



Avaya Solution & Interoperability Test Lab

Application Notes for Algo 8180 SIP Audio Alerter with Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Algo 8180 SIP Audio Alerter to interoperate with Avaya IP Office. 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.

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. 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.

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 Avaya IP Office Internal Twinning 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 speaker.

1.1. 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.711, 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.

1.2. Support

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

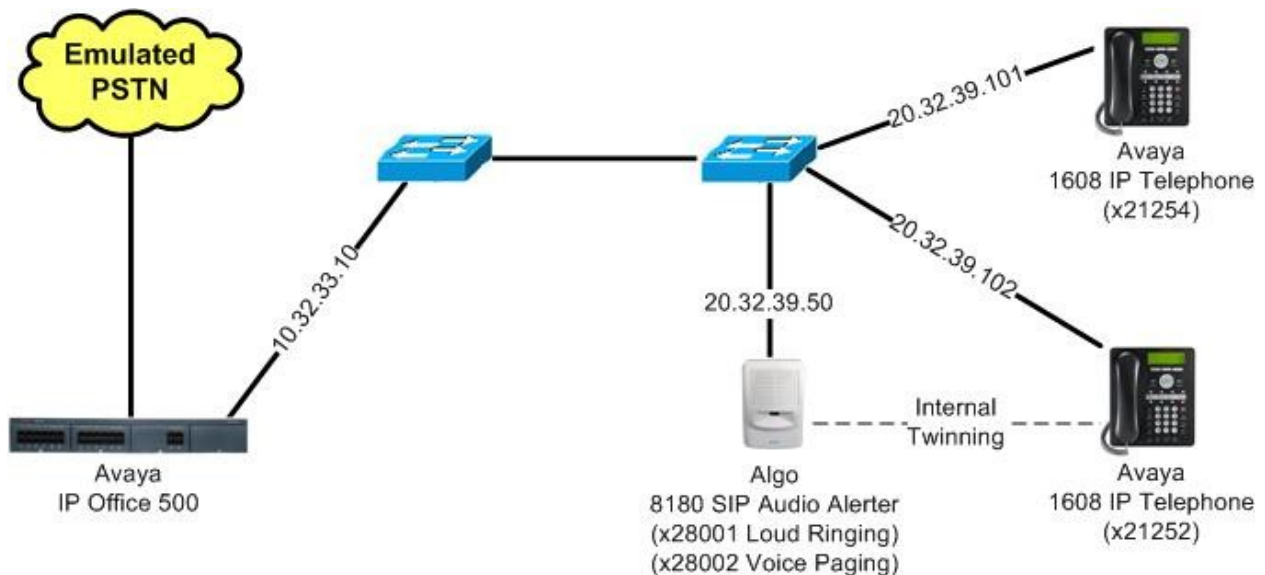
- **Phone:** (877) 884-2546
- **Web:** <http://www.algosolutions.com/support/support.html>
- **Email:** support@algosolutions.com

2. Reference Configuration

In the compliance testing, Algo 8180 SIP Audio Alerter registered with Avaya IP Office as two separate SIP endpoints, and the extensions used for the testing are shown in the table below.

Function	Extension	Desk Phone Extension
Loud Ringing	28001	21252
Voice Paging	28002	NA

The configuration used for the compliance testing is shown below.



3. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office IP500	6.0 (18)
Avaya 1608 IP Telephone (H.323)	1.3
Algo 8180 SIP Audio Alerter	1.0.5

