Avaya Solution & Interoperability Test Lab

Application Notes for AtlasIED IPX Series with Avaya IP Office Server Edition 11.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the AtlasIED IPX Series to interoperate with Avaya IP Office Server Edition 11.0.

AtlasIED IPX Series is a family of VoIP speakers that can deliver audio and visual notifications with built in microphone and optionable LCD screen. In the compliance testing, AtlasIED IPX IP-SM registered to Avaya IP Office as a SIP endpoint.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any 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 the AtlasIED IPX Series (IPX) to interoperate with Avaya IP Office Server Edition.

The IP Office Server Edition configuration consisted of two IP Office systems, a primary Linux server and an expansion IP500V2 that were connected via a Small Community Network (SCN) trunk.

IPX is a family of VoIP speakers that can deliver audio and visual notifications with built in microphone and optionable LCD screen. In the compliance testing, one IPX was used and registered to the primary IP Office system as a SIP endpoint.

The compliance testing focused on the audio integration of IPX with IP Office. The model of IPX used in the testing was IP-SM, which did not include an LCD screen nor the ability to make an outbound call to a pre-configured destination. As such, the test scope did not include display of caller ANI nor origination of an outbound call from IPX.

In addition, the visual notification feature for IPX models with LCD screens requires separate integration with a third-party application. As such, visual notification is also outside the scope of this compliance test.

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2. General Test Approach and Test Results

The feature test cases were performed manually. Inbound calls to IPX were manually originated from PSTN, Avaya SIP, Avaya H.323, and/or Avaya Digital endpoints. All call controls such as hold and drop were performed from the originator of the inbound call to IPX.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to IPX.

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 these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. 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 these Application Notes, the interface between IP Office and IPX did not include use of any specific encryption features as requested by AtlasIED.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing included registration, hold/resume, drop, media shuffling/non-shuffling, G.711, G.722, codec negotiation, transfer, conference, and long duration.

The serviceability testing focused on verifying the ability of IPX to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet connection to IPX.

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2.2. Test Results

All test cases were executed and verified. The following were observations on IPX from the compliance testing.

- After successful registration with IP Office, the registration status on the IPX web interface continued to reflect "Not Registered". This is a known problem, with a fix to be released in an upcoming release.

- IPX returned 404 Not Found for OPTIONS messages from IP Office. This did not appear to have any other negative impact.

- When IPX is transferred from one Avaya endpoint to another, IPX can respond with 486 Busy Here to the re-INVITE or end up with no connected talk-path with the transferred-to party. Note that transfer is not a common call scenario for IPX, and therefore the handling of the issue is to treat it as an observation.

- When IPX becomes the last endpoint on a conference that was initiated by an Avaya SIP endpoint, IP Office requires the last party to drop manually. Since there is no ability for IPX to perform the manual drop, IPX stayed connected to the conference port until a manual reboot of IPX is issued from the IPX web interface. Note that conference is not a common call scenario for IPX, and IP Office has an enhancement in release 11.1 to not require the manual drop.

2.3. Support

Technical support on IPX can be obtained through the following:

- **Phone:** +1 (800) 876-3333, +1 (502) 267-7436
- **Email:** support@atlasied.com
- **Web:** http://atlasied.com/customer_service

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3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**. Each IP Office system has connectivity to the PSTN, for testing of cross system PSTN scenarios.

