



Avaya Solution & Interoperability Test Lab

Application Notes for BBX Technologies Vuesion Multimedia Contact Center Additional Client Features with Avaya IP Office 8.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for BBX Technologies Vuesion Multimedia Contact Center additional Client features to interoperate with Avaya IP Office. In the compliance testing, BBX Technologies Vuesion Multimedia Contact Center provided skill based routing and announcements using the SIP User, TAPI, and DevLink interfaces from Avaya IP Office 8.0.

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 required for BBX Technologies Vuesion Multimedia Contact Center additional Client features to interoperate with Avaya IP Office. In the compliance testing, BBX Technologies Vuesion Multimedia Contact Center provided skill based routing and announcements by using the SIP User, TAPI, and DevLink interfaces from Avaya IP Office.

The SIP User interface was used by Vuesion to register virtual SIP users and to route incoming calls via an available SIP user in a hunt group to the Vuesion server. The TAPI interface was used by Vuesion to monitor and control the virtual SIP and physical agent and supervisor users, and to provide call control via the agent and supervisor desktops. The Client performs the same features of a physical or softphone agent on a desktop agent in addition to extra features of its own.

The BBX Technologies Vuesion Multimedia Contact Center consisted of the Vuesion Server and Vuesion Client software.

2. General Test Approach and Test Results

The feature test cases were performed manually. Upon start of the BBX Technologies Vuesion Multimedia Contact Center application, the application automatically registers the virtual SIP users to Avaya IP Office.

For the manual part of the testing, incoming calls were made to the main hunt group. The Vuesion server used the TAPI event messages to track agent states, and specified calls to be redirected to available agents. Since the testing concentrated on the additional features of a Client, various menu and control features of the Client were verified.

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

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on BBX Technologies Vuesion Multimedia Contact Center Client's additional features:

- Proper registration of virtual SIP users.
- Initiate call by double clicking on user's icon in List, Large and Detail Views.
- Verify Speed Dial List by double click method and dial box method.
- Verify if calls can be initiated by using the Inbound/Outbound history information by using both double click and dial box method.
- Verify the Chat feature between agents that are logged in to the client.
- Verify Extended State feature of a client.
- Verify test calls to a number that are designated as an emergency number.
- Verify Marquee message from a Supervisor.

The serviceability testing focused on verifying the ability of BBX Technologies Vuesion Multimedia Contact Center to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet cables to the Vuesion server and to the Vuesion client.

2.2. Test Results

All test cases were executed and passed. The following observations were made on BBX Technologies Vuesion Multimedia Contact Center Client's additional features during the compliance testing:

- When a user is in Extended State then Do Not Disturb (DND) overrides Forward (FWD) and therefore the call cannot be forwarded.
- In case of conference call, user cannot release the call from desktop agent and has to be released from the physical agent.

During an active call if the link goes down and after the recovery of the link between the Vuesion server and IP Office, the Vuesion client can no longer control the call via the desktop. The workaround is to manually control the call via the phone. However after the first manual control from the phone, the agent can once again control the call via the desktop. If the link goes down at the same instant as a call is presented to the agent, then after recovery, the incoming call is still shown and the agent has no control on the desktop. Agent has to manually refresh to get control back of the desktop.

2.3. Support

Technical support on BBX Technologies Vuesion Multimedia Contact Center can be obtained through the following:

- **Phone:** (800) 930-4229, option 4
- **Email:** bbxservice@bbxtech.com
- **Web:** www.bbxtech.com

3. Reference Configuration

The configuration used for the compliance testing is as shown in **Figure 1** below.

In the compliance testing, the Vuesion Manager, Vuesion Reports and Vuesion Client software were running on the Vuesion server, while another server was hosting the Avaya IP Office Manager and IP Office Softphone. During compliance testing two Vuesion clients were logged in on the same server where one was connected to the Desktop agent and the other to the Desktop Supervisor agent. During testing with IP Office Softphone one of the Vuesion clients was logged in to connect to the IP Office Softphone. Emulated PSTN was used to make inbound/outbound calls.

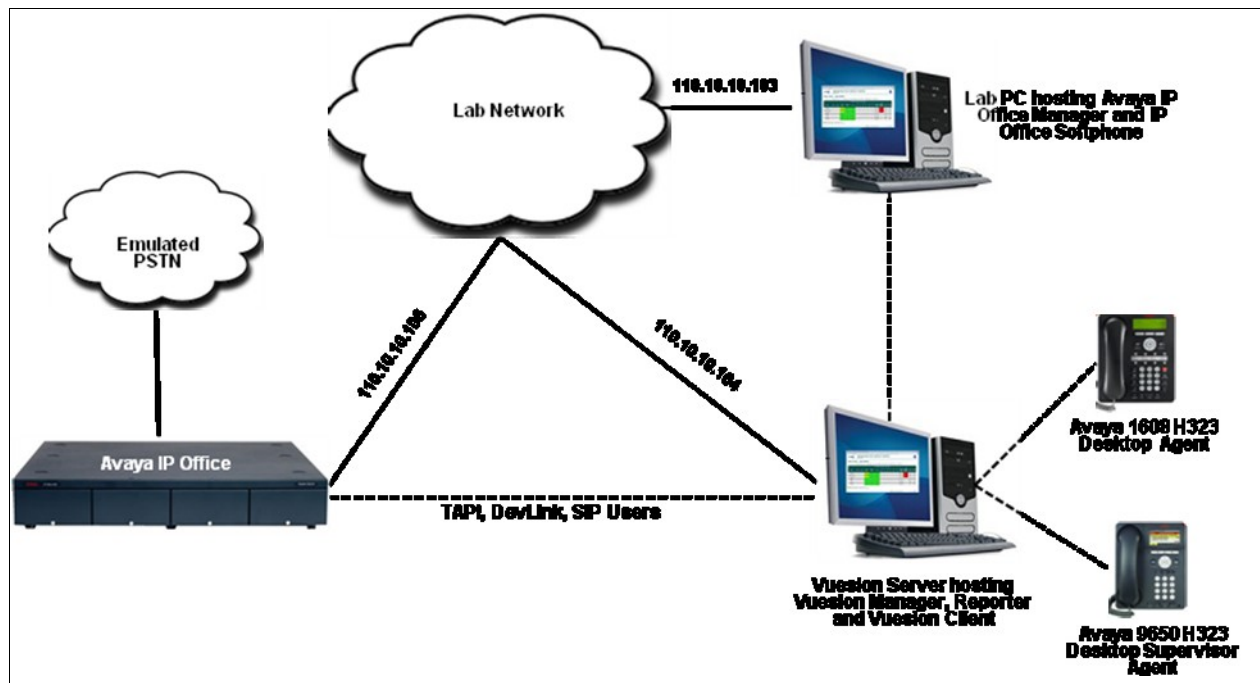


Figure 1: Compliance Test Lab Configuration

4. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500	8.0 (18)
Avaya IP Office Manager	10.0 (18)
Avaya 9650 IP Telephone (H.323)	3.186a
Avaya 1608 IP Telephone (H.323)	1.300B
Avaya IP Office Softphone (SIP)	3.2.3.15.64595
BBX Technologies Vuesion Server on Windows 2008 Server R2 Standard <ul style="list-style-type: none">• Avaya TAPI (tspi2w.tsp)• Avaya DevLink (devlink.dll)	V7.03 1.0.0.35 1.0.0.5
BBX Technologies Vuesion Client	V7.03

5. Configure Avaya IP Office

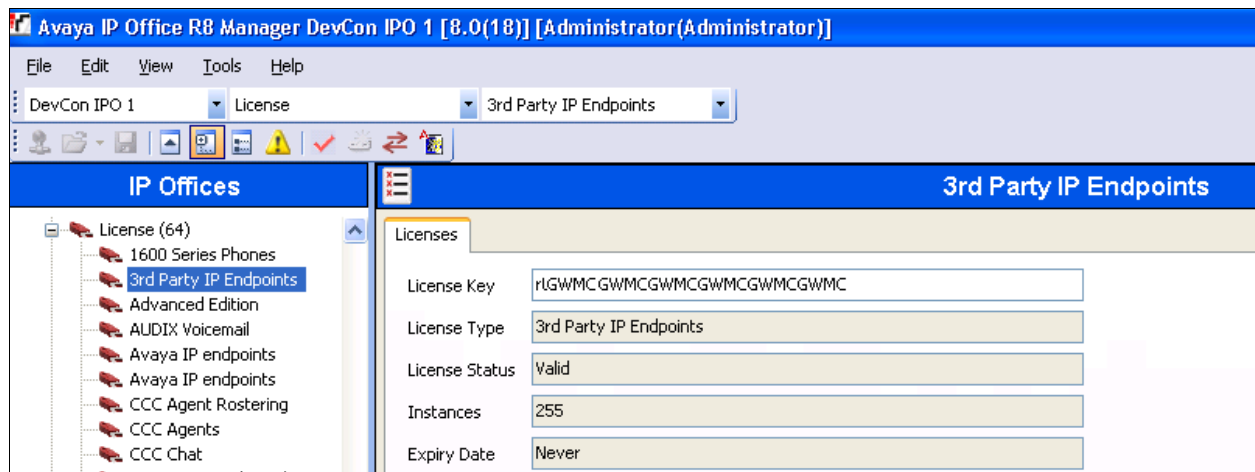
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- Verify IP Office license
- Obtain LAN IP address
- Administer SIP Registrar
- Administer SIP extensions
- Administer SIP users
- Administer hunt groups
- Administer agents
- Administer supervisors
- Administer incoming call route
- Administer short code

