



IGNW

Integrating Cisco Jabber with Daylite

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Overview

Project Overview

This project was the collaboration with all parties below to create a custom integration. IGNW put together a POC for IOSExpert to show them how the integration could be done using Jabber and an HTML Web Page using Javascript libraries embedded by Cisco in the Jabber Client.

Purpose of this Document

This document is intended to provide enough information for LANetworks or the Customer to support themselves after IGNW has disengaged from the project.

Technical Overview

Within each Jabber Client is a Javascript Library that allows access to real time call detail information for the logged in Jabber Client. This library is accessed by creating a Custom Tab within Jabber and pointing Jabber at an HTML file. This HTML file contains Javascript that can interact with the Inbound Call Detail information and pass data to the Daylite CRM product.

This Custom Tab was tested on Mac, Windows, iOS and likely works on Android Devices as well. The custom integration may not work on all platforms though.

The solution does NOT work with Cisco Expressway. Due to this fact, all clients must be on either the AGBO Internal Network or connected to the AGBO network via a VPN client.

In addition, the Solution must only be installed on PC / Devices that have the Daylite client installed. See the section [Error that Occurs when the host is not set up correctly](#) to see what happens if it is not installed.

Due to the above error as of March 2020, AGBO will be deploying the solution manually rather than using the centralized deployment method as documented below.

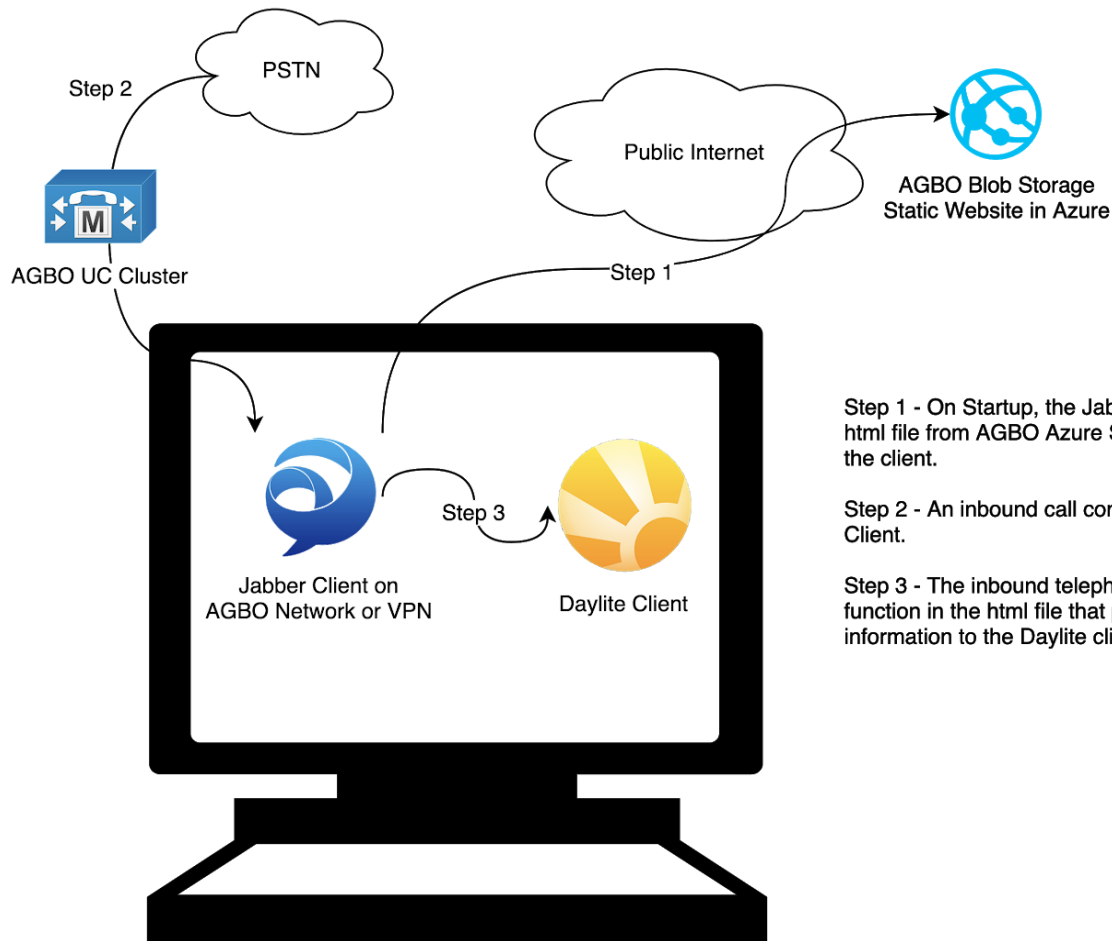
Once the customer upgrades to UCM 12.5 or later, there is a way to have custom jabber profiles per user. That is also documented below ([Multiple jabber-config.xml Profiles](#)).

