Avaya Solution & Interoperability Test Lab

Application Notes for RedSky Technologies E911 Manager and Network Discovery with Avaya Communication Manager – Issue 1.0

Abstract

These Application Notes describe a compliance-tested configuration consisting of Avaya Communication Manager and the RedSky Technologies E911 Manager and Network Discovery. The RedSky E911 Manager retrieves emergency numbering and location information for a station from a PBX. The RedSky E911 Manager validates, reformats, and uploads the information to public Automatic Location Identification (ALI) databases. With Network Discovery, E911 Manager is automatically notified by the PBX in real-time when an IP telephone registers on the network. Network Discovery determines the location of the telephone based on its IP address, port, and network device. During compliance testing, the RedSky E911 Manager successfully retrieved station emergency numbering and location information after Avaya Communication Manager stations were added, deleted, and changed. In addition, the RedSky E911 Manager was able to use Network Discovery to determine the port and network device of the user and assign the proper ELIN (Emergency Location Identification Number (ELIN) that corresponds to the location of the user.

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 a compliance-tested configuration consisting of Avaya Communication Manager and the RedSky Technologies E911 Manager and Network Discovery. The RedSky E911 Manager retrieves emergency numbering and location information for a station from a PBX. The RedSky E911 Manager validates, reformats, and uploads the information to public Automatic Location Identification (ALI) databases. With Network Discovery, E911 Manager is automatically notified by the PBX in real-time when an IP telephone registers on the network. Network Discovery determines the location of the telephone based on its IP address, port, and network device. During compliance testing, the RedSky E911 Manager successfully retrieved station emergency numbering and location information after Avaya Communication Manager stations were added, deleted, and changed. In addition, the RedSky E911 Manager was able to use Network Discovery to determine the port and network device of the user and assign the proper Emergency Location Identification Number (ELIN) that corresponds to the location of the user.

Figure 1 illustrates a sample configuration consisting of:

- Avaya S8720, S8500, S8300 Servers
- Avaya G650 and G350 Media Gateways
- Avaya IP, digital, and analog telephones
- RedSky E911 Manager primary and backup servers

The compliance testing focused on verifying the generation of the ALI records and not on the transfer of ALI records to ALI databases.

The RedSky E911 Manager retrieves station numbering and location information from Avaya Communication Manager at user defined intervals.

There are two options for location identification, Network Range and Network Discovery. A Network Range can be defined in the RedSky E911 manager to associate each network region or subnet to a range of IP addresses. Each IP address range will have an assigned Emergency Location Identification Number (ELIN) that serves as the 10-digit number that is sent over the network for 911 calling.

Network Discovery is a protocol used by the RedSky E911 Manager to detect and track a more specific location of new users registering on the network. When a phone registers on the network, the RedSky E911 Manager captures the port and network device and assigns the proper ELIN to the Emergency Location Extension field of the station form on the PBX.

A network matrix is maintained in the RedSky E911 Manager that contains associations of Emergency Response Locations (ERL) to Emergency Location Identification Numbers (ELIN). Each network device or port is assigned to an ERL that describes the building, floor, and quadrant location. Each ERL has an associated ELIN which is the ten-digit telephone number that is sent over the Public Switched Telephone Network (PSTN) when a 911 call is placed.

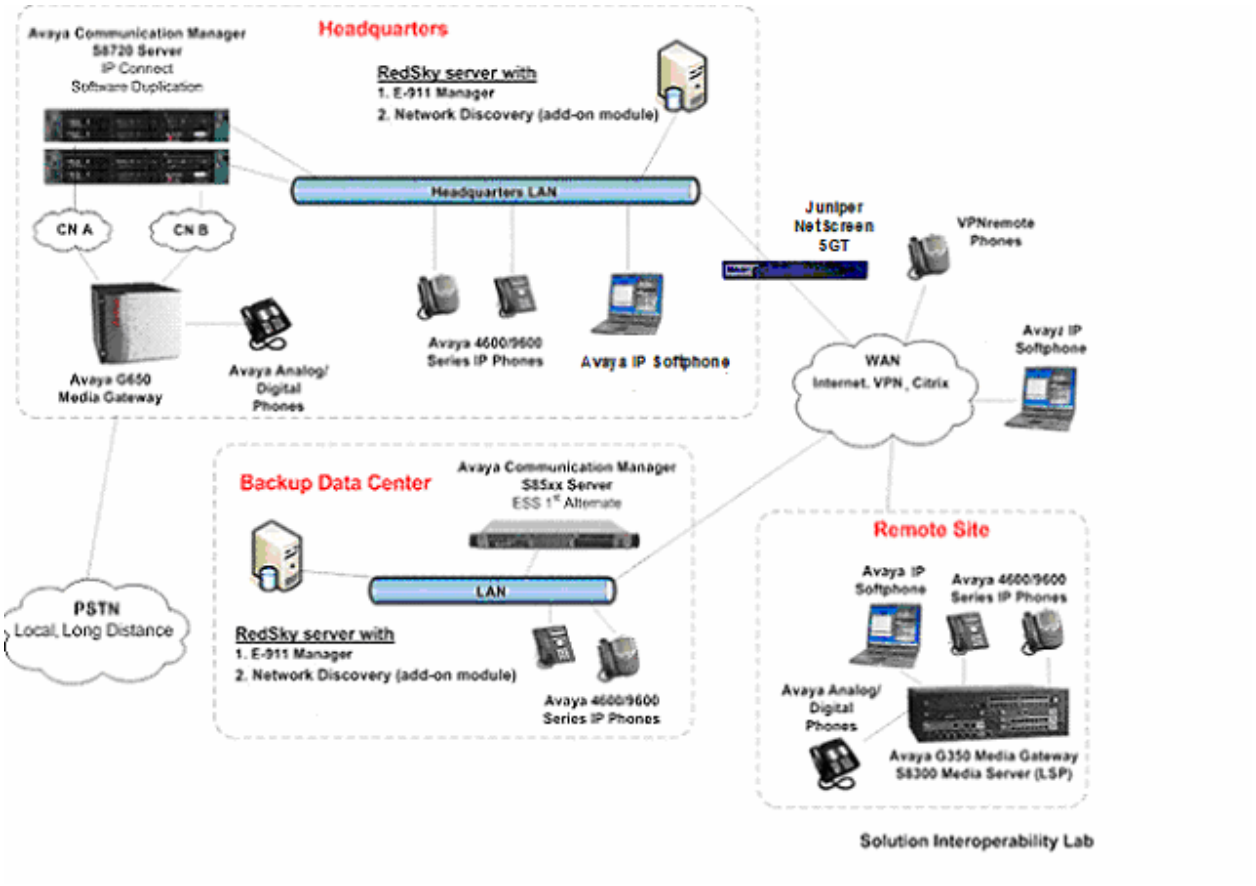


Figure 1 – Sample Configuration

2. Equipment and Software Validated

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

Equipment	Version
Avaya Communication Manager - Avaya S8720 Servers - Avaya S8500 Server - Avaya S8300 Server	5.0 (R015x.00.0.825.4) Headquarter ESS LSP
Avaya G650 Media Gateway - IPSI (TN2312BP) - C-LAN (TN799DP) - MedPro (TN2602AP)	 HW15 FW039 HW01 FW156 HW02 FW033
Avaya 4600 Series H.323 Phones	2.8
Avaya G350 Media Gateway	27.26.0
Avaya 9600 Series H.323 Phones	1.5
Avaya IP Softphone	6.0.0.25
Avaya 6211 Analog Phone	---
Avaya 2420 Digital Phone	---
Juniper NetScreen 5GT	5.3.0r2.0
RedSky Technologies - E911 Manager - Network Discovery	Windows 2003 Server Standard Edition with SP2 5.4.2 5.4.2

3. Configure Avaya Communication Manager

This section describes the steps for configuring IP registration logging, the public/unknown numbering formats and stations with location information (e.g., room, floor, building), System Access Terminal (SAT) access for the RedSky servers, and the ARS dial plan for alerts. The commands shown were issued from the SAT.

