Avaya Solution & Interoperability Test Lab

Application Notes for LiveSentinel SIP Multimedia Video Door Intercom with Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for LiveSentinel SIP Multimedia Video Door Intercom to interoperate with Avaya IP Office. LiveSentinel VDI SIP Multimedia Intercom is a SIP-based device that can register with Avaya IP Office as SIP endpoints and enables video conversations and remote entry using door release features.

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 LiveSentinel SIP Multimedia Video Door Intercom (VDI) to interoperate with Avaya IP Office. LiveSentinel VDI SIP Multimedia Intercom is a SIP-based device that can register with Avaya IP Office as a SIP endpoint.

The LiveSentinel VDI is a multimedia SIP endpoint combining the functionality of an IP phone, security camera, and interactive kiosk. The LiveSentinel VDI is designed for outdoor or public access locations to provide enhanced communication and support for guests and visitors. Applications include audio intercom with video security, lobby intercom, enhanced courtesy phone, multi-tenant gate or entrance, guest service, and visitor assistance kiosk. Graphic icons with multilingual menus and SIP based speech, text, or video communication make the LiveSentinel VDI ideal for serving international, multilingual, or hearing impaired clients. Static displayed or scroll list menus are easily created using the web tools provided or custom applications may be created to display photos, maps, directions, sub-directories and more using QT based QML script language.

2. Interoperability Testing

The focus of this interoperability compliance testing was to verify that the LiveSentinel VDI can register as a SIP endpoint on IPO, and is able to originate and receive both audio and video calls to and from telephones on the IPO system.
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 for 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. Test Description and Coverage

Compliance testing verified that the LiveSentinel VDI was able to interoperate with the telephones residing on the IPO system. The following interoperability areas were covered:

- LiveSentinel VDI can register to the IPO as a SIP endpoint.
- LiveSentinel VDI can make a call to a telephone on the IPO system and establish a clear speech and video path.
- A telephone on the IPO system can call the extension assigned to the LiveSentinel VDI and establish speech/video path(s) between the telephone and the LiveSentinel VDI SIP Multimedia Intercom.
- Telephones on the IPO system can send required DTMF tones and therefore ensure the remote door release features work successfully.
- LiveSentinel VDI can successfully re-register if the network connection drops and returns.

2.2. Test Results and Observations

The feature test cases were performed manually. The objectives outlined in section 2.1 were executed and passed.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cable to the LiveSentinel VDI SIP Multimedia Intercom.

3. Reference Configuration

The LiveSentinel VDI solution consists of a SIP multimedia endpoint that can support voice and video calls and can remotely open doors through the use of DTMF tones. Once LiveSentinel VDI registers as a SIP endpoint with Avaya IP Office, these endpoints can place and receive voice and video calls with various supported features as listed above in **Section 2**. The reference configuration used for the compliance test is shown in **Figure 1** below.

