Avaya Solution & Interoperability Test Lab

Application notes for Configuring Genesis GenAlert to Interoperate with Avaya Communication Server 1000 – Issue 1.0

Abstract

These Application Notes describe a compliance-tested configuration consisting of Genesis Systems Corporation GenAlert solution and Avaya Communication Server 1000 Release 7.6.

Genesis GenAlert is a web or client based real-time emergency reporting package that provides on-site notification when an emergency call has been placed. This compliance test focused on the interoperability of Genesis GenAlert with Avaya Communication Server 1000 Release 7.6.

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.

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1. Introduction

These Application Notes describe a compliance-tested configuration consisting of Genesis Systems Corporation GenAlert (hereafter known as GenAlert) solution and Avaya Communication Server 1000 Release 7.6 (hereafter known as Communication Server 1000).

GenAlert offers a web & client based real-time emergency reporting package that detects when 911 is called and notifies either by SMS text message, screen pop, email, and / or even sounding an alarm. This compliance test focused on the interoperability of GenAlert with Communication Server 1000.

The GenAlert server connects to Communication Server 1000 SNMP port and collects SNMP traps that are generated when an emergency call is placed and provides the notification using screen pops, emails, SMS text messages or sounding an alarm.

2. General Test Approach and Test Results

The compliance test focused on the ability for the GenAlert application to accurately report all the information gathered from SNMP traps generated by Communication Server 1000.

When an emergency call is placed, an On Site Notification (OSN) message is generated by Communication Server 1000 and provided as an SNMP trap. GenAlert collects this SNMP trap, compiles all information present in the trap and presents it in a user friendly form via screen pop, email, SMS text message or sounding an alarm.

The solution contains two modules under the GenStart application. One module named GCOM collects the raw SNMP data and the other module named GENALERT processes this data and outputs it in the required format for screen pops, emails or SMS text messages.

For location identification, Genesis uses the GSQM and PORTSERV modules to collect the Emergency Response Location (ERL) data from Communication Server 1000 and uses the same during an emergency call.

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.

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2.1. Interoperability Compliance Testing

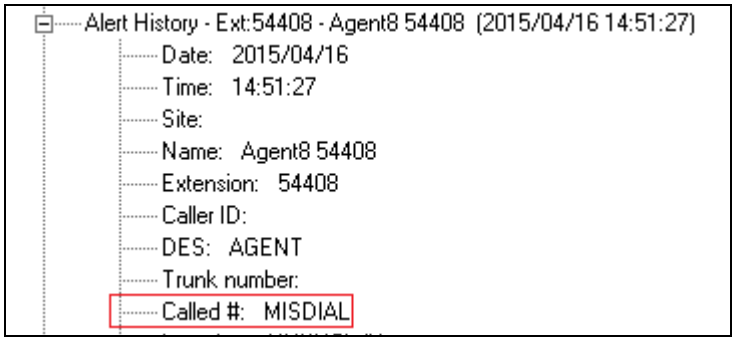
The general test approach was to verify the integration of GenAlert with Communication Server 1000. Various emergency calls were placed from Communication Server 1000 telephones to verify SNMP traps were properly logged and displayed (via pop-up alerts) by GenAlert. GenAlert's email and text message notification of the alert was also tested.

Additionally, basic serviceability testing examined the handling of and recovery from error conditions (such as network disconnects and power failures).

2.2. Test Results

The Genesis GenAlert Solution successfully passed compliance testing with the following observations:

- Emergency alert notification using email and text can be delayed since these are dependent on the email servers and local Telco providers. During compliance testing, alerts notified using email was almost instantaneous however there were delays in receiving alerts via the text messages.
- For location identification, Genesis uses the GSQM and PORTSERV modules which are part of Genesis GenSwitch application and therefore this application will be required.
- If a misdial event occurs, GenAlert will notify of the same by showing *MISDIAL* in the application's *Called #* field as shown in the screen below.



Note: *Genesis GenAlert is an alerting application only and does not do any location discovery of the devices. Location discovery of devices using this application is the responsibility of the user by programming it in Avaya Communication Server 1000.*

2.3. Support

Information, Documentation and Technical support for Genesis products can be obtained at:

- Phone: 1 (888) 993-2288 or 1 (604) 530-9348
- Web: http://www.buygenesis.com
- Email: support@buygenesis.com

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3. Reference Configuration

Figure 1 below illustrates the configuration used to compliance test the Genesis GenAlert solution with Communication Server 1000. The Genesis GenAlert Solution and the screen pop client were installed on a Windows 7 Professional SP1 OS. For email verification, a Genesis mail server was used and for SMS texting, a local Telco provider was used.

Any 911 calls made by a phone on the Communication Server 1000 was directed to a PSTN phone (not shown) to ring and emulate the receiving end of the 911 call.

