



Avaya Solution & Interoperability Test Lab

Application Notes for RedSky Technologies Softphone Location Determination Application with Avaya Communication Manager and Avaya IP Softphone - Issue 1.0

Abstract

These Application Notes describe a compliance-tested configuration comprised of Avaya Communication Manager, Avaya IP Softphone and the RedSky Technologies Softphone Location Determination Application (SLDA). The SLDA application interfaces with the Avaya IP Softphone to provide the capability to update their location information in RedSky database for Enhanced-911 emergencies. During compliance testing, the RedSky SLDA service successfully added, updated and deleted Avaya IP Softphone's address/location information into the RedSky Location Information Service and Master Street Address Guide Service Provider databases. Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the *DeveloperConnection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe a compliance-tested configuration comprised of Avaya Communication Manager 3.1.2, Avaya IP Softphone 5.24.8 and the RedSky Technologies Softphone Location Determination Application (SLDA) 1.0.0.17. The SLDA application interfaces with the Avaya IP Softphone to provide the capability to update their location information in RedSky database for Enhanced-911 (E911) emergencies. During compliance testing, the RedSky SLDA service successfully added, updated and deleted Avaya IP Softphone's address/location information into the RedSky Location Information Service (LIS) and Master Street Address Guide (MSAG) Service Provider databases. E911 calls are routed to the appropriate Public Safety Answering Point (PSAP) based upon the location/address information of the Avaya IP Softphone. No 911 calls were made for this compliance testing.

Figure 1 illustrates a sample configuration consisting of:

- Avaya S8710 Media Servers running Avaya Communication Manager
- Avaya G650 Media Gateway
- Avaya IP and Digital Telephones
- Analog telephones
- Avaya IP Softphone with RedSky SLDA service
- RedSky E911 server running LIS service
- Third-party Master Street Address Guide (MSAG) Service Provider

The compliance testing focused on verifying that address/location data was successfully changed with the MSAG Service Provider database when an Avaya IP Softphone successfully registers with Avaya Communication Manager.

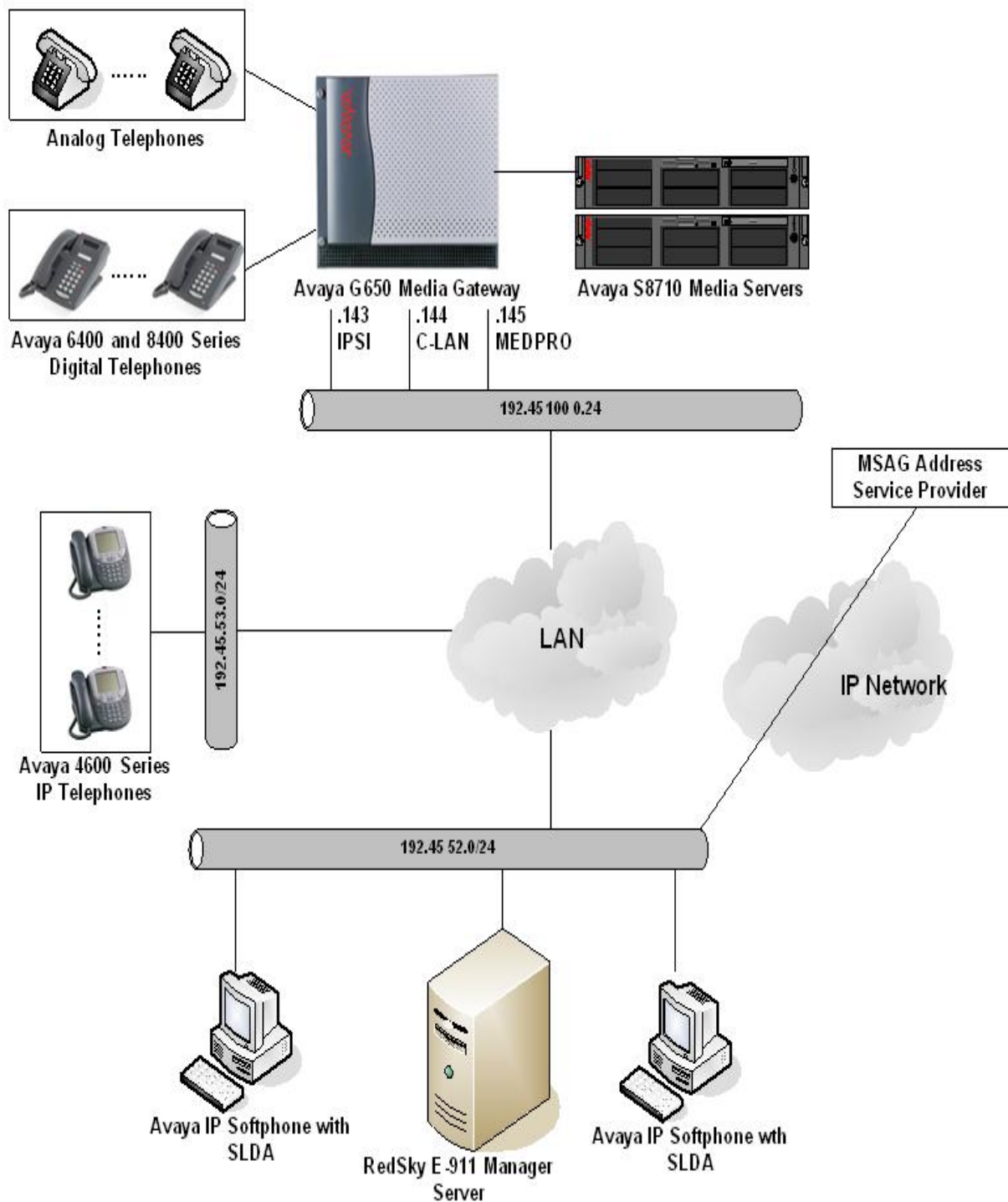


Figure 1: Sample configuration

2. Equipment and Software Validated

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

Equipment		Software/Firmware
Avaya S8710 Media Servers		Avaya Communication Manager 3.1.2 (R013x.01.2.632.1)
Avaya G650 Media Gateway		-
	TN2312BP IP Server Interface	HW12 FW 31
	TN799DP C-LAN Interface	HW01 FW 17
	TN2302AP IP Media Processor	HW20 FW 112
Avaya 4600 Series IP Telephones		2.3 (4602SW H.323) 2.5 (4625SW H.323) 2.2.3 (4610SW SIP)
Avaya 6400 and 8400 Series Digital Telephones		-
Analog Telephones		-
Avaya IP Softphone		5.24.8
RedSky Technologies E911 Server		5.3.0
RedSky Technologies Softphone Location Determination Application (SLDA)		1.0.0.17

3. Configure Avaya Communication Manager

This section describes the steps for configuring phone numbers for Avaya IP Softphone stations in Avaya Communication Manager. The steps are performed from the Avaya Communication Manager System Access Terminal (SAT) interface.

3.1. Configure IP Station

This section describes how to add an IP station to be used for Avaya IP Softphone registration with Avaya Communication Manager.