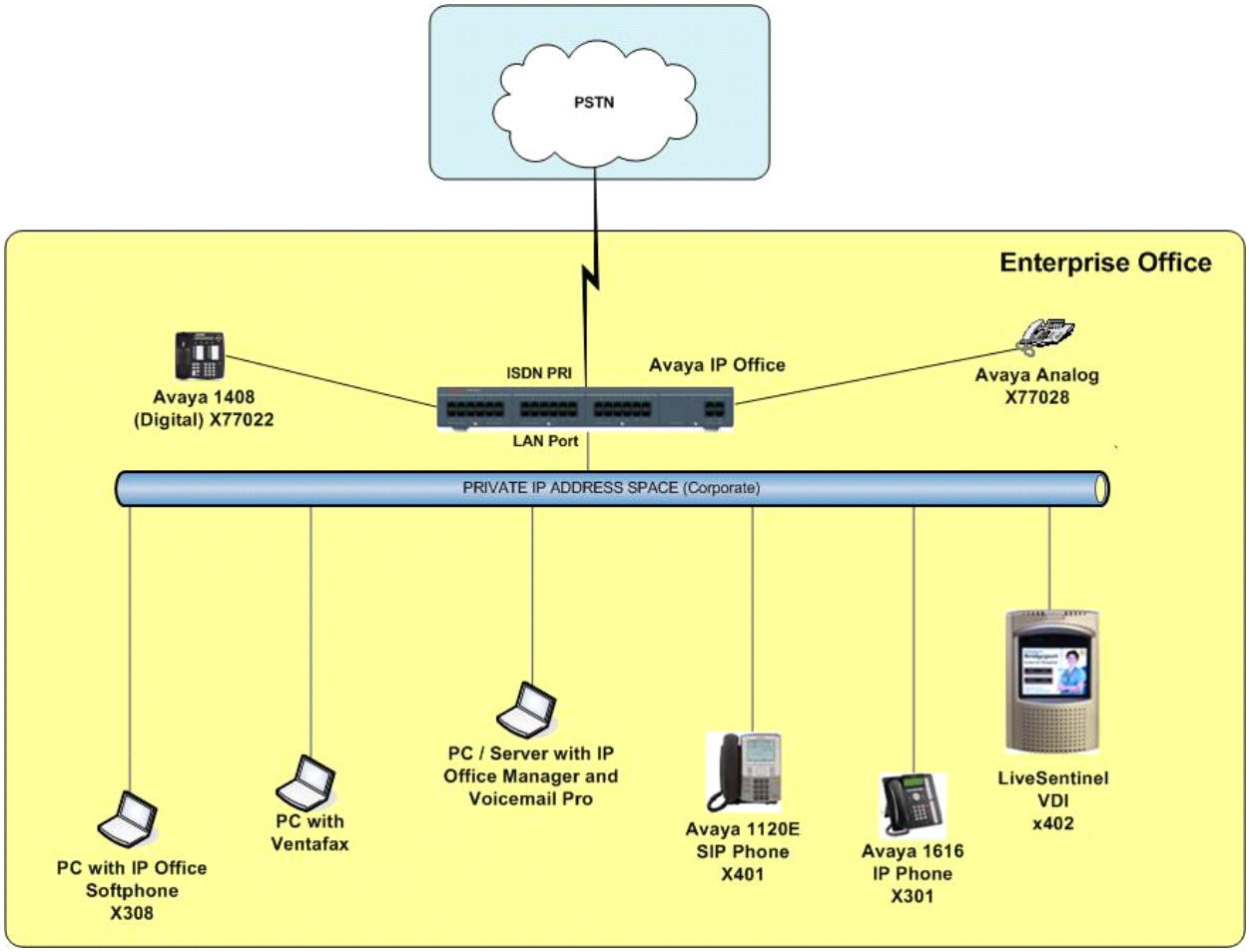


Figure 1: LiveSentinel VDI with IP Office 9.0

4. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office IP500 V2	9.0.0.829
Avaya 1120E IP phone (SIP)	SIP1120e.04.01.13.00
Avaya 1616i IP phone (H.323)	hb1616ua1_330D.bin
Avaya 1608 Digital phone	N/A
Avaya Analog phone	N/A
Avaya IP Office Softphone	3.2.3.48
LiveSentinel VDI SIP Multimedia Intercom	21.0.4.97

Testing was performed with IP Office 500 V2 R9.0, but it also applies to IP Office Server Edition R9.0. Note that IP Office Server Edition requires an Expansion IP Office 500 V2 R9.0 to support analog or digital endpoints or trunks. IP Office Server Edition does not support TAPI Wave or Group Voicemail.

5. Configure Avaya IP Office

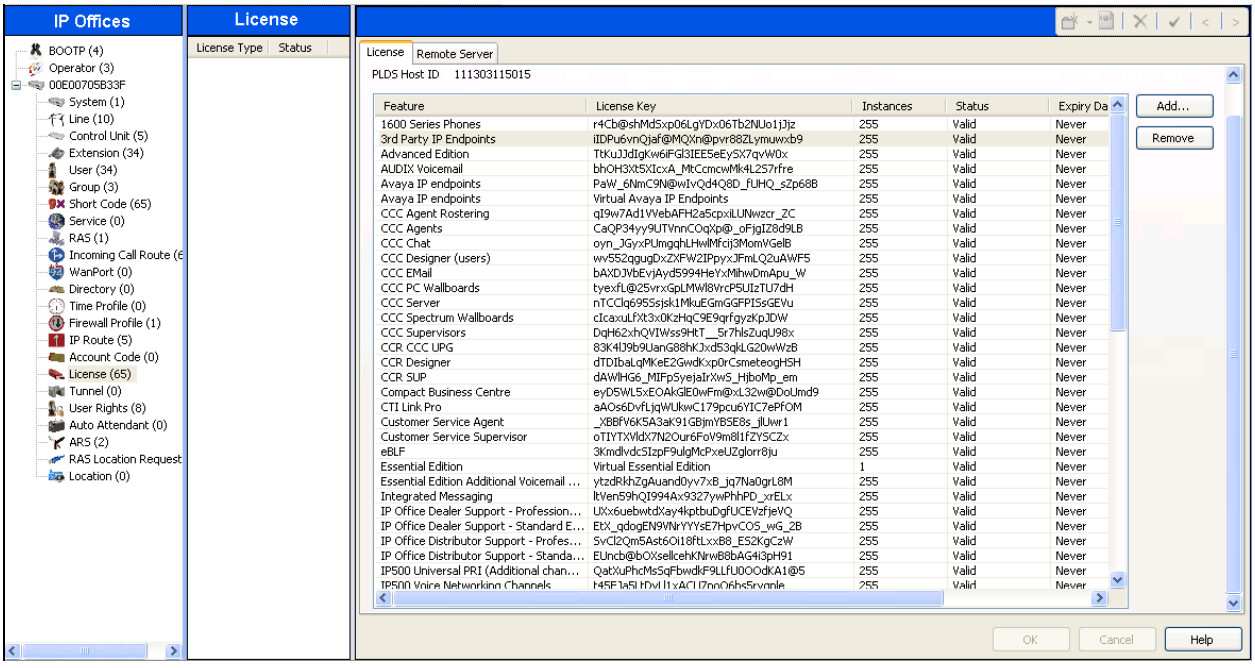
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- 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.

