Avaya Solution & Interoperability Test Lab

Application Notes for Algo 8028 SIP Doorphone Version 2.7.4 with Avaya IP Office Release 11 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Algo 8028 SIP Doorphone to interoperate with Avaya IP Office. Algo 8028 SIP Doorphone 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 Doorphone to interoperate with Avaya IP Office. Algo 8028 SIP Doorphone is a SIP-based device that can register with Avaya IP Office as SIP endpoint using UDP protocol.

Algo 8028 SIP Doorphone (hereafter referred as 8028) is outdoor rated IP intercom compatible with premise based and hosted SIP communication servers. By connecting to Avaya IP Office, arriving visitors and guests can be greeted from any telephone or client and allowed entry by a simple key press.

In the compliance testing, Avaya IP Office Server Edition system (IP Office) 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. The focus of this interoperability compliance testing was to verify if the 8028 can register as a SIP endpoint on the IP Office and able to make a call to and from a telephone on the 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.

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 8028 did not include use of any specific encryption features as requested by Algo.
2.1. Interoperability Compliance Testing
Compliance testing verified that the 8028 was able to interoperate with the telephones residing on the IP Office system. The following interoperability areas were covered:

- The 8028 can register to IP Office as a SIP endpoint.
- The 8028 can make a call to an endpoint on IP Office and establish a clear speech path.
- Avaya Endpoints on IP Office can call the extension assigned to the 8028 and establish speech path.
- Avaya Endpoints on the 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 the 8028 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 the 8028 and Avaya endpoint (H.323, SIP, and digital) cannot be transferred by Avaya endpoint to Avaya SIP endpoint. This feature is currently not supported on Algo 8028.

2.3. Support
Technical support on Algo 8028 SIP Doorphone 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 the 8028. The 8028 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.
The following table indicates the IP addresses that were assigned to the systems in the test configuration diagram:

<table>
<thead>
<tr>
<th>Description</th>
<th>IP Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Office Primary Server Edition</td>
<td>10.10.97.110</td>
</tr>
<tr>
<td>IP Office 500V2 Expansion</td>
<td>10.10.97.230</td>
</tr>
<tr>
<td>Avaya SIP and H323 Endpoint</td>
<td>10.33.5.30-10.33.5.36</td>
</tr>
<tr>
<td>Algo 8028 SIP Doorphone</td>
<td>10.33.5.50</td>
</tr>
</tbody>
</table>

4. **Equipment and Software Validated**

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

<table>
<thead>
<tr>
<th>Equipment/Software</th>
<th>Release/Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avaya IP Office Primary Server Edition running on Virtual Environment</td>
<td>11.0.0.2.0 Build 23</td>
</tr>
<tr>
<td>Avaya IP Office 500v2 Expansion</td>
<td>11.0.0.2.0 Build 23</td>
</tr>
<tr>
<td>Avaya IP Office DIG DCPx16 V2</td>
<td>11.0.0.2.0 Build 23</td>
</tr>
<tr>
<td>Avaya IP Office Manager</td>
<td>11.0.0.2.0 Build 23</td>
</tr>
<tr>
<td>Avaya 96x1 Series IP Deskphones (H.323)</td>
<td>Version 6.6604</td>
</tr>
<tr>
<td>Avaya 1140E IP Deskphones (SIP)</td>
<td>SIP1140e Ver. 04.04.23.00</td>
</tr>
<tr>
<td>Avaya J129 SIP Deskphone</td>
<td>3.0.0.16</td>
</tr>
<tr>
<td>Avaya Equinox™ for Windows</td>
<td>3.4.4.45.14</td>
</tr>
<tr>
<td>Algo 8028 SIP Doorphone</td>
<td></td>
</tr>
<tr>
<td>Firmware Version</td>
<td>2.7.4</td>
</tr>
<tr>
<td>Kernel Version</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**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

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”.

![Configuration Screen](image-url)
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 8028 extension from Section 5.4. Remember these values as they will be needed to register the 8028 to IP Office. Enter desired values for Password and Confirm Password.

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 8028 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.
6. Configure 8028 SIP Doorphone

This section provides the procedures for configuring Algo 8028 SIP Doorphone. The procedures include the following areas.

6.1. Launch Web Interface

Access the 8028 SIP Doorphone 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 Doorphone. The IP address can obtain initially from the call button on the 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)**: Enter the sip domain name of IP Office as configured in Section 5.2.
- **Extension**: Enter the SIP base extension as configured in **Section 5.4**.
- **Authentication ID**: Enter the SIP user name as configured in **Section 5.5**.
- **Authentication password**: The SIP extension password in **Section 5.4** or SIP user login code in **Section 5.5**.
- **Dialing Extension**: Enter an extension on the IP Office for dialing out from the call button in the 8028 Door station.
Navigate to **Advanced Settings → Advanced SIP**, the **Advance SIP Settings** is displayed. Enter the IP address of LAN1 IP Office in the **Outbound Proxy** and keep other values at default.
7. Verification Steps
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Algo 8028 SIP Doorphone.

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 is an entry for the **Algo-8028/2.7.4** in the list.
7.2. Verify Algo 8028

From the 8028 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 8028 and IP Office.

- Verify that when the call button on the 8028 is pressed, the endpoint on the IP Office rings and a clear speech path is established.
- Verify that the solution works with different Avaya endpoints (e.g. digital, analog, IP etc) and that DTMF tones generated from these different endpoints are able to unlock the door release.
- Verify that the 8028 goes into an idle state when the call is completed.
- Verify that the 8028 re-register without issues if the Ethernet cable is unplugged and plugged back in.

8. Conclusion

These Application Notes describe the procedures required to configure Algo 8028 SIP Doorphone 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 observations 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:


Additional Avaya IP Office documentation can be found at:
http://marketingtools.avaya.com/knowledgebase/

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