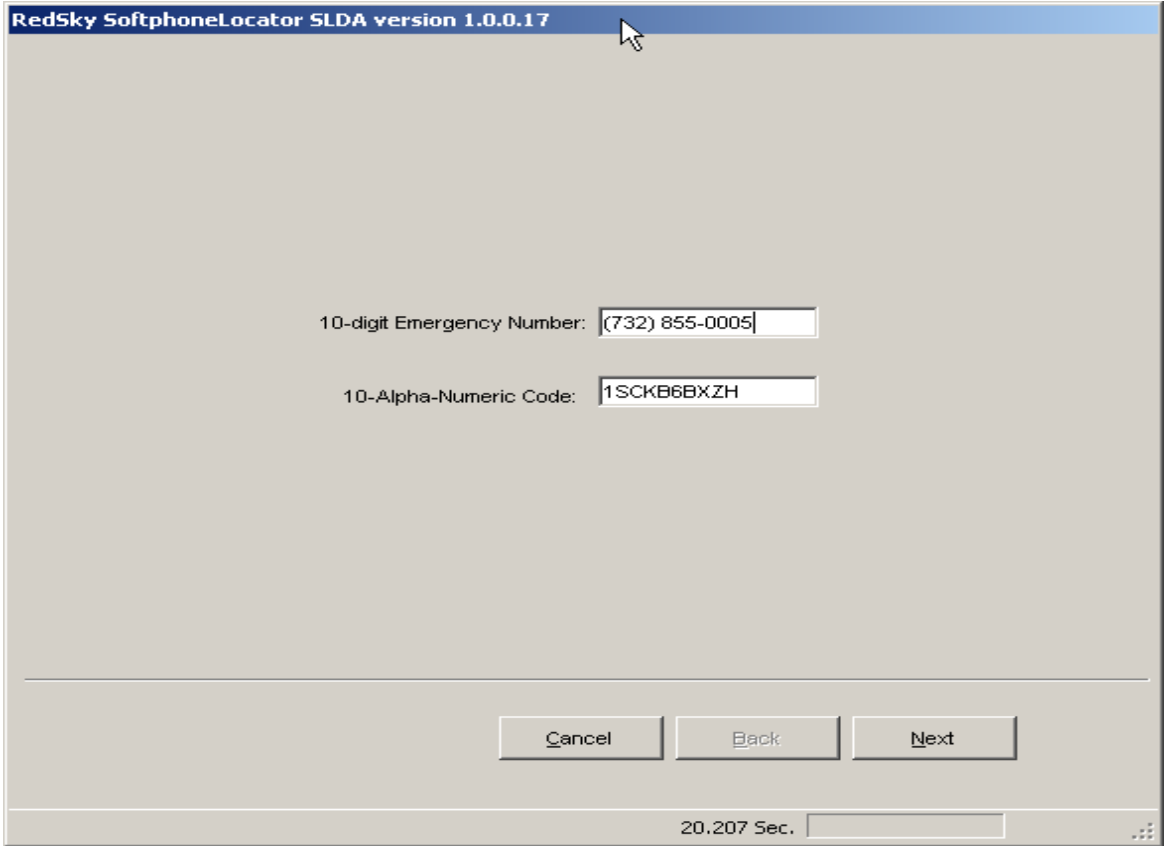
Step	Description																																
1.	<p>Issue the command “display system-parameters customer-options”, and proceed to Page 2. Verify that the number of IP Stations supported by the system is sufficient for the number of IP stations needed. If not, contact an authorized Avaya account representative to obtain additional licenses.</p> <pre>display system-parameters customer-options</pre> <p style="text-align: right;">Page 2 of 10</p> <p style="text-align: center;">OPTIONAL FEATURES</p> <table><thead><tr><th>IP PORT CAPACITIES</th><th>USED</th></tr></thead><tbody><tr><td>Maximum Administered H.323 Trunks: 200</td><td>148</td></tr><tr><td>Maximum Concurrently Registered IP Stations: 1000</td><td>2</td></tr><tr><td>Maximum Administered Remote Office Trunks: 0</td><td>0</td></tr><tr><td>Maximum Concurrently Registered Remote Office Stations: 0</td><td>0</td></tr><tr><td>Maximum Concurrently Registered IP eCons: 0</td><td>0</td></tr><tr><td>Max Concur Registered Unauthenticated H.323 Stations: 0</td><td>0</td></tr><tr><td>Maximum Video Capable H.323 Stations: 0</td><td>0</td></tr><tr><td>Maximum Video Capable IP Softphones: 0</td><td>0</td></tr><tr><td>Maximum Administered SIP Trunks: 200</td><td>153</td></tr><tr><td>Maximum Number of DS1 Boards with Echo Cancellation: 0</td><td>0</td></tr><tr><td>Maximum TN2501 VAL Boards: 1</td><td>1</td></tr><tr><td>Maximum G250/G350/G700 VAL Sources: 0</td><td>0</td></tr><tr><td>Maximum TN2602 Boards with 80 VoIP Channels: 2</td><td>0</td></tr><tr><td>Maximum TN2602 Boards with 320 VoIP Channels: 2</td><td>1</td></tr><tr><td>Maximum Number of Expanded Meet-me Conference Ports: 0</td><td>0</td></tr></tbody></table> <p>(NOTE: You must logoff & login to effect the permission changes.)</p>	IP PORT CAPACITIES	USED	Maximum Administered H.323 Trunks: 200	148	Maximum Concurrently Registered IP Stations: 1000	2	Maximum Administered Remote Office Trunks: 0	0	Maximum Concurrently Registered Remote Office Stations: 0	0	Maximum Concurrently Registered IP eCons: 0	0	Max Concur Registered Unauthenticated H.323 Stations: 0	0	Maximum Video Capable H.323 Stations: 0	0	Maximum Video Capable IP Softphones: 0	0	Maximum Administered SIP Trunks: 200	153	Maximum Number of DS1 Boards with Echo Cancellation: 0	0	Maximum TN2501 VAL Boards: 1	1	Maximum G250/G350/G700 VAL Sources: 0	0	Maximum TN2602 Boards with 80 VoIP Channels: 2	0	Maximum TN2602 Boards with 320 VoIP Channels: 2	1	Maximum Number of Expanded Meet-me Conference Ports: 0	0
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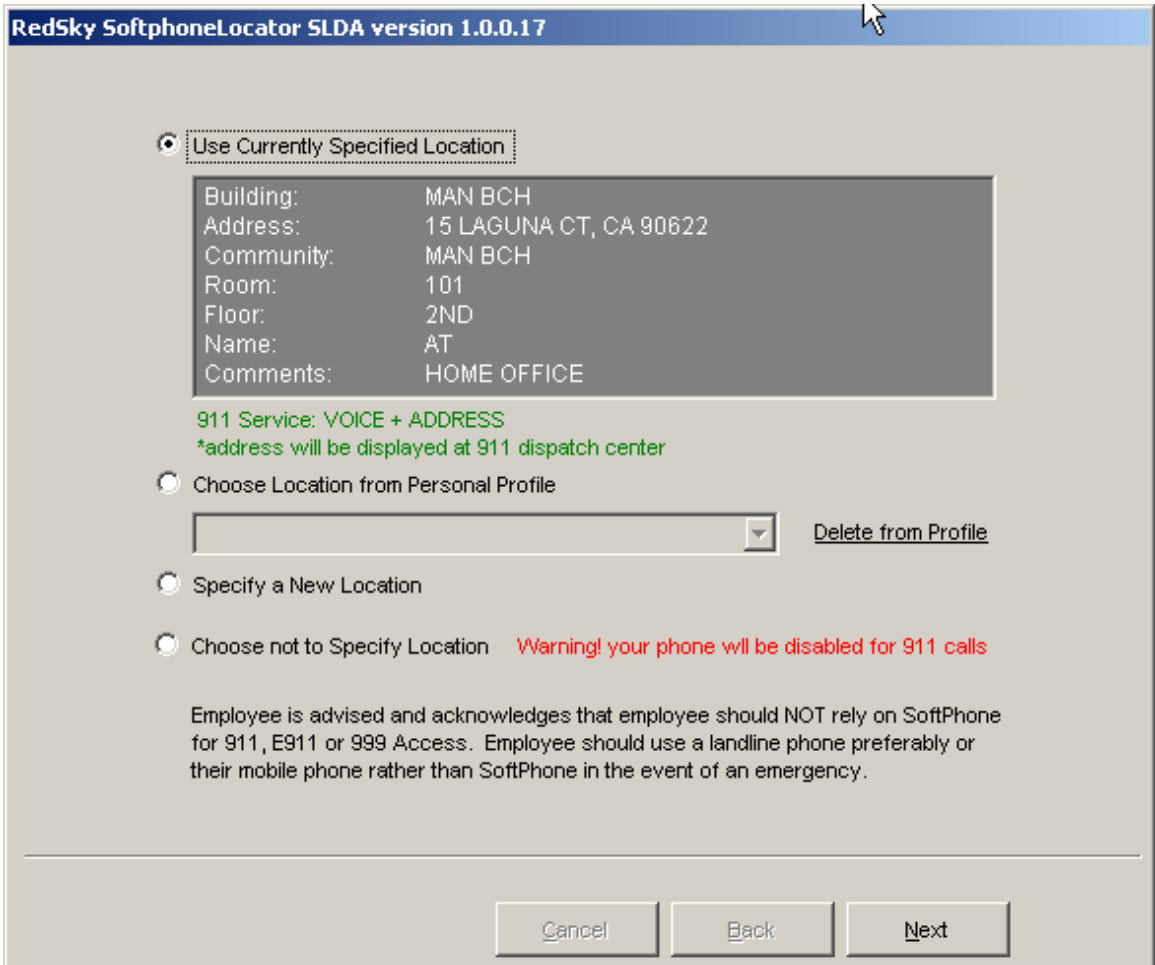
Step	Description
2.	<p>Enter the add station <s> command, where <s> is an available extension in the dial plan, to administer an IP Softphone station. On Page 1 of the station form configure the following:</p> <ul style="list-style-type: none"> • Type – Set to any IP Phone type, 4625 in this example. • Port – Set to IP. • Name – Set station name to any descriptive name, RedSky-SLDA in this example. • Security Code: - Set to any numeric value, 123456 in this example. • IP SoftPhone? – Set to y.
	<pre> add station 50005 Page 1 of 4 STATION Extension: 50005 Lock Messages? n BCC: 0 Type: 4625 Security Code: 123456 TN: 1 Port: IP Coverage Path 1: COR: 1 Name: RedSky-SLDA Coverage Path 2: COS: 1 Hunt-to Station: STATION OPTIONS Loss Group: 2 Personalized Ringing Pattern: 1 Data Module? n Message Lamp Ext: 50005 Speakerphone: 2-way Mute Button Enabled? y Display Language: english Media Complex Ext: IP SoftPhone? y </pre>

