



## Avaya Solution & Interoperability Test Lab

---

# **Application Notes for Configuring Algo 8028 SIP Door Phone Version 2.6.4 with Avaya IP Office Server Edition Solution Release 9.1.4 - Issue 1.1**

### **Abstract**

These Application Notes describe the configuration steps required for Algo 8028 SIP Door Phone to interoperate with Avaya IP Office Server Edition Solution. The Algo 8028 SIP Door Phone is a device that integrates into the Avaya IP Office and enables conversations and remote entry using door release features.

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 8028 SIP Door Phone to interoperate with Avaya IP Office Server Edition Solution. Algo 8028 SIP Door Phone is a SIP-based device that can register with Avaya IP Office as SIP endpoint.

Algo 8028 Door Phone is an outdoor rated IP intercom compatible with premise based and hosted SIP communication servers. By connecting to the VoIP telephone system, arriving visitors and guests can be greeted from any telephone or client and allowed entry by a simple key press.

The IP Office Server Edition Solution that consists of a primary Server Edition in Virtual Environment and an expansion 500V2. Algo 8028 was registered as SIP users to both the primary Server Edition and the expansion 500V2.

## 2. General Test Approach and Test Results

The feature test cases were performed manually. The focus of this interoperability compliance testing was to verify if the 8028 can register as a SIP endpoint on IP Office and able to make a call to and from a telephone on IP Office and able to open the door when the key is pressed on the phone.

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

Compliance testing verified that Algo 8028 was able to interoperate with the telephones residing on IP Office system. The following interoperability areas were covered:

- Algo 8028 can register to IP Office as a SIP endpoint.
- Algo 8028 can make a call to a telephone on IP Office and establish a clear speech path.
- A telephone on IP Office can call the extension assigned to Algo 8028 and establish speech path between the telephone and Algo 8028.
- Telephones on IP Office can send required DTMF tones and therefore ensure the remote door release features work successfully.

The serviceability testing focused on verifying the ability of Algo 8028 SIP Door Phone 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 observation was made during the compliance testing:

- The call between Algo 8028 Door phone and Avaya phones (H.323, SIP, and digital) cannot be transferred in blind and attended mode by Avaya phone to Avaya SIP phone 1140E. The transfer uses REFER method which is not supported by Algo 8028 in the current release.

