for authEndpoint

Example ChatWidget key value pairs input

```
{
  "cloudfrontId": "dg9yx063wiht",
  "widgetId": "5338d219-92c7-427e-8b10-26a8f4dfb3d1",
  "openChatColor": "white",
  "openChatBackgroundColor": "#826359",
  "closeChatColor": "white",
  "closeChatBackgroundColor": "#940eb9",
  "snippetId": "QVFJREFIaUpTVGJkNWhNc0Q1WHpHYnFQTkJyYXN0.....=",
  "authEndpoint": "https://www.yourdomain.com/yourAuthEndpoint"
}
```

The input above is for the following example ChatWidget Script

```
<script type="text/javascript">
(function(w, d, x, id){
  s=d.createElement('script');
  s.src='https://dg9yx063wiht.cloudfront.net/amazon-connect-chat-interface-client.js';
  s.async=1;           cloudfrontId
  s.id=id;
  d.getElementsByTagName('head')[0].appendChild(s);
  w[x] = w[x] || function() { (w[x].ac = w[x].ac || []).push(arguments) };      widgetId
})(window, document, 'amazon_connect', '5338d219-92c7-427e-8b10-26a8f4dfb3d1');
amazon_connect('styles', { openChat: { color: 'white', backgroundColor: '#826359' },
  closeChat: { color: 'white', backgroundColor: '#940eb9' } });
amazon_connect('snippetId', 'QVFJREFIaU...');           snippetId
</script>
```

script:

```
<script type="text/javascript">
  (function(w, d, x, id){
    s=d.createElement('script');
    s.src='https://dg9yx063wiht.cloudfront.net/amazon-connect-chat-
interface-client.js';
    s.async=1;
    s.id=id;
    d.getElementsByTagName('head')[0].appendChild(s);
```

```

w[x] = w[x] || function() { (w[x].ac = w[x].ac || []).push(arguments) };
})(window, document, 'amazon_connect', '5338d219-92c7-427e-8b10-
26a8f4dfb3d1');
amazon_connect('styles', { openChat: { color: 'white', backgroundColor:
'#826359' }, closeChat: { color: 'white', backgroundColor: '#940eb9' } });
amazon_connect('snippetId',
'QVFJREFIaUpTVGJkNWhNc0Q1WHpHYnFQTkJyYXN0.....=');
</script>

```

## Example Call back function for JWT

```

amazon_connect('authenticate', function(callback) {
  window.fetch('https://www.yourdomain.com/yourAuthEndpoint').then(res => {
    res.json().then(data => {
      callback(data.data);
    });
  });
});

```

- Click Save
- Go to Setup
- Go to VisualForce page
- Select AC\_ChatWidget
- Click Preview
- You should see a chat icon on the right bottom corner. If not, check browser console for error messages
- Copy the AC\_ChatWidget visualforce page URL.

- Go to your Experience Cloud Builder

The screenshot shows the Experience Cloud Builder interface. At the top, there's a navigation bar with icons for Home, Publish, and Prev. Below the header is a banner featuring a cup of coffee on a bed of coffee beans. The text "CAPRICORN" is displayed in a stylized font above the coffee cup. A search bar with the placeholder "Search the help center..." and a magnifying glass icon is positioned below the banner. The main content area contains several dashed-line boxes representing layout slots: "Content", "Sidebar", and "Sidebar Alt" in the middle row, and "Content Footer" at the bottom. In the bottom left corner, there's a small note: "powered by salesforce".

- Open Components

The screenshot shows the Home screen of a Content Editor interface. On the left, there is a vertical sidebar with four icons: a lightning bolt (Content), a pen (Edit), a grid (Collections), and a gear (Settings). The main area is titled "Components" and features a search bar with a magnifying glass icon and the placeholder "Search...". Below the search bar, a section titled "CONTENT (12)" is expanded, showing a list of components with their corresponding icons:

- CMS Collection
- CMS Connect (HTML)
- CMS Connect (JSON)
- CMS Single Item
- Headline
- HTML Editor
- Language Selector
- Recommendations Carousel
- Rich Content Editor
- Tabs
- Tile Menu
- Visualforce Page

- Drag and drop iFrame Component to your page



# Components



Search...



Record Detail



Related Record List

## SALES (1)



Campaign Marketplace

## SUPPORT (6)



Case Deflection



Channel Menu



Contact Request Button & F...



Contact Support Button



Contact Support Form



Embedded Service Appoint...

## TOPICS (3)



Featured Topics



Topic Catalog



Trending Topics

## ▼ CUSTOM COMPONENTS (1)



Some components in this section are blocked due to the site's security level setting. [More Details](#)



iFrame Component

[Get more on the AppExchange](#)

- Change Chat Widget URL to <your-website-domain>/apex/amazonconnect\_\_AC\_ChatWidget if you did not enable the security for the chat widget. If you have enabled security, change it to <your-website-domain>/apex/amazonconnect\_\_AC\_ChatWidgetWithJWT
  - You will have the website domain once it is published. The URL is in Settings→General→Published Status, and the part from https to .com is your website domain. If you haven't published it yet, you can update it once it is published and re-publish the website.
  - If you have site name, you need to append /<site-name> after your domain name. For example if the published website is demo-developer-edition.na111.force.com/testing/s/, your Chat Widget URL should be:
    - If security disabled --> demo-developer-edition.na111.force.com/testing/amazonconnect\_\_AC\_ChatWidget
    - If security enabled --> demo-developer-edition.na111.force.com/testing/amazonconnect\_\_AC\_ChatWidgetWithJWT
- Go to Settings→General→Guest User Profile and click in to the Guest User Profile

### Guest User Profile

Configure access for guest or unauthenticated users. [Learn More](#)  
[dev3test Profile](#)

- Inside Guest user profile, go to Enabled Visualforce Page Access

- Add amazonconnect.AC\_ChatWidget( or AC\_ChatWidgetWithJWT if you have enabled security for chat widget)

## Enable Visualforce Page Access

Select the Visualforce pages that you want to make accessible at this Salesforce site.

**Save** **Cancel**

### Available Visualforce Pages

amazonconnect.ACSFCCP\_ObjectType  
amazonconnect.ACSFCCP\_PostCallUpdateTask  
amazonconnect.AC\_AgentStatusSessionEnd  
amazonconnect.AC\_CCPElementEditor  
amazonconnect.AC\_CallRecordingTask  
amazonconnect.AC\_ClassicAdapter  
amazonconnect.AC\_ClassicScriptIncludes  
amazonconnect.AC\_ConsoleAdapter  
amazonconnect.AC\_ConsoleScriptIncludes  
amazonconnect.AC\_CtiFlowEditor  
amazonconnect.AC\_CtiScriptEditor  
amazonconnect.AC\_HelperIncludes  
amazonconnect.AC\_HelperIncludesCcpV1  
amazonconnect.AC\_HelperIncludesCcpV2

### Enabled Visualforce Pages

CommunitiesLogin  
CommunitiesSelfReg  
CommunitiesSelfRegConfirm  
CommunitiesTemplate  
Exception  
FileNotFoundException  
ForgotPassword  
ForgotPasswordConfirm  
InMaintenance  
SiteLogin  
SiteRegister  
SiteRegisterConfirm  
UnderConstruction  
amazonconnect.AC\_ChatWidget

Add  
Remove

- Click Save
- Go to Enable Apex Class Access and add amazonconnect.AC\_ChatWidgetController

## Enable Apex Class Access

Select the Visualforce pages that you want to make accessible at this Salesforce site.

**Save** **Cancel**

### Available Apex Classes

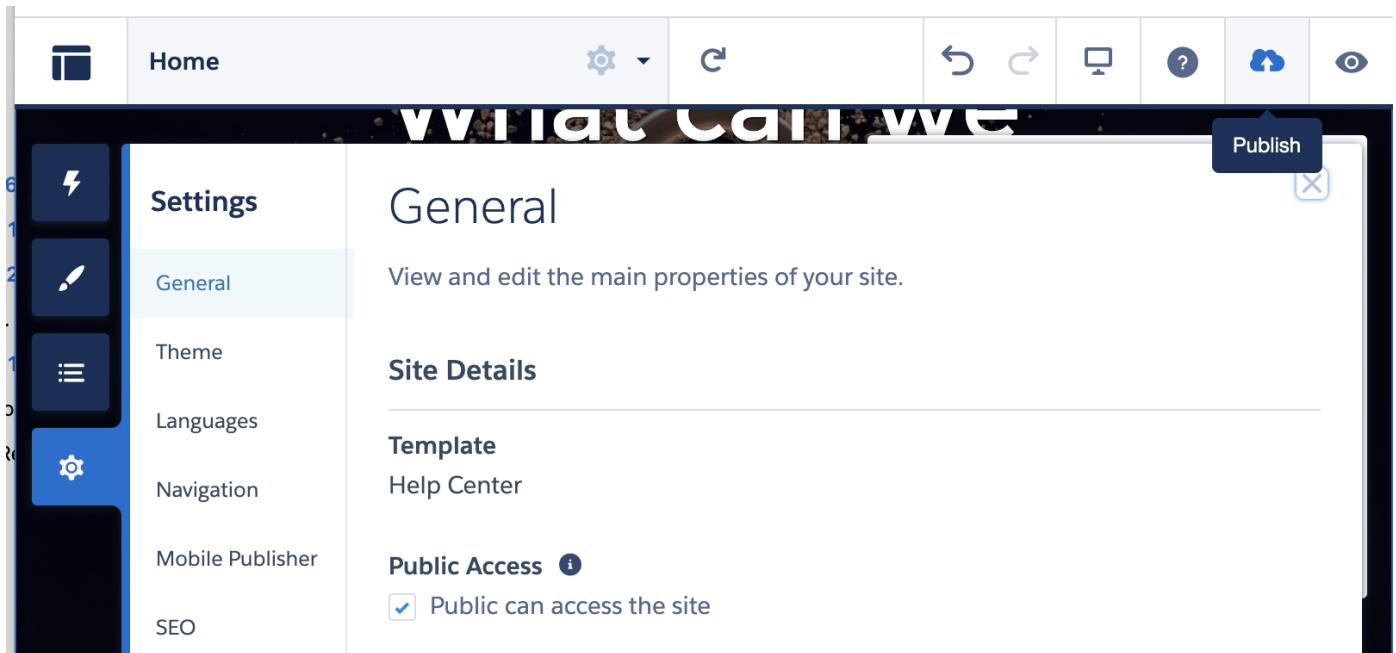
amazonconnect.ACSTFCPR\_PostCallUpdateTaskController  
amazonconnect.AC\_AmazonConnectAPI  
amazonconnect.AC\_CCAContactLens  
amazonconnect.AC\_CCPElementEditorController  
amazonconnect.AC\_CCOVERLAYController  
amazonconnect.AC\_CTIFlowController  
amazonconnect.AC\_CaseCCATriggerBatch  
amazonconnect.AC\_ContactCCATriggerBatch  
amazonconnect.AC\_ContactChannelController  
amazonconnect.AC\_ContactChannelWrapper  
amazonconnect.AC\_CtiScriptExtension  
amazonconnect.AC\_PhoneCallController  
amazonconnect.AC\_PhoneCallWrapper  
amazonconnect.AC\_PostInstallHandler  
amazonconnect.AC\_QueueMetricsController