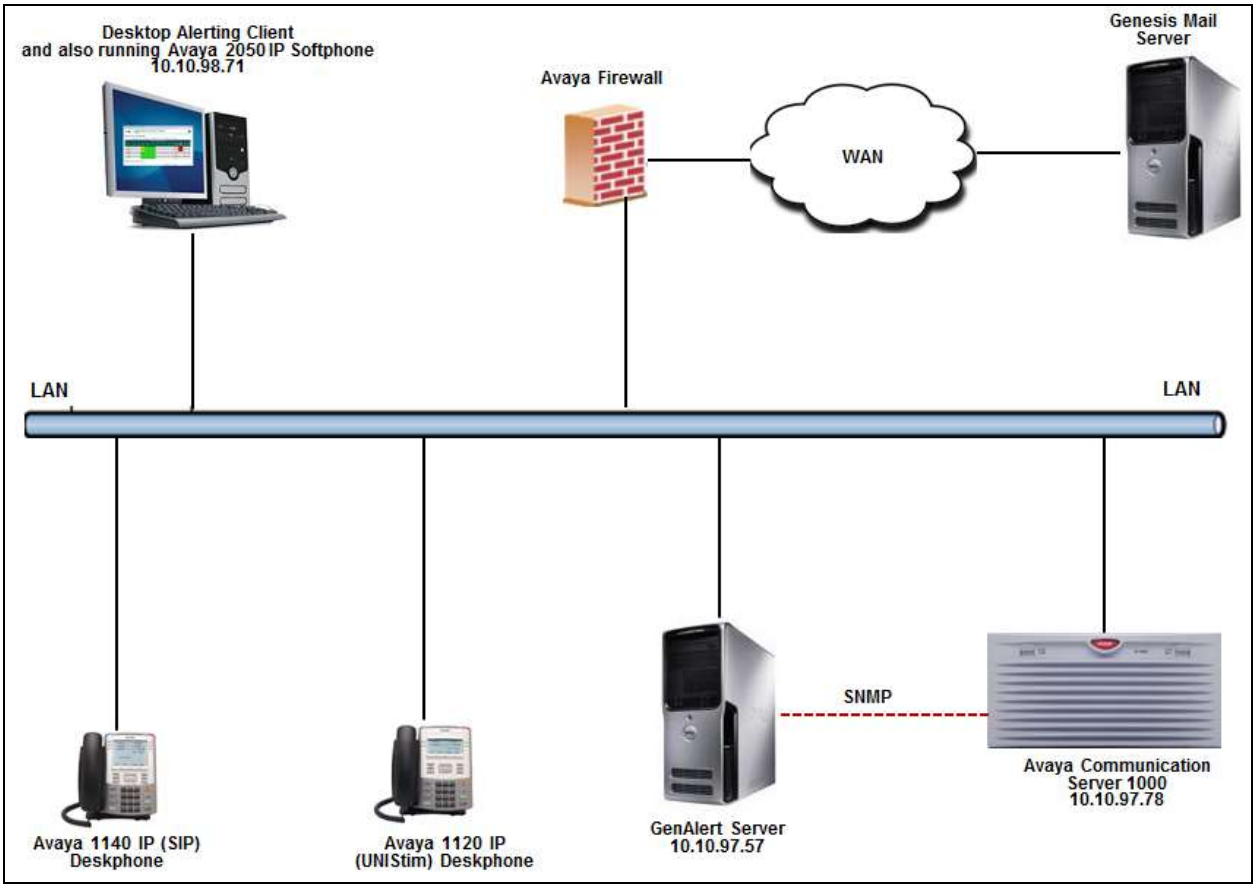

Figure 1: Genesis GenAlert Solution with Avaya Communication Server 1000

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4. Equipment and Software Validated

Equipment/Software	Release/Version
Avaya Communication Server 1000	7.65 SP6
Avaya IP Phones: • 1120(UNIStim) • 1140 (SIP) • 2050 IP Softphone	 0624C8V 4.04.10 4.4 SP3
Genesis: GenAlert installed on MS Windows 7 Professional SP1 GenStart Module	 3.3.3 4.15

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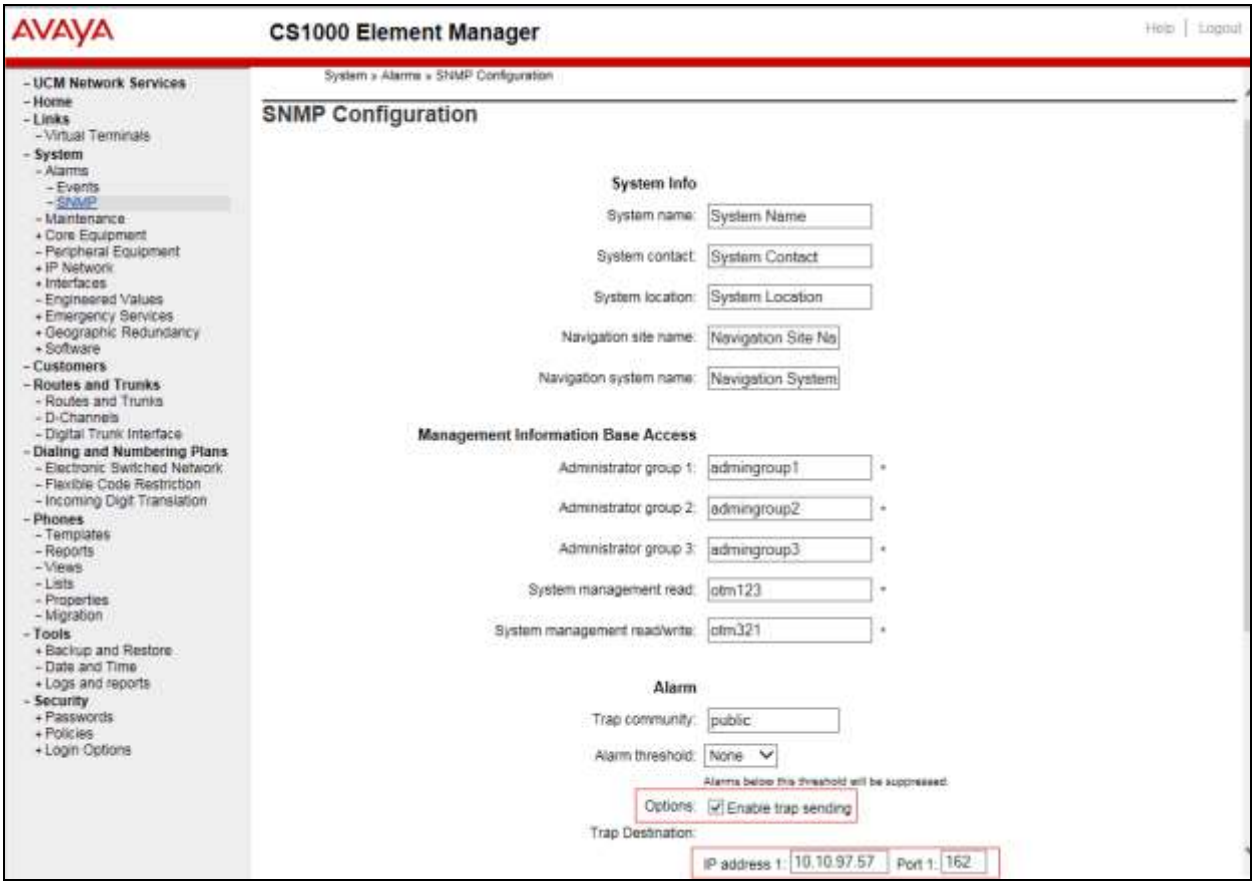
5. Configure Avaya Communication Server 1000

This section assumes that the Communication Server 1000 is correctly installed and configured to make emergency calls. It is beyond the scope of this document to explain in detail the configuration required to make emergency calls from Communication Server 1000. However a brief description of the call routing used during compliance testing and SNMP configuration will be explained in this document.

5.1. Configure SNMP

Access the Communication Server 1000 Element Manager via the Unified Communication Manager or System Manager (not shown).

Navigate to **System → Alarms → SNMP** (not shown) to add the system that is going to collect the SNMP traps. In this case it would be the GenAlert system. Screen below shows the values used during compliance testing. Ensure that the **Enable trap sending b**ox under **Options** is checked. Enter the IP address of the GenAlert system that will collect the SNMP traps in the **IP address 1** field under **Trap Destination**. For **Port 1** enter *162*. Click on **Save** (not shown) to complete the configuration.