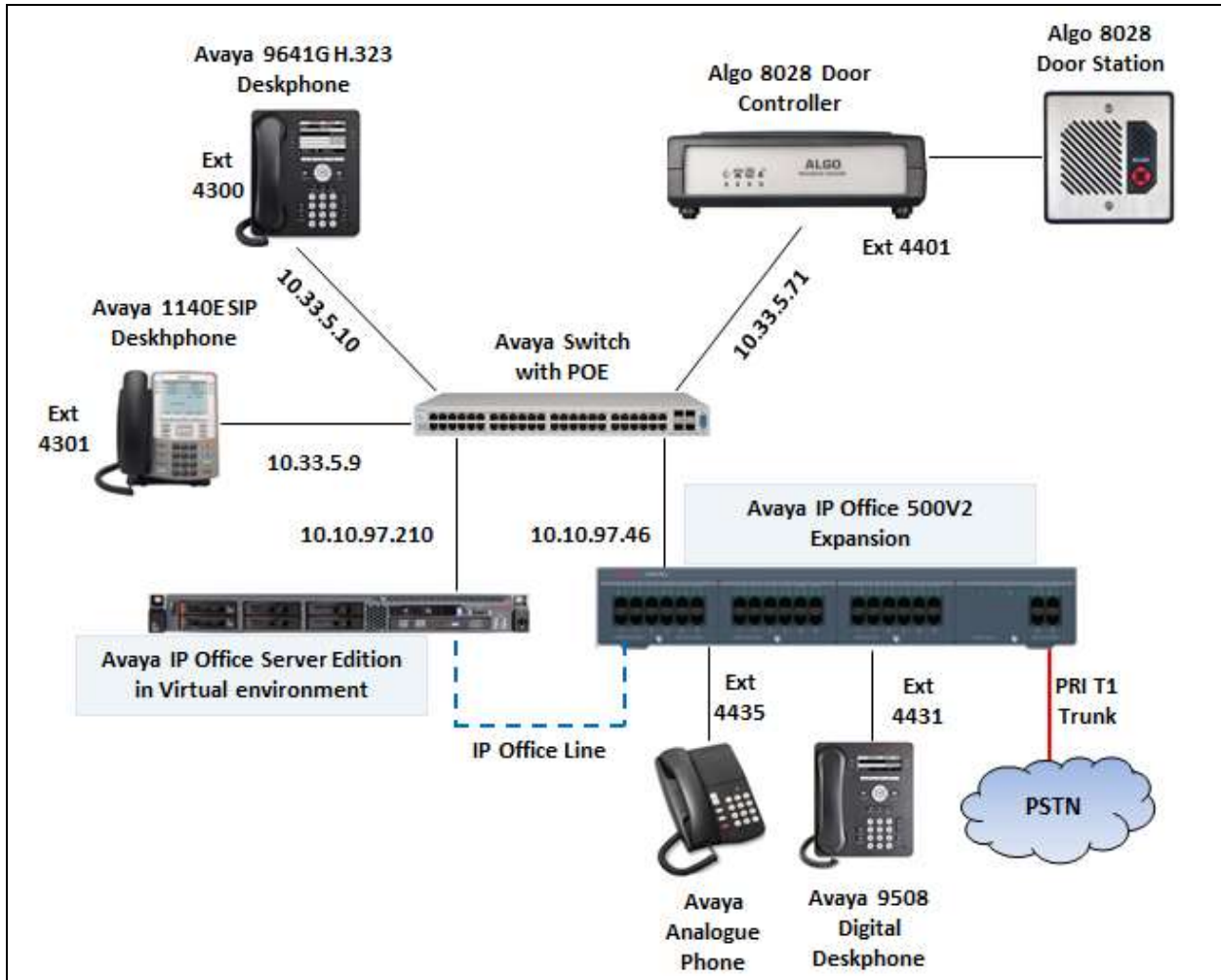
## 2.3. Support

Technical support on Algo 8028 SIP Door Phone can be obtained through the following:

- Phone: + 1 604 454 3792
- Web: <http://www.algosolutions.com/support>
- Email: [support@algosolutions.com](mailto:support@algosolutions.com)

### 3. Reference Configuration

**Figure 1** illustrates the test configuration used during the compliance testing between the Avaya IP Office and Algo 8028 SIP Door Phone. Algo 8028 SIP Door Phone communicated with IP Office through Avaya switch with Power over Ethernet (PoE) and registered with Avaya IP Office as SIP endpoint. The IP Office Server Edition Solution that consists of a primary Server Edition in Virtual Environment and an expansion 500V2. The PRI T1 trunk was also configured to connect from IP Office 500V2 expansion to PSTN for test cases off-net via PRI T1 trunk.



**Figure 1: Test Configuration Diagram**

## 4. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office Server Edition in Virtual Environment	9.1.4 Build 137
Avaya IP Office 500V2 Expansion	9.1.4 Build 137
Avaya H.323 9641G IP Deskphone	6.6029
Avaya H.323 1608 IP Deskphone	1.380B
Avaya 1140E SIP Phone	4.4.23
Avaya 9508 Digital Phone	0.55
Avaya Analog Phone	-
Algo 8028 SIP Door Phone Firmware	2.6.4
Kernel Version	r5
DSP Version	1.8