3.1. Enable Logging for IP Registrations

Use the **change logging-levels** command to set the *Log IP Registrations and events* field to **y** on Page 2 of the **Logging Levels** form.

```
change logging-levels                                          Page   2 of   2

                                LOGGING LEVELS

     Log All Submission Failures: y
          Log PMS/AD Transactions: n
  Log IP Registrations and events: y
    Log CTA/PSA/TTI Transactions: y
```

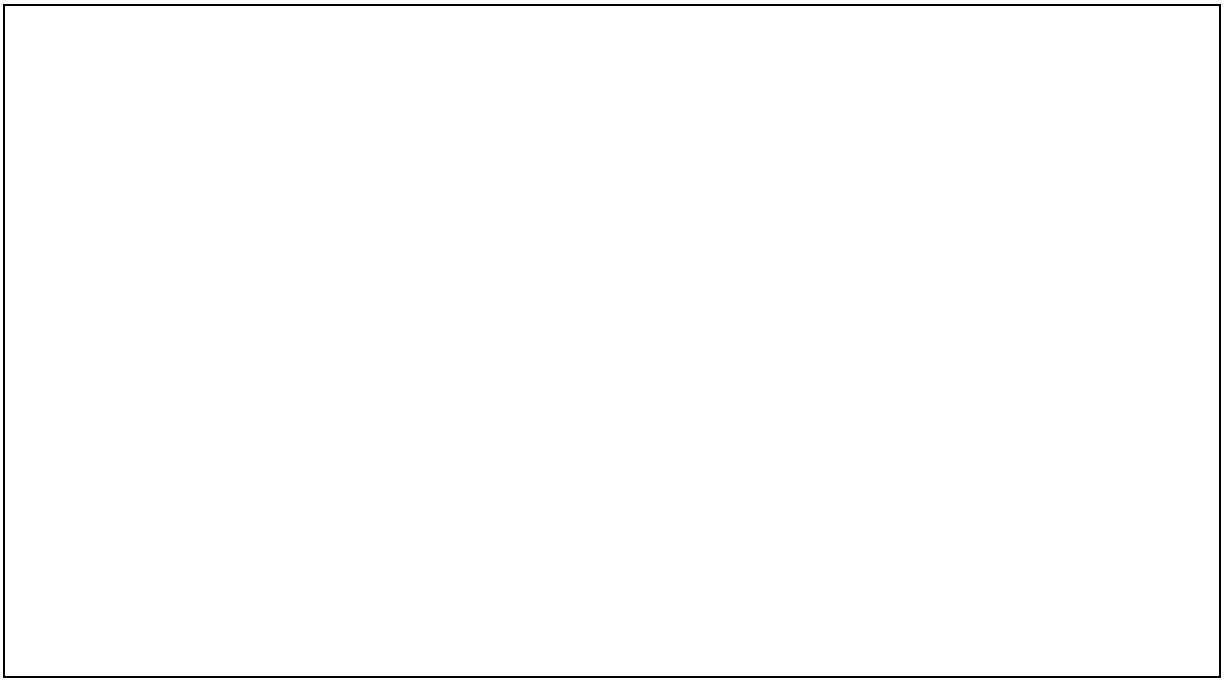
3.2. Configure Numbering

Use the **change public-unknown-numbering** command to specify the digits which will be prefixed to the calling party number of outbound calls routed to ISDN trunk groups. In the example shown below, 5-digit calling party numbers that begin with a **"2"** will be prefixed with **"73285"** to form a 10-digit calling party number. If the *Trk Grp(s)* field is blank, then the entry applies to all calls originated by **"2xxxx"** extensions and routed to any ISDN trunk group. The RedSky E911 Manager retrieves the information in this table from Avaya Communication Manager to form 10-digit numbers for stations before uploading to the ALI databases.

```
change public-unknown-numbering 0                              Page   1 of   2
                     NUMBERING - PUBLIC/UNKNOWN FORMAT
                                          Total
Ext  Ext             Trk        CPN       CPN
Len  Code            Grp(s)     Prefix    Len
                                                  Total Administered: 4
 5   2                          73285     10        Maximum Entries: 9999
 5   4                                    5
 5   5                                    5
 5   49                         73224     10
```

3.3. Configure Station Location Information

Use the **change station n** command, where **n** is an existing station. On Page 1 of the **station** form, enter a *Name* if one has not been entered yet.



On Page 2 of the **station** form, if external callers can reach the station extension directly, set the *Emergency Location Ext* field to the station extension (default). If not, set the *Emergency Location Ext* field to the extension of a DID station. The *Emergency Location Ext* is used, along with any modifications defined in the **public-unknown-numbering** form (see Section 3.2), to form the Calling Party Number for an outbound 911 call and provides the PSAP with a direct call back number. The *Always Use* field should be set to **y**, so that the *Emergency Location Ext* is always used to form the Calling Party Number. The RedSky E911 Manager does not currently consider the *Always Use* parameter.

```
change station 23000                                        Page   2 of   5
                                  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
                                                      EMU Login Allowed? y
        H.320 Conversion? n          Per Station CPN - Send Calling Number?
      Service Link Mode: as-needed
        Multimedia Mode: enhanced                 Audible Message Waiting? n
    MWI Served User Type:                       Display Client Redirection? n
            AUDIX Name:                        Select Last Used Appearance? n
                                                 Coverage After Forwarding? s
                                                   Multimedia Early Answer? n
                                              Direct IP-IP Audio Connections? y
  Emergency Location Ext: 23000          Always Use? y IP Audio Hairpinning? n
```

3.4. Configure IP Node Names

Use the **change node-names ip** command to create node names (e.g., **RedSky1** and **RedSky2**) and enter the IP addresses (e.g., **9.1.1.55** and **9.1.1.56**) for the RedSky E911 servers. Note the node-name and IP address of the C-LAN board which will be used by E911 Manager to connect and retrieve station and location information from Avaya Communication Manager.

```
change node-names ip                                          Page   1 of   2
                                  IP NODE NAMES
    Name                   IP Address
AES1                    9.1.1.50
CLAN-01A02              9.1.1.8
CLAN-01B02              9.1.1.9
CLAN-RETAIL             30.1.1.4
FCSWinsuite             9.1.1.203
GVT-S8300-LSP           9.1.4.2
MedPro-01A03            9.1.1.5
MedPro-01B07            9.1.1.6
RedSky1                 9.1.1.55
RedSky2                 9.1.1.56
S8500-ESS               9.1.1.13
SES1                    9.1.1.34
VAL-01A12               9.1.1.12
clan-trade              5.1.1.4
default                 0.0.0.0
govmas1                 9.1.1.31
```

3.5. Configure IP Services

Use the **change ip-services** command to configure entries for the RedSky E911 servers as follows:

- *Service Type* – Set to **SAT**.
- *Enabled* – Set to **y**.
- *Local Node* – Set to the node name (e.g., **CLAN-01A02**) of the C-LAN in Section 3.5.
- *Local Port* – Set to **5023**.
- *Remote Node* – Set to the node names (e.g., **RedSky1** and **RedSky2**) of the RedSky E911 servers in Section 3.5.
- *Remote Port* – Set to the default value.

```
change ip-services                                            Page   1 of   4

                                  IP SERVICES
 Service      Enabled     Local       Local       Remote      Remote
  Type                    Node        Port        Node        Port
PMS                    CLAN-01A02     0       FCSWinsuite     5103
CDR1                   CLAN-01A02     0       FCSWinsuite     5050
SAT             y      CLAN-01A02     5023    RedSky1         0
SAT             y      CLAN-01A02     5023    RedSky2         0
AESVCS          y      CLAN-01A02     8765
AESVCS          y      CLAN-01B02     8765
```

3.6. Configure ARS Dial Plan for Alerts

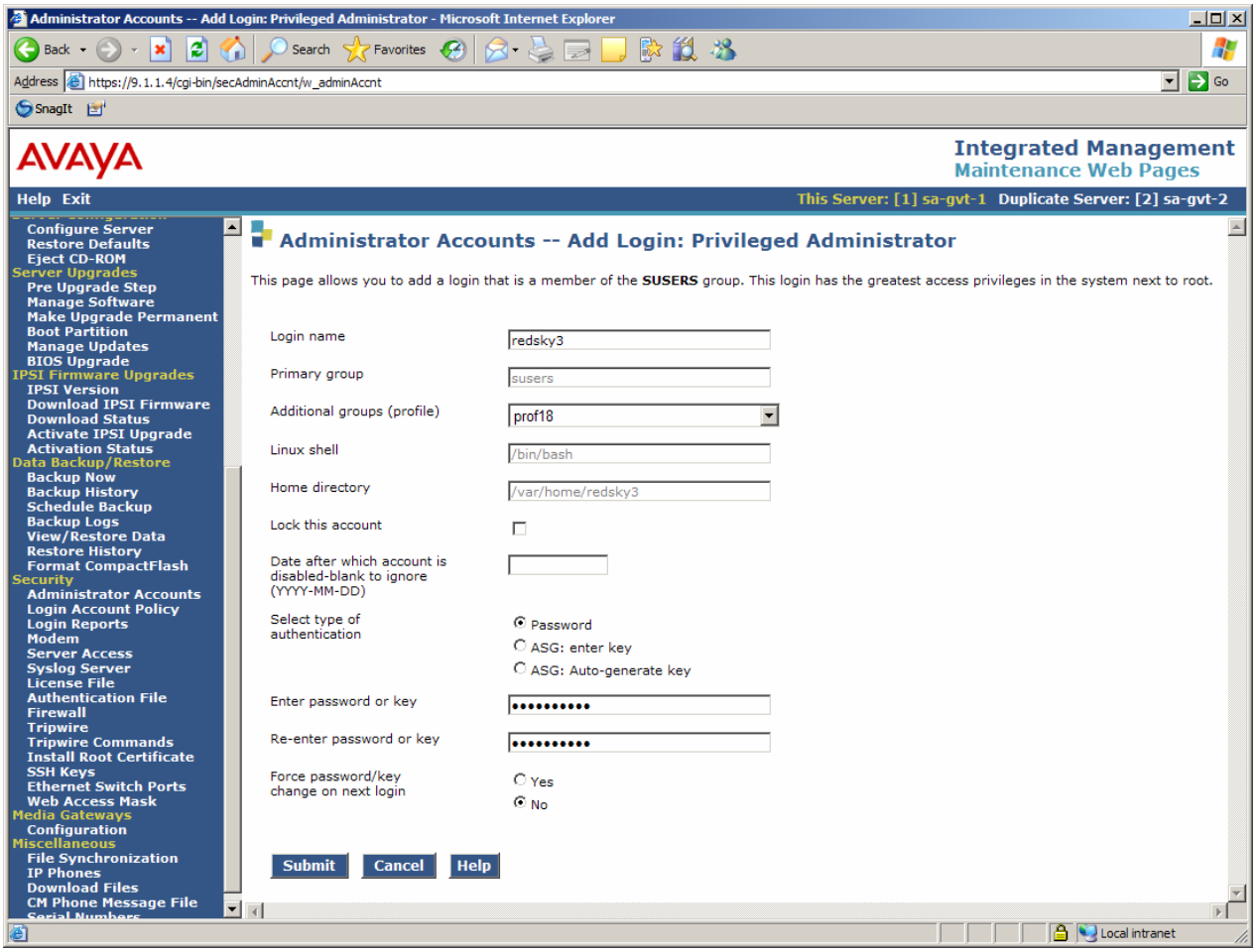
Use the **change ars analysis 911** command to alert for E911 calls. Add an entry to set the *Call Type* to **alrt** for **"911"** calls. If the digit **"9"** is used as the ARS Feature Access Code in Avaya Communication Manager, then add an entry for the Dialed String of "**9911**" with *Call Type* set to **alrt**. These two entries allow the caller to dial either "**911**" or "**9911**" when placing a 911 call.

```
change ars analysis 911                                    Page   1 of   2
                         ARS DIGIT ANALYSIS TABLE
                                Location:  all          Percent Full:    1

          Dialed          Total     Route    Call   Node  ANI
          String          Min  Max  Pattern  Type   Num   Reqd
     911                  3    3    1        alrt         n
     976                  7    7    deny     hnpa         n
     9911                 4    4    1        alrt         n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
                                                          n
```