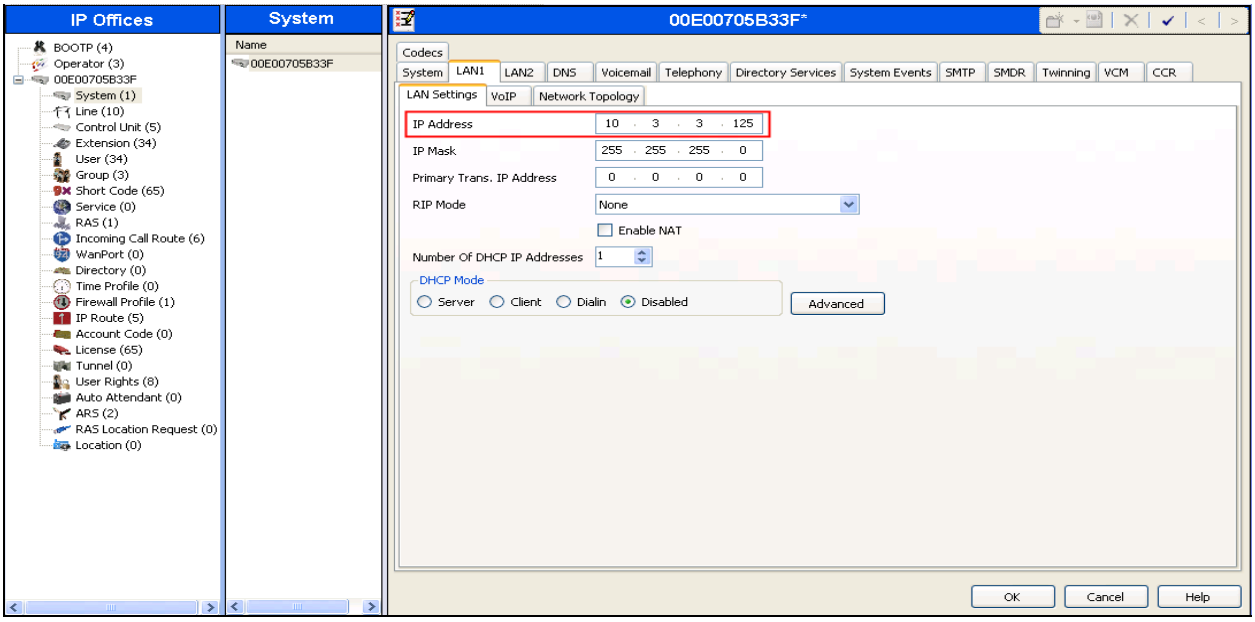
The **Avaya IP Office R9 Manager** screen is displayed. From the configuration menu in the left pane, select **License → 3rd Party IP Endpoints** to display the **3rd Party IP Endpoints** screen in the right pane. Verify that the **License Status** is "Valid" and that there are enough **Instances** to support all required endpoints.