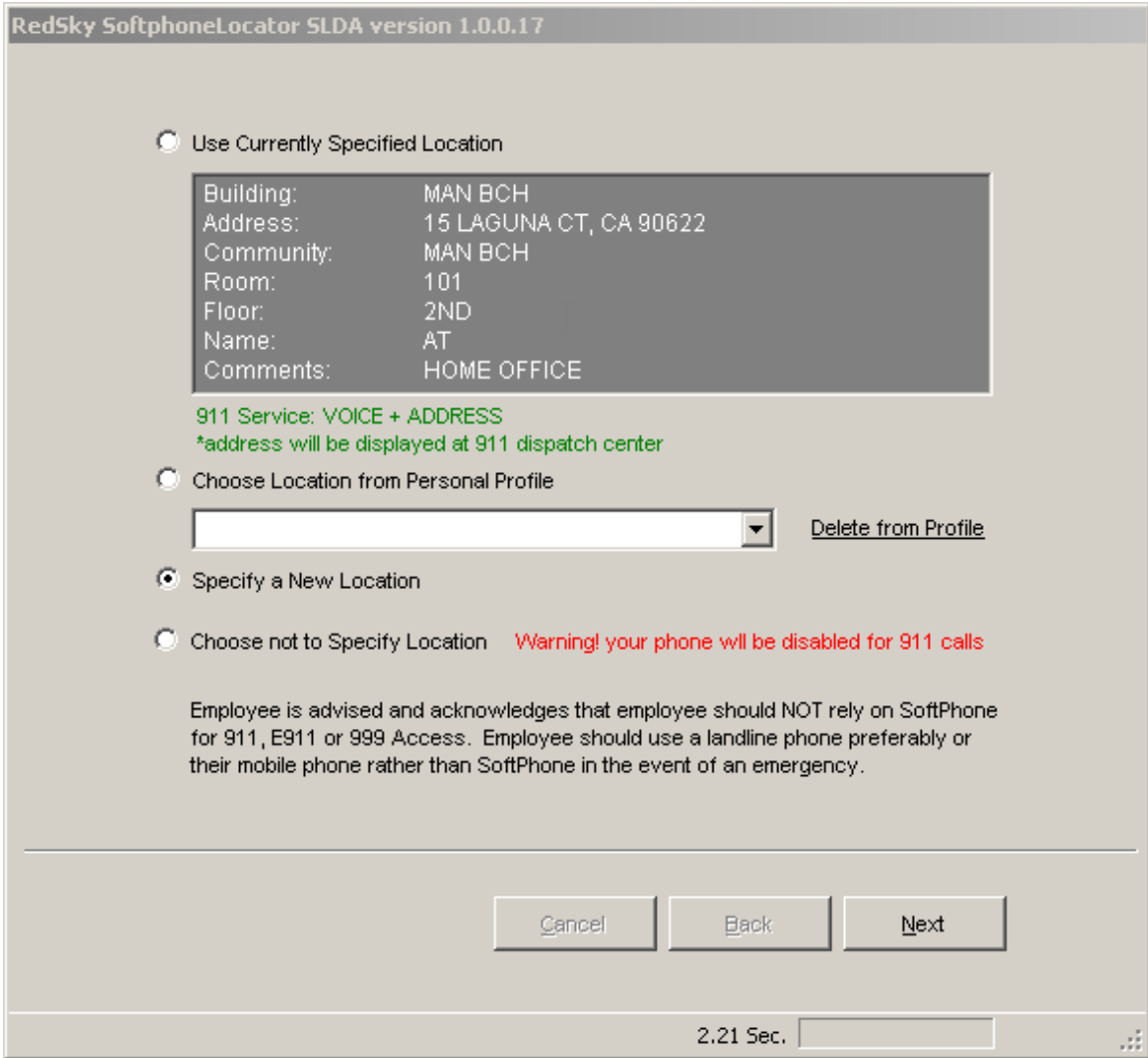
Step	Description
3.	<p>Proceed to Page 2 of add station form and populate the following fields:</p> <ul style="list-style-type: none"> • Multimedia Mode – Set to enhanced. • Remote Softphone Emergency Calls – Set to option. This setting allows the Softphone client to optionally disable the 911 service.
	<pre> add station 50005 Page 2 of 4 STATION FEATURE OPTIONS LWC Reception: spe Auto Select Any Idle Appearance? n LWC Activation? y Coverage Msg Retrieval? y LWC Log External Calls? n Auto Answer: none CDR Privacy? n Data Restriction? n Redirect Notification? y Idle Appearance Preference? n Per Button Ring Control? n Bridged Idle Line Preference? n Bridged Call Alerting? n Restrict Last Appearance? y Active Station Ringing: single Conf/Trans on Primary Appearance? n H.320 Conversion? n Per Station CPN - Send Calling Number? Service Link Mode: as-needed Multimedia Mode: enhanced MWI Served User Type: Display Client Redirection? n AUDIX Name: Select Last Used Appearance? n Coverage After Forwarding? s Remote Softphone Emergency Calls: option Direct IP-IP Audio Connections? y Emergency Location Ext: 50001 Always Use? n IP Audio Hairpinning? n </pre>

