**Avaya Solution & Interoperability Test Lab**

# Application Notes for Resource Software International Shadow OSN 2.1 with Avaya IP Office 9.0 – Issue 1.0

## Abstract

These Application Notes describe the configuration steps required for Resource Software International (RSI) Shadow OSN to interoperate with Avaya IP Office. Resource Software International Shadow OSN application offers immediate E911 on-site notification for emergency calls. RSI Shadow OSN is a computer telephony solution that uses the CTI Link Pro (DevLink and 3rd Party TAPI) interface to an Avaya IP Office to provide real-time monitoring and notification of emergency events (i.e. 911 calling) and deliver emergency notification messages to a telephone sets.

Readers should pay attention to **Section** Error! Reference source not found., in particular the scope of testing as outlined in **Section** Error! Reference source not found. as well as any observations noted in **Section Error! Reference source not found.**, 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 Resource Software International (RSI) Shadow OSN to interoperate with Avaya IP Office. RSI Shadow OSN is a computer telephony solution that uses the CTI Link Pro (DevLink and 3rd Party TAPI) interface to an Avaya IP Office to provide real-time monitoring and notification of emergency events (e.g. 911 calling).

The software can be configured to deliver notification messages to a telephone set, via email, or to a desktop computer using Windows popup messages. A record of each emergency notification event is stored in the emergency notification event log (notify.log). The onsite notification feature provides businesses with immediate real-time notification of emergency events. This solution provides increased security, elimination of inappropriate/invalid emergency calls, and faster response times to actual emergency events. The software will operate on computer operating a Microsoft Windows operating system (Windows 7 or greater).

# 2. General Test Approach and Test

## 2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The feature testing focused on verifying the following on RSI Shadow OSN:

- Handling of real-time data from Avaya IP Office, and the use of that data to provide notification of an emergency to a telephone set and a flashing red on RSI Shadow OSN PC.

The serviceability testing focused on verifying the ability of RSI Shadow OSN to recover from adverse conditions, such as disabling/re-enabling the network connection to the RSI Shadow OSN PC.

## 2.2. Test Results

All test cases were executed and passed. With following observation:

1. When the emergency call is made and connected, it takes 5 second for RSI Shadow OSN window starts to flash Red.
2. When the emergency call is made and connected, it takes 10 second for notify phone start to send emergency event to the designated phone in Extension list.
3. In the event of emergency call is made, if the designated notify device are SIP IP deskphone or Analog phone, the phone cannot automatically sends an alert of the event to designated phone in Extension list, user need to manually pick up the notify device hand set in order for the alert is sent. Workaround is to use Digital on standard IP phone as a notify device or configure auto answer on SIP deskphone (not tested).
4. Notifications to analog phone will only result in the device ringing. No other notification is possible with this type of device.


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## 2.3. Support

Technical support on the RSI Shadow OSN can be obtained through the following:

- **Phone:** (905) 576-4575
- **Email:** support@telecost.com
- **Web:** www.telecost.com

# 3. Reference Configuration

The RSI Shadow OSN solution consists of the RSI Shadow OSN application running on a Windows PC / Server. The RSI Shadow OSN application utilizes the CTI Link Pro (DevLink and 3rd Party TAPI) interface to Avaya IP Office to provide real-time monitoring and notification of emergency events (i.e. 911 calling).

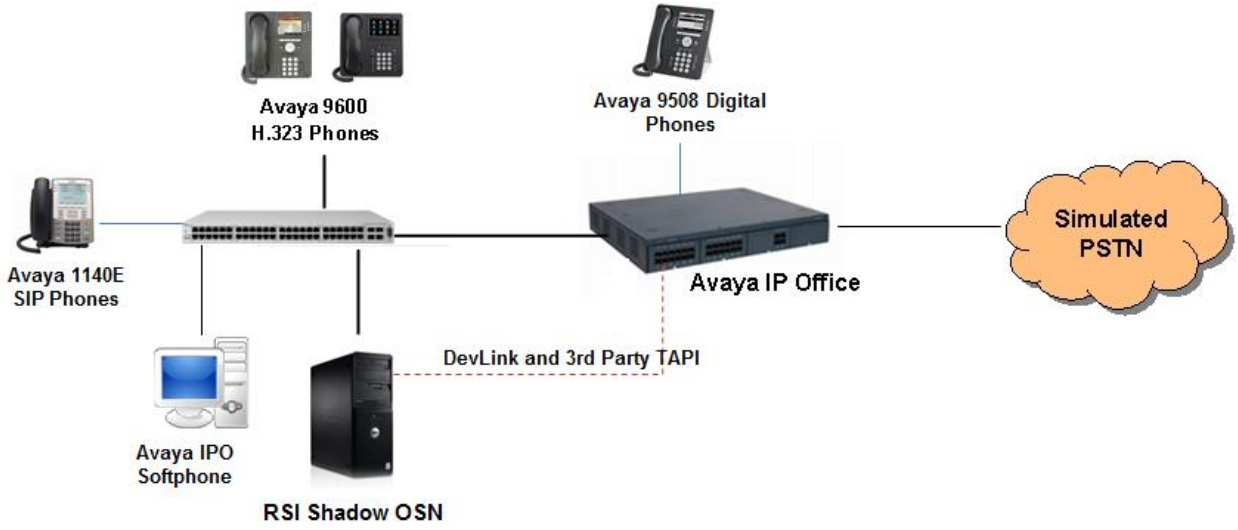


**Figure 1: RSI Shadow OSN with Avaya IP Office**


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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 500 V2 | 9.0.400 Build 965 |
| Analog Telephone | n/a |
| Avaya 9508 Series Digital Telephones | 45 |
| Avaya 9621G Series IP Telephones (H.323) | 6.4014 |
| Avaya 9630 IP telephones (H323) | S3.220A |
| Avaya 1140 SIP IP Deskphone | 04.03.18 |
| Avaya IP Office Soft Phone | 3.2.3.20 |
| Avaya IP Office TAPI Driver<br>IP Office user CD /w CTI Link Pro (TAPI & DevLink) | V4.2.59 |
| RSI Shadow OSN application on a Windows 7SP1 | Version 2014 Build 2.1.0.1 |

*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.*


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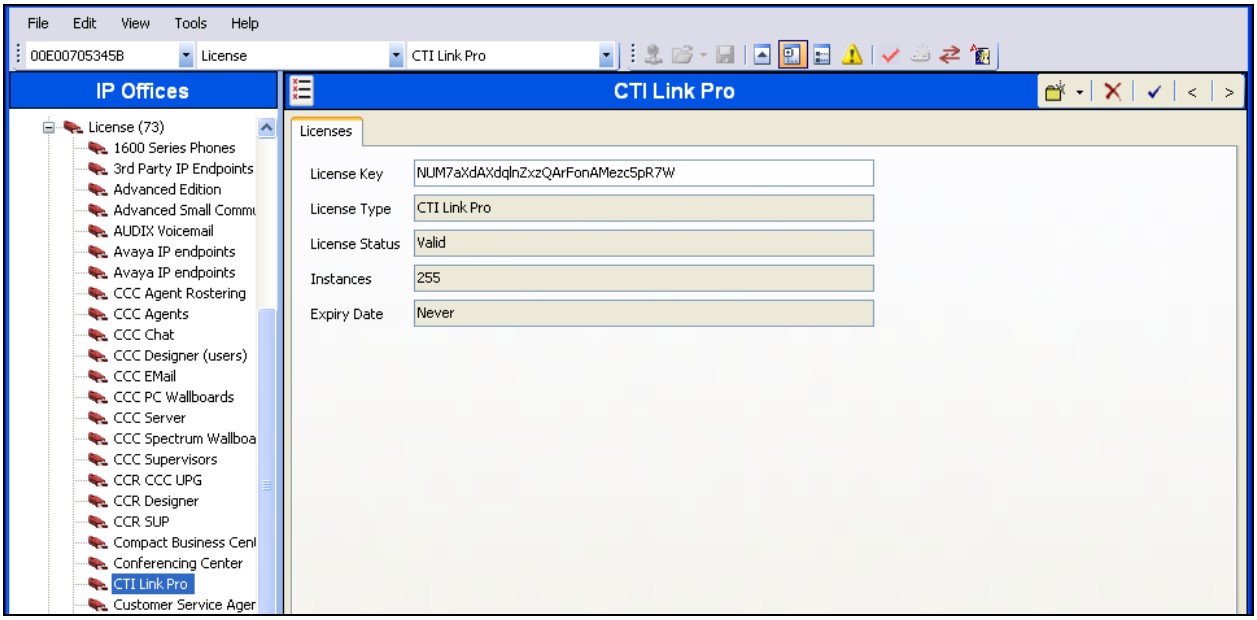
# 5. Configure Avaya IP Office

This section provides the procedures for configuring Avaya IP Office.