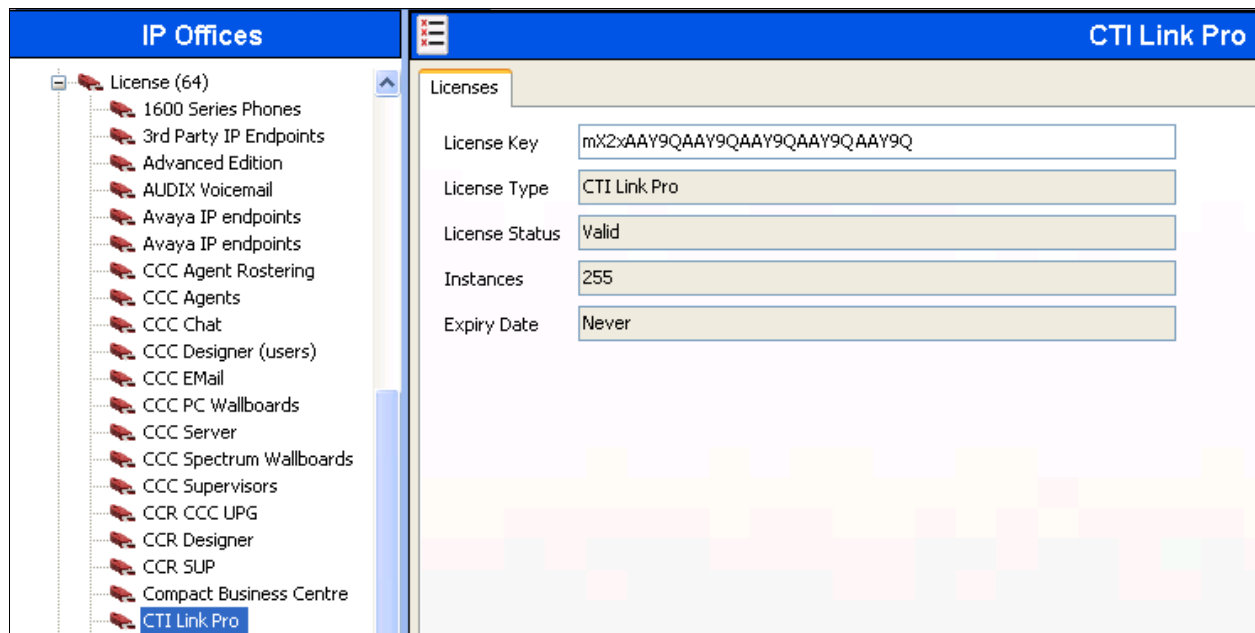
5.1. Verify IP Office License

From a PC running the Avaya IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.

The **Avaya IP R8 Office Manager** screen is displayed. From the configuration tree in the left pane, select **License** → **3rd Party IP End-points** to display the **3rd Party IP End-points** screen in the right pane. Verify that the **License Status** is “Valid”.

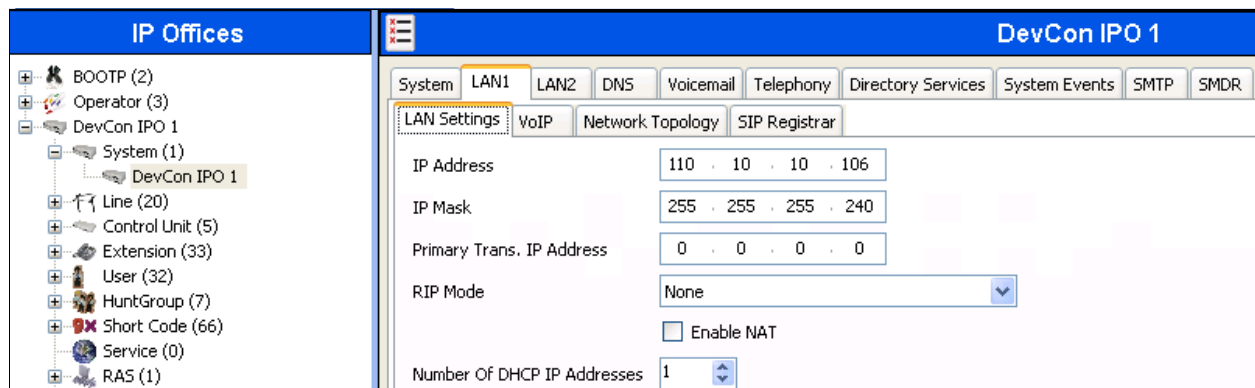


Scroll down the left pane and select **License → CTI Link Pro**, to display the **CTI Link Pro** screen in the right pane. Verify that the **License Status** is “Valid”.



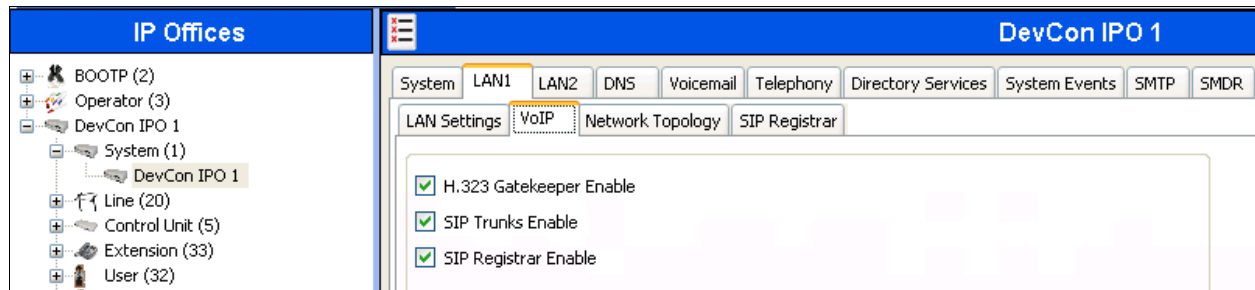
5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **DevCon IPO 1** screen in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure Vuesion. Note that IP Office can support SIP on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.

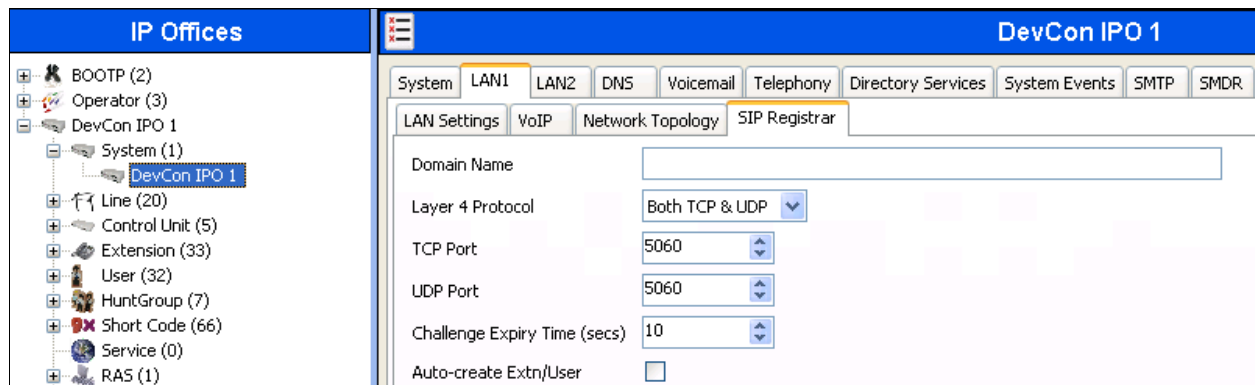


5.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below. Retain default values for the remaining fields.

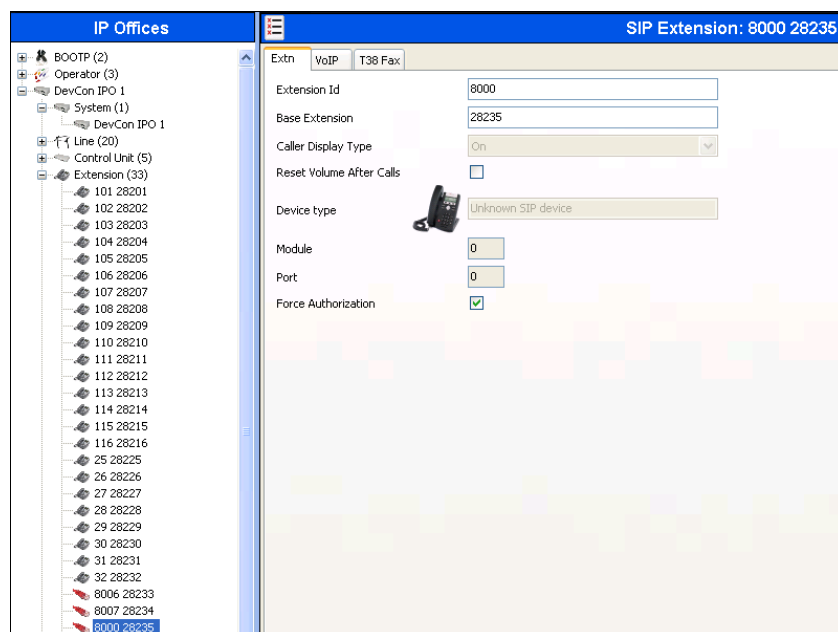


Select the **SIP Registrar** sub-tab, and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the LAN IP address was used for registration.



5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension**, and select **New → SIP Extension** from the pop-up list to add a new SIP extension. Enter the desired digits for **Base Extension**, and retain the default values in the remaining fields. The screen below shows the added SIP extension.



Select the **VoIP** tab. Check **Re-invite Supported**, and **Reserve 3rd party IP endpoint license**, as shown below. Uncheck **Allow Direct Media Path**. Select “Custom” from **Codec Selection** drop down box and move “G.729 (a) 8K CS-ACELP” to the **Selected** column. Retain the default values in the remaining fields.

Repeat this section to add the desired number of SIP extensions. In the compliance testing, five SIP extensions with base extensions of 28235-28239 were created.

IP Offices

BOOTP (2)

Operator (3)

DevCon IPO 1

System (1)

DevCon IPO 1

Line (20)

Control Unit (5)

Extension (33)

101 28201

102 28202

103 28203

104 28204

105 28205

106 28206

107 28207

108 28208

109 28209

110 28210

111 28211

112 28212

113 28213

114 28214

115 28215

116 28216

SIP Extension: 8000 28235*

Extn

VoIP

T38 Fax

IP Address

0 . 0 . 0 . 0

Codec Selection

Custom

Unused

G.711 ULAW 64K

G.711 ALAW 64K

G.722 64K

G.723.1 6K3 MP-MLQ

>>

<<

↑

↓

>>

Selected

G.729(a) 8K CS-ACELP

Fax Transport Support

None

TDM->IP Gain

Default

IP->TDM Gain

Default

DTMF Support

RFC2833

☐ VoIP Silence Suppression

☐ Local Hold Music

☐ Allow Direct Media Path

☒ Re-invite Supported

☐ Use Offerer's Preferred Codec

☐ Reserve Avaya IP endpoint license

☒ Reserve 3rd party IP endpoint license

5.5. Administer SIP Users

From the configuration tree in the left pane, right-click on **User**, and select **New** from the pop-up list. For **Name** and **Full Name**, enter the same desired value prefixed with “IVR”, as required by Vuesion. For **Extension**, enter the first SIP base extension from **Section 5.4**. Retain the default values in the remaining fields. The screen below shows the added SIP user.

