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Avaya Solution & Interoperability Test Lab

Application Notes for Algo 8028 SIP Door Phone with Avaya IP Office - Issue 1.1

Abstract

These Application Notes describe the configuration steps required for Algo 8028 SIP Door Phone to interoperate with Avaya IP Office. 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.

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1. Introduction

These Application Notes describe the configuration steps required for Algo 8028 SIP Door Phone to interoperate with Avaya IP Office. 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

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 observations were made during the compliance testing:
- A call between Algo 8028 and Avaya phones (H.323, SIP, and digital) cannot be transferred in attended mode by Avaya phone to any SIP phone. This feature is currently not supported on Algo 8028.

- During active call if the network cable is disconnected from Algo 8028 Door Controller and plugged back in, Algo 8028 phone is able to re-register to IPO but inbound and outbound call from/to Algo 8028 cannot be made. There is a workaround to fix the issue by setting Max Call Duration on Algo 8028 to duration time, e.g. 3 minutes and after the duration the call will be clear.

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/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 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 PRI T1 trunk was also configured to connect from IP Office to PSTN for test cases off-net via PRI T1 trunk.
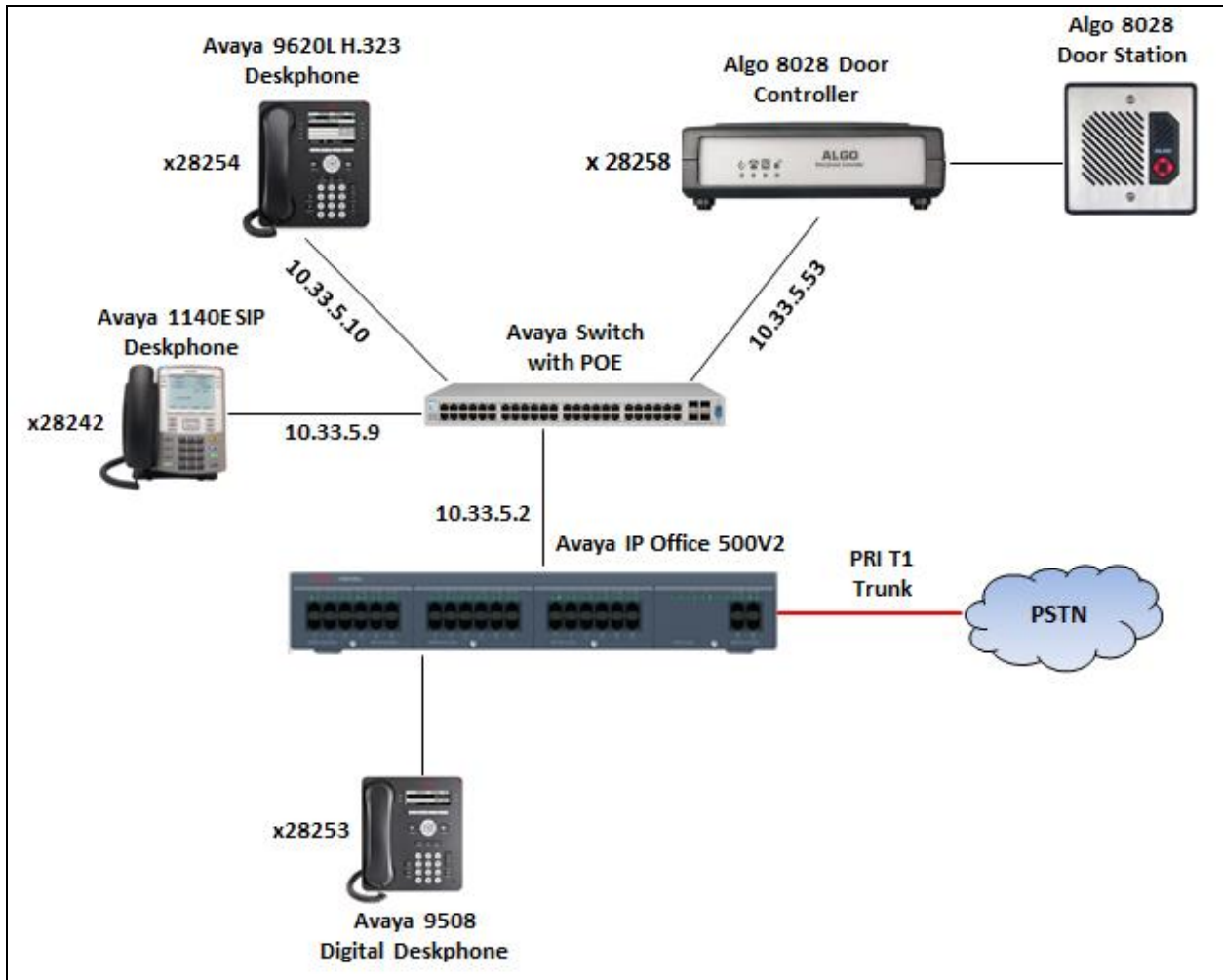
Figure 1: Test Configuration Diagram

