



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Sabio CRM Integration from Sabio Ltd with Avaya Aura® Contact Center R6.4 and Avaya Aura® Communication Manager R6.3 - Issue 1.0

Abstract

These Application Notes describe the configuration steps necessary for provisioning Sabio CRM Integration to successfully interoperate with Avaya Aura® Contact Center R6.4 and Avaya Aura® Communication Manager R6.3. Sabio CRM Integration is middleware between a Computer Relationship Management (CRM) system and the Avaya Aura® Contact Center.

Readers should pay particular attention to the scope of testing as outlined in Section 2.1, as well as observations noted in Section 2.2 to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps necessary for provisioning Sabio CRM Integration from Sabio Ltd to successfully interoperate with Avaya Aura® Contact Center R6.4 and Avaya Aura® Communication Manager R6.3.

Sabio CRM Integration is a solution from Sabio Ltd capable of providing a link between a Computer Relationship Management (CRM) system and the Avaya Aura® Contact Center specifically the Open Queue Interface. The Sabio CRM Integration solution allows requests made from a CRM solution to be passed into Avaya Aura® Contact Center using the Open Queue Application Programming Interface (API). This request or work item is then queued to an agent using Avaya Aura® Contact Center skill based routing. Once this interaction is answered by an Agent a screen pop is presented to the agents desktop PC.

Sabio CRM Integration consists of two modules that interact with each other for this solution, and connect into Avaya Aura® Contact Center as follows:

1. The Sabio CRM Integration server connects to Avaya Aura® Contact Center Open Queue Interface.
2. The Sabio CRM Client installed on each agent PC utilizing a connection to the Communication Control Toolkit (CCT) module on Avaya Aura® Contact Center in order to monitor events from the agent's phone set. Once an interaction is answered on the Avaya Aura® Agent Desktop (AAAD) an event is sent to Sabio CRM Client that tells it to pop the screen.
3. The Sabio CRM Client also facilitates a 'Click to Call' option for agents allowing an agent to make a call back to a customer by clicking a button on the agent desktop application.

Open Queue refers to the ability of an external application to queue contacts in the Avaya Aura® Contact Center. Open Queue is a web service hosted on the Contact Center Manager Server (CCMS) module of the Contact Center and requires that the Open Queue Open Interface feature is enabled on the CCMS server.

The Open Queue Open Interface is a SOA-modelled API that allows external applications to queue third-party contact types into the Contact Center to be routed to skilled, idle agents.

This licensed service is hosted on the CCMS server and is an optional feature of a Contact Center installation. The Open Interface can be optionally configured for secure access using SSL. Customers authenticate themselves with the Web service using a default user and a configurable password. Once authenticated, applications have the ability to:

- Create an Open Queue contact with intrinsic data.
- Query Open Queue contacts created.
- Drop Open Queue contacts created.
- Listen for the status of a Contact Center Multimedia provider.

2. General Test Approach and Test Results

There was no CRM system provided by Sabio Ltd for compliance testing, instead a test program called “SOAP UI” provided by Sabio which was used as a “Test Harness”. The SOAP UI generated work items that passed to the Open Queue interface on Contact Center. This mimicked a user requesting an agent’s assistance and allowed the creation of an Open Queue contact with intrinsic data.

There was no CRM present to show a useful screen pop so instead of popping a screen with information on the caller a google search page was popped with the information gathered displayed in the ‘Search Window’. An example of this can be seen in **Section 9.2.1**.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member’s solution.

2.1. Interoperability Compliance Testing

This interoperability compliance test plan focuses on the monitoring incoming calls to the Open Queue Default Skillset presented to the Contact Center Agent on Avaya Aura® Agent Desktop (AAAD) and the resulting screen pop presented to the agent who answered the skillset call. Compliance testing focused on the following call types.

- Simulated requests made to the Open Queue Web Services.
- Simulated “Click to Call” calls made to the PSTN.

Compliance testing focused on observing Screen Pops under the following conditions.

- Screen pop observation for incoming call to an agent.
- Screen pop observation for agent busy/alternate destination routing.
- Screen pop observation for “No answer” by Agent (timeout).
- Screen pop observation for blind/attended transfer to agent.
- Screen pop observation for personal call.
- Screen pop observation for blind/attended transfer to supervisor.

Compliance testing focused on the following Failover testing.

- Temporary loss and re-establishment of network connectivity to both the Sabio CRM Integration server and the Avaya Aura® Contact Centre server.
- Temporary loss and re-establishment of CCT services, (simulated power issue).

2.2. Test Results

Basic test cases involving calls being offered directly to the phone set passed successfully, however the following observations were noted during testing:

1. When the CCT module is shut down and restarted it is also necessary to restart CCMS in order to reconnect to Open Queue Web Services.
2. When an agent is not logged in, the work item or Open Queue contact is not queued; so when the agent logs in, the work item is not presented). This is because the default Contact Center routing workflow for Open Queue items discards items in this case – it is suggested that a customized workflow should be used which is implemented based on customer specific scenarios.

2.3. Support

The following is the contact information for Sabio:

Tel +44 (0) 141 2228888

Web www.sabio.co.uk

Email support@sabio.co.uk

3. Reference Configuration

The configuration in **Figure 1** was used to compliance test Sabio CRM Integration with Contact Center. The Sabio CRM Integration Server running on a windows 2008 R2 operating system and an agent PC running Sabio CRM Client.

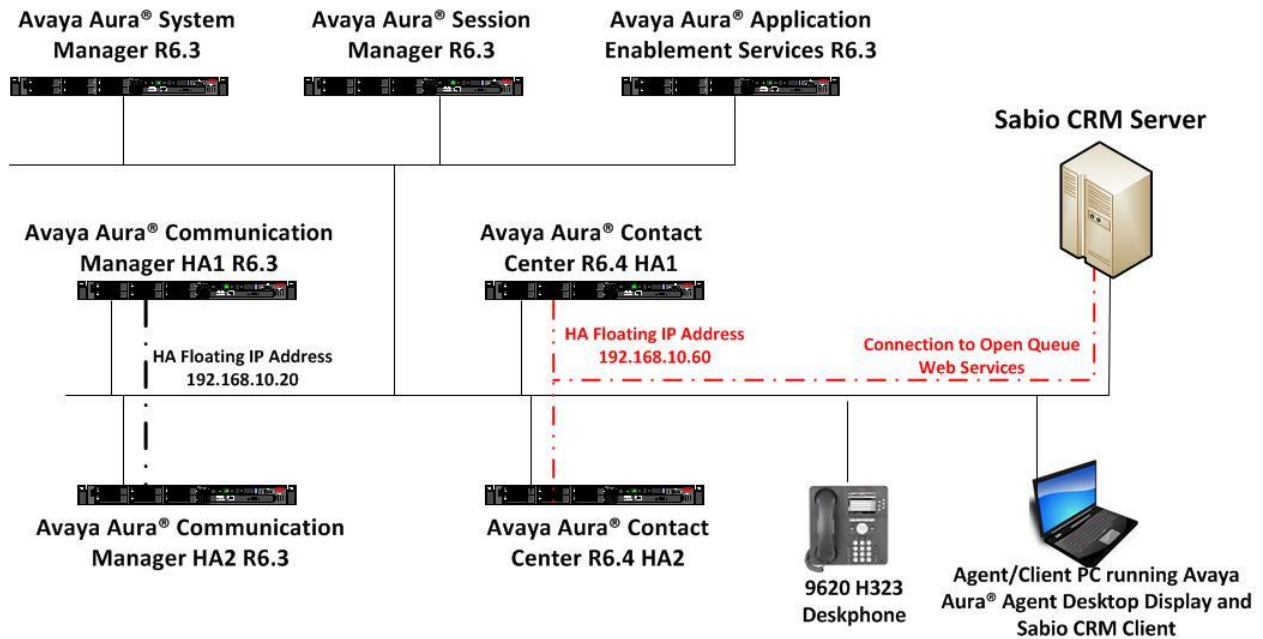


Figure 1: Connection of Sabio CRM Integration solution with Avaya Aura® Contact Centre R6.4 and Avaya Aura® Communication Manager R6.3.

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Hardware	Software/Release
Avaya Aura [®] System Manager running on an Avaya S8800 Server	R6.3 SP7
Avaya Aura [®] Communication Manager running on an Avaya S8800 Server	R6.3 SP6 (HA mode)
Avaya Aura [®] Communication Manager running on an Avaya S8800 Server	R6.3 SP6 (HA Mode)
Avaya Aura [®] Session Manager running on an Avaya S8800 Server	R6.3 SP4
Avaya Aura [®] Application Enablement Services running on an Avaya S8800 Server	R6.3 (Full reboot HA Mode)
Avaya Aura [®] Contact Centre running on an Avaya S8800 Server	R6.4 SP13 in HA Mode
Avaya Aura [®] Contact Centre running on an Avaya S8800 Server	R6.4 SP13 in HA Mode
Avaya Media Server running on an Avaya S8800 Server	R6.4 SP13
Avaya 96xx/96x1 Series Deskphone	H.323 Release 3.1 SP2
Avaya 96xx/96x1 Series Deskphone	SIP Release 2.6 SP3
Sabio CRM Integration Server running on Windows 2008 R2 64 bit virtual server - Web Service - Windows Service (proxy server)	R1.0.1.0 R1.6.0.0
Sabio CRM Client runs on agent desktop PC (Windows XP)	R1.0.3.0

5. Configure Avaya Aura® Communication Manager

There are no specific configuration changes on Communication Manager required for this solution, for all provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 11**.

The configuration illustrated in this section was performed using Communication Manager System Administration Terminal (SAT).