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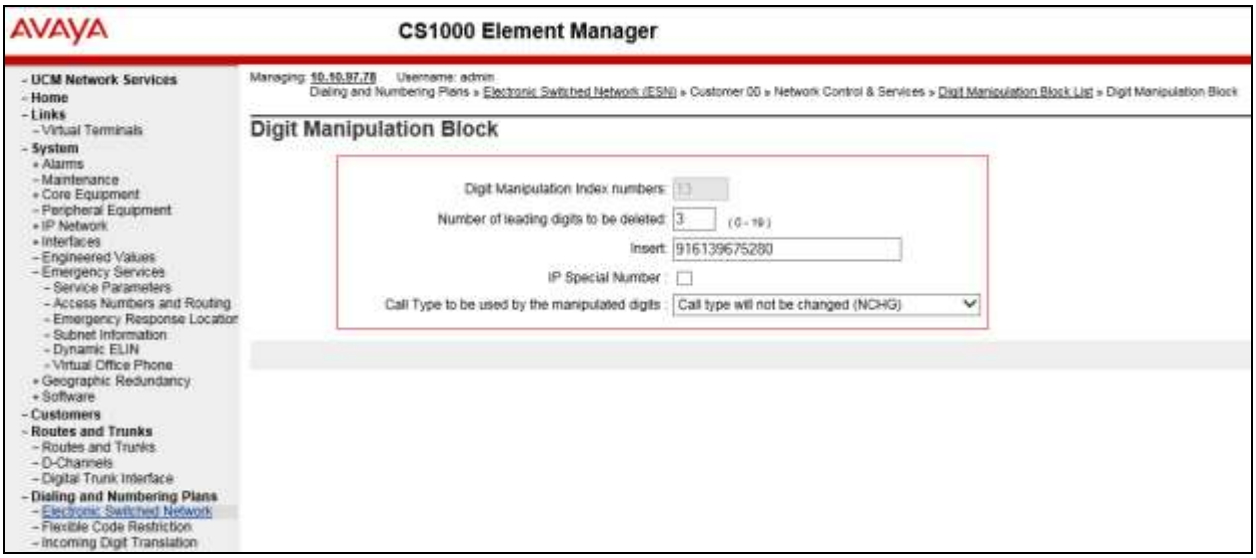
5.2. Configure Routing

Navigate to **Dialing and Numbering Plans → Electronic Switched Network → Digit Manipulation Block** (not shown) to add a new Digit Manipulation Block. During compliance testing, Digit Manipulation Index Number **13** was added a shown in the screen below. The following values were configured,

- **Number of leading digits to be deleted**: *3*; when a user dials 911, all of these are deleted.
- **Insert**: *916139675280*; after deleting the above digits, 916139675280 are inserted instead and the call is routed to this number. During compliance testing, 6139675280 is used as simulated PSAP number. When user dials 911, the call is routed to this phone.
- **Call Type to be used by the manipulated digits**: Select *Call type will not changed (NCHG)* from the drop down list.



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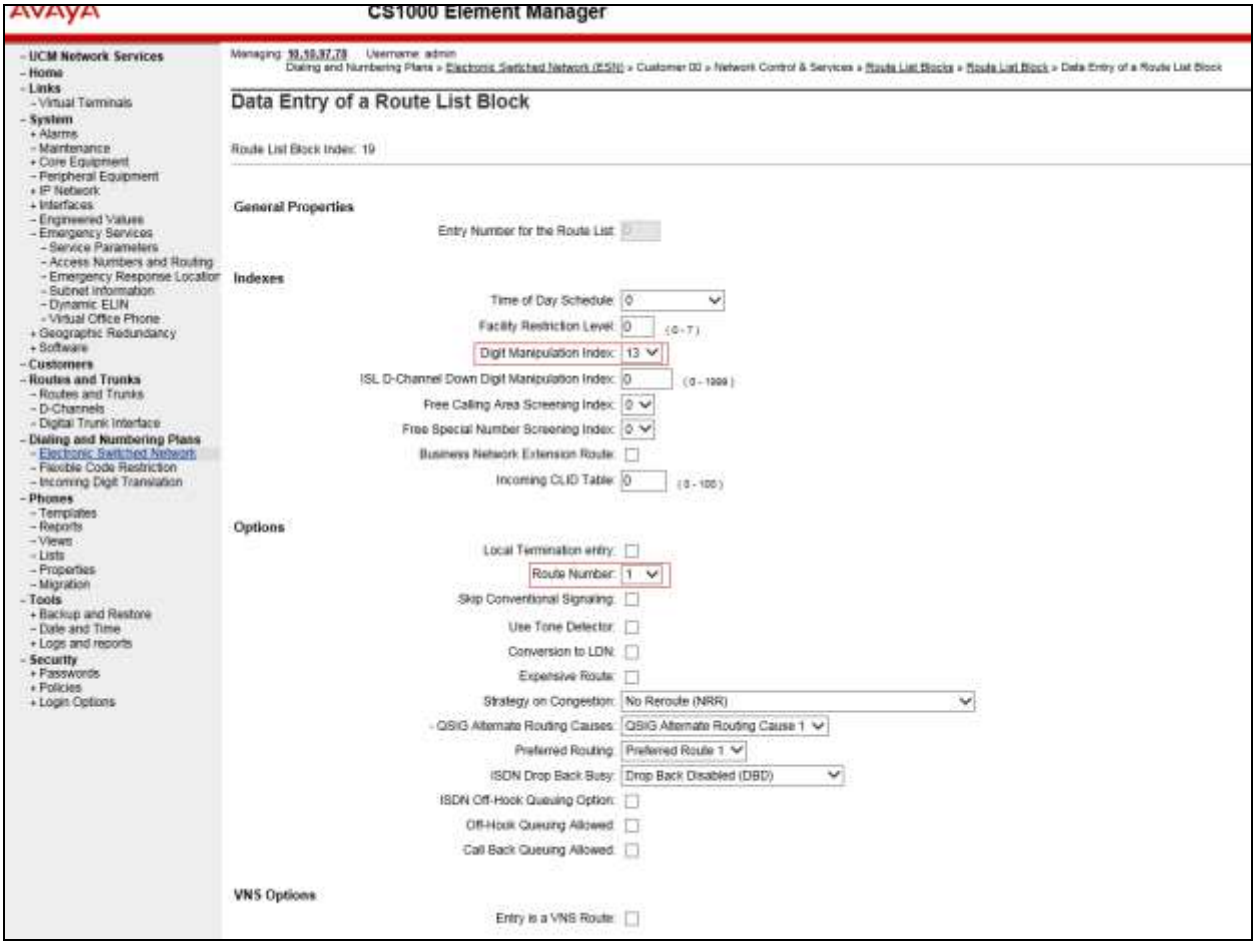
Navigate to **Dialing and Numbering Plans → Electronic Switched Network → Route List Block** (not shown) to add a new Route List Block. During compliance testing, Route List Block Index **19** was added as shown in the screen below. The following values were configured,

- **Digit manipulation Index**: *13*; this was the value cofigured above during compliance testing.
- **Route Number**: *1*; this was an active route that is used to route the call during compliance testing.

Retain default values for all other fields.



