



Avaya Solution & Interoperability Test Lab

Application Notes for Algo 8180 SIP Audio Alerter Version 1.7 and with Avaya IP Office Server Edition Release 11-Issue 1.1

Abstract

These Application Notes describe the configuration steps required for Algo 8180 SIP Audio Alerter to interoperate with Avaya IP Office Server Edition. Algo 8180 SIP Audio Alerter is a SIP-based device that can register with Avaya IP Office as two separate SIP endpoints, one for loud ringing and one for voice paging.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the 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 required for Algo 8180 SIP Audio Alerter to interoperate with Avaya IP Office Server Edition. Algo 8180 SIP Audio Alerter is a SIP-based device that can register with IP Office as two separate SIP endpoints, one for loud ringing and one for voice paging.

For loud ringing, Algo 8180 SIP Audio Alerter can be configured to ring whenever the associated desk phone receives an incoming call. The loud ringing is useful for users that require louder ringing than what is available from the desk phone. The simultaneous ringing at the desk phone and Algo 8180 SIP Audio Alerter is accomplished via the Mobile internal twining feature.

For voice paging, Algo 8180 SIP Audio Alerter can auto-answer an incoming call and allow the caller to broadcast audio over the Algo 8180 SIP Audio Alerter.

In the compliance testing, Avaya IP Office Server Edition system consists of Avaya IP Office Primary Linux running on Virtualized Environment and a 500V2 Expansion.

2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were manually placed to the loud ringing and voice paging extensions, with call controls such as hold/resume, unattended, attended transfer and conference performed from the caller.

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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in this DevConnect Application Note included the enablement of supported encryption capabilities in the Avaya products only (private network side). Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with this Application Note, the interface between Avaya systems and the Algo 8180 did not include use of any specific encryption features as requested by Algo.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The loud ringing feature testing included registration, internal and external caller, interactions with the voice paging extension, and interactions with desk phone features such as coverage, call forwarding, and do not disturb. The voice paging feature testing included registration, media shuffling, G.722, internal and external caller, interactions with the loud ringing extension, and interactions with caller actions such as drop, hold/reconnect, blind/attended transfer, and blind/attended conference.

The serviceability testing focused on verifying the ability of Algo 8180 SIP Audio Alerter to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable to the device.

2.2. Test Results

The objectives outlined in **Section 2.1** were verified. All test cases passed. The following observations were made during the compliance testing:

- The call between Algo 8180 and Avaya phones (H.323, SIP, and digital) cannot be transferred by Avaya phone to SIP phone. This feature is currently not supported on Algo 8180.

2.3. Support

Technical support on Algo 8180 SIP Audio Alerter can be obtained through the following:

- Phone: + 1 604 454 3792
- Web: <http://www.algosolutions.com/support/support.html>
- Email: support@algosolutions.com

3. Reference Configuration

Figure 1 illustrates the test configuration used during the compliance testing between the Avaya IP Office and Algo 8180 SIP Audio Alerter. The 8180 SIP Audio Alerter communicated with IP Office through Avaya switch with Power over Ethernet (PoE) and registered with Avaya IP Office as SIP endpoint. The PRI T1 trunk was also configured to connect from IP Office to PSTN for test cases off-net via PRI T1 trunk.