5.1. Verify System Features

Use the **display system-parameters customer-options** command to verify that Communication Manager has permissions for features illustrated in these Application Notes. On **Page 3**, ensure that **Computer Telephony Adjunct Links?** is set to **y** as shown below.

display system-parameters customer-options		Page	3	of	11
OPTIONAL FEATURES					
Abbreviated Dialing Enhanced List?	y	Audible Message Waiting?	y		
Access Security Gateway (ASG)?	n	Authorization Codes?	y		
Analog Trunk Incoming Call ID?	y	CAS Branch?	n		
A/D Grp/Sys List Dialing Start at 01?	y	CAS Main?	n		
Answer Supervision by Call Classifier?	y	Change COR by FAC?	n		
ARS?	y	Computer Telephony Adjunct Links?	y		
ARS/AAR Partitioning?	y	Cvg Of Calls Redirected Off-net?	y		
ARS/AAR Dialing without FAC?	y	DCS (Basic)?	y		
ASAI Link Core Capabilities?	n	DCS Call Coverage?	y		
ASAI Link Plus Capabilities?	n	DCS with Rerouting?	y		
Async. Transfer Mode (ATM) PNC?	n	Digital Loss Plan Modification?	y		
Async. Transfer Mode (ATM) Trunking?	n	DS1 MSP?	y		
ATM WAN Spare Processor?	n	DS1 Echo Cancellation?	y		
ATMS?	y				
Attendant Vectoring?	y				

5.2. Configure the Agent Stations

This is a screenshot of the Avaya 9620 H.323 Deskphone used during compliance testing. On **Page 1** ensure that **IP Softphone** is set to **y**.

display station 2000		Page 1 of 5
STATION		
Extension: 2000	Lock Messages? n	BCC: 0
Type: 9620	Security Code: *	TN: 1
Port: S00000	Coverage Path 1: 2	COR: 1
Name: Paul 2000	Coverage Path 2:	COS: 1
	Hunt-to Station:	Tests? y
STATION OPTIONS		
Location:	Time of Day Lock Table:	
Loss Group: 19	Personalized Ringing Pattern: 1	
	Message Lamp Ext: 2000	
Speakerphone: 2-way	Mute Button Enabled? y	
Display Language: english		
Survivable GK Node Name:		
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? y	
	IP Video? n	
	Short/Prefixed Registration Allowed: default	
	Customizable Labels? y	

On **Page 2** ensure that **Multimedia Mode** is set to **enhanced**.

display station 2000		Page 2 of 5
STATION		
FEATURE OPTIONS		
LWC Reception: spe	Auto Select Any Idle Appearance? n	
LWC Activation? y	Coverage Msg Retrieval? y	
LWC Log External Calls? n	Auto Answer: none	
CDR Privacy? n	Data Restriction? n	
Redirect Notification? y	Idle Appearance Preference? n	
Per Button Ring Control? n	Bridged Idle Line Preference? n	
Bridged Call Alerting? n	Restrict Last Appearance? y	
Active Station Ringing: single	EMU Login Allowed? n	
H.320 Conversion? n	Per Station CPN - Send Calling Number? y	
Service Link Mode: as-needed	EC500 State: enabled	
Multimedia Mode: enhanced	Audible Message Waiting? n	
MWI Served User Type:	Display Client Redirection? n	
AUDIX Name:	Select Last Used Appearance? n	
	Coverage After Forwarding? s	
	Multimedia Early Answer? n	
	Direct IP-IP Audio Connections? y	
Emergency Location Ext: 2000	Always Use? n IP Audio Hairpinning? n	

display station 2000	STATION	Page 3 of 5
<p>Conf/Trans on Primary Appearance? n</p> <p>Bridged Appearance Origination Restriction? n</p>		
<p>Call Appearance Display Format: inter-location</p> <p>IP Phone Group ID:</p> <p>Enhanced Callr-Info Display for 1-Line Phones? n</p>		
ENHANCED CALL FORWARDING		
	Forwarded Destination	Active
Unconditional For Internal Calls To: 4000		n
External Calls To: 4000		n
Busy For Internal Calls To: 4202		n
External Calls To: 4202		n
No Reply For Internal Calls To: 2101		y
External Calls To: 2101		y
SAC/CF Override: n		

On **Page 4** there are three call appearance buttons configured, **call-appr**.

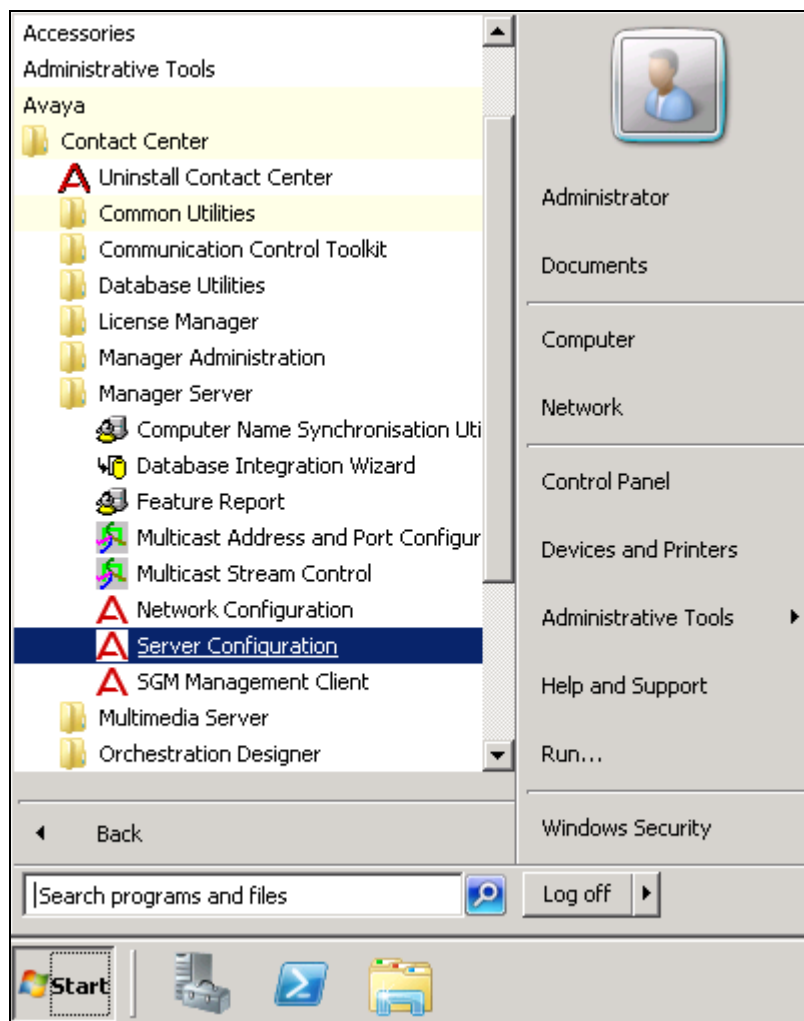
display station 2000	STATION	Page 4 of 5
SITE DATA		
Room:		Headset? n
Jack:		Speaker? n
Cable:		Mounting: d
Floor:		Cord Length: 0
Building:		Set Color:
ABBREVIATED DIALING		
List1:	List2:	List3:
BUTTON ASSIGNMENTS		
1: call-appr	4:	
2: call-appr	5:	
3: call-appr	6:	
voice-mail		

6. Configuration of Avaya Aura® Contact Center

It is assumed that a fully working contact center is already in place with call routing and agents configured. Communication Control Toolkit (CCT) is a module of Avaya Aura® Contact Center and this is a client/server application that implements Computer-Telephony Integration (CTI) for installed and browser-based client integrations. This section describes the steps required to add a new Agent and CCT user and associate that CCT user with a windows domain user.

6.1. Configure Open Queue on Avaya Aura® Contact Center

To ensure that Open Queue is setup on Contact Center from the Contact Center server navigate to **Start → Programs → Avaya → Manager Server → Server Configuration**.



In the left window under **Main Menu** click on **Licensing**, and ensure that both **Open Queue** and **OI Open Queue** are ticked as shown below.

Server Configuration

AVAYA Contact Center Server Configuration

Main Menu

- Local Settings
- Licensing**
- SIP
- Network Settings
- Local Subscriber
- CCT Server
- WS Open Interfaces
- SalesForce

License Manager Package

CCMS Package
Nodal Enterprise

Optional Packages:

- ☐ Networking
- ☐ Instant Messaging
- ☐ Web Based Statistics
- ☒ Multiplicity
- ☒ Open Queue
- ☒ OI Open Queue
- ☒ OI Universal Networking

Serial Number
20004054

License Server IP Address

License Server IP	Port
192.168.10.60	3998

Optional Alternative License Server IP Address

License Server IP

Exit Apply All OK

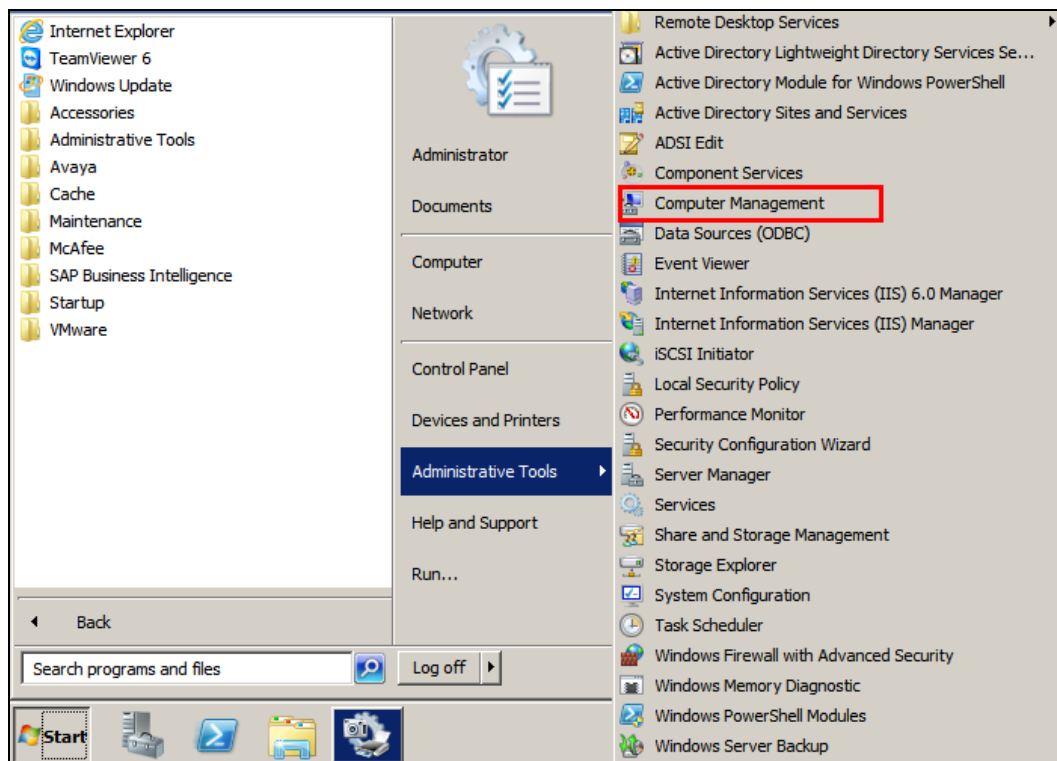
In the left window under **SIP** click on **WS Open Interfaces**, in the main window ensure that **SOA ENABLED** is ticked. The **Host** is the name or IP address of the Contact Center server, the **User Name** and **User Password** will be required again in the setup of Sabio CRM Integration in **Section 7**. The ports and Session Timeout can be left as default. Once these are all filled in correctly then click on **Apply All** at the bottom of the screen and this will require a reboot of the Contact Center server after.