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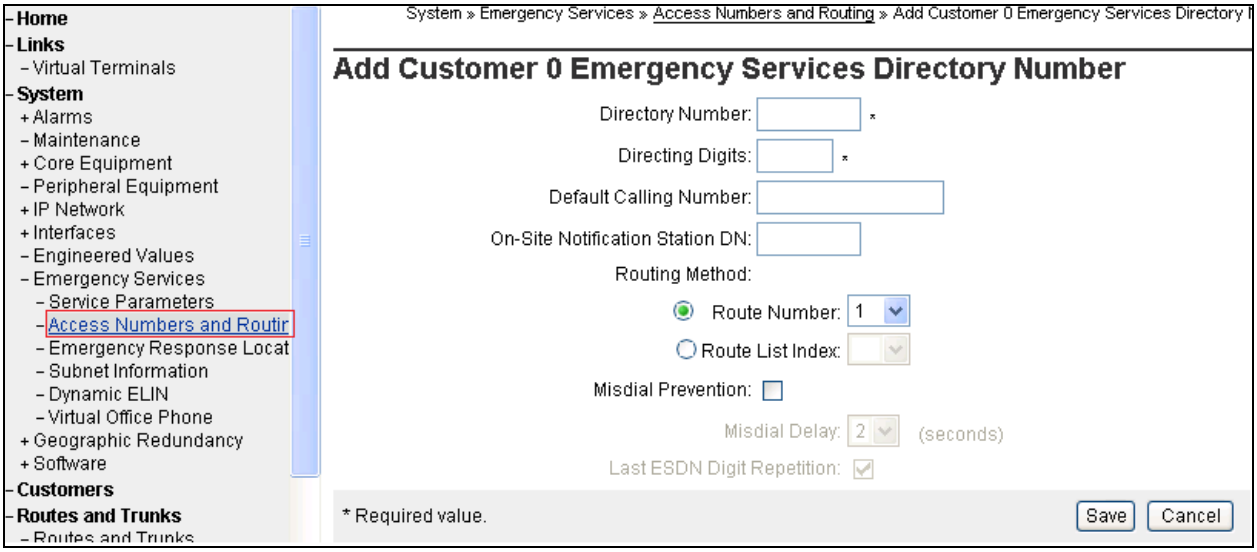
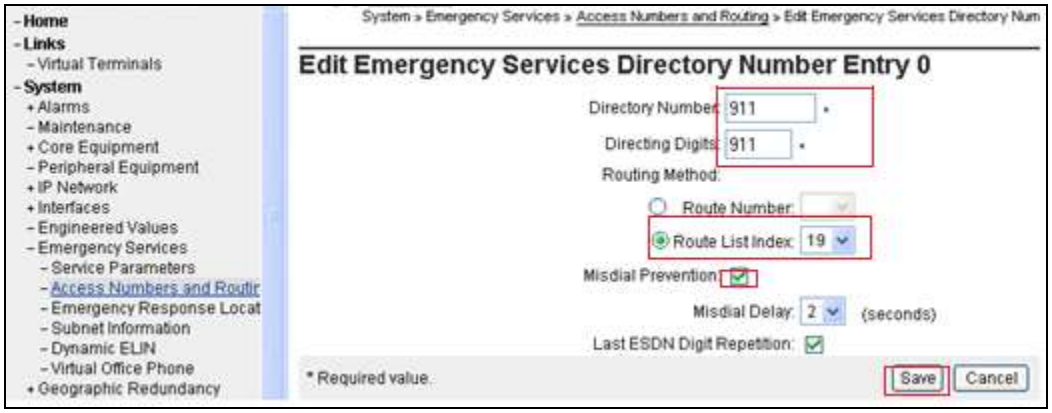
5.3. Configure Emergency Service Access (ESA)

Navigate to **System → Emergency Services → Access Numbers and Routing** to add an Emergency Service Directory Number**.** If there was no ESA Access Numbers and Routing configured, the **Emergency Services Directory Number** page appears as shown below.



Enter the following information as shown below,

- **Directory Number**: *911*
- **Directing Digit**: *911*
- **Routing Method**: Select *Route List Index* and choose the appropriate value available from pull down menu. During compliance testing *19* was selected as configured previously in **Section 5.2**.
- **Misdial Prevention**, a dialog box appears asking for your confirmation to enable the feature, click *OK.* The remaining fields were left at their default values. Click **Save**.



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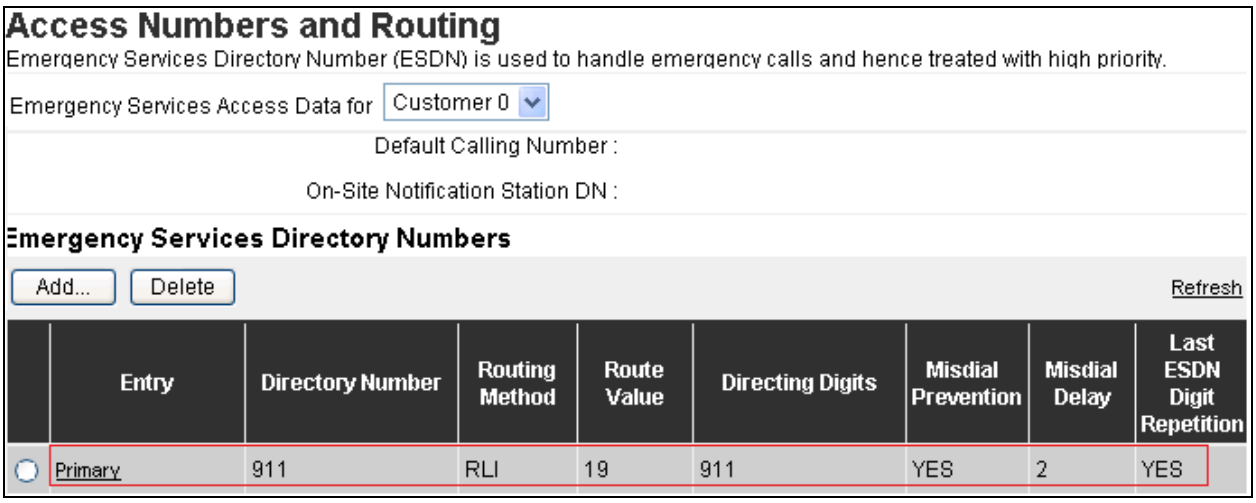
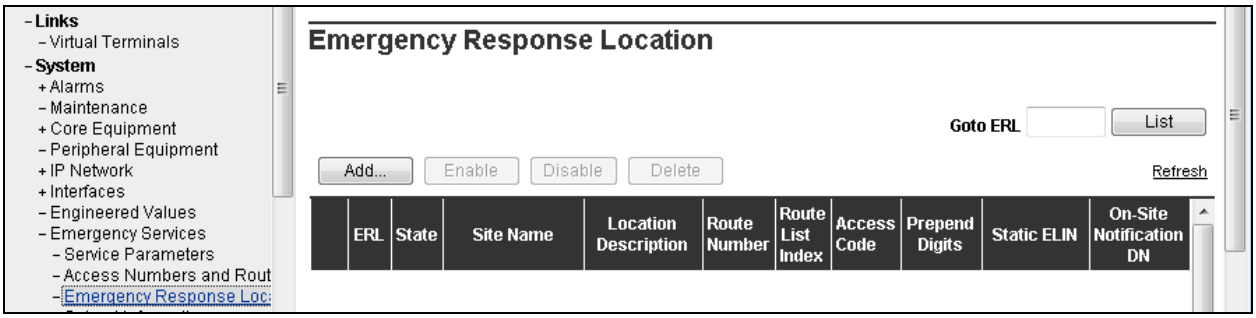
Screen below shows the completed configuration.



5.4. Configure Emergency Response Location (ERL)

Navigate to **System → Emergency Services → Emergency Response Location** to add an Emergency Response Location.

Click on **Add** from the screen shown below.