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4. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500V2	9.0.3.941
Avaya H.323 9620L IP Deskphone	3.220A
Avaya H.323 9650C IP Deskphone	3.220A
Avaya 1140E SIP Phone	4.3
Avaya 9508 Digital Phone	0.55
Avaya IP Softphone	3.2.3.48
Algo 8028 SIP Door Phone	2.2

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".

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 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.

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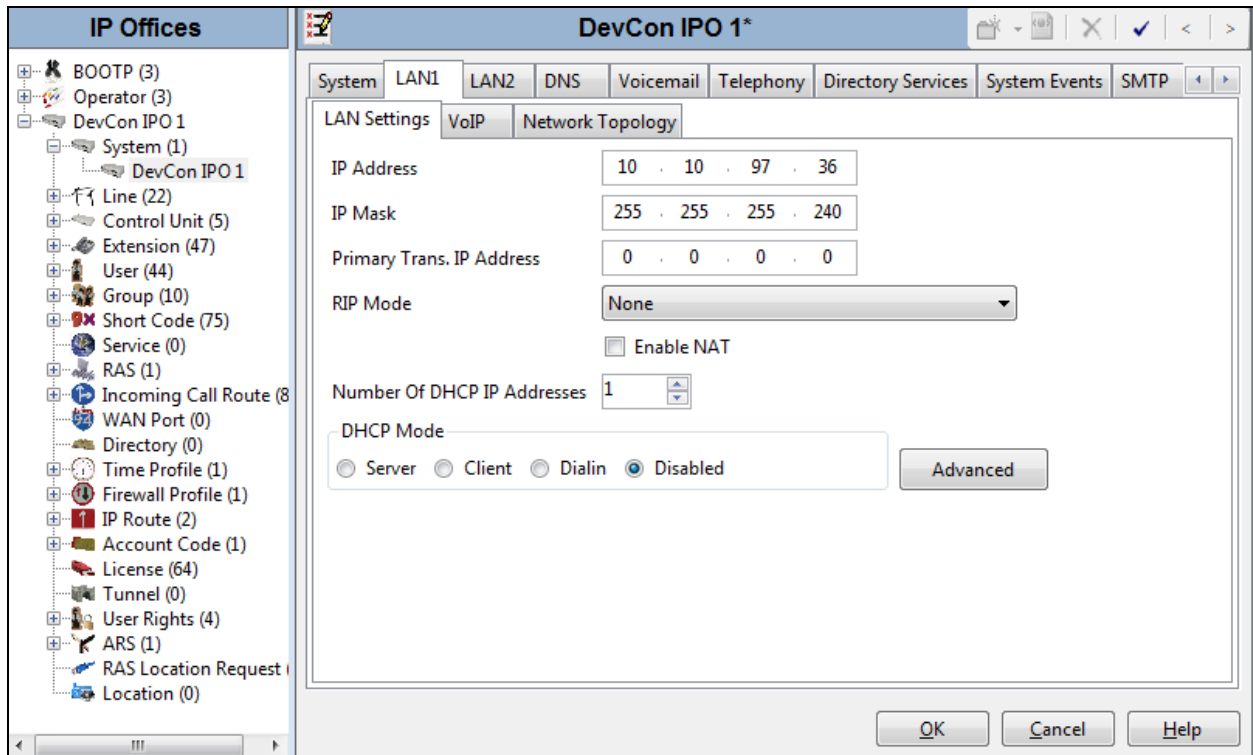
5.3. Administer SIP Registrar

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.