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 with the appropriate credentials.

The **Avaya IP Office Manager** screen is displayed. From the configuration tree in the left pane, select **License > CTI Link Pro** to display the **CTI Link Pro** screen in the right pane. Verify that the **License Status** is "Valid".





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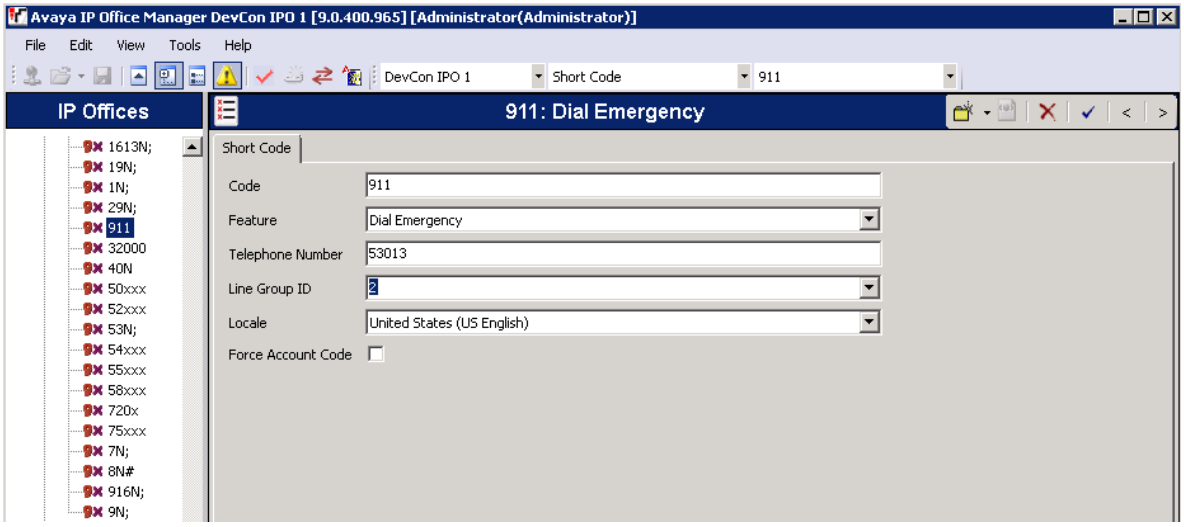
From the configuration tree in the left pane, right click on **Short Code**, select **New** to add 911 short code as show below. During compliance test, user dial 911 is routed to simulated PSTN (53013).





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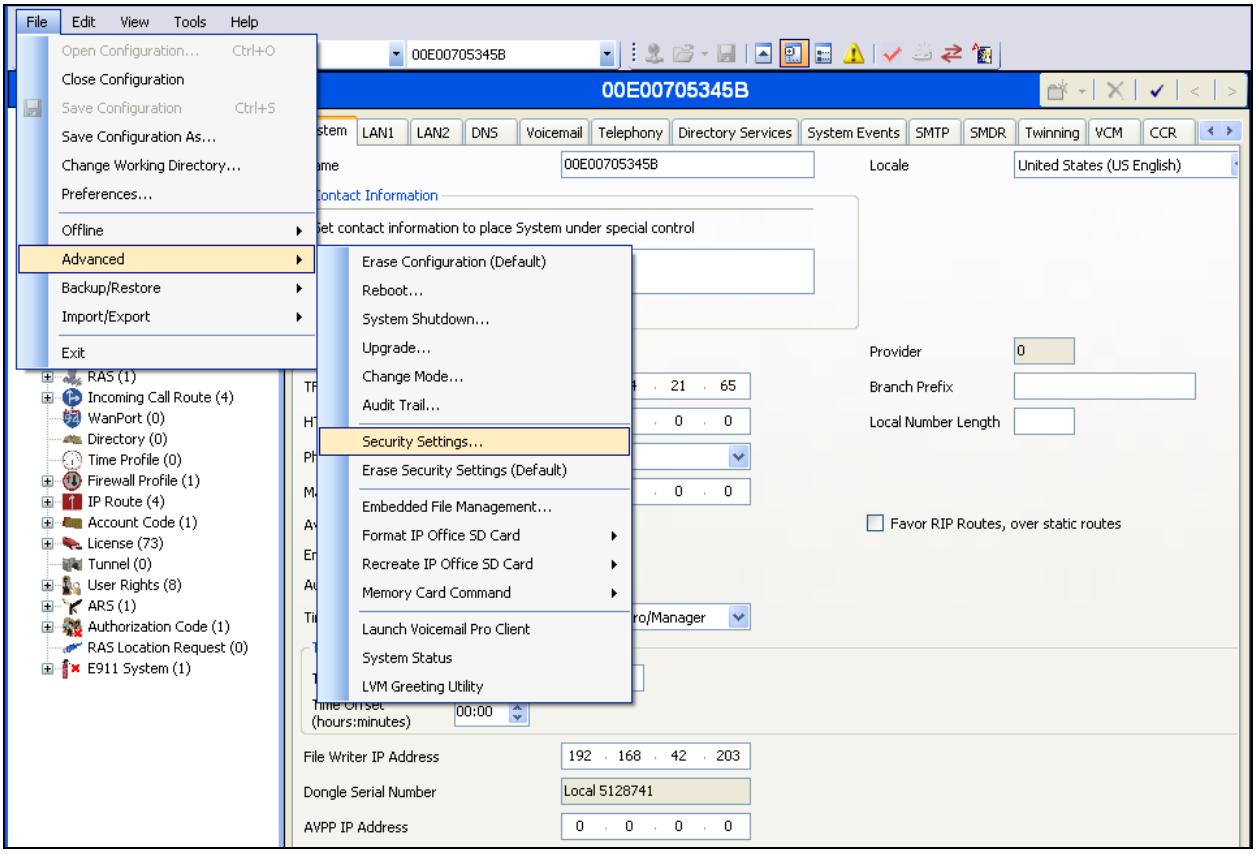
From the top menu select **File > Advanced > Security Settings...**