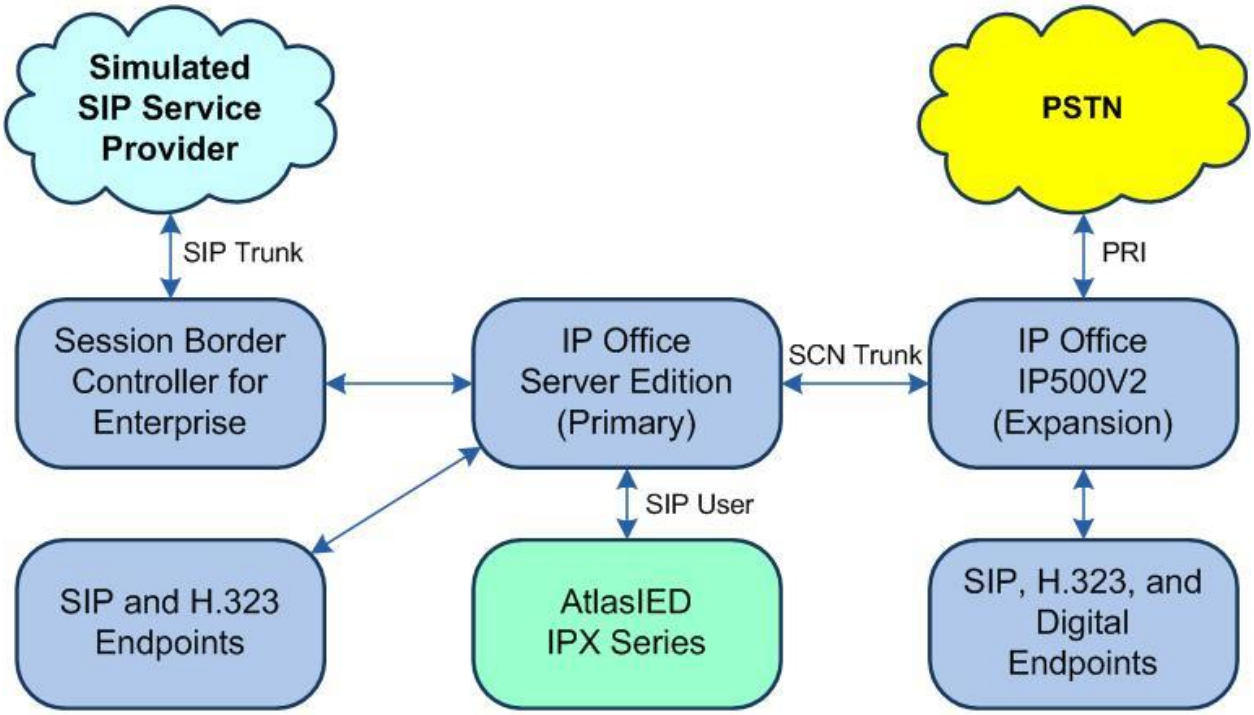

Figure 1: Compliance Testing Configuration

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4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Server Edition (Primary) in Virtual Environment	11.0.4.1.0
Avaya IP Office on IP500V2 (Expansion)	11.0.4.1.0
Avaya 1120E IP Deskphone (SIP)	4.4.23.0
Avaya J129 IP Deskphone (SIP)	4.0.0.0.21
Avaya 1608-I IP Deskphone (H.323)	1.3120
Avaya 9611G IP Deskphone (H.323)	6.8202
Avaya 1408 Digital Deskphone	48.02
AtlasIED IPX Series IP-SM	1.2.0

Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 and also when deployed with IP Office Server Edition in all configurations.

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5. Configure Avaya IP Office

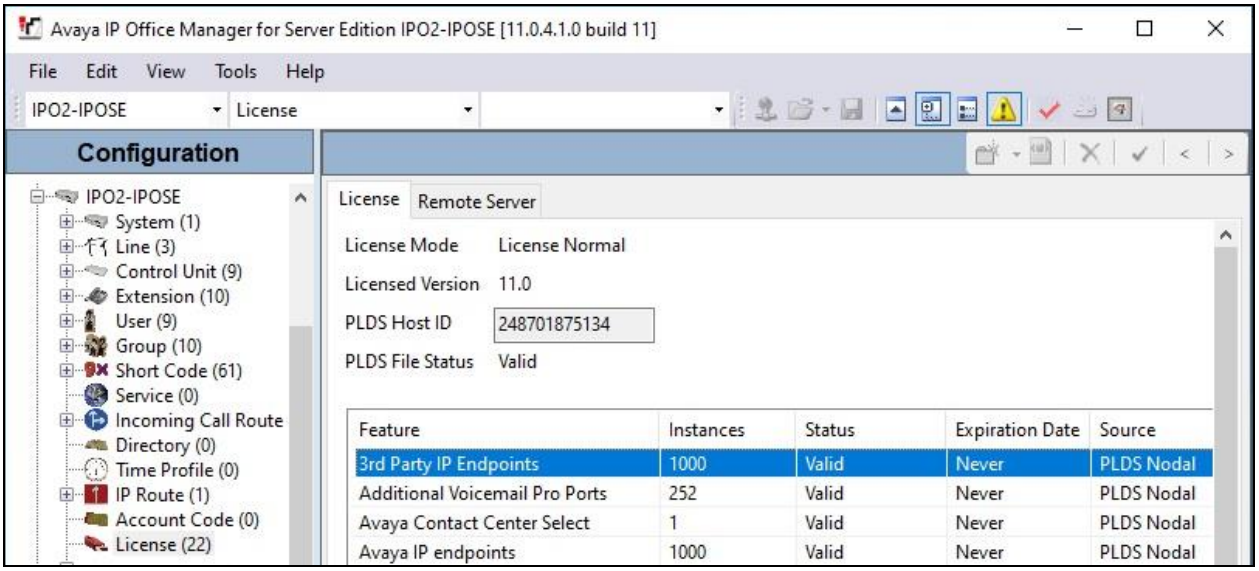
This section provides the procedures for configuring IP Office. The procedures include the following areas:

- Verify license
- Obtain LAN IP address
- Administer SIP Registrar
- Administer SIP extension
- Administer SIP user

5.1. Verify License

From a PC running the IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the application. Select the proper primary IP Office system, and log in using the appropriate credentials. The **Avaya IP Office Manager for Server Edition IPO2-IPOSE** screen is displayed, where **IPO2-IPOSE** is the name of the primary IP Office system.