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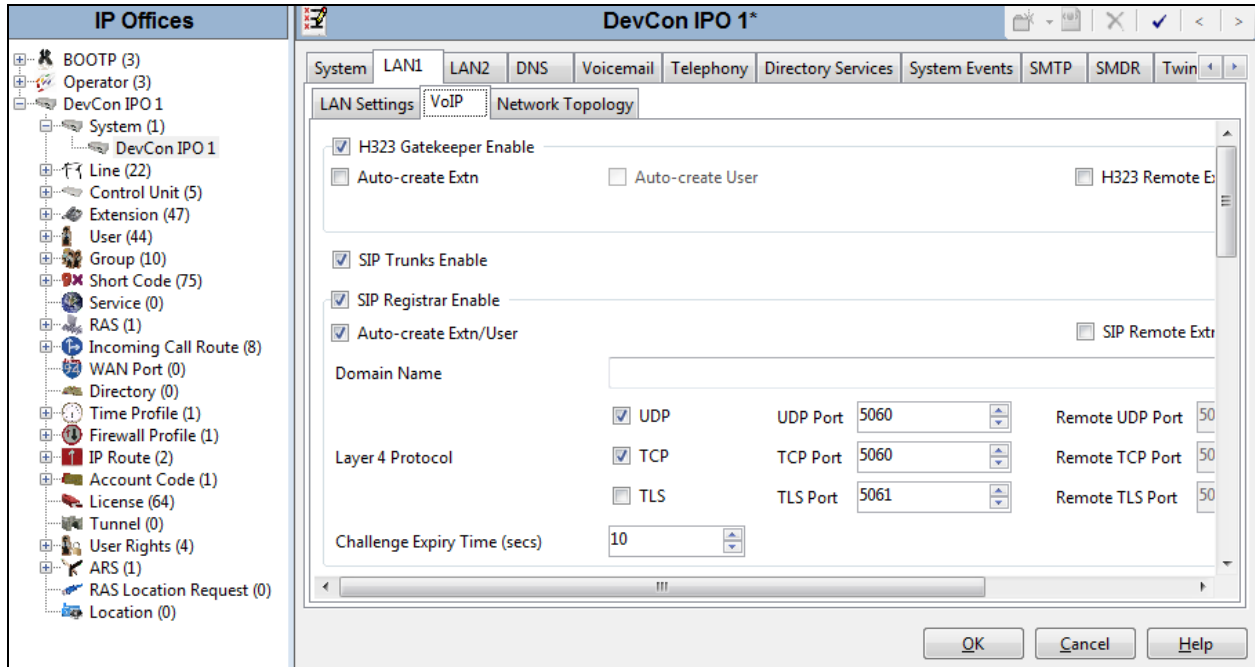
5.4. Administer SIP Extensions

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 "**28258**". Retain the default values in the remaining fields.
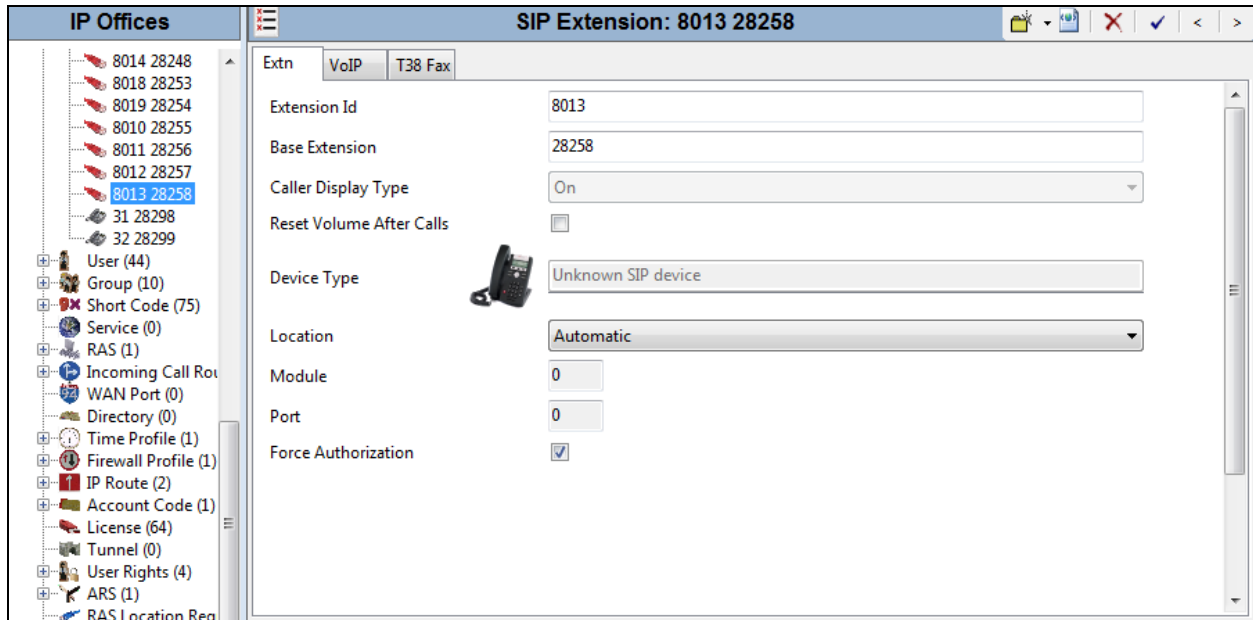
Select the **VoIP** tab, and retain the default values in all fields. Repeat this section to add additional SIP extensions as desired.