## 5. Configure Avaya IP Office

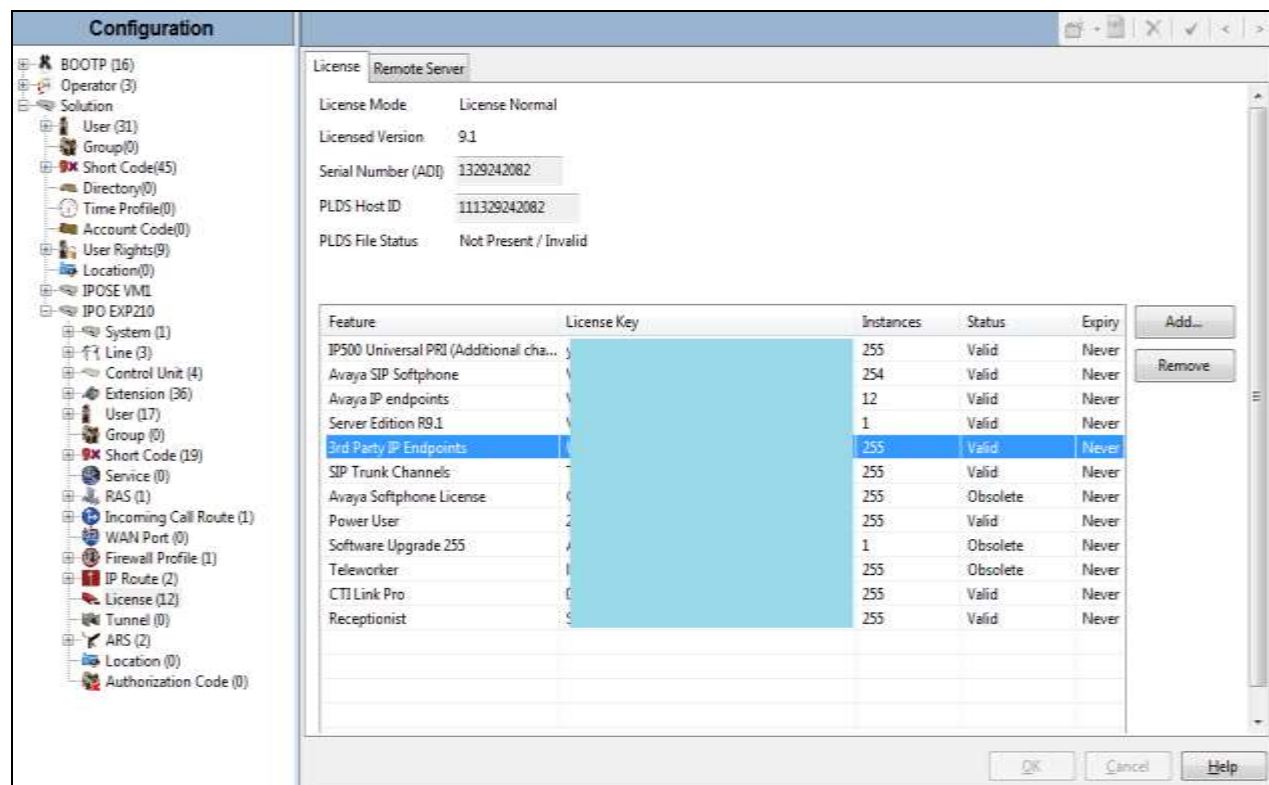
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

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

### 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”.

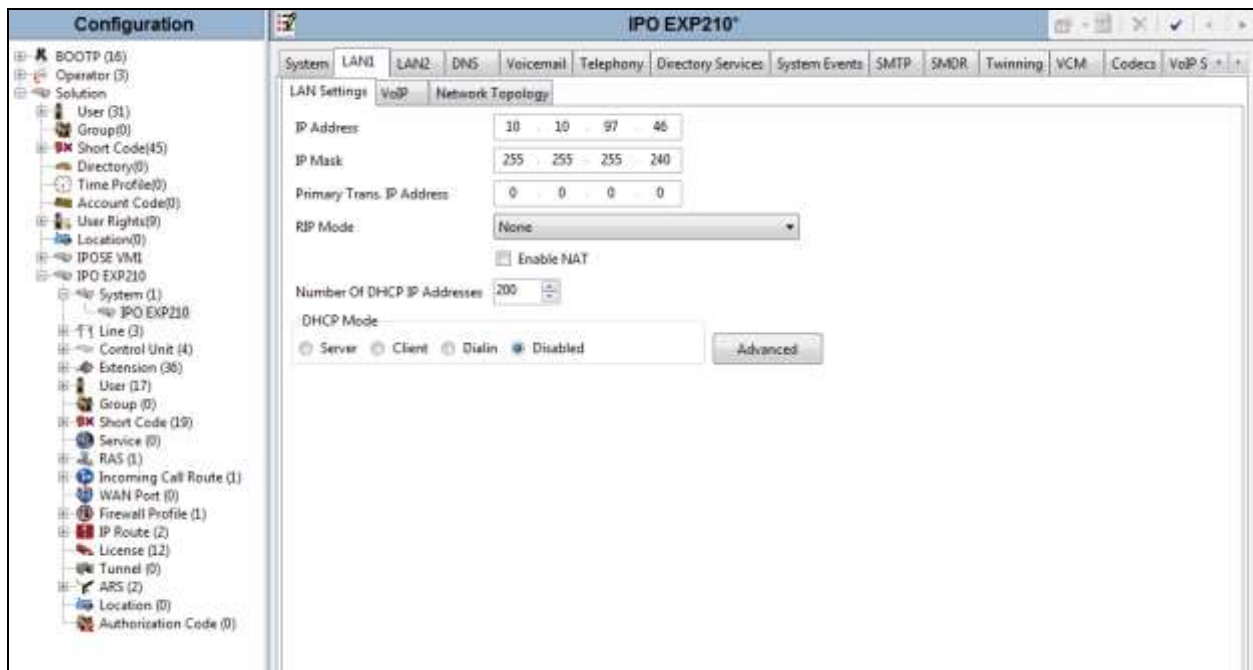


The screenshot shows the Avaya IP Office Manager interface. On the left is a configuration tree with 'License' selected. The main area displays license information for a 'Remote Server' and a table of features.