The screenshot shows the 'User' configuration page for 'IVR 28235: 28235'. The left pane shows the 'IP Offices' tree with 'User (32)' selected. The main pane has tabs for 'User', 'Voicemail', 'DND', 'ShortCodes', 'Source Numbers', 'Telephony', 'Forwarding', 'Dial In', 'Voice Recording', and 'Button Programming'. The 'User' tab is active, showing fields for Name, Password, Confirm Password, Full Name, Extension, Locale, Priority, System Phone Rights, and Profile. Below these are checkboxes for 'Receptionist', 'Enable Softphone', 'Enable one-X Portal Services', 'Enable one-X TeleCommuter', 'Enable Remote Worker', and 'Ex Directory'. A 'Device Type' section shows 'Unknown SIP device'. A 'User Rights' section includes 'User Rights view', 'Working hours time profile', 'Working hours User Rights', and 'Out of hours User Rights'.

Select the **Voicemail** tab, and uncheck **Voicemail On**, as shown below.

The screenshot shows the 'Voicemail' configuration page for 'IVR 28235: 28235'. The left pane shows the 'IP Offices' tree with 'User (32)' selected. The main pane has tabs for 'User', 'Voicemail', 'DND', 'ShortCodes', 'Source Numbers', 'Telephony', 'Forwarding', 'Dial In', and 'Voice Recording'. The 'Voicemail' tab is active, showing fields for 'Voicemail Code', 'Confirm Voicemail Code', and 'Voicemail Email'. To the right are checkboxes for 'Voicemail On', 'Voicemail Help', 'Voicemail Ringback', 'Voicemail Email Reading', and 'UMS Web Services'. Below these are radio buttons for 'Voicemail Email' (Off, Copy, Forward, Alert). A 'DTMF Breakout' section includes fields for 'Reception / Breakout (DTMF *0)', 'Breakout (DTMF *2)', and 'Breakout (DTMF *3)'. All fields are set to 'System Default ()'.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Enter a desired **Login Code**.

Repeat this section to add a new user for each SIP extension from **Section 5.4**. In the compliance testing, five users with extensions of 28235-28239 were created.

The screenshot displays the Avaya IP Office configuration interface. On the left, the 'IP Offices' tree shows a hierarchy: BOOTP (2), Operator (3), DevCon IPO 1, System (1), DevCon IPO 1, Line (20), Control Unit (5), Extension (33), and User (32). Under 'User (32)', a list of extensions is visible, including 28201 Extn28201 through 28211 Extn28211.

The main configuration area is titled 'IVR 28235: 28235'. It features a tabbed interface with 'Telephony' selected. Within 'Telephony', the 'Supervisor Settings' sub-tab is active. The settings include:

- Login Code:** A text field containing '****'.
- Login Idle Period (secs):** A text field.
- Monitor Group:** A dropdown menu set to '<None>'.
- Coverage Group:** A dropdown menu set to '<None>'.
- Status on No-Answer:** A dropdown menu set to 'Logged On (No change)'.
- Reset Longest Idle Time:** A section with two radio buttons: 'All Calls' (selected) and 'External Incoming'.
- After Call Work Time (secs):** A dropdown menu set to 'System Default (10)'.

On the right side of the 'Supervisor Settings' tab, there are several checkboxes:

- ☐ Force Login
- ☐ Force Account Code
- ☐ Outgoing Call Bar
- ☐ Inhibit Off-Switch Forward/Transfer
- ☐ Can Intrude
- ☒ Cannot be Intruded
- ☐ Can Trace Calls
- ☐ CCR Agent
- ☐ Automatic After Call Work

5.6. Administer Hunt Groups

Administer three hunt groups for the following purposes:

- Main hunt group for delivering of incoming trunk calls to Vuesion.
- Monitor hunt group for supervisor monitoring of agents.
- Transfer hunt group for use by Vuesion for internal transfers.

5.6.1. Administer Main Hunt Group

From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. This hunt group will be used to deliver incoming trunk calls to Vuesion.

Enter desired values for **Name** and **Extension**. For **Ring Mode**, select “Rotary” from the drop-down list. Retain the default values in the remaining fields

In the **User List** section, add the desired number of virtual SIP users from **Section 5.5** as members. In the compliance testing, 28235 to 28237 were added as members as shown below.

The screenshot displays the configuration window for a 'Rotary Group BBX Main: 77100'. The left pane shows the 'IP Offices' configuration tree with 'HuntGroup (7)' expanded, highlighting '77100 BBX Main'. The main pane shows the configuration for this hunt group. The 'Name' field is 'BBX Main' and the 'Extension' is '77100'. The 'Ring Mode' is set to 'Rotary'. The 'No Answer Time (secs)' is 'System Default (15)'. The 'Hold Music Source' is 'No Change'. The 'Agent's Status on No-Answer Applies To' is 'None'. The 'Central System' is 'DevCon IPO 1'. The 'User List' section shows three members:

Extension	Name	System
28235	IVR 28235	DevCon IPO 1
28236	IVR 28236	DevCon IPO 1
28237	IVR 28237	DevCon IPO 1

Select the **Voicemail** tab, and uncheck **Voicemail On**.

The screenshot shows the 'Voicemail' configuration tab for 'Rotary Group BBX Main: 77100'. On the left is a tree view under 'IP Offices' containing: BOOTP (2), Operator (3), DevCon IPO 1 (with sub-items System (1) and DevCon IPO 1), Line (20), Control Unit (5), Extension (33), User (32), and HuntGroup (7) (with sub-items 77200 BBX CSR, 77600 BBX Failover, and 77100 BBX Main). The main panel has tabs: Hunt Group, Queuing, Overflow, Fallback, Voicemail (selected), Voice Recording, Announcements, and SIP. The 'Voicemail' tab contains the following settings: 'Voicemail Code' (empty text box), 'Confirm Voicemail Code' (empty text box), 'Voicemail Email' (empty text box), 'Voicemail On' (unchecked checkbox), 'Voicemail Answer Time (secs)' (45), 'Voicemail Help' (unchecked checkbox), 'Broadcast' (unchecked checkbox), 'UMS Web Services' (unchecked checkbox), and 'Voicemail Email' options: Off (selected radio button), Copy, Forward, and Alert.

Select the **Queuing** tab, and uncheck **Queuing On**.

The screenshot shows the 'Queuing' configuration tab for 'Rotary Group BBX Main: 77100'. The left tree view is identical to the previous screenshot, with '77100 BBX Main' highlighted. The main panel has tabs: Hunt Group, Queuing (selected), Overflow, Fallback, Voicemail, Voice Recording, Announcements, and SIP. The 'Queuing' tab contains the following settings: 'Queuing On' (unchecked checkbox), 'Queue Length' (No Limit), 'Normalize Queue Length' (checked checkbox), 'Queue Type' (Assign Call On Agent Answer), 'Calls In Queue Alarm' (expanded section containing 'Calls In Queue Threshold' set to 1 and 'Analog Extension to Notify' set to <None>).

5.6.2. Administer Monitor Hunt Group

From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. This hunt group will be used for supervisor monitoring of agents.

Enter desired values for **Name** and **Extension**, and retain the default values in the remaining fields.

Follow the procedures in **Section 5.6.1** to uncheck **Voicemail On**.

In the **User List** section, add the agent users as members. In the compliance testing, 28233, 28234 and 28240 were added as members as shown below.

IP Offices

- BOOTP (2)
- Operator (3)
- DevCon IPO 1
 - System (1)
 - DevCon IPO 1
 - Line (20)
 - Control Unit (5)
 - Extension (33)
 - User (32)
 - HuntGroup (7)
 - 77200 BBX CSR
 - 77600 BBX Failover
 - 77100 BBX Main
 - 77500 BBX Monitor**
 - 77700 BBX NetCSR
 - 77300 BBX Outdial
 - 77199 IVR Pilot
 - Short Code (66)
 - Service (0)
 - RAS (1)
 - Incoming Call Route (4)
 - WanPort (0)
 - Directory (0)
 - Time Profile (0)
 - Firewall Profile (1)
 - IP Route (2)
 - Account Code (1)
 - License (64)
 - Tunnel (0)

Sequential Group BBX Monitor: 77500

Hunt Group | Queuing | Overflow | Fallback | Voicemail | Voice Recording | Announcements | SIP

Name: BBX Monitor ☐ CCR Agent Group

Extension: 77500

Ring Mode: Sequential No Answer Time (secs): System Default (15)

Hold Music Source: No Change

Agent's Status on No-Answer: None

Applies To: DevCon IPO 1 ☐ Advertize Group

Central System: DevCon IPO 1

User List

Extension	Name	System
<input checked="" type="checkbox"/>	28233	Extn28233 DevCon IPO 1
<input checked="" type="checkbox"/>	28234	Extn28234 DevCon IPO 1
<input checked="" type="checkbox"/>	28240	Extn28240 DevCon IPO 1

Edit... Remove

5.6.3. Administer Transfer Hunt Group

From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. This hunt group will be used by Vuesion for internal transfers.

Enter desired values for **Name** and **Extension**. For **Ring Mode**, select “Rotary” from the drop-down list. Retain the default values in the remaining fields.

In the **User List** section, add the desired number of virtual SIP users from **Section 5.5** as members. In the compliance testing, 28235 to 28237 were added as members as shown below.

Follow the procedures in **Section 5.6.1** to uncheck **Voicemail On** and **Queuing On**.