From the configuration tree in the left pane, select **License** under the IP Office system that will be used for SIP user integration with IPX, in this case "IPO2-IPOSE", a list of licenses is displayed in the right pane. Verify that there are sufficient licenses for **3rd Party IP Endpoints**, as shown below.



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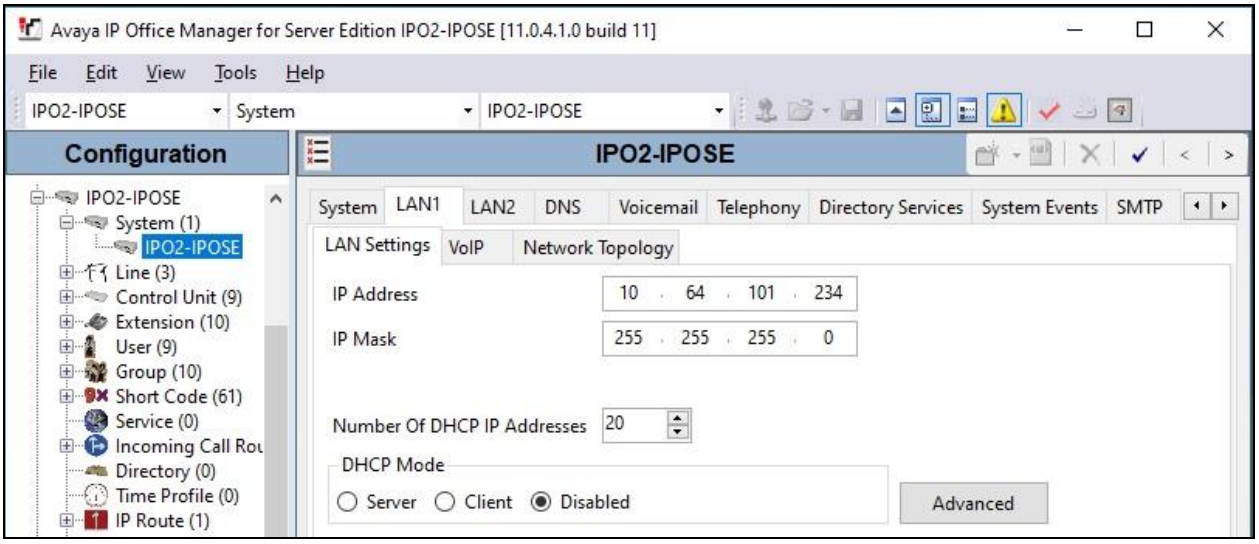
5.2. Obtain LAN IP Address

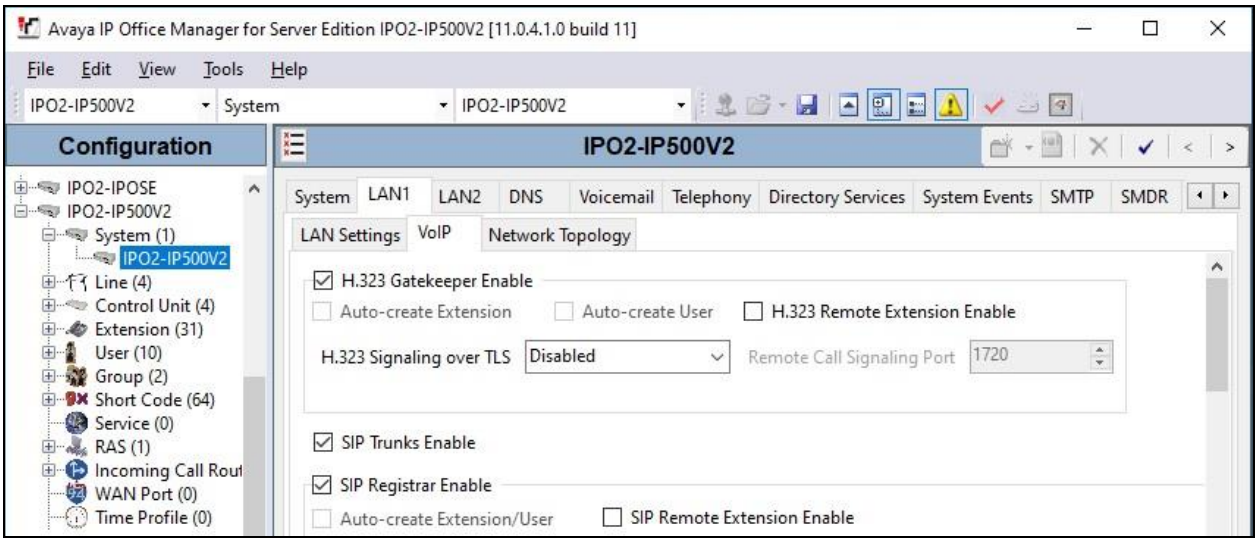
From the configuration tree in the left pane, select **System** under the IP Office system that will be used for SIP user integration with IPX, in this case "IPO2-IPOSE". Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane.