5.2. Obtain LAN IP Address

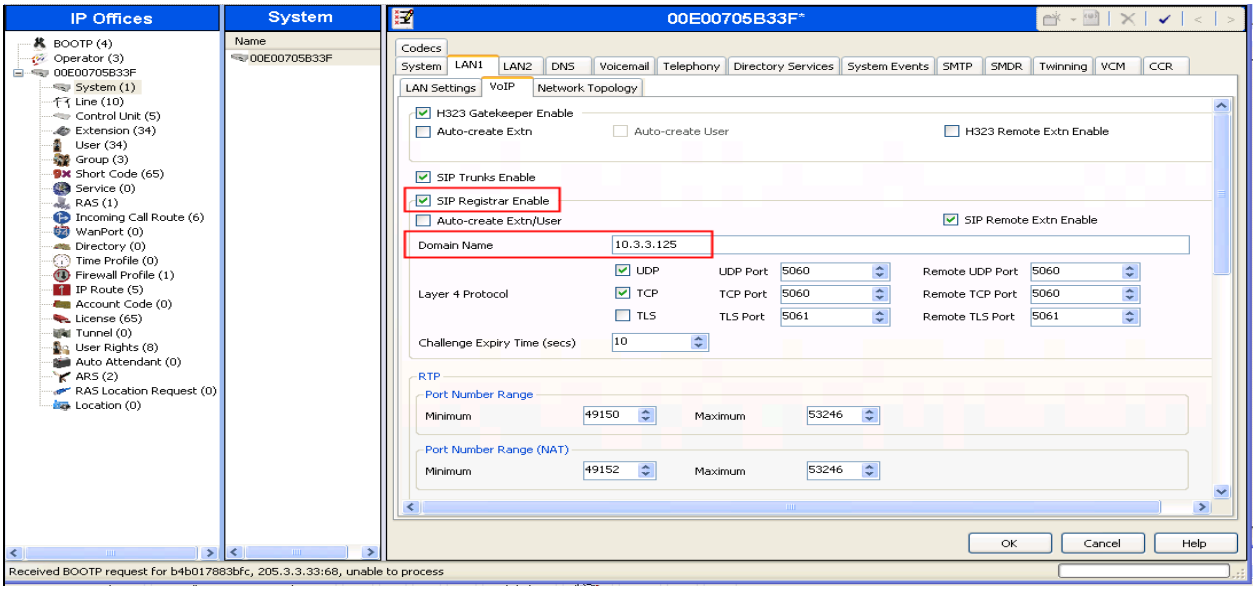
From the configuration menu in the left pane, select **System**. Click the **LAN1** tab followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure LiveSentinel VDI.

Note that IP Office can support SIP extensions on the LAN1 and/or LAN2 interfaces. For the compliance testing, the LAN1 interface was used.



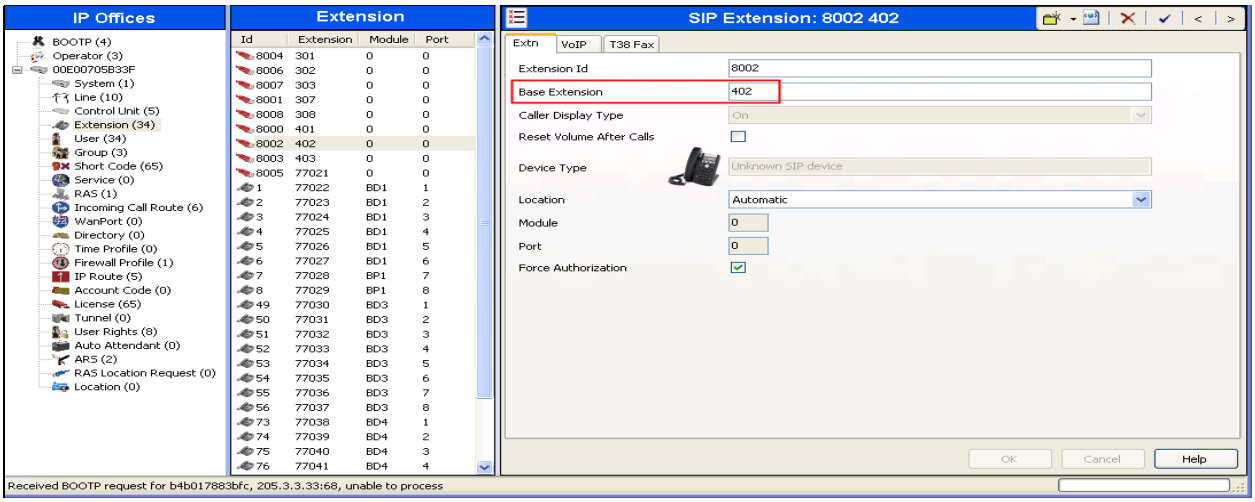
5.3. Administer SIP Registrar

Select the **VoIP** sub-tab from the right pane. Make certain that **SIP Registrar Enable** is checked and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was set to the IP address of the LAN1 interface, so the SIP endpoints used the LAN1 IP address for registration, as shown below.