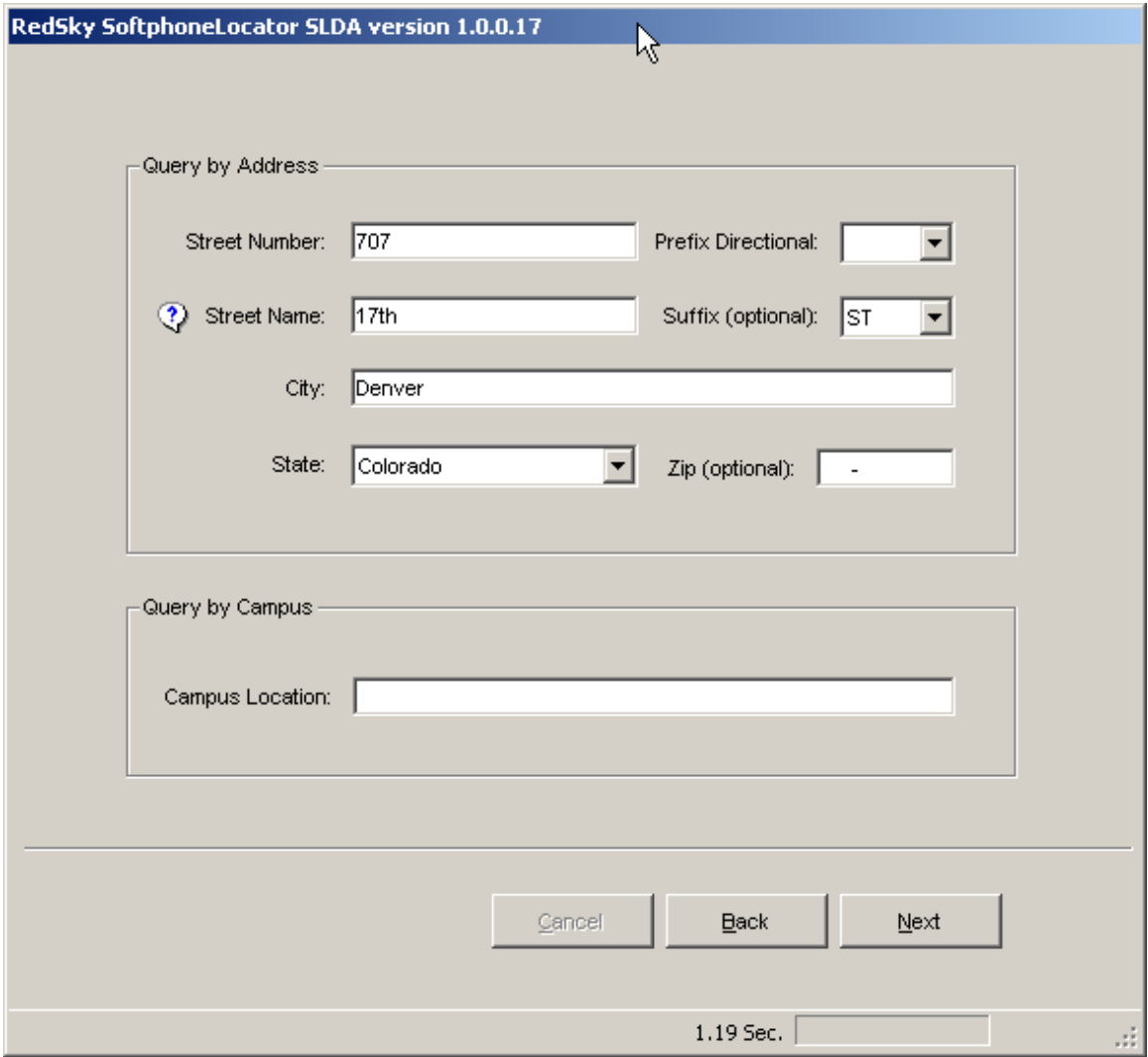
4. Configure Avaya IP Softphone with RedSky SLDA

This section describes how to configure RedSky SLDA service to be used by Avaya IP Softphone on Microsoft Windows desktop. It is assumed that Avaya IP Softphone and RedSky SLDA service are already installed on the desktop and that the RedSky LIS service is running on RedSky E-911 server.

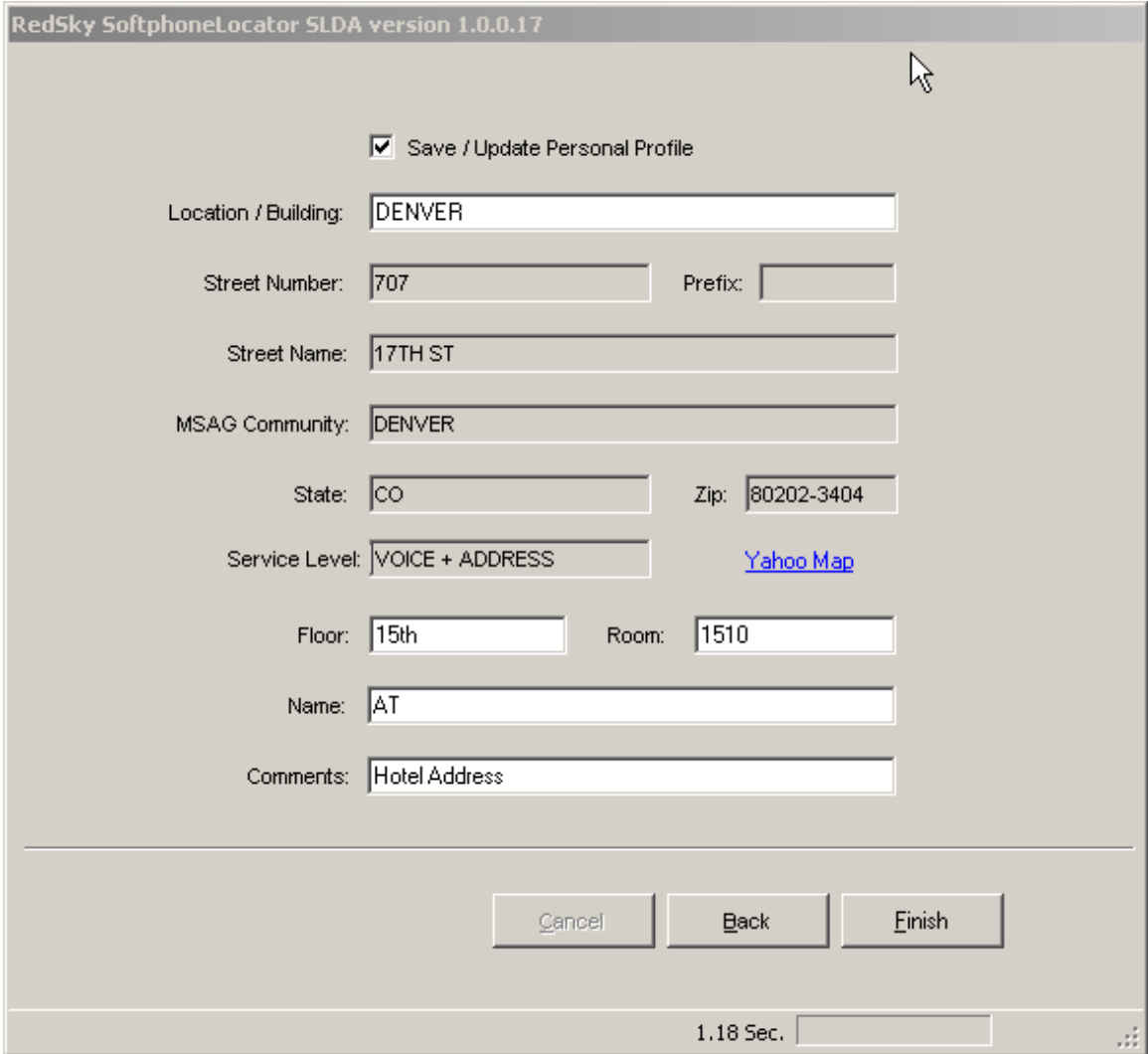
Step	Description
1.	Navigate to Windows Start->Programs->Avaya IP Softphone ->Avaya IP Softphone .
2.	<p>If the RedSky SLDA service is running, the following RedSky SoftphoneLocator SLDA screen appears on the desktop. Configure the following fields:</p> <ul style="list-style-type: none">• 10-digit Emergency Number – Enter the telephone number administered in RedSky LIS server associated with the Avaya IP Softphone extension configured in Section 3, Step 2.• 10-Alpha-Numeric Code – Enter the password generated when the Avaya IP Softphone 10-digit Emergency Number is administered on the LIS server. <p>Click Next.</p> 