### Enabled Apex Classes

amazonconnect.AC\_ChatWidgetController

Add  
Remove

- Click Publish button on the top right to publish the website



- Copy the published website URL in Settings→Published Status
- Go back to Amazon Connect Chat Widget website, add following url to the allow-list Domains:

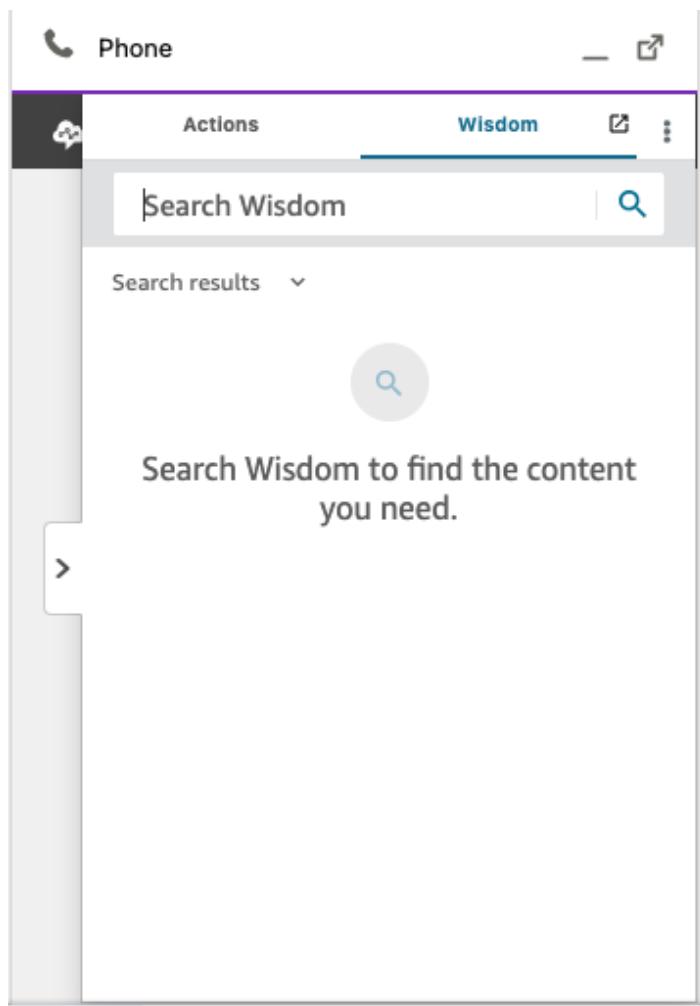
\* The AC\_ChatWidget visualforce page URL, remove everything after .com  
 \* The published website URL to chat widget allow-list origin, remove everything after .com

**Verify the change:** Open your published website in a incognito window, you should be able to use chat widget to chat as a customer and chat to your agent without login

 [Edit this page](#)

# Wisdom Integration

The Amazon Connect CTI Adapter allows for integration with Amazon Connect Wisdom.



The integration between Wisdom and the CTI Adapter first requires that Wisdom is set up in the Amazon Connect instance that the CTI Adapter is integrated with. See [here](#) for full instructions.

Before proceeding with the below, please ensure that Wisdom articles are properly showing up in your Wisdom instance for the specific user you are testing.

#### **Amazon Connect Wisdom Permission Sets:**

Salesforce users accessing Amazon Connect Wisdom in Salesforce must belong to either the *AC\_Wisdom* permission set, or the *AC\_Administrator* permission set.

1. In setup, search for and select *permission sets*.
2. Select either the *AC\_Wisdom* or the *AC\_Administrator* permission set
3. Select *Manage Assignments*, and add all relevant users to the permission set of choice.

#### **Setting up Amazon Connect Wisdom in the CCP Overlay:**

1. Navigate to your CTI Adapter
2. Scroll down to the Features section and create a new feature

Features		New AC Feature
Action	AC Feature Name	

3. Create a new feature with the following values:

- AC Feature Name - FEATURE\_WISDOM\_PANEL
- Value - Enabled: true

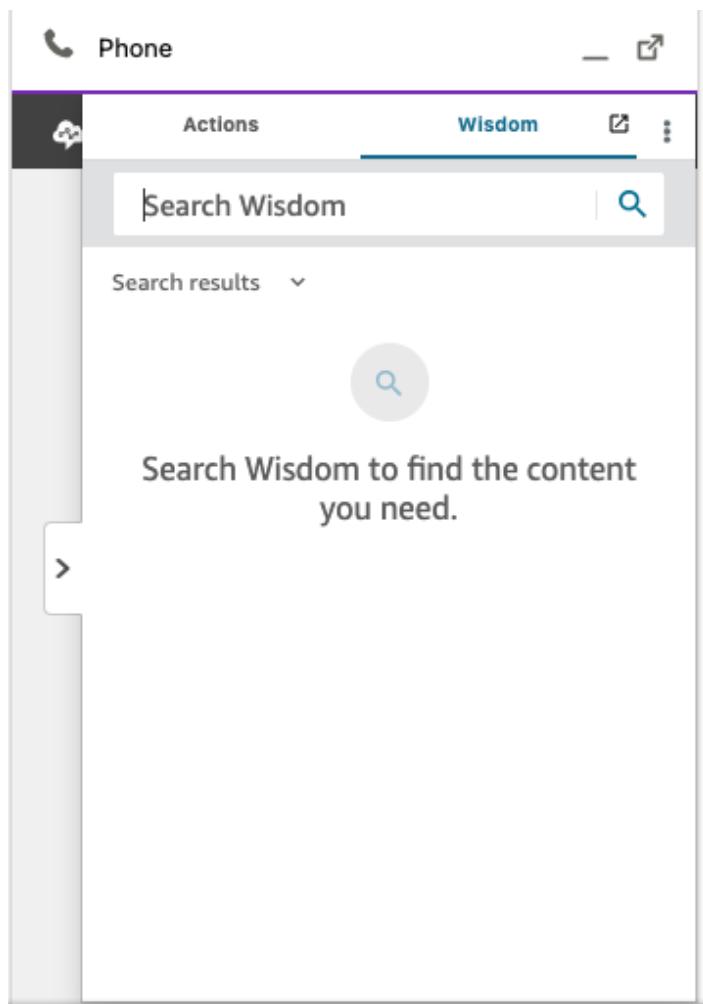
AC Feature Name	<input type="text" value="FEATURE_WISDOM_PANEL"/>
Value	<input type="text" value="Enabled: true"/>
Active	<input checked="" type="checkbox"/>
CTI Adapter	ACLightningAdapter

4. In addition, you can also include the `IgnorePermissionSet` setting to the value of the feature on a new line. This setting will show Wisdom if it is enabled regardless of whether the logged in user belongs to the *AC\_Wisdom* or the *AC\_Administrator* permission set. This setting is required if the logged in user has the `View Setup and Configuration` profile setting set to false.

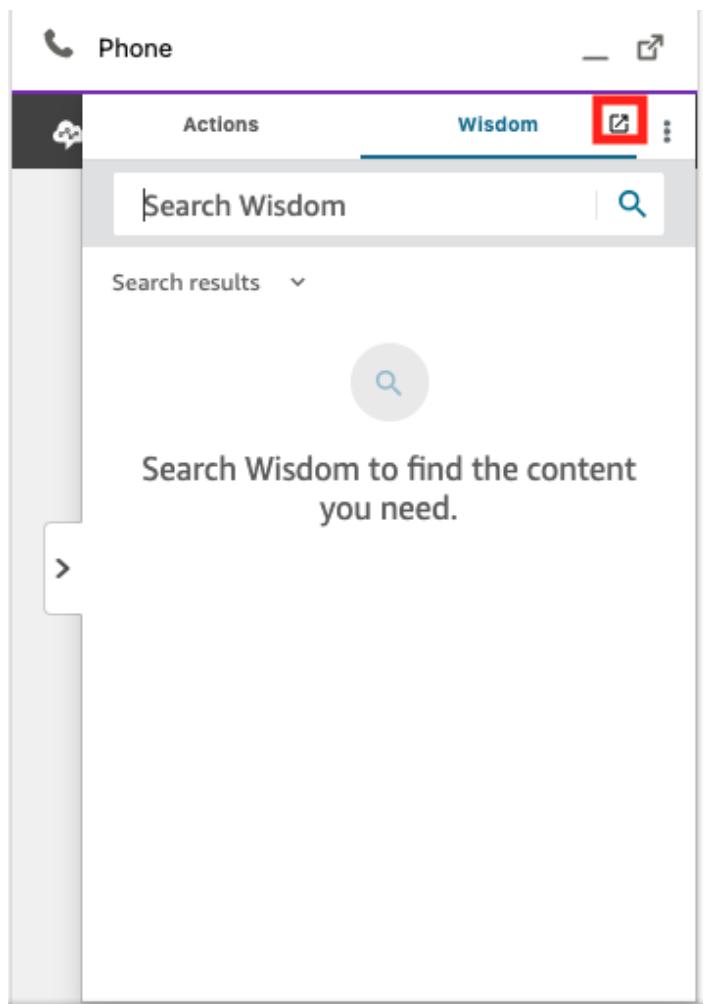
- `IgnorePermissionSet: true`

```
AC Feature Name
FEATURE_WISDOM_PANEL
Value
Enabled: true
IgnorePermissionSet: true
```