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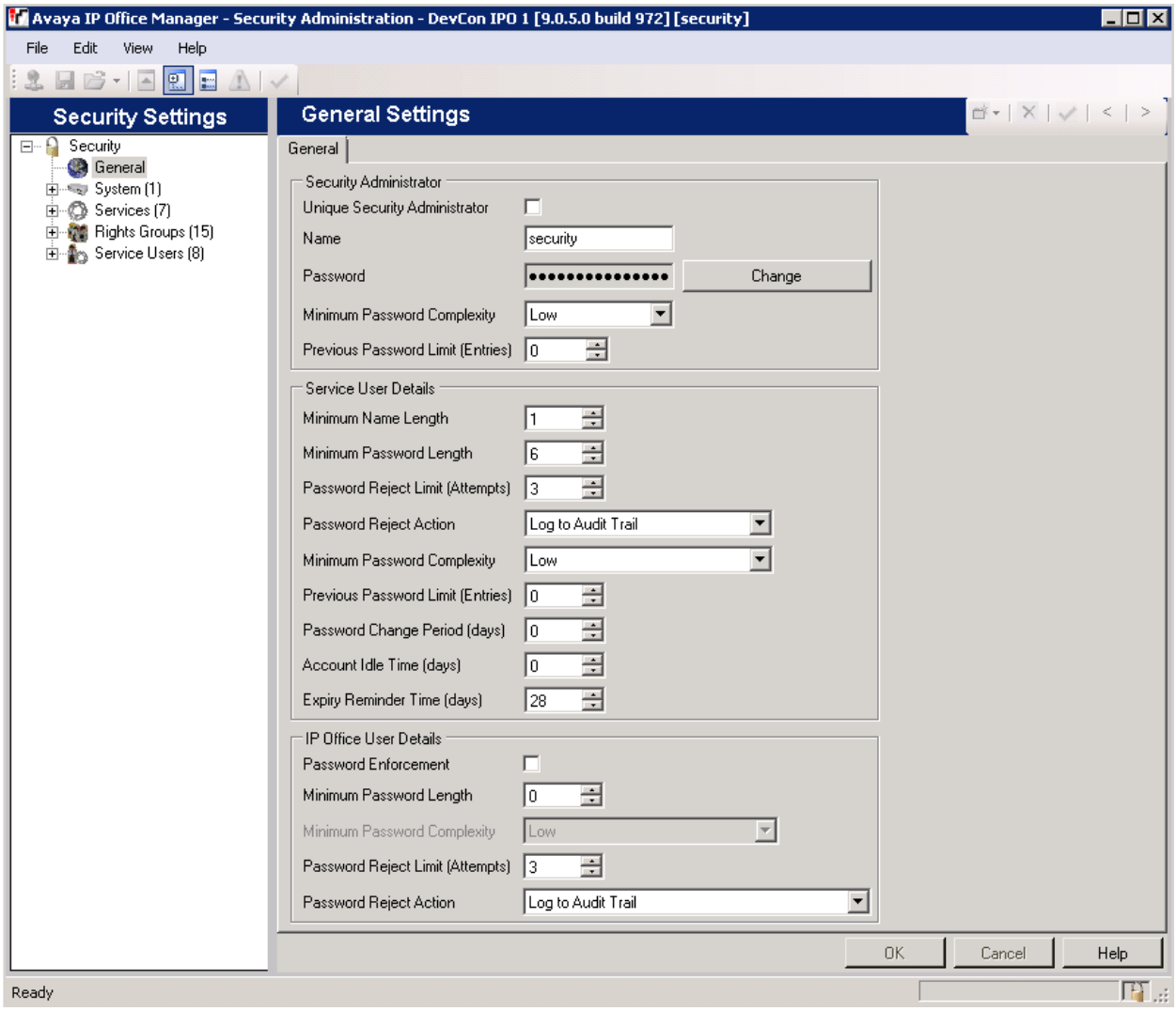
The following screen is displayed.





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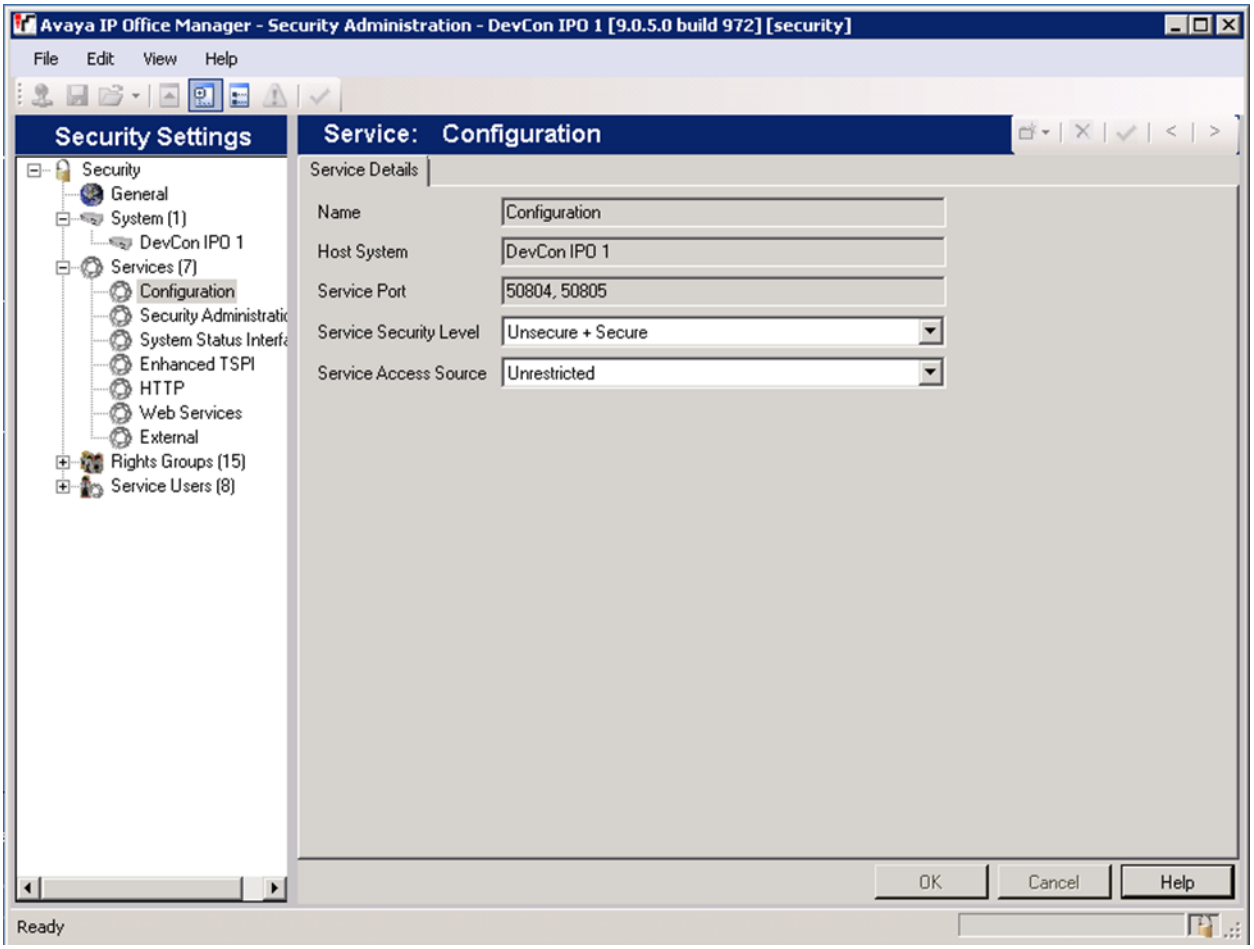
From the **Security Settings** tree in the left pane, navigate to **Services > Configuration**. Verify "Unsecure + Secure" is selected from the **Service Security Level** drop-down menu. Note the secure **Service Port** value (i.e. "50805") which will be used later to configure RSI Shadow OSN. Click **OK** to save any changes.





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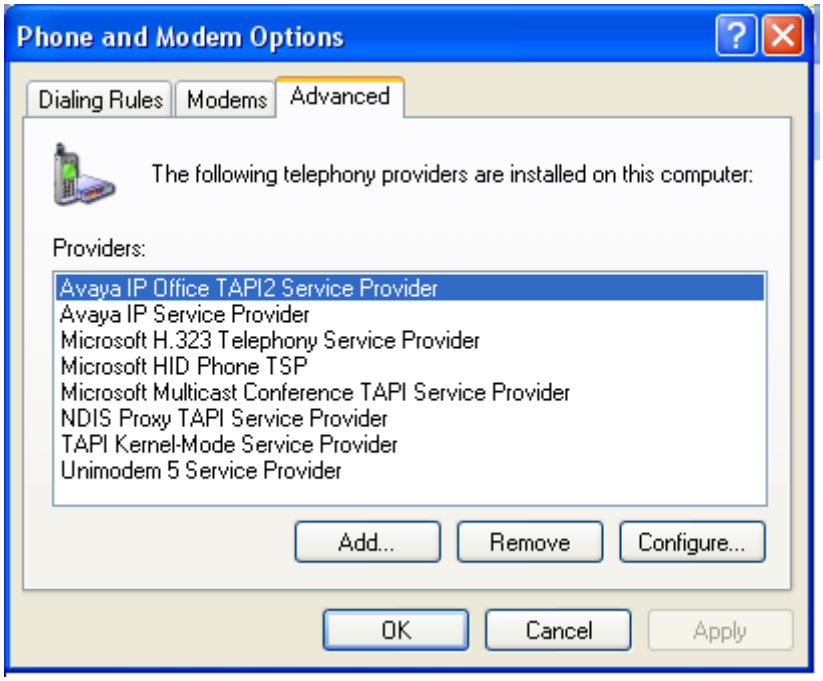
# 6. Configure RSI Shadow OSN

This section provides the procedures for configuring the RSI Shadow OSN Server. The procedures include the following areas:

- Administer TAPI Driver
- Launch Shadow OSN Configuration Wizard
- Administer Connection Information
- Administer System Defaults
- Administer Public Safety Answering Point (PSAP)
- Administer Emergency List
- Administer Extension List
- Administer Notify List
- Administer IP Office Configuration Account

## 6.1. Administer TAPI Driver

It is assumed that TAPI drive had been installed on PC. In this compliance test, TAPI driver is installed from IP Office user CD /w CTI Link Pro (TAPI & DevLink). From the RSI Shadow OSN PC, select **Start > Control Panel > Phone and Modem Options**, to display the **Phone and Modem Options** screen, select the **Avaya IP Office TAPI2 Service Provider** entry under the **Advanced** tab, and then click **Configure**.