Feature	License Key	Instances	Status	Expiry
IP500 Universal PRI (Additional cha...		255	Valid	Never
Avaya SIP Softphone		254	Valid	Never
Avaya IP endpoints		12	Valid	Never
Server Edition R9.1		1	Valid	Never
<b>3rd Party IP Endpoints</b>		<b>255</b>	<b>Valid</b>	<b>Never</b>
SIP Trunk Channels		255	Valid	Never
Avaya Softphone License		255	Obsolete	Never
Power User		255	Valid	Never
Software Upgrade 255		1	Obsolete	Never
Teleworker		255	Obsolete	Never
CTI Link Pro		255	Valid	Never
Receptionist		255	Valid	Never

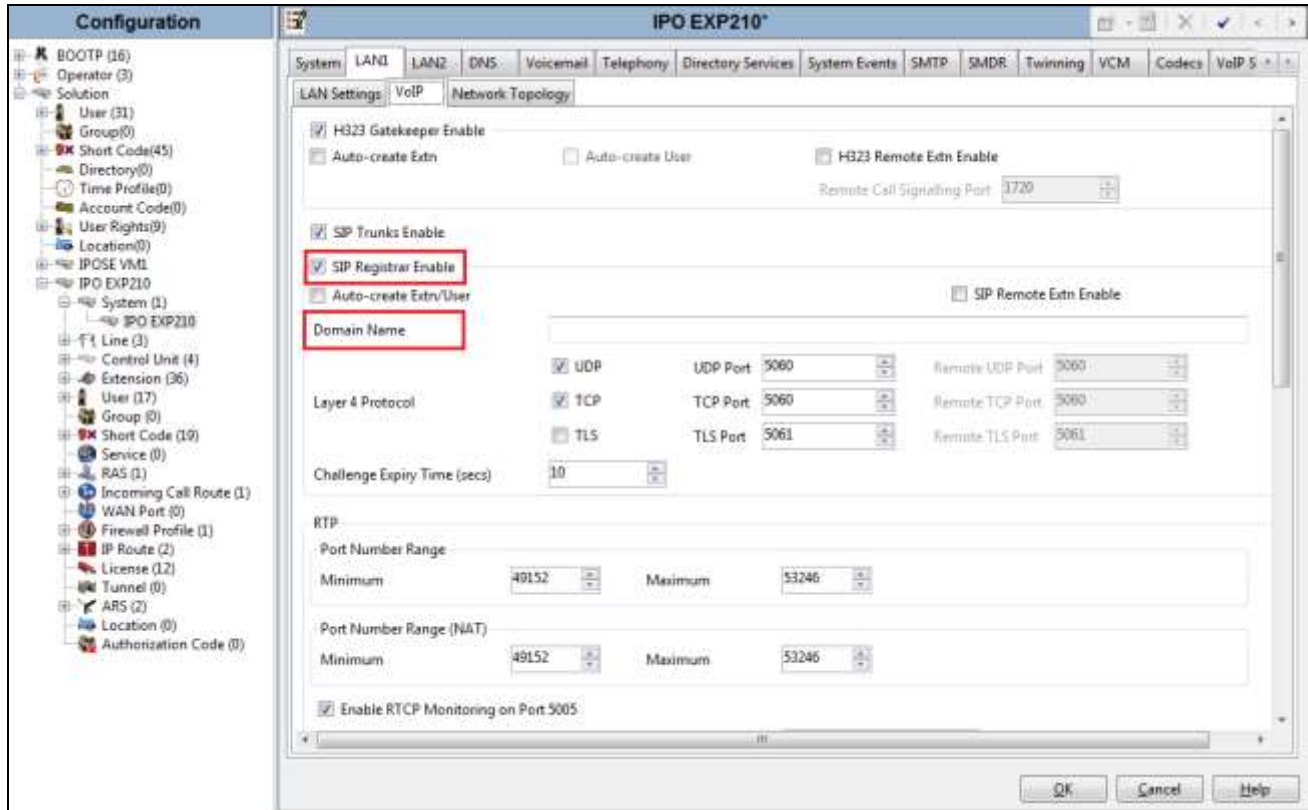
## 5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **IPO EXP210** 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 8028. 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