5.4. Administer SIP Extensions

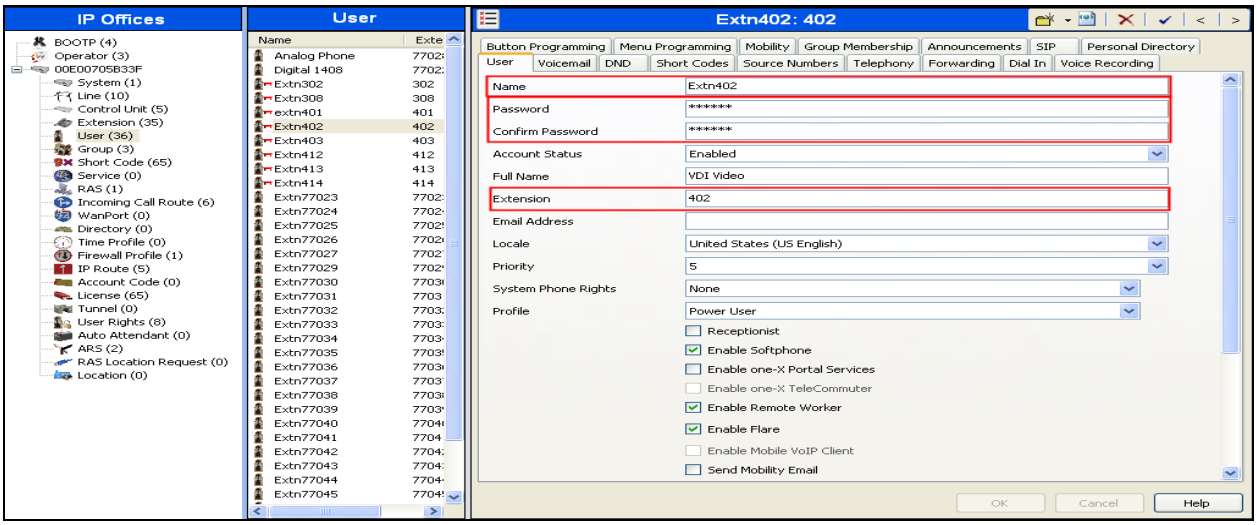
From the configuration menu in the left pane, right-click on **Extension** and select **New → SIP Extension** from the pop-up list to add a new SIP extension (not shown). For **Base Extension**, enter the LiveSentinel VDI extension which is shown in **Figure 1** in **Section 3**. Retain the default values in the remaining fields.



Repeat this section to add additional SIP extensions as desired. In the compliance testing, one SIP extension "402" was created as an IP Office Softphone user.

5.5. Administer SIP Users

From the configuration menu in the left pane, right-click on **User** and select **New** from the pop-up list (not shown). Enter a descriptive **Name** for the User. For **Extension**, enter the LiveSentinel VDI extension from **Section 5.4**. Remember these values as they will be needed to register LiveSentinel VDI to IPO. Enter the desired value for **Password** and **Confirm Password**, this password is used when a User wants to login to IPO.



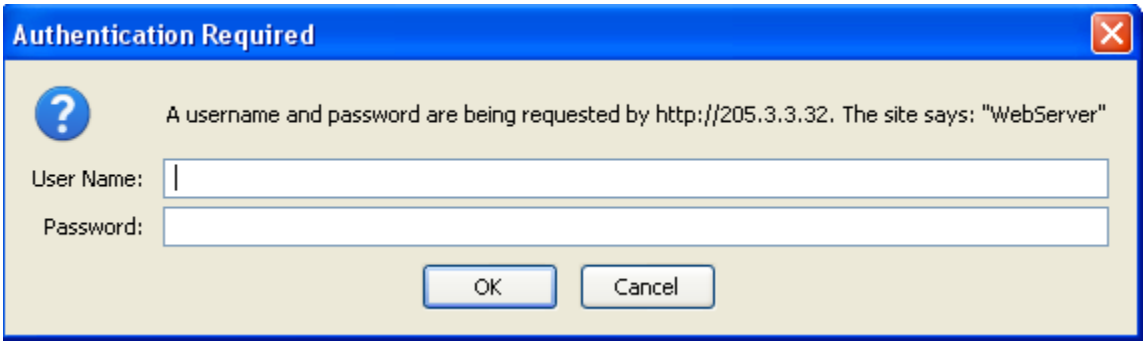
6. Configure LiveSentinel VDI SIP Multimedia Intercom

This section provides the procedures for configuring LiveSentinel SIP Multimedia Video Door Intercom (VDI). The procedures include the following areas:

- Launch web interface
- Administer configuration

6.1. Launch Web Interface

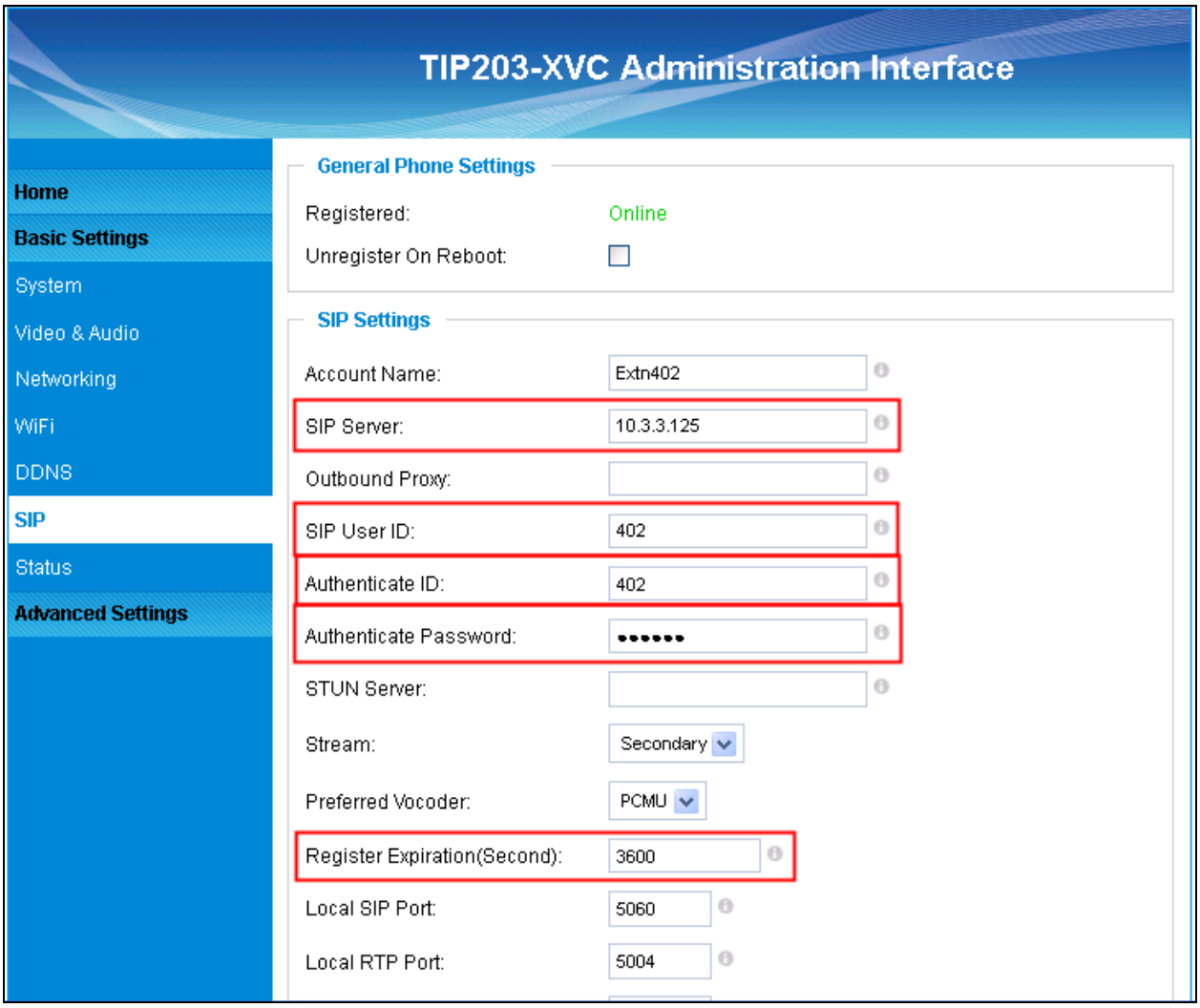
Access the LiveSentinel VDI web-based interface by using the URL "http://ip-address" in an Internet browser window, where "ip-address" is the IP address of the LiveSentinel VDI endpoint. Note that the default IP address of the LiveSentinel VDI endpoint is 192.168.1.111. The **Authentication Required** screen is displayed, as shown below. Log in using the appropriate credentials.