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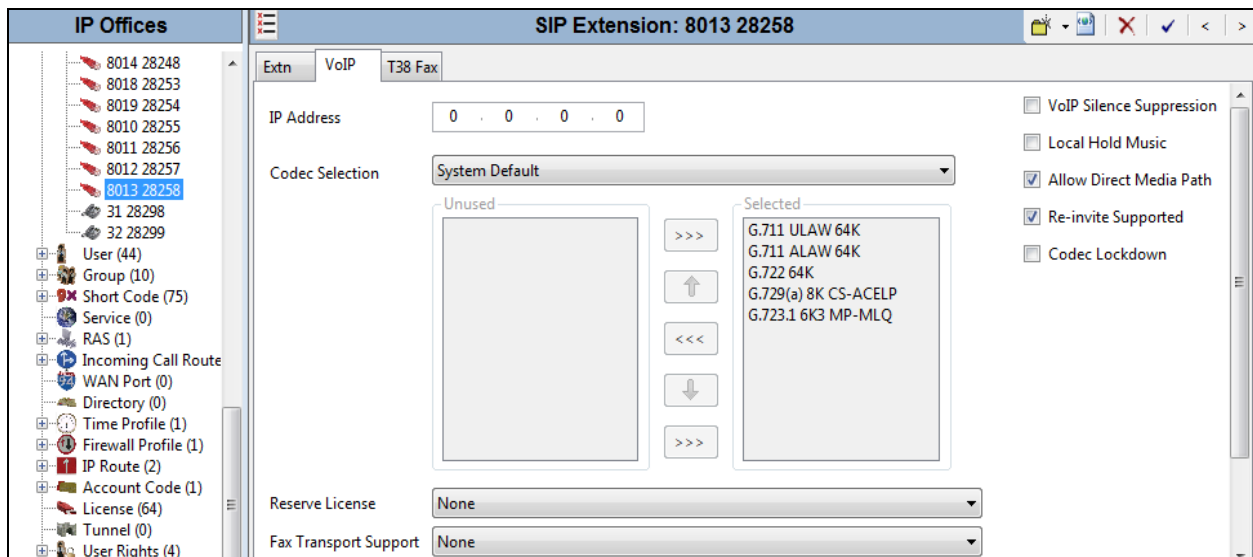
5.5. Administer SIP User

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 from **Section 5.4**. Remember these values as they will be needed to register Algo to IPO.

Enter desired values for **Password**, this password is used when user want to log onto IP Office Softphone.

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.

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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.