3.7. Create Login for RedSky E911 Manager

Launch the Maintenance web interface for Avaya Communication Manager. Click the **Administrator Accounts** option under *Security* on the left half of the screen. On the screen that appears (not shown), select the **Add Login** action and the *Privileged Administrator* radio button. Click **Submit**. On the Administrator Accounts – Add Login screen, enter a *Login name* and *password* that will be used by the Redsky E911 Manager to log into Avaya Communication Manager. The login and password will be used in Step 3 of Section 4. Click **Submit**.



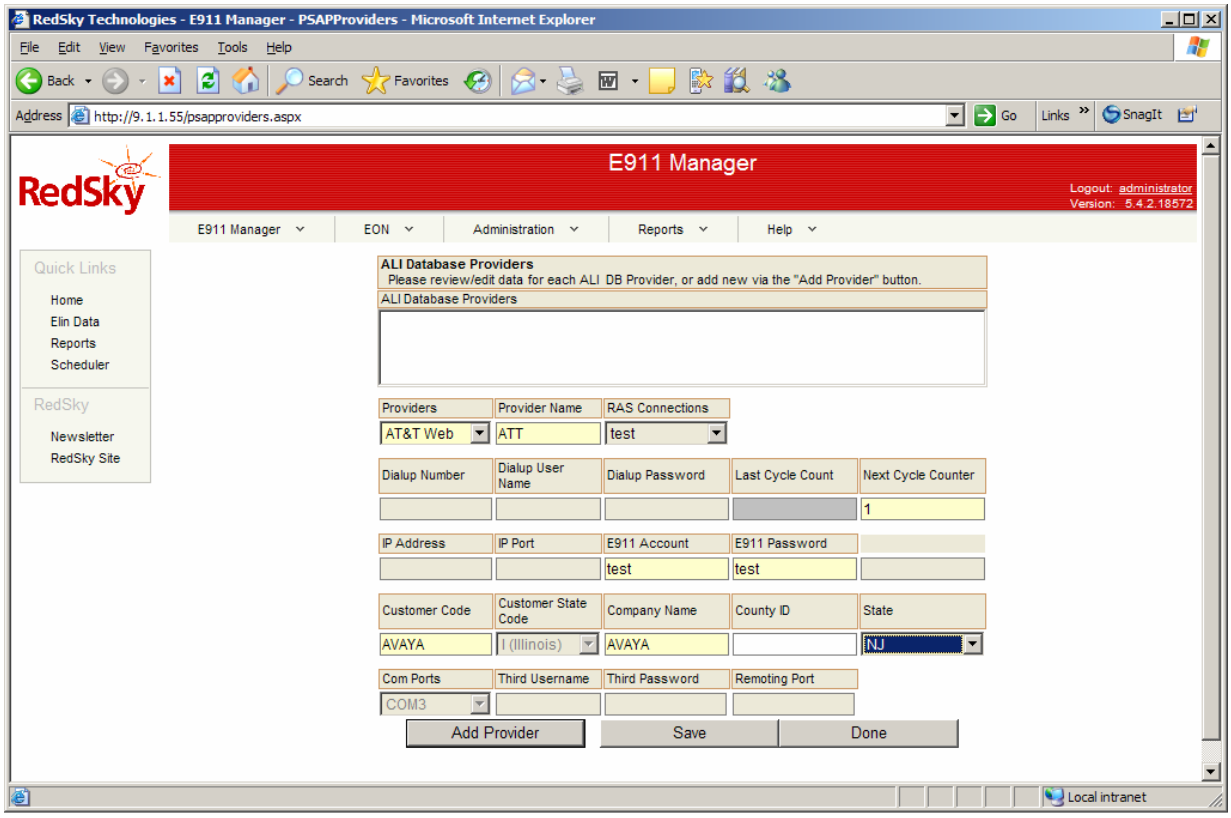
4. Configure RedSky E911 Manager

This section provides the steps for configuring the RedSky E911 Manager to retrieve station numbering and location information from Avaya Communication Manager.

1. Launch a web browser and enter http://<IP address of E911 Manager server>/home.aspx as the URL and log in with the appropriate credentials. The following *Tasks* list is shown. The tasks listed will change depending on the *Switch Type* selected in Step 7 for the "Define Phone Switch Parameters" task.

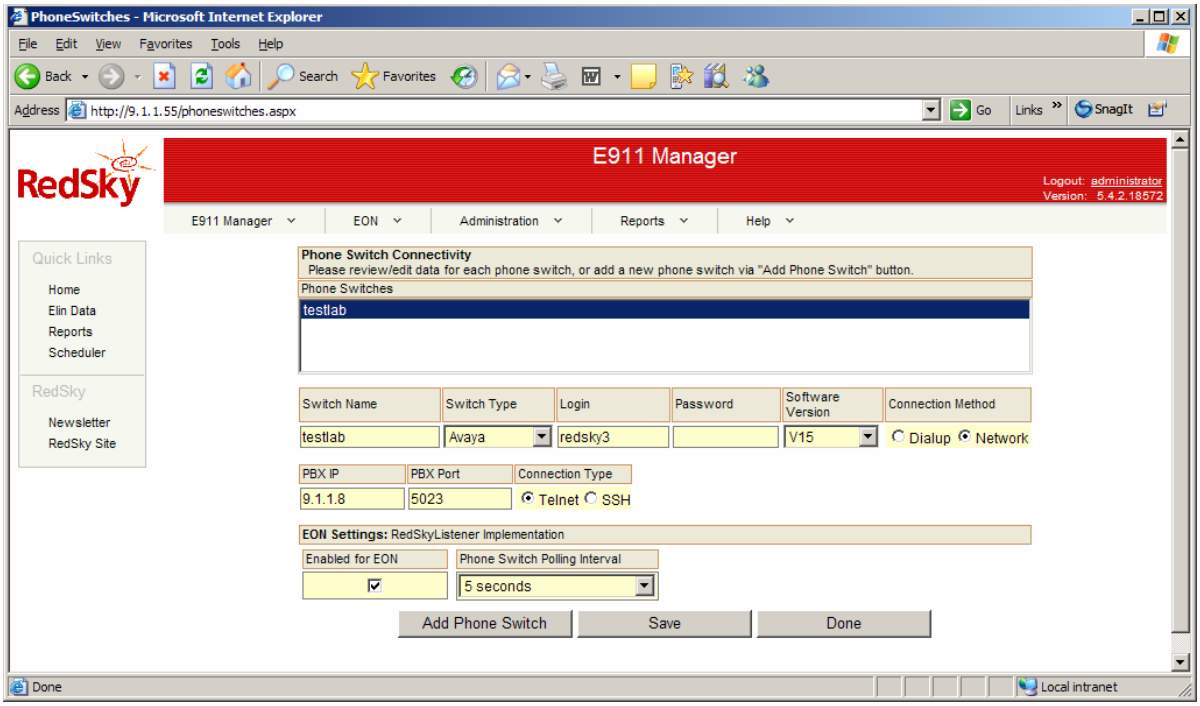
2. From the *Tasks* list, click on **ALI Database Providers** and then click **Add Provider**. Configure the following parameters:
    - *Providers* – Select AT&T Web from the drop-down list.
    - *Provider Name* – Enter **ATT**.
    - *RAS Connections* – Select **test** from the drop-down list.
    - *Next Cycle Counter* – Enter **1**.
    - *E911 Account* – Enter **test**.
    - *E911 Password* – Enter **test**.
    - *Customer Code* – Enter **AVAYA**.
    - *Company Name* – Enter **AVAYA**.
    - *State* – Select **NJ** from the drop-down list.