The screenshot shows the 'Server Configuration' window for 'Contact Center Server Configuration'. The left sidebar contains a tree view with the following items: Main Menu, Local Settings, Licensing, SIP, Network Settings, Local Subscriber, CCT Server, **WS Open Interfaces** (highlighted with a red box), and Salesforce. The main area is divided into two panels. The left panel, titled 'SOA Properties', contains the following fields: **SOA ENABLED** (checked, highlighted with a red box), Host (AACC62HA1), Ports (9070 - 9073), User Name (OpenWsUser), User Password (masked with asterisks), Session Timeout (120), and a checkbox for TLS Encryption. The right panel, titled 'TLS Configuration [NO_CSR]', contains the following sections: 'Generate Certificate Signing Request' with Password and CSR File fields; 'Trusted Certificate Authority' with Alias, CA Cert, and a Browse button; and 'CSR Response Certificate' with CSR Cert and a Browse button. At the bottom of the window, there are three buttons: Exit, **Apply All** (highlighted with a red box), and OK.

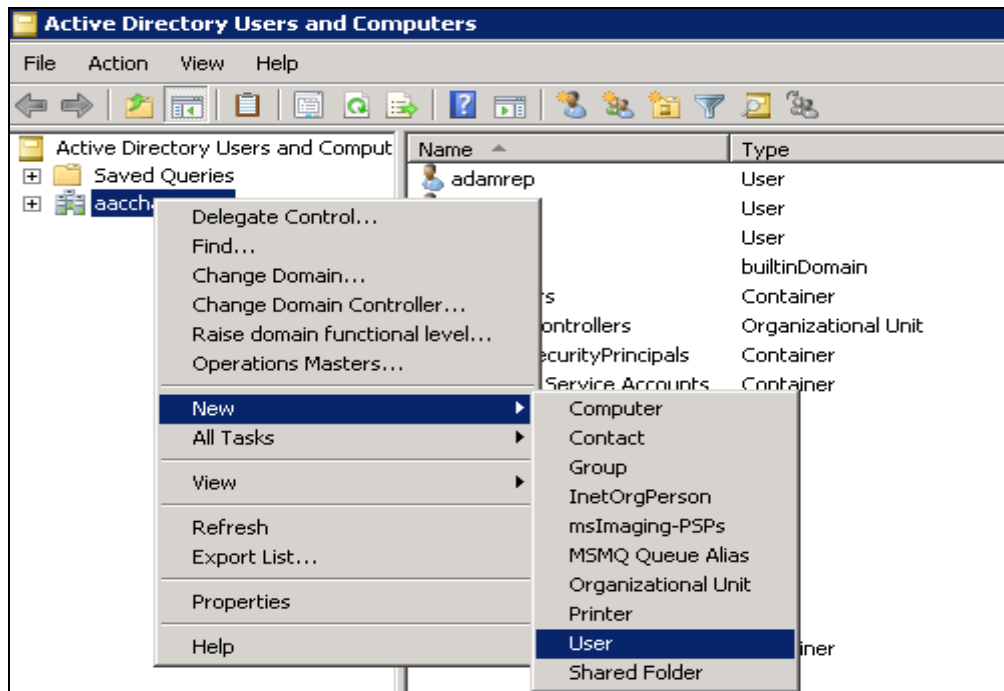
6.2. Create a Windows user on the Avaya Aura® Contact Center Server

All CCT users must be associated with a user account on Windows Active Directory/Domain User account. When a Contact Center user is created there is an option to create a CCT user and there is an association made there with a Windows Domain user, see **Section 6.3**. Users who can access multiple domains can also access the CCT client as long as trust is established between the domains; the user does not have to log on to separate domains to use the CCT client.

If there is no Active Directory already in place then a windows user must be added to the Contact Center server before a CCT user is added. In the example below a user called agent1 was created by the domain administrator on the domain controller. To add a new windows user navigate to **Start → Administrative Tools → Computer Management**.



Select **Active Directory Users and Computers** → <Domain> in the left window and right click on the domain and select **New** → **User** as shown below.



Enter the **First name** and **User Logon name** @ domain and note that this same user name and password will be required in configuring the Sabio CRM Client application in **Section 8**. Click on **Next** once the information is filled in correctly.

The screenshot shows the 'New Object - User' dialog box. The 'Create in:' field is set to 'aaccha.avaya/'. The 'First name:' field contains 'agent1' and the 'Initials:' field is empty. The 'Last name:' field is empty. The 'Full name:' field contains 'agent1'. The 'User logon name:' field contains 'agent1' and the domain dropdown is set to '@aaccha.avaya'. The 'User logon name (pre-Windows 2000):' field contains 'AACCHA\' and the 'agent1' field is empty. The 'Next >' button is highlighted with a red box.

Enter a **Password** and click on **Password never expires** simply to avoid password issues in the future and click and **Next** and then **Finish** (not shown).

New Object - User

Create in: aaccha.avaya/

Password: [masked]

Confirm password: [masked]

☐ User must change password at next logon

☐ User cannot change password

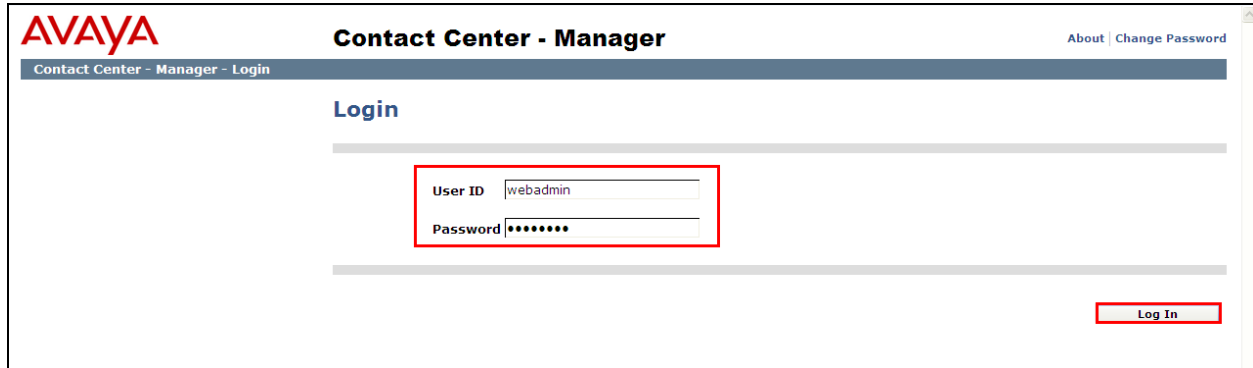
☒ Password never expires

☐ Account is disabled

< Back Next > Cancel

6.3. Create a user on Avaya Aura® Contact Center

Open a web session to the Contact Center server and **Log In** with the proper credentials as shown below.



The screenshot shows the Avaya Contact Center Manager Login page. The header includes the Avaya logo, the title "Contact Center - Manager", and links for "About" and "Change Password". Below the header, the page is titled "Login". There are two input fields: "User ID" with the value "webadmin" and "Password" with masked characters "*****". A red box highlights these two fields. At the bottom right, there is a "Log In" button, also highlighted with a red box.

Click on **Configuration**.



Right click on the **Supervisor** in the left window and click on **Add Agent**.

AVAYA

Contact Center Management

View/EditAddStatusLaunchpadHelp

CCM Servers (Supervisors)

AACC62HA1

Super

Add Agent

Supervisor Details

Delete Supervisor

Add Many Users

Contact Center Management

- Click a server name to log on to the server and manage users.
- Choose from the options in the View/Edit menu to load supervisors to the desired server to manage this data.
- To add a user, log on to the desired server. Then, choose from the supervisors, and supervisor/agents.

Enter the details of the user including, the **Login ID** which is the extension of the agents phone set and the **Voice URI** is be the ext@domain. Ensure that **Create CCT Agent** is ticked. Once this is ticked the CCT/Agent account will need to be associated with the windows domain user account created in **Section 6.2**.

AVAYA Contact Center Management Logged in user: webadmin | Log

View/Edit Add Status Launchpad Help

CCM Servers (Supervisors)

- AACC62HA1
 - Supervisor Default
 - Agent Default
 - agent1 agent1
 - agent2 agent2

New Agent Details: agent1 Server: AACC62HA1

User Details

First Name:
 Last Name:
 Title:
 Department:
 Language: English
 Comment:

Account Type

User Type: Agent
 Login ID: 2000
 Voice URI: sip.2000@aaccha.avaya
 IM URI: sip

☒ Create CCT Agent

CCT Agent Login Details

Domain:
 User ID:

Associate User Account

☐ Search local operating system ☐ Search local security server ☒ Search domain users

Enter the **Domain Details** and the **Domain Account** of the windows domain user from **Section 6.2** and click on **List All**.

AVAYA Contact Center Management Logged in user: webadmin

View/Edit Add Status Launchpad Help

CCM Servers (Supervisors)

- AACC62HA1
 - Supervisor Default
 - Agent Default
 - agent1 agent1
 - agent2 agent2

Associate User Account

☐ Search local operating system ☐ Search local security server ☒ Search domain users

Domain Details

Server Name or IP: 192.168.10.2
☒ Specify Domain Account

Domain Account

(Domain/User ID): aaccha/agent1
 Password:
 Base DN:
 Port Number:
☐ Use Secure Connection

Search all user accounts where:
 Last Name starts with and includes all users

Select the correct user and then expand the **Contact Types**.