Involved Parties

The following parties were involved in this Project.

- IGNW is the SME on the project with knowledge of how to integrate external apps with CUCM and Jabber
 - Jon Schnelz - Mgmt Point of Contact - jons@ignw.io
 - Joe Jacobs - Jabber Integration SME - joej@ignw.io
- LANetworks is the VAR supporting the CUCM Deployment for AGBO
 - Vitaliy Greben - Jabber SME with LANetworks - vgreben@la-networks.com
- IOSExpert - Developers of the Daylite CRM Tool looking at providing an integration between CUCM and their Daylite Application
 - Richard Rohleder - richard.rohleder@iosxpert.biz
 - Eric Nelles - eric.nelles@iosxpert.biz
- AGBO is the customer seeking to get call details into the Daylite CRM application when inbound calls are received.
 - Dustin Bodily - VP of Technology - dbodily@agbo.com

Diagram of the Solution




Step 1 - On Startup, the Jabber Application Downloads static html file from AGBO Azure Storage. This is in the Custom Tab in the client.

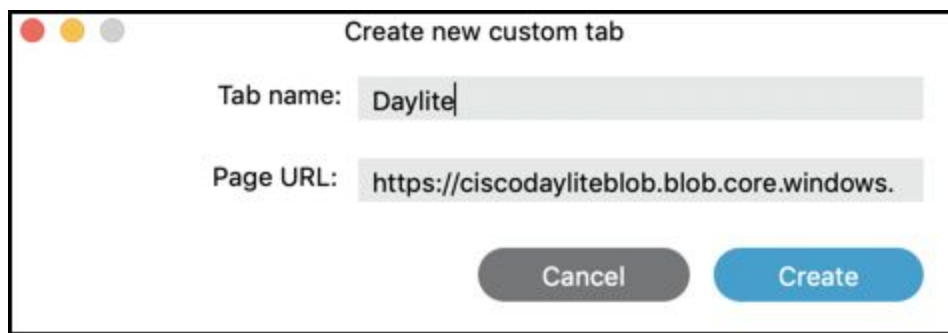
Step 2 - An inbound call comes in from the PSTN to the Jabber Client.

Step 3 - The inbound telephone call executes a Javascript function in the html file that passes the needed Call Detail information to the Daylite client installed on the PC.

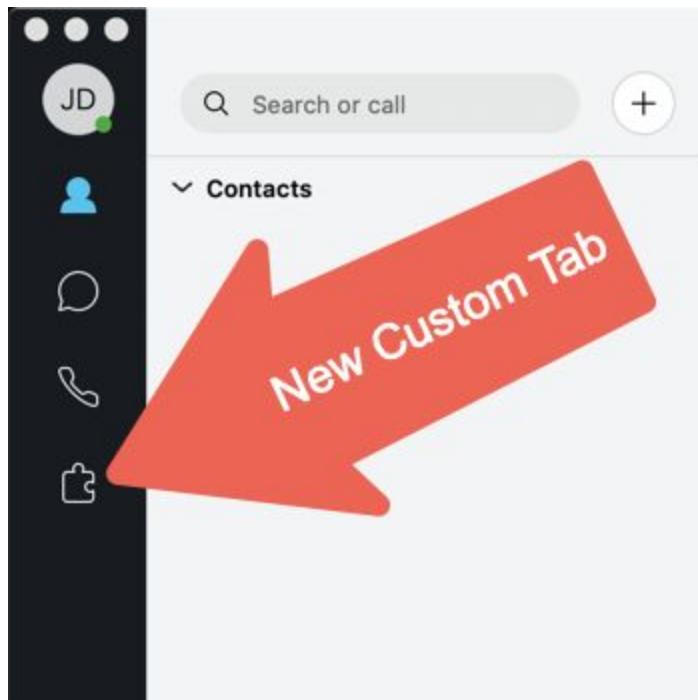
Configuring Jabber Client Manually

In order to create the Custom Tab on each client perform the following:

- Launch the Jabber Client
- Select **File -> New Custom Tab**
- Enter the following information
 - Tab name: Daylite
 - Page URL: [https://ciscodayliteblob.blob.core.windows.net/\\$web/Cisco_DL_modified.html](https://ciscodayliteblob.blob.core.windows.net/$web/Cisco_DL_modified.html)
- Click the  button to create the custom tab



- Your Jabber Client will have a new tab as per the picture below



Centrally Configuring Custom Tab

This section covers how to centrally deploy the Custom Tab. There is only one option with UCM 11.6 which AGBO was on at the time of this document, which is deploying a **jabber-config.xml** file. Due to the error caused when the Daylite client is not installed (see [Error that Occurs when the host is not set up correctly](#)) the customer is going to manually deploy the client at this time to approximately 40 end points.

Single jabber-config.xml File

With UCM11.6 the method to centrally configure all Jabber clients is via a **jabber-config.xml** file installed on the UCM TFTP server. To upload the configure the file (see [File for AGBO](#)) to the UCM, follow the following steps.

Upload the File to the TFTP Server




- Download the **jabber-config.xml** file from GitHub or create it on your local computer using the contents in the section below.
- Log into the CUCM OS Admin Page (<https://<IP or Hostname of CUCM>/cmplatform/>)
- Navigate to **Software Upgrades -> TFTP File Management**
- Click
- Click the button and navigate on your local machine to select the **jabber-config.xml** file
- Leave the **Directory** field blank. This will upload the file to the root of the TFTP server which is where it is needed

The screenshot shows a web-based dialog box titled "Upload File". At the top, there are two buttons: "Upload File" and "Close". Below this is a "Status" section with an information icon and the text "Status: Ready". The main section is titled "Upload File" and contains an "Upload File" button, a "Browse..." button, and a text field containing the filename "jabber-config.xml". Below the filename is a "Directory" label and an empty text input field. At the bottom of the dialog are two buttons: "Upload File" and "Close".

- Click the button to upload the file to the server

Restart the TFTP Server

The TFTP Service needs to be restarted for the file to be delivered properly after it's uploaded to the server.

- Navigate to the CUCM Serviceability page and log in (<https://<IP or Hostname of CUCM>/ccmservice/>)
- Navigate to **Tools -> Control Center - Feature Services**
- Select the CUCM Publisher from the drop down (or whichever server is hosting the TFTP Server)
- Click 
- Click the radio button next to **Cisco Tftp** in the **CM Services** section
- Click the  to restart the service
- Click the  to confirm you want to restart the service
- Wait for the page to reload (a couple of minutes)
- Verify the service shows it was restarted recently

Service	Status	Mode	Last Restarted	Age
Cisco Dialed Number Analyzer Server	Started	Activated	Tue Dec 10 22:20:14 2019	103 days 13:21:40
Cisco Dialed Number Analyzer	Started	Activated	Tue Dec 10 22:25:24 2019	103 days 13:04:30
Cisco Tftp	Started	Activated	Mon Mar 23 12:29:45 2020	0 days 00:00:09

Validate the File is Present

The easiest way is from the web browser used to access the Admin Web Portal. The call manager exposes the TFTP file server as an HTTP server on a specific port.




- Navigate to <http://<IP or Hostname of CUCM>:6970/jabber-config.xml>
- Verify the contents of the file you uploaded are what is displayed in the browser

Multiple jabber-config.xml Profiles

With UC12.5 and later, Cisco added the feature to create the jabber-config.xml configuration inside the CUCM WebAdmin portal. This configuration can be applied to UC Service Profiles that are then assigned to users. This section covers how to set it up.