    Click **Save**, then **Done**.

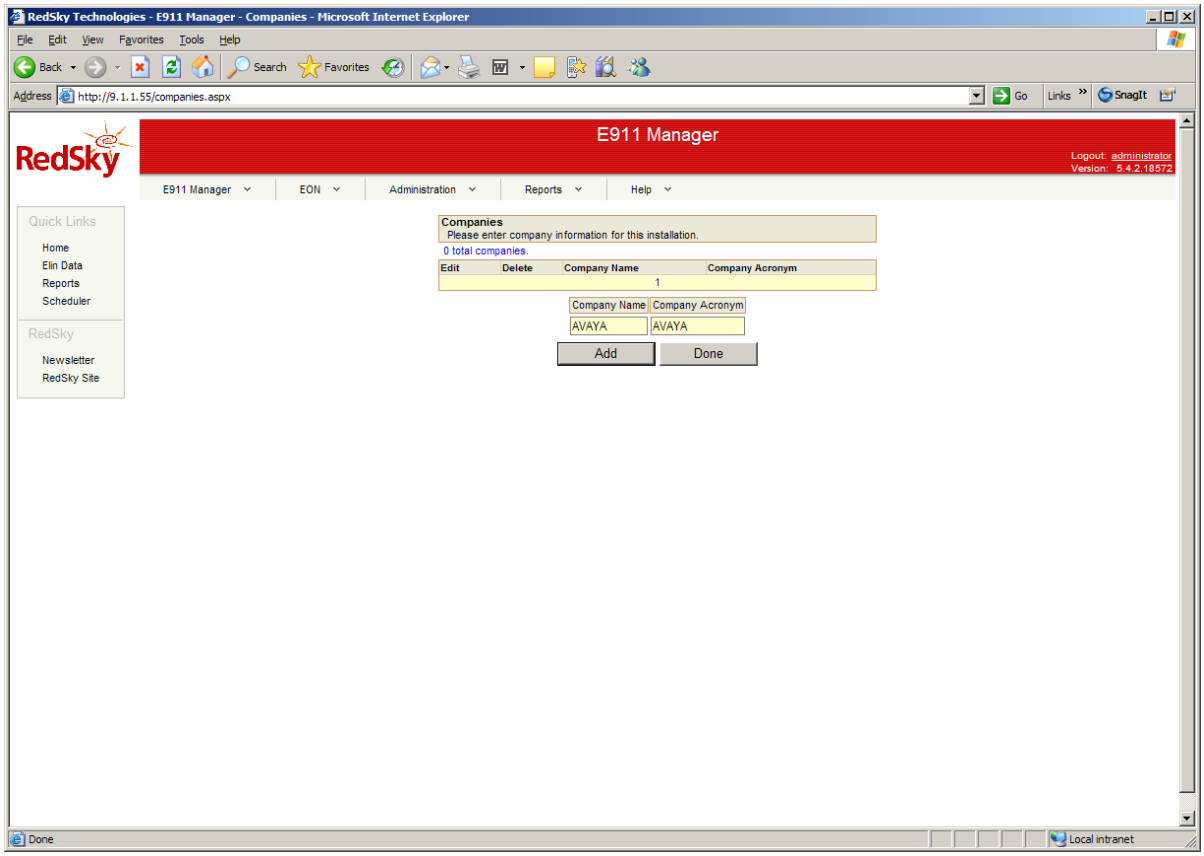


3. From the **Tasks** list, click on **Define Phone Switch Connectivity**. Click on **Add Phone Switch**. Configure the following parameters:
    - *Switch Name* – Enter a name for the switch.
    - *Switch Type* – Select **Avaya** from the drop-down list.
    - *Login* – Enter the login created in Section 3.7.
    - *Password* – Enter the password created in Section 3.7.
    - *Software Version* – Select **V15** from the drop-down list.
    - *Connection Method* – Select **Network**.
    - *PBX IP* – Enter the IP address of the C-LAN board on which the SAT service is enabled (see Section 3.4).
    - *PBX Port* – Enter **5023**.
    - *EON Settings* – Check to enable EON.
    - *Phone Switch Polling Interval* – Accept the default.

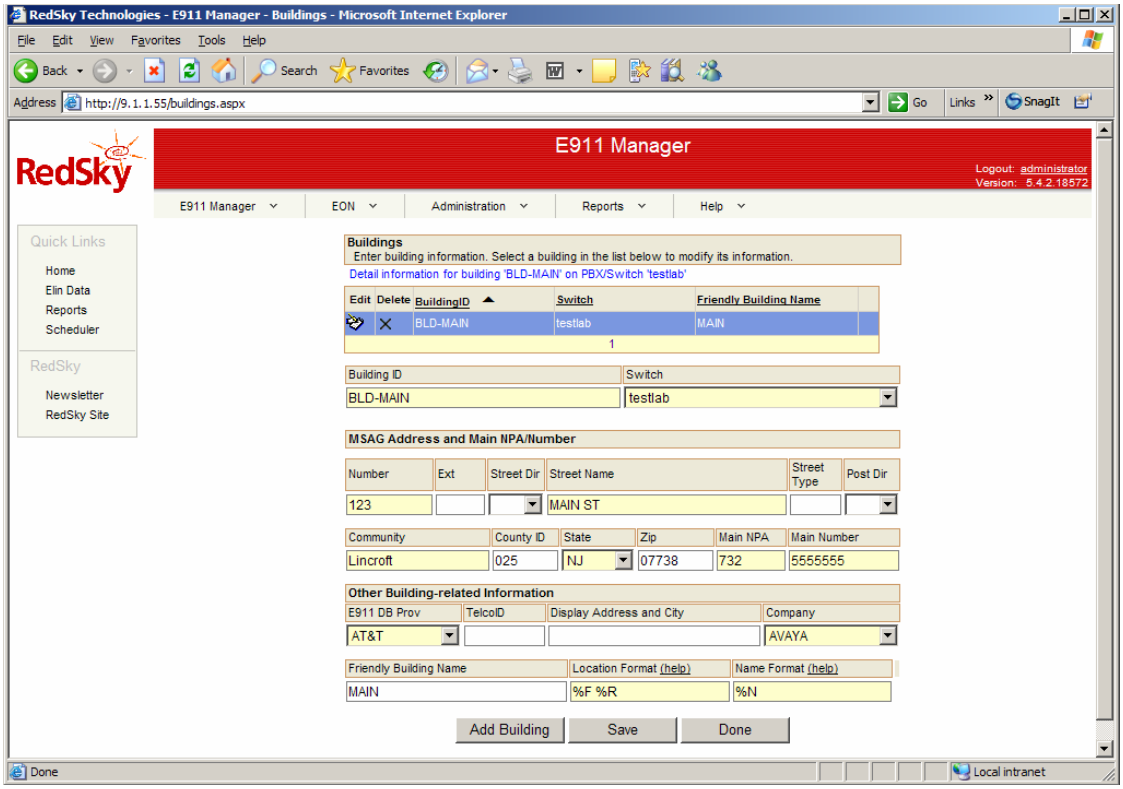
    Click **Save,** then **Done**.



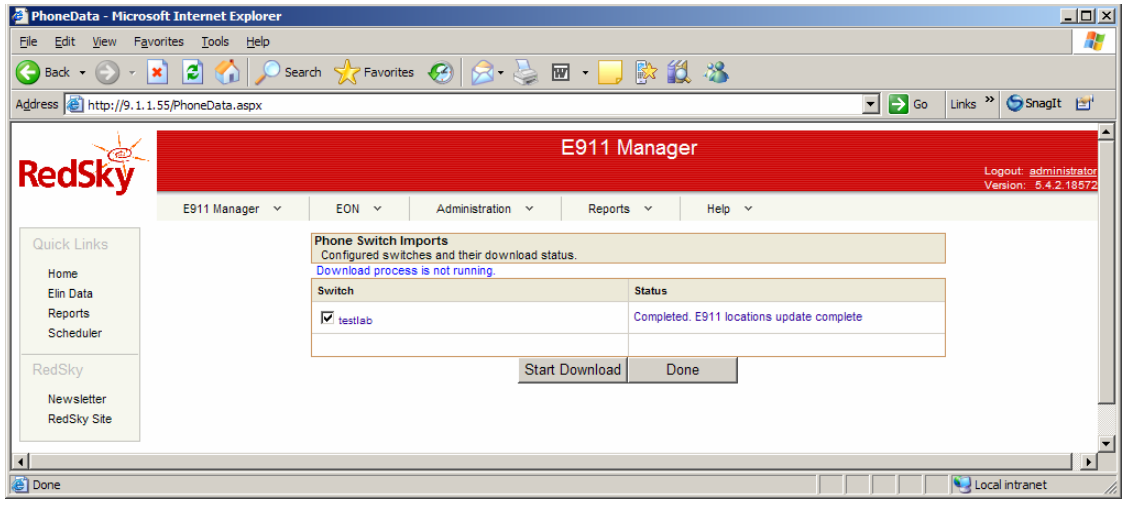
4. From the **Tasks** list, click on **Company Information**. Enter a *Company Name* and an associated *Company Acronym*. Click on **Add**, then **Done**.