IP Offices

- BOOTP (2)
- Operator (3)
- DevCon IPO 1
 - System (1)
 - DevCon IPO 1
 - Line (20)
 - Control Unit (5)
 - Extension (33)
 - User (32)
 - HuntGroup (7)
 - 77200 BBX CSR**
 - 77600 BBX Failover
 - 77100 BBX Main
 - 77500 BBX Monitor
 - 77700 BBX NetCSR
 - 77300 BBX Outdial
 - 77199 IVR Pilot
 - Short Code (66)
 - Service (0)
 - RAS (1)
 - Incoming Call Route (4)
 - WanPort (0)
 - Directory (0)
 - Time Profile (0)
 - Firewall Profile (1)
 - IP Route (2)
 - Account Code (1)
 - License (64)
 - Tunnel (0)

Rotary Group BBX CSR: 77200

Hunt Group | Queuing | Overflow | Fallback | Voicemail | Voice Recording | Announcements | SIP

Name: BBX CSR

Extension: 77200

Ring Mode: Rotary

Hold Music Source: No Change

Agent's Status on No-Answer: None

Central System: DevCon IPO 1

☐ CCR Agent Group

No Answer Time (secs): System Default (15)

☐ Advertize Group

User List

Extension	Name	System
<input checked="" type="checkbox"/>	28235	IVR 28235 DevCon IPO 1
<input checked="" type="checkbox"/>	28236	IVR 28236 DevCon IPO 1
<input checked="" type="checkbox"/>	28237	IVR 28237 DevCon IPO 1

Edit... Remove

5.7. Administer Agents

From the configuration tree in the left pane, select the first agent user, in this case “28233”.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Uncheck **Cannot be Intruded**, as shown below. If this agent needs to be monitored then select the required monitoring group from the **Monitor Group** drop down menu.

Repeat this section for all agent users.

The screenshot displays the Avaya configuration interface. On the left, the 'IP Offices' tree shows a hierarchy: BOOTP (2), Operator (3), DevCon IPO 1, System (1), DevCon IPO 1, Line (20), Control Unit (5), Extension (33), and User (32). The 'User (32)' list includes extensions from 28201 to 28233, with '28233 Extn28233' selected. The main panel is titled 'Extn28233: 28233' and contains several tabs: User, Voicemail, DND, ShortCodes, Source Numbers, Telephony (selected), Forwarding, Dial In, Voice Recording, and Button Programming. Under the 'Telephony' tab, the 'Supervisor Settings' sub-tab is active. It contains the following settings:

- Login Code: [Empty text box]
- Login Idle Period (secs): [Empty text box]
- Monitor Group: BBX Monitor (dropdown menu)
- Coverage Group: <None> (dropdown menu)
- Status on No-Answer: Logged On (No change) (dropdown menu)
- Reset Longest Idle Time: All Calls (radio button selected)
- External Incoming: [Empty text box]
- After Call Work Time (secs): System Default (10) (dropdown menu)

On the right side of the 'Supervisor Settings' sub-tab, there are several checkboxes, all of which are unchecked:

- Force Login
- Force Account Code
- Outgoing Call Bar
- Inhibit Off-Switch Forward/Transfer
- Can Intrude
- Cannot be Intruded
- Can Trace Calls
- CCR Agent
- Automatic After Call Work

5.8. Administer Supervisors

From the configuration tree in the left pane, select the first supervisor user that will be monitoring agents, in this case “28234”.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. For **Monitor Group**, select the Monitor hunt group from **Section 5.6.2**. Check **Can Intrude** and **Cannot be Intruded**.

Repeat this section for all supervisors that will be monitoring agents. In the compliance testing, one supervisor user with extension 28234 was configured, as shown below.

The screenshot displays the Avaya configuration interface. On the left, the 'IP Offices' tree shows a hierarchy: BOOTP (2), Operator (3), DevCon IPO 1, System (1), DevCon IPO 1, Line (20), Control Unit (5), Extension (33), and User (32). Under the 'User' category, a list of extensions is shown, with '28234 Extn28234' selected at the bottom. The main panel is titled 'Extn28234: 28234*' and contains several tabs: User, Voicemail, DND, ShortCodes, Source Numbers, Telephony (selected), Forwarding, Dial In, Voice Recording, and Button Programming. Within the 'Telephony' tab, the 'Supervisor Settings' sub-tab is active. This sub-tab includes fields for 'Login Code', 'Login Idle Period (secs)', 'Monitor Group' (set to 'BBX Monitor'), 'Coverage Group' (set to '<None>'), and 'Status on No-Answer' (set to 'Logged On (No change)'). There are also checkboxes for 'Force Login', 'Force Account Code', 'Outgoing Call Bar', 'Inhibit Off-Switch Forward/Transfer', 'Can Intrude' (checked), 'Cannot be Intruded' (checked), 'Can Trace Calls', 'CCR Agent', and 'Automatic After Call Work'. A 'Reset Longest Idle Time' section has radio buttons for 'All Calls' (selected) and 'External Incoming'. At the bottom, the 'After Call Work Time (secs)' is set to 'System Default (10)'.

5.9. Administer Incoming Call Route

If necessary, create an incoming call route to route incoming calls to the Main hunt group. In the compliance testing, a SIP line “17” was created for incoming route

As shown in the screen below, the **Line Group ID** of “17” is selected.

The screenshot displays the 'IP Offices' configuration window. On the left, a tree view shows the hierarchy: BOOTP (2), Operator (3), DevCon IPO 1, System (1), DevCon IPO 1, Line (20), Control Unit (5), Extension (33), User (32), HuntGroup (7), Short Code (66), Service (0), RAS (1), and Incoming Call Route (4). Under 'Incoming Call Route (4)', three items are listed: 2, 17 (highlighted in blue), and 1. The main panel on the right is titled '17' and contains several tabs: 'Standard', 'Voice Recording', and 'Destinations'. The 'Standard' tab is active, showing fields for: Bearer Capability (Any Voice), Line Group ID (17), Incoming Number, Incoming Sub Address, Incoming CLI, Locale, Priority (1 - Low), Tag, and Hold Music Source (System Source).

In the **Destinations** tab, the use of “.” in the **Destination** field enables the routing to reach all extensions in the IP Office.

If desired, the Main hunt group can be selected from the **Destination** drop-down to route all incoming trunk calls to Vuesion.

The screenshot displays the 'IP Offices' configuration window, specifically the 'Destinations' tab for Line Group ID 17. The left tree view is identical to the previous screenshot, with '17' highlighted under 'Incoming Call Route (4)'. The main panel on the right shows the 'Destinations' tab with a table containing one row: 'Default Value' in the 'TimeProfile' column, '.' in the 'Destination' column, and a dropdown arrow in the 'Fallback Extension' column.

5.10. Administer Short Code

From the configuration tree in the left pane, right-click on **Short Code** and select **New** from the pop-up list to add a new short code for Outbound dialing. Configure the fields as shown below in the right pane.

Note that the short code **9N;** was used during compliance testing for making outbound calls. Outbound calls were routed using **Line Group ID “17”**, which is a SIP Line created on IP Office.

The screenshot displays the IP Office configuration interface. On the left, the 'IP Offices' pane lists various short codes, with '9N;' selected at the bottom. On the right, the '9N;; Dial' configuration pane is shown, containing the following fields:

Short Code	
Code	9N;
Feature	Dial
Telephone Number	N"@110.10.10.108"
Line Group ID	17
Locale	United States (US English)
Force Account Code	<input type="checkbox"/>

6. Configure BBX Technologies Vuesion Multimedia Contact Center

This section provides the procedures for configuring the Vuesion server. The procedures include the following areas:

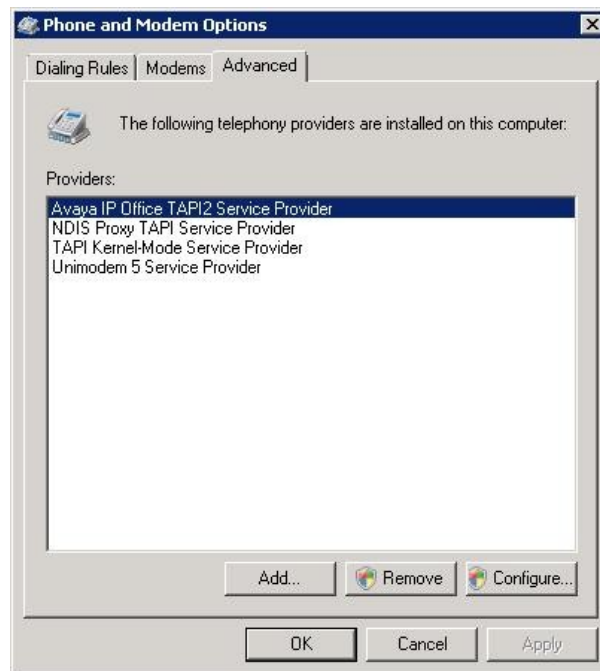
- Administer TAPI driver.
- Administer Switch.txt.
- Stop service.
- Launch Vuesion Manager.
- Administer communication settings.
- Administer local extensions.
- Administer tenants.
- Administer VMAIL extensions.
- Administer queues sizing.
- Administer ACD members.
- Administer ACD groups.
- Start service.

The configuration of the Vuesion server is typically performed by BBX Technologies technicians. The procedural steps are presented in these Application Notes for informational purposes.

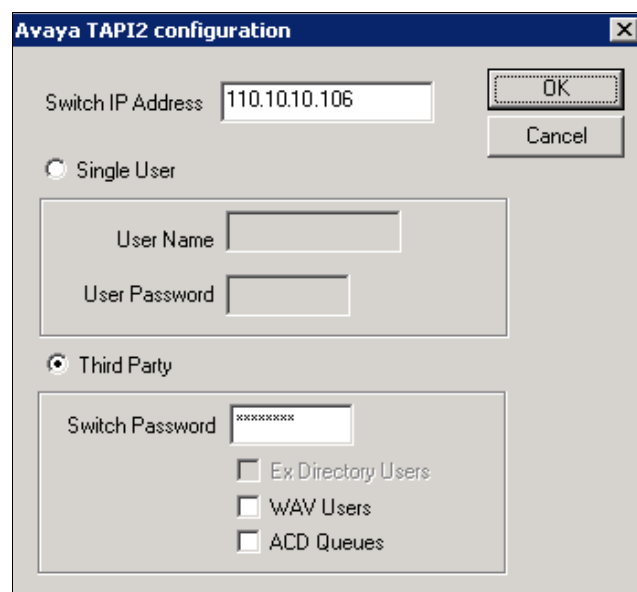
In addition to the shown procedural steps, the application also requires the auto attendant, and the class of service for the agents and supervisors be configured by following reference in **Section 9 [2]**.