5. Open the ccp, observe that there is a tab with Wisdom in the CCP Overlay.

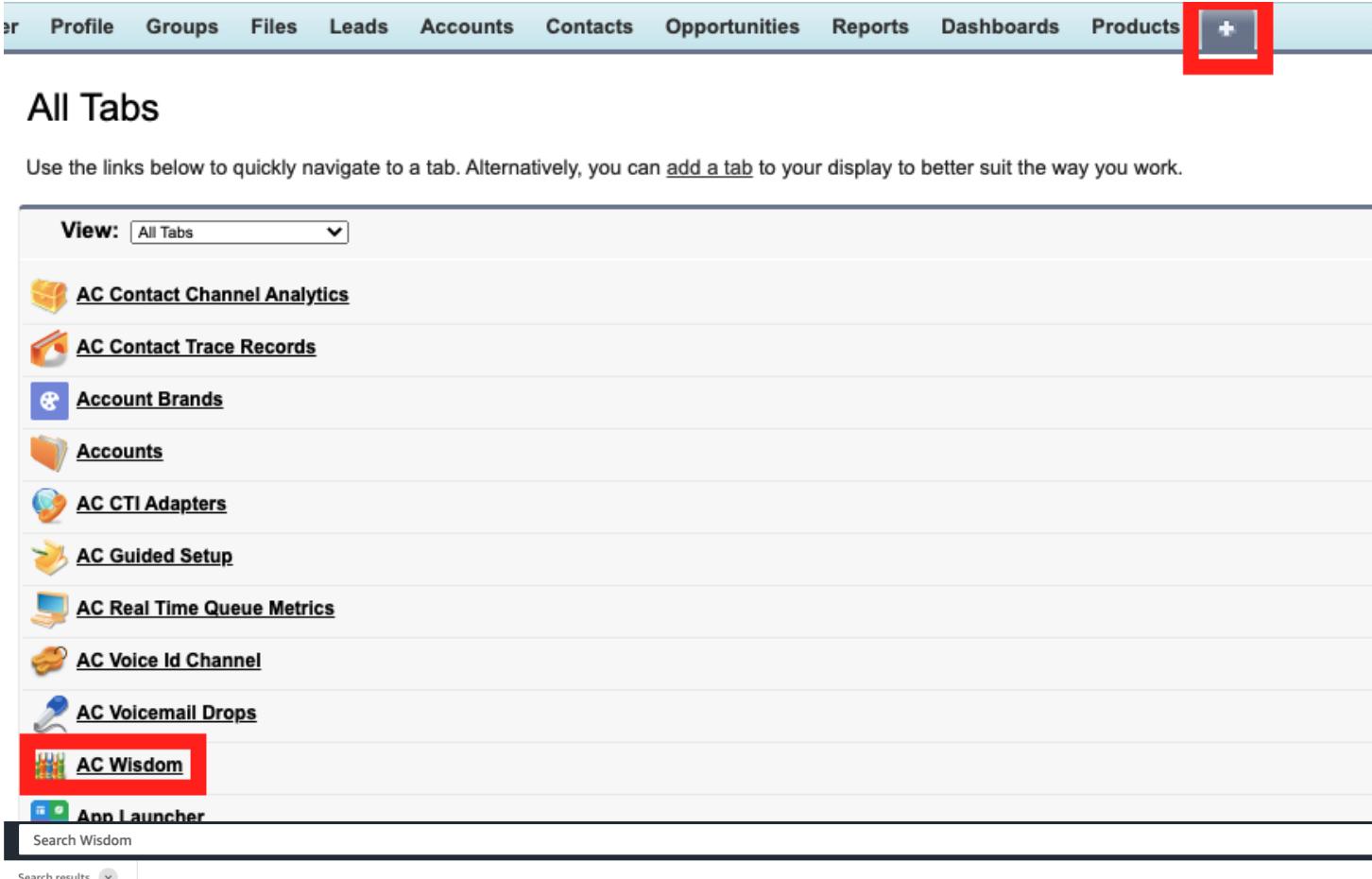


Wisdom can be popped out into a new window by pressing pop out button.



## Accessing the Tabbed Version of Wisdom:

Wisdom is also accessible in Tabbed form.



The screenshot shows the 'All Tabs' view in Salesforce. At the top, there's a navigation bar with links for 'Profile', 'Groups', 'Files', 'Leads', 'Accounts', 'Contacts', 'Opportunities', 'Reports', 'Dashboards', 'Products', and a plus sign icon. Below this is a section titled 'View:' with a dropdown menu set to 'All Tabs'. A horizontal scroll bar is visible. The list of tabs includes: 'AC Contact Channel Analytics', 'AC Contact Trace Records', 'Account Brands', 'Accounts', 'AC CTI Adapters', 'AC Guided Setup', 'AC Real Time Queue Metrics', 'AC Voice Id Channel', 'AC Voicemail Drops', 'AC Wisdom' (which is highlighted with a red box), and 'App Launcher'. At the bottom, there's a search bar labeled 'Search Wisdom' and a 'Search results' dropdown.

## Accessing the Component Version of Wisdom:

The final method of accessing Wisdom in Salesforce is through the Wisdom component.

1. Navigate to Object Manager in Setup in Lightning
2. Select either Task or Case (note: the Wisdom component is embeddable in other pages as well, but you may need to write custom classes in order to do so.)

3. Select *Page Layouts*

4. Select the appropriate layout

5. Select *Visualforce Pages* in the top component

The screenshot shows the Salesforce Setup interface for managing object layouts. The top navigation bar says "SETUP > OBJECT MANAGER" and the page title is "Task". On the left, there's a sidebar with tabs: "Details", "Fields & Relationships", "Page Layouts" (which is selected and highlighted in blue), "Lightning Record Pages", "Buttons, Links, and Actions", and "Compact Layouts". The main content area is titled "Task Layout". It has a toolbar with "Save", "Quick Save", "Preview As...", "Cancel", "Undo", "Redo", and "Layout Properties". Below the toolbar is a "Quick Find" search bar with the placeholder "Page Name". A list of components is shown, with "Visualforce Pages" highlighted in blue. To the right of the list is a table with four rows:

Component	Page Name
+ Section	ACSFCCP_CallRecor...
+ Blank Space	ACSFCCP_CallTask
AC_CallRecordingTask	ACSFCCP_PostCallU...
AC_WisdomTask	

6. Click and drag the appropriate Wisdom visualforce page into the desired location

7. Save the layout

8. Navigate to a task page

The screenshot shows a task page for a case. At the top, it displays the case number (00001031) and creation date (10/6/2021, 10:57 PM). The subject is "(No Subject)" and there is no description. To the right, there are status fields: Status (New), Priority (Medium), and Case Owner (redacted). Below this is the "Case Detail" section with buttons for "Edit", "Delete", "Close Case", and "Clone". At the bottom of the detail section is a search bar labeled "Search Wisdom" with a magnifying glass icon. Below the search bar is a "Search results" dropdown.

[Edit this page](#)

# Voice Id

The Amazon Connect CTI Adapter allows for integration with Amazon Connect Voice Id.

The integration between Voice Id and the CTI Adapter first requires that Voice Id is set up in the Amazon Connect instance that the CTI Adapter is integrated with. See [here](#) for full instructions.

Before proceeding with the below, please ensure that Voice Id works as expected in a standalone CCP.

## Enabling the Voice Id Trigger:

1. In Setup, search for Custom Settings.
2. Click on Custom Settings, and click Manage on the row with the **Toolkit for Amazon Connect** setting
3. Click into your setting (or create one if it doesn't exist)

The screenshot shows the Salesforce Setup interface. At the top, there's a blue header bar with the word "SETUP" and a gear icon. Below it, a dark blue bar has the text "Custom Setting" and "Toolkit for Amazon Connect". The main content area has a light gray background. At the top left, there's a section titled "Custom Setting Toolkit for Amazon Connect" with some descriptive text. On the right side, there's a "New" button. Below this, there's a section titled "Default Organization Level Value" with a "View" dropdown set to "All" and a "Create New View" link. A red box highlights the "New" button. At the bottom, there's a table with a single row labeled "Setup Owner ↑" and a message "No records to display."

4. Search and assign the toolkit for either your profile or user, and then uncheck Disable the Voice Id Channel Trigger
5. Enter the domain of Amazon Connect instance in the Url field (if it doesn't exist already).
6. Click save.

After following the above steps, **AC\_VoiceIdChannel\_\_c** records will start to be created on calls where Voice Id is active. These records can be viewed in the AC Voice Id Channel tab:

## All Tabs

Use the links below to quickly navigate to a tab. Alternatively, you can [add a tab](#) to your display to better suit the way you work.

**View:** [All Tabs](#)

-  [AC Contact Channel Analytics](#)
-  [AC Contact Trace Records](#)
-  [Account Brands](#)
-  [Accounts](#)
-  [AC CTI Adapters](#)
-  [AC Guided Setup](#)
-  [AC Real Time Queue Metrics](#)
-  [AC Voice Id Channel](#)
-  [AC Voicemail Drops](#)
-  [AC Wisdom](#)
-  [App Launcher](#)
-  [Article Management](#)
-  [Assets](#)
-  [Authorization Form](#)

AC Voice Id Channel  
AC Voice Id Channel 0000000000

[« Back to List: Custom Object Definitions](#)

AC Voice Id Channel Detail		<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Clone</a>	<a href="#">Sharing</a>
AC Voice Id Channel Name	Voice Id Channel 0000000000				
Contact Id	a6a6ef03-f073-4c96-ab6f-b9382ff3bc18				
Customer Number					
Speaker Id	no_speaker_id_found				
Speaker Status	no_speaker_id_found				
Authentication Result Decision	Error				
Authentication Result Score	0				

 [Edit this page](#)

# Invoking the Amazon Connect Salesforce Lambda in a Contact Flow

The Amazon Connect Contact Flow defines the routing behaviour within Amazon Connect, allowing contact center administrators to customize call flow behaviour such as playing prompts, invoking Lambda functions for data lookup, and sending the call to different queues based on various conditions. As a result, Contact Flows are expected to be highly customized for each organization. While the Adapter package does not provide any Contact Flows, there are some best practices that are worth highlighting when utilizing the Adapter.

The key element that enables Contact Flow integration is the AWS Lambda function. A Lambda function is a serverless piece of code that is invoked by the Contact Flow. Typically, Lambda functions are used to update or retrieve information from databases or APIs, as well as integrating with other systems. Lambda function can return any data processed to the Contact Flow where it can be used for decision making.