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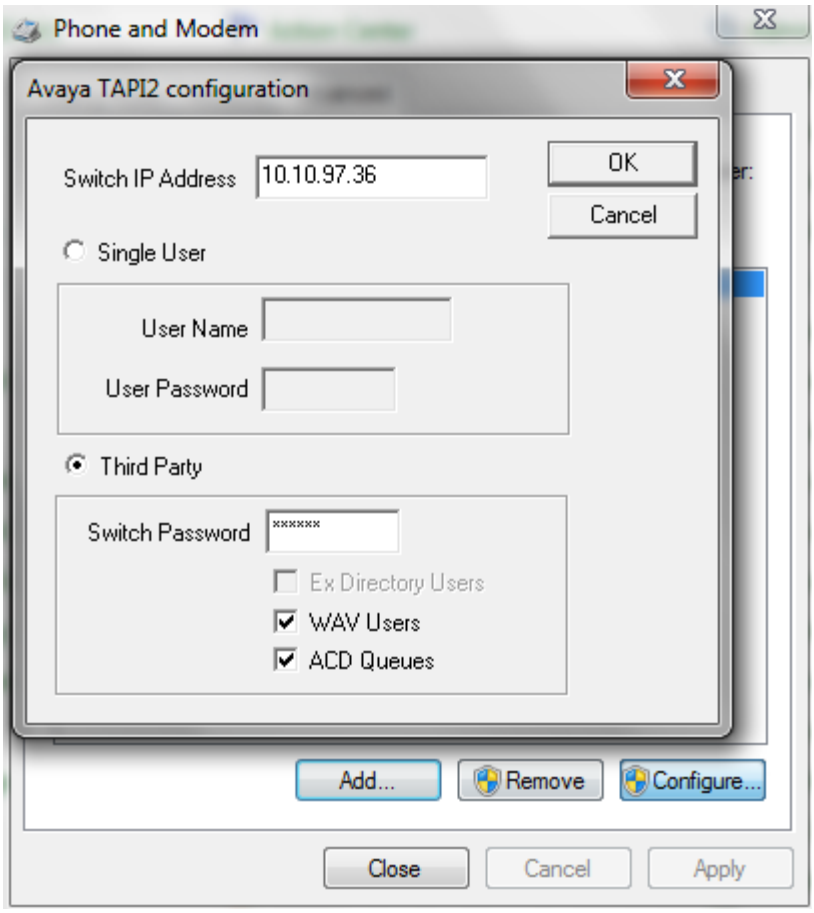
The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of Avaya IP Office. Select the radio button for **Third Party**. Enter the appropriate credentials for the **Switch Password**. Click OK to save changes. Reboot the RSI Shadow OSN PC.





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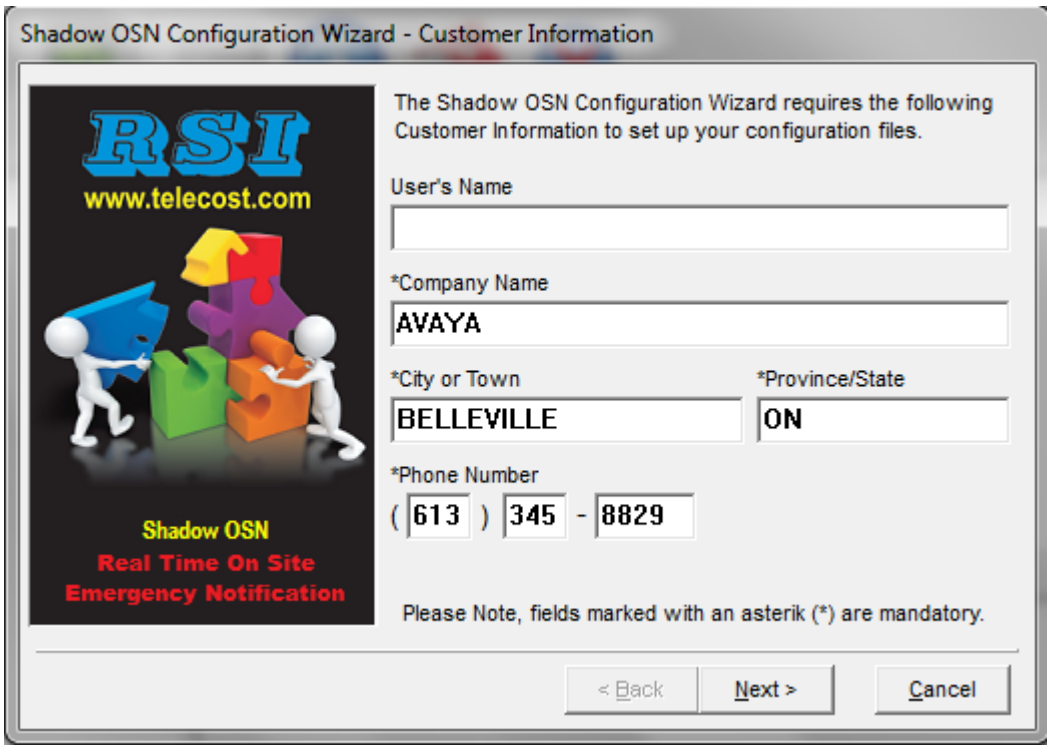
## 6.2. Launch RSI Shadow OSN Configuration Wizard

From the PC where the RSI Shadow OSN application is installed, select **Start > All Programs > RSI > Shadow OSN > Avaya > Configuration Wizard** to launch the configuration wizard. In the following sections, after entering the appropriate values on each screen, click the **Next** button to move forward through the wizard. At the end of the wizard, click the **Finish** button to complete the configuration.





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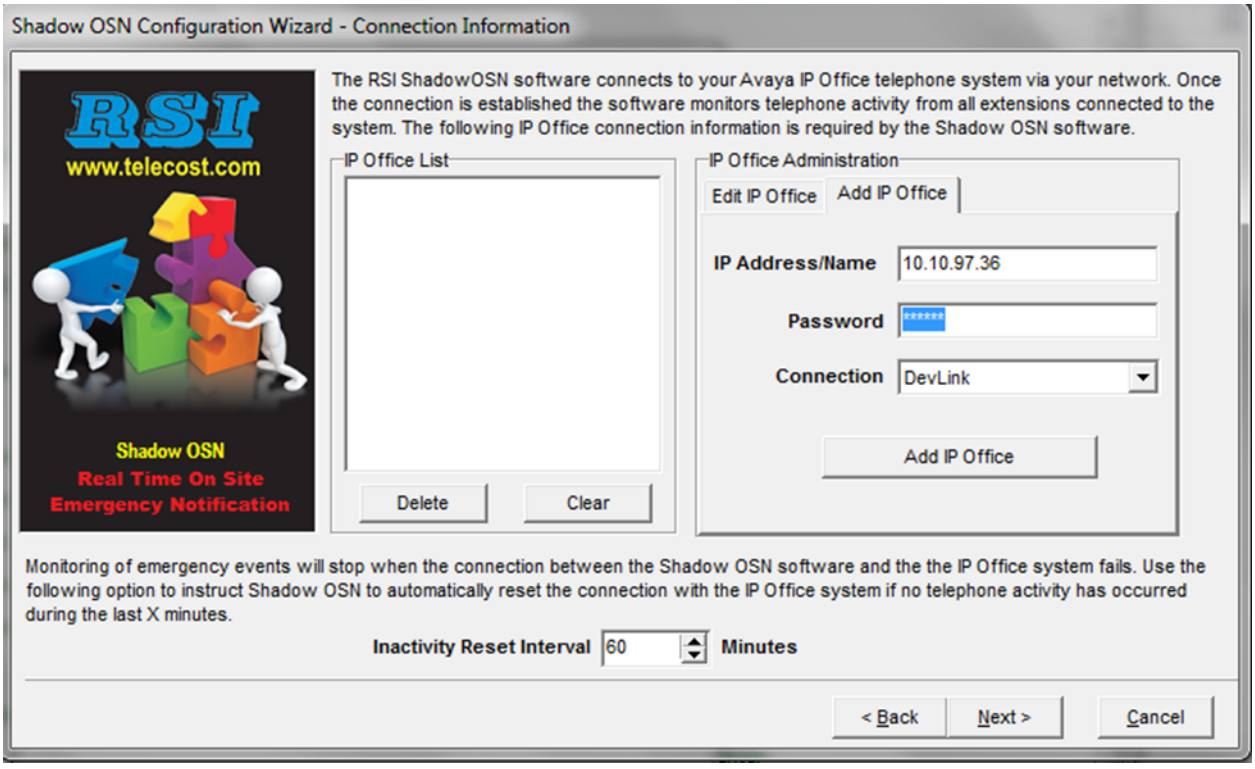
## 6.3. Administer Connection Information