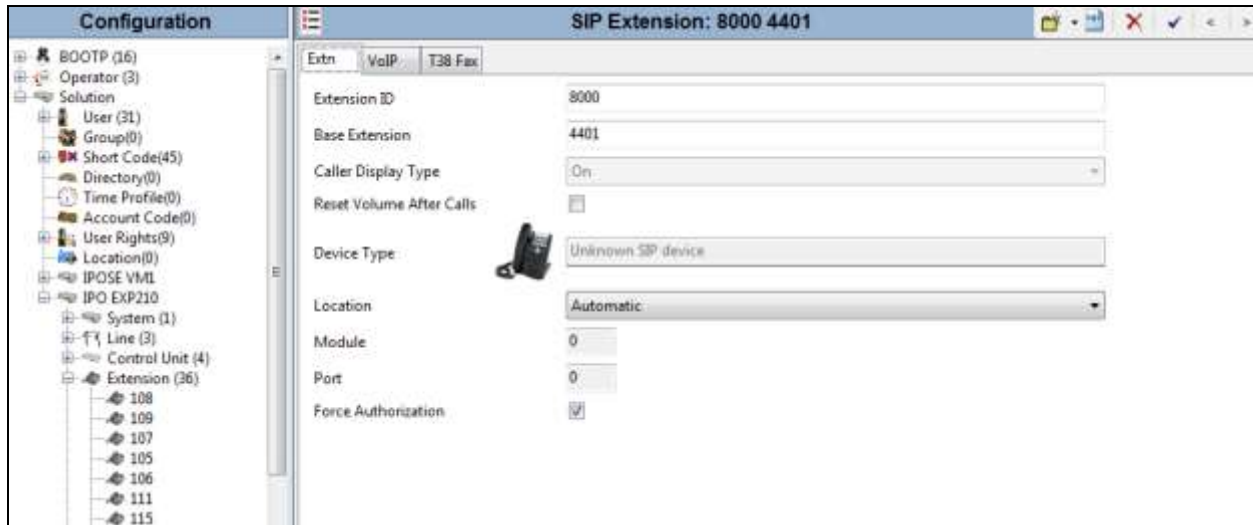
Continuing from **Section 5.2**, select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below. Enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the SIP endpoints used the LAN IP address for registration.



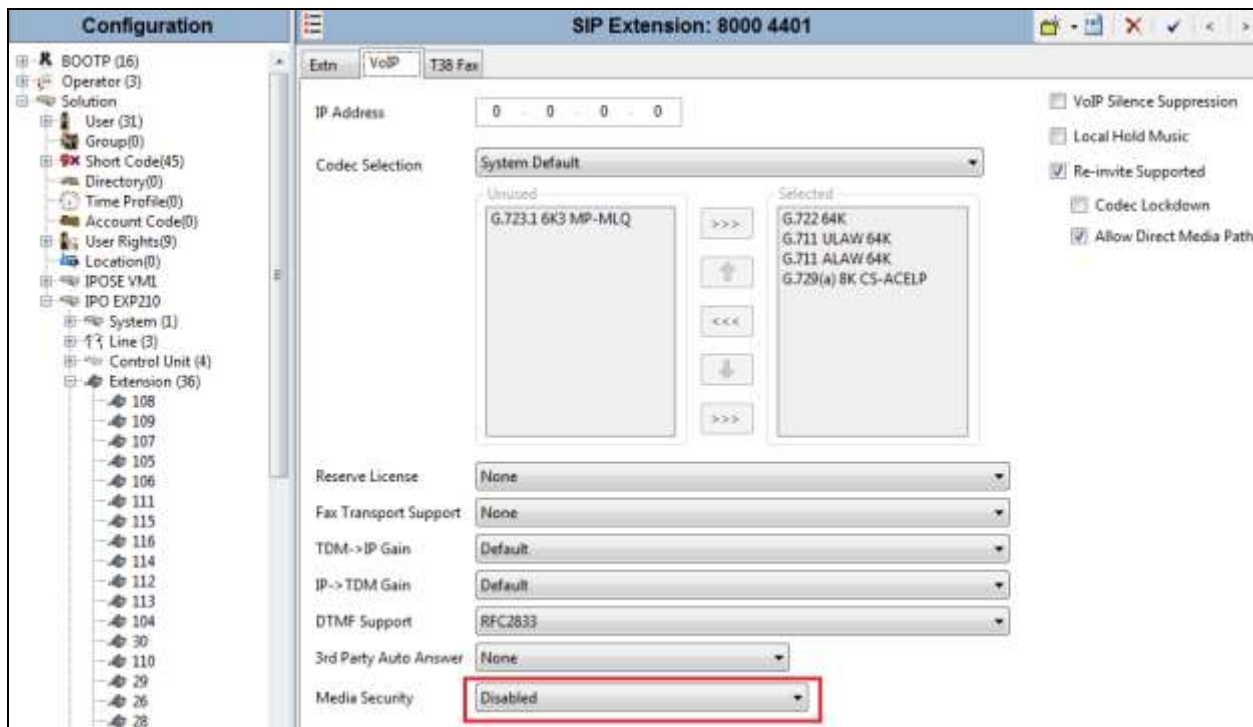


## 5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension**, and select **New** → **SIP Extension** (not shown) from the pop-up list to add a new SIP extension. For **Base Extension**, enter the SIP door extension “4401”. Retain the default values in the remaining fields.