Since Salesforce is highly customizable, the same Salesforce object in a different environment may have different fields associated with it. As a result, we can expect objects to have different requirements for how they are retrieved, updated and created. The CTI Adapter was built to be able to query Salesforce objects regardless of how they have been customized. The user of the Adapter must therefore ensure they are passing the appropriate parameters to the Lambda functions provided as part of the Adapter.

The Lambda function supports different operations, based on the mandatory input parameter "sf\_operation".

## Salesforce Lookup

This operation is invoked by setting "sf\_operation" to "lookup". In this case, the Lambda function queries Salesforce for objects based on the parameters passed to it.

- "**sf\_object**" parameter contains Salesforce Object, like Case, Contact etc.
- "**sf\_fields**" parameter contains a set of fields to be returned in a result. For example, if we are querying Case, we might specify "Id, IsClosed, Subject", or if we are querying Contact, we might specify "Id, Name, Email"
- Specify a conditional parameter, for example "CaseNumber" or "homephone". Multiple values may be sent and they will be applied with "AND" operator.

In the Amazon Connect Contact Flow Designer, add *Integrate > Invoke AWS Lambda function* block. Set 'sfInvokeAPI' Lambda ARN and make sure you have granted Amazon Connect to invoke the Lambda Function.

Example for phone number lookup:

X

## Invoke AWS Lambda function

Makes a call to AWS Lambda, and optionally returns key / value pairs.

The returned key value pairs can be used to set contact attributes.

Function ARN

arn:aws:lambda:us-east-1:680944752362:function:aws-ser

Function input parameters

Use text X

Destination key

sf\_operation

Value

lookup

Use text X

Destination key

sf\_object

Value

Contact

Use text X

Destination key  
sf\_fields

Value  
Id, Name

Use attribute

Destination key  
homephone

Type  
System

Attribute  
Customer Number

A result example:

```
"ExternalResults": {  
    "Id": "0031r000026MVPAA4",  
    "sf_count": "1",  
    "Name": "Milos Cosic"  
}
```

Example for Case lookup:

X

## Invoke AWS Lambda function

Makes a call to AWS Lambda, and optionally returns key / value pairs.

The returned key value pairs can be used to set contact attributes.

Function ARN

2362:function:aws-serverless-repository-AmazonConnec-s

Function input parameters

Use text X

Destination key  
sf\_operation

Value  
lookup

Use text X

Destination key  
sf\_object

Value  
Case

The image contains two side-by-side configuration panels from the Amazon Connect Contact Flow Designer.

**Panel 1 (Top):**

- Destination key:** sf\_fields
- Value:** Id, IsClosed, Subject

**Panel 2 (Bottom):**

- Destination key:** CaseNumber
- Type:** System
- Attribute:** Stored customer input

A result example:

```
"ExternalResults": {
    "Id": "5001r000023QcAcAAK",
    "IsClosed": "true",
    "sf_count": "1",
    "Subject": "Amazon Connect Case"
}
```

## Salesforce Create

This operation is invoked by setting "sf\_operation" to "create". In this case, the Lambda function creates a Salesforce object based on the parameters passed to it.

- "**sf\_object**" parameter contains Salesforce to be created, like Case.
- Specify additional parameters for the Salesforce object to be created. Please be sure to include all parameters required to create the Salesforce object.

In the Amazon Connect Contact Flow Designer, add *Integrate > Invoke AWS Lambda function* block. Set 'sflInvokeAPI' Lambda ARN and make sure you have granted Amazon Connect to invoke the Lambda Function.

An example for Case creation:

X

## Invoke AWS Lambda function

Makes a call to AWS Lambda, and optionally returns key / value pairs.

The returned key value pairs can be used to set contact attributes.

Function ARN

erless-repository-AmazonConhec-sfInvokeAPI-2R3T34AMG

Function input parameters

<input checked="" type="radio"/> Use text	X
Destination key	
sf_operation	
Value	
create	
<input checked="" type="radio"/> Use text	X
Destination key	
sf_object	
Value	
Case	
<input checked="" type="radio"/> Use text	X
Destination key	
Origin	
Value	
Phone	

Use text X

Destination key  
Status

Value  
New

Use text X

Use attribute X

Destination key  
ContactId

Type  
External

Attribute  
Id

Contact Id is usually received as a result of a previous phone lookup, but it can be also stored as an Attribute (i.e. sf\_contact\_id)

Use text X

Destination key  
Subject

Value  
Amazon Connect Case

Use text X

Destination key  
Priority

Value  
Low

A result example (providing the newly created Case Id):

```
"ExternalResults": {  
    "Id": "5001r000023QfhPAAS"  
},
```

# Salesforce Update

This operation is invoked by setting "sf\_operation" to "update". In this case, the Lambda function updates a Salesforce object based on the parameters passed to it.

- "**sf\_object**" parameter contains Salesforce to be updated, like Case.
- Specify additional parameters for the Salesforce object to be created. Parameters must include `sf_object` and `sf_id`.

In the Amazon Connect Contact Flow Designer, add *Integrate > Invoke AWS Lambda function* block. Set 'sfInvokeAPI' Lambda ARN and make sure you have granted Amazon Connect to invoke the Lambda Function.

An example for Case update:

## Invoke AWS Lambda function

X

Makes a call to AWS Lambda, and optionally returns key / value pairs.

The returned key value pairs can be used to set contact attributes.

Function ARN

752362:function:aws-serverless-repository-AmazonConnec

Function input parameters

Use text X

Destination key  
sf\_operation

Value  
update

Use text X

Destination key  
sf\_object

Value  
Case

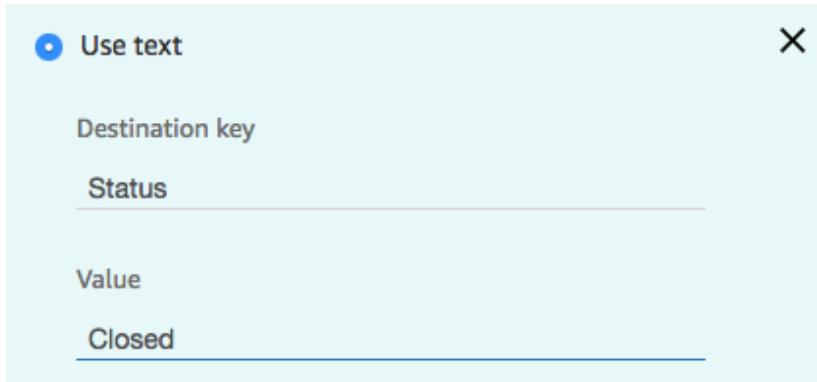
Use attribute X

Destination key  
sf\_id

Type  
External

Attribute  
Id

Case Id is usually received as a result of a previous case lookup, but it can be also stored as an Attribute (i.e. sf\_case\_id)



A result example (HTTP Status Code):

```
"ExternalResults": {  
    "Status": "204"
```

204 is "No Content" success code

## Salesforce Phone Lookup

This operation is invoked by setting "sf\_operation" to "phoneLookup". In this case, the Lambda function queries Salesforce for Contacts based on the parameter passed to it.

It uses the Salesforce Object Search Language (SOLS) to construct text-based search queries against the search index, which gives significant performance improvement when searching phone number fields.

- "**sf\_phone**" parameter contains the phone number to search.
- "**sf\_fields**" parameter contains a set of fields to be returned in a result. As it searches for Contacts, we might specify "Id, Name, Email"

In the Amazon Connect Contact Flow Designer, add *Integrate > Invoke AWS Lambda function* block. Set 'sfInvokeAPI' Lambda ARN and make sure you have granted Amazon Connect to invoke the Lambda Function.

Example for phone number lookup:

## Invoke AWS Lambda function

X

Makes a call to AWS Lambda, and optionally returns key / value pairs.

The returned key value pairs can be used to set contact attributes.

Function ARN

serverless-repository-AmazonConnec-sfInvokeAPI-2R3T34AMG

Function input parameters

Use text X

Destination key  
sf\_operation

Value  
phoneLookup

Use text X

Destination key  
sf\_fields

Value  
Id, Name

Use attribute X

Destination key  
sf\_phone

Type  
System

Attribute  
Customer Number

A result example:

```
"ExternalResults": {  
  "Id": "0031r000026MVPAA4",  
  "sf_count": "1",  
  "Name": "Milos Cosic"  
}
```

# Salesforce query

This operation is invoked by setting "sf\_operation" to "query". In this case, the Lambda function uses Salesforce Object Query Language (SOQL) to conduct a query against the Salesforce instance.

- "query" parameter contains the query.

Any additional parameters will replace text values in the original query so that queries can be dynamic based on values stored within the contact flow. For example, the parameter set:

- query: "select field from object"
- field: "Id"
- object: "Task"

Will result in the query: "select Id from Task".

## Function input parameters

Use text X

Destination key  
sf\_operation

Value  
query

Use attribute

In the contact flow example below, we look for a customer by phone number.

Use text

X

 Use attribute

Destination key

number

Type

System



Attribute

Customer Number



(full text of the value is "select Id from Contact where Phone LIKE '%number%'")

 Use text

X

Destination key

query

Value

select Id from Contact where Phone LIKE '%numl Use attribute

This operation returns a response of:

{

```
"sf_records_0_Id": "00303000001RZfIAAW",
"sf_count": 1
}
```

Note that `sf_count` is the count of records matched and not the count of fields in the response. This means all fields that start with `sf_records_i_` count as one record. If the query above returned the Name as well as the Id and matched more than one record, the response will be:

```
{
  "sf_records_0_Id": "00303000001RZfIAAW",
  "sf_records_0_Name": "Name0",
  "sf_records_1_Id": "00303000001RZfIAAE",
  "sf_records_1_Name": "Name1",
  "sf_count": 2
}
```

## Salesforce queryOne

This operation is invoked by setting "sf\_operation" to "queryOne" (case sensitive). In this case, the Lambda function uses Salesforce Object Query Language (SOQL) to conduct a query against the Salesforce instance, returning a result only when one record is returned from the query. For query, the following parameter is required:

- **"query"** parameter contains the query.

Any additional parameters will replace text values in the original query so that queries can be dynamic based on values stored within the contact flow. For example, the parameter set:

- query: "select field from object"
- field: "Id"
- object: "Task"

Will result in the query: "select Id from Task".