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 **Section5.5**.
- **Dialing Extension:** Enter an extension on IP Office for dialing out from the call button in Algo 8028 Door station.
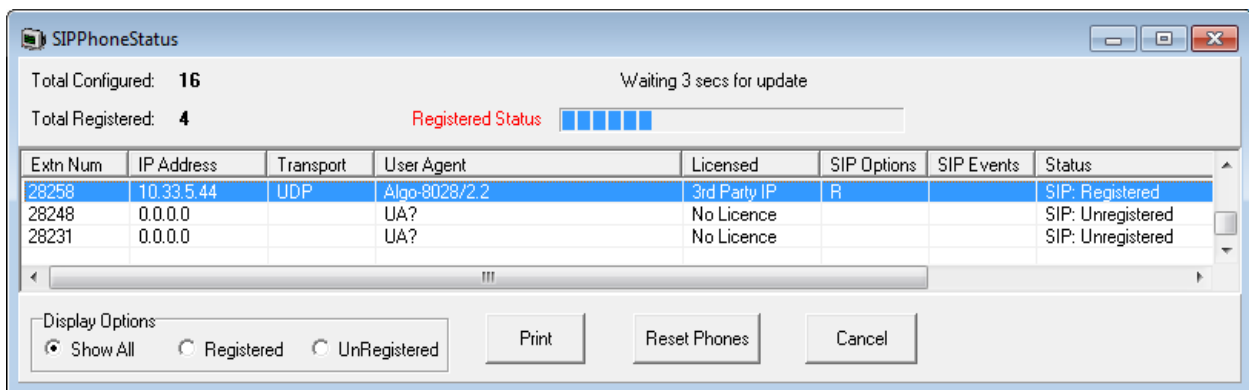
7. Verification Steps