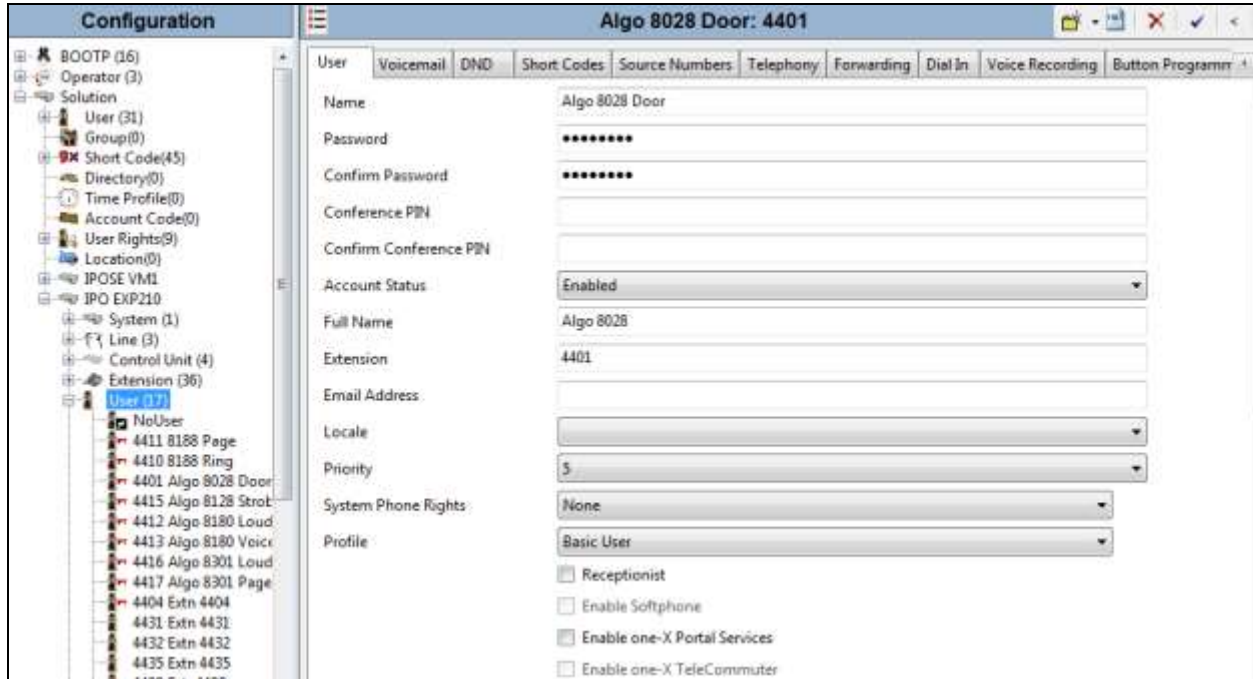


Select the **VoIP** tab, select **Disable** in the **Media Security** dropdown menu and retain the default values in all fields. Note that Media Security for all Algo SIP extensions needs to be set as “Disabled” to avoid the audio issue.



## 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 (not shown). Enter desired values for **Name**. For **Extension**, enter the Algo 8028 extension **4401** from **Section 5.4**. Remember these values as they will be needed to register Algo to IPO.



Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab, and enter a desired **Login Code**. This **Login Code** is needed to register Algo 8028 to IPO.



## 6. Configure Algo 8028 SIP Door Phone

This section provides the procedures for configuring Algo 8028 SIP Door Phone. The procedures include the following areas:

- Launch web interface
- Administer configuration

### 6.1. Launch Web Interface

Access Algo 8028 SIP Door Phone web-based interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the 8028 SIP Door Phone. The IP address can obtain initially from the call button on Algo 8028 Door station. The **Welcome to the Algo 8028 SIP Doorphone Control Panel** screen is displayed, as shown below. Log in using the appropriate credentials.

**ALGO** 8028 SIP Doorphone Control Panel Firmware: 2.6.4

### Welcome to the Algo 8028 SIP Doorphone Control Panel

Setting up your SIP Doorphone:

**Step 1: Configure your SIP Doorphone**

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 Doorphone (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 Doorphone (Optional)**

Please register your product using the link below:  
<http://www.algosolutions.com/8028reg>

Registration ensures your access to the latest upgrades to this product and important service notices.