Make a note of the **IP Address**, which will be used later to configure IPX. Note that IP Office can support SIP 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.



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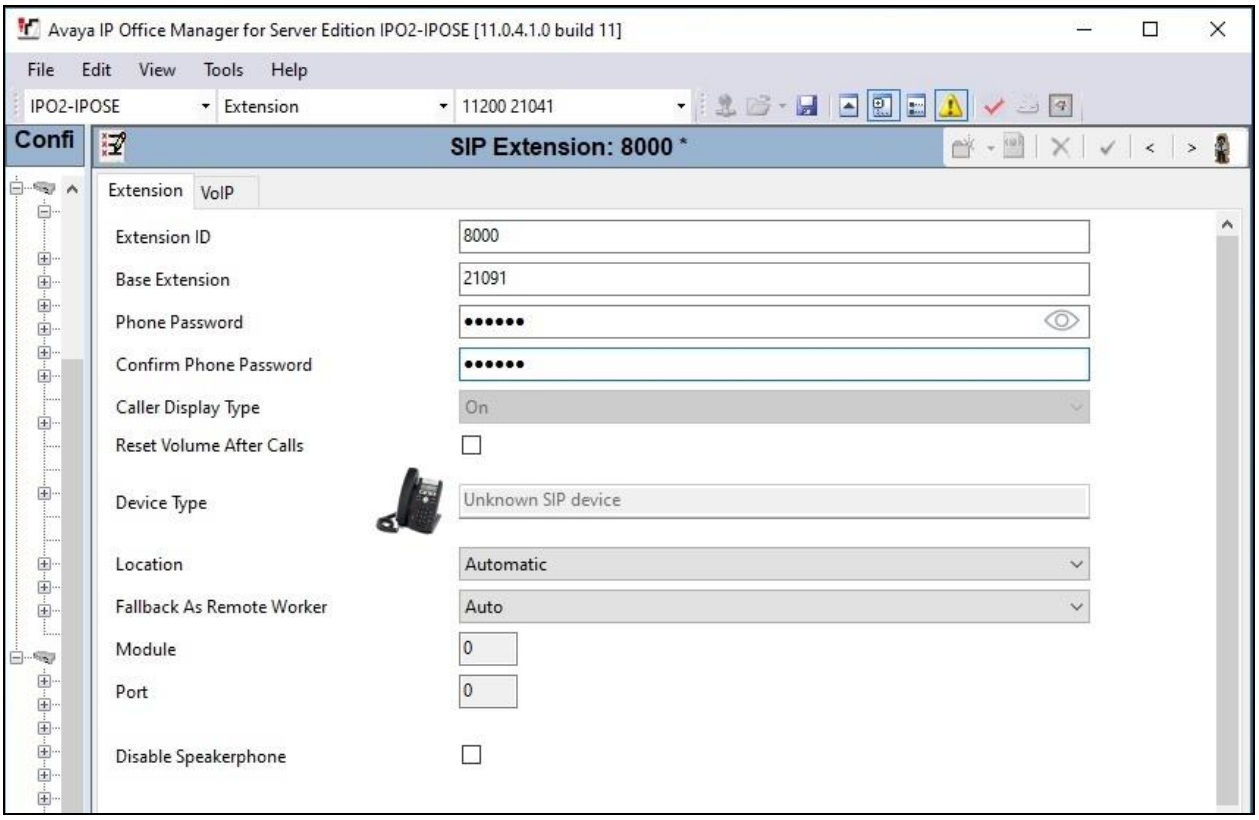
5.4. Administer SIP Extension

From the configuration tree in the left pane, right-click on **Extension** under the IP Office system that will be used for SIP user integration with IPX, in this case "IPO2-IPOSE", and select **New → SIP Extension** from the pop-up list to add a new SIP extension. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Base Extension:** Enter an available extension number, in this case "21091".
- **Phone Password:** Enter a desired password.
- **Confirm Phone Password:** Enter the same desired password.