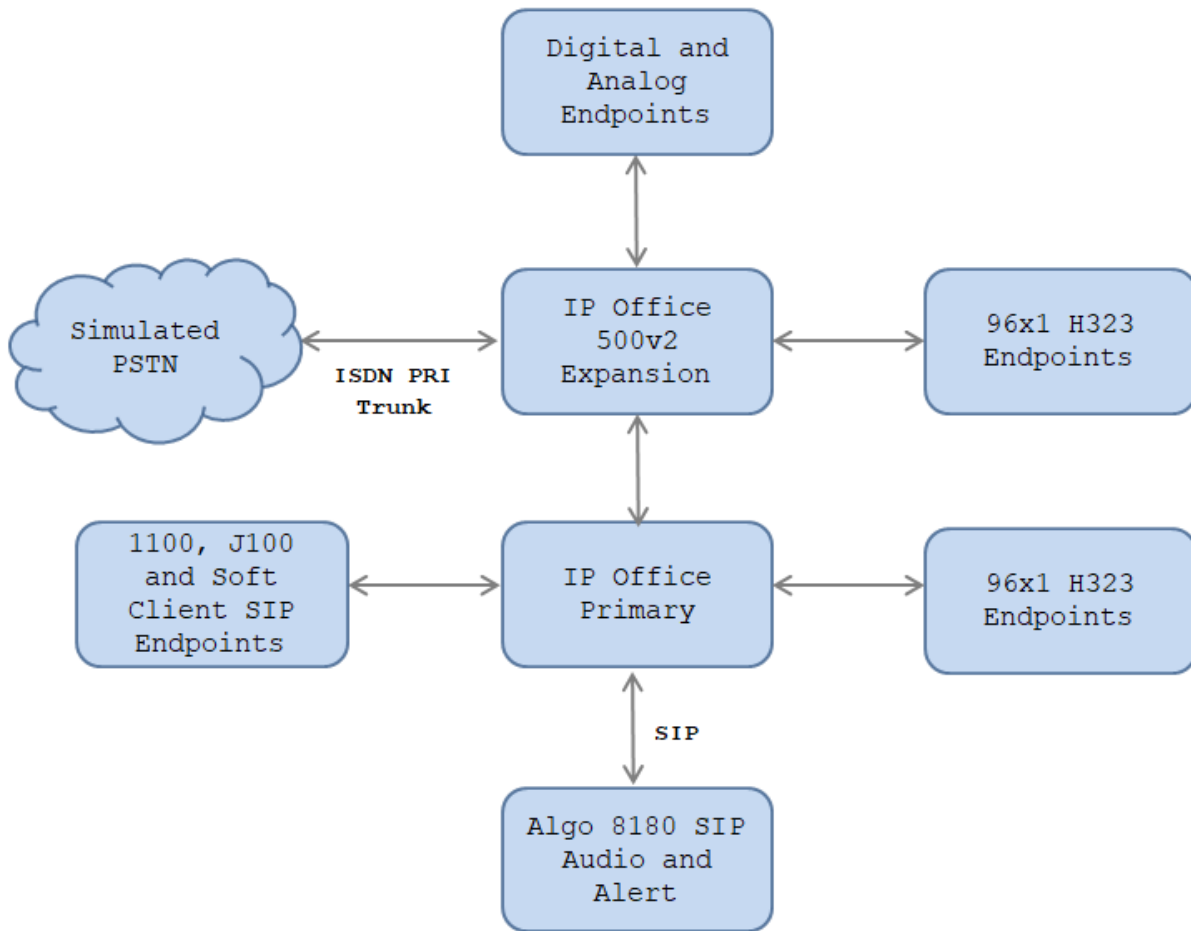


Figure 1: Test Configuration Diagram

The following table indicates the IP addresses that were assigned to the systems in the test configuration diagram:

Description	IP Address
IP Office Primary Server Edition	10.10.97.110
IP Office 500V2 Expansion	10.10.97.230
Avaya SIP and H323 Endpoint	10.33.5.30-10.33.5.36
Algo 8180 SIP Audio and Alert	10.33.5.50

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya	
Avaya IP Office Primary Server Edition running on Virtual Environment	11.0.0.2.0 Build 23
Avaya IP Office 500v2 Expansion	11.0.0.2.0 Build 23
Avaya IP Office DIG DCPx16 V2	11.0.0.2.0 Build 23
Avaya IP Office Manager	11.0.0.2.0 Build 23
Avaya 96x1 Series IP Deskphones (H.323)	Version 6.6604
Avaya 1140E IP Deskphones (SIP)	SIP1140e Ver. 04.04.23.00
Avaya Communicator for Windows	2.1.4.0
Avaya Equinox™ for Windows	3.4.4.45.14
Avaya J129 SIP Deskphone	3.0.0.16
Algo 8180 SIP Audio Alerter	
Firmware Version	1.7
Kernel Version	1.5

Note: Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500v2 and also when deployed with all configurations of IP Office Server Edition.

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 Internal Twinning

5.1. Verify IP Office License

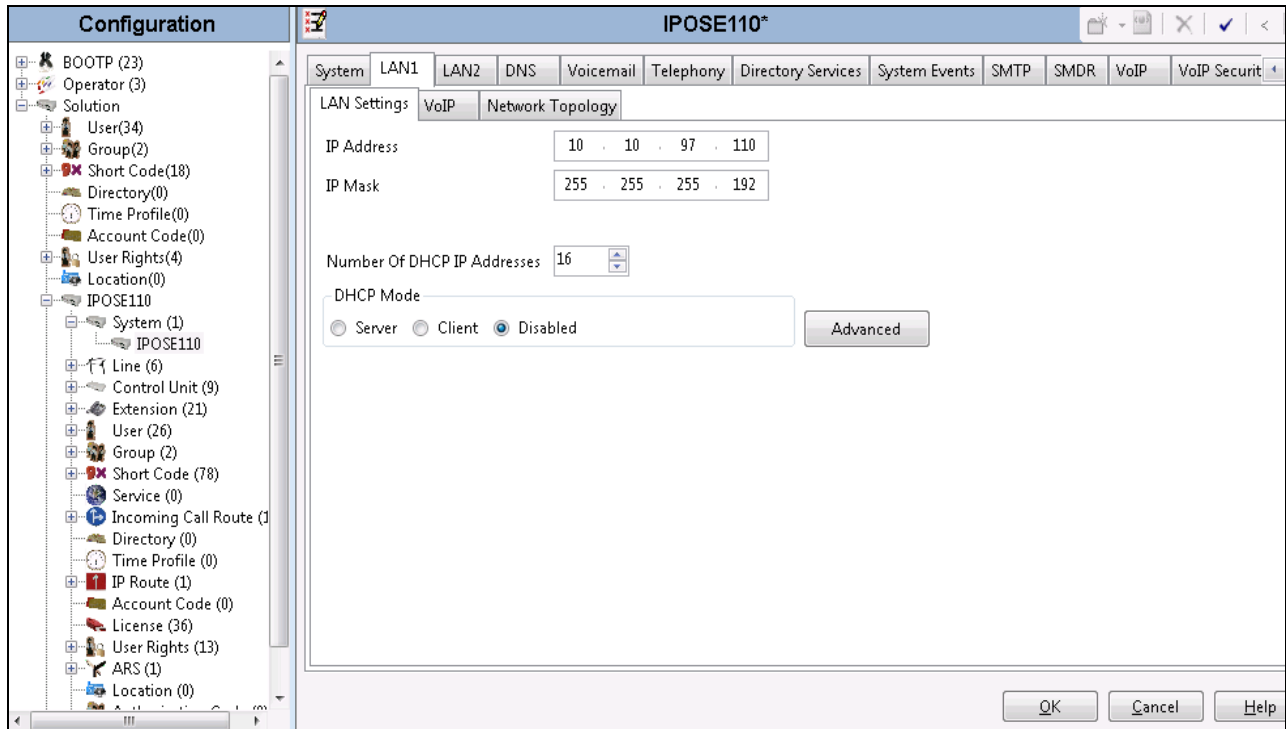
From a PC running the Avaya IP Office Manager application, select **Start** → **Programs** → **IP Office** → **Manager** to launch the Manager application. Select the proper IP Office system, and log in using the appropriate credentials.