**Login**

Password (default: algo)

**Status**

Device Name	doorphone
Extension	4401
SIP Registration	<b>Successful</b>
Call Status	Idle

## 6.2. Administer Algo 8028

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):** The LAN IP address from **Section 5.2**.
- **Extension:** The SIP base extension from **Section 5.4**.
- **Authentication ID:** The SIP user name from **Section 5.5**.
- **Authentication password:** The SIP user login code from **Section 5.5**.
- **Dialing Extension:** Enter an extension on IP Office for dialing out from the call button in Algo 8028 Door station.

The screenshot displays the '8028 SIP Doorphone Control Panel' interface. At the top, the 'ALGO' logo is on the left, the title '8028 SIP Doorphone Control Panel' is in the center, and 'Firmware: 2.6.4' is on the right. Below the title bar, there are navigation tabs: 'Status', 'Basic Settings' (selected), 'Advanced Settings', 'System', and 'Logout'. Under 'Basic Settings', there are sub-tabs: 'SIP' (selected), 'Audio', and 'Door Relay'. The main content area is titled 'SIP Settings' and contains a 'SIP' section with the following fields:

SIP Domain (Proxy Server)	10.10.97.46 <small>Default port is 5060. To specify a different port, enter PROXY:PORT, e.g. my_proxy.com:5070, or 192.168.1.10:5080.</small>
Extension	4401
Authentication ID	4401
Authentication Password	•••••
Dialing Extension	84179673404 <small>Phone number to be dialed when the call button on the door station is pressed.</small>

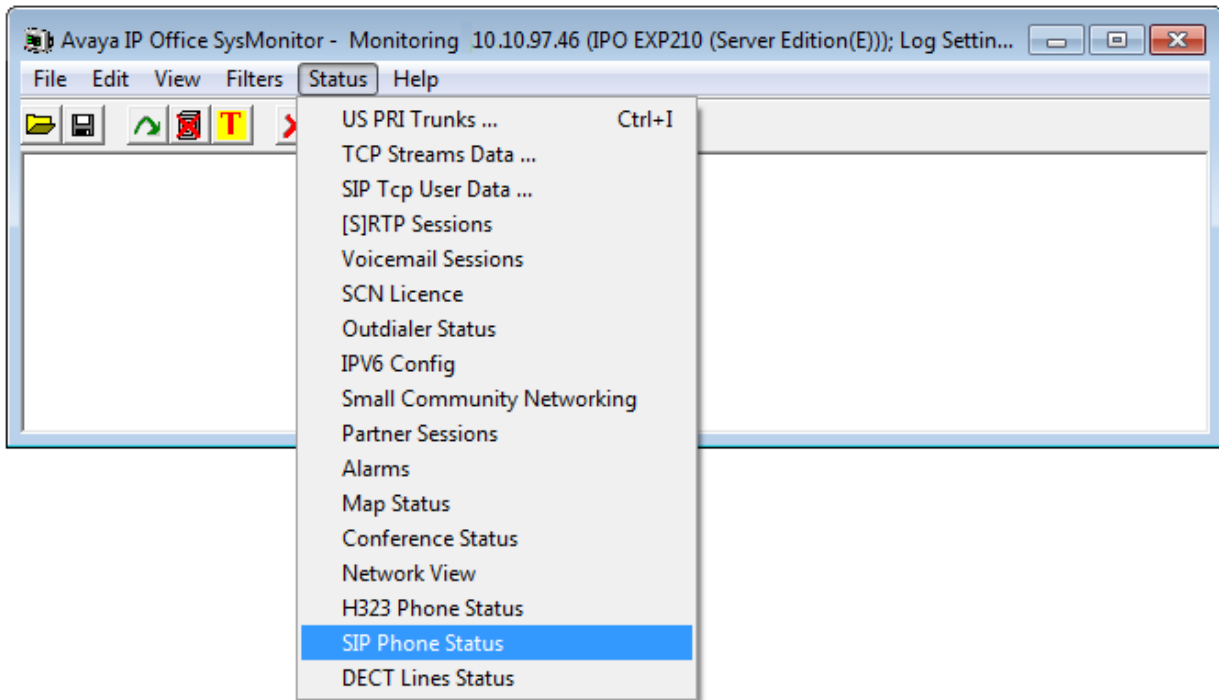
At the bottom right of the settings area is a 'Save' button with a green checkmark icon. At the very bottom of the page, the copyright notice reads: '© Copyright 2015 Algo Communication Products Ltd.'