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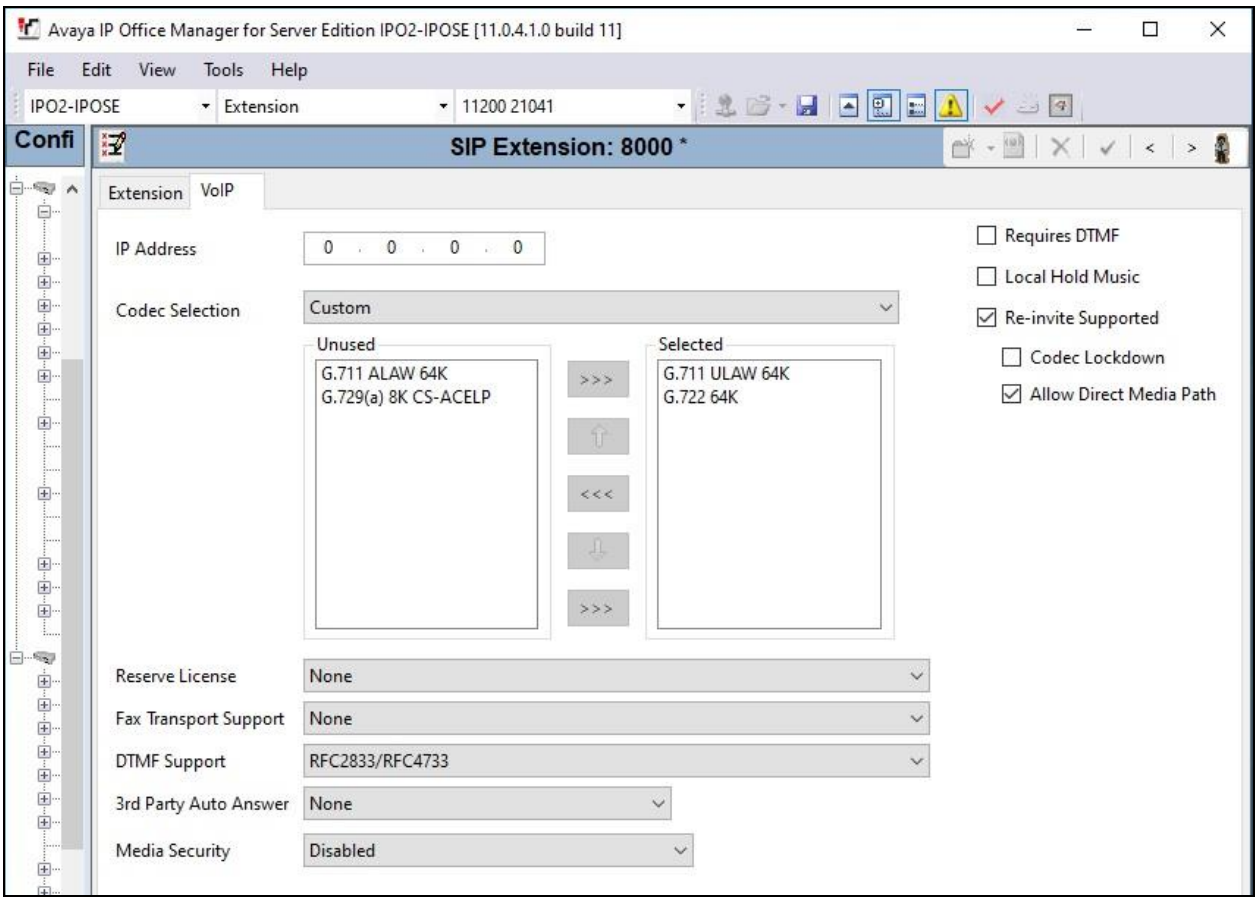
Select the **VoIP** tab. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Codec Selection:** "Custom"
- **Selected:** Retain G.722 64K and the relevant G.711 codec variant.
- **Media Security:** "Disabled"

Repeat this section to add the desired number of SIP extensions. In the compliance testing, one SIP extension with base extensions of 21091 was created.