4. Configure Avaya IP Office

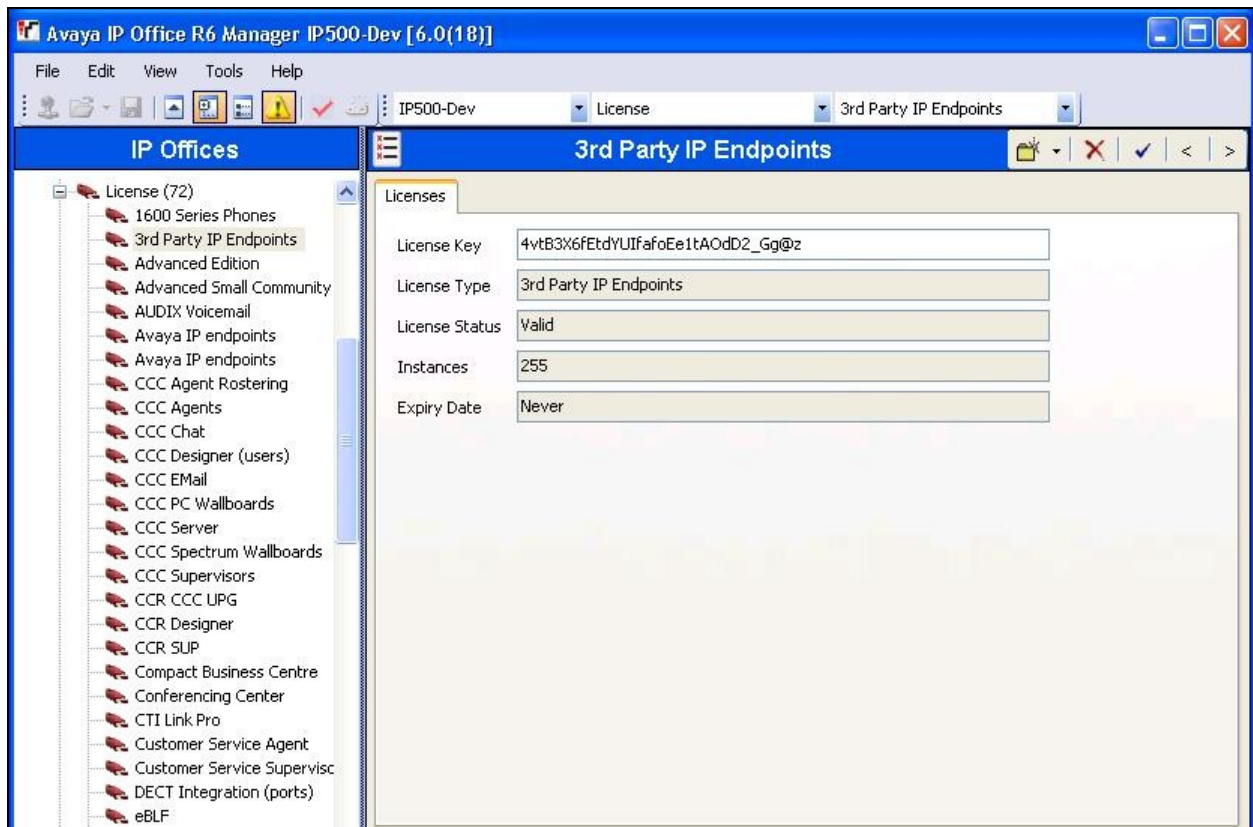
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- Verify IP Office license
- Obtain LAN IP address
- Administer SIP registrar
- Administer SIP extensions
- Administer SIP users
- Administer Internal Twinning

4.1. 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.

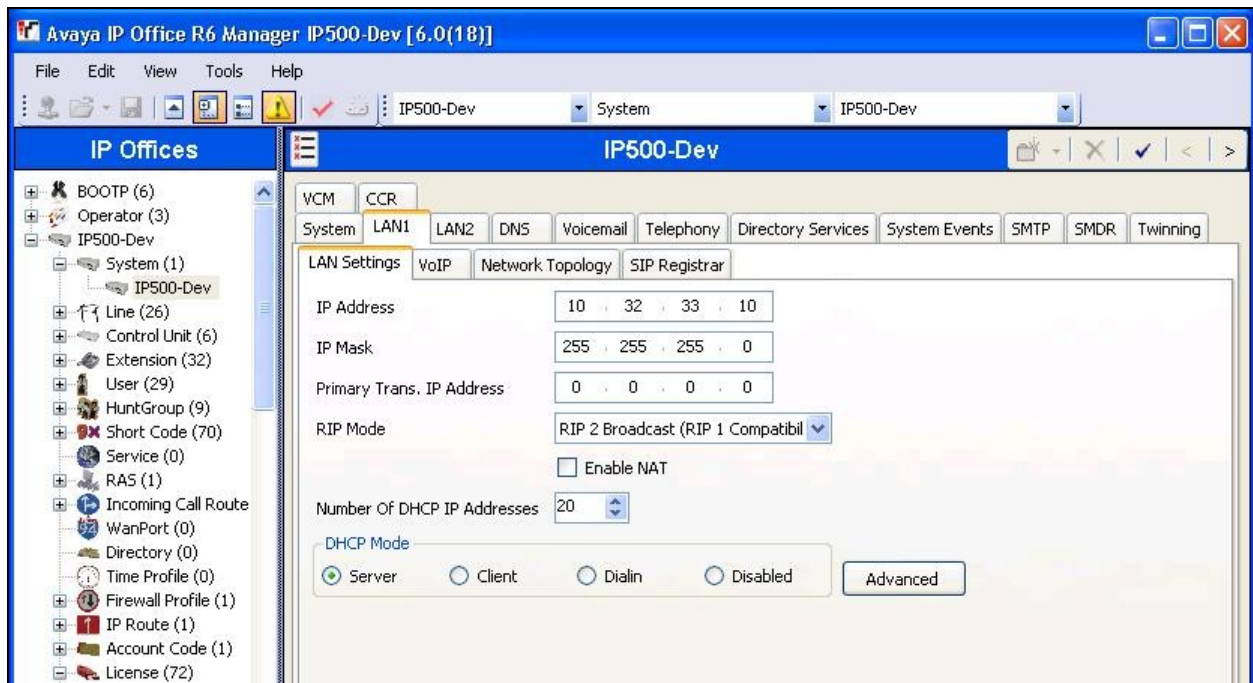
The **Avaya IP Office R6 Manager** screen is displayed. From the configuration tree in the left pane, select **License > 3rd Party IP Endpoints** to display the **3rd Party IP Endpoints** screen in the right pane. Verify that the **License Status** is “Valid”.