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.
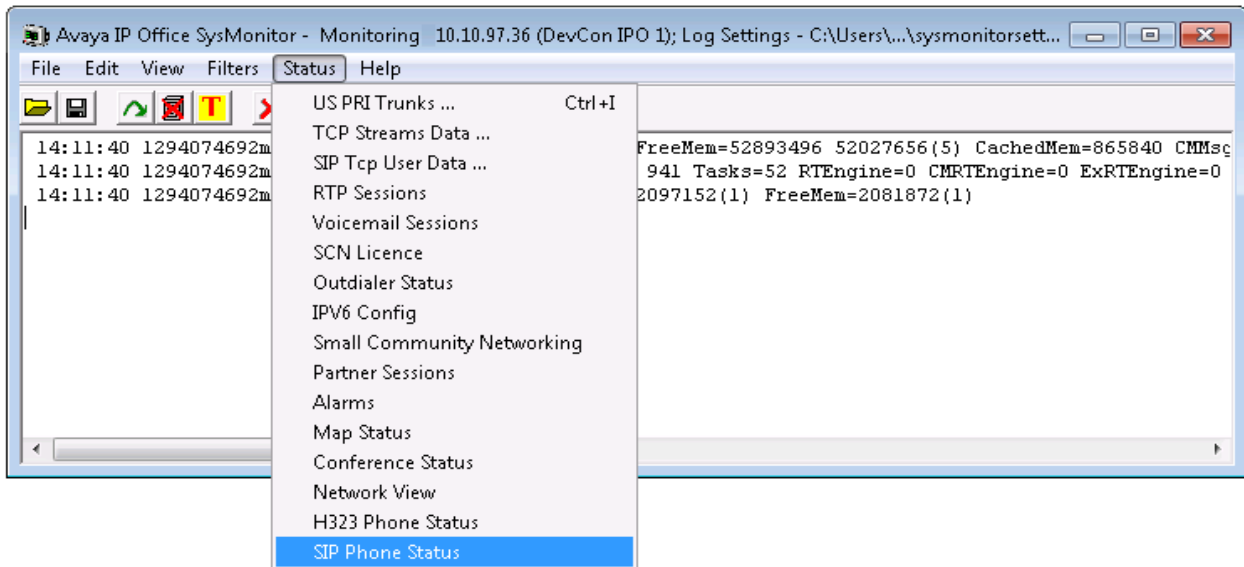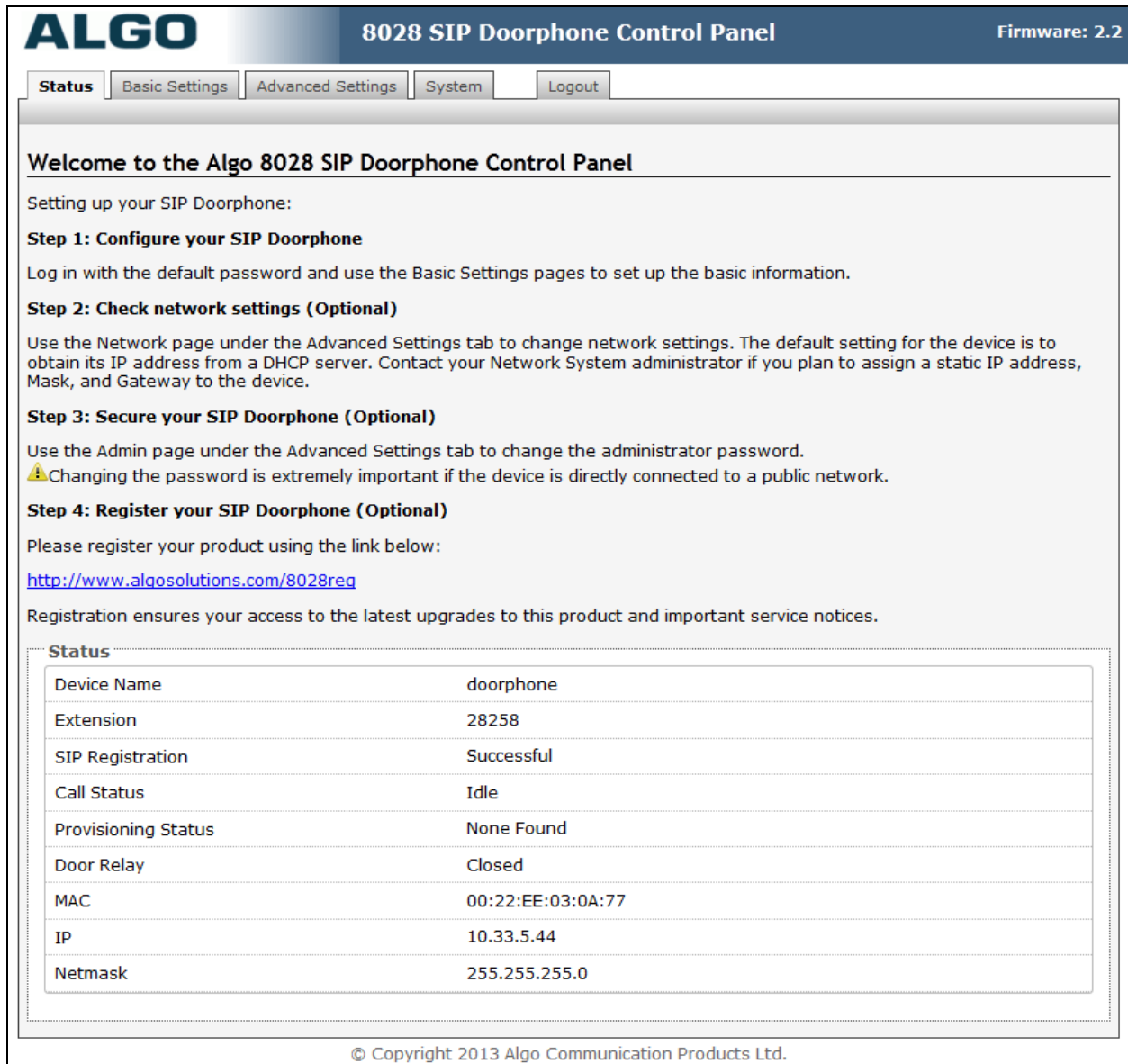

The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each SIP extension from **Section 5.4**, that the **User Agent** is "Algo-8028/2.2", and that the **Status** is "SIP: Registered", as shown below.

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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 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

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**. Algo 8028 SIP Door Phone version 2.2 is considered to be in compliance with Avaya IP Office System Release 9.0.

9. Additional References

Product documentation for the Avaya IP Office may be found at:
https://support.avaya.com/css/Products/

Product documentation for the Algo 8028 SIP Door Phone products may be found at:
http://www.algosolutions.com/products/doorphones-security/8028-sip-doorphone.html

Avaya IP Office Documents:
[1] IP Office 9.0 Installation, Document number 15-601042 Issue 28, 11 October 2013
[2] IP Office 9.0 Manager 9.0, Document number 15-601011 Issue 9.01, 09 September 2013
IP Office 9.0 Administering Voicemail Pro, Document number 15-601063 Issue 9.0 Release 1.0, September 2013

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