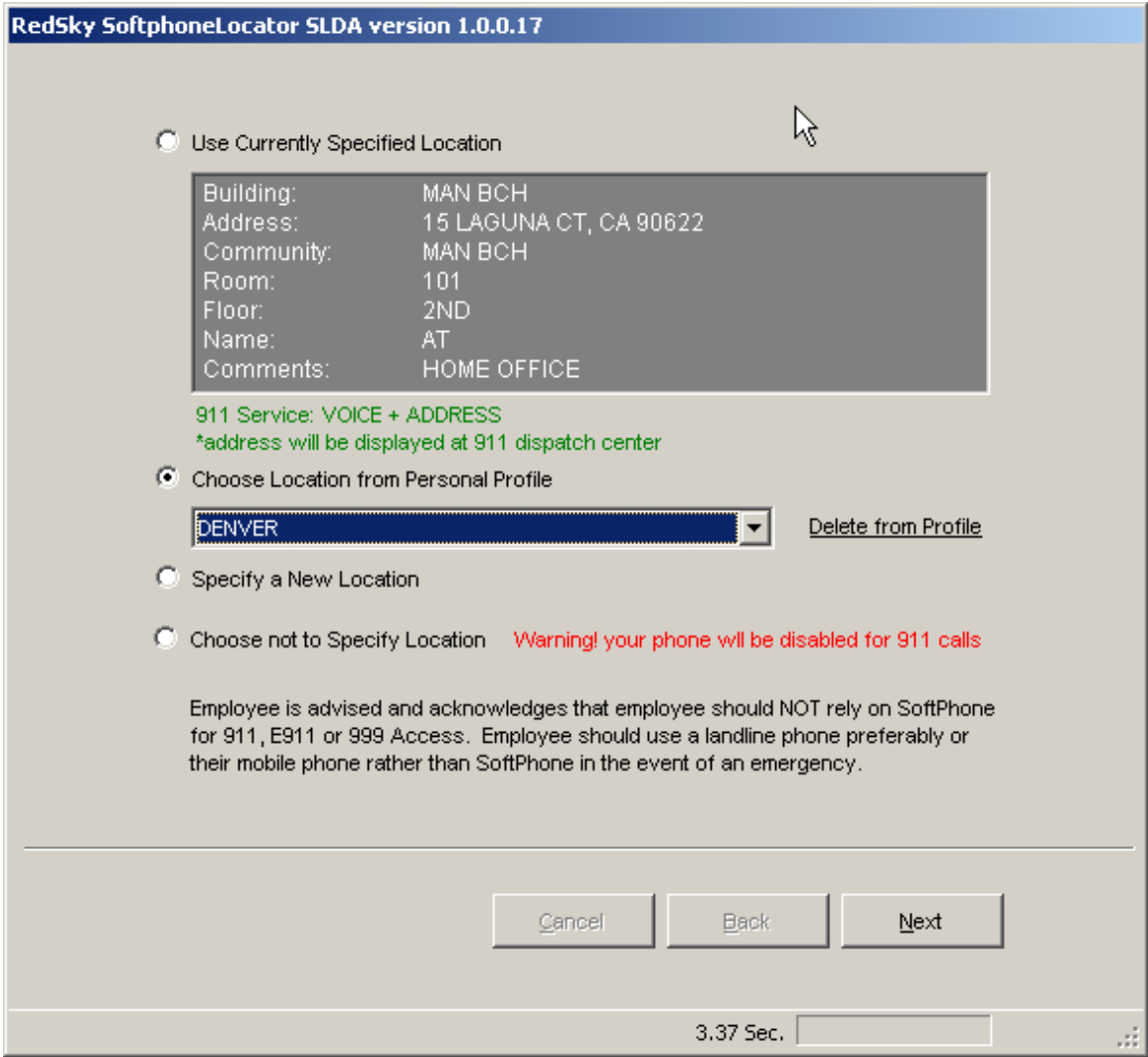
Step	Description
3.	<p>On the following screen, there are four options to configure the location information.</p> <ul style="list-style-type: none"> • Use Currently Specified Location • Choose a Location from Personal Profile • Specify a New Location • Choose not to Specify Location <p>To use the currently specified location, select the Use Currently Specified Location option. Click Next and proceed to Step 10.</p> <p>Note: The currently specified location data is configured when the RedSky LIS server provisions the IP Softphone in its database.</p> 

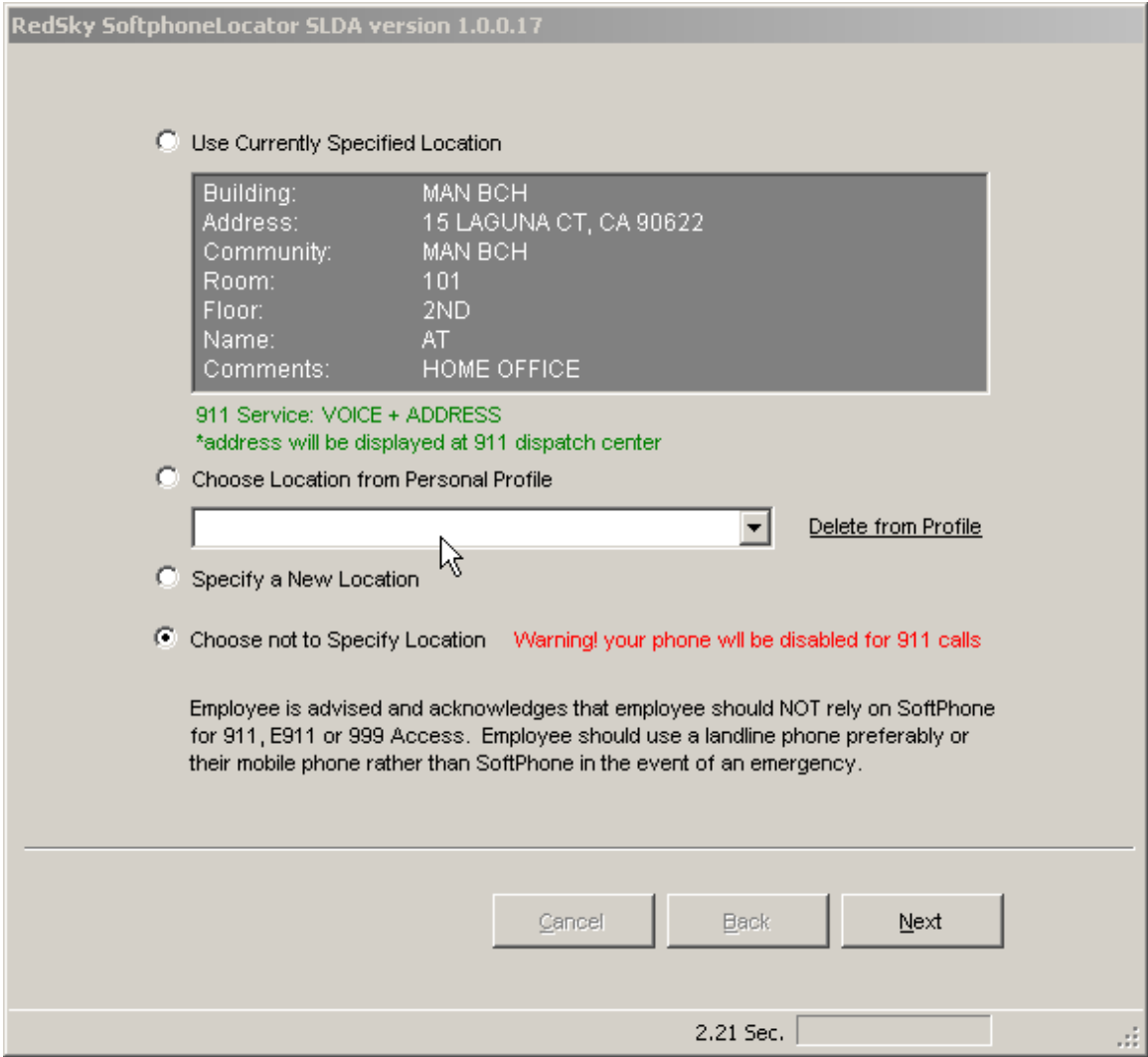
Step	Description
4.	<p>To configure a new location, select the Specify a New Location option and click Next.</p> 