6.1. Administer TAPI Driver

From the Vuesion server, select **Start → Control Panel**, and click on the **Phone and Modem** icon (not shown below). In the **Phone and Modem Options** screen, select the **Advanced** tab. Select the **Avaya IP Office TAPI2 Service Provider** entry, and click **Configure**.

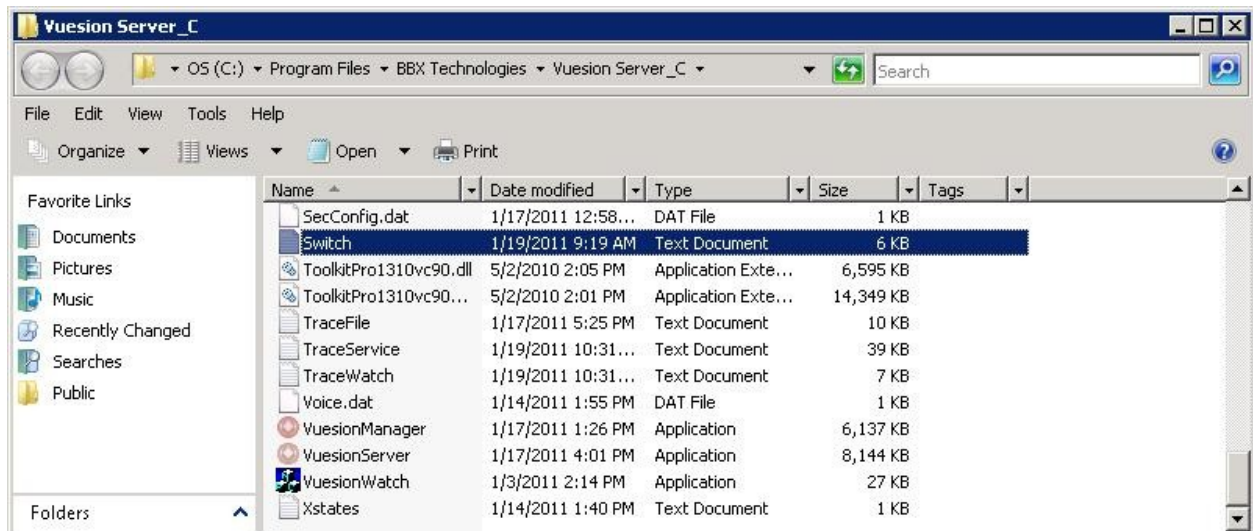


The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of Avaya IP Office. Select the radio button for **Third Party**, and enter the IP Office password into the **Switch Password** field. Reboot the Vuesion server.

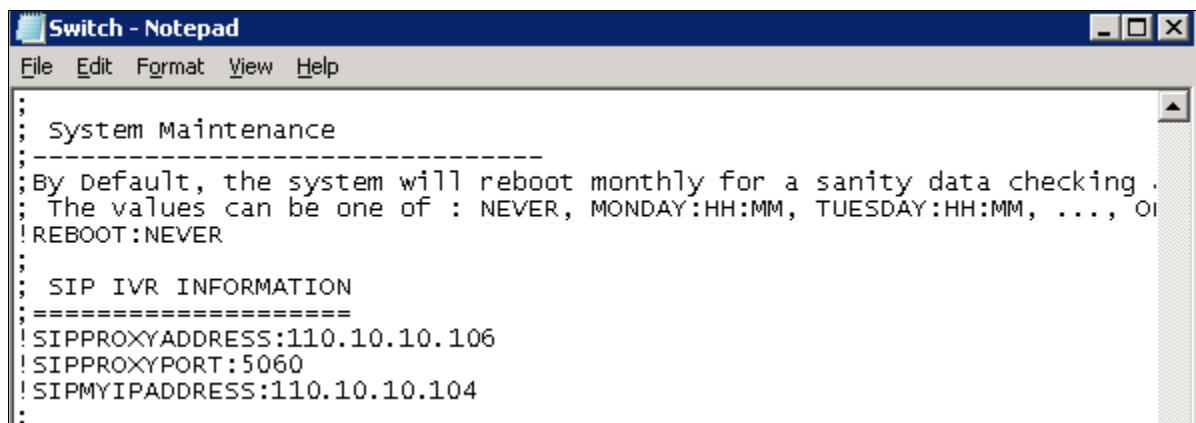


6.2. Administer Switch.txt

Navigate to the **C:\Program Files\BBX Technologies\Vuesion Server_C** directory to locate the **Switch** text file shown below.

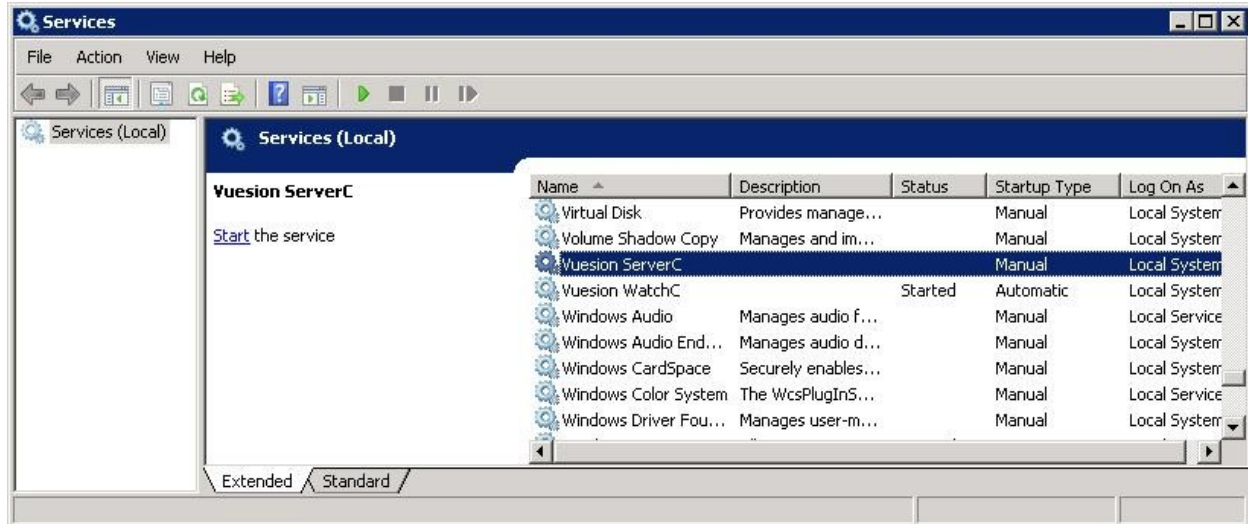


Open the **Switch** text file with the Notepad application. For **SIPPROXYADDRESS**, enter the IP address of IP Office from **Section 5.2**. For **SIPPROXYPORT**, enter the UDP port number from **Section 5.3**. For **SIPMYIPADDRESS**, enter the IP address of the local Ethernet interface used for connectivity with IP Office, in this case "110.10.10.104".



6.3. Stop Service

Select **Start → Control Panel → Administrative Tools → Services**, to display the **Services** screen. Navigate to the **Vuesion ServerC** entry, right-click on the entry and select **Stop**.



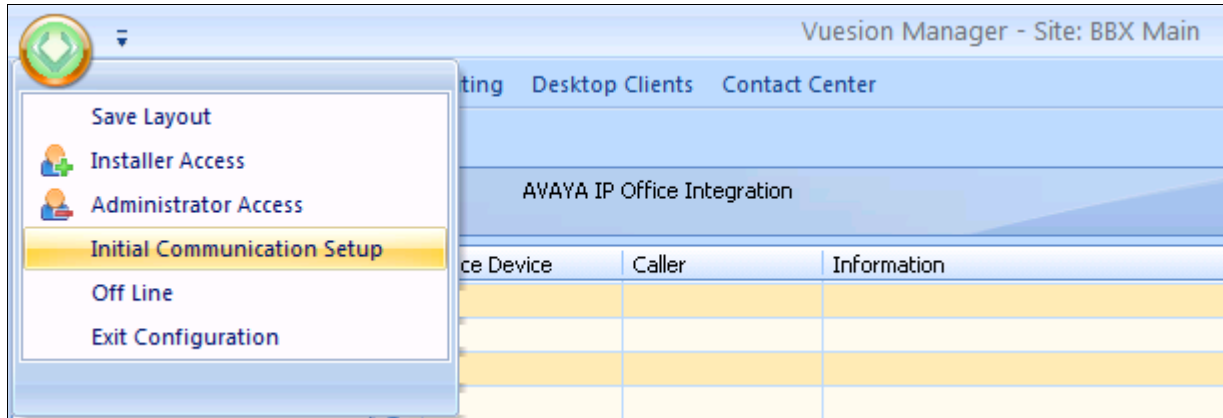
6.4. Launch Vuesion Manager

From the Vuesion server, double-click the **VuesionManager** icon shown on the desktop, which was created as part of installation.



6.5. Administer Communication Settings

The **Vuesion Manager** screen is displayed. Click on the icon in the top left corner, and select **Initial Communication Setup** from the drop-down list.



The **VuesionServer** dialog box is displayed, click **OK**



The **COMMUNICATION SETTINGS** screen is displayed next. Check **IP Enabled**. Enter the IP address and password for IP Office in **PBX IP Addr** and **PBX Password**. **IVR Pilot Number** should be a unique number and therefore use available extension numbers on IP Office. Retain the default values in the remaining fields.

COMMUNICATION SETTINGS

SWITCH COMMUNICATION

RS232 Port #: COM1 BaudRate: 9600

☒ IP Enabled

PBX IP Addr: 110.10.10.106

PBX Password: [Masked]

PBX SMDR IP Address: [Empty]

PBX SMDR TCP Port: 0

NETWORKING SETUP: MASTER SERVER

NetServer IP address: [Empty]

NetServer IP Port: [Empty]

Node Index: [Empty]

THIS SERVER DEFINITION

Customer Location Name: BBX Main

This Server IP address: 110.10.10.104

This Server IP Port: 62029

IVR Location: BBX Main

IVR Pilot Number: 77199

OK

6.6. Administer Local Extensions

The **Vuesion Manager** screen is displayed again. Select **Switch Setup** → **Local Extensions** from the left pane.

