App Note 010 - Agent Screen Pops

Abstract
The LiveOps Phone Panel displays information about an incoming call including Caller ID, Campaign Name and Dialed Number. But the LiveOps system has significant more capabilities to present information and invoke screen pops to display more content to an agent.

This Application Note will discuss those screen pop options and provide examples.

Overview of Solution
When using the LiveOps Phone Panel, an incoming call will display basic details about the caller including Caller ID (also called the Automatic Number Identification, or ANI), the Campaign Name that was used to route the call to the agent, and the number that the caller dialed to enter the LiveOps system (called the Dialed Number Identification System, or DNIS).

In addition to this basic information, the LiveOps system has the ability to collect information from the caller using DTMF
digits and query customer databases and Customer Relation Management (CRM) systems to retrieve information. All of this data, plus the menu selections and other Call Flow Attributes can be displayed to the Agent using a screen pop.

Screen pops can come in the form of a simple text display inserted into the Phone Panel itself called a “Quick Pop”:

![Quick Pop](image)

Or they can be references to external web pages used for displaying CRM contacts and other information.

For example, you might collect the caller’s Account Number using the “Collect Digits” Action within a Call Flow, perform a “Data Exchange” lookup into your customer database querying for a match to that Account Number, and retrieving the most recent Case Number. Then, when the call is sent to the next available agent, perform a screen pop by calling your CRM’s Uniform Resource Locator (URL) with the necessary parameters to do a screen pop to display the customer’s Case Information Page.

In the following sections we will discuss these different screen pop options and how to use them and configure them.

**Quick Pop**

Quick Pop is a simple display of text-based call information that can be easily pushed into the Phone Panel Web Application running on an agent’s desktop computer. Quick Pop is documented in “Section 12: Quick Pop” in the “Salesforce Open CTI Phone Panel User Guide” which can be found here:

[https://developer.liveops.com/resources/documentation](https://developer.liveops.com/resources/documentation)

Quick Pop is limited in terms of text space and features; it is not intended as a true screen pop solution. Quick Pop is, however, a useful tool for displaying focused call information to agents as the call is starting.
Quick Pop is implemented by inserting text content, attribute information and other parameters in the “Screen Pop” field of the “On Call” section within the LiveOps Call Flow Authoring tool. To access this section:

1. Login into the LiveOps administration Web Portal for your tenant (with Administrator’s credentials)
2. Navigate to “Routing > Call Flows”
3. Edit an existing Call Flow
4. Select the “On Call” tab

For Quick Pop to function, the content you enter in this field must begin with “?quickPop=”. The text placed after this initial term can contain any standard text characters plus Call Attributes.

Note: The term “quickPop” is case sensitive and must be entered exactly as “?quickPop=” in the Screen Pop field.

Custom Variables and Call Attributes can be inserted by beginning them with a “dollar-sign brace” (“&{”) and ending with a “brace” (”}”). For example, to display the variable “CallType” you would enter: ${CallType}

Note: A plus sign (“+”) can be used to indicate a space character.

“?quickPop=Call Type is ${CallType}” and “?quickPop=Call+Type+is+${CallType}” will produce the same results.

The Quick Pop display area can be closed when it is no longer needed by the agent by clicking on the “X” in the upper right section of the Quick Pop display area.

Note: The Quick Pop information cannot be retrieved once it is closed.
In the following example the Phone Panel would display a Quick Pop containing the Zip Code of the caller and the Forecasted temperature for the day in the caller’s area. The Zip Code could be collected using the “Collect Digits” module and the Max_Temp value could be returned from a REST GET query performed using the weather.gov database.

For example, the following Quick Pop entry will produce the display below:

?quickPop=Call Type is ${CallType} | CaseNumber is ${CaseNo} | Zip ${Zip_Code} | MaxTemp ${Max_Temp}

Note: You can use Quick Pop in both Standard IVR Campaigns and Call Flow Based Campaigns; however, the functionality for Standard Campaigns is limited to simple text and hard coded variables. For Quick Pops using custom attributes, use a Call Flow Based Campaign.