Contact Center Management
Logged in user: webadmin

View/Edit
Add
Status
Launchpad
Help

CCM Servers (Supervisors)

AAACC62HA1

Supervisor Default

Agent Default
agent1 agent1
agent2 agent2

Last Name
starts with
and includes
all users

Search
List All

User Name	Last Name (22)	First Name	Status	Description
<input type="radio"/> 2004	2004	User	Available	⬇ ⬆ ⬇
<input type="radio"/> 2005	2005	User	Available	⬇ ⬆ ⬇
<input type="radio"/> 2010	2010	User	Available	⬇ ⬆ ⬇
<input type="radio"/> adamrep		adamrep	Available	⬇ ⬆ ⬇
<input type="radio"/> agent1		agent1	Available	⬇ ⬆ ⬇
<input type="radio"/> 2006	2006	Test	Available	⬇ ⬆ ⬇
<input type="radio"/> 2007	2007	Test	Available	⬇ ⬆ ⬇

The account specified here will be used by the Supervisor/Agent to login to CCMA.

Agent Information

Primary Supervisor:
Supervisor Default

Login Status
Logged Out

Call Presentation:
Call_Centre_Administrator

Multiplicity Presentation Class:
MPC_Off

Threshold:
Agent_Template

Contact Types

Tick **OpenQ** from the **Contact Types** and expand **Skillsets** and then **Assign Skillsets**, click on **List All** and assign the **OQ_Default_Skillset** to the user by giving it a **Priority** (e.g. **1**). Click on **Submit** once this is complete to save this new user.

The screenshot displays the Avaya Contact Center Management (CCM) interface. The top navigation bar includes the Avaya logo, the title "Contact Center Management", and a "Log" link. Below the navigation bar, there are tabs for "View/Edit", "Add", "Status", "Launchpad", and "Help".

The main content area is divided into two sections. The left section, titled "CCM Servers (Supervisors)", shows a tree view with the following structure:

- CCM Servers (Supervisors)
 - AACC62HA1
 - Supervisor Default
 - Agent Default
 - agent1 agent1
 - agent2 agent2

The right section, titled "Contact Types", contains a table with the following data:

Contact Type	Priority
EMail	
Fax	
IM	
OpenQ	<input checked="" type="checkbox"/>
Outbound	
Scanned_Document	

Below the "Contact Types" table, there is a section titled "Skillsets". It includes a search bar with the text "Show: all skillsets on server AACC62HA1 where:" and a dropdown menu for "Skillset name" set to "contains". There are "Search" and "List All" buttons.

The "Skillsets" section also contains a table with the following data:

Skillset Name (13)	Contact Type	Priority
IM_Default_Skillset	IM	Unassigned
OB_Default_Skillset	Outbound	Unassigned
OQ_Default_Skillset	OpenQ	1
rhtest	Voice	Unassigned

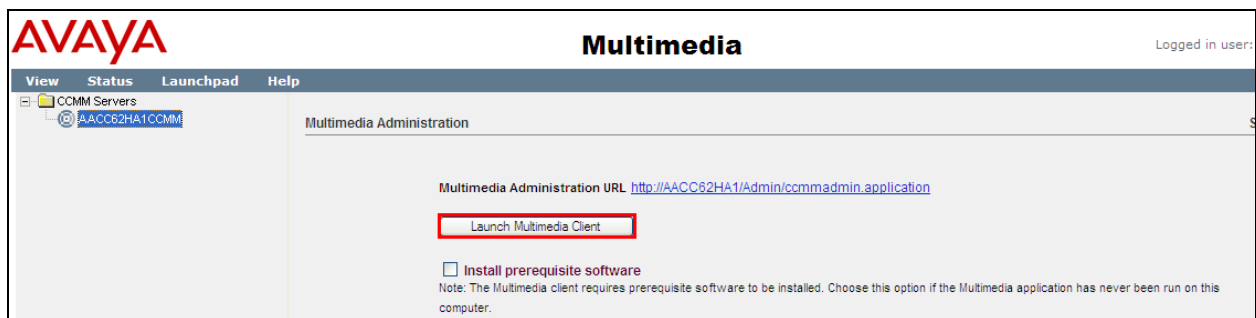
At the bottom of the interface, there are several buttons: "Clear", "Submit", "Create Copy", "Create Many", "Logout Agent", and "Manage Agent Profiles". The "Submit" button is highlighted with a red border.

6.4. Configure Avaya Aura® Contact Center Multimedia

From the **Launchpad**, click on **Multimedia**.



Click on **launch Multimedia Client**.



CCMM Administration is opened and click on **Agent Desktop Configuration** on the bottom left of the screen. Choose **User Settings** in the left window and ensure that **Open Queue Contact Processing** is ticked at the top of the main window. Click on **Save** once this is complete.

The screenshot displays the 'User Settings' window within the 'CCMM Administration' application. The left-hand navigation pane shows a tree structure under 'Agent Desktop Configuration', with 'User Settings' selected and highlighted. The main content area contains various configuration options, with 'Open Queue Contact Processing' checked and highlighted by a red rectangle. Other settings include checkboxes for customer history display, encoding page, and alert settings, as well as dropdown menus for voice contact identifiers and audible alert settings. The 'Save' button at the bottom right is also highlighted with a red rectangle. The status bar at the bottom indicates the user is 'webadmin' and the server time is '10:41'.

Setting	Value
Open Queue Contact Processing	<input checked="" type="checkbox"/>
Display Customer History on Voice Contact	<input type="checkbox"/>
Display Customer History on Personal Calls	<input type="checkbox"/>
Voice Contact Identifier for Customer History	SIP_FROM_ADDRESS
Encoding Page of CCT Attached Data	Latin1
Attachment Upload Timeout	300 Seconds
Suppress Browser Script Errors	<input type="checkbox"/>
Display Not Ready Reason Text Only	<input type="checkbox"/>
Display Voice Calls in Customer History	<input type="checkbox"/>
Number of Personal IM's Allowed To Go Ready	0
Audible Alert Setting	WAV
Play Alert on Voice	<input checked="" type="checkbox"/>
Play Alert on CCMM	<input checked="" type="checkbox"/>
Source of WAV	MM
Display Caller's Friendly Name	<input type="checkbox"/>
Highlight DN Call During Transfer	<input checked="" type="checkbox"/>
Put Call on Hold During Transfer	<input checked="" type="checkbox"/>
Observe Agent Initiated Contact Center Calls	<input type="checkbox"/>
Taskbar Alert on New WebComms Message	<input type="checkbox"/>
Avaya Aura Presence Delay Factor (Milliseconds)	1
Clear Previous Phone Number	<input type="checkbox"/>

Click on **Basic Screenpops** in the left window and choose the **General Intrinsic** tab in the main window. Here any intrinsic can be added by clicking **Add** on the bottom of the screen. The example below shows four new **Screenpop Intrinsic**s added that can be displayed on AAAD. Click on **Save** once this is completed.

CCMM Administration

AVAYA

Basic Screenpop Settings

General settings **General Intrinsic** Basic Screenpop (Shortcuts) Basic Filters (Launch Types)

Screenpop Intrinsic

Name	Friendly Name	Display	Screenpop Parameter
Skillset	Skillset	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AD_CDN	AD_CDN	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AD_DNIS	AD_DNIS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AD_CLID	AD_CLID	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SIP_RETURNED_DIGITS_1	SIP_RETURNED_DIGITS_1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SIP_RETURNED_DIGITS_2	SIP_RETURNED_DIGITS_2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CCAD_IVR	CCAD_IVR	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FROMADDRESS	FROMADDRESS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TOADDRESS	TOADDRESS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CONTACTID	CONTACTID	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CampaignName	CampaignName	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DefaultNumber	DefaultNumber	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RecordType	RecordType	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Team	Team	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GUID	GUID	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Priority	Priority	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Personal Call Screenpop Intrinsic Contact Screenpop Intrinsic **Add** Remove

Save Cancel Help

User: webadmin | Server Time: 10:44 | Status:

7. Configuration Sabio CRM Integration Server

The Open Queue Open Interfaces allows 3rd- party applications such as Sabio CRM Integration Server the ability to queue contact-types in the Contact Center to idle agents. In order to connect to the Open Queue Interface the 3rd- party application must first follow some steps.

1. Login/Logoff– On successfully authentication with the web service the 3rd party application receives a token to identify itself.
2. CreateOQContact - issue the create open queue contact request.
3. GetOQContact, DropContact, - optionally query or remove existing contacts.
4. Adding and Removing event listeners - optionally register interest for related events.

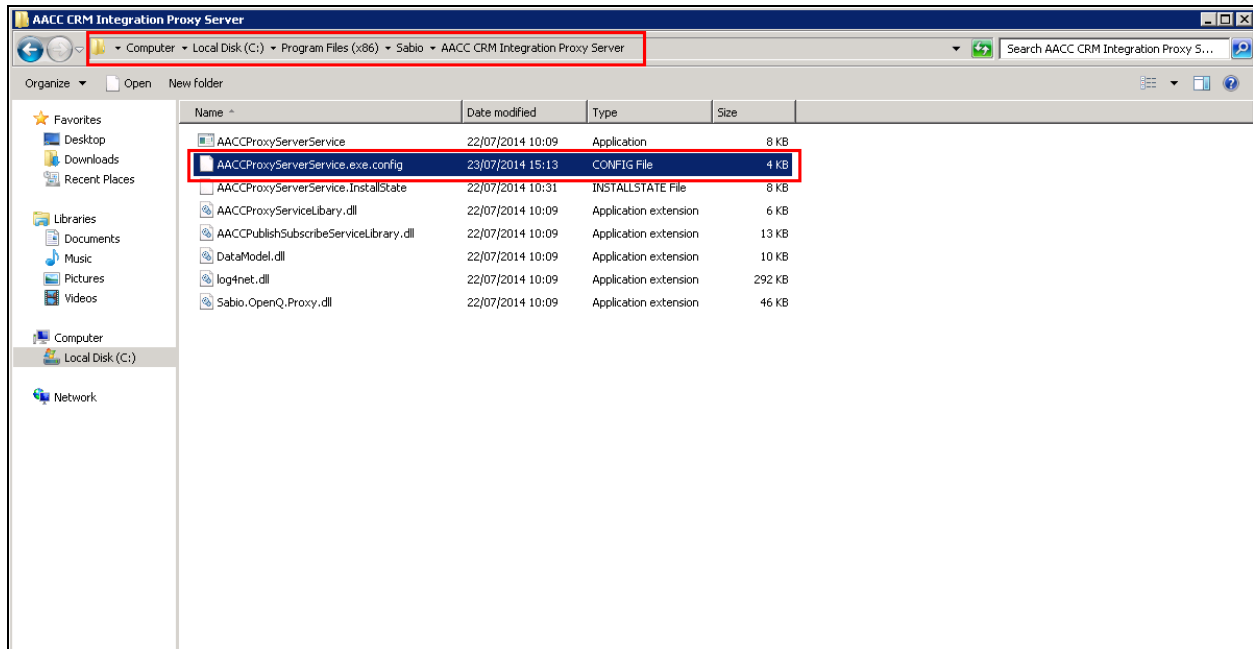
Before the service can be used the Sabio CRM Integration Server must first receive a Single Sign On (SSO) token that will be used for all subsequent calls to the service. To receive this token the Sabio CRM Integration Server must supply the required authentication details;

- Username – OpenWsUser is the fixed user name that is associated with this service. Only one application at a time is allowed login using this username.
- Password – Password123 is the default password associated with this service. This password can be changed in the WS Open Interface dialog of the Contact Center Service Configuration application located on the CCMS server.
- Domain – open_queue this field is used as a qualifier to differentiate this service from other services that also use the OpenWsUser username.