Vuesion Manager - Site: BBX Main

Switch Setup Messaging Routing Desktop Clients Contact Center

Switch Setup

- Communication
- Local Extensions
- Off Premise Extensions
- Phantom Extensions
- Park Orbits
- Hold Extensions
- Area Paging
- Trunks
- Reload Switch Info

AVAYA IP Office Integration

Voice Device	Caller	Information

Record Device	Recording	Information

The **DIRECTORY CONFIGURATION** screen is displayed as shown below. Click on **Add** to start adding required agents, supervisors and hunt groups.

[illegible]

The **Extension Range Selection** screen is shown below where Local User Extensions can be added and if required a range can be provided too.

EXTENSION RANGE SELECTION

LOCAL USER EXTENSIONS

First Device #:

How Many ?

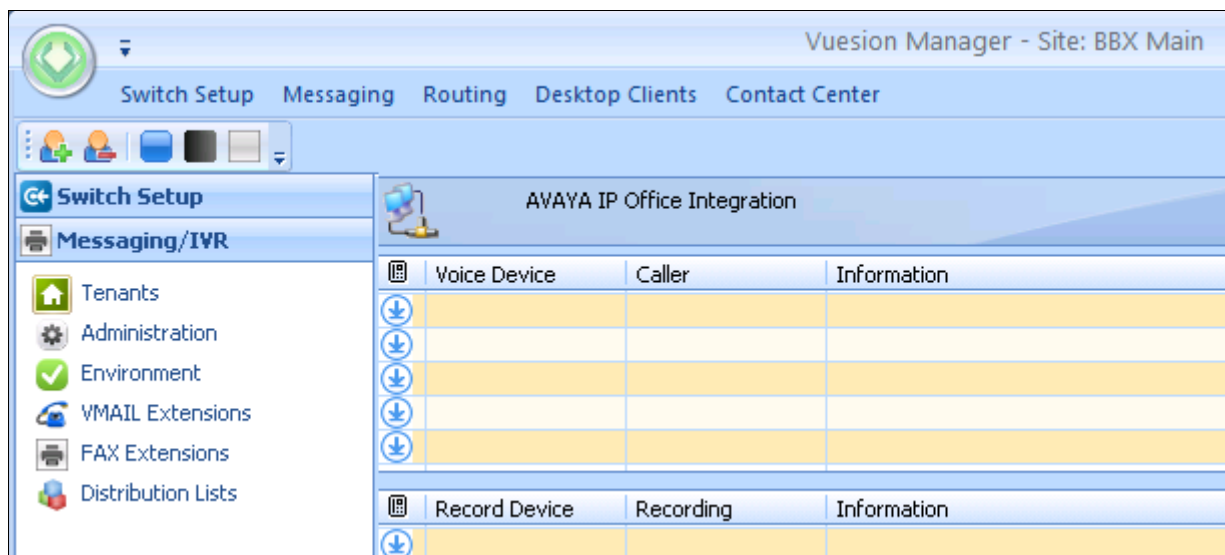
OK

Update the **Full Name** field as desired, and retain the default values in the remaining fields. **Class of Service** can be set from the drop down menu depending on each user's requirement. Note that the port numbers are automatically assigned by the system subsequently.

RS; Reviewed:
SPOC 5/11/2012

6.7. Administer Tenants

From the **Vuesion Manager** screen, select **Messaging/IVR** → **Tenants** from the left pane.



The **TENANTS/GROUPS** screen is displayed as shown below. Click on **Add Tenant**.

[illegible]

The **Tenants/Group** screen is shown as below. Create an entry for the Main hunt group from **Section 5.6.1**, as shown below.

For **Name**, enter the Main hunt group name from **Section 5.6.1**. For **ID** and **Password**, enter the Main hunt group extension from **Section 5.6.1**. Retain the default values in the remaining fields, and click **Edit Members**.

The screenshot shows the 'TENANTS/GROUPS' application window. On the left is a table titled 'Tenants/Groups' with columns 'Name', 'ID', and 'Pwd'. The first row contains 'BBX Main', '77100', and '7710'. To the right of the table are several configuration sections:

- Tenant/Group Definition:** Name: 'BBX Main', ID: '77100', Password: '7710'.
- Taxes:** % '0'.
- Discount:** % '0'.
- Long Distance Call Charges:** First Minute: '\$ 0', Add. Minute: '\$ 0'.
- International Call Charges:** First Minute: '\$ 0', Add. Minute: '\$ 0'.
- ☐ **Cost Incoming Calls**
- Monthly Constant Charges:** A table with 3 columns: 'Charge Name', 'Quantity', and 'Rate'. It contains 6 rows, all with '0' in the Quantity and Rate columns.
- Time Zone Offset:** Offset: ☐ (+ OR -), Hours: '0', Minutes: '0'.
- Show Directory (Yes/No):** 'Yes'.
- Override Auto-Attendant:** (empty field).
- ☐ **Order of Users Fullname is [Lastname][Firstname]**

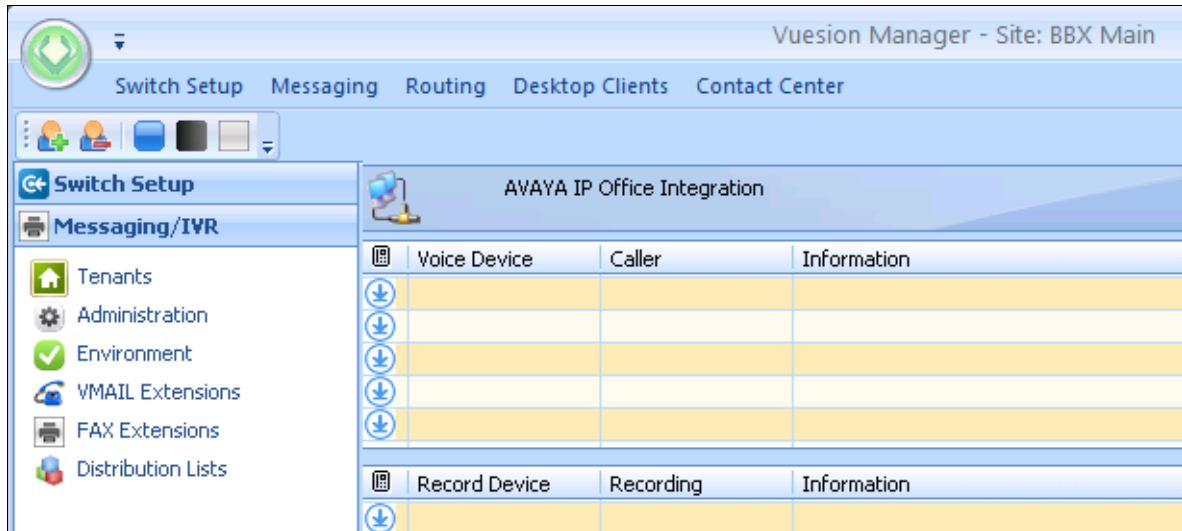
At the bottom are buttons: 'Add Tenant', 'DeleteTenant', 'Edit Members', 'Save', and 'Exit'.

The **Selected Tenant** screen is displayed. Select the applicable entries in the **Available User List** section, and click the double-left-arrow to move the entries to the **Tenant/Group Members List** section, as shown in screen below. Click on **Save** to complete the selection.

[illegible]

6.8. Administer VMAIL Extensions

From the **Vuesion Manager** screen, select **Messaging/IVR → VMAIL Extensions** from the left pane.



The **DIRECTORY CONFIGURATION** screen is displayed as shown below. Click on **Add** to start adding IVR Extensions.

The screenshot shows the 'DIRECTORY CONFIGURATION' window. The left pane is titled 'IVR EXTENSIONS' and contains a table with columns 'Full Name', 'DN #', and 'Port#'. The right pane is titled 'DIRECTORY ASSIGNMENT' and contains the following fields: 'Directory #', 'FullName', 'Title', 'PBX', 'Account', 'Password', 'Tenant Name', and 'Class of Service'. Below these fields are two columns of checkboxes: 'Shared Station', 'Virtual/Single Line', 'Disable SMDR', 'Live Record', 'Announce/Notify', 'Reserved', 'Recorder', 'Disabled', 'SIP IVR', 'Network Advertise', 'Guest Telephone', 'Music On Hold', and 'Nurse/CareGiver'. The bottom pane is titled 'FOLLOW ME OPTIONS' and contains the following fields: 'Cellular #', 'Home #', 'Alternate #', and 'Active Forward'. At the bottom of the window are buttons for 'Add', 'Delete', 'Save', 'Refresh All', and 'Exit'.

The **Extension Range Selection** screen is shown below where IVR Extensions can be added and if required a range can be provided too.

The **DIRECTORY CONFIGURATION** screen is displayed with entry for each virtual SIP user from **Section 5.5**.

For **Full Name**, enter the SIP user name from **Section 5.5**. For **Password**, enter the SIP user login code from **Section 5.5**. Check **SIP IVR**. Retain the default values in the remaining fields. Note that the port numbers are automatically assigned by the system subsequently.

Full Name	DN #	Port#
IVR 28235	28235	11
IVR 28236	28236	12
IVR 28237	28237	13
IVR 28238	28238	14
IVR 28239	28239	15

DIRECTORY ASSIGNMENT

Directory #: 28235
 Full Name: IVR 28235
 Title:
 PBX:
 Account:
 Password:
 Tenant Name:
 Class of Service: 0

☐ Shared Station
☐ Virtual/Single Line
☐ Disable SMDR
☐ Live Record
☐ Announce/Notify
☐ Reserved
☐ Recorder
☐ Disabled

☒ SIP IVR
☐ Network Advertise
☐ Guest Telephone
☐ Music On Hold
☐ Nurse/CareGiver

FOLLOW ME OPTIONS

Cellular #:
 Home #:
 Alternate #:
 Active Forward:
 Add Delete Save Refresh All Exit

6.9. Administer Queues Sizing

From the **Vuesion Manager** screen, select **Contact Center** → **Queues Sizing** from the left pane.