4.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **IP500-Dev** 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.

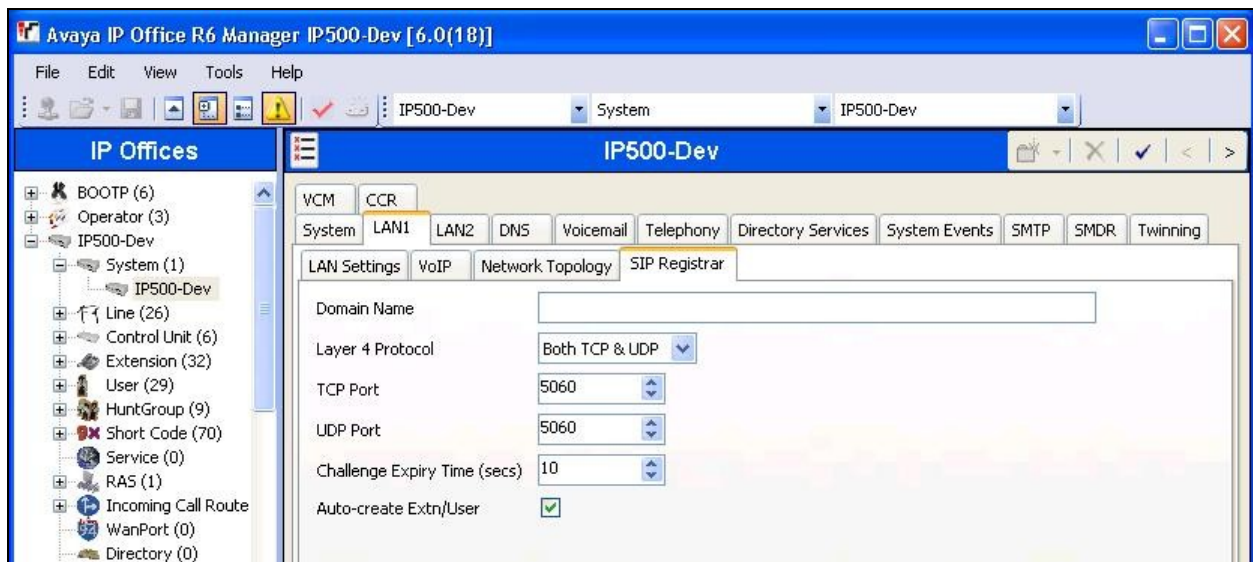


4.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below.