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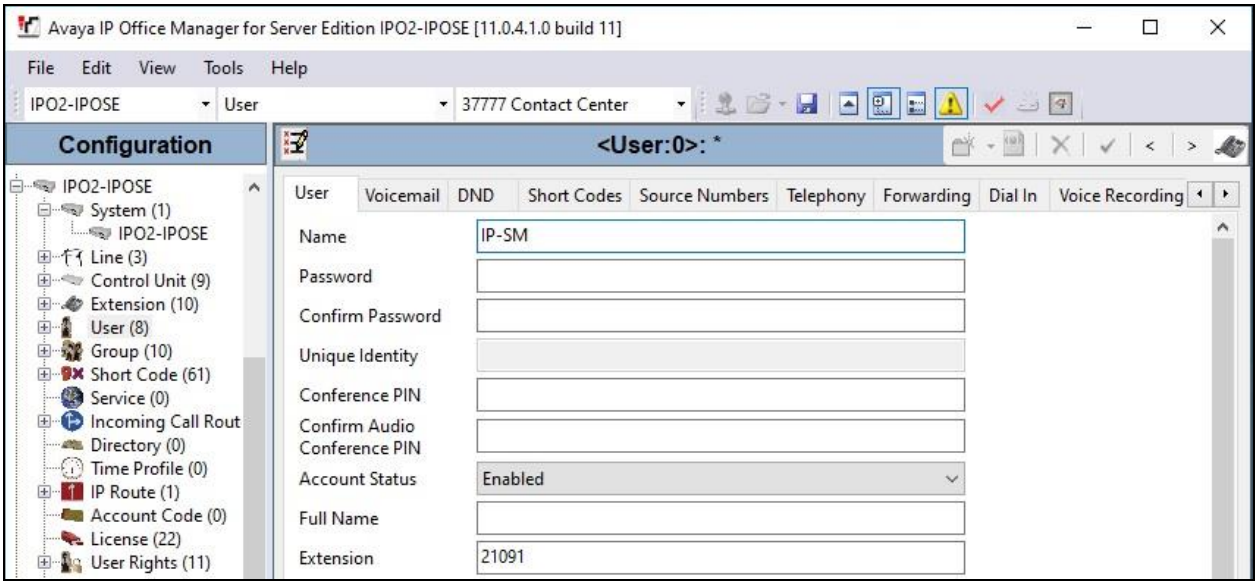
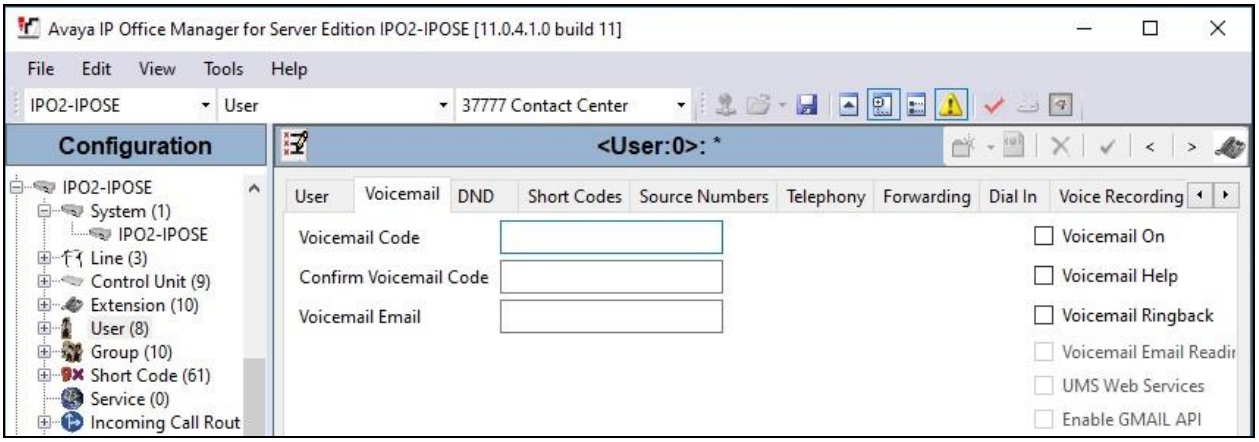
5.5. Administer SIP User

From the configuration tree in the left pane, right-click on **User** under the IP Office system that will be used for SIP user integration with IPX, in this case "IPO2-IPOSE", and select **New** from the pop-up list to add a new user.

Enter desired values for **Name** and **Full Name**. For **Extension**, enter the first SIP base extension from **Section 5.4**. Retain the default values in the remaining fields.



Select the **Voicemail** tab, and uncheck **Voicemail On**, as shown below.



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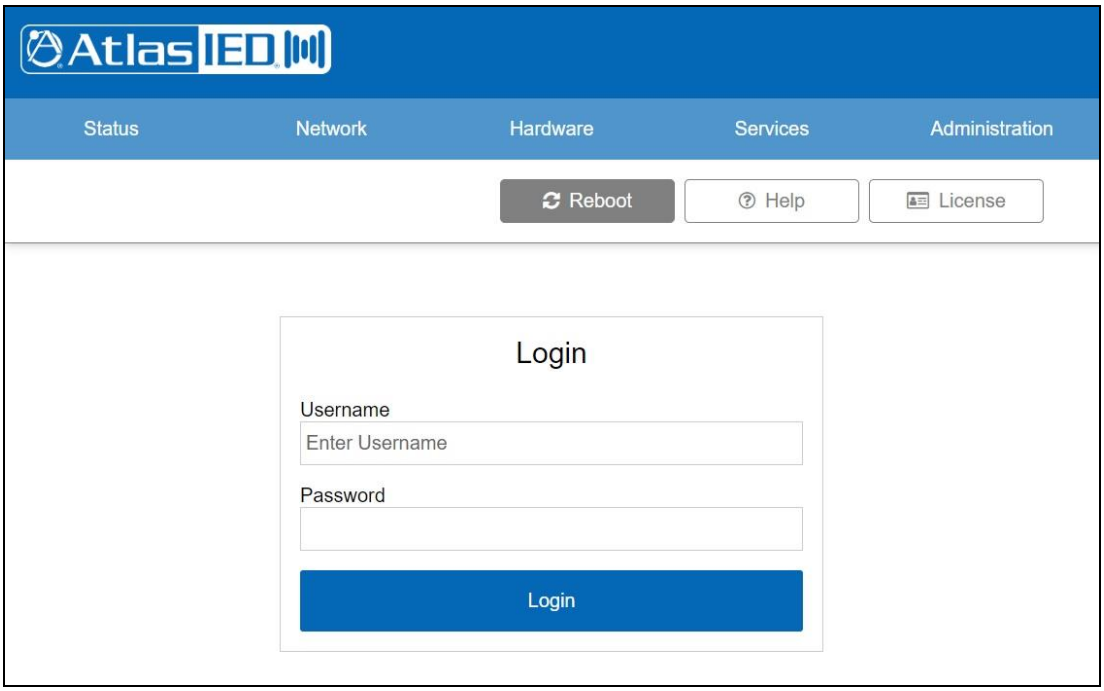
6. Configure AtlasIED IPX Series