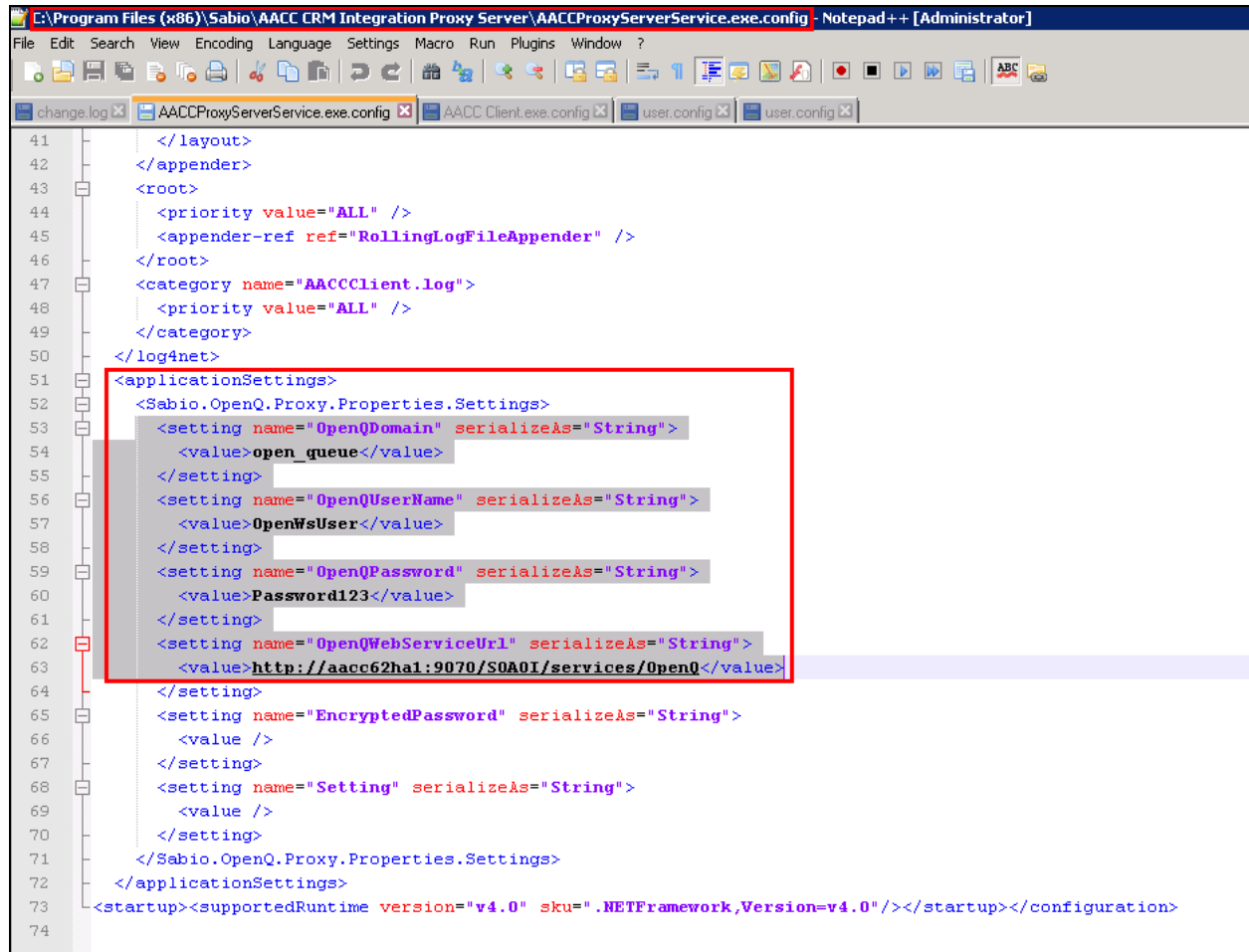
The Open Queue Open Interface only allows one user to be logged on at any one time, hence there can only ever be one sso token associated with an active session. If the user tries to log in when there is currently an active session they will receive an exception detailing that only one user can login at any one time.

Note: The installation of Sabio CRM Integration is run from an executable file and is outside the scope of these Application Notes.

Once the Sabio CRM Integration is installed, the AACCPProxyServerService.exe.config file is amended in order to connect to Contact Center. The default location of the AACCPProxyServerService.exe.config file is **C: //Program Files(x86)/Sabio/AACC CRM Integration Proxy Server/** as shown below.



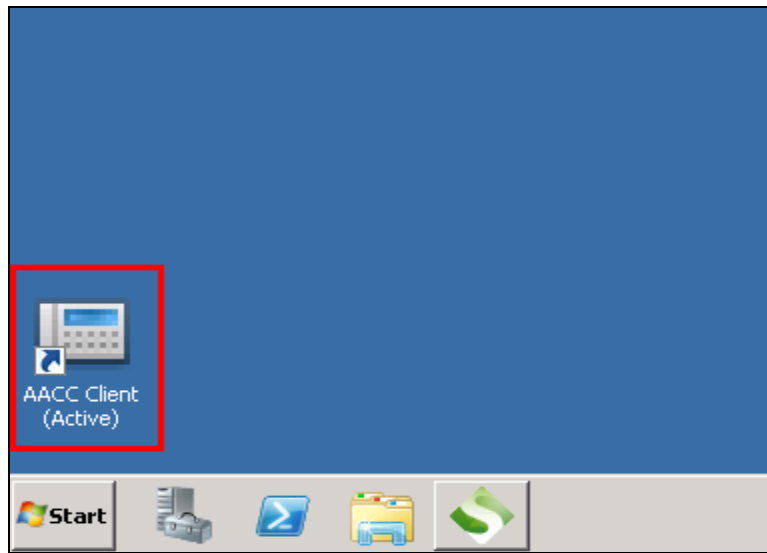
Open the **AACCPProxyServerService.exe.config** file using Notepad++ or a similar program. The highlighted section, as shown below, is amended in order to connect to Contact Center. These include the **OpenQDomain**, **OpenQUserName**, **OpenQPassword** and **OpenQWebServiceUrl**. Save the file once this is amended correctly.



```
41 </layout>
42 </appender>
43 <root>
44 <priority value="ALL" />
45 <appender-ref ref="RollingLogFileAppender" />
46 </root>
47 <category name="AACCCClient.log">
48 <priority value="ALL" />
49 </category>
50 </log4net>
51 <applicationSettings>
52 <Sabio.OpenQ.Proxy.Properties.Settings>
53 <setting name="OpenQDomain" serializeAs="String">
54 <value>open_queue</value>
55 </setting>
56 <setting name="OpenQUserName" serializeAs="String">
57 <value>OpenWsUser</value>
58 </setting>
59 <setting name="OpenQPassword" serializeAs="String">
60 <value>Password123</value>
61 </setting>
62 <setting name="OpenQWebServiceUrl" serializeAs="String">
63 <value>http://aacc62hal:9070/SQA0I/services/OpenQ</value>
64 </setting>
65 <setting name="EncryptedPassword" serializeAs="String">
66 <value />
67 </setting>
68 <setting name="Setting" serializeAs="String">
69 <value />
70 </setting>
71 </Sabio.OpenQ.Proxy.Properties.Settings>
72 </applicationSettings>
73 <startup><supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.0"/></startup></configuration>
74
```

8. Configuration Sabio CRM Client

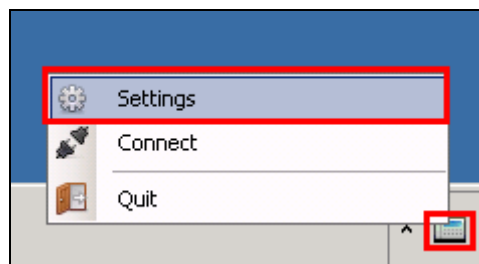
In order to facilitate a screen pop on the client or agents PC, the Sabio CRM Client must be installed on that PC. This is run from an executable file and is outside the scope of these Application Notes. Once the Sabio CRM Client is installed, the icon highlighted below will appear on the desktop. Run the Sabio CRM Client (**AACC Client**) by double click on this shortcut.



Once this is run the icon will appear in the system tray and can be accessed by right-clicking the icon as shown below.



Click on the icon in the system tray and select **Settings**.



The following screen will appear, enter the **Credentials** of the agent. Note this will be the username and password of the CCT agent which is the same as that of the windows domain user created for that agent as per **Section 6.2**. Enter the IP address of the Contact Center server for **Primary** and the **Port** can be left as default. Click on **OK** once this is entered.