6.2. Administer SIP Settings

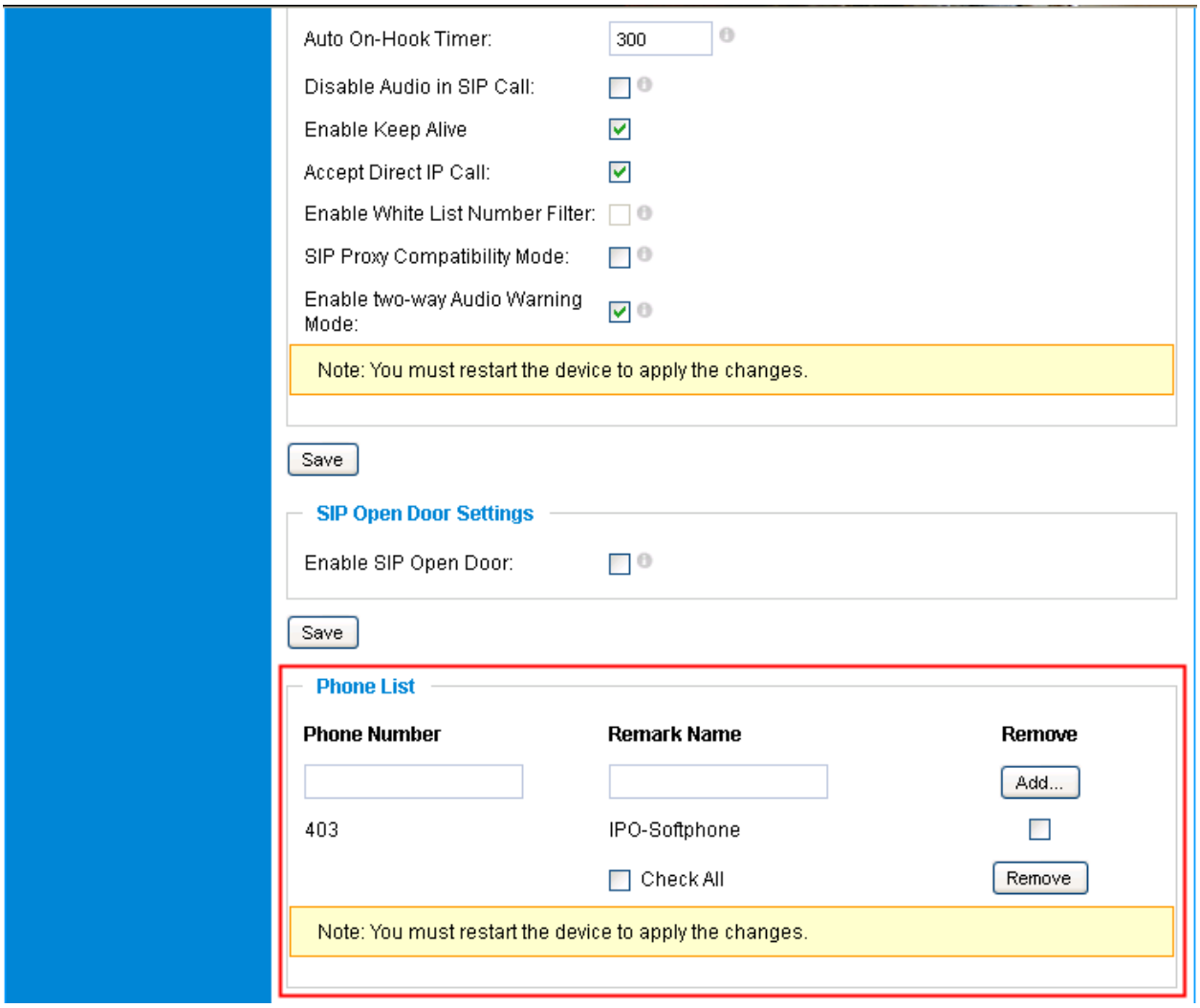
To configure SIP Settings, click on **SIP** from the menu on the left and enter the following values for the specified fields. Retain default values in the remaining fields.

- **SIP Server:** Enter the LAN IP address of IP Office.
- **SIP User ID:** Enter the SIP Base Extension from **Section 5.4**.
- **Authenticate ID:** Enter the SIP User name from **Section 5.5**.
- **Authenticate password:** Enter the SIP User password from **Section 5.5**.
- **Register Expiration:** Avaya recommends a registration interval of **3600** seconds.



6.3. Administer Dialing Phone Number

While still on the **SIP** page, scroll to the bottom to display the lower section of the screen, as shown below. Under **Phone List**, configure the number to be dialed when the LiveSentinel VDI button is pressed by entering the designated extension in the **Phone Number** field. This is the extension that will ring when a user presses the LiveSentinel VDI button. During compliance testing, the IPO softphone extension "403" was used to verify the voice/video call, as shown below.