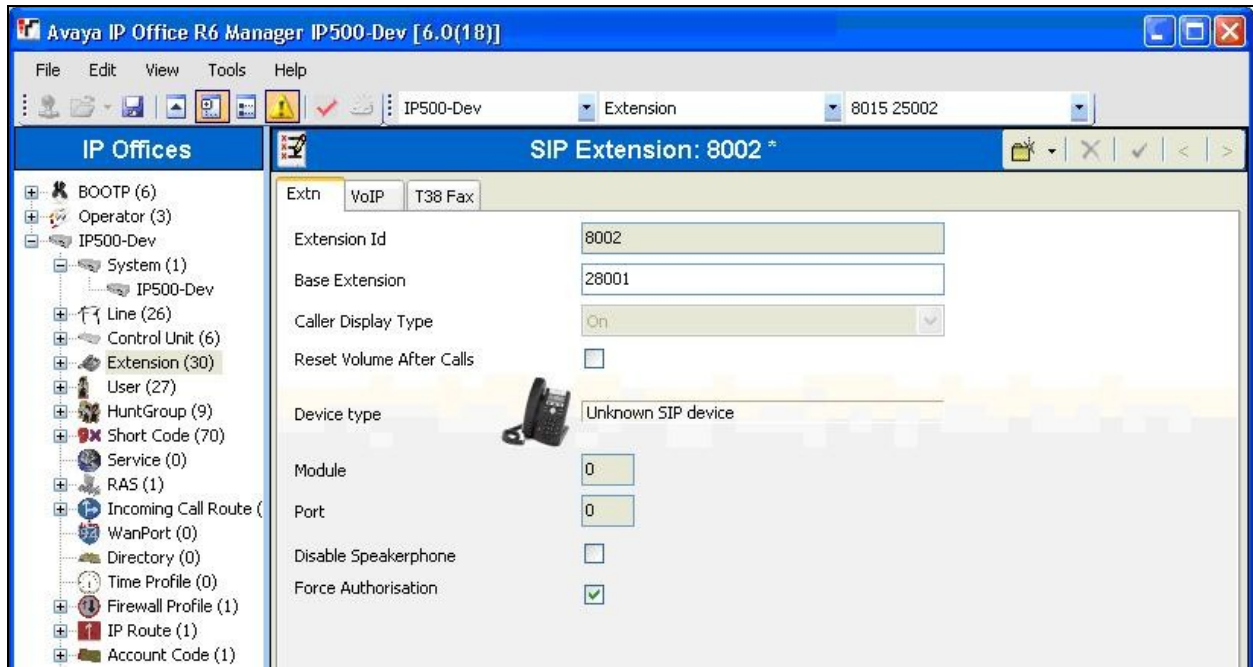


Select the **SIP Registrar** sub-tab, and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the SIP endpoints used the LAN IP address for registration.



4.4. 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 loud ringing extension from **Section 2**. Retain the default values in the remaining fields.



Select the **VoIP** tab, and retain the default values in all fields.

Repeat this section to add additional SIP extensions as desired. In the compliance testing, one SIP extension “28001” was created for loud ringing, and one SIP extension “28002” was created for voice paging.



4.5. Administer SIP Users

From the configuration tree in the left pane, right-click on **User**, and select **New** from the pop-up list. Enter desired values for **Name** and **Full Name**. For **Extension**, enter the first SIP base extension from **Section 4.4**.

Avaya IP Office R6 Manager IP500-Dev [6.0(18)]

File Edit View Tools Help

IP500-Dev User NoUser

IP Offices

- BOOTP (6)
- Operator (3)
- IP500-Dev
 - System (1)
 - IP500-Dev
 - Line (26)
 - Control Unit (6)
 - Extension (32)
 - User (27)
 - HuntGroup (9)
 - Short Code (70)
 - Service (0)
 - RAS (1)
 - Incoming Call Route (1)
 - WanPort (0)
 - Directory (0)
 - Time Profile (0)
 - Firewall Profile (1)
 - IP Route (1)
 - Account Code (1)
 - License (72)
 - Tunnel (0)

<User:0>: *

Button Programming Menu Programming Mobility Phone Manager Options Hunt Group Membership Announcements

Personal Directory

User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording

Name: sip28001

Password:

Confirm Password:

Full Name: Algo 8180 Ring

Extension: 28001

Locale:

Priority: 5

System Phone Rights: None

Profile: Basic User

☐ Receptionist

☐ Enable SoftPhone

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab, and enter a desired **Login Code**. Repeat this section to add a new user for each SIP extension from **Section 4.4**. In the compliance testing, user “sip28001” was created for loud ringing, and user “sip28002” was created for voice paging.