Create UC Service

NOTE: This document the **jabber-config.xml** file does not exist in the TFTP server.

- Log into the CUCM Admin Portal (<https://<IP or Hostname of CUCM>/ccmadmin/showHome.do>)
- Navigate to **User Management -> User Settings -> UC Service**
- Click 
- Select **Jabber Client Configuration (jabber-config.xml)** from the drop down
- Click the  button
- Fill out the following fields:
 - Name: Jabber with Daylite
 - Description: Jabber Endpoint Config for Daylite Integration
 - Jabber Configuration Parameters
 - Top Section
 - Options
 - AllowUserCustomTabs
 - true
 - Click on **Add Custom**
 - Options
 - Type in **ShowTabLabel**
 - true
 - Bottom Section
 - Client (In the bottom of the 2 config parameters)
 - jabber-plugin-config
 - browser-plugin-v2
 - page
 - Icon: [https://ciscodayliteblob.blob.core.windows.net/\\$web/io_icon.png](https://ciscodayliteblob.blob.core.windows.net/$web/io_icon.png)
 - Preload: true
 - Internal: true
 - Refresh: true
 - URL: [https://ciscodayliteblob.blob.core.windows.net/\\$web/Cisco_DL_modified.html](https://ciscodayliteblob.blob.core.windows.net/$web/Cisco_DL_modified.html)
 - Tooltip: Daylite
- Click the  button to save the UC Service
- See the next page for an screen shot of the completed form

Filled out Jabber Client Config Form

UC Service Information					
UC Service Type: Jabber Client Configuration (jabber-config.xml)					
Product Type: Jabber					
Name*		Jabber with Daylite			
Description		Jabber Endpoint Config for Daylite Integration			

Jabber Configuration Parameters					
Section	Parameter	Parameter Description	Value	Operations	
Options	AllowUserCustomTabs	Allows user create custom embedded tabs	true	Delete	
Options	ShowTabLabel		true	Delete	
-- Not Selected --	-- Not Selected --			Add Add Custom	

Section	Parameter	Parameter Description	Value	Operations	
Client	Jabber-plugin-config	browser-plugin-v2	page	Delete	
	icon	Icon	https://ciscodayliteblo		
	preload	Preload	true		
	internal	Internal	true		
	refresh	Refresh	true		
	uri	URL	https://ciscodayliteblo		
	tooltip	Tooltip	Daylite		
-- Not Selected --	-- Not Selected --	-- Not Selected --	-- Not Selected --	Delete Add	

Create New Service Profile

This will create a new Service Profile for use by users who need the tab. There is no copy procedure for Service Profiles. So look at the default Service Profile and copy all the current settings to a new one.

- Navigate to **User Management -> User Settings -> Service Profiles**
- Click on the default Service Profile, note all the settings
- Click on **Add New** at the bottom
- Add a Name and Description for the new Service Profile
 - Name: **Jabber with Daylite**
 - Description: **Jabber with Daylite**
- Put all the settings from the default into the Service Profile
- At the very bottom, under **Jabber Client Configuration**
 - Common: **Jabber with Daylite**
- Click **Save**

Update User

Now that you have a Service Profile, you need to update your Jabber user(s) to use it.

NOTE: You could also do this for multiple users in the Bulk Administration section or using a Python Script using the Zeep Library.

- Navigate to **User Management -> End User**
- Click on a user to update
- Scroll down to the **Service Settings** section
- Update the UC Service Profile to **Jabber with Daylite**

- Click on the  **Save** button

Update the Jabber Client

The next time the client logs in the new tab should show up. If they are already logged in and want to get the tab or the tab doesn't show up after a restart.

- Make sure Jabber is logged in
- Select **Help -> Refresh Configuration** and force jabber to get the new config file.

NOTE: If you are trying to remove a tab and the changes are not being recognized, you may need to log the user off, reset the Jabber client, and reconfigure the jabber client.