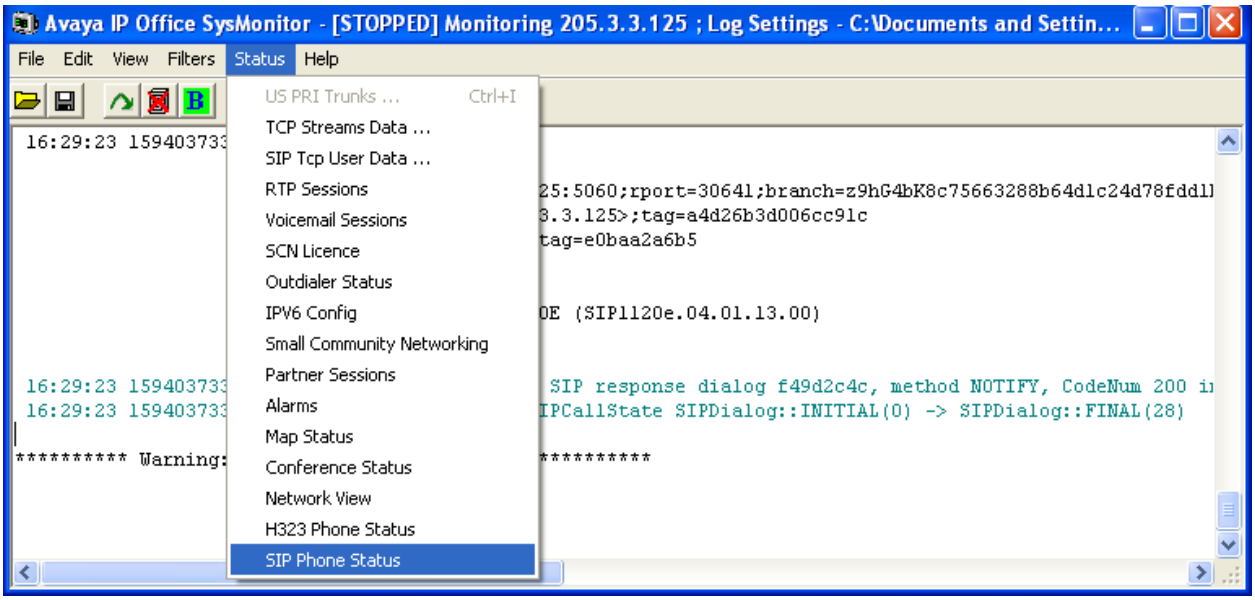


7. Verification Steps

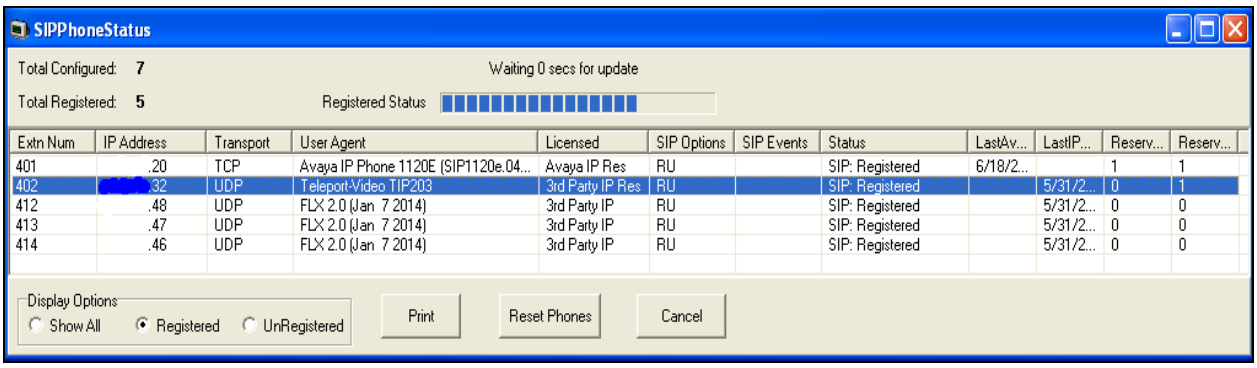
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and LiveSentinel SIP Multimedia Video Door Intercom (VDI).

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 R9 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 "VDI", and that the **Status** is "SIP: Registered", as shown below.



7.2. Login IP Office Softphone

Select **Start → Programs → IP Office → Softphone** enters the following values for the specified fields, and retains the default values in the remaining fields.

- **Sip Domain:** The Login Server is IP address from **Section 5.2**.
- **User Name:** The SIP user name from **Section 5.4**
- **Password:** The password from the **User** tab of **Section 5.5**.

7.3. Make a video call from LiveSentinel VDI SIP to IPO Softphone

Push the button on the LiveSentinel VDI device to initiate a video call to the IPO Softphone at extension 403. Once the Softphone rings click on the answer button to establish the call. Verify that the video call is established with good quality voice and video. Below is a screenshot of video call capture from the IPO Softphone.

8. Conclusion

These Application Notes describe the configuration steps required for LiveSentinel SIP Multimedia Video Door Intercom (VDI) 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 R9.0.3 IP Office Application Server 9.0 Installation and Maintenance* 15-601011, *July 2014*, available at http://support.avaya.com.

2. *LiveSentinel VDI SIP Multimedia Intercom User Guide* available at http://www.livesentinel.com.