5. From the **Tasks** list, click on **Building Information**. Click on **Add Building**. For each building defined in Avaya Communication Manager in Section 3.3, enter the *BuildingID* and a *Friendly Building Name*. The *BuildingID* value must match the value configured in Avaya Communication Manager. For Switch, select the phone switch configured in Step 3 from the drop-down list. Enter address and main telephone number information for the building in the *MSAG Address and Main NPA Number* section. Accept the defaults for the other fields. Click on **Save**, then **Done**.

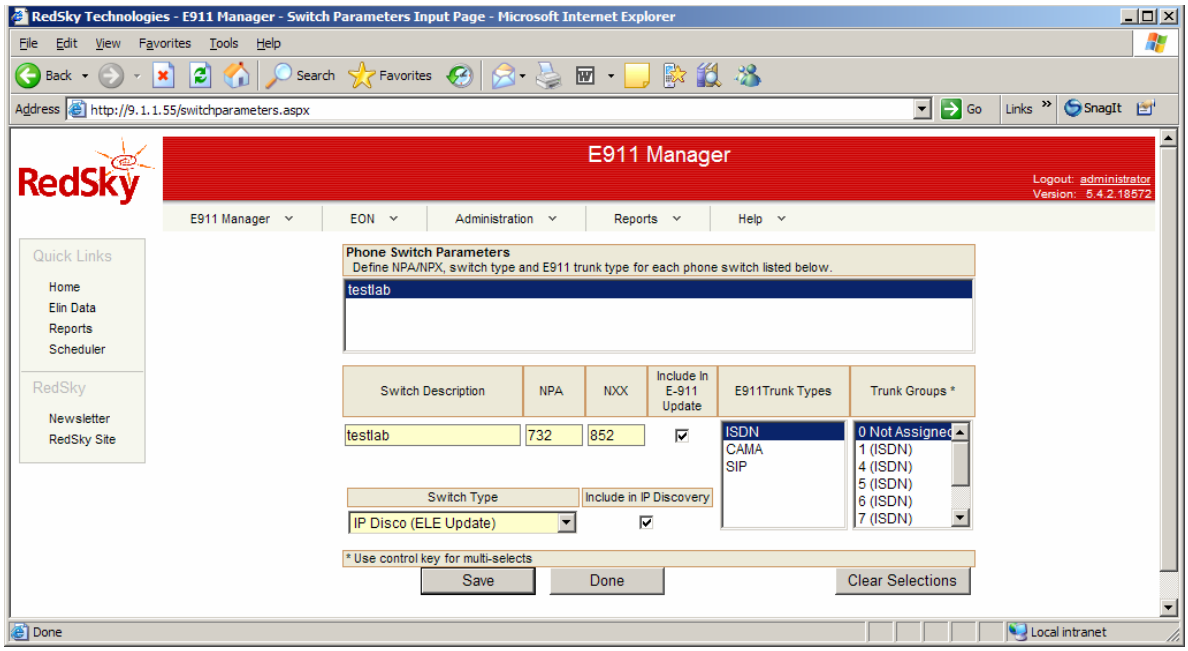


6. From the **Tasks** list, click on **Import Data from Phone Switch**. Click on **Start Download**. Click on **Done** after the download completes.

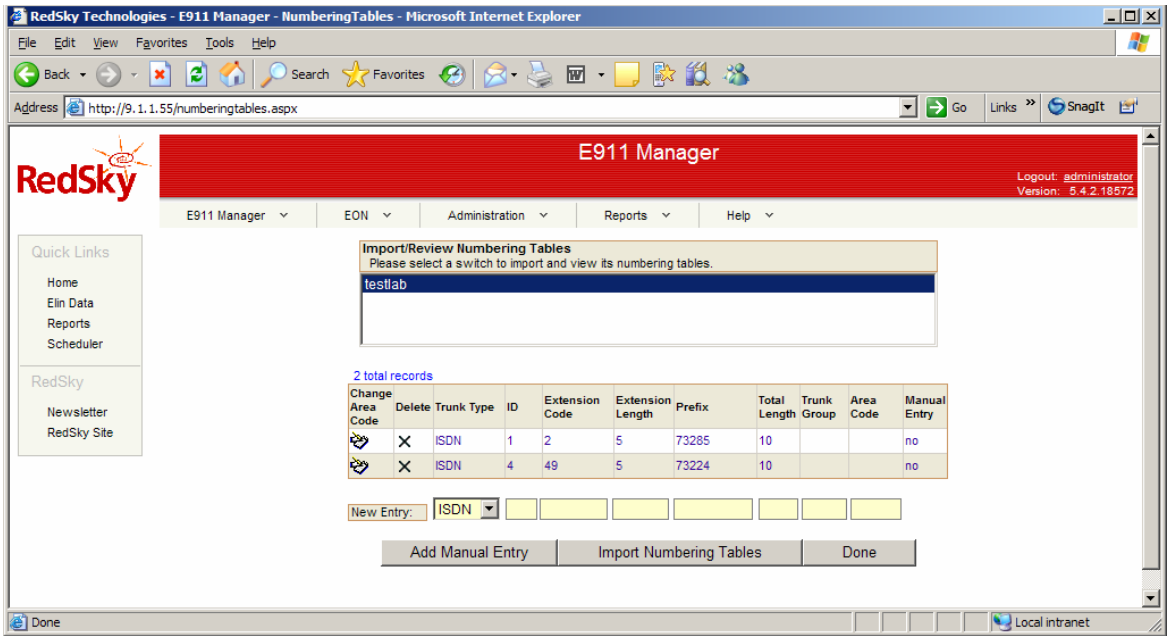


7. From the **Tasks** list, click on **Define Phone Switch Parameters**. Select the switch configured in Step 3, and enter the following information:
   - *Switch Description* – Enter a description for the switch.
   - *NPA* – Enter the area code.
   - *NXX* – Enter the region code.
   - *Include in E911 Update* – Check this checkbox.
   - *Switch Type* – Select **IP Disco (ELE Update)** from the drop-down menu box.
   - *Include in IP Discovery* – Check this checkbox.
   - *E911 Trunk Types* – Select **ISDN** from the drop-down menu list.
   - *E911 Trunk Group*- Leave blank if a trunk group is not specified in the public-unknown-numbering form (see Section 3.2) in Avaya Communication Manager. Alternatively, if outbound 911 calls are routed to a specific trunk group, and that trunk group is specified in the public-unknown-numbering form, then select the number of that trunk group.

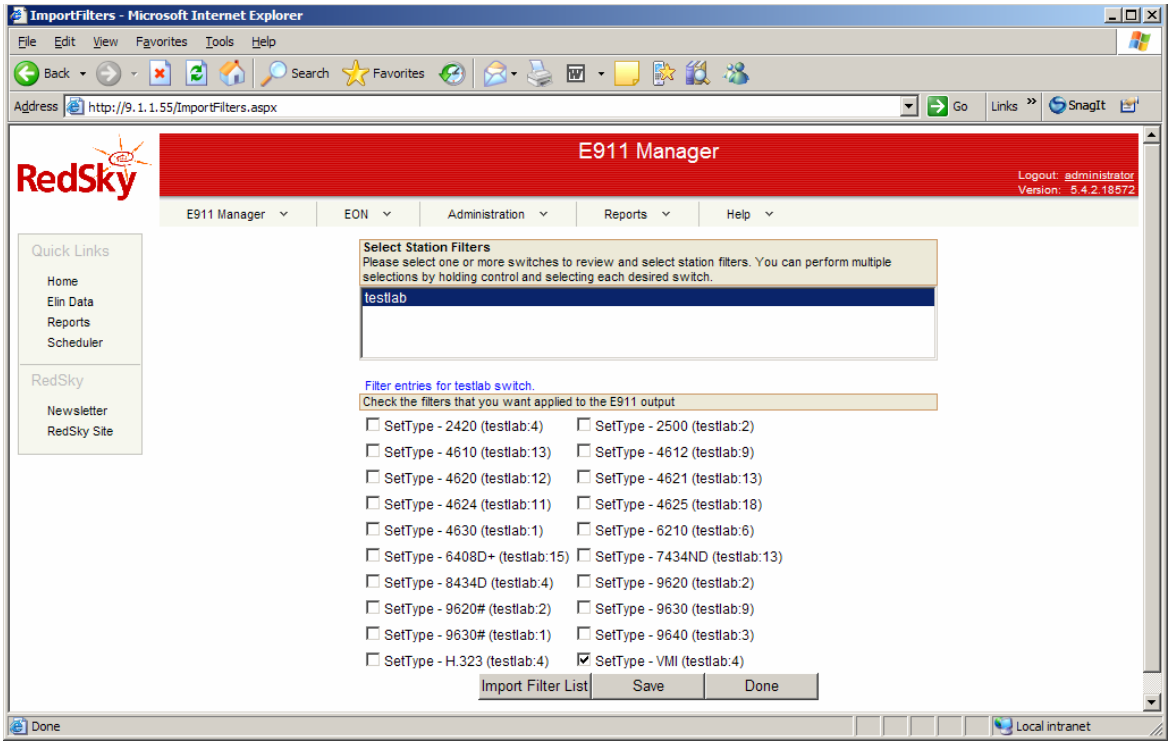
   Click on **Save,** then **Done**.