The **Avaya IP Office Manager** screen is displayed. From the configuration tree in the left pane, select **License**, the list of license displayed in the right panel. Verify that the **3rd Party IP Endpoints** status is “Valid”.

Feature	Instances	Status	Expiration Date	Source
Power User	384	Valid	Never	PLDS Nodal
Avaya IP endpoints	384	Valid	Never	PLDS Nodal
IP500 Voice Networking Channels	32	Obsolete	Never	PLDS Nodal
SIP Trunk Channels	512	Valid	Never	PLDS Nodal
IP500 Universal PRI (Additional cha...	100	Obsolete	Never	PLDS Nodal
CTI Link Pro	5	Valid	Never	PLDS Nodal
Wave User	16	Obsolete	Never	PLDS Nodal
3rd Party IP Endpoints	384	Valid	Never	PLDS Nodal
Centralized Endpoints	100	Obsolete	Never	PLDS Nodal
Essential Edition	5	Obsolete	Never	PLDS Nodal
R8+ Preferred Edition (VM Pro)	5	Obsolete	Never	PLDS Nodal
Server Edition	5	Valid	Never	PLDS Nodal
UMS Web Services	100	Valid	Never	PLDS Nodal
WebLM Model	1	Obsolete	Never	PLDS Nodal
WebLM Model 9.1	1	Obsolete	Never	PLDS Nodal
Avaya Mac Softphone	100	Valid	Never	PLDS Nodal
SM Trunk Channels	128	Valid	Never	PLDS Nodal
Web Collaboration	64	Valid	Never	PLDS Nodal
Avaya Contact Center Select	5	Valid	Never	PLDS Nodal

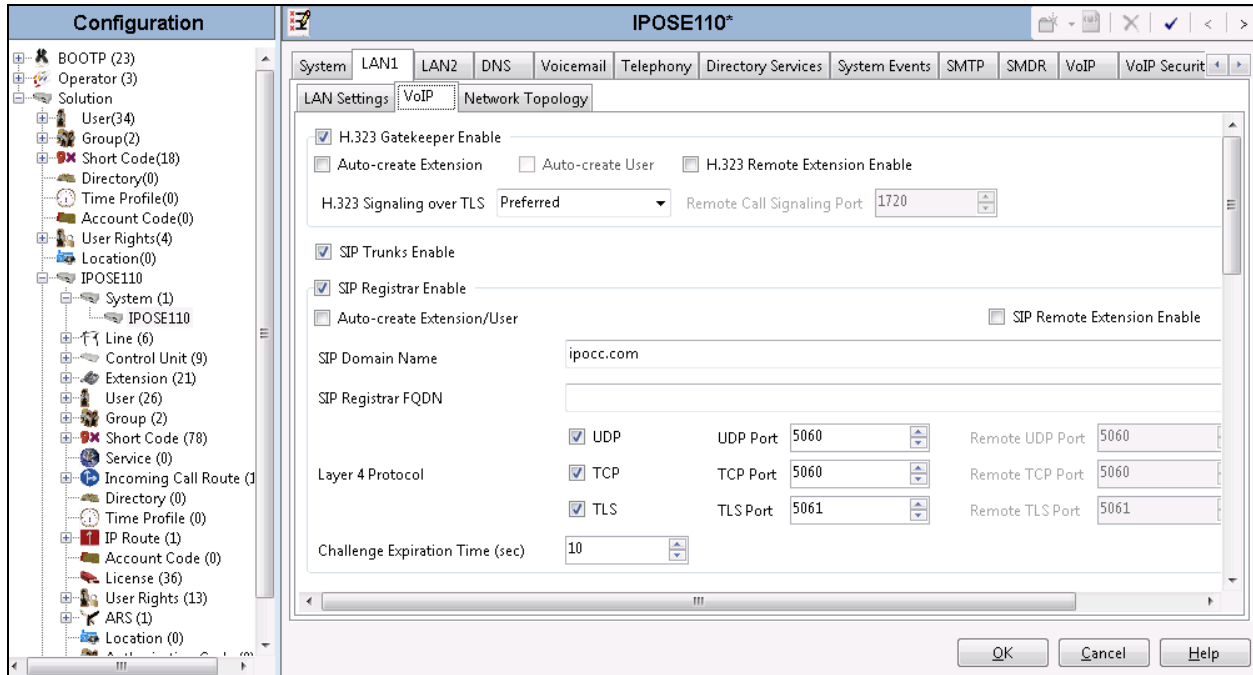
5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select System to display the **IPOSE110** 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 Algo. Note that IP Office can support SIP extensions on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.