Settings

Credentials

Agent ID: agent1

Domain: AACCHA

Password: xxxxxxxx

Avaya Aura Contact Center Sever Address(es)

Primary: 192.168.10.60 Port: 29373

Campus Alternate: (optional)

Geographic Alternate: (optional)

☐ Use remote settings. Reload Remote Config

Remote Settings Location:

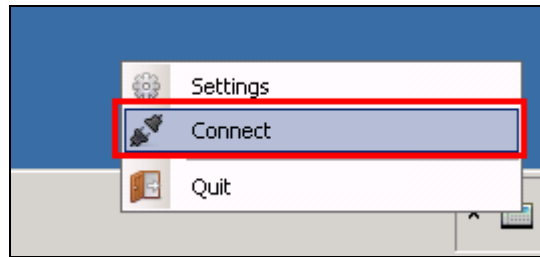
Primary: FAILED TO LOAD REMOTE FILE Port: FAILED TO

Campus Alternate: FAILED TO LOAD REMOTE FILE (optional)

Geographic Alternate: FAILED TO LOAD REMOTE FILE (optional)

OK Cancel

Once again click on the icon in the system tray and select **Connect**. The Screen pop application is now running in the background and when a skillset call is answered the screen will pop with the configured URL for the agent to enter information.

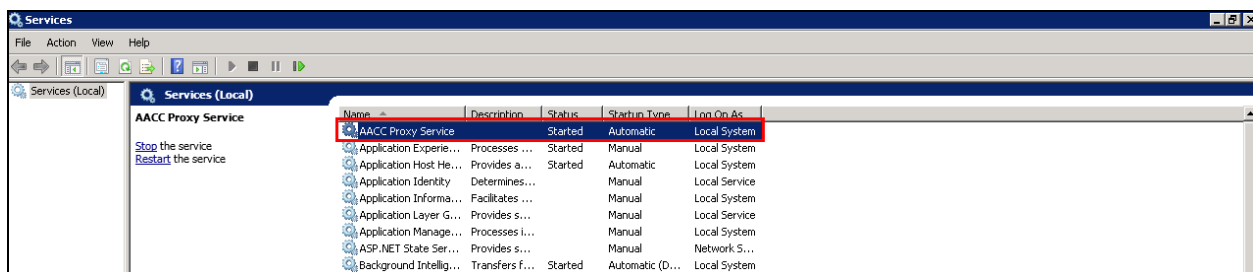


9. Verification Steps

To verify a successful configuration of Sabio CRM Integration and Avaya Aura® Contact Center, a work item must be created and sent to the Open Queue Web Services. Typically such a work item is placed into Open Queue by a customer on a website linked to a CRM system. During compliance testing there was no CRM system present so an application call SOAP UI was used to simulate this work item being created by the CRM.

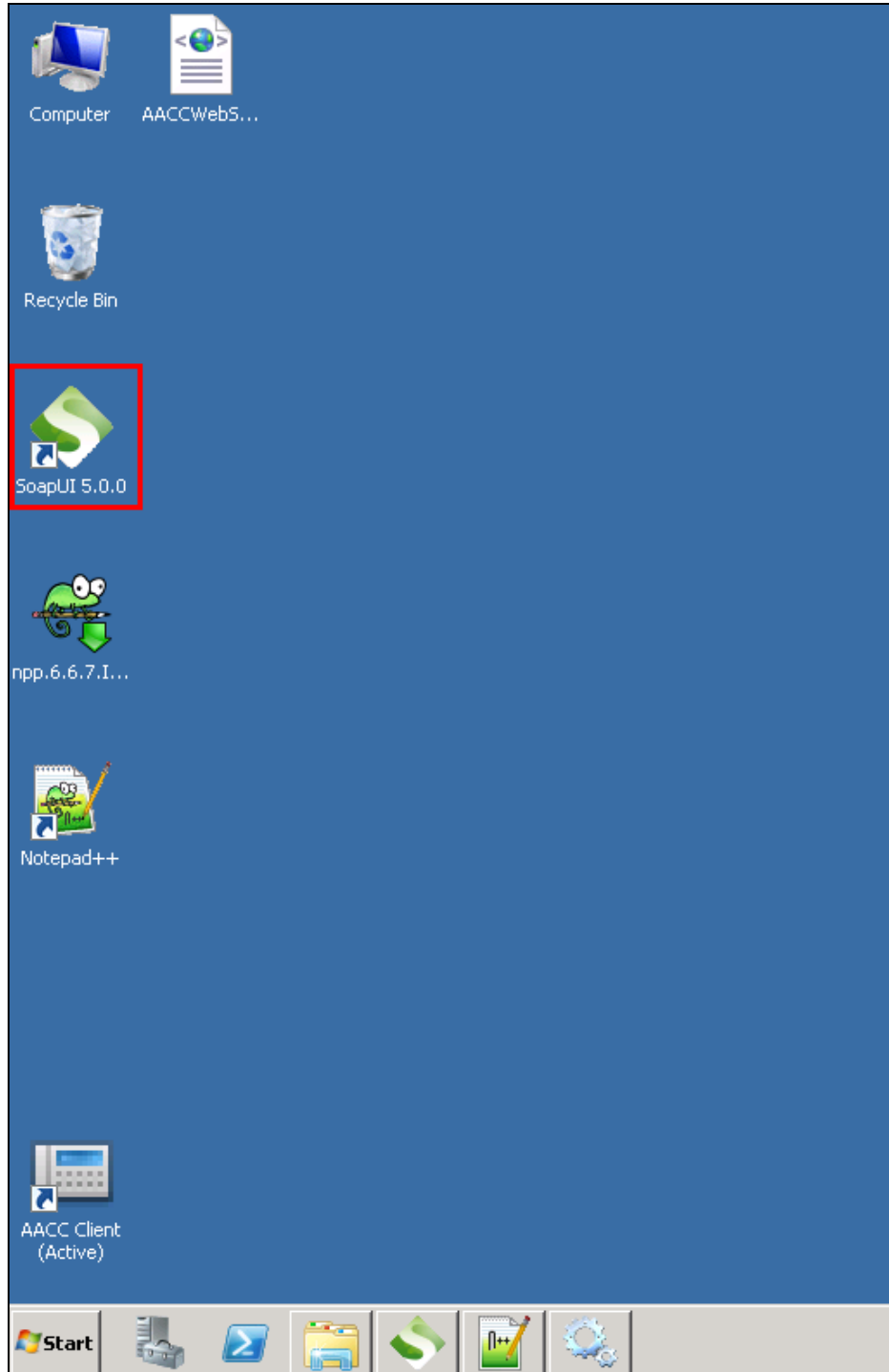
9.1. Verify that the services are running on the Sabio CRM Integration Server

Open the Windows Services. Ensure that **AACC Proxy Service** is running as highlighted below.

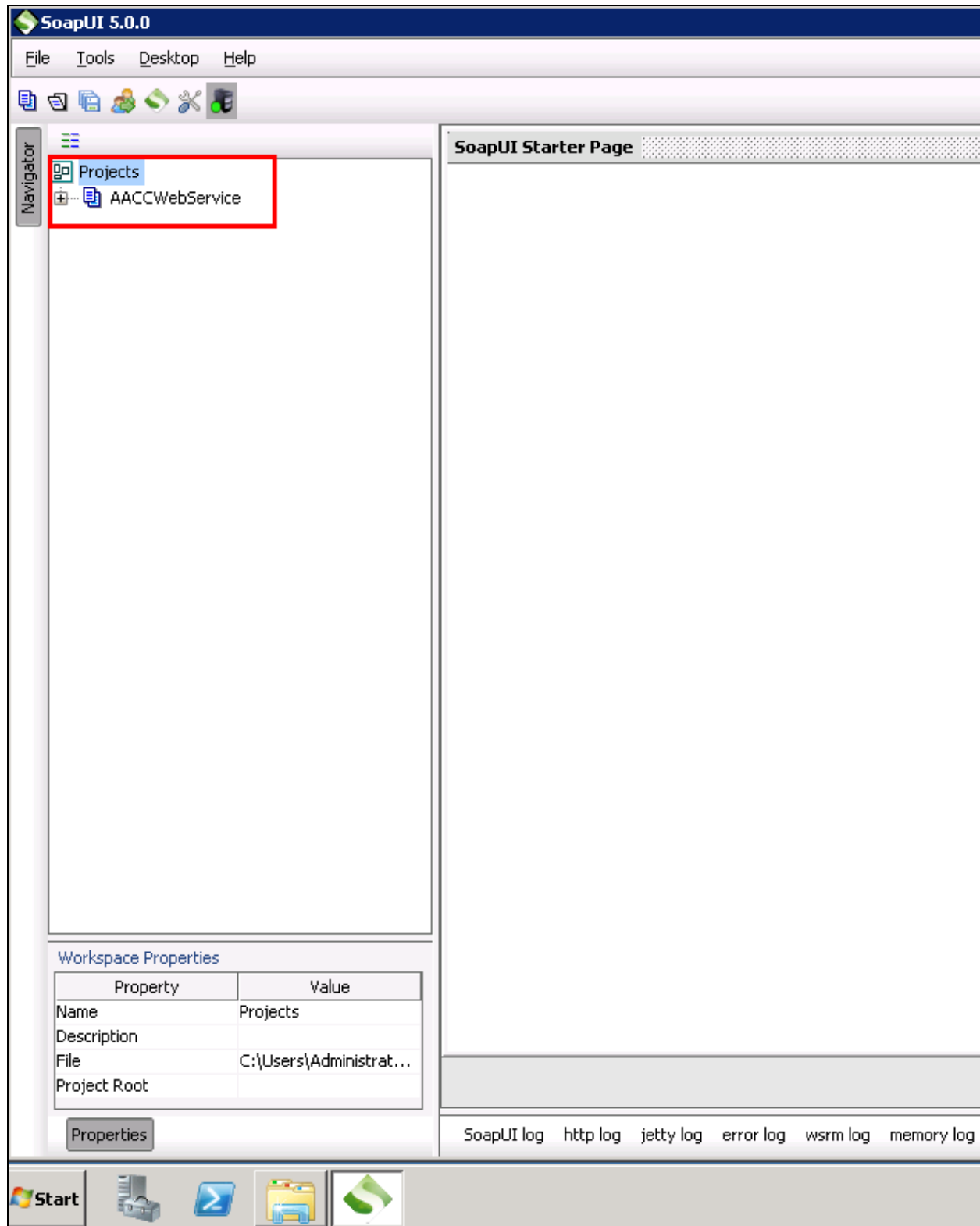


9.2. Verify work items can be sent to Open Queue

Open SOAP UI. Note the installation of this application is outside the scope of these Application Notes.