Avaya IP Office R6 Manager IP500-Dev [6.0(18)]

File Edit View Tools Help

IP500-Dev User NoUser

IP Offices

- BOOTP (6)
- Operator (3)
- IP500-Dev
 - System (1)
 - IP500-Dev
 - Line (26)
 - Control Unit (6)
 - Extension (32)
 - User (27)
 - HuntGroup (9)
 - Short Code (70)
 - Service (0)
 - RAS (1)
 - Incoming Call Route (1)
 - WanPort (0)
 - Directory (0)
 - Time Profile (0)
 - Firewall Profile (1)
 - IP Route (1)
 - Account Code (1)
 - License (72)
 - Tunnel (0)

<User:0>: *

Button Programming Menu Programming Mobility Phone Manager Options Hunt Group Membership Announcements

Personal Directory

User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording

Call Settings Supervisor Settings Multi-line Options Call Log

Login Code: *****

Login Idle Period (secs):

Monitor Group: <None>

Coverage Group: <None>

Status on No-Answer: Logged On (No change)

☐ Force Login

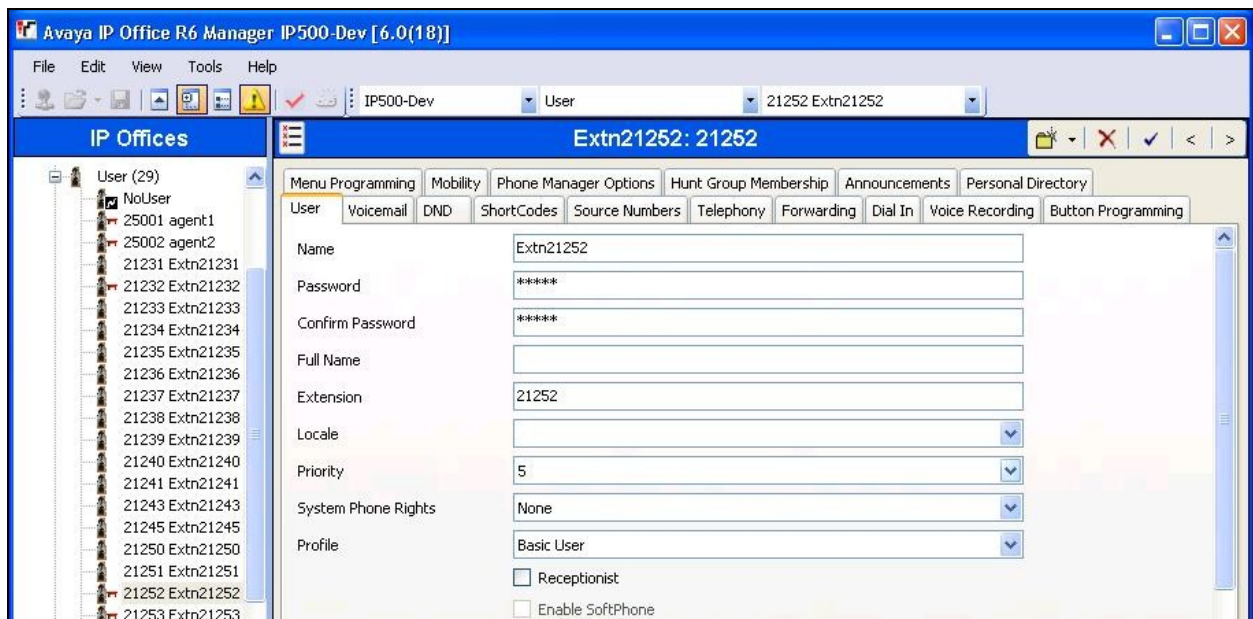
☐ Force Account Code

☐ Force Authorization Code

☐ Outgoing Call Bar

4.6. 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 “Extn21252”.



Avaya IP Office R6 Manager IP500-Dev [6.0(18)]

File Edit View Tools Help

IP500-Dev User 21252 Extn21252

IP Offices

- User (29)
 - NoUser
 - 25001 agent1
 - 25002 agent2
 - 21231 Extn21231
 - 21232 Extn21232
 - 21233 Extn21233
 - 21234 Extn21234
 - 21235 Extn21235
 - 21236 Extn21236
 - 21237 Extn21237
 - 21238 Extn21238
 - 21239 Extn21239
 - 21240 Extn21240
 - 21241 Extn21241
 - 21243 Extn21243
 - 21245 Extn21245
 - 21250 Extn21250
 - 21251 Extn21251
 - 21252 Extn21252
 - 21253 Extn21253

Extn21252: 21252

Menu Programming Mobility Phone Manager Options Hunt Group Membership Announcements Personal Directory

User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording Button Programming

Name: Extn21252

Password: *****

Confirm Password: *****

Full Name:

Extension: 21252

Locale:

Priority: 5

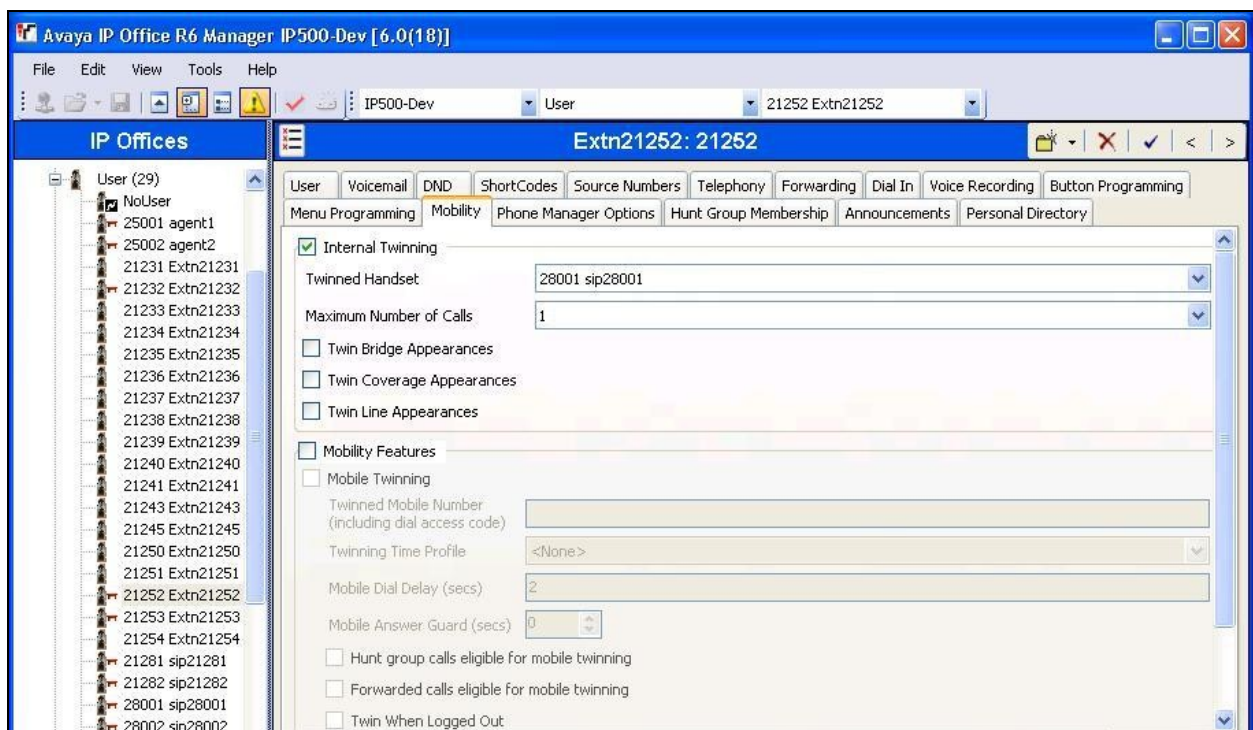
System Phone Rights: None

Profile: Basic User

☐ Receptionist

☐ Enable SoftPhone

Select the **Mobility** tab, and check **Internal Twinning**. For **Twinned Handset**, select the loud ringing user from **Section 4.5**. Retain the default values in the remaining fields.



Avaya IP Office R6 Manager IP500-Dev [6.0(18)]

File Edit View Tools Help

IP500-Dev User 21252 Extn21252

IP Offices

- User (29)
 - NoUser
 - 25001 agent1
 - 25002 agent2
 - 21231 Extn21231
 - 21232 Extn21232
 - 21233 Extn21233
 - 21234 Extn21234
 - 21235 Extn21235
 - 21236 Extn21236
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 - 21243 Extn21243
 - 21245 Extn21245
 - 21250 Extn21250
 - 21251 Extn21251
 - 21252 Extn21252
 - 21253 Extn21253
 - 21254 Extn21254
 - 21281 sip21281
 - 21282 sip21282
 - 28001 sip28001
 - 28002 sip28002

Extn21252: 21252

User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording Button Programming

Menu Programming **Mobility** Phone Manager Options Hunt Group Membership Announcements Personal Directory

☒ Internal Twinning

Twinned Handset: 28001 sip28001

Maximum Number of Calls: 1

☐ Twin Bridge Appearances

☐ Twin Coverage Appearances

☐ Twin Line Appearances

☐ Mobility Features

☐ Mobile Twinning

Twinned Mobile Number (including dial access code):