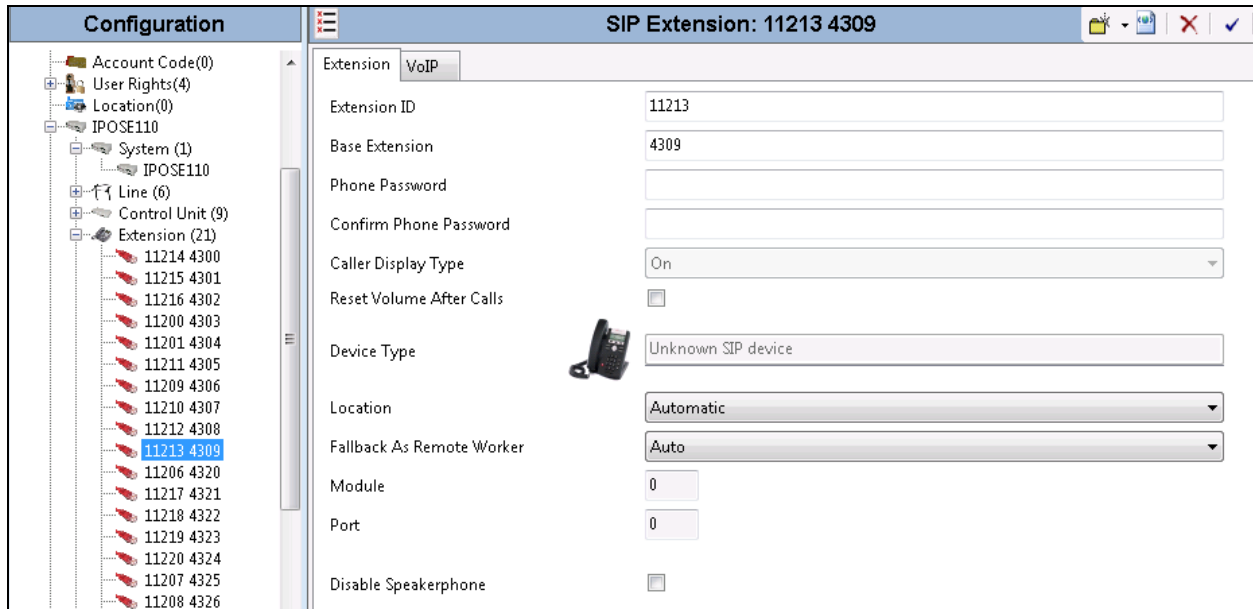
5.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below. Enter a valid sip domain name for SIP endpoints to use for registration with IP Office. In the compliance testing, the sip domain name **ipocc.com** was used so the SIP endpoints used the sip domain name for registration.

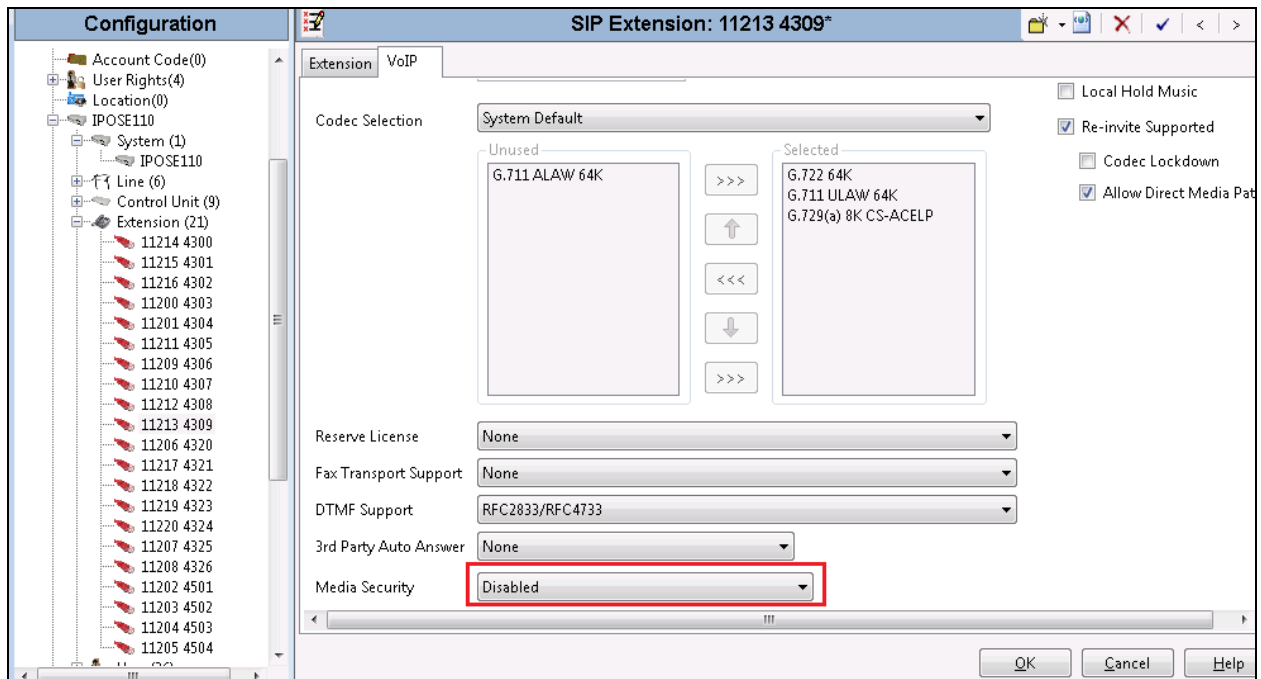


5.4. Administer SIP Extensions

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. For **Base Extension**, enter the SIP door extension “**4309**”. Retain the default values in the remaining fields.



Select the **VoIP** tab, select **Disabled** in the **Media Security** field and retain other fields at default values. Repeat this section to add additional SIP extensions as desired.



5.5. Administer SIP User

From the configuration tree in the left pane; right-click on **User** tab and select **New** from the pop-up list. Enter desired values for **Name**. For **Extension**, enter the Algo 8180 extension from **Section 5.4**. Remember these values as they will be needed to register Algo to IP Office. Enter desired values for **Password** and **Confirm Password**.