Useful Links

Cisco Documents

All Jabber Documents

<https://www.cisco.com/c/en/us/support/unified-communications/jabber-windows/products-installation-guides-list.html>

Jabber On Premises Deployment Guide for Jabber 12.8 - Client Configuration Section

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/jabber/12_8/cjab_b_deploy-jabber-on-premises-128/cjab_b_deploy-jabber-on-premises-128_chapter_01111.html

Jabber 12.8 Parameters Reference Guide - List of all the options for the **jabber-config.xml** file

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/jabber/12_8/cjab_b_parameter-reference-guide-jabber-128.html

Jabber 12.8 Feature Guide - Custom Embedded Tabs

- Instructions on setting up custom tabs
- Specs for creating the icon if desired
- Information on the Javascript functions in the Custom Tabs

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/jabber/12_8/cjab_b_feature-configuration-for-jabber-128/cjab_b_feature-configuration-for-jabber-128_chapter_0101.html?bookSearch=true

GitHub

IGNW Deliverables in GitHub

https://github.com/IGNW/la_networks

jabber-config.xml file

https://github.com/IGNW/la_networks/blob/master/daylite/jabber-config.xml

Technical Examples and links to technical docs

https://github.com/IGNW/la_networks/tree/master/daylite

Azure

URL for the File in Daylites Blob Storage

[https://ciscodayliteblob.blob.core.windows.net/\\$web/Cisco_DL_modified.html](https://ciscodayliteblob.blob.core.windows.net/$web/Cisco_DL_modified.html)

Sample Config File from IGNW Lab

This is a sample file used in the IGNW lab. The **jabber-plugin-config** section adds a custom tab to the jabber client that when clicked on, opens the Cisco.com URL. This is just an example config. The purpose is to show how the XML file is built with options from each section of the config file.

```
<config version="1.0">
  <Client>
    <PrtLogServerUrl>http://server_name:port/path/prt_script.php</PrtLogServerUrl>
    <jabber-plugin-config>
      <browser-plugin>
        <page refresh="true" preload="true">
          <tooltip>Cisco</tooltip>
          <icon>http://www.cisco.com/web/fw/i/logo.gif</icon>
          <url>www.cisco.com</url>
        </page>
      </browser-plugin>
    </jabber-plugin-config>
  </Client>
  <Options>
    <Set_Status_Inactive_Timeout>20</Set_Status_Inactive_Timeout>
    <StartCallWithVideo>>false</StartCallWithVideo>
  </Options>
  <Policies>
    <Disallowed_File_Transfer_Types>.exe;.msi</Disallowed_File_Transfer_Types>
  </Policies>
  <Directory>
    <PrimaryServerName>dir.example.com</PrimaryServerName>
    <SearchBase1>ou=staff,dc=example,dc=com</SearchBase1>
    <ConnectionUsername>ad_jabber_access@example.com</ConnectionUsername>
    <ConnectionPassword>Jabber</ConnectionPassword>
    <PhotoUriSubstitutionEnabled>True</PhotoUriSubstitutionEnabled>
    <PhotoUriSubstitutionToken>SAMAccountName</PhotoUriSubstitutionToken>
    <PhotoUriWithToken>http://example.com/phto/SAMAccountName.jpg</PhotoUriWithToken>
  </Directory>
</config>
```

File for AGBO

The following file could be used in the AGBO CUCM. The pros is it would deploy the Custom Tab to every user. The down side is it would deploy the Custom Tab to every user.

If the supporting applications from Daylite are not installed on the host machine, then an error will pop up. See the section [Error that Occurs when the host is not set up correctly](#) for more details.

```
<?xml version="1.0" encoding="utf-8"?>
<config version="1.0">
  <Client>
    <jabber-plugin-config>
      <browser-plugin>
        <page refresh="true" preload="true">
          <tooltip>Daylite</tooltip>
        </page>
      </browser-plugin>
    </jabber-plugin-config>
  </Client>
  <Options>
    <AllowUserCustomTabs>true</AllowUserCustomTabs>
    <ShowTabLabel>true</ShowTabLabel>
  </Options>
</config>
```

The above file can also be found in the GitHub Repo:

https://github.com/IGNW/la_networks/blob/master/daylite/jabber-config.xml

Error that Occurs when the host is not set up correctly