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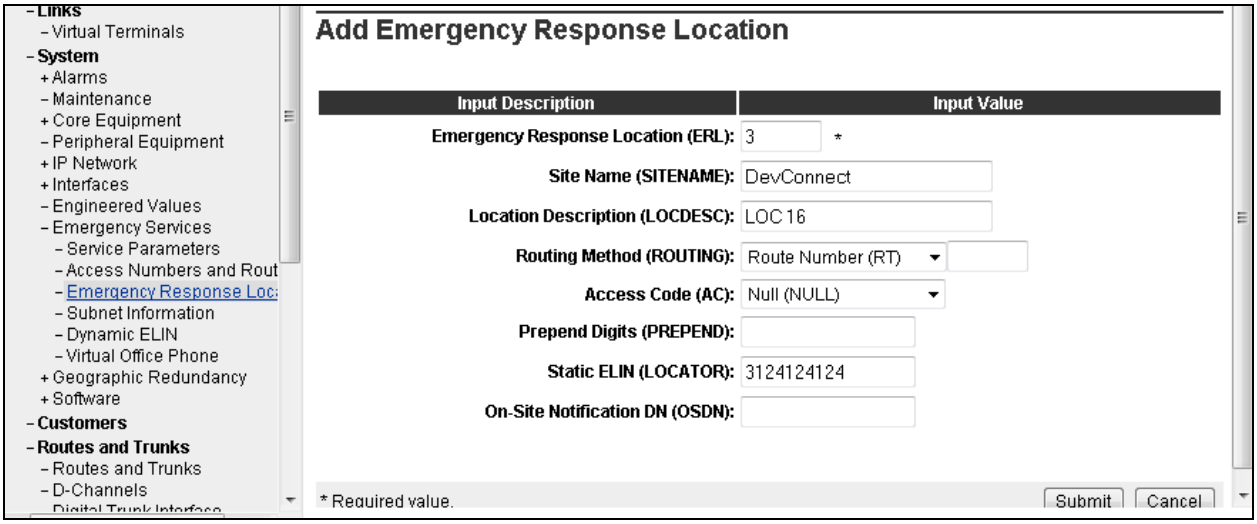
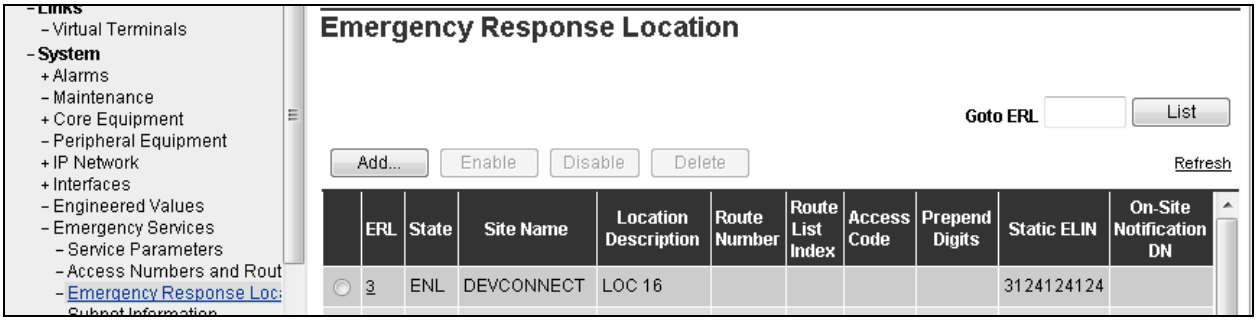
Configure the following fields as shown in the screen below,

- **Emergency Response Location (ERL)**: Enter an appropriate number.
- **Site Name (SITENAME)**: Enter a descriptive site name.
- **Location Description (LOCDESC)**: Enter a descriptive location name.
- **Static ELIN (LOCATOR)**: Enter a valid location entry.

Rest of the fields were left at default values during compliance testing. Click on **Submit** to complete the configuration.



Screen below shows an entry of an ERL added during compliance testing.



Note: *Genesis GenSwitch service will collect the above information using **PRT ERL** command in overlay **LD 117** at a scheduled time or on demand and use this information to populate the required fields for location identification during an emergency call.*

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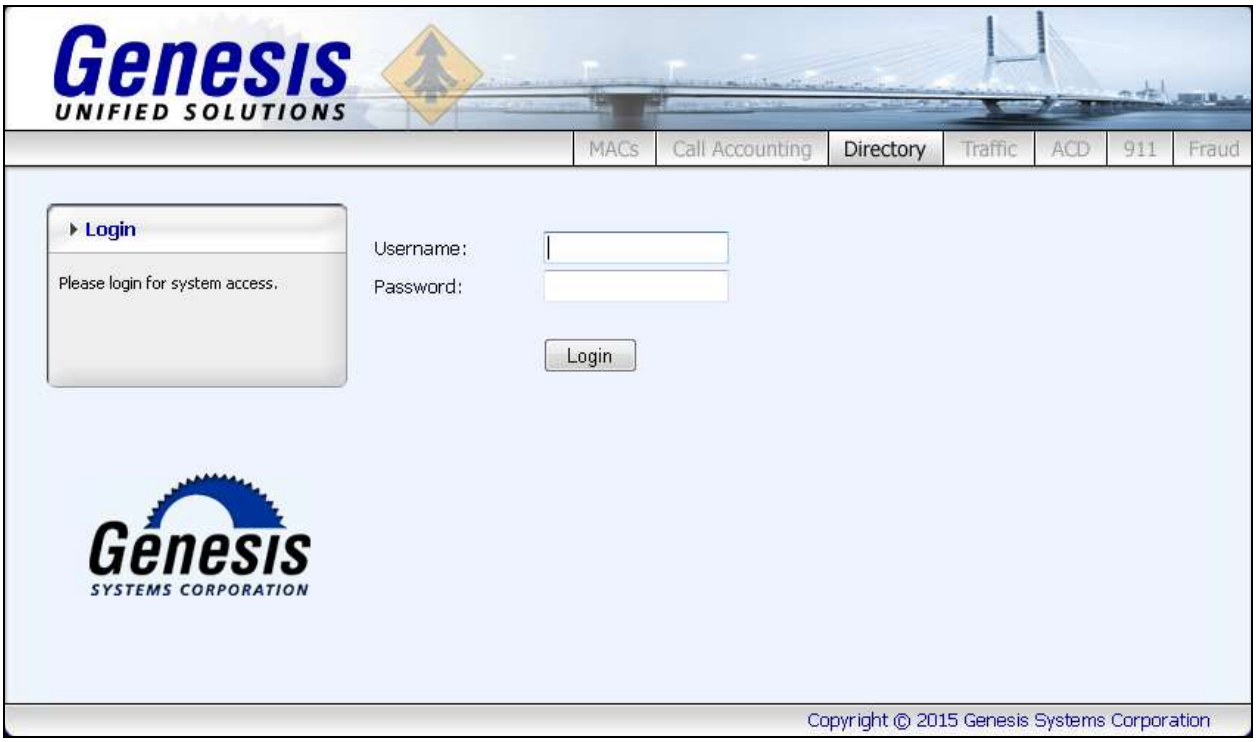
6. Configure Genesis GenAlert Solution

It is assumed that the GenAlert software has been installed, configured, and is ready for the integration with Avaya Communication Server 1000. The GenAlert Software Users Guide can be obtained by contacting Genesis. The sub-sections below only provide the steps required to configure the Genesis GenAlert Solution to interoperate with Communication Server 1000.