The screenshot shows the 'User' configuration page for extension 4309. The left pane shows a configuration tree with 'User (26)' selected. The main pane has tabs for 'User', 'Voicemail', 'DND', 'Short Codes', 'Source Numbers', 'Telephony', 'Forwarding', 'Dial In', 'Voice Recording', and 'Button Programming'. The 'User' tab is active, showing fields for Name (4309), Password (masked), Confirm Password (masked), Unique Identity, Conference PIN, Confirm Audio Conference PIN, Account Status (Enabled), Full Name (SIP 3RD 4309), Extension (4309), Email Address, Locale, Priority (5), System Phone Rights (None), and Profile (Basic User).

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab, and enter a desired **Login Code**. This **Login Code** is needed to register the 8180 to IP Office. Note: if the **Phone Password** in the **Extension** tab in **Section 5.4** is configured, the password in the Phone Password must be used for the registration, in case the **Phone Password** is left blank then the code in the **Login Code** is used for the registration. The difference between Phone Password and Login Code is that the Phone Password can combine letter and number while Login Code only allows number.

The screenshot shows the 'Supervisor Settings' sub-tab for extension 4309. The left pane shows the configuration tree with 'User (26)' selected. The main pane has tabs for 'Call Settings', 'Supervisor Settings', 'Multi-line Options', 'Call Log', and 'TUI'. The 'Supervisor Settings' tab is active, showing fields for Login Code (masked), Confirm Login Code (masked), Login Idle Period (sec), Monitor Group (<None>), Coverage Group (<None>), Status on No-Answer (Logged On (No change)), IPOCC Agent Type (<None>), Privacy Override Group (<None>), and Reset Longest Idle Time (All Calls selected). There are also several checkboxes: Force Login, Force Account Code, Force Authorization Code, Incoming Call Bar, Outgoing Call Bar, Inhibit Off-Switch Forward/Transfer, Can Intrude, Cannot Be Intruded (checked), Can Trace Calls, and Deny Auto Intercom Calls.

5.6. Administer Internal Twinning

From the configuration tree in the left pane, select the desk phone user that will be associated with the loud ringing user. In this case, desk phone user “4301”.

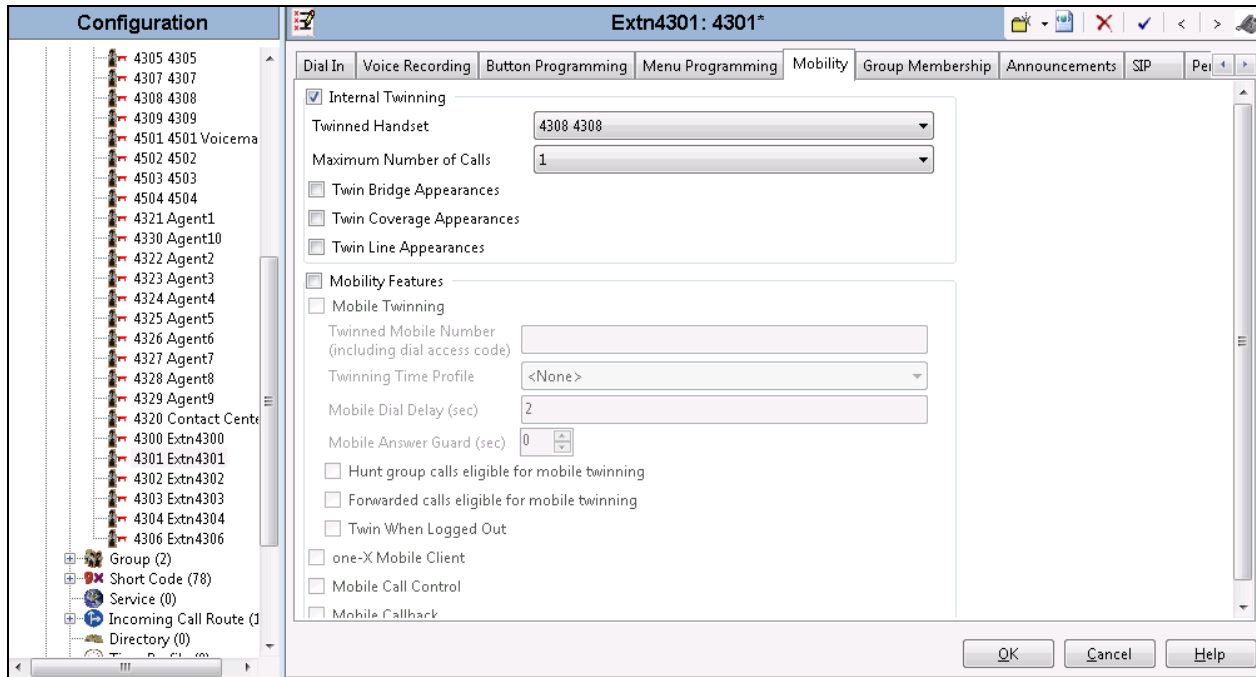
The screenshot displays the Avaya configuration interface for a user. The left pane shows a configuration tree with the following structure:

- Control Unit (9)
- Extension (21)
- User (26)
 - NoUser
 - 4305 4305
 - 4307 4307
 - 4308 4308
 - 4309 4309
 - 4501 4501 Voicema
 - 4502 4502
 - 4503 4503
 - 4504 4504
 - 4321 Agent1
 - 4330 Agent10
 - 4322 Agent2
 - 4323 Agent3
 - 4324 Agent4
 - 4325 Agent5
 - 4326 Agent6
 - 4327 Agent7
 - 4328 Agent8
 - 4329 Agent9
 - 4320 Contact Centri
 - 4300 Extn4300
 - 4301 Extn4301
 - 4302 Extn4302
 - 4303 Extn4303
 - 4304 Extn4304
 - 4306 Extn4306

The main pane shows the configuration details for 'Extn4301: 4301'. The configuration is organized into tabs: User, Voicemail, DND, Short Codes, Source Numbers, Telephony, Forwarding, Dial In, Voice Recording, and Button Programmir. The 'User' tab is active, showing the following fields:

- Name: Extn4301
- Password: ••••••••
- Confirm Password: ••••••••
- Unique Identity: [Empty]
- Conference PIN: [Empty]
- Confirm Audio Conference PIN: [Empty]
- Account Status: Enabled
- Full Name: SIP 4301
- Extension: 4301
- Email Address: [Empty]
- Locale: [Empty]
- Priority: 5
- System Phone Rights: None
- Profile: Basic User
 - Receptionist
 - Enable Softphone

Select the **Mobility** tab, and check **Internal Twinning**. For Twinned Handset, select the loud ringing user from **Section 5.5**. Retain the default values in the remaining fields. Note that with the Internal Twinning configuration, the Algo extension 4308 will be acting like secondary extension of the extension 4301 which is configured as primary and direct call to the secondary will always get busy. This is design intend of Internal Twining feature in IP Office. In order to place direct call to Algo loud ringing extension, do not configure it twinned with a deskphone.



6. Configure 8180 SIP Audio Alerter

This section provides the procedures for configuring Algo 8180 SIP Door Phone. The procedures include the following areas.

6.1. Launch Web Interface

Access the 8180 SIP Audio Alerter web-based interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the 8180 Audio Alerter. The IP address of the 8180 can be spoken by using combination buttons in the bottom of the 8180. The **Welcome to the Algo 8180 SIP Audio Alerter Control Panel** screen is displayed, as shown below. Log in using the appropriate credentials.

ALGO 8180G2 SIP Audio Alerter Control Panel Firmware: 1.6.4

Welcome to the Algo 8180G2 SIP Audio Alerter Control Panel

Setting up your SIP Audio Alerter:

Step 1: Configure your SIP Audio Alerter
Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)
Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Mask, and Gateway to the device.

Step 3: Secure your SIP Audio Alerter (Optional)
Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠️ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your SIP Audio Alerter (Optional)
Please register your product using the link below:
<http://www.algosolutions.com/register>
Registration ensures your access to the latest upgrades to this product and important service notices.

Login

Password (default: **algo**)

Status

Device Name	sipalerter		
SIP Registration	Page	Successful	(Extensior 4309)
	Ring #1	Successful	(Extensior 4308)
Call Status	Idle		
Proxy Status	Single proxy mode		
Security	TLS	Disabled	
	S RTP	Disabled	
Provisioning Status	None Found		
MAC	00:22:ee:12:04:73		
IP	10.33.5.50		
Netmask	255.255.255.0		
Gateway	10.33.5.1		

6.2. Administer Algo 8180

Select **Basic Settings** → **SIP** from the top menu, to display the screen below. Configure the **SIP Account** section toward the bottom of the screen as desired to match the configuration. Enter the following values for the specified fields, and retain the default values in the remaining fields.

- **SIP Domain (Proxy Server):** Enter the SIP domain name as configured in **Section 5.2**.
- **Ring/Alert Mode:** Select the **Monitor** “Ring” event on registered SIP extension.
- **Ring/Alert Extension:** Enter the SIP user extension as configured in **Section 5.4**.
- **Authentication ID:** Enter the SIP user name as configured in **Section 5.5**.
- **Authentication password:** Enter the SIP password extension from **Section 5.4** or the SIP user login code from **Section 5.5**.
- Enter the Authentication Extension and ID and password for the Page.

The screenshot displays the ALGO 8180G2 SIP Audio Alerter Control Panel interface. The top navigation bar includes 'Status', 'Basic Settings', 'Additional Features', 'Advanced Settings', 'System', and 'Logout'. The 'SIP' section is active, with sub-tabs for 'Features' and 'Multicast'. The 'SIP Settings' section contains two main configuration areas. The first area, titled 'SIP', includes a help icon and a note: 'This section allows the SIP server information & account credentials to be entered. This information should be obtained from your telephone system administrator or hosted account provider. After saving these settings, see the Status tab to confirm successful registration.' Below this are fields for 'SIP Domain (Proxy Server)' (value: ipocc.com), 'Ring/Alert Mode' (radio buttons: Monitor 'Ring' event on registered SIP extension [selected], Use 'Subscribe/Notify' dialog event (RFC 4235) to monitor event on different extension, Use 'Subscribe/Notify' presence event (RFC 3856/3863 PIDE) to monitor event on different extension, None), 'Ring/Alert Extension' (value: 4308), 'Authentication ID' (value: 4308), 'Authentication Password' (masked with dots), and 'Display Name (Optional)'. A second note states: 'The device will detect inbound ring events on this extension and play the alerting tone (and multicast if configured) until the inbound call stops ringing. It will not answer the call on this extension.' The second configuration area, titled 'Base/Page Extension', includes fields for 'Base/Page Extension' (value: 4309), 'Authentication ID' (value: 4309), 'Authentication Password' (masked with dots), and 'Display Name (Optional)'. A final note states: 'The device will auto-answer any inbound call received on this extension and provide a voice paging path (and multicast if configured)'. A 'Save' button with a green checkmark is located at the bottom right of the configuration area.