This section provides the procedures for configuring each IPX. The procedures include the following areas:

- Launch web interface
- Administer SIP service

6.1. Launch Web Interface

Access the IPX web-based interface by using the URL "http://ip-address" in an Internet browser window, where "ip-address" is the IP address of the IPX speaker. Log in using the appropriate credentials.



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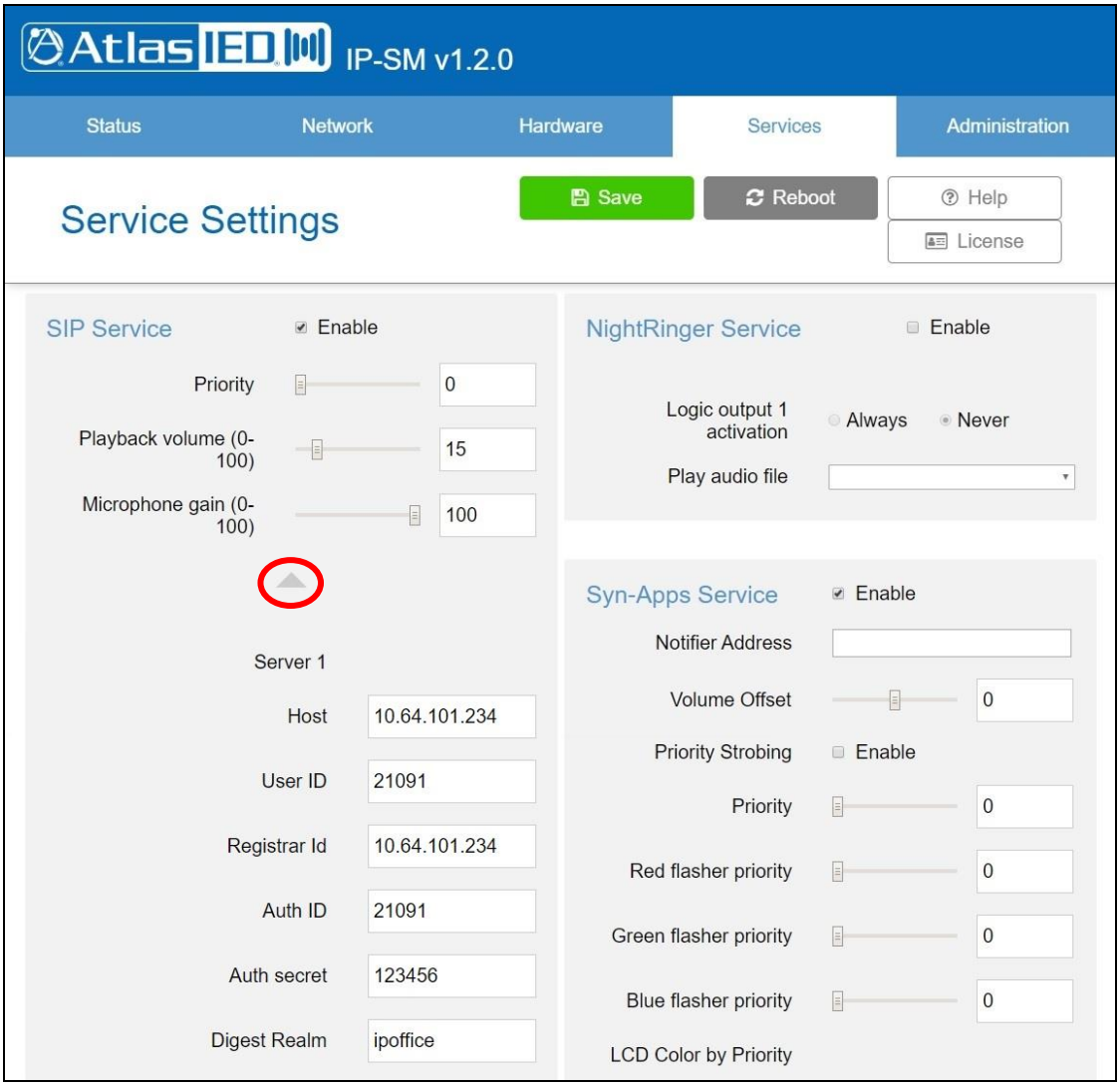
6.2. Administer SIP Service

The **AtlasIED** screen is displayed. Select **Services** from the top menu to display the **Service Settings** screen. In the **SIP Service** sub-section, check **Enable** and click on the icon highlighted below to display additional parameters.