Twining Time Profile: <None>

Mobile Dial Delay (secs): 2

Mobile Answer Guard (secs): 0

☐ Hunt group calls eligible for mobile twinning

☐ Forwarded calls eligible for mobile twinning

☐ Twin When Logged Out

5. Configure Algo 8180 SIP Audio Alerter

This section provides the procedures for configuring Algo 8180 SIP Audio Alerter. The procedures include the following areas:

- Launch web interface
- Administer configuration

5.1. Launch Web Interface

Access the 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 SIP Audio Alerter. Note that the default IP address of the SIP Audio Alerter is 192.168.1.111. The **Welcome to the SIP Audio Alerter Configuration Interface** screen is displayed, as shown below. Log in using the appropriate credentials.

The screenshot displays the '8180 SIP Audio Alerter Control Panel' with 'Firmware: 1.0.5' in the top right. A 'Status' tab is active. The 'Welcome' section is expanded, showing a 'Welcome to the SIP Audio Alerter Configuration Interface' message. It instructs the user to set up the device and lists three steps: 1. Configure your SIP Audio Alerter (default password 'algo'), 2. Check network settings (Optional), and 3. Secure your SIP Audio Alerter (Optional). A 'Remove Welcome' button is present. Below this, the 'Login' section is expanded, showing a password field and a 'Login' button. The 'Info' section is also expanded, displaying MAC (00:22:EE:02:00:2F), IP (20.32.39.50), and Netmask (255.255.255.0) information. The footer contains copyright information for 2008-2010 Algo Communication Products Ltd.

ALGO 8180 SIP Audio Alerter Control Panel Firmware: 1.0.5

Status

Welcome

Welcome to the SIP Audio Alerter Configuration Interface

Please take a minute to set up your SIP Audio Alerter:

Step 1: Configure your SIP Audio Alerter

Log in with the default password **algo** and use the config page to set up the SIP connection information.

Step 2: Check network settings (Optional)

Use the Network section on Config page to change network settings. The default setting for the SIP Audio Alerter 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 SIP Audio Alerter device.

Step 3: Secure your SIP Audio Alerter (Optional)

Use the Admin section on Config page to change the administrator password.

Remove Welcome

Login

Password: Login

Info

MAC: 00:22:EE:02:00:2F
IP: 20.32.39.50
Netmask: 255.255.255.0

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5.2. Administer Configuration

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

- **Sip Domain/Proxy:** The LAN IP address from **Section 4.2**.
- **Ring Detect Extension:** The loud ringing SIP base extension from **Section 4.4**.
- **Ring Auth ID:** The loud ringing SIP user name from **Section 4.5**.
- **Ring Password:** The loud ringing SIP user login code from **Section 4.5**.
- **Page Audio Extension:** The voice paging SIP base extension from **Section 4.4**.
- **Page Auth ID:** The voice paging SIP user name from **Section 4.5**.
- **Page Password:** The voice paging SIP user login code from **Section 4.5**.

The screenshot shows the ALGO 8180 SIP Audio Alerter Control Panel interface. The top header includes the ALGO logo, the title "8180 SIP Audio Alerter Control Panel", and the firmware version "Firmware: 1.0.5". Below the header is a navigation bar with tabs for "Status", "Config", "Services", and "About". The "Config" tab is selected. A "Save Settings" button is located at the top of the configuration area.

The configuration is organized into three main sections, each with a collapse icon (minus sign in a square):

- SIP Section:** Contains two columns of settings.
 - Left column: SIP Domain/Proxy (10.32.33.10), Outbound Proxy (optional), Registrar (optional), Register Period (seconds) (3600), and Use Same Port (radio buttons for On and Off).
 - Right column: Ring Detect Extension (28001), Auth ID (sip28001), Password (masked with dots), Page Audio Extension (28002), Auth ID (sip28002), and Password (masked with dots).
- Features Section:** Contains two columns of settings.
 - Left column: Ring Tone (bell-uk.wav), Ring Volume (6), Ambient Noise Compensation (radio buttons for On and Off), Ambient Noise Level (66), Page Volume (4), and Page Timeout (30 seconds).
 - Right column: Multicast Mode (radio buttons for None, Master, Slave), Speaker Mode (radio buttons for Auto, External, Internal, Disabled), Relay Mode (radio buttons for Both, Ring, Page, Disabled), and an Advanced Settings button.
- Network Section:** Contains a single column of settings.
 - DHCP (radio buttons for On and Off).
 - IP Address (20.32.39.50).
 - Netmask (255.255.255.0).
 - Gateway (20.32.39.2).
 - DNS 1 and DNS 2 (empty fields).
 - An Advanced Settings button.