Quick Pop has the following restrictions:

• **String length:** Strings of up to 2,000 characters are supported.

• **No scrolling:** Regardless of the length of data passed to Quick Pop, the display does not scroll.

• **Plain text only:** Quick Pop will not display HTML. It does not support text styling, hyperlinks, etc.

• **No JavaScript:** Quick Pop does not support JavaScript.
Quick Pop does not support embedding \r, \n, \t.

Note: The Quick Pop method is not supported in Engage. Quick Pop only works in Phone Panel.

URL Screen Pops

In conjunction with the delivery of a call to an agent, the Phone Panel receives a call arrival event from the LiveOps cloud-based data center. This event contains the configured screen pop URL (Universal Resource Locator), as well as CTI (Computer Telephony Integration) data and call context data associated with the inbound call.

The Phone Panel uses its containing web browser to launch the screen pop and fetch the URL, passing call information as fetch parameters. This browser-based URL fetch can be used in a variety of different scenarios, based on the type of client application and parameters that control the style of screen pop.

There are three different URL Screen Pop methods and behaviors that can be configured.

Screen Pop in a New Window (or Browser Tab)

Each call arrival can bring up a new browser window. This window is used to load the contents of the screen pop URL, generally fetched from a client-hosted web server. Call context information is passed within the URL request, allowing the client application to customize the served content displayed to the agent.
Screen Pop in the Same Window (or Browser Tab)

Each call arrival can invoke a screen pop into the same browser window. On first call, a new browser window is created to load the initial screen pop content. Subsequent calls will invoke a screen pop within the existing window.

Blind Pop

A third option allows each call arrival to fetch the screen URL without displaying the contents (known as an "invisible" or "blind" pop). This is generally used to notify a client-hosted web service of call arrival. This service can then drive a web or native desktop application, essentially routing the notification event from agent workstation to a back-end web service and back to the agent workstation.

This method will not be discussed in this Application Note.
Screen Pop Parameters

As the Contact Center Administrator, you enter Screen Pop URL information in the “Screen Pop” field within the “On Call” tab while editing a Call Flow using the Call Flow Authoring tool.

For example, you might enter https://www.google.com.

Upon receiving a new call, the Phone Panel will launch the specific website in a new browser window.

You will notice that the actual URL that is launched contains far more information than just https://www.google.com. In fact, the Phone Panel appends all Call Variables including system variables and any custom or Call Flow attributes that
have “Use to present a screen pop” checked.

The parameters sent with the URL include basic call information and all call-related attributes.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>MastID</td>
<td>The session identifier of the delivered call.</td>
</tr>
<tr>
<td>ANI</td>
<td>The caller's phone number as provided by the inbound telecom carrier.</td>
</tr>
<tr>
<td>ProductPhone</td>
<td>The dialed number as provided by the inbound telecom carrier.</td>
</tr>
<tr>
<td>campaign_id</td>
<td>The identifier of the Campaign based on which the call was delivered.</td>
</tr>
<tr>
<td>Attrib=Value, …</td>
<td>Call Attributes are sent in “name-value pairs”.</td>
</tr>
</tbody>
</table>

In the Google example above, the complete URL is:
In this example, the site www.google.com completely ignores the extra content in the URL. You would normally substitute your Customer Relations Management (CRM) URL in place of the Google URL.

It is important to note that it is the responsibility of the destination web server to be able to receive this data, parse through it for fields that are of use and to display the content properly to the agent. The LiveOps Screen Pop will send the data to your CRM … but it is up to your CRM/Web Server to parse, extract, interpret, query and display the proper information.

Note: If your CRM is unable to receive this verbose information, the LiveOps Professional Service team can provide custom code to filter out and send only the parameters that your CRM needs in order to perform a proper lookup or query to present information to the agent. Please contact your Professional Services Representative for more details.

Browser Window Behavior

When using Phone Panel, the default window behavior for a screen pop is to pop open a new window with each incoming call.