Navigate to **Advanced Settings** → **Advanced SIP**. The **Advanced SIP** page is displayed, enter the LAN1 IP address of IP Office Primary in the **Outbound Proxy** and keep other values at default.

Click on **Save** button to save the configuration.

ALGO 8180G2 SIP Audio Alerter Control Panel Firmware: 1.7

Status Basic Settings Additional Features **Advanced Settings** System Logout

Network Admin Time Provisioning File Manager Advanced Audio **Advanced SIP** Advanced Multicast

Advanced SIP Settings

General

SIP Transportation	Auto	<p>ⓘ Select Auto to check DNS NAPTR record, then try UDP/TCP.</p> <p>ⓘ In TLS mode, if the SIP Server requires endpoints to be authenticated, a PEM file containing both a device certificate and a private key needs to be installed on the Algo device. Use the "Advanced Settings > File Manager" tab to upload a certificate file renamed to 'sipclient.pem' in the 'certs' folder.</p> <p>ⓘ To force the Algo device to authenticate the SIP server, a certificate obtained from the SIP server needs to be installed. Use the "Advanced Settings > File Manager" tab to upload a certificate file renamed to 'siptrusted.pem' in the 'certs' folder.</p>
SDP SRTP Offer	Disabled	
SIP Outbound Support (RFC 5626)	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	<p>ⓘ Enable this option to support best networking practices according to RFC 5626. This option should generally be enabled if the Algo device is being registered with a hosted server or if TLS is being used for SIP Transportation.</p>
Outbound Proxy	10.10.97.110	
Register Period (seconds)	3600	

NAT

Media NAT None ICE STUN

Server Redundancy

Server Redundancy Feature (Multiple SIP Server Support) Enabled Disabled

Interoperability

Keep-Alive Method	<input checked="" type="radio"/> None <input type="radio"/> Double CRLF	<p>ⓘ This setting will enable sending periodic CRLF messages for both UDP and TCP connections.</p>
Use Outgoing TLS port in SIP headers	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	<p>ⓘ Use ephemeral port number from outgoing SIP TLS connection instead of listening port number in SIP Contact and Via headers. This is useful to connect the device to some local SIP servers, like Asterisk or FreeSWITCH.</p>
Do Not Reuse Authorization Headers	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	<p>ⓘ When enabled, all SIP authorization information from the last successful request will not be reused in the next request.</p>

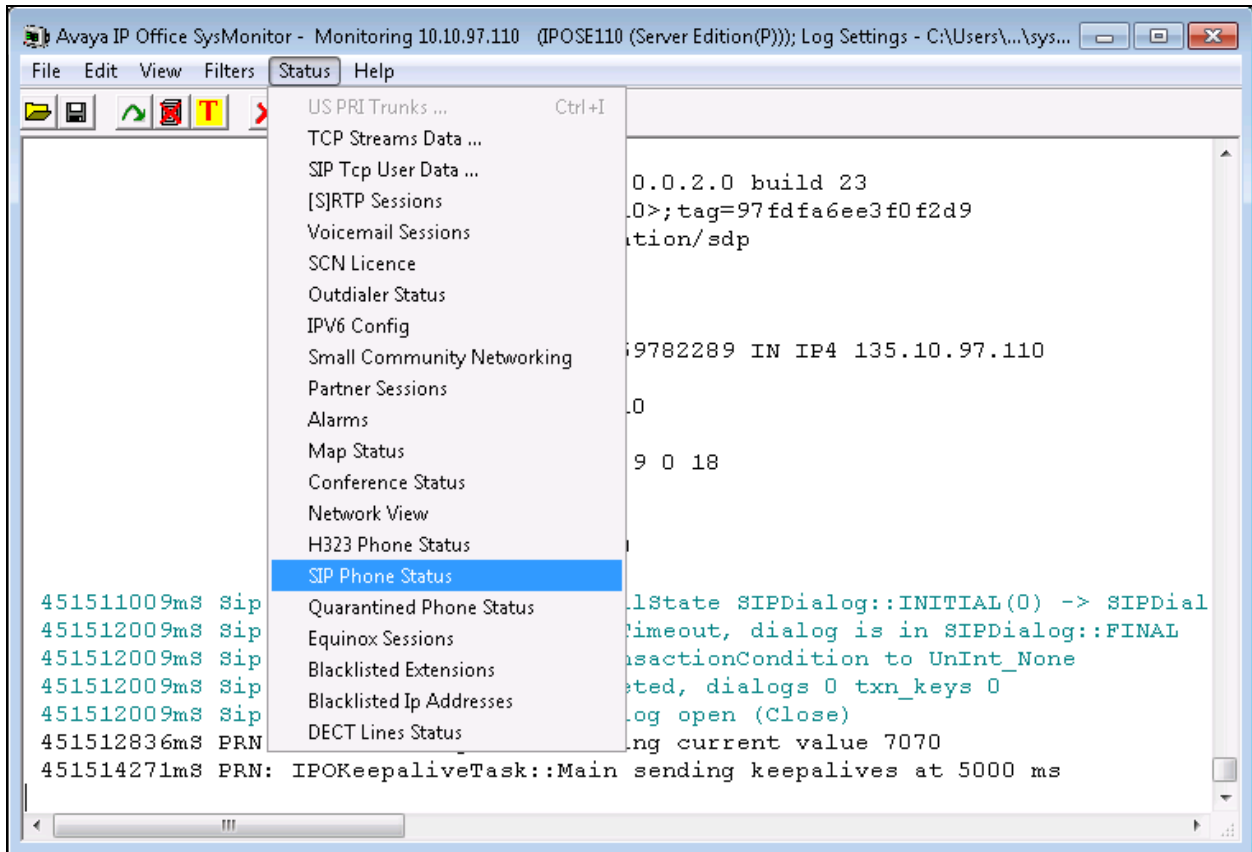
Save

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Algo 8180 SIP Audio Alerter.