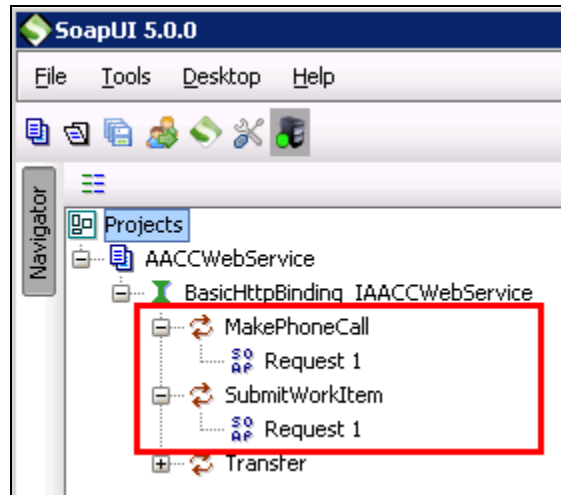


Once SOAP UI is opened the projects can be seen in the top left corner..



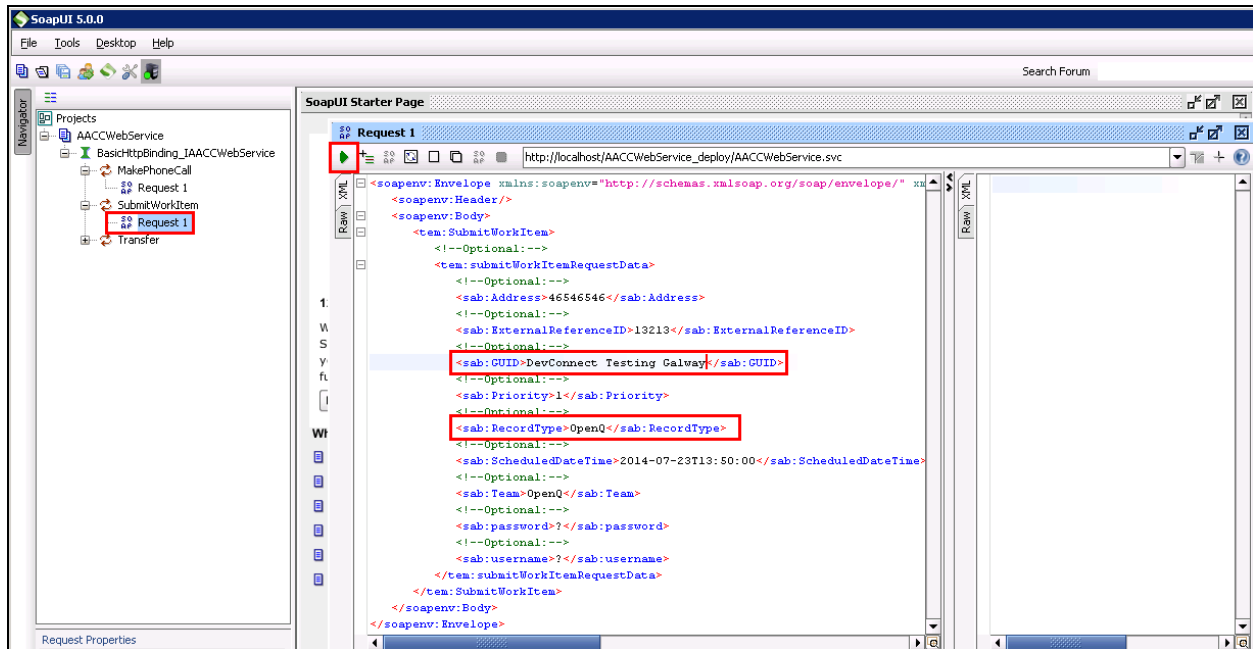
Please note that the following test applications were written by Sabio in order to simulate the CRM system from a customer point of view. These items can be run by clicking on them as shown below.

- **MakePhoneCall** – This simulates a click to call feature.
- **SubmitWorkItem** – This simulates the creation of a work item on a CRM web page.

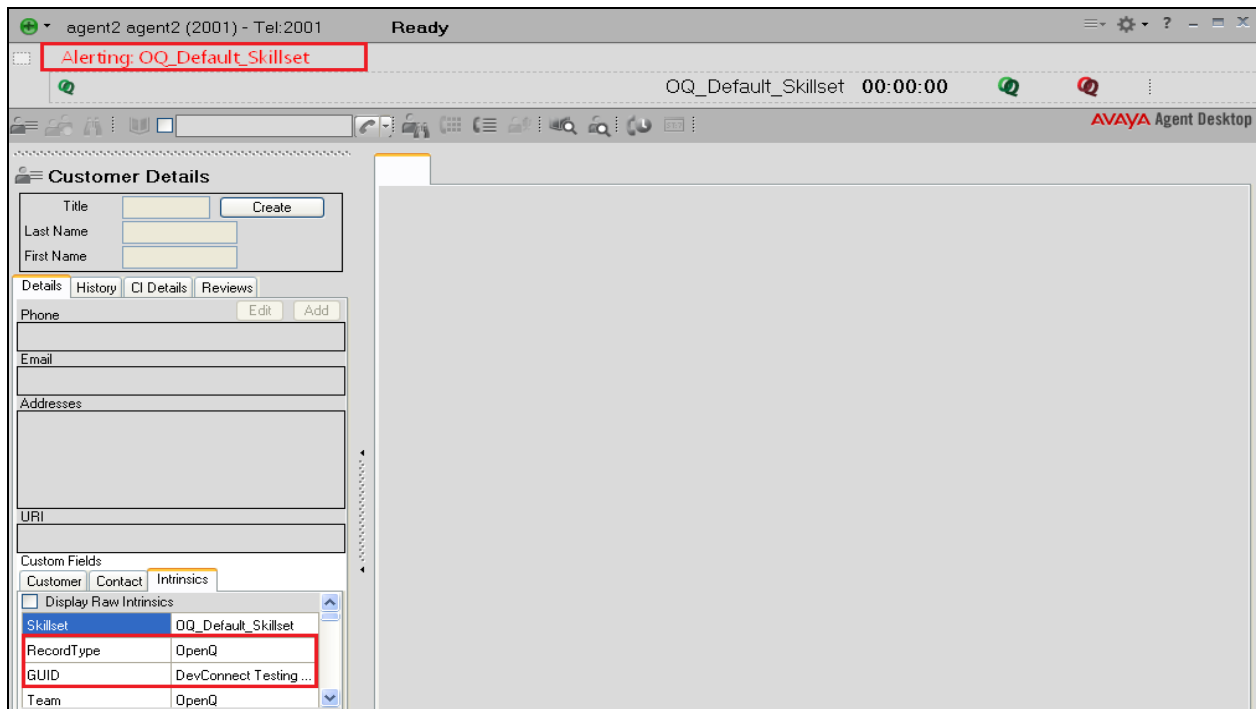


9.2.1. Submit a work item

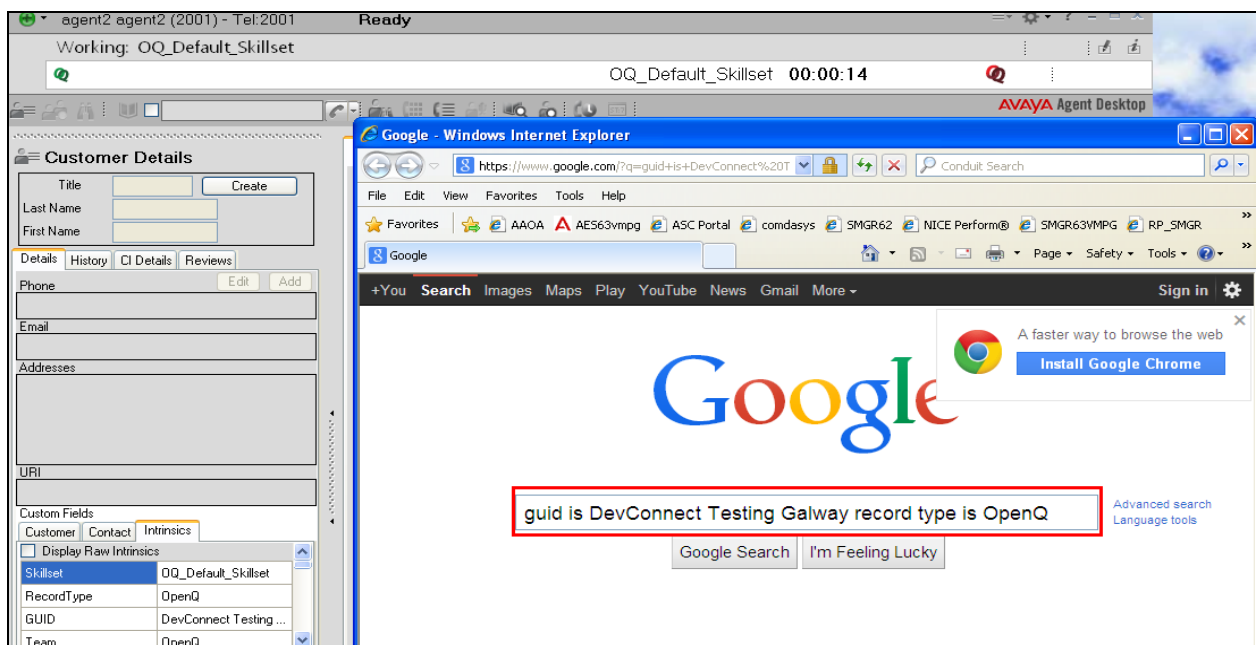
The following application is used to simulate a work item created for delivery to Contact Center Open Queue. The **GUID** can be set to any text in the example below this is set to “**DevConnect Testing Galway**” and the **RecordType** is set to **OpenQ**. Once this is set the play icon at the top left is pressed to submit the work item.



Once the work item is submitted the AAAD should be alerted on the agent's PC as follows. Note the **OQ_Default_Skillset** is called and this is shown below. The **GUID** and **RecordType** are shown in the **Intrinsics** tab also highlighted.