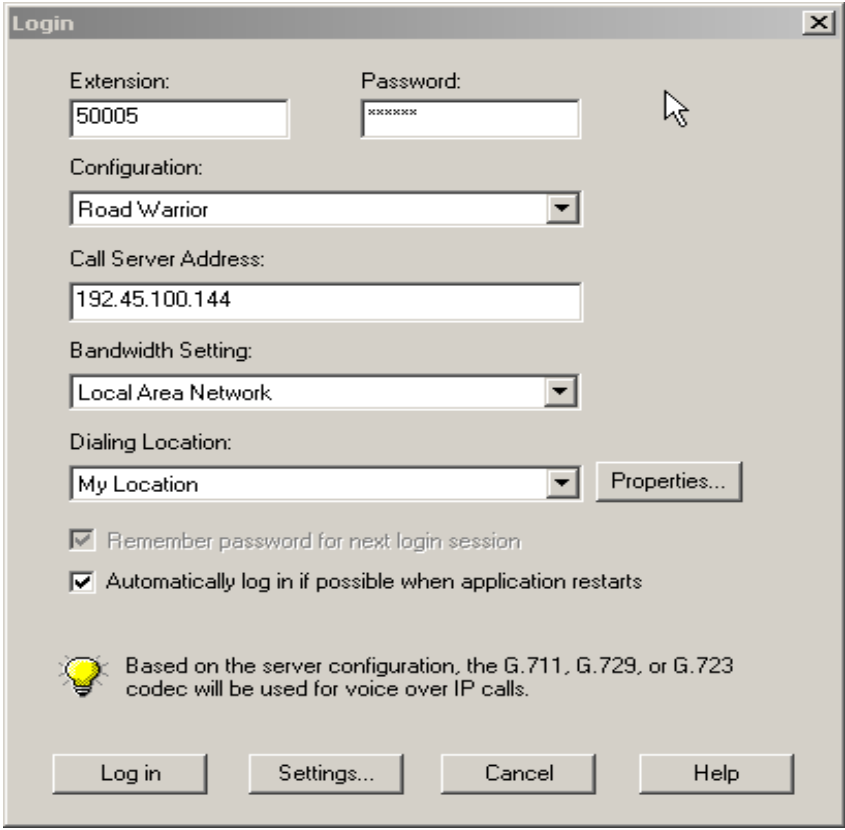
Step	Description
5.	<p>Enter valid street address for the current location of the Avaya IP Softphone by populating the following fields:</p> <ul style="list-style-type: none"> • Street Number – Any valid street number. Set to 707 in this example. • Street Name – Any valid street name. Set to 17th in this example. • Suffix (optional) – This can be a ST (for street), CT (for court), etc. Set to ST in this example. • City – Any valid city. Set to Denver in this example. • State – Any valid state. Set to Colorado in this example. • Zip – Zip code entry is optional. <p>Click Next.</p> 

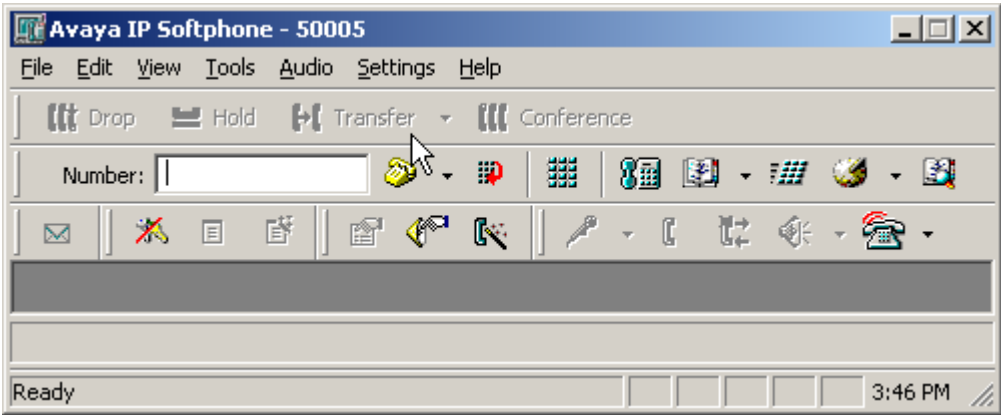
Step	Description												
6.	<p>Based upon the information entered in Step 5, multiple location entries may appear in the following screen. Select the valid entry and click Next.</p> <div><div>RedSky SoftphoneLocator SLDA version 1.0.0.17</div><div><table><tr><th></th><th>Location</th><th>House Number</th><th>Street Name</th></tr><tr><td></td><td>DENVER</td><td>0-8899</td><td>E 17TH AVE</td></tr><tr><td>▶</td><td>DENVER</td><td>300-2799</td><td>17TH ST</td></tr></table></div><div><div>Cancel</div><div>Back</div><div>Next</div></div><div>3.39 Sec. <div></div></div></div>		Location	House Number	Street Name		DENVER	0-8899	E 17TH AVE	▶	DENVER	300-2799	17TH ST
	Location	House Number	Street Name										
	DENVER	0-8899	E 17TH AVE										
▶	DENVER	300-2799	17TH ST										

Step	Description
7.	<p>Enter additional information related to the address. Following information can be entered:</p> <ul style="list-style-type: none"> • Location/Building – This could be any name as long as it is unique for this Avaya IP Softphone. Set to DENVER in this example. • Floor – Set to 15th in this example. • Room – Set to 1510 in this example. • Name – Set to AT in this example. • Comments – Set to Hotel Address in this example. <p>In order to save this address permanently in the RedSky database for future use, select the Save/Update Personal Profile option. Click Finish and proceed to Step 10.</p> 

Step	Description
8.	<p>To configure a location from personal profile, select the Choose a Location from Personal Profile option and click Next. The screen shown in Step 7 appears. Configure the location information and proceed to Step 10.</p> 