Note: Depending on the Browser and Operating system, opening a “New Window” can often result in opening a new tab within a previously open window. In this Application Note we will use the term “Tab” to mean either a new Window (when no windows has previously been opened) or to mean a new Tab within a pre-existing Window of the Browser.
There are several parameters that you can adjust to modify the behavior of the screen pop. These include:

- `popType=browser-new`
- `windowname=CustomWindowNameHere`
- `wc_menubar=0`
- `wc_resizeable=1`

The effect of these parameters is described below.

All parameters are case sensitive and must be entered exactly as shown (with the exception of "CustomWindowNameHere").

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>popType=browser-new</td>
<td>First Pop: New Tab</td>
<td>Adding this parameter will cause the screen pop to open a new browser window (or tab) for the first screen pop and to open a new window (or tab) for all subsequent screen pops.</td>
</tr>
<tr>
<td></td>
<td>Next Pop: New Tab</td>
<td></td>
</tr>
<tr>
<td>windowname=CustomName</td>
<td>First Pop: New Tab</td>
<td>This parameter is used in conjunction with the “popType=browser-new” parameter. Adding this parameter will cause the screen pop to reuse the same window (tab). The name specified is not displayed but is used as a window identifier so the Phone Panel can find and reuse the window.</td>
</tr>
<tr>
<td></td>
<td>Next Pop: Same Tab</td>
<td></td>
</tr>
</tbody>
</table>

This is the default behavior for Phone Panel.
First Pop: New Window
Next Pop: Same Window

wc_menubar=0

This parameter is used in conjunction with the "popType=browser-new" parameter. Adding this parameter will cause the screen pop to appear in a “Modal” window with no menu bar. This parameter is meant to be combined with the “windowname” parameter so that a new window (not a tab) is opened and reused each time.

wc_resizeable=1

N/A

This parameter is used in conjunction with the "popType=browser-new" parameter. Adding this parameter will cause the screen pop to appear in a window that may (=1) or may not (=0) be resizable.

Note: Not all browsers support this parameter.

popType=browser-popapp

N/A

Alternative method of popping windows.

Not discussed in this AppNote

popType=browser-

N/A

Alternative method of popping windows.

postmessage

Not discussed in this AppNote
These parameters can be appended to the URL string directly in the Screen Pop field or they can be set as Call Flow Attributes, either dynamically or statically.

You can add parameters directly in the Screen Pop field by appending each parameter using an ampersand prefix. For example, to add the “popType=browser-new” and “windowname=OpenedByLiveOps” you would enter the following:

https://www.YOURCRM.com?popType=browser-new&windowname=OpenedByLiveOps

Alternatively, to add those same parameters using Call Flow Attributes you would do the following:

1. Edit your Call Flow

2. Navigate to the “Attributes” tab and add a new Attribute for “popType”

   a. Attribute Identifier must match the parameter name exactly
b. Data Type is String

c. Default Value should match the parameter setting exactly

d. Be sure to check “Use to present a screen pop”

3. Add another Attribute for “windowname”. You can set the Default Value to any string you want.

4. When finished you should have two new Attributes like the following:

5. Navigate to the “On Call” tab

6. Enter “https://www.YOURCRM.com” in the “Screen Pop” field
Examples of Browser Window Behavior

For testing we will use https://www.google.com as the URL entered into the Screen Pop field. This is a simple way to test the screen pop features because Google simply ignores the extra parameters that are sent by the LiveOps system. This allows us to test the screen pop without having to worry about managing the parsing and querying of the call parameters that a real CRM application would need to do.

For these examples and tests we included the additional parameters directly into the Screen Pop field so they can be easily seen.

Phone Panel Test Environment

Firefox 25 for the Mac using Phone Panel 3.0.43

1) Screen Pop Content: https://www.google.com

Result:
First Call = New browser tab is opened
Second Call = New browser tab is opened every time

2. Screen Pop Content: https://www.google.com?popType=browser-new

Result:
First Call = New browser tab is opened
Second Call = New browser tab is opened every time
Note: This is the default behavior for Phone Panel (as seen in Phone Panel Test 1)

3) Screen Pop Content: https://www.google.com?popType=browser-new&windowname=NEW

Result:

First Call  = New browser tab is opened

Second Call = Existing tab is reused

Note: The name “NEW” is not displayed. It is only used as an internal Window/Tab identifier.