On the **Connection Information** screen, enter the IP Office IP address (or name) in the **IP Address or Name** field. Enter the password used to access IP Office in the **Password** field. Select **DevLink** in **Connection** drop down list. Click **Add IP Office** button to add to IP Office List window on the left hand side.





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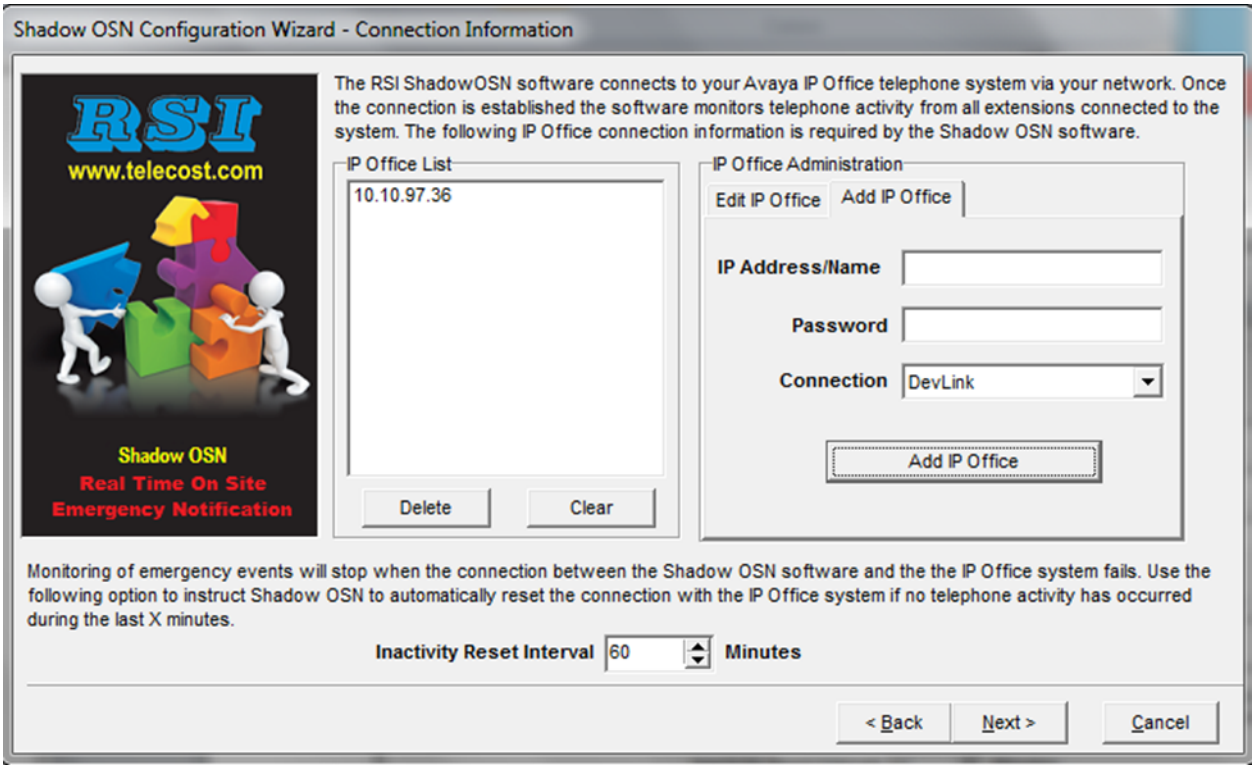
New IP Office is added into IP Office list as shown below:




## 6.4. Administer System Defaults

On the **Setup System Defaults** screen, enter the desired system defaults. The screen below shows the values used during compliance testing.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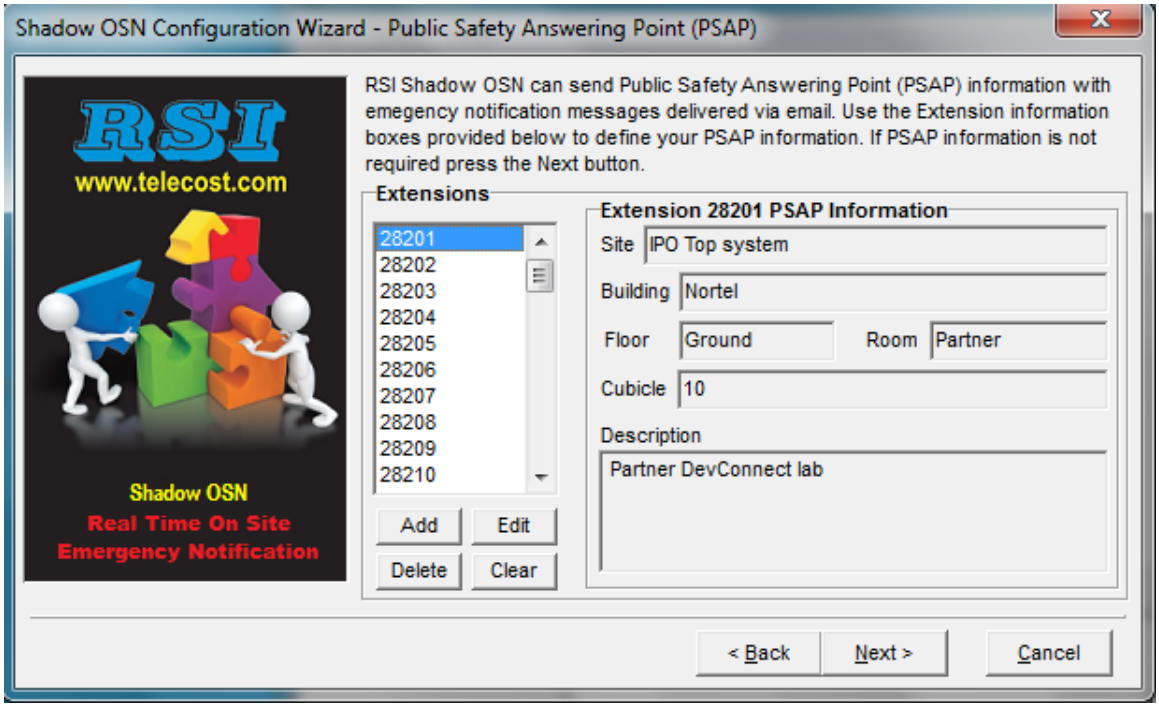
## 6.5. Administer Public Safety Answering Point

On the **Public Safety Answering Point** screen, add/edit the PSAP Information fields as desired for each of the IP Office extensions. The listed extension is loaded from IPO extension configured in Section **6.1**.