Under **Server 1**, enter the following values for the specified fields and retain the default values for the remaining fields. Select **Save** followed by **Reboot**.

- **Host:** IP address of primary IP Office system LAN1 from **Section 5.2**.
- **User ID:** The SIP base extension from **Section 5.4**.
- **Registrar Id:** IP address of primary IP Office system LAN1 from **Section 5.2**.
- **Auth ID:** The SIP base extension from **Section 5.4**.
- **Auth secret:** The SIP extension password from **Section 5.4**.
- **Digest Realm:** "ipoffice"



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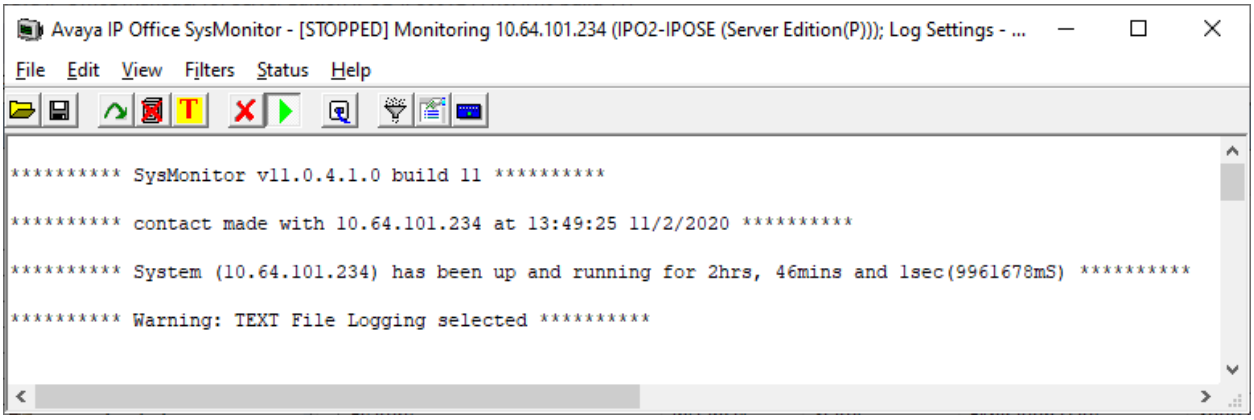
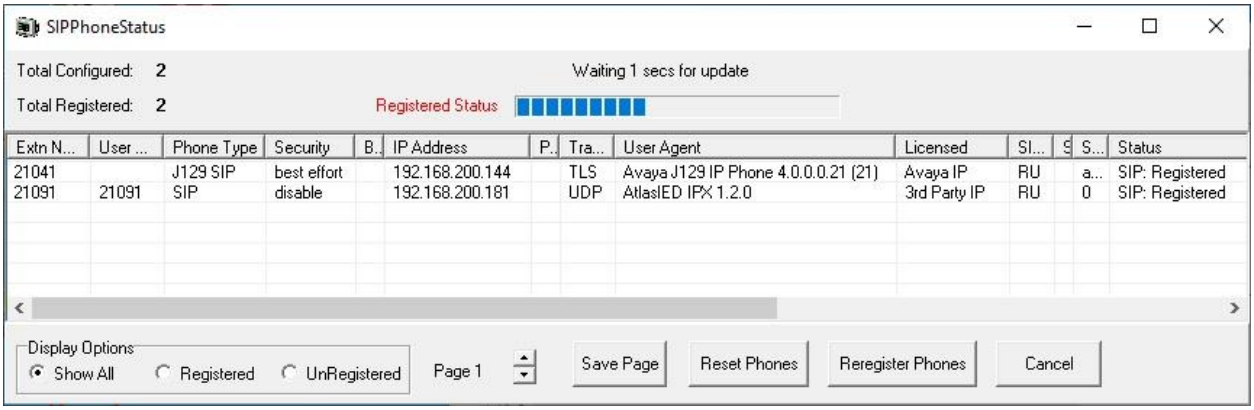
7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of IP Office and IPX.

From a PC running the IP Office Monitor application, select **Start → All Programs → IP Office → Monitor** to launch the application, and connect to the primary IP Office system. The **Avaya IP Office SysMonitor** screen is displayed. 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 "AtlasIED IPX 1.2.0" and that the **Status** is "SIP: Registered", as shown below.



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8. Conclusion

These Application Notes describe the configuration steps required for AtlasIED IPX Series to successfully interoperate with Avaya IP Office Server Edition 11.0. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

9. Additional References

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

1. *Administering Avaya IP Office™ Platform with Manager*, Release 11.0, August 2018, available at http://support.avaya.com.

2. *AtlasIED IP Endpoint Speakers Install Sheet*, available from https://www.atlasied.com/speakers-horns-voip-speakers.

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