Vuesion Manager - Site: BBX Main

Switch Setup Messaging Routing Desktop Clients Contact Center

AVAYA IP Office Integration

	Voice Device	Caller	Information
↓	28235		
↓	28236		
↓	28237		
↓	28238		
↓	28239		

	Record Device	Recording	Information
↓			
↓			
↓			

The **DIRECTORY CONFIGURATION** screen is displayed. Click on **Add** to start adding Call Center Queue.

The **Extension Range Selection** screen is shown below where Call Center Queue numbers can be added and if required a range can be provided too.

Screen below shows the desired number of entries for queuing of incoming ACD calls used for compliance testing.

The screenshot shows the 'ACD Members' window. On the left is a table with columns: Name, ID, Passw, COS, Type, and Def. The table is currently empty. On the right are configuration fields:

- Member Definition:** Member (text box), FullName (text box), Password (text box).
- Setup:** Type (dropdown menu showing 'ACD Agent'), Primary (dropdown menu), Class (dropdown menu showing '0').
- Allow Agents Screen Capture:** Five Supervisor ID text boxes.
- Auto Login:** Extension (text box).
- Buttons: Add, Delete, Save, Exit.

Create an entry for each agent user from **Section 5.7**, and for each supervisor user from **Section 5.8**, as shown in screen below. Enter the desired **FullName**. For **Member ID**, enter a unique value for each agent and supervisor. The recommendation is to use available extension numbers on IP Office. For **Password**, enter desired values. In the compliance testing, the same values are used for member ID and password for simplicity. For **Type**, select “ACD Agent” for agents and “ACD Supervisor” for supervisors. For **Primary Group**, select the Transfer hunt group name from **Section 5.6.3**. For **Class**, select the appropriate class of service.

The screenshot shows the 'ACD Members' window with data entered. The table contains the following rows:

Name	ID	Passw	COS	Type	Def.
Agent 1	78100	7810	1	ACD Agent	
Agent 2	78101	7811	1	ACD Agent	
Supervisor 1	78102	7812	1	ACD Supervisor	

The configuration fields on the right are updated as follows:

- Member Definition:** Member (78100), FullName (Agent 1), Password (7810).
- Setup:** Type (ACD Agent), Primary (BBX CSR), Class (1).
- Allow Agents Screen Capture:** Five Supervisor ID text boxes (all empty).
- Auto Login:** Extension (text box).
- Buttons: Add, Delete, Save, Exit.

6.11. Administer ACD Groups

From the **Vuesion Manager** screen shown in **Section 6.9**, select **Contact Center → ACD Groups** from the left pane, to display the **SkillSets Administration** screen. Create an entry for the Transfer hunt group from **Section 5.6.3**, as shown below.

The **Voice Routing Options** section defines the parameters used for routing of ACD calls. The **Multimedia Contact Center Members Assignment** section defines the members and their skills level. The **Announcements** section defines the announcement treatments.

The screenshot below shows the values used in the compliance testing.

SkillSets Administration

Group ID: 77200 Group Name: BBX CSR Routing Method: Least Productive

Group Name	ID
BBX CSR	77200

Voice Routing Options

Enable: ☒ Priority: 09

Overflow Time: 10 Min

Overfl. Destination: 77200

Signed-Out OVF: 77200

All Busy Overflow:

Longest InQ Thr: 10 Sec

Force Priority: 00

Calls Queued Thr.: 01

☒ Auto WrapUp @ 15 Sec

☐ Ringback on Queue

Email Routing Options

Enable: ☐ Priority: 00

Subject Filter:

Overflow Time: 00

OVF Destination:

Signed-Out OVF:

EmailQ Threshold: 2

Longest InQ Thr: 300

Force Priority: 9

Fax Routing Options

Enable: ☐ Priority: 00

Overflow Time: 00

OVF Destination:

Signed-Out OVF:

FaxQ Threshold: 10

Longest InQ Thr: 300

Force Priority: 0

Miscellaneous

☐ Auto Logout @ 11:50:00 PM

Advance Time: 10 Sec

☐ Follow Me (Non Call Center)

Multimedia Contact Center Members Assignment

VoiceSkill: 00 EmailSkill: 00 FaxSkill: 00 OutdialSkill: 00

HandleVoice: ☐ HandleEmails: ☐ HandleFax: ☐ HandleOutdial: ☐

Name	ID	Type
Agent 1	78100	ACD Agent
Agent 2	78101	ACD Agent
Supervisor 1	78102	ACD Supervisor

<< >>

Name	ID
------	----

Announcements

	QPosition	~ Hold	AA	Repeat	Frequency
1: AA		<input type="checkbox"/>	AA	Repeat	Never
2: AA		<input type="checkbox"/>	AA	Repeat	Never
3: AA		<input type="checkbox"/>	AA	Repeat	Never

Outbound Campaign

Enable Campaign: ☐ Campaign Priority: 00

ODBC - DSN:

Table: Password:

Login:

Name Field:

Phone Field:

Contact:

Priority Field:

Comment Field:

Resolution Field:

Restricted Hours During Schedule (Format: 12:00-13:00,...)

Enable Schedule: ☐ Timezone: (CST)

Start Datetime: 4/ 3/2012 8:00:00 AM

Stop Datetime: 4/ 3/2012 5:00:00 PM

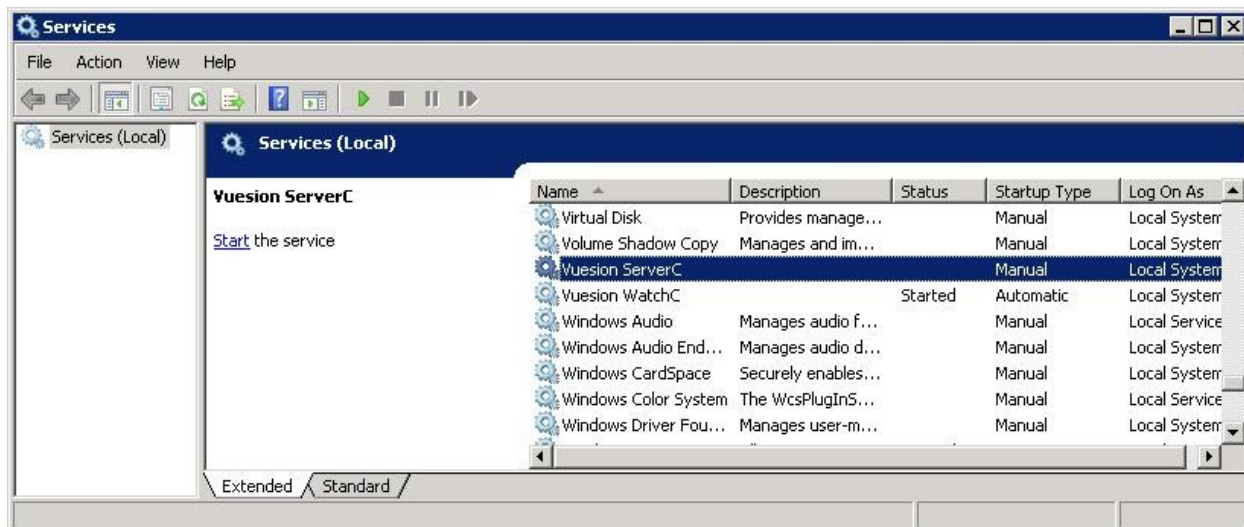
M T W T F S S

Import Records Restart Campaign

Add Remove Refresh Scripts Save Exit

6.12. Start Service

Select **Start** → **Control Panel** → **Administrative Tools** → **Services**, to display the **Services** screen. Navigate to the **Vuesion ServerC** entry, right-click on the entry and select **Start**.



7. Verification Steps

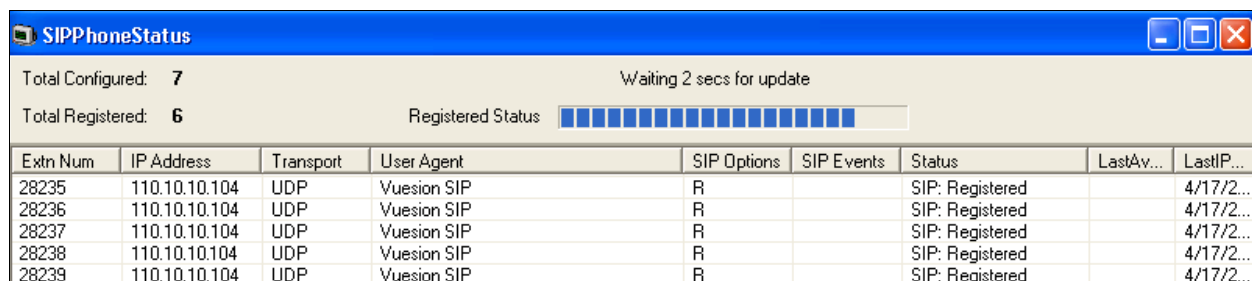
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and BBX Technologies Vuesion Multimedia Contact Center Client's additional features.

7.1. Verify Avaya IP Office

From a PC running the Avaya IP Office Monitor application, select **Start → Programs → IP Office → Monitor** to launch the application. The **Avaya IP Office R8 SysMonitor** screen is displayed, as shown below. Select **Status → SIP Phone Status** from the top menu.



The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each virtual SIP user from **Section 5.5**, that the **User Agent** contains “Vuesion SIP”, and that the **Status** is “SIP: Registered”, as shown below.



Extn Num	IP Address	Transport	User Agent	SIP Options	SIP Events	Status	LastAv...	LastIP...
28235	110.10.10.104	UDP	Vuesion SIP	R		SIP: Registered		4/17/2...
28236	110.10.10.104	UDP	Vuesion SIP	R		SIP: Registered		4/17/2...
28237	110.10.10.104	UDP	Vuesion SIP	R		SIP: Registered		4/17/2...
28238	110.10.10.104	UDP	Vuesion SIP	R		SIP: Registered		4/17/2...
28239	110.10.10.104	UDP	Vuesion SIP	R		SIP: Registered		4/17/2...