6.1. Genesis GenAlert Web Interface

Access the Genesis web interface by opening a web browser and entering the following URL: ***http://localhost/GenWeb***. Login to the web interface using the proper credentials.



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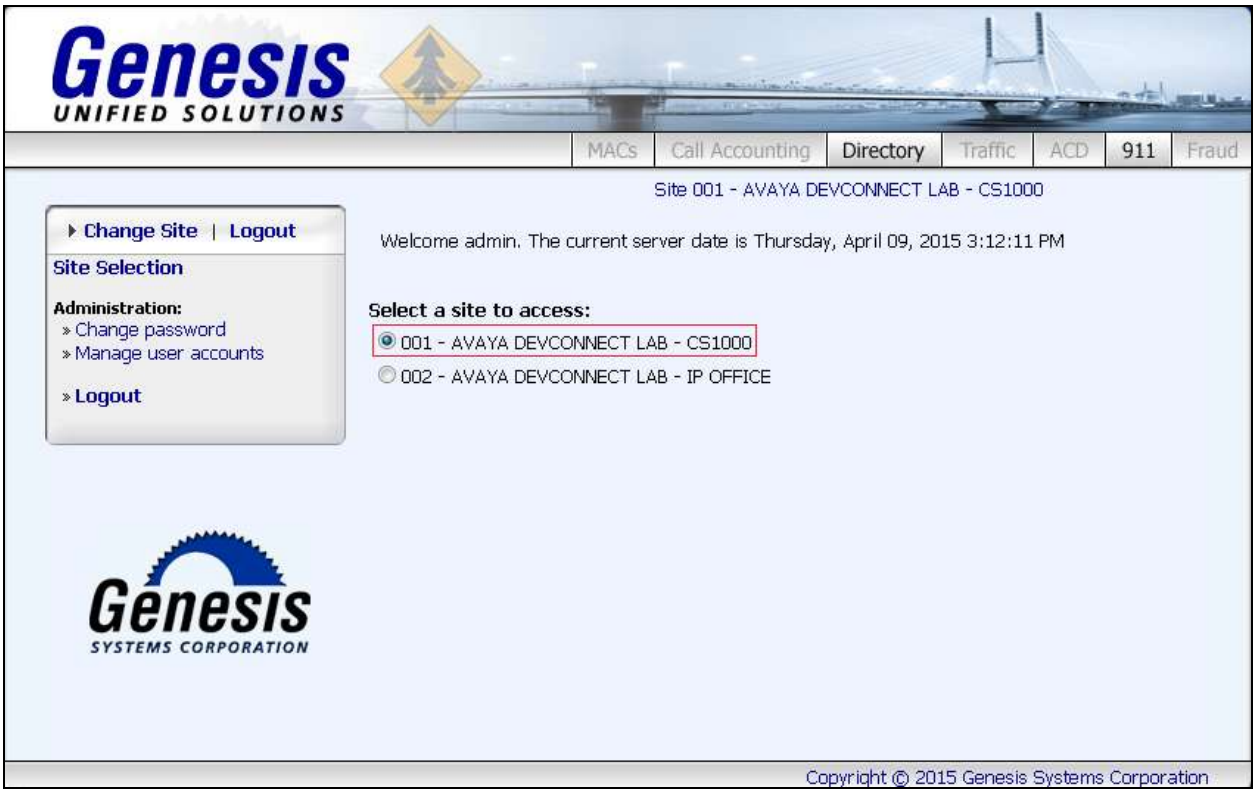
6.2. Configure Switch Settings

From the main page displayed below, select the required site and then navigate to the section **911**. Note that site/s is configured by Genesis based on licenses purchased.



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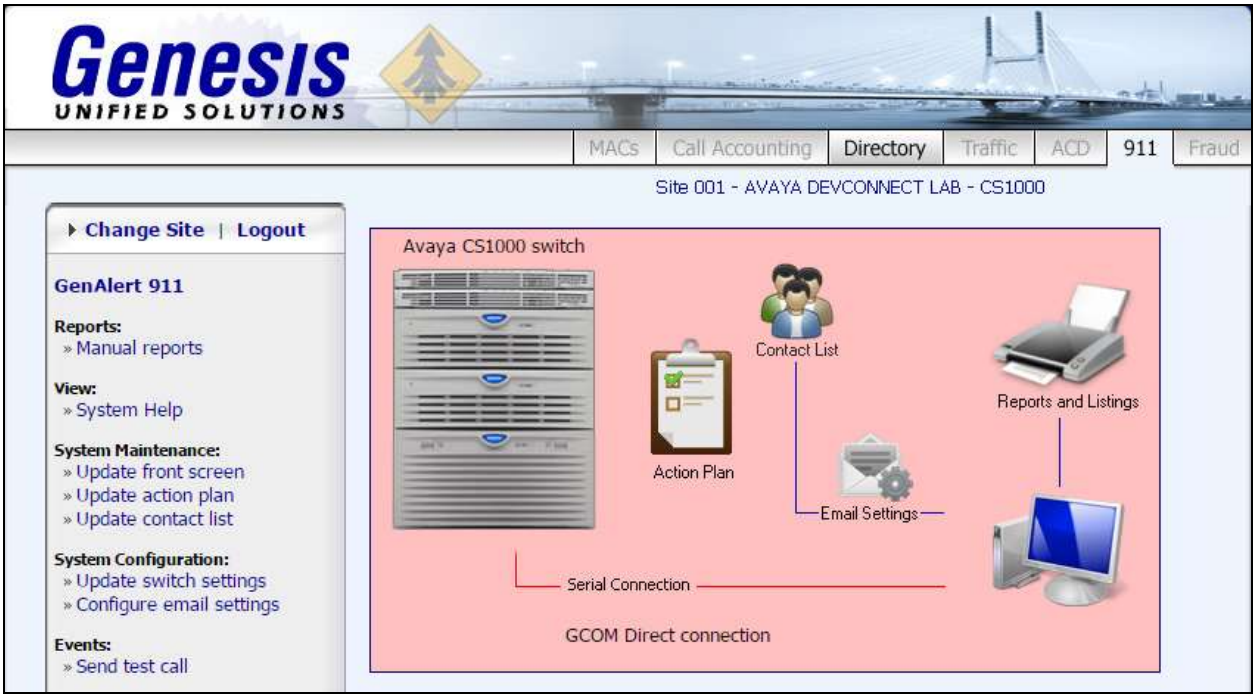
From the screen shown below, navigate to **System Configuration → Update switch settings**.