## 7. Verification Steps

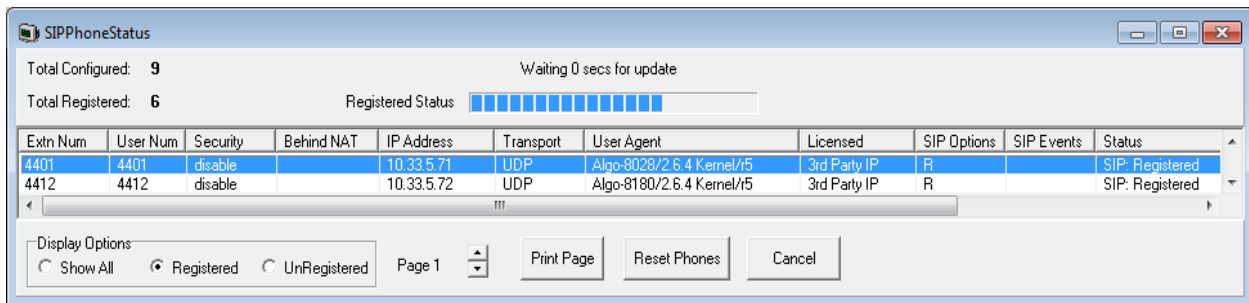
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Algo 8028 SIP Door Phone.

### 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. Verify that there is an entry for each SIP extension from **Section 5.4**, that the **User Agent** is “Algo-8028/2.4 Kernel/r5”, and that the **Status** is “**SIP: Registered**”, as shown below.



## 7.2. Verify Algo 8028 SIP Door Phone

From the Algo 8028 SIP Doorphone web-based interface, select **Status** from the top menu. Verify that **SIP Registration** displays “Successful” in the **SIP Registration** as shown below.

The screenshot displays the '8028 SIP Doorphone Control Panel' web interface. At the top, the 'ALGO' logo is on the left, the title '8028 SIP Doorphone Control Panel' is in the center, and 'Firmware: 2.6.4' is on the right. Below the title bar is a navigation menu with tabs for 'Status', 'Basic Settings', 'Advanced Settings', 'System', and 'Logout'. The 'Status' tab is selected. The main content area has a heading 'Welcome to the Algo 8028 SIP Doorphone Control Panel' and a sub-heading 'Setting up your SIP Doorphone:'. It lists four steps: 1. Configure your SIP Doorphone, 2. Check network settings (Optional), 3. Secure your SIP Doorphone (Optional), and 4. Register your SIP Doorphone (Optional). Step 4 includes a link to 'http://www.algosolutions.com/8028reg'. Below the steps is a 'Status' section containing a table with the following data:

Status	
Device Name	doorphone
Extension	4401
SIP Registration	<b>Successful</b>
Call Status	Idle
Provisioning Status	None Found
Door Relay	Closed
Door Station	Model 3201 Firmware 2
MAC	00:22:EE:03:14:6F
IP	10.33.5.71
Netmask	255.255.255.0
Date/Time	Sat Jan 1 20:01:09 PST 2000

At the bottom of the interface, there is a copyright notice: '© Copyright 2015 Algo Communication Products Ltd.'

The following tests were conducted to verify the solution between the Algo 8028 and Avaya IPO.

- Verify that when the call button on Algo 8028 Door Station is pressed the telephone on IPO rings and a clear speech path is established
- Verify that the telephone that receives the incoming call from the 8028 Door Station 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) and that DTMF tones generated from these different clients are able to unlock the door release
- Verify that 8028 goes into an idle state when the call is completed
- Verify that the 8028 re-registers without issues if the Ethernet cable is unplugged and plugged back in

## 8. Conclusion

These Application Notes describe the configuration steps required to integrate the Algo 8028 SIP Door Phone with Avaya IP Office Server Edition Solution. 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

Product documentation for the Avaya IP Office may be found at:

<https://support.avaya.com/css/Products/>

Avaya IP Office Documents:

- [1] Administering Avaya IP Office™ Platform with Manager, Issue 9.1, Issue 10.33, December 2015.
- [2] Deploying Avaya IP Office™ Platform Servers as Virtual Machines, Release 9.1, Issue 03i, November 2015.
- [3] IP Office™ Platform 9.1 Using IP Office System Monitor, Issue 06e, May 2015.

Product documentation for the Algo 8028 SIP Door Phone products may be found at:

<http://www.algosolutions.com/8028>

---

**©2016 Avaya Inc. All Rights Reserved.**

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at [devconnect@avaya.com](mailto:devconnect@avaya.com).