Note: By specifying a “windowname,” the browser window (or tab) that LiveOps opens becomes “sticky” and will be reused over and over again. Even if the agent uses that tab to browse to another URL, when the next call comes in, that same tab will be re-used again.

4) Screen Pop: https://www.google.com?popType=browser-new&windowname=NEW&wc_menubar=0

Result:

First Call  = New “menu-less” browser window is opened

Second Call = Existing menu-less window is reused

Note: The menu-less window will look similar to the following:
Note: When the screen pop is invoked, it is invoked in the same browser that was used to launch Phone Panel. The “Default Browser” setting within your operating system has no effect. For example, if you open Phone Panel in Firefox on a Mac all screen pops invoked by Phone Panel will be done using the same browser: Firefox on the Mac.

Screen Pops in LiveOps Engage

The multichannel agent tool called LiveOps Engage also uses the “Screen Pop” field to invoke screen pops.

Whereas the default screen pop behavior for Phone Panel is “a new window/Tab every time” the default behavior for LiveOps Engage is “a new, menu-less window that is reused on subsequent screen pops”.

Whereas Phone Panel’s screen pop behavior can be adjusted using the parameters described above, LiveOps Engage’s screen pop behavior cannot be adjusted. The presence or absence of the parameters described above have no effect on the screen pop that is created by Engage. It always opens “a new, menu-less window that is reused on subsequent screen pops”.

Note: The Quick Pop method is not supported in Engage. Quick Pop only works in Phone Panel.

Engage Test Environment

Firefox 25 for the Mac using Engage Version 5.4.1a9 Build 5.4.1.38

Screen Pop Content: https://www.google.com?popType=browser-new&windowname=NEW&wc_menubar=0
Result:  
First Call = New “menu-less” browser window is opened

Second Call = Existing “menu-less” browser window is reused

Note: This is the default behavior for Engage

Note: This is the only behavior supported in Engage. Parameter settings have no effect.

Note: The browser window (or tab) that LiveOps Engage opens becomes “sticky” and will be reused over and over again. Even if the agent uses that tab to browse to another URL, when the next call comes in, that same tab will be re-used again.

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**Screen Pops for Outbound Calls**

If you enable an inbound Campaign to be used for Outbound Calling, the “Screen Pop” field is honored and will be invoked. The screen pop will be invoked when entering a number manually as well as when using the Salesforce.com Click-to-Call feature. The only requirement is that you select an “Inbound Campaign” that has been enabled for Outbound use.

Selecting an “Outbound Campaign” will not perform a screen pop as Outbound Campaigns do not use the Call Flow Authoring tool and therefore do not have a “Screen Pop” field.

Note: Screen pops are invoked for outbound dials when using Phone Panel but not when using Engage.
Additional Resources

• For more information on other Screen Pop programming methods such as “popType=browser-popapp”, “popType=iframe-blind”, etc. please consult your LiveOps Professional Service Representative.

• Quick Pop is documented in Section “12: Quick Pop” in the “Salesforce Open CTI Phone Panel User Guide” which can be found here: [https://developer.liveops.com/resources/documentation](https://developer.liveops.com/resources/documentation).

• Salesforce.com Screen Pops are documented in Section “13. Salesforce Screen Pops” in the “Salesforce Open CTI Phone Panel User Guide” which can be found here: [https://developer.liveops.com/resources/documentation](https://developer.liveops.com/resources/documentation).

• LiveOps Desktop Integration API Guide.

Version Information

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<th>Date</th>
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<th>Contributor</th>
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<tr>
<td>BRT</td>
<td>1.0</td>
<td>Rick Elliott</td>
<td>Internal Programming Documentation</td>
</tr>
<tr>
<td>December, 2013</td>
<td>2.0</td>
<td>Jefferson M. Rowley</td>
<td>Initial AppNote with updated and revised content</td>
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