In the contact flow example below, we look for a customer by phone number.

## Function input parameters

Use text

X

Destination key

sf\_operation

Value

query

Use attribute

(full text of the value is "select Id from Contact where Phone LIKE '%number%'")

Use text

Destination key

---

query

Value

---

select Id from Contact where Phone LIKE '%numl

 Use attribute Use text Use attribute

Destination key

---

number

Type

---

System



Attribute

---

Customer Number



This operation returns a response of:

```
{  
  "sf_records": [  
    {
```

```
        "Id": "00303000001RZfIAAW"  
    }  
],  
"sf_count": "1"  
}
```

## Salesforce createChatterPost

This operation is invoked by setting "sf\_operation" to "createChatterPost" (case sensitive). In this case, the Lambda function uses the Salesforce Connect REST API to create a chatter post (see [here](#)). For createChatterPost, the following parameters are required:

- sf\_feedElementType
- sf\_subjectId
- sf\_messageType
- sf\_message

The following parameter is optional:

- sf\_mention

(refer to the api reference for value types)

Any additional parameters will replace text values in the sf\_message so that messages can be dynamic based on values stored within the contact flow. For example, the parameter set:

- sf\_message: "Please help me with case {{caseld}}"
- caseld: 1234

Will result in the message: "Please help me with case 1234".

In the contact flow example below, we leave a chatter post on a contact.



Use text



Destination key

sf\_operation

Value

createChatterPost

Use attribute

Use text



Destination key

sf\_feedElementType

Value

FeedItem

Use attribute

Use text



Destination key

sf\_subjectId

Value

00303000001RZflAAW

Use attribute

Use text X

Destination key

sf\_messageType

Value

Text

Use attribute

Use text



Use attribute

Destination key

contactId

Type

System



Attribute

Contact id



Use text



Destination key

sf\_message

Value

I had a problem during the call. My contact id is {{

Use attribute

(full text of the value is "I had a problem during the call. My contact id is {{contactId}}.")

The operation returns a response of:

{

```
"Id": "0D503000000ILY5CA0"
```

```
}
```



**apiuser**



I had a problem during the call. My contact id is dda99fbf-6186-4125-ba59-c461d620fdbd.

[Comment](#) · [Like](#) · Today at 3:45 PM via Amazon Connect Integration

the Subject:

## Salesforce createChatterComment

This operation is invoked by setting "sf\_operation" to "createChatterComment" (case sensitive). In this case, the Lambda function uses the Salesforce Connect REST to create a chatter comment (see [here](#)). For createChatterComment, the following parameters are required:

- sf\_feedElementId
- sf\_commentType
- sf\_commentMessage

(refer to the api reference for value types)

Any additional parameters will replace text values in the sf\_commentMessage so that messages can be dynamic based on values stored within the contact flow. For example, the parameter set:

- sf\_commentMessage: "Please help me with case {{ caseld }}"
- caseld: 1234

In the contact flow example below, we leave a comment on a chatter post.

Use text



Destination key

sf\_operation

Value

createChatterComment

Use attribute

Use text



Destination key

sf\_feedElementId

Value

0D503000000ILY5CAO

Use attribute



Use text

Destination key

sf\_commentType

Value

## Text

Use attribute

Use text X

Destination key

sf\_message

Value

This concern has been addressed.

Use attribute

The operation returns a response of:

```
{  
    "Id": "0D70300000ChhNCAS"  
}
```

See the chatter post appear attached to the Subject:



apiuser

I had a problem during the call. My contact id is dda99fbf-6186-4125-ba59-c461d620fdbd.

[Comment](#) · [Like](#) · Today at 3:45 PM via Amazon Connect Integration



apiuser

This concern has been addressed.

[Like](#) · Today at 3:53 PM via Amazon Connect Integration

Write a comment...

# Salesforce search

This operation is invoked by setting "sf\_operation" to "search" (case sensitive). In this case, the Lambda function uses the Salesforce REST to perform a parameterized search (see [here](#)). For search, the following parameters are required:

- q
- sf\_fields
- sf\_object

The following parameters are optional:

- where
- overallLimit

See the below example:

Use text X

Destination key  
`sf_operation`

Value  
`search`

Use attribute

Use text

X

Destination key

q

Value

test

Use attribute

59

Use text

X

Destination key

sf\_object

Value

Case

Use attribute

60

Use text



Destination key

sf\_fields

Value

Subject, Status

Use attribute

61

Use text



Destination key

overallLimit

Value

3

Use attribute

62

Use text



Destination key

where

Value

Status like 'New'

Use attribute

63

The operation returns a response of:

```
{  
  "sf_records_0_Id": "50001000001B9e6AAG",  
  "sf_records_0_Subject": "test subject",  
  "sf_records_0_Status": "New",  
  "sf_records_1_Id": "50001000001B9eWAAS",  
  "sf_records_1_Subject": "test subject",  
  "sf_records_1_Status": "New",  
  "sf_records_2_Id": "50001000001BDgiAAG",  
  "sf_records_2_Subject": "test subject",  
  "sf_records_2_Status": "New",  
  "sf_count": 3  
}
```

Note that `sf_count` is the count of records matched and not the count of fields in the response. This means all fields that start with `sf_records_i_` count as one record.

## Salesforce searchOne

This operation is invoked by setting "sf\_operation" to "searchOne" (case sensitive). In this case, the Lambda function uses the Salesforce REST to perform a parameterized search (see [here](#)). For search, the following parameters are required:

- q

- sf\_fields
- sf\_object

The following parameter is optional:

- where

See the below example:

Use text X

Destination key

sf\_operation

Value

searchOne

Use attribute

Use text X

Destination key

q

Value

test subject unique

Use attribute

Use text



Destination key

sf\_object

Value

Case

Use attribute

Use text



Destination key

sf\_fields

Value

Subject, Status

Use attribute

Use text



Destination key

overallLimit

Value

3

Use attribute

Use text



Destination key

where

Value

Status like 'New'

Use attribute

The operation returns a response of:

```
{  
  "Id": "50001000001BIn6AAG",  
  "Subject": "test subject unique",  
  "Status": "New",  
  "sf_count": 1  
}
```

# Appendix A: CTI Flow Sources and Events

The following sources are defined in the adapter for use with CTI Scripts:

- Initialization
  - onInit -- The CTI adapter has initialized.
- Amazon Connect Agent
  - onRefresh -- The Connect agent's data was updated.
  - onStateChange -- The Connect agent's state changed.
  - onRoutable -- The Connect agent became available for contacts.
  - onNotRoutable -- The Connect agent became unavailable for contacts.
  - onOffline -- The Connect agent's state was set to "Offline".
  - onError -- The Connect agent encountered a system error.
  - onAfterCallWork -- The Connect agent entered "After Call Work".
  - onInit -- The Connect agent has logged in.
- Amazon Connect Voice Contact
  - onIncoming -- The voice contact is incoming. Note: This event fires for queued callback contact only.
  - onConnecting -- The voice contact is connecting. Note. This event fires for inbound and outbound contacts except queued callback contacts.
  - onConnected -- The voice contact is connected.
  - onEnded -- The voice contact is ended or destroyed.
  - onRefresh -- The voice contact is updated.
  - onAccepted -- A voice contact is accepted.

- onPending -- The voice contact is pending.
  - onMissed -- The voice contact is / was missed.
  - onDestroy - The voice contact is destroyed.
- Amazon Connect Chat Contact
    - onConnecting -- The chat contact is connecting.
    - onConnected -- The chat contact is connected.
    - onEnded -- The chat contact ended.
    - onRefresh -- The chat contact is updated.
    - onAccepted -- The chat contact is accepted.
    - onPending -- The chat contact is pending.
    - onMessageReceived -- A message was received from the customer
    - onMessageSent -- A message was sent to the customer
    - onMissed -- The chat contact was missed.
    - onDestroy - The voice contact is destroyed.
- Amazon Connect Task Contact
    - onIncoming -- The tasks contact is incoming.
    - onConnecting -- The task contact is connecting.
    - onConnected -- The task contact is connected.
    - onEnded -- The task contact ended.
    - onRefresh -- The task contact is updated.
    - onAccepted -- The task contact is accepted.
    - onPending -- The voice contact is pending.
    - onMissed -- The task contact was missed.
    - onDestroy - The voice contact is destroyed.

- onTransferInitiated -- When the server has initiated the task transfer.
  - onTransferSucceeded -- When the task transfer has succeeded.
  - onTransferFailed -- When the task transfer has failed.
  - onTaskExpiring -- Triggers 2 hours before the task expires.
  - onTaskExpired -- When the task has expired.
- Salesforce Agent
    - onStateChange -- The Salesforce agent's state changed.
    - onWorkAccepted -- The Salesforce agent accepted work.
    - onWorkloadChanged -- The Salesforce agent's workload changed.
  - Salesforce UI
    - onClickToDial -- A phone number, within the Salesforce UI, was clicked.
    - onNavigationChange
    - onHvsWorkStart

 [Edit this page](#)

## Appendix B: Configuring Salesforce as Your Identity Provider

Amazon Connect supports Security Assertion Markup Language (SAML 2.0) to enable single sign on(SSO). Salesforce can act as a single sign on identity provider to service providers, allowing end users to easily and securely access many web and mobile applications with one login. By establishing the SSO integration between Amazon Connect and Salesforce, you will be able to seamlessly login to Salesforce and the same credentials will be used to auto-login to Amazon Connect.

## Configuration

# Prerequisites

To complete the SSO integration between Salesforce and Amazon Connect, you need:

1. An Amazon Connect Instance configured for SAML authentication
2. Appropriate AWS permissions to create Identity and Access Management (IAM) roles and policies
3. Administrator permissions for your Salesforce Org
4. Amazon Connect CTI Adapter AppExchange package installed and configured

## Configuring Salesforce as an Identity Provider

First, we need to enable Salesforce to act as an identity provider (IdP). An IdP performs end user authentication and provides the credentials to the requesting service provider. In this case, Salesforce server as the IdP and Amazon Connect the service provider, while being embedded in Salesforce.

### Setup Identity Provider & Download Metadata

1. Log in into your Salesforce org and go to **Setup**.
2. In the **Quick Find** field, type **Identity Provider**, then select **Identity Provider** from the result list
3. Identity Provider may be enabled by default. If not, choose **Enable Identity Provider**, then select the appropriate certificate and select Save.