7.1. Verify Avaya IP Office

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



The **SIPPhoneStatus** screen is displayed and select the **Registered** radio button in the **Display Options** area it displays all SIP users currently register to IP Office. Verify that there are two extensions for the 8180 ring and page in the list.

SIPPhoneStatus

Total Configured: **14** Waiting 1 secs for update

Total Registered: **5** Registered Status: [Progress Bar]

Extn Num	User Num	Phone Type	Security	Behind ...	IP Address	Private Addr...	Transport	User Agent	Licensed	SI
4303	4303	J179 SIP	best effort		172.16.99.15		TLS	Avaya J179 IP Phone 1.5.0.0...	Avaya IP	RI
4304	4304	1140E_SIP	best effort		10.33.5.51		TLS	Avaya IP Phone 1140E (SIP1...	Avaya IP	RI
4306	4306	1140E_SIP	best effort		172.16.99.3		TCP	Avaya IP Phone 1140E (SIP1...	Avaya IP	RI
4308	4308	SIP	disable		172.16.99.12		UDP	Algo-8180G2/1.7	3rd Party IP	RI
4309	4309	SIP	disable		172.16.99.12		UDP	Algo-8180G2/1.7	3rd Party IP	RI

Display Options: Show All Registered UnRegistered Page 1 Save Page Reset Phones Reregister Phones Cancel

7.2. Verify Algo 8180 SIP Alerter

From the Algo 8180 SIP Audio Alerter web-based interface, select **Status** from the top menu. Verify that **SIP Registration** displays “Successful” in the **SIP Registration** as shown below.

ALGO 8180G2 SIP Audio Alerter Control Panel Firmware: 1.7

Status Basic Settings Additional Features Advanced Settings System Logout

Device Status

Welcome to the Algo 8180G2 SIP Audio Alerter Control Panel

Setting up your SIP Audio Alerter:

Step 1: Configure your SIP Audio Alerter
Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)
Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Mask, and Gateway to the device.

Step 3: Secure your SIP Audio Alerter (Optional)
Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠️ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your SIP Audio Alerter (Optional)
Please register your product using the link below:
<http://www.algosolutions.com/register>
Registration ensures your access to the latest upgrades to this product and important service notices.

Status

Device Name	sipalerter		
SIP Registration	Page Ring #1	Successful Successful	(Extension 4309) (Extension 4308)
Call Status	Idle		
Proxy Status	Single proxy mode		
Security	TLS SRTP	Disabled Disabled	
Provisioning Status	None Found		
MAC	00:22:ee:12:04:73		
IP	10.33.5.50		
Netmask	255.255.255.0		
Gateway	10.33.5.1		
Date / Time	Sun Dec 23 22:08:30 EST 2018		
Multicast Mode	Disabled		
Volume	Page Volume: 1 (-27dB), Ring Volume: 0 (-30dB)		
Relay Input Status	Disabled		

The following tests were conducted to verify the solution between the Algo 8180 and Avaya IP Office.

- Verify that the incoming call to the twinning extension on the IP Office rings the 8180 and the 8180 stops ringing if the twinning extension answers the call
- Verify that the incoming call to the 8180 Page is automatically answered with clear audio path
- Verify that the telephone that places the incoming call to the 8180 can do conference, transfer, mute, un-mute and provide busy tone if it is on another call
- Verify that the solution works with different Avaya clients (e.g. digital, analog, IP etc).
- Verify that 8180 goes into an idle state when the call is completed
- Verify that the 8180 re-registers without issues if the Ethernet cable is unplugged and plugged back in

8. Conclusion

These Application Notes describe the procedures required to configure Algo 8180 SIP Audio Alerter to interoperate with Avaya IP Office Server Edition using as SIP 3rd endpoint. All of the executed test cases have passed and met the objectives outlined in **Section 2.1**, with some exceptions outlined in **Section 2.2**.

9. Additional References

This section references the documentation relevant to these Application Notes. Product documentation for Avaya IP Office, including the following, is available at:

<http://support.avaya.com/>

- [1] *Avaya IP Office Platform Solution Description*, Release 11.0, May 2018.
- [2] *Avaya IP Office Platform Feature Description*, Release 11.0, May 2018.
- [3] *IP Office Platform 11.0 Deploying Avaya IP Office Essential Edition*, Document Number 15-601042, Issue 33g, 20 May 2018.
- [4] *Administering Avaya IP Office Platform with Manager*, Release 11.0, May 2018.
- [5] *IP Office Platform 10.1 Using Avaya IP Office Platform System Status*, Document 15-601758, Issue 13a, 05 April, 2018.
- [6] *IP Office Platform 11.0 Using IP Office System Monitor*, Document 15-601019, Issue 09b, 10 May, 2018.

Additional Avaya IP Office documentation can be found at:

<http://marketingtools.avaya.com/knowledgebase/>

Product documentation for the Algo 8180 SIP Audio Alerter products may be found at:

<http://www.algosolutions.com/products/audible-and-visual-alerting/8180.html>

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