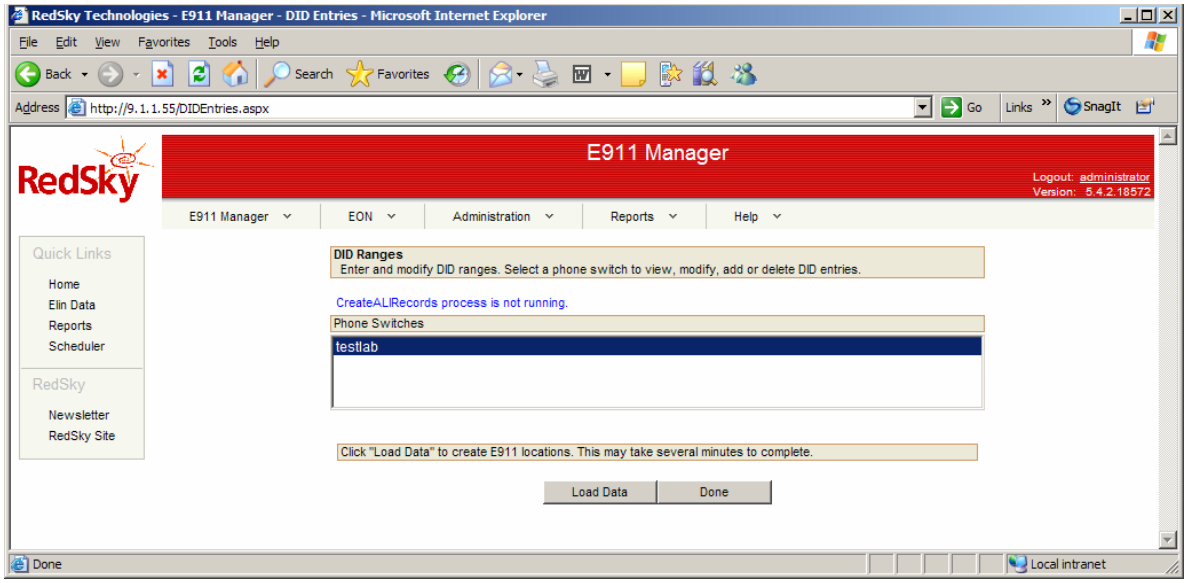
8. From the **Tasks** list, click on **Import/Review Numbering Tables**. Select the switch to import and view its numbering tables. Click on **Import Numbering Tables**. After the import completes, review the table entries and verify consistency with the public unknown-numbering form entries in Avaya Communication Manager. Only entries with a prefix are imported. Click on **Done**.



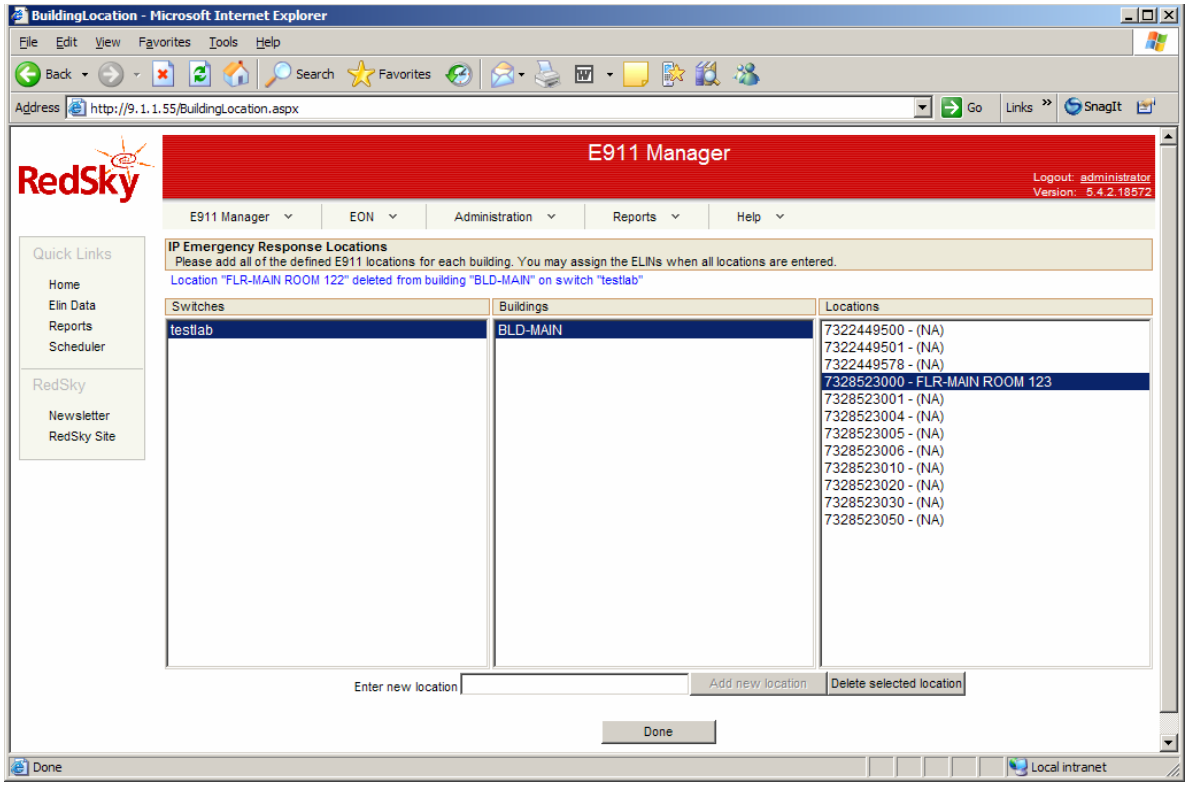
9. From the **Tasks** list, click on **Select Station Filters**. Select the switch to review and Click **Import Filter List**. Check the checkboxes of the phone types for which ALI records are NOT to be generated. Click on **Save,** then **Done**.



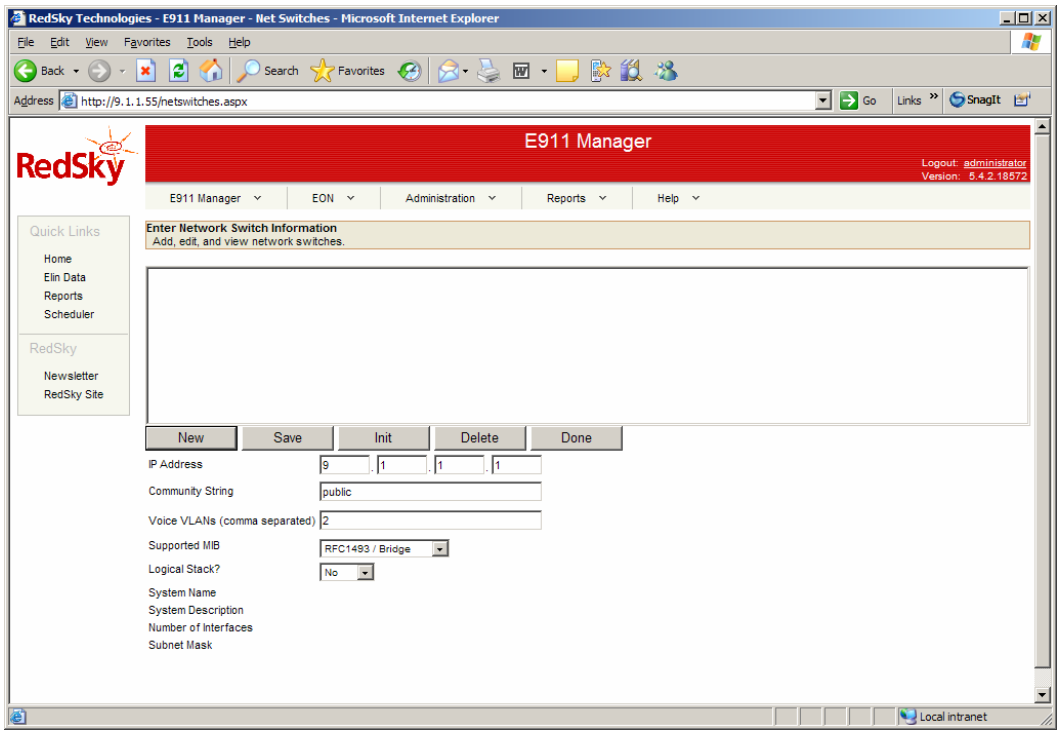
10. From the **Tasks** list, click on **Create DIDs**. Click on **Load Data**. Click on **Done** after the load data completes.