6. 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 and conference performed from the caller.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cable to Algo 8180 SIP Audio Alerter.

All test cases were executed and passed.

7. Verification Steps

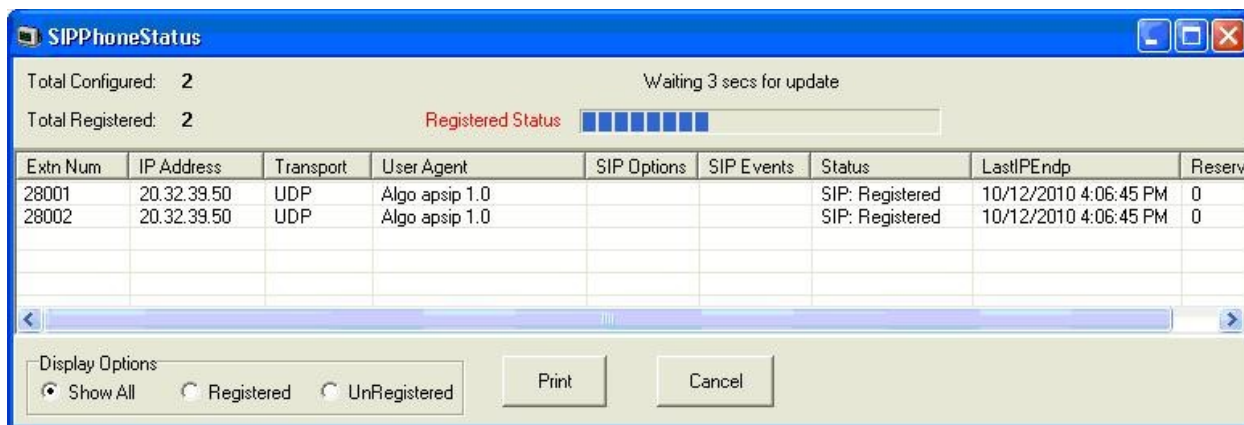
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Algo 8180 SIP Audio Alerter.

7.1. Verify Avaya IP Office

From a PC running the Avaya IP Office Monitor application, select **Start > Programs > IP Office > Monitor** to launch the application. The **Avaya IP Office R6 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 SIP extension from **Section 4.4**, that the **User Agent** is “Algo”, and that the **Status** is “SIP: Registered”, as shown below.



7.2. Verify Algo 8180 SIP Audio Alerter

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

The screenshot displays the web-based interface of the Algo 8180 SIP Audio Alerter. The top header features the 'ALGO' logo on the left, the title '8180 SIP Audio Alerter Control Panel' in the center, and 'Firmware: 1.0.5' on the right. Below the header is a navigation bar with four tabs: 'Status' (selected), 'Config', 'Services', and 'About'. The main content area is divided into two sections. The first section, titled 'Logout', contains a single 'Logout' button. The second section, titled 'Info', displays system information in a table-like format. The 'Info' section shows the following details: Device Name: sipalerter, Ring Extension: 28001, Page Extension: 28002, SIP Registration: Ring - Successful, Page - Successful, Call Status: Idle, MAC: 00:22:EE:02:00:2F, IP: 20.32.39.50, and Netmask: 255.255.255.0. At the bottom of the interface, a copyright notice reads '© Copyright 2008-2010 Algo Communication Products Ltd.'

8180 SIP Audio Alerter Control Panel		Firmware: 1.0.5
Status Config Services About		
Logout		
<input type="button" value="Logout"/>		
Info		
Device Name:	sipalerter	
Ring Extension:	28001	MAC: 00:22:EE:02:00:2F
Page Extension:	28002	IP: 20.32.39.50
SIP Registration:	Ring - Successful	Netmask: 255.255.255.0
	Page - Successful	
Call Status:	Idle	

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8. Conclusion

These Application Notes describe the configuration steps required for Algo 8180 SIP Audio Alerter to successfully interoperate with Avaya IP Office. All feature and serviceability test cases were completed.

9. Additional References

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

1. *IP Office 6.0 Documentation CD*, February 2010, available at <http://support.avaya.com>.
2. *Algo 8180 SIP Audio Alerter User Guide*, Document Number 90-00041-A, available at <http://www.algosolutions.com>.

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