Step	Description
9.	<p>To disable the 911 service, select the Choose not to Specify Location option and click Next. This selection will disable 911 calling if the Remote Softphone Emergency Calls is set to option in Section 3, Step 3.</p>  <p>RedSky SoftphoneLocator SLDA version 1.0.0.17</p> <p><input type="radio"/> Use Currently Specified Location</p> <p>Building: MAN BCH Address: 15 LAGUNA CT, CA 90622 Community: MAN BCH Room: 101 Floor: 2ND Name: AT Comments: HOME OFFICE</p> <p>911 Service: VOICE + ADDRESS *address will be displayed at 911 dispatch center</p> <p><input type="radio"/> Choose Location from Personal Profile</p> <p><input type="radio"/> Specify a New Location</p> <p><input checked="" type="radio"/> Choose not to Specify Location Warning! your phone will be disabled for 911 calls</p> <p>Employee is advised and acknowledges that employee should NOT rely on SoftPhone for 911, E911 or 999 Access. Employee should use a landline phone preferably or their mobile phone rather than SoftPhone in the event of an emergency.</p> <p>Cancel Back Next</p> <p>2.21 Sec.</p>

Step	Description
10.	<p>The IP Softphone Login screen appears. Enter the following information:</p> <ul style="list-style-type: none"> • Extension – Set to Extension as configured in Section 3.1, Step 2. • Password – Set to the same value as the Security Code in Section 3.1, Step 2. • Configuration – Type of configuration this softphone will be used for. Set to Road Warrior in this example. • Call Server Address - IP address of the C-LAN. Set to 192.45.100.144 in this example. • Bandwidth Setting – Set to Local Area Network in this example. <p>Select the Automatically log in if possible when application restarts option and click Log in Button to register with Avaya Communication Manager.</p> <p>Note: This screen is only displayed when the Avaya IP Softphone is configured for the first time.</p> 

Step	Description
11.	<p>The following screen appears when the Avaya IP Softphone has registered successfully with Avaya Communication Manager. The Avaya IP Softphone is now configured to send current location/address information to PSAP in case of a 911 emergency.</p> 

5. Interoperability Compliance Testing

The interoperability compliance testing included functionality and serviceability testing. The functionality testing evaluated the ability of the RedSky SLDA to accurately report the current location of Avaya IP Softphone. Avaya IP Softphone's current location is entered when it registers with Avaya Communication Manager.

5.1. General Test Approach

The general test approach was to verify that the current location/address information was accurately reported to MSAG Address Service Provider. The main objectives were to verify the following:

- Avaya IP Softphone with RedSky SLDA service successfully registers with Avaya Communication Manager.
- Avaya IP Softphone with RedSky SLDA service successfully reports its current location to MSAG Address Service Provider to be used by Public Safety Answering Point (PSAP) in case of 911 emergency.
- Avaya IP Softphone with RedSky SLDA service successfully adds a new location in MSAG Address Service Provider database.
- Avaya IP Softphone with RedSky SLDA service successfully deletes or updates an existing location in MSAG Address Service Provider database.

For serviceability testing, failures such as cable pulls and hardware resets were applied by disconnecting and reconnecting Ethernet cables and resetting Avaya SES and Avaya Communication Manager.

5.2. Test Results


The main objectives of **Section 5.1** were verified successfully. For serviceability testing, the Avaya IP Softphone in conjunction with RedSky SLDA service was able to connect to Avaya Communication Manager and RedSky E911 server to report its current location information after the connection to the active Avaya S8710 Media Server was disconnected and reconnected, as well as after resets of Avaya Communication Manager and the RedSky E911 server.

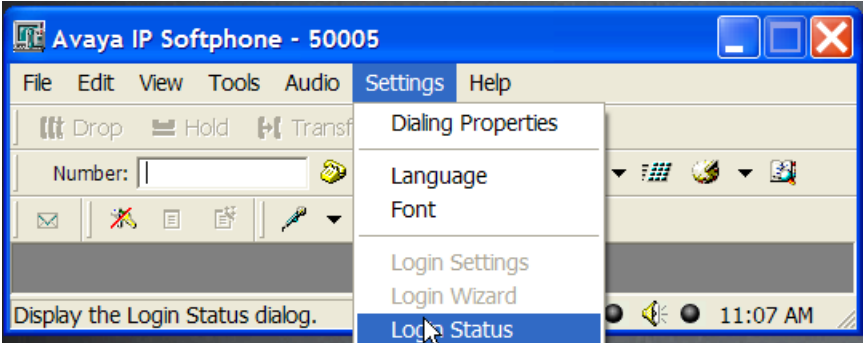
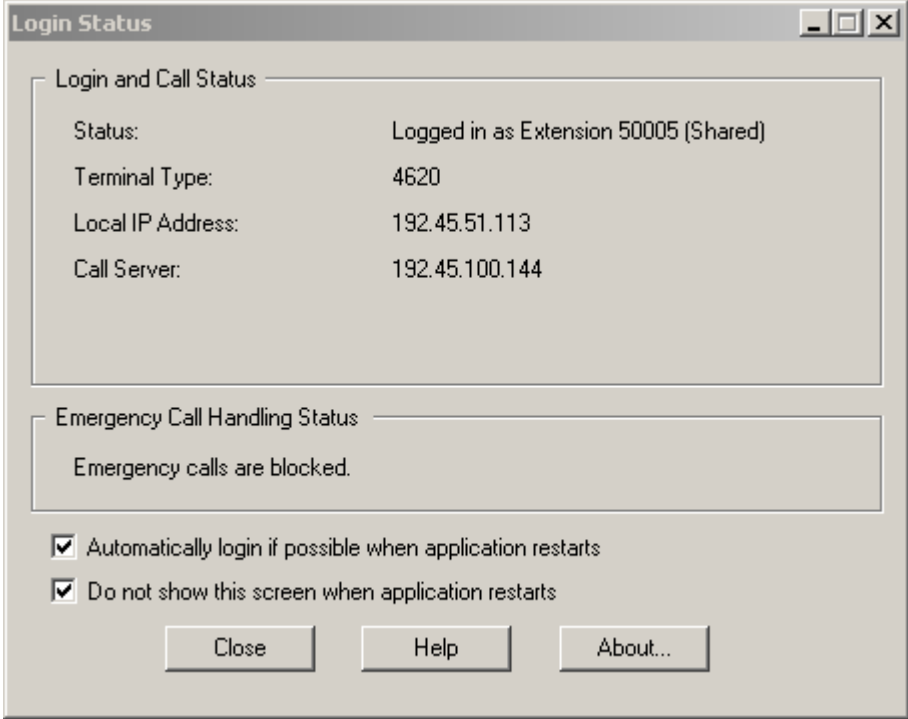
The following observations were made during testing:

- MSAG Address Service Provider does not validate zip codes. Zip code entry is optional.
- MSAG Address Service Provider does not support all zip codes for Enhanced 911 service.

The MSAG Address Service Provider for RedSky E911 service used during the compliance testing is aware of the above issues. It is expected that MSAG Address Service Provider will work closely with RedSky Technologies to resolve these issues in future releases. Contact RedSky Technologies for further updates.