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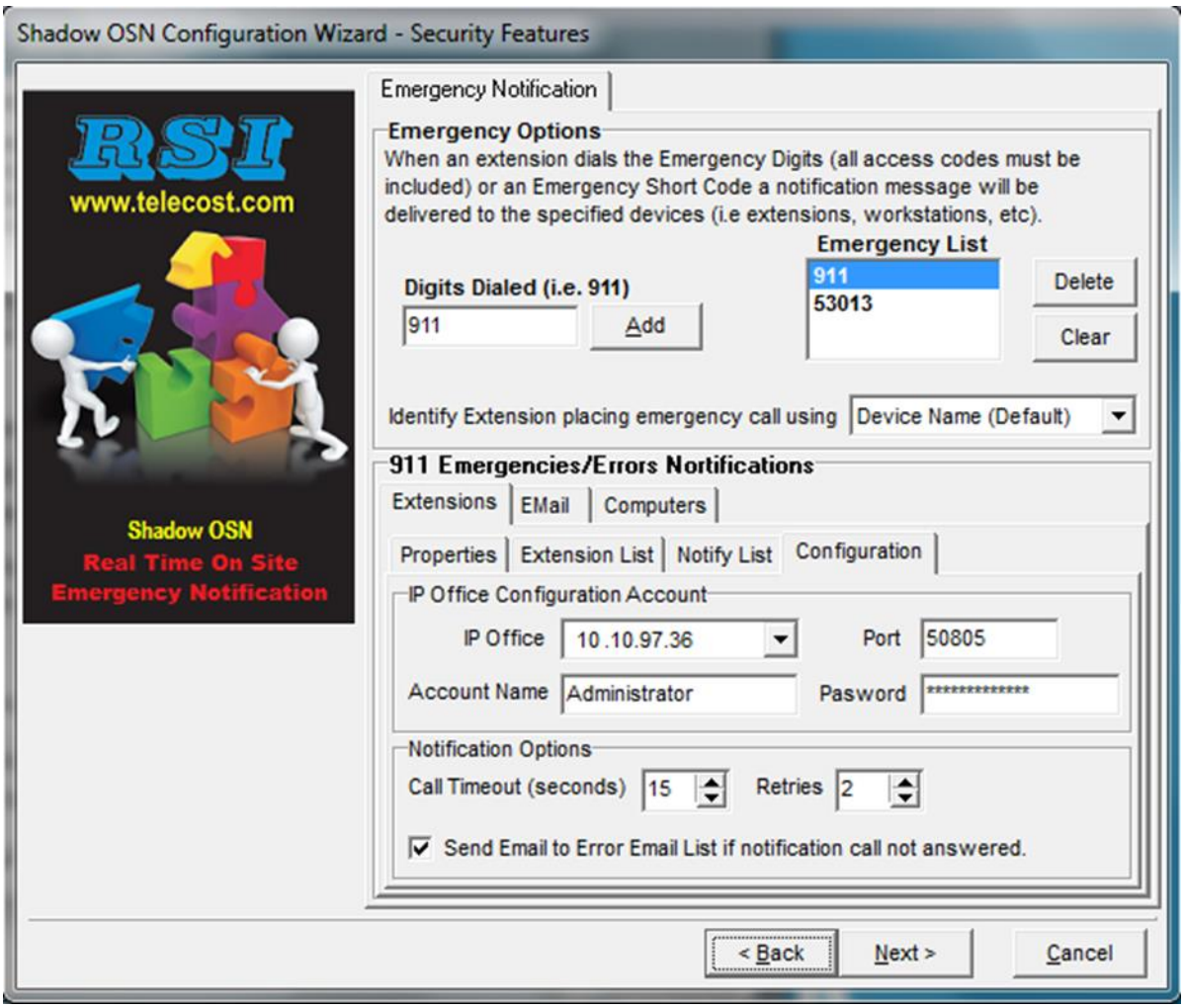
## 6.6. Administer Emergency List

On the top half of the **Security Features** Screen, enter a value in the **Digits Dialed** field and click the **Add** button to add the value to the **Emergency List**. The screen below shows that "53013" and "911" had already been added as an emergency number. Repeat this procedure to add all the desired emergency numbers. Stay on this Secirytu Feature screen to modify other tabs of 911 Emergency/Errors Notifications bottom section.





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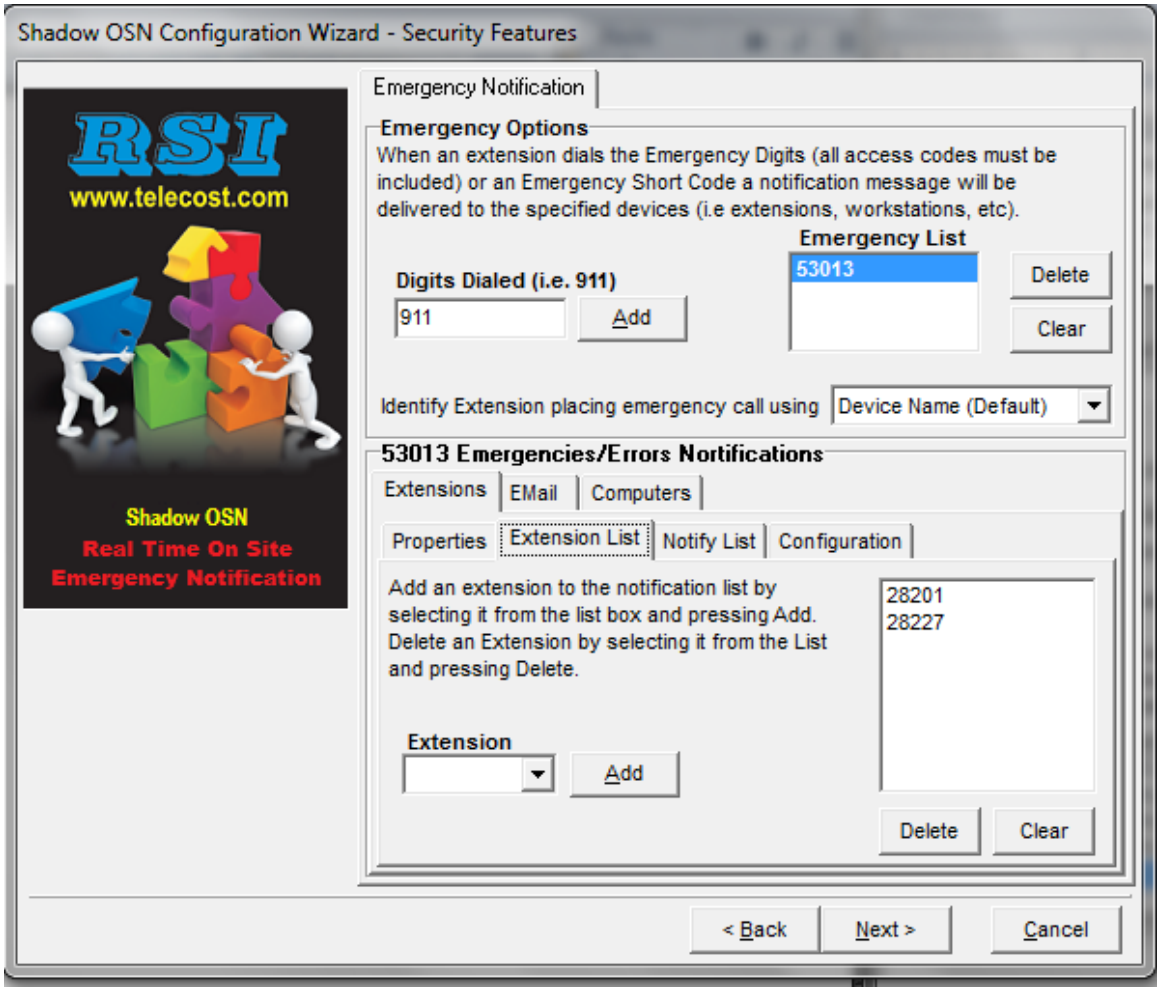
## 6.7. Administer Extension List

When emergency call is made, the phones that are listed in extension list will ring with the information of what extension is making emergency call. On the bottom half of the **Security Features** Screen, click the **Extension List** tab, use the **Extension** drop-down menu to select an extension to be added to the notification list. Click the **Add** button to add the selected extension to the Extension List. Repeat this procedure to add the desired numbers to the notification list. The screen below shows that extension "28201" and "28227"has already been added.