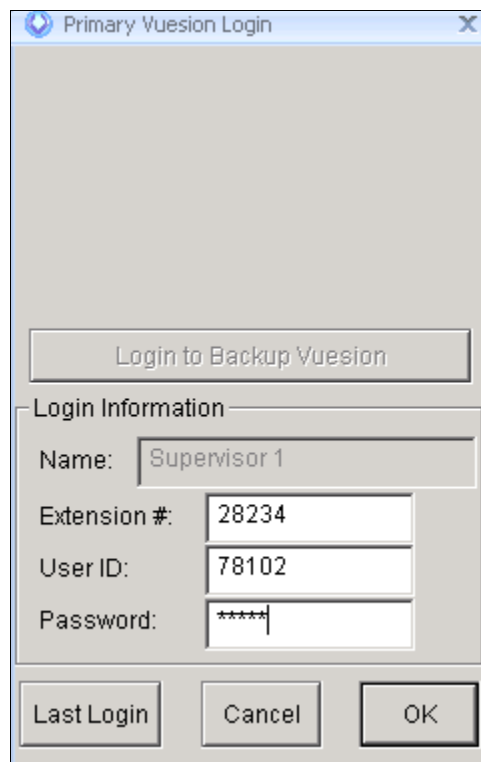
7.2. Verify BBX Technologies Vuesion Multimedia Contact Center

From the agent user PC running Vuesion Client, double-click on the **VuesionClient** icon shown on the desktop, which was created as part of installation.



The **Vuesion User Login** screen is displayed. The screen shows the “Supervisor 1” **Login Information**.

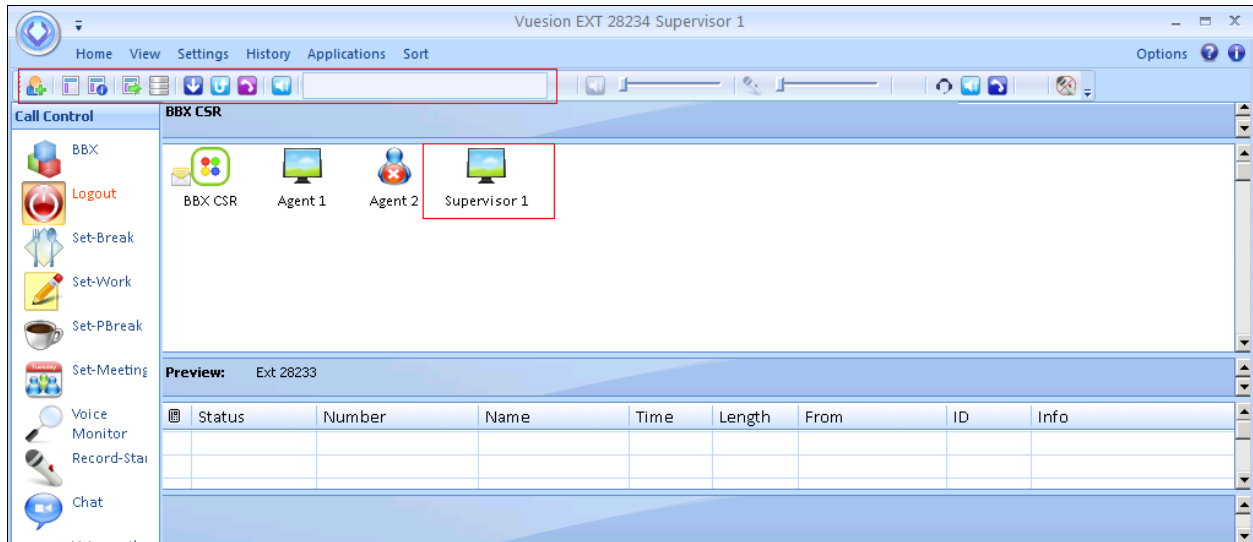
For **Extension #**, enter the extension number of the supervisor from **Section 6.6**. For **User ID** and **Password**, enter the corresponding credentials for the supervisor from **Section 6.10**, as shown below. During compliance testing this client was run from the Vuesion server.

A screenshot of the "Primary Vuesion Login" dialog box. The dialog has a title bar with a blue icon and the text "Primary Vuesion Login". Inside, there is a large grey rectangular area at the top. Below it is a button labeled "Login to Backup Vuesion". Underneath that is a section titled "Login Information" with a minus sign on the left. This section contains four input fields: "Name:" with the text "Supervisor 1", "Extension #:" with the text "28234", "User ID:" with the text "78102", and "Password:" with the text "*****". At the bottom of the dialog are three buttons: "Last Login", "Cancel", and "OK".

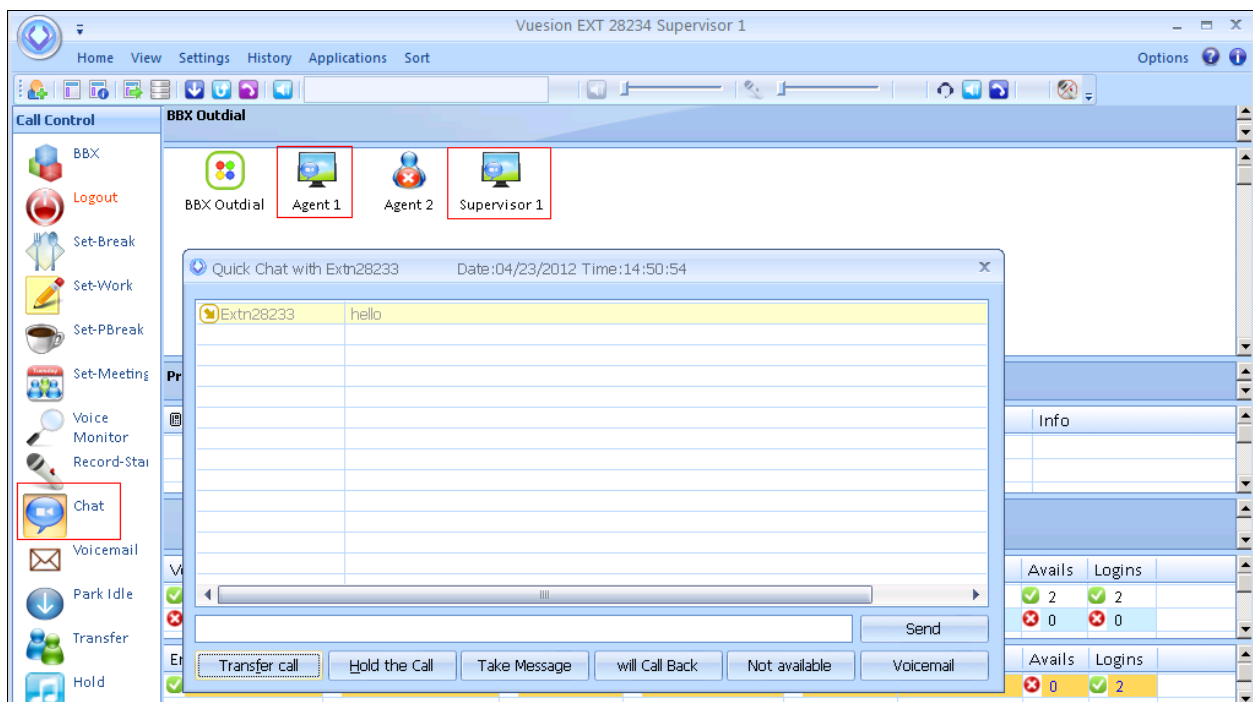
Login Information	
Name:	Supervisor 1
Extension #:	28234
User ID:	78102
Password:	*****

The **Vuesion** screen is displayed. Click on the **Login** icon from the left pane (not shown).

The screen is updated in the right pane, as shown below. Also top left of the screen shows the menu controls like Speed Dial List, Inbound/Outbound Call history, Dial Box etc.



The screen below shows agents “28234” and “28233” using the Chat feature.



The screen below shows agent “28234” being configured to an Extended State, “On Vacation”.

Extension Configuration

Extension Information

Agent Name:

Ext. Name:

Title:

Extension #:

Email:

Email Account:

Account Code:

Favorite Forward Destinations

Mobile #:

Home #:

Alternate #:

Forward To:

Presence State

State	IVR Digit
Out to Lunch	1
Business Travel	2
Out Of Office	3
On Vacation	4
Personal	5
Appointment	6
Clear State	0

Active Presence State

Return - Date:

Return -

The screen below shows agent “28233” being able to see the Extended State of agent “28234”.

Vuesion EXT 28233 Agent 1

Home View Settings History Applications Sort Options

Call Control

Logout Set-Break Set-Work Set-PBreak Set-Meeting Voice Monitor Record-Star Chat

BBX CSR

BBX CSR Agent 1 Agent 2 **Supervisor 1**

Preview:

Status	Number	Name	Time	Length	From

Screen below shows the Marquee message being configured. Click on **Send Marquee** to send the message and on **Clear Marquee** to clear the message.

Status	Number	Name	StartTime	ID	Account	Level	Info1

Static

☒ Pause Campaign
 ☐ Enable Rescue

Skill Group Marquee

Send Marquee
Clear Marquee

OK

Screen below shows the Marquee message being displayed on agent “28233” desktop.

Vuesion EXT 28233 Agent 1

Home View Settings History Applications Sort

Options ? i

Call Control

Logout

Set-Break

Set-Work

Set-PBreak

Set-Meeting

Voice Monitor

Record-Star

Chat

Voicemail

Park Idle

Transfer

BBX Outdial

BBX Outdial

Agent 1

Agent 2

Supervisor 1

Preview:

Status	Number	Name	Time	Length	From

This is a Test

Voice Queues	Queued	Longest	Active	Abandon	Handled	Overflow	Callback	~TTA
BBX CSR	0	0:00	0	0	0	0	0	0:00

8. Conclusion

These Application Notes describe the configuration steps required for BBX Technologies Vuesion Multimedia Contact Center additional Client features to successfully interoperate with Avaya IP Office. All feature test cases were completed. Observations are noted in **Section 2.2**.

9. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office KnowledgeBase 8.0 Documentation CD*, December 2011, available at <http://support.avaya.com>.
2. *Vuesion Application Server Contact Center Configuration Guide*, available upon request to BBX Technologies Support.

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