6. Verification Steps

Step	Description																																																																																																																																					
1.	<p>Left click on RedSky SLDA icon on the Microsoft Windows toolbar on the desktop where the Avaya IP Softphone is installed. Verify the current location/address setting of the Avaya IP Softphone.</p> <div><div></div><div>Current Location</div><div>Building: MAN BCH Address: 15 LAGUNA CT, CA 90622 Community: MAN BCH 911 Service: VOICE + ADDRESS Room: 101 Floor: 2nd Name: AT Comments: Home Office</div></div>																																																																																																																																					
2.	Change the current location of the Avaya IP Softphone and verify with MSAG Address Service Provider that the location information is changed.																																																																																																																																					
3.	<p>Verify the current location of the Avaya IP Softphone by running activity log report in RedSky E911 server. Sample results are displayed below:</p> <table><tr><th>Date</th><th>Time</th><th>CPN</th><th>Activity</th><th>Service</th><th>Provider</th><th>Address</th></tr><tr><td>1/10/2007</td><td>9:58:34 AM</td><td>7328550005</td><td>Unchanged</td><td>(+)Enhanced</td><td>MSAG</td><td>41 E CHURCH ST ORLANDO, FL FL:10, RM:1019</td></tr><tr><td>1/10/2007</td><td>8:58:55 AM</td><td>7328550005</td><td>Opt Out - No 911</td><td>(+)Enhanced</td><td>MSAG</td><td>41 E CHURCH ST ORLANDO, FL FL:10, RM:1019</td></tr><tr><td>1/9/2007</td><td>4:57:18 PM</td><td>7328550005</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>41 W CHURCH ST ORLANDO, FL FL:10, RM:1010</td></tr><tr><td>1/9/2007</td><td>4:50:24 PM</td><td>7328550005</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>3210 LAKE EMMA RD LAKE MARY, FL FL:99, RM:9901</td></tr><tr><td>1/9/2007</td><td>4:47:47 PM</td><td>7328550005</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>15 LAGUNA CT MAN BCH, CA FL:2nd, RM:101</td></tr><tr><td>1/9/2007</td><td>4:45:27 PM</td><td>7328550005</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>707 17TH ST DENVER, CO FL:15th, RM:1510</td></tr><tr><td>1/9/2007</td><td>4:35:20 PM</td><td>7328550005</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>15 LAGUNA CT MAN BCH, CA FL:2nd, RM:101</td></tr><tr><td>1/9/2007</td><td>4:22:36 PM</td><td>7328550005</td><td>Opt Out - No 911</td><td>(-)Voice Only</td><td>MSAG</td><td>1111 POLARIS PKWY COLUMBUS, OH FL:, RM:</td></tr><tr><td>1/9/2007</td><td>3:19:34 PM</td><td>7328550005</td><td>Opt Out - No 911</td><td>(+)Enhanced</td><td>MSAG</td><td>15 LAGUNA CT MAN BCH, CA FL:, RM:</td></tr><tr><td>1/9/2007</td><td>2:14:09 PM</td><td>7328550005</td><td>Location Updated</td><td>(-)Voice Only</td><td>MSAG</td><td>15 LAGUNA CT MAN BCH, CA FL:, RM:</td></tr><tr><td>1/9/2007</td><td>1:04:02 PM</td><td>7328550005</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>1601 DRY CREEK DR LONGMONT, CO FL:, RM:</td></tr><tr><td>1/9/2007</td><td>9:41:51 AM</td><td>7328523112</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>532 E FRY BLVD SIERRA VISTA, AZ FL:, RM:</td></tr><tr><td>1/9/2007</td><td>9:41:11 AM</td><td>7328523112</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>150 W UNIVERSITY DR TEMPE, AZ FL:, RM:</td></tr><tr><td>1/9/2007</td><td>9:40:13 AM</td><td>7328523112</td><td>Location Updated</td><td>(-)Voice Only</td><td>MSAG</td><td>1111 POLARIS PKWY COLUMBUS, OH FL:, RM:</td></tr><tr><td>1/9/2007</td><td>9:31:38 AM</td><td>7328523112</td><td>Location Updated</td><td>(-)No Coverage</td><td>MSAG</td><td>2728 N HAMPDEN CT CHICAGO, IL FL:21, RM:05</td></tr><tr><td>1/9/2007</td><td>9:23:08 AM</td><td>7328523112</td><td>Opt Out - No 911</td><td>(-)Voice Only</td><td>MSAG</td><td>20 SUTTIE AVE PISCATAWAY TWP, NJ FL:, RM:</td></tr><tr><td>1/9/2007</td><td>9:16:57 AM</td><td>7328523112</td><td>Location Updated</td><td>(+)Enhanced</td><td>MSAG</td><td>707 17TH ST DENVER, CO FL:15, RM:1510</td></tr><tr><td>1/9/2007</td><td>8:49:19 AM</td><td>7328523112</td><td>Location Updated</td><td>(-)Voice Only</td><td>MSAG</td><td>1308 CENTENNIAL AVE PISCATAWAY TWP, NJ FL:2, RM:203</td></tr></table>	Date	Time	CPN	Activity	Service	Provider	Address	1/10/2007	9:58:34 AM	7328550005	Unchanged	(+)Enhanced	MSAG	41 E CHURCH ST ORLANDO, FL FL:10, RM:1019	1/10/2007	8:58:55 AM	7328550005	Opt Out - No 911	(+)Enhanced	MSAG	41 E CHURCH ST ORLANDO, FL FL:10, RM:1019	1/9/2007	4:57:18 PM	7328550005	Location Updated	(+)Enhanced	MSAG	41 W CHURCH ST ORLANDO, FL FL:10, RM:1010	1/9/2007	4:50:24 PM	7328550005	Location Updated	(+)Enhanced	MSAG	3210 LAKE EMMA RD LAKE MARY, FL FL:99, RM:9901	1/9/2007	4:47:47 PM	7328550005	Location Updated	(+)Enhanced	MSAG	15 LAGUNA CT MAN BCH, CA FL:2nd, RM:101	1/9/2007	4:45:27 PM	7328550005	Location Updated	(+)Enhanced	MSAG	707 17TH ST DENVER, CO FL:15th, RM:1510	1/9/2007	4:35:20 PM	7328550005	Location Updated	(+)Enhanced	MSAG	15 LAGUNA CT MAN BCH, CA FL:2nd, RM:101	1/9/2007	4:22:36 PM	7328550005	Opt Out - 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Step	Description
4.	<p>Verify that the Avaya IP Softphone successfully registers with Avaya Communication Manager and the Emergency call handling status is correct by navigating Settings->Login Status link.</p>  <p>In the following example, Status field indicates that Softphone is registered with Avaya Communication Manager and the Emergency Call Handling Status field indicates that 911 calls are blocked.</p> 

7. Support

For technical support on RedSky Technologies products, contact RedSky Technologies at:

- Phone: 1-866-778-2435
- E-mail: support@redskytech.com

8. Conclusion

These Application Notes describe a compliance-tested configuration comprised of Avaya Communication Manager 3.1.2, Avaya IP Softphone 5.24.8 and the RedSky Technologies Softphone Location Determination Application (SLDA) 1.0.0.17. The SLDA application interfaces with the Avaya IP Softphone to provide the capability to update their location information in RedSky database for Enhanced-911 (E911) emergencies. During compliance testing, the RedSky SLDA service successfully added, updated and deleted Avaya IP Softphone's address/location information into the RedSky Location Information Service (LIS) and Master Street Address Guide (MSAG) Service Provider databases. E911 calls are routed to the appropriate Public Safety Answering Point (PSAP) based upon the location/address information of the Avaya IP Softphone. No E911 calls were made during the compliance testing.

9. Additional References

Product documentation for Avaya products may be found at <http://support.avaya.com>.

[1] *Avaya Communication Manager Application Notes: Emergency Calling*

[2] *Feature Description and Implementation for Avaya Communication Manager*, Issue 4, February 2006, Document Number 555-245-205.

Product information for RedSky Technologies solutions may be found at <http://www.redskytech.com/solutions>.

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Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya Developer*Connection* Program at devconnect@avaya.com.