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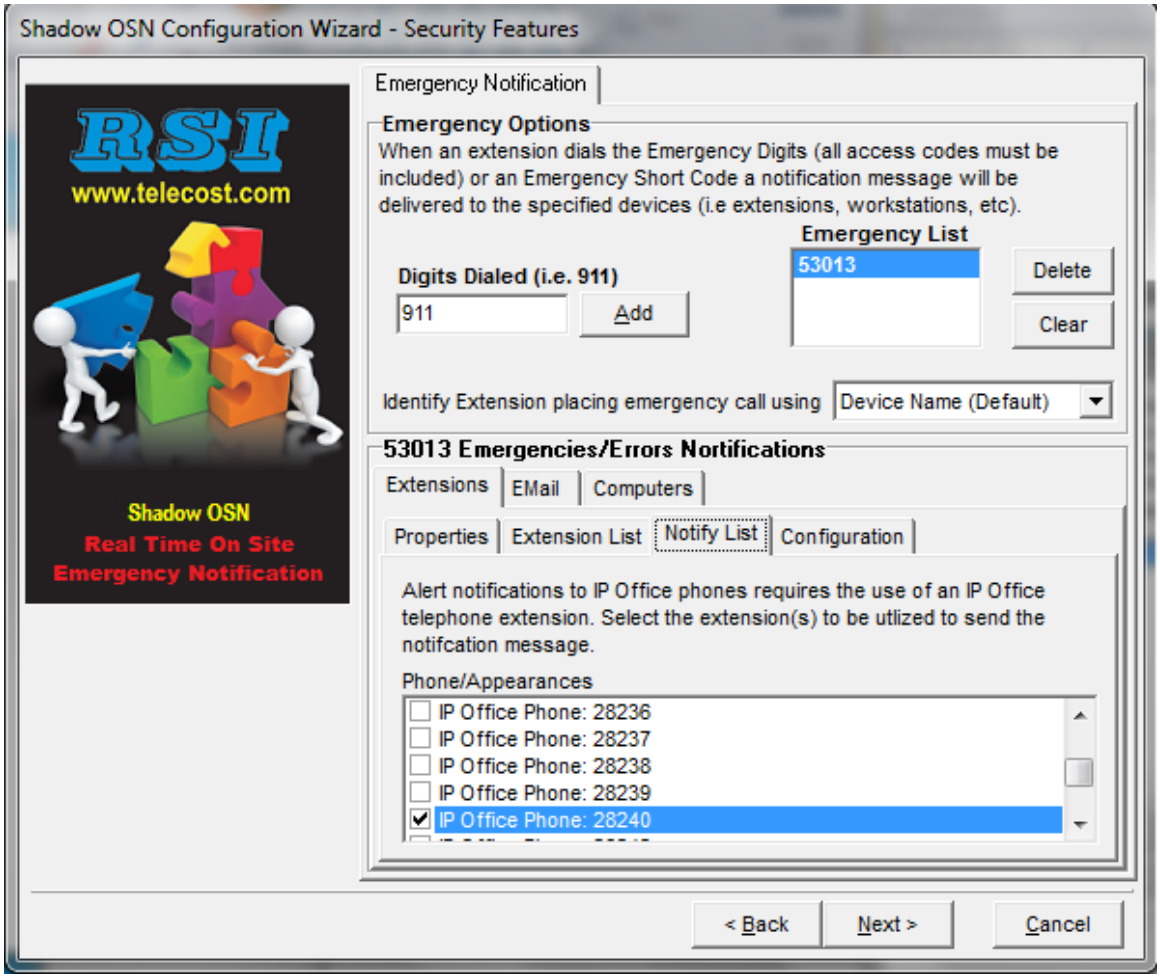
## 6.8. Administer Notify List

On the bottom half of the **Security Features** Screen, click the **Notify List** tab, the select the extension(s) to be utilized to send the notification message. When emergency call is made, phone in this list will make an outbound notification call to extension listed in Section **6.7.**





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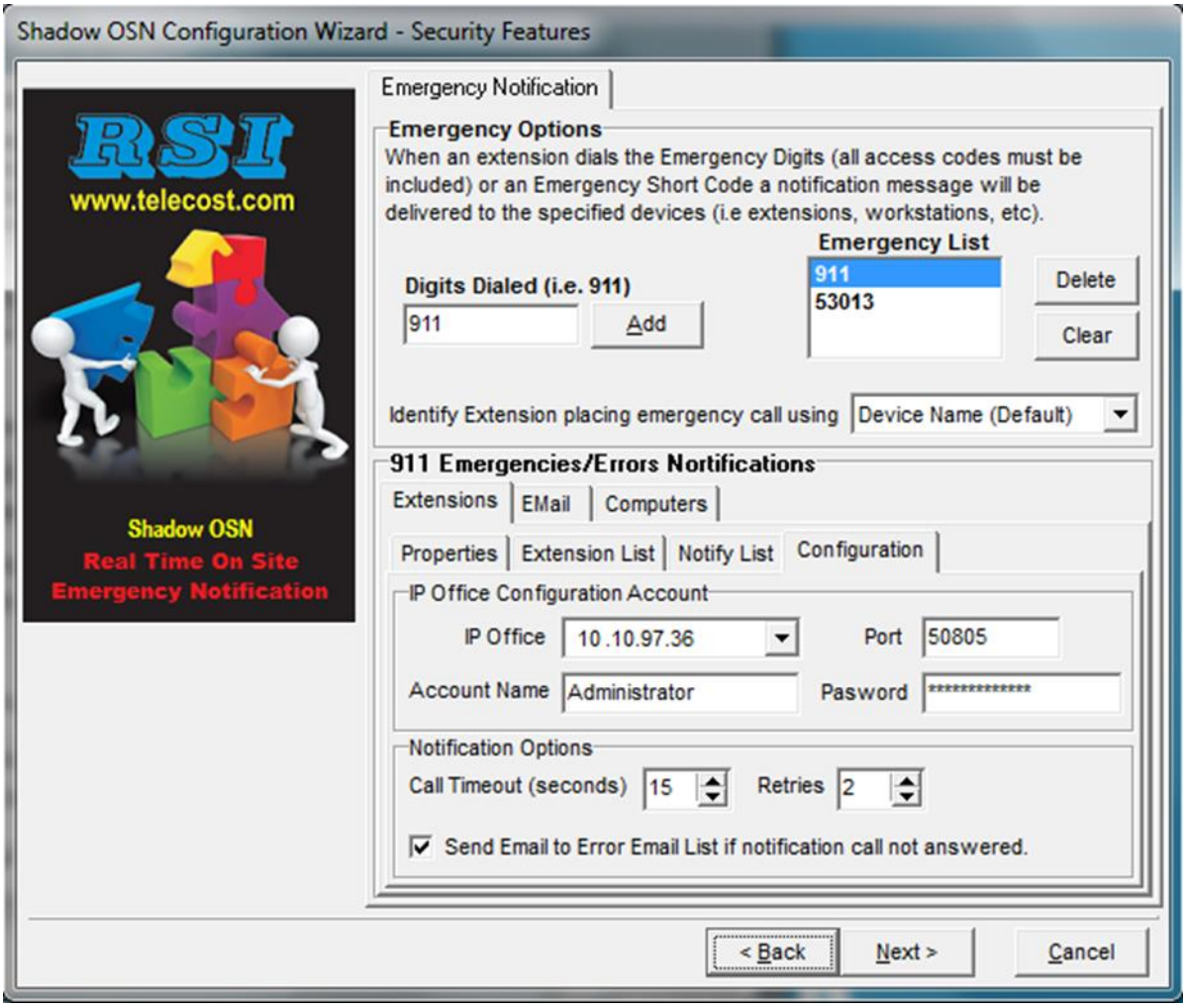
## 6.9. Administer IP Office Configuration Account

On the bottom half of the **Security Features** Screen, click the **Configuration** tab, then enter the appropriate IP Office credentials for the **Account Name** and **Password** fields. In the **Port** field, enter the secure **Service Port** value shown at the end of **Section 5**.