### Identity Provider

Enable Salesforce.com as an identity provider so you can use single sign-on with other web sites, and define the appropriate service providers whose applications support single sign-on. You can switch to different service providers without having to log in again. [Learn more...](#)



The screenshot shows the 'Identity Provider Setup' page. At the top, there is a button labeled 'Enable Identity Provider' which is highlighted with a red box. Below this, a message says 'Click Enable Identity Provider to enable your Salesforce.com organization as an identity provider.' Under the heading 'Service Providers', it says 'Service Providers are now created via Connected Apps. Click here.' There is a table below with columns 'Name' and 'Created Date', showing 'No Service Providers'.

4. Choose **Download Metadata** and save the file to your computer.

## Identity Provider

Help for this Page 

Enable Salesforce.com as an identity provider so you can use single sign-on with other web sites, and define the appropriate service providers whose applications support single sign-on. You can switch to different service providers without having to log in again. [Learn more...](#)

### Quick Tips

- [Certificates and Keys](#)
- [About Single Sign-On](#)
- [My Domain](#)

**Identity Provider Setup**

[Edit](#) [Disable](#) [Download Certificate](#) [Download Metadata](#) 

**▼ Details**

Issuer <https://ctiadAPTERDEMO-dev-ed.my.salesforce.com>

**▼ Currently chosen certificate details**

Label	Unique Name
SelfSignedCert_17Feb2020_221125	SelfSignedCert_17Feb2020_221125

Created Date 2/17/2020, 2:11 PM      Expiration Date 2/17/2021, 4:00 AM

Key Size 2048

**▼ SAML Metadata Discovery Endpoints**

Salesforce Identity	Endpoint URL
Salesforce Identity	<a href="https://ctiadAPTERDEMO-dev-ed.my.salesforce.com/.well-known/samlidp.xml">https://ctiadAPTERDEMO-dev-ed.my.salesforce.com/.well-known/samlidp.xml</a>

## Configure the Identity Provider, Policy, and Role in the AWS Console

Next, you need to configure the identity provider (Salesforce) in the AWS console and provide access to Amazon Connect via IAM policies and roles. This allows AWS to acknowledge Salesforce as the identity provider and to provide users authenticated through Salesforce with the access required to login to Amazon Connect.

### Configure the Identity Provider

1. Login to the [AWS console](#)
2. Open the [AWS identity and Access Management \(IAM\) Console](#)
3. Select **Identity providers**

### Identity and Access Management (IAM)

#### Dashboard

#### ▼ Access management

Groups

Users

Roles

Policies

**Identity providers** 

Account settings

4. Choose **Add Provider**

5. On the Configure Provider screen, select **SAML** as the Provider Type

## Add an Identity provider

### Configure provider

#### Provider type

##### SAML

Establish trust between your AWS account and a SAML 2.0 compatible Identity Provider such as Shibboleth or Active Directory Federation Services.

##### OpenID Connect

Establish trust between your AWS account and Identity Provider services, such as Google or Salesforce.

6. Set the Provider Name to **SalesforceConnect**

7. Import the metadata file you downloaded previously by selecting Choose File and navigating to the downloaded metadata file.

8. Select Next Step

9. Choose Create

10. The Identity provider has been created

### Create the IAM Role and Policy

1. Login to the [AWS console](#)

2. Open the [AWS identity and Access Management \(IAM\) Console](#)

3. Select **Roles**, then choose **Create role**

4. Choose **SAML 2.0 federation**

5. In the SAML provider dropdown, select the provider you just created, which should be named **SalesforceConnect**

6. Select the radio button for **Allow programmatic and AWS Management Console access**. The Attribute and Value fields should auto-populate

# Create role

1

2

3

4

## Select type of trusted entity

 <b>AWS service</b> EC2, Lambda and others	 <b>Another AWS account</b> Belonging to you or 3rd party	 <b>Web identity</b> Cognito or any OpenID provider	 <b>SAML 2.0 federation</b> Your corporate directory
--	---	---	--

Allows users that are federated with SAML 2.0 to assume this role to perform actions in your account. [Learn more](#)

## Choose a SAML 2.0 provider

If you're creating a role for API access, choose an Attribute and then type a Value to include in the role. This restricts access to users with the specified attributes.

SAML provider  ▼

[Create new provider](#) [Refresh](#)

Allow programmatic access only  
 Allow programmatic and AWS Management Console access

Attribute  ▼

Value\*

Condition [+ Add condition \(optional\)](#)

## 7. Select Next: Permissions

8. On the Attach permissions policies page, select **Create policy**. This will open a new browser tab.

9. Choose the **JSON** tab to switch to the JSON editor

10. Replace the existing JSON with the following:

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "Statement1",
            "Effect": "Allow",
            "Action": "connect:GetFederationToken",
            "Resource": [
                "**YOUR ARN**/user/${aws:userid}"
            ]
        }
    ]
}
```

11. Replace **\*\*YOUR ARN\*\*** with the ARN of your Amazon Connect instance. To find your Amazon Connect instance ARN:

12. Open a new tab in your browser and navigate to [Amazon Connect Console](#)
13. Click on the name (alias) of your Amazon Connect instance
14. Copy the Instance ARN and paste it to your computer's notepad (you will use it in a few places)
15. Choose **Review policy**
16. Set the Name to **SalesforceConnectPolicy**
17. Select **Create Policy**
18. Once the Policy has been created, close the tab, go back to the original (Role) tab in your browser and select the **Refresh** button (do not refresh the browser)
19. In the search field, enter **SalesforceConnectPolicy** and select the box to attach the policy.

**Create role**

1    **2**    3    4

▼ Attach permissions policies

Choose one or more policies to attach to your new role.

**Create policy**

Filter policies		Showing 1 result
	Policy name	Used as
<input checked="" type="checkbox"/>	SalesforceConnectPolicy	None

20. Choose **Next: Tags** and set tags if desired, then choose **Next: Review**
21. Name the Role **SalesforceConnectRole** and provide a description if you like
22. Select Create role

## Complete the Base Salesforce Configuration

Next, you need to configure a Connect App in Salesforce and provide further configuration to complete the SAML integration.

### Create the Connected App in Salesforce

1. Log in into your Salesforce org and go to **Setup**
2. In the **Quick Find** field, type **Apps** and select **Build->Create->Apps**
3. Select New Connected App

4. Provide a name for the Connected App, such as **AmazonConnectSAML**, then press tab and the API Name should auto-populate

5. Provide an email contact address

## New Connected App

**Save** **Cancel**

**Basic Information**

Connected App Name	AmazonConnectSAML
API Name	AmazonConnectSAML
Contact Email	dougjaso+ctiadapterdemo@amazon.ci
Contact Phone	
Logo Image URL	<a href="#">Upload logo image or Choose one of our sample logos</a>
Icon URL	<a href="#">Choose one of our sample logos</a>
Info URL	
Description	

6. In the Web App Settings section, choose **Enable SAML**

7. Leave Start URL empty

8. Set Entity Id to the same name that you gave the Identity Provider in the IAM console, which should be **SalesforceConnect**

9. Set ACS URL as <https://signin.aws.amazon.com/saml>

10. Set Subject Type as **Persistent ID**

**Web App Settings**

Start URL	
Enable SAML	<input checked="" type="checkbox"/>
Entity Id	SalesforceConnect
ACS URL	<a href="https://signin.aws.amazon.com/saml">https://signin.aws.amazon.com/saml</a>
Enable Single Logout	<input type="checkbox"/>
Subject Type	Persistent ID
Name ID Format	urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified
Issuer	<a href="https://ctiadapterdemo-dev-ed.my.salesforce.com">https://ctiadapterdemo-dev-ed.my.salesforce.com</a>
IdP Certificate	Default IdP Certificate
Verify Request Signatures	<input type="checkbox"/>
Encrypt SAML Response	<input type="checkbox"/>

11. Choose **Save**. The screen should refresh and the new Connected App should be displayed

12. Scroll down to the **Custom Attributes** section and select **New**

13. Set Key as <https://aws.amazon.com/SAML/Attributes/RoleSessionName>

14. Set Value as **\$User.Email**

15. Select **Save**

## Create Custom Attribute

The screenshot shows a 'Create Custom Attribute' dialog box. The 'Key' field is set to 'https://aws.amazon.com'. The 'Value' field contains '\$User.Email'. There are buttons for 'Insert Field' and 'Insert Operator'. At the bottom are 'Save' and 'Cancel' buttons.

16. Select New again to configure another custom attribute

17. Set Key as <https://aws.amazon.com/SAML/Attributes/Role>

18. The Value is going to be a combination of the Identity Provider and IAM Role ARNs.

a. In a new tab, open the [AWS identity and Access Management \(IAM\) Console](#)

b. On the left navigation, select **Identity providers**

c. Select the Identity provider you created earlier, which should be named **SalesforceConnect**

d. Copy the **Provider ARN** to your computer's notepad

e. Return to the IAM console and select **Roles**

f. Select the Role you created earlier, which should be **SalesforceConnectRole**

g. Copy the **Role ARN** to your computer's notepad

h. Format the combined value as follows:

'Identity Provider ARN' & ',' & 'Role ARN'

i. Paste the formatted value into the Custom Attribute Value

19. Select **Save**

## Create Custom Attribute

Key https://aws.amazon.com

Value

'arn:aws:iam::YOURACCOUNT:saml-provider/SalesforceConnect' & ',' &  
'arn:aws:iam::YOURACCOUNT:role/SalesforceConnectRole'

Insert Field Insert Operator ▾

Save Cancel

20. At the top of the Connected App description, select **Manage**

21. Scroll down to the **SAML login Information** section

22. Copy the **IdP-Initiated Login URL** to your computer's notepad

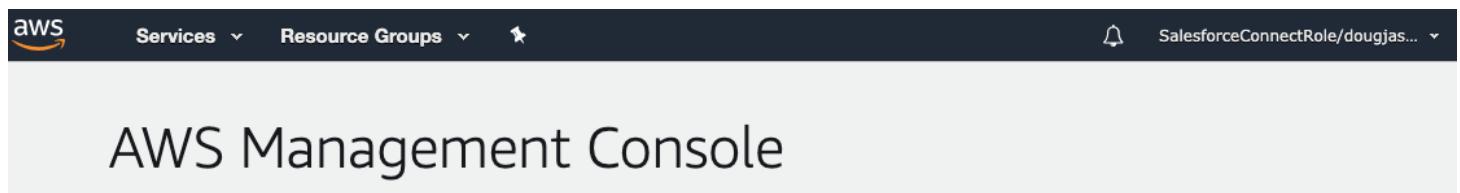
23. Scroll down to find the Profiles section, then select **Manage Profiles**

24. Select a profile from the list, for example System Administrator for testing purposes

25. Choose **Save**

26. Open a new tab in your browser and navigate to IdP-Initiated Login URL that you copied in an earlier step

27. The browser will redirect to AWS Console and log you in automatically as a federated user **Note:** you may be able to see AWS services, but you should have no configuration rights.



28. The Federated Login consists of the Role name and your Salesforce email address.

29. Initial validation is complete

## Complete the Amazon Connect Configuration

The last step in the SAML setup is to add users to Amazon Connect that exist in your Salesforce org, then validate login. It is critical that the usernames for both platforms match exactly.

## Add Users to Amazon Connect

1. In a new browser tab, login to the [AWS console](#)
2. Open the [Amazon Connect Console](#)
3. Select the name (alias) of your Amazon Connect instance
4. Choose **Log in for emergency access**

The screenshot shows the 'Account overview' page for an Amazon Connect instance named 'guidedsetuptest-instance-w3dgh2'. In the 'Access information' section, there is a link to the 'Access URL': <https://guidedsetuptest-instance-w3dgh2.my.connect.aws>. To the right of this, under 'Emergency access', there is a button labeled 'Log in for emergency access' which is highlighted with a red box. Below this button is a warning message in a box: '⚠️ Warning: Use this login method only for emergencies. Do not use for your day-to-day operations.'

5. Within the Amazon Connect administration portal, select **Users** then choose **User Management**
6. Click **Add New Users**
7. Leave **Create and setup a new user** selected and choose **Next**
8. Complete the First and Last name fields as appropriate
9. Set the login name to match the **Email Address** of your Salesforce user
10. Set the **Routing Profile**. In this example, the default Basic Routing Profile is shown
11. Set the **Security Profile**. In this example, *Admin* is shown

## Add new user

The screenshot shows the 'Add user details' step of a three-step process. Step 1 is 'Select source' (done), Step 2 is 'Add user details' (selected), and Step 3 is 'Verify user details'. The user details entered are: First name: Jason, Last name: Douglas, Login name: j+ctiadapterdemo@amazon.com. Below these fields are sections for Routing Profile (Basic Routing Profile selected), Security Profiles (Admin selected), and Phone Type (Soft phone selected, Auto-Accept Call checkbox unchecked). An 'After call work (ACW) timeout' field is also present.

12. Select **Save**

13. Select **Create Users**

14. Repeat this process as required for your staff

## Final Configuration for the Lightning Experience

Now that all of the underlying pieces are in place, the last steps are to create the Amazon Connect Single Sign On URL and validate that it works correctly, then configure the Lightning CTI adapter and login the agent.

### Create the Amazon Connect SSO URL

You create the Amazon Connect SSO URL by combining the IdP-Initiated Login URL that you copied earlier, and a relay state URL that will redirect the authenticated user to your Amazon Connect instance.

The 'RelayState' will be in the following format (replace `us-west-2` with the region you are using):