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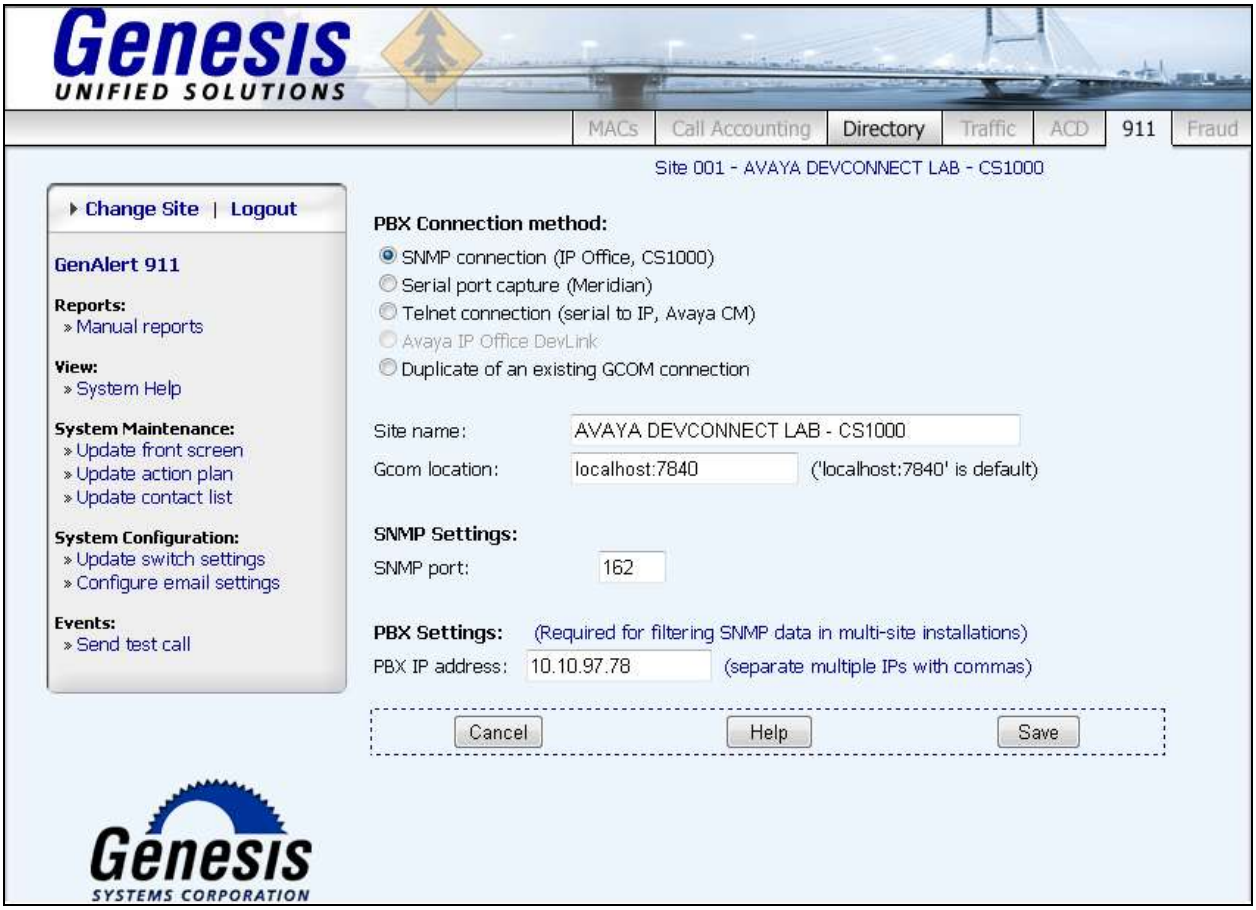
Configure the following fields,

- **PBX Connection method**: Select *SNMP connection (IP Office, CS1000)*
- **Site name**: A descriptive name.
- **SNMP port**: Enter the matching SNMP traps port mentioned in **Section 5.1**.
- **PBX IP address**: IP addresses of the Communication Server 1000 to monitor for SNMP traps. During compliance testing only one Communication Server 1000 was monitored.

Retain default values for all other fields and click on **Save** to complete the configuration.



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6.3. Configure Email Settings

For compliance testing Genesis mail server was used. To configure the email settings, navigate to **System Configuration → Configure email settings**. The values shown in the screen below were configured for compliance testing.

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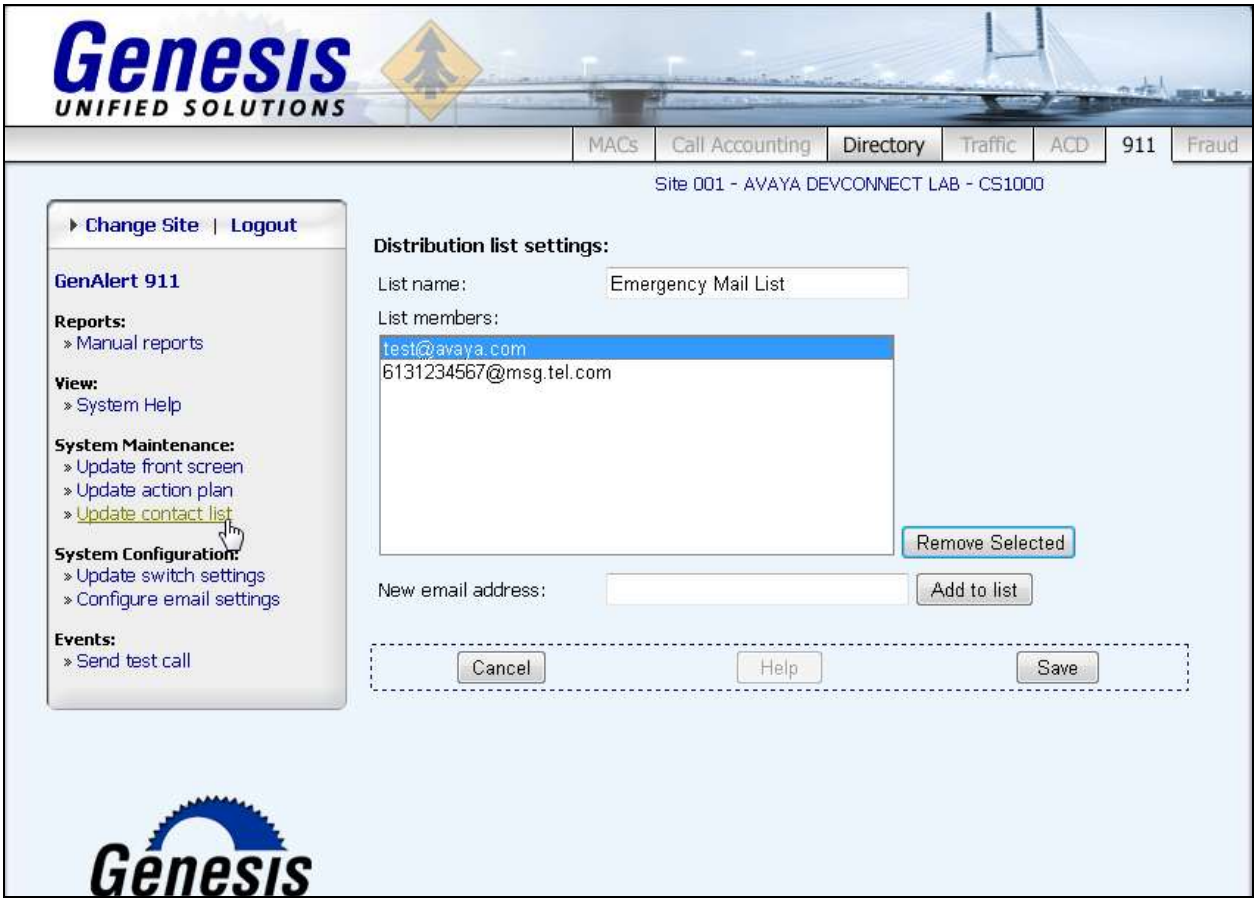
6.4. Configure Contact List

Emergency alerts can be forwarded to emails and also sent as SMS text messages via GenAlert. To configure email addresses or mobile numbers, navigate to **System Maintenance → Update contact list** as shown in the screen below. Enter the required email address or mobile number in the **New email address** field and click on **Add to list**. Click on **Save** to complete adding the required members.