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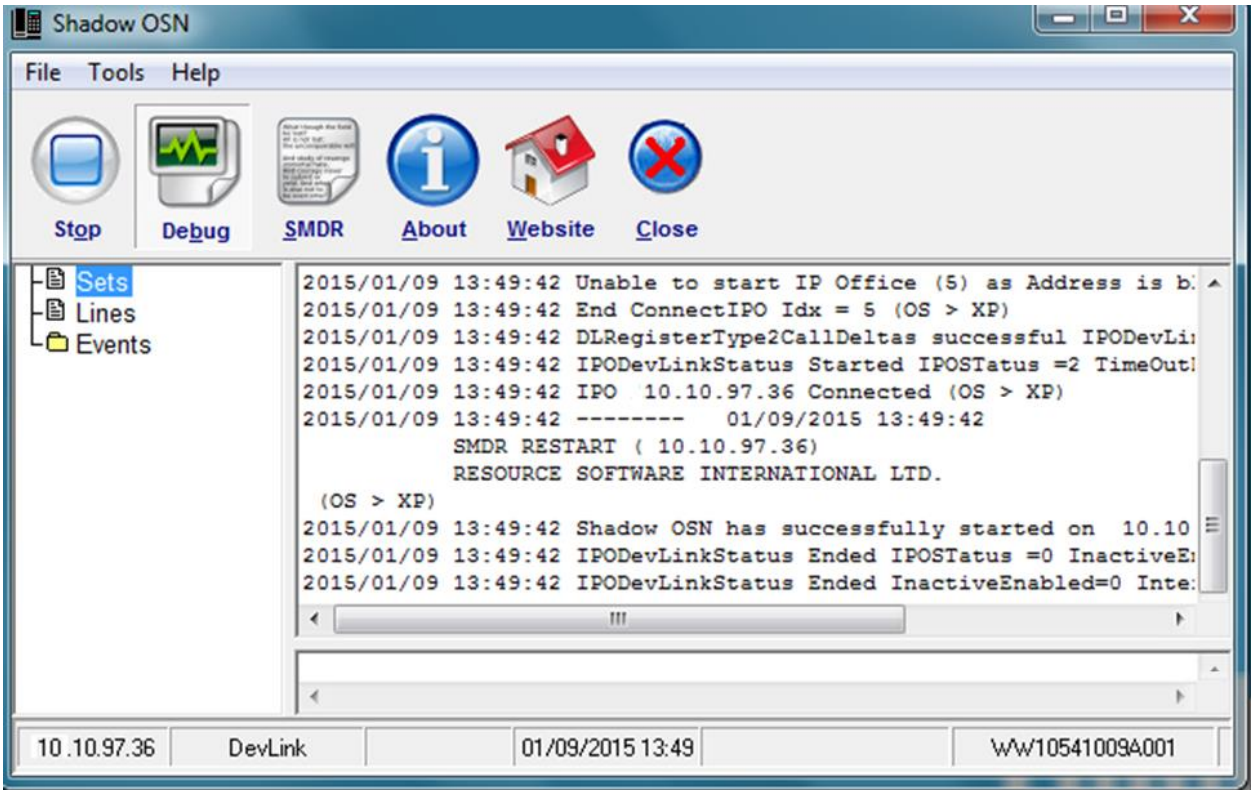
# 7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and RSI Shadow OSN.

Launch the RSI Shadow OSN application by selecting **Start > All Programs > RSI > Shadow OSN > Avaya > Onsite Notification**. Click the **Debug** icon followed by the **Start** Icon (note the **Start** icon will change to a **Stop** icon as shown below). Verify that the IPO connection is established as show in below logs.





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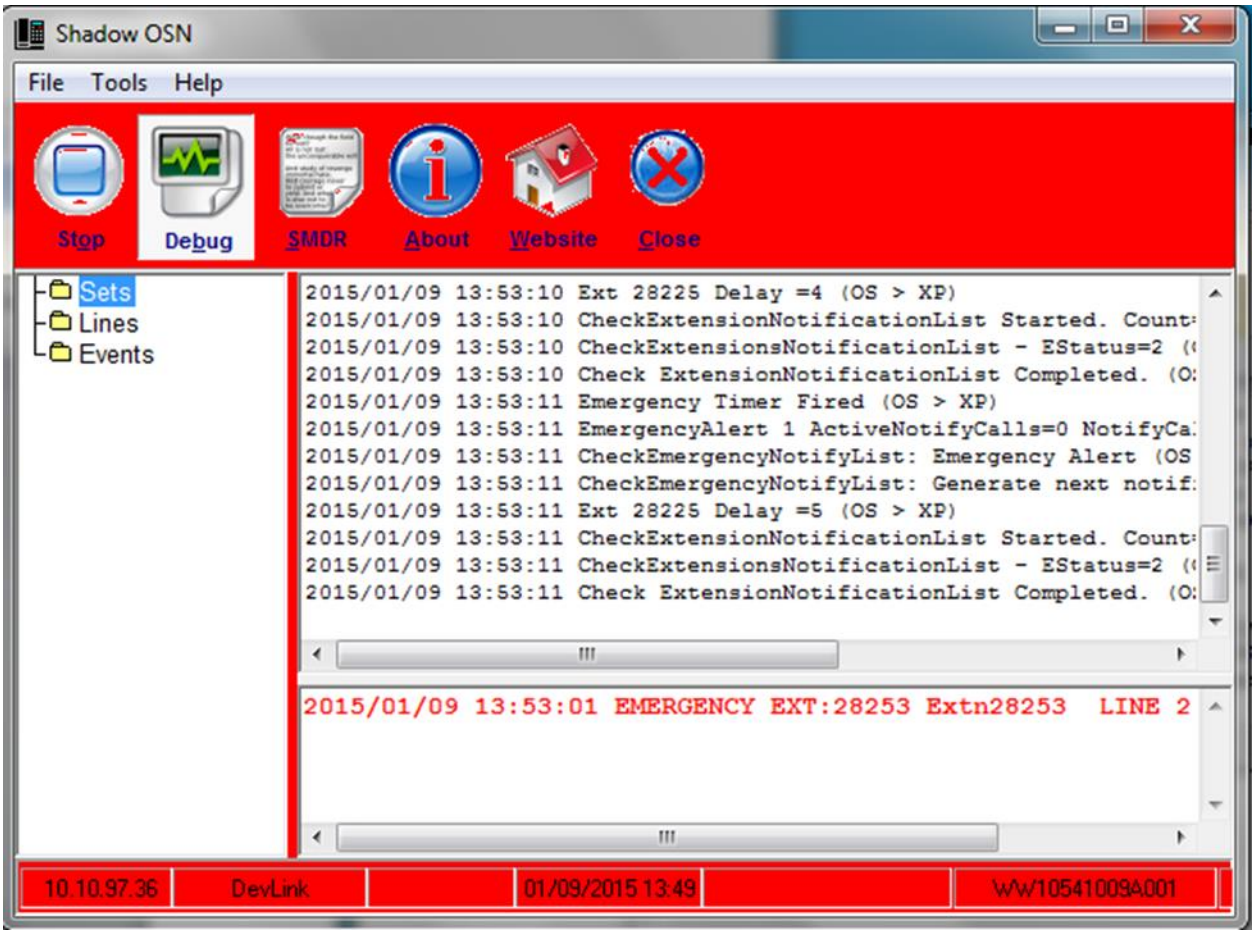
Place a call to an emergency number (in this case, “53013”). Verify the Shadow OSN application begins flashing and displays an event on the bottom portion of the screen indicating which extension dialed the emergency number (e.g. “28253”) and the emergency number dialed (e.g. “53013”). Verify an outbound call is placed from an extension selected in the **Notify List** in **Section 6.8** (e.g. “28240”) to the extension in the **Extension List**, configured in **Section. 6.7** (e.g “28201” and “28227”). Verify the display on extension 28201 shows extension 28253 made an emergency call.





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# 8. Conclusion

These Application Notes describe the configuration steps required for RSI Shadow OSN 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 Installation*, available at http://support.avaya.com.

2. *IP Office Manager* available at http://support.avaya.com.

3. *Resource Software International Ltd. Shadow OSN (IP Office) User Guide*, available as part of RSI Shadow OSN installation.




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