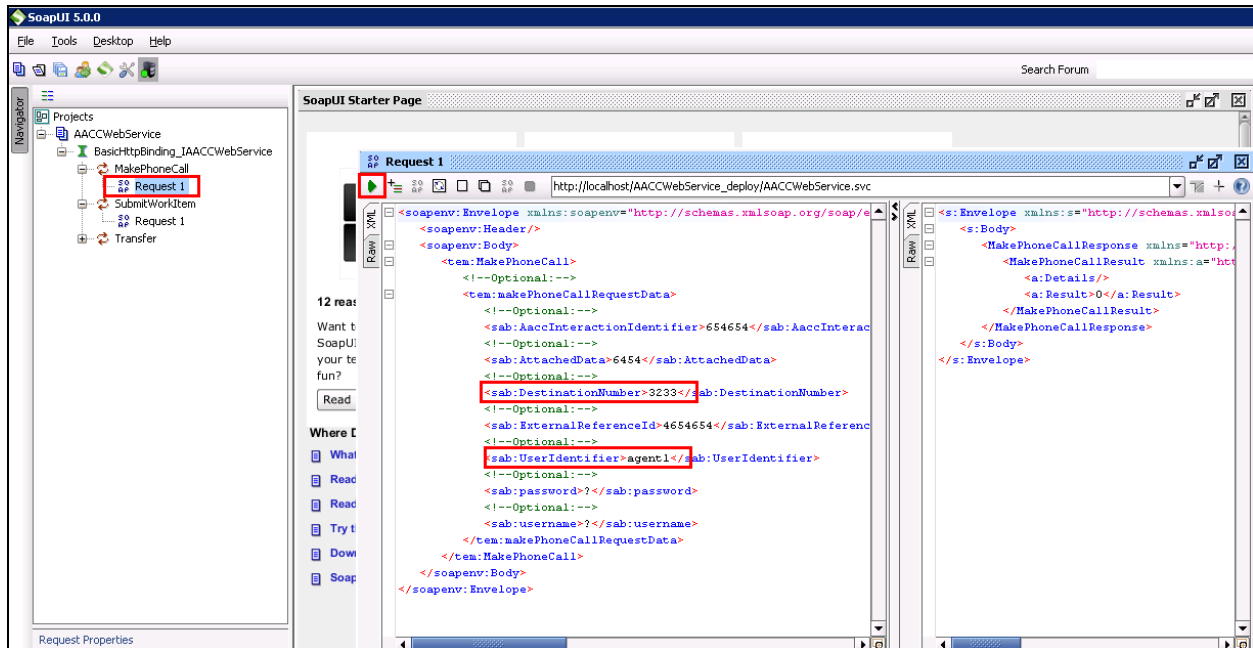


A screen is also popped due to the Sabio CRM Client running in the background on the agents PC.

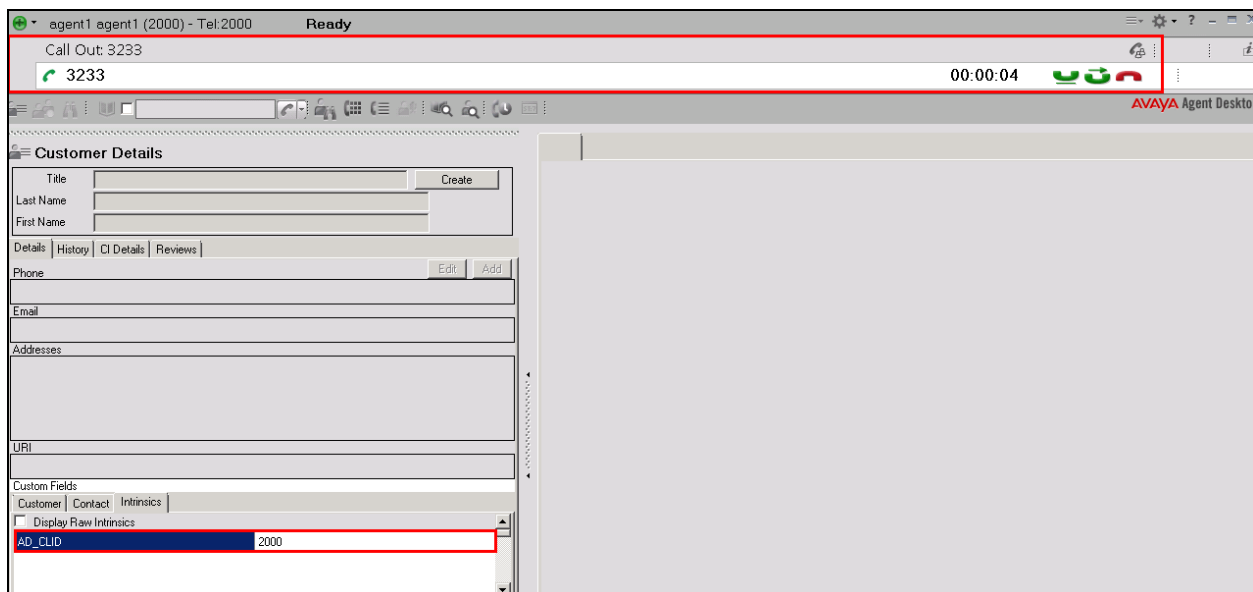


9.2.2. Make Phone Call

The following application is used to simulate a click to call on the agents desktop. The **Destinationnumber** is set to any PSTN number in the example below this is set to “3233” and the **UserIdentifier** is set to **agent1**. Once this is set the play icon at the top left is pressed to submit the call.

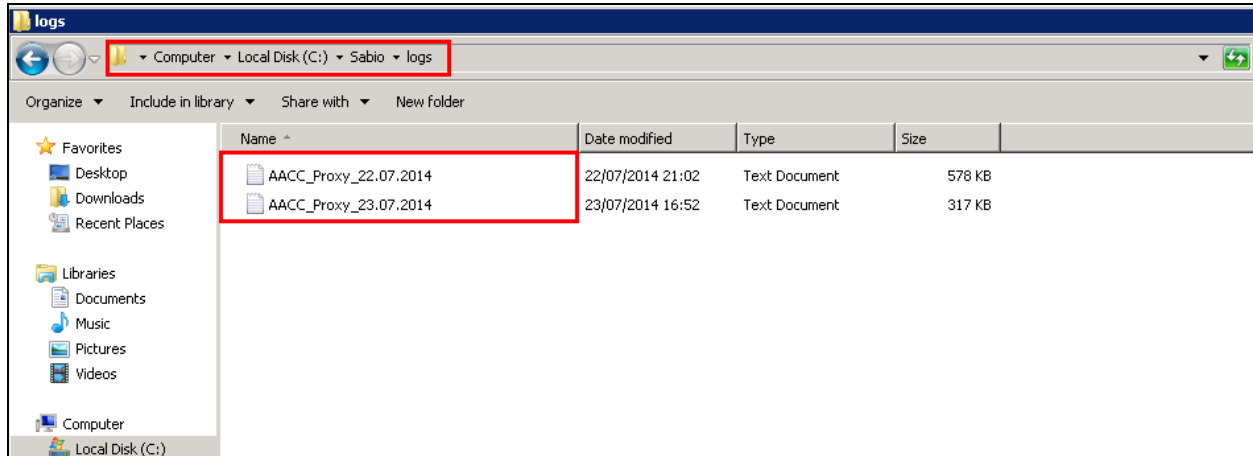


A telephone call is then made from the phone set associated with **agent1** to extension **3233**. This is shown below.

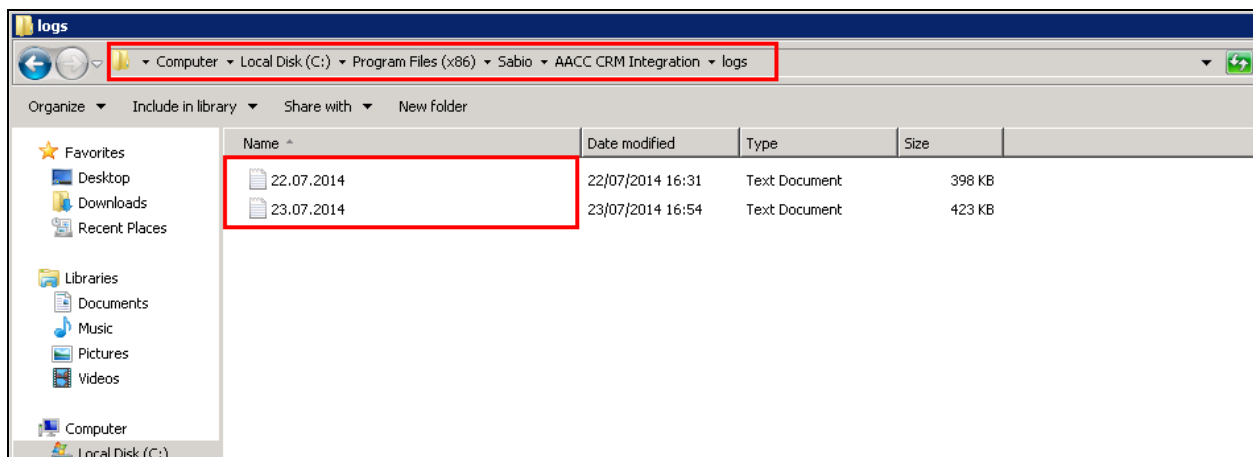


9.3. Troubleshooting issues on Sabio CRM Integration

The location of the server logs are as follows, **C:/Sabio/logs**. The log files are named as shown below.



The location of the client logs are with the installation software in the example below this is , **C:/Program Files(x86)/Sabio/AACC CRM Integration/logs**. The log files are named as shown below.



10. Conclusion

The interoperation of Sabio CRM Integration from Sabio Ltd with Avaya Aura® Contact Center R6.4 and Avaya Communication Manager R6.3 was successful for this specific setup in order to place work items into the Open Queue Web Services on Contact Center and induce a screen pop from once this call was answered by an agent. The compliance testing was deemed passed with all issues and observations outlined in **Section 2.2**.

11. Additional References

Additional Avaya product documentation is available at <http://support.avaya.com>.

- [1] *Administering Avaya Aura® Communication Manager*, Document ID 03-300509
- [2] *Avaya Aura® Communication Manager Feature Description and Implementation*, Document ID 555-245-205
- [3] *Avaya Aura® Application Enablement Services Administration and Maintenance Guide* Release 6.3
- [4] *Avaya Aura® Contact Center Server Administration*, Release 6.4, 44400-610

For information on Sabio CRM Integration from Sabio Ltd visit <http://www.sabio.co.uk>

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