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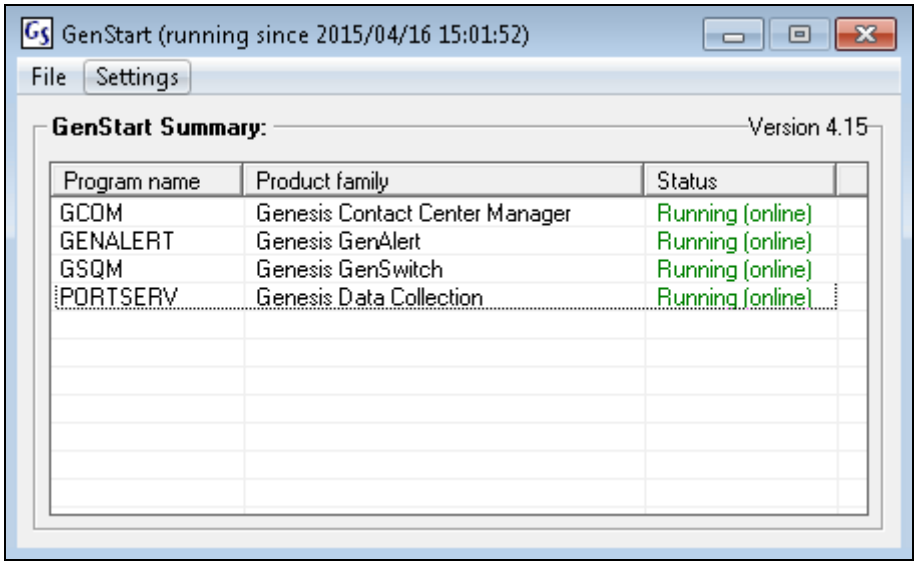
7. Verification Steps

This section includes some steps that can be followed to verify the configuration.

7.1. Verify Genesis Services

Verify that the Genesis Contact Center Manager (**GCOM**) and Genesis GenAlert (**GENALERT**) services are online by selecting **show** from the **GenStart** icon (not shown) in the Windows System Tray on the Genesis server.

Also verify that Genesis GenSwitch **(GSQM)** and Genesis Data Collection **(PORTSERV)** services are online and running. These services are required to collect the ERL information that is used for location identification.



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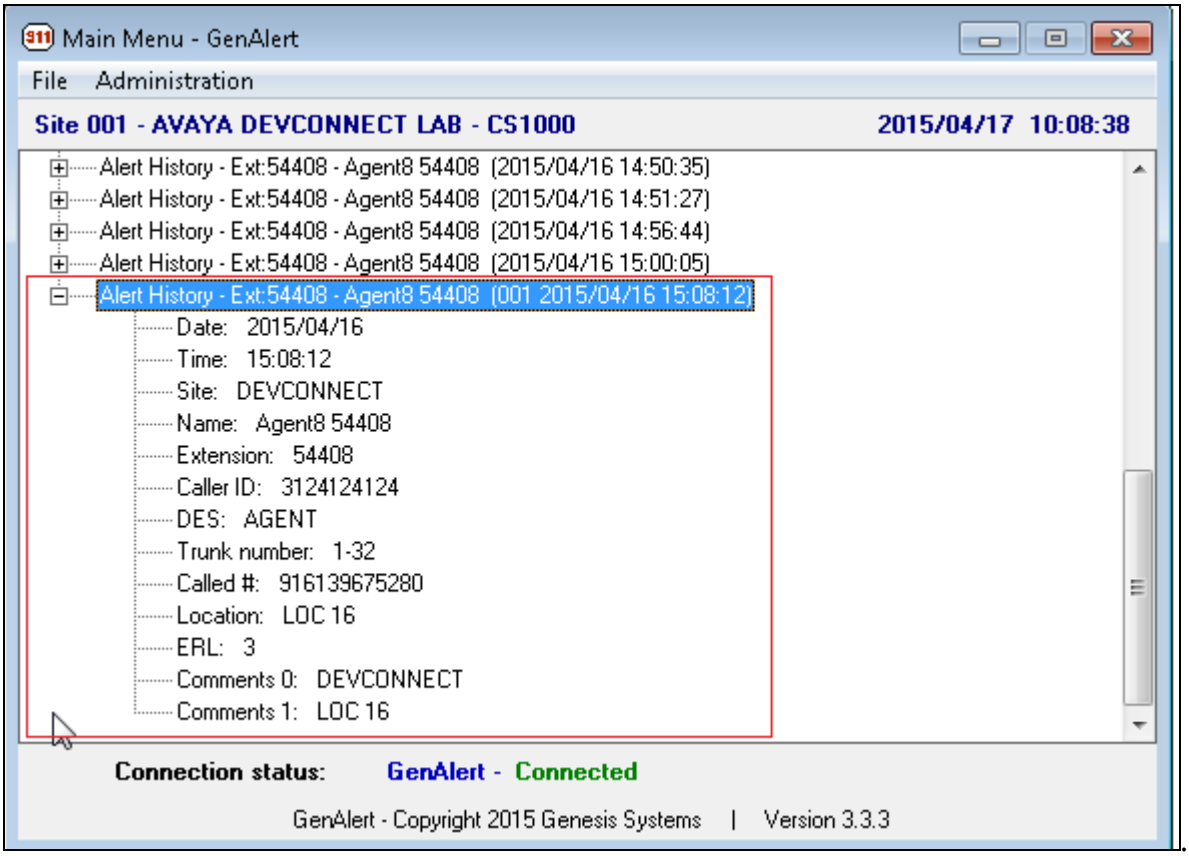
7.2. Verify Emergency Call Messages

Launch the **GenAler**t application installed on any PC. Generate an emergency call and verify that an alert is generated and the information shown in the alert is accurate as shown in the screen below. The alert information was also received via email and SMS text message and verified for accuracy.



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8. Conclusion

The Genesis GenAlert solution passed compliance testing. These Application Notes describe the procedures required for the Genesis GenAlert solution to interoperate with Avaya Communication Server 1000 to support the reference configuration shown in **Figure 1**. Refer to **Section 2.2** for testing result details and any observations noted during testing.

9. Additional References

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

[1] *NN43001-613, 05.03 Communication Server 1000 Emergency Services Access Fundamentals.*
[2] *NN43001-116, 05.16 Communication Server 1000 Unified Communications Management Common Services Fundamentals.*
[3] *Software Input Output Reference — Administration Avaya Communication Server 1000 7.6 NN43001-611.*
[4] *NN43001-719, 05.02 Communication Server 1000 Fault Management – SNMP.*

Product documentation for the Genesis GenAlert Solution can be found at http://www.buygenesis.com/software/911-alerts/genalert.htm.

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