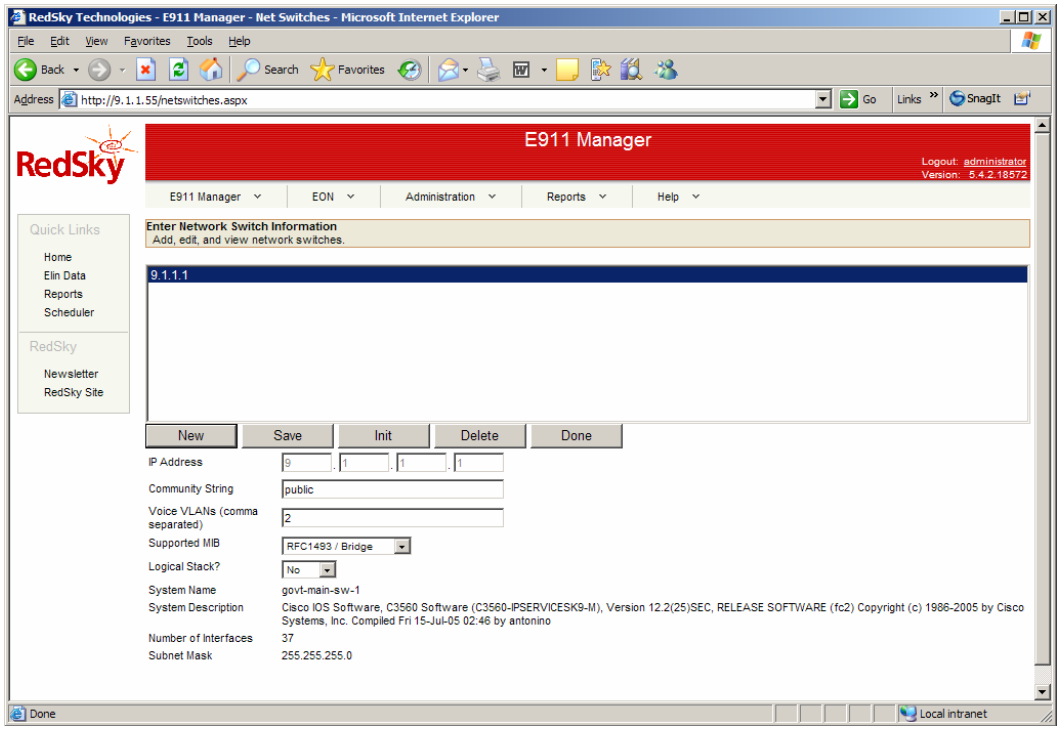
11. From the **Tasks** list, click on **Define IP Emergency Response Locations**. Select the Switch, Building and Location under each window. Enter a new location for the ELIN selected and click on **Add new location**. The location information added (e.g., **FLR-MAIN ROOM 123**) is displayed next to the ELE (e.g., **7328523000**). Click on **Done**.



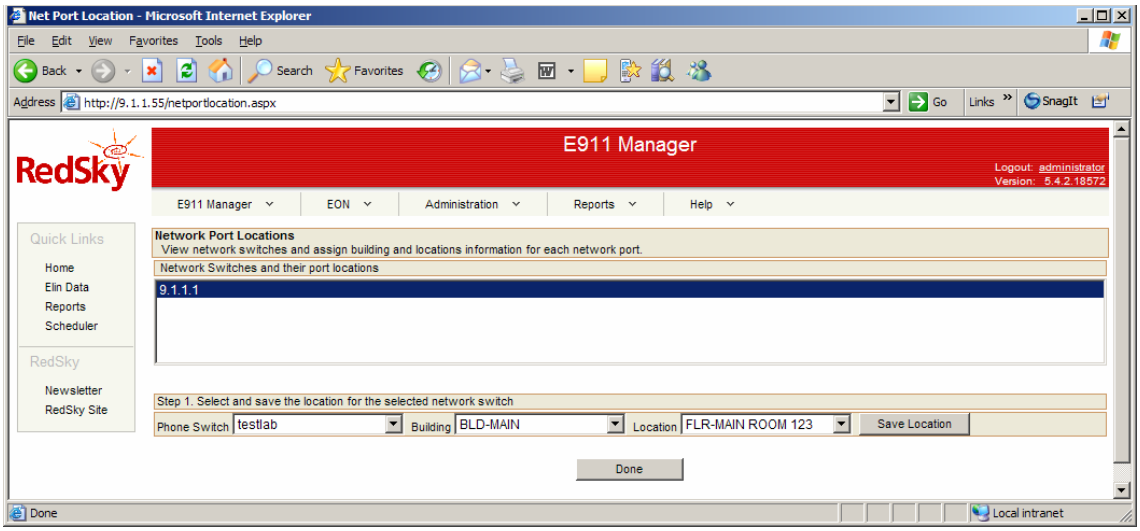
12. From the **Tasks** list, click on **Enter Network Switch Information**.
    a) Enter *the IP Address* for the switch, SNMP *Community String*, *Voice VLAN* if any. Click on **Save**.



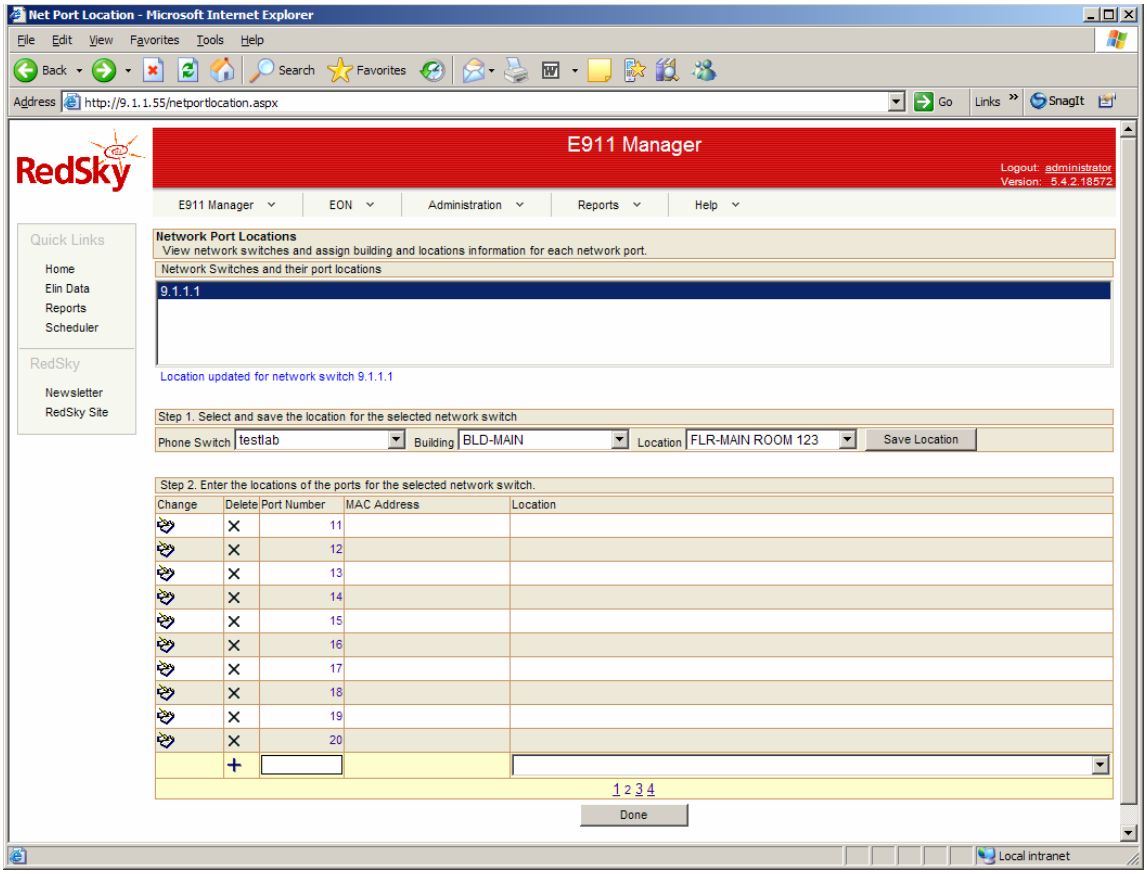
    b) Select the switch that was just entered and click on **Init** to retrieve information regarding the switch. Click on **Done**.