```
https://us-west-2.console.aws.amazon.com/connect/federate/[object Object]?destination=%2Fconnect%2Fccp
```

1. To begin, format the relay state URL by replacing `Instanceld` with your Instance Id. To find your Amazon Connect Instance Id:

a. Open a new tab in your browser and navigate to the [Amazon Connect Console](#)

b. Click on the name (alias) of your Amazon Connect

c. From the Instance ARN, copy the portion after the '/'. This is the Instance Id

## Distribution settings

### Instance ARN

arn:aws:connect:us-west-2:YOUR-ACCOUNT-ID:instance/YOUR-INSTANCE-ID-XXX-XXXXXXX

- Concatenate the 'IdP-Initiated Login URL' and the 'RelayState', by combining the two with "&RelayState=" in between, for example:

```
https://mXXXXXXrun-dev-ed.my.salesforce.com/idp/login?  
app=0sp0N00000Caid&RelayState=https://us-west-  
2.console.aws.amazon.com/connect/federate/[object Object]?  
destination=%2Fconnect%2Fccp
```

- This is the Final SSO URL, needed for the Amazon Connect Lightning CTI Adapter Configuration.

- To validate this URL:

- Open a new tab in the same browser that you are logged into Salesforce
- Paste the fully concatenated URL into the new browser and press enter
- You should automatically login and be redirected to the Amazon Connect Contact Control Panel.

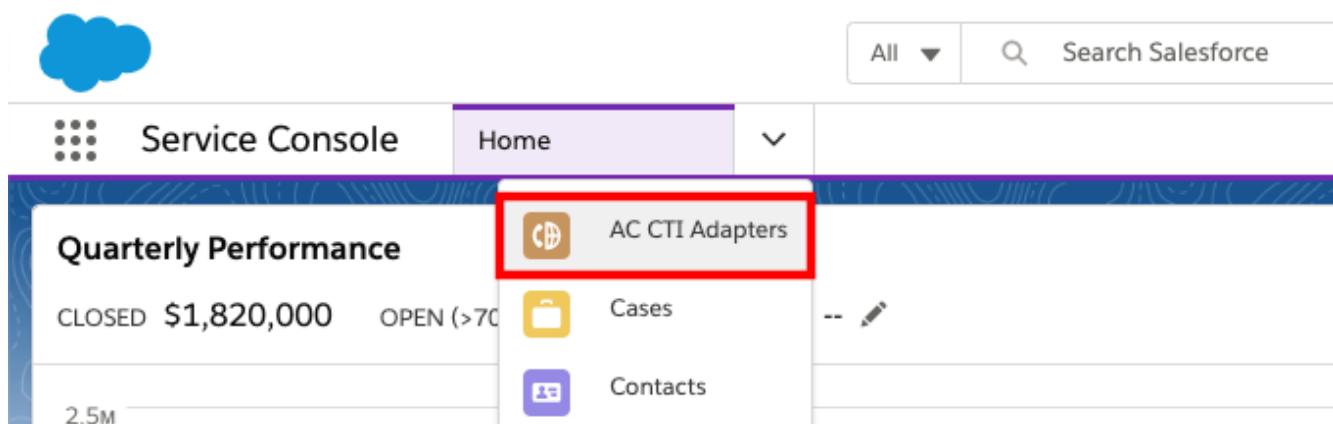
- Once you validate the full URL, you are ready to add it to the Lightning Adapter

## Configure the CTI Lightning Adapter in Salesforce For SSO

Now we are ready to complete the last step in the configuration process: Adding the SSO settings for Salesforce to the Lightning Adapter. This will configure the adapter to authenticate via SSO and redirect to the Amazon Connect Contact Control Panel once authentication completes.

- Log in into your Salesforce org and go to the **Service Console**

- Expand the **navigation menu** by selecting the down arrow and choose **AC CTI Adapters**.



### 3. Select **ACLightningAdapter**

4. Scroll down to the Single SignOn (SSO) section and choose the pencil icon of either field to edit

#### ▼ Single SignOn (SSO)

SSO Url

SSO Relay State



5. For the SSO Url, copy the first part of the SSO URL that you created previously, up to the first question mark (do not copy the question mark), for example:

```
https://mXXXXXXrun-dev-ed.my.salesforce.com/idp/login?  
app=0sp0N00000Caid&RelayState=https://us-west-  
2.console.aws.amazon.com/connect/federate/<b>InstanceId</b>  
destination=%2Fconnect%2Fccp
```

6. Paste this portion of the URL into the **SSO Url** field

#### ▼ Single SignOn (SSO)

SSO Url

https://sample-dev-ed.my.salesforce.com/idp/login

7. For the SSO Relay State, copy everything AFTER the question mark (do not copy the question mark), for example:

```
https://mXXXXXXrun-dev-ed.my.salesforce.com/idp/login?  
app=0sp0N00000Caid&RelayState=https://us-west-  
2.console.aws.amazon.com/connect/federate/<b>InstanceId</b>  
destination=%2Fconnect%2Fccp
```

8. Paste this portion of the URL into the **SSO Relay State** field

#### ▼ Single SignOn (SSO)

SSO Url

https://sample-dev-ed.my.salesforce.com/idp/login

SSO Relay State

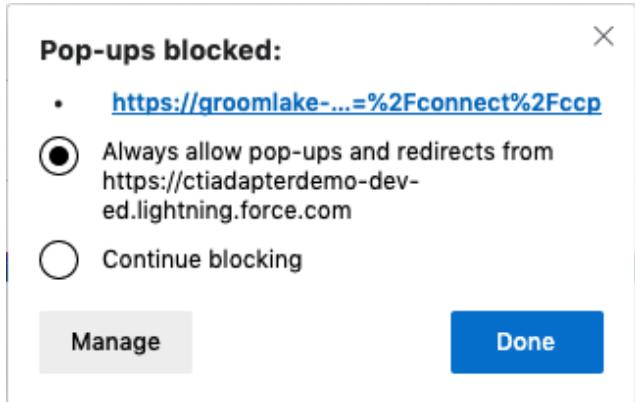
```
app=0sp6g000000XZyd&RelayState=https://us-west-2.console.aws.amazon.com/connect/federate/YOUR-INSTANCE-ID?  
destination=%2Fconnect%2Fccp
```

9. Choose **Save**

Note: With the new Amazon Connect instance urls (`*.my.connect.aws`) you must put the full URL into the `Amazon Connect Instance` field in the AC CTI Adapter record for SSO to work. Ex: using `https://myinstance.my.connect.aws` instead of `my instance`.

10. **Refresh** your browser to make the changes take effect

- a. **NOTE:** If you receive a blocked popup warning, select the warning and change the setting to always allow popups from your Salesforce org, then refresh the browser again



11. Select the **phone icon** in the console toolbar to open the CCP Note: You may also receive popups to allow notifications and microphone access. Please accept both.

12. Click the Sign into CCP button

13. You should now see the authenticated and logged in CCP

ACLightningAdapter | Sale X Lightning

AdapterTest Burner Accounts -...

Service Console AC CTI Adapters

Recently Viewed ▾

1 item · Updated 4 minutes ago

Search this list...

Amazon Connect

Offline

Welcome Jason

Quick connects

Number pad

Amazon Connect History

Configuration is complete

Edit this page

# Appendix C: CTI Flow Examples

This appendix includes samples scripts that provide different functionality depending on the event source.

## Voice Contact Screenpop (Legacy Adapter Support)

**Source:** Amazon Connect Voice Contact

**Event:** onConnecting

[Download](#)

## Chat Contact Screenpop

**Source:** Amazon Connect Chat Contact

**Event:** onConnecting

[Download](#)

## Click-to-Dial

**Source:** Amazon Connect Chat Contact

**Event:** onClickToDial

[Download](#)

## Screen Pop on Customer Phone Number

**Source:** Amazon Connect Voice Contact

**Event:** onConnecting

[Download](#)

## Screen Pop a Case on Contact Attribute Data (if it exists) or Pop a New Case (if it does not)

**Source:** Amazon Connect Voice Contact

**Event:** onConnecting

[Download](#)

## Create a Task (Call Activity) and Pop That Task

**Source:** Amazon Connect Voice Contact

**Event:** onConnecting

[Download](#)

## Screenpop on Customer Email Address (in contact attribute data)

**Source:** Amazon Connect Chat Contact

**Event:** onConnecting

[Download](#)

## Create a Task (Call Activity) and Pop That Task

**Source:** Amazon Connect Chat Contact

**Event:** onConnecting

[Download](#)

## Create a Task (Call Activity) and Pop That Task using CTI Actions

**Source:** CTI Action

**Event:** N/A

[More details](#)

[Download](#)

## Default CTI Flows

The following zip file includes default flows, which are automatically added and activated on new installations of the package. However, if you are upgrading from an earlier version you may need to replace your legacy script with the new flow.

[Download](#)

 [Edit this page](#)

# Appendix D: CTI Flow Blocks

## If-else

Change the flow of your script depending on value of fields you fetch or store. This is a simple "if-else" utility for your flow.

## HTTP Request

Make an HTTP request.

## Get Property

Fetches a property from the local data store. You can access a property you have retrieved from the local store by referring to the return value of this block.

## Get All Properties

Returns all stored properties.

## Format Phone Number

Formats a phone number for a country code.

## Format Phone Number (E164)

Formats a phone number for a country code in E164 format.

## Format a Date object

Returns a formatted date.

## Is Truthy?

This is a utility to branch your flow depending on the truthiness of a value.

## **Set Property**

Assigns a value to a property in the local data store.

## **Log to Console**

Sends a static or dynamic value from an action to a logger.

## **Show Modal**

The command to open modal.

## **Enable Click To Dial?**

The query to determine whether Click to Dial should be enabled.

## **Enable Click To Dial**

The command to enable Click to Dial.

## **Disable Click To Dial**

The command to disable Click to Dial.

## **Get App View Info**

The command to get App View information.

## **Get Softphone Layout**

The query to get softphone layout.

## **Get Agent Workload on Salesforce**

Returns the agent's current workload.

## **Complete High Velocity Sales Work With Task Saved**

This methods allow your CTI implementation to communicate with High Velocity Sales (HVS) to handle HVS work.

## **Refresh View**

The command to refresh the view.

## **Show Softphone Panel**

The command to show softphone panel.

## **Hide Softphone Panel**

The command to hide softphone panel.

## **Set Softphone Panel Height**

The command to set the height of softphone panel.

## **Set Softphone Panel Width**

The command to set the width of softphone panel.

## **Screenpop Object**

The command to open a screenpop with information from object.

## **Screenpop Url**

The command to screenpop a url in a new browser tab or browser window.

## **Screenpop Object Home**

The command to screenpop to an object's home page.

## **Screenpop List**

The command to screenpop a list view.

## **Screenpop Search**

The command to screenpop search results based upon the search input. Not to be confused with "Search And Screenpop."

## **Screenpop New Record**

The command to screenpop to a new record of the specified type with specified default field values.

## **Search And Screenpop**

This command searches objects specified in the softphone layout for a given string. Returns search results and screen pops any matching records. Not to be confused with "Screenpop Search."

## **Run Apex**

The command to run an apex function.

## **Get Agent State from Salesforce**

The command to get an agent's state.

## **Set Agent State on Salesforce**

The command to set an agent's presence state on Salesforce.

## **Login Agent on Salesforce**

The command to login an agent on Salesforce.

## **Logout Agent on Salesforce**

The command to logout an agent on Salesforce.

## **Save (or Create) a Record**

The command to save or create a Salesforce object.

## **Create a Task**

The command to create a Task. (The Subject of the task will be a string made up of upto 3 field values.)

## **Is Contact "Do Not Call"?**

The query to check if the Contact requested not to be called.

## **Dial Number**

The command to dial a phone number or to conference to an endpoint.

## **Mute Agent**

The command to mute the agent.

## **Unmute Agent**

The command to unmute the agent.

## **Get Agent Status from Connect**

The command to get the current presence status of the agent from Connect.

## **Set Agent Status on Connect**

The command to set the current presence status of the agent on Connect.

## **Set Agent Status By Name on Connect**

The command to set the current presence status of the agent on Connect by name of the state.

## **Set Agent as Available on Connect**

The command to set the current state of the agent to "Available."

## **Get Quick Connection List**

Gets the list of quick connects available to the current agent

## **Get Transfer Connection List**

Gets the list of quick connects available to the current agent.

## **Get Endpoint by Phone Number**

Generates and returns an endpoint for a provided phone number.

## **Get Available Agent States**

Gets all of the available agent states including custom states.

## Get Agent Name

Returns the agent's user friendly display name for the agent.

## Get Agent Extension

Returns the phone number that is dialed by Amazon Connect to connect calls to the agent for incoming and outgoing calls, if softphone is not enabled.

## Get Agent Deskphone Number

Returns the phone number that is dialed by Amazon Connect to connect calls to the agent for incoming and outgoing calls, if softphone is not enabled.

## Is Agent Softphone Enabled?

Checks if agent softphone is enabled. Branches in different directions if it is or not.

## Change Agent to Softphone

Changes the current agent to softphone mode.

## Change Agent to Deskphone

Changes the current agent to desktop phone mode with the specified phone number.

## Get Agent Configuration

Returns the phone number that is dialed by Amazon Connect to connect calls to the agent for incoming and outgoing calls, if softphone is not enabled.

## Get Agent Dialable Countries

Returns the list of dialable countries for the current agent.

## Create Task Contact

The command to create a task contact that is sent to the provided quick connect endpoint. The quick connect must be available to any queue the agent has access too.

## **Get Contact Attribute**

The command to get value of an attribute from the contact in the current session.

## **Is Voice Contact?**

The command to determine if the contact is a voice contact.

## **Is Chat Contact?**

The command to determine if the contact is a chat contact.

## **Is Task Contact?**

The command to determine if the contact is an amazon connect task contact.

## **Is Contact Inbound?**

The command to determine if the contact is inbound.

## **Is Contact Transfer?**

The command to determine if the contact is transferred.

## **Is Callback?**

The command to determine if the contact is a queue callback.

## **Get Contact Properties**

The command to get properties of a contact.

## **Get Customer Phone Number**

The command to get customer phone number of a contact.

## **Get Contact Interaction Metadata**

The command to get metadata about a contact interaction.

## **Pop Task Contact's Reference Urls**

The command to pop any reference urls if the contact is a task. Returns the number of urls popped.

## **Query value**

The query to execute an arbitrary SOQL statement and returns the results.

## **Get Salesforce Lead Id**

The command to get a salesforce lead id using a formatted phone number.

## **Open Salesforce Primary Tab**

Opens a new primary tab to display the content of the specified URL.

## **Open Salesforce Sub Tab**

Opens a new subtab (within a primary tab) that displays the content of a specified URL.

## **Get Focused Primary Tab Object Id**

Returns the object ID of the primary tab on which the browser is focused.

## **Get Focused Subtab Object Id**

Returns the object ID of the subtab on which the browser is focused.

## **Call jQuery Method**

Perform a method call on a jQuery selection with your arguments.

## **Replace String**

Perform a .replace() method on an input string.

## **Text Starts With Value**

Checks whether a text input starts with one of the values.

## **Text Ends With Value**

Checks whether a text input ends with one of the values.

## Join Strings

Concatenates 2 values into a string.

## SOQL Query

The query to execute an arbitrary SOQL statement and returns the results.

## Multiply

Multiply two numbers.

## Divide

Divide two numbers.

## Get Tab Object Map

Returns a map of all visible primary tabs and their associated objects (if available).

## Close Salesforce Tab

Closes the Salesforce with a given id.

## Delay

Delays execution for a period of time. (Keep in mind that your flow may be stopped if it runs longer than the maximum allowed execution window of 60 seconds.)

## Get Primary Tab Ids

Returns all of the IDs of open primary tabs.

## Get Tabs With Matching Url

Returns the ids of the primary tabs with the url matching a provided string.

## Length

Returns the length of a value.

## **Slice**

Returns the slice of a value.

## **Cast a Value to a Type**

Cast an input value to a Javascript type, such as Number or String.

## **Get CCP Logs**

The command to get the logs of agent from Connect.

## **Clear All Properties**

Clears all stored properties.

## **Unset Property**

Removes the value assigned to a property in the local data store.

## **Show Attributes**

This command displays the contact attributes in the CCP overlay.

## **Is Task Contact?**

Check if the contact is a task

## **Create Task Contact**

Creating a new task contact with certain inputs.

## **Pop Task Contact's ReferenceUrls**

Pop any reference urls that are related to the task contact

## **Start Recording**

Use the contact recording API to start recording the call.

## **Stop Recording**

Use the contact recording API to stop recording the call.

## Update Contact Attributes

Use the Connect API to update the attributes of the current contact.

## Get Payload

Retrieve the payload of the CTI Flow. (The payload can be configured by CTI Actions.)

## Send Data to CCP Overlay

Send an object to Data panel of CCP Overlay.

## Leave a Voicemail

Use Voicemail drops to leave a voicemail.

## Destroy Agent Connection to Live Contact

Destroys destroy the agent's connection to any live contact that is currently being handled by the CTI Flow. This is being deprecated for contacts in ACW. Use the ClearContact block for Clear ACW functionality.

## Clear Contact

Clears a contact that is no longer being worked on - i.e. it's one of ERROR, ACW, MISSED, REJECTED.

 [Edit this page](#)