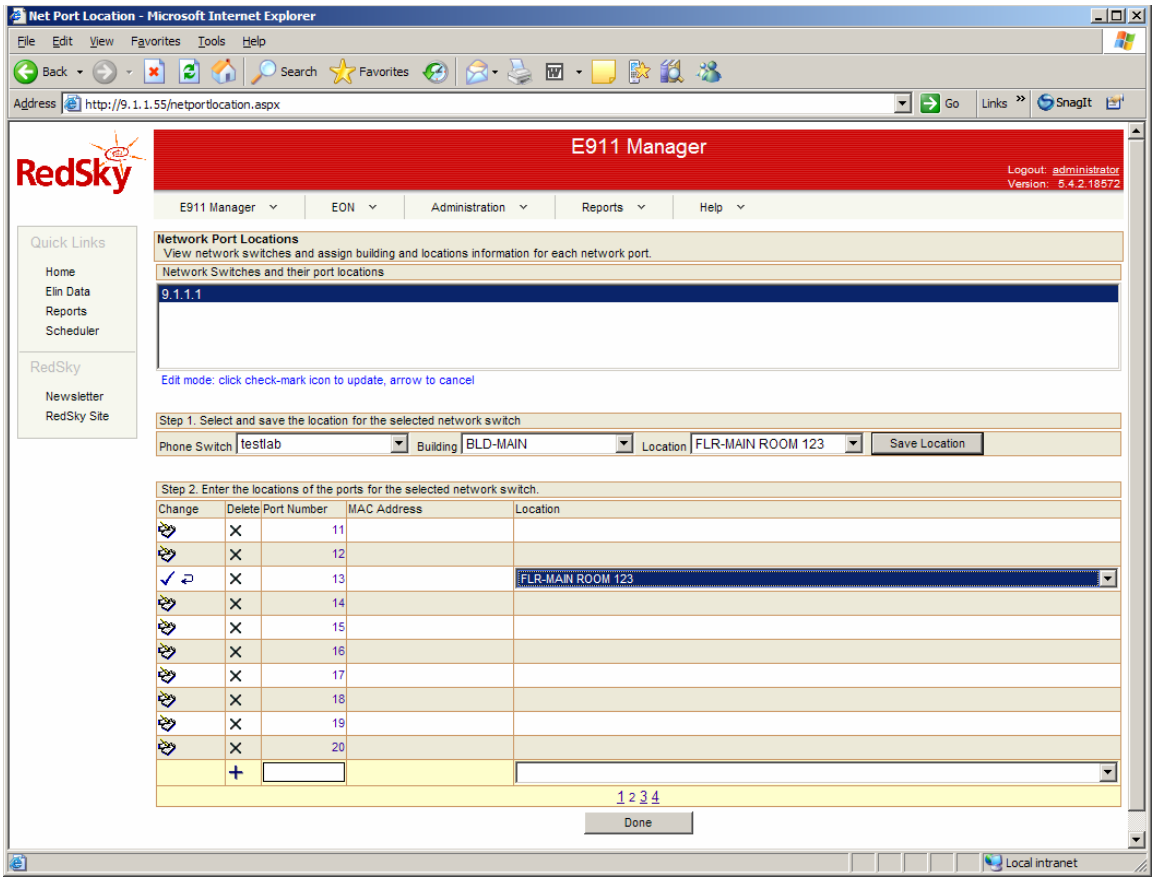
13. From the **Tasks** list, click on **Network Port Locations**.
    a) Select the network switch (**9.1.1.1**), Phone Switch (**testlab**), Building (**BLD-MAIN**), and Location (**FLR-MAIN ROOM 123**) and click on **Save Location**.



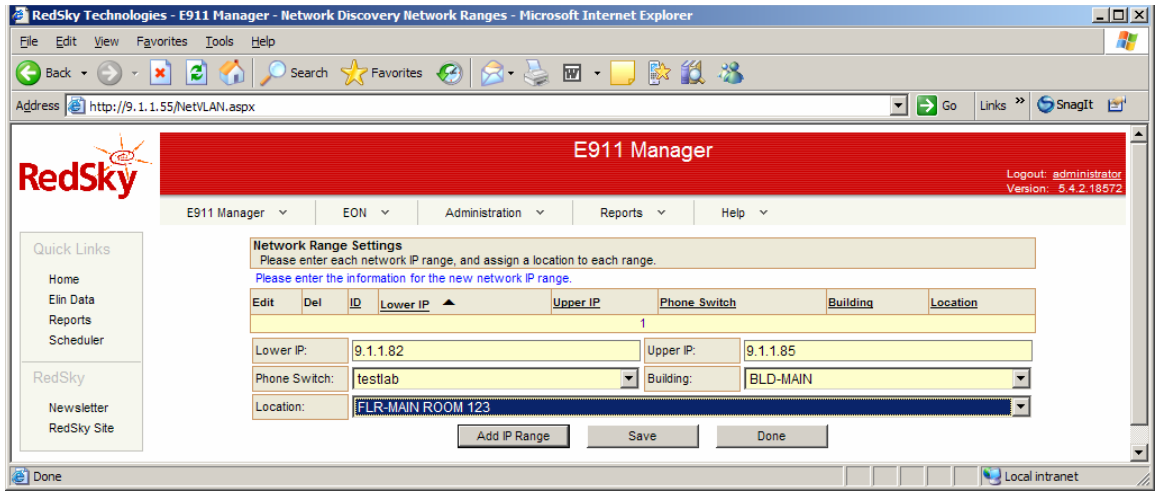
    b) Click on the page (e.g., Page 2) to display the port location on the switch (e.g., **Port Number 13**) where the IP telephone for Station 23000 is connected.
    c) Click on the Edit icon for Port 13.



d) Select the IP Emergency Response Location (e.g., **FLR-MAIN ROOM 123**) that was configured in Step 11. Click on the Checkmark icon ✓ to save the change. Click on **Done**.

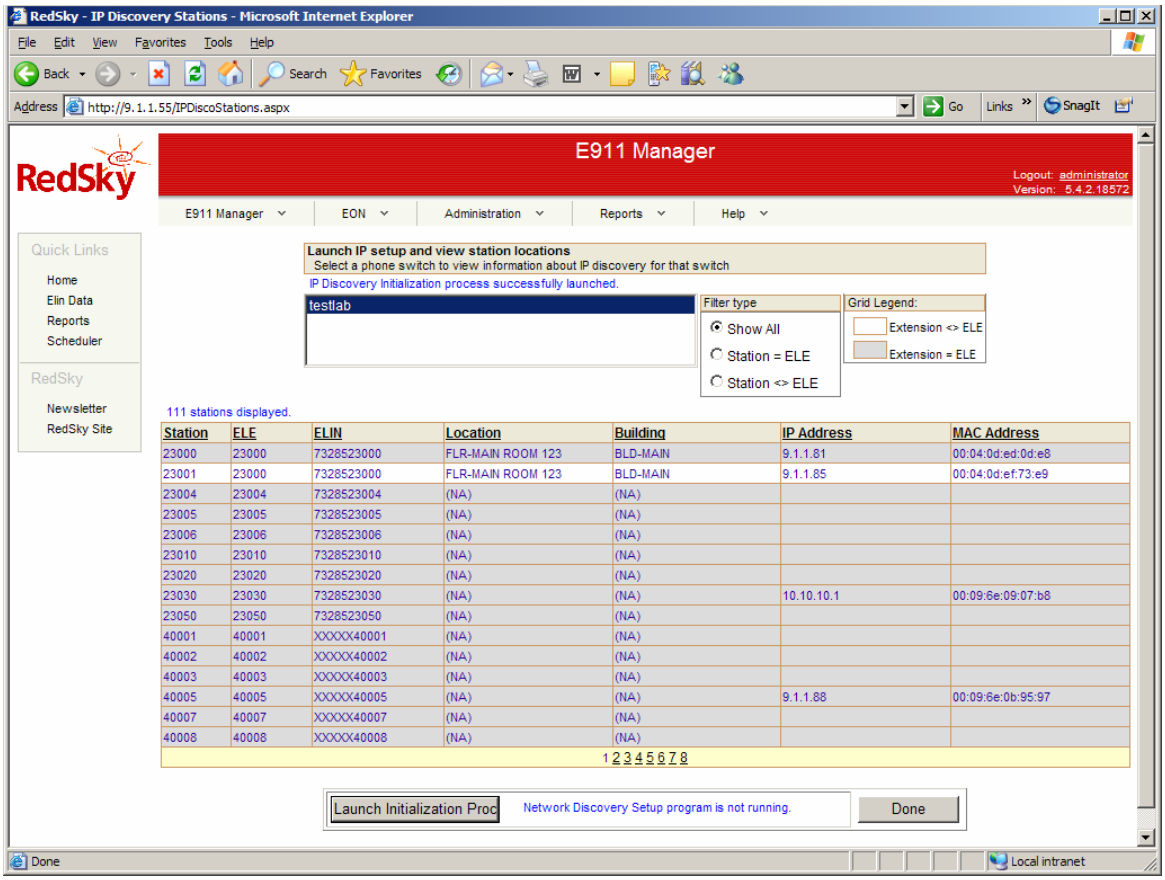


14. From the **Tasks** list, click on **Enter and review Network Range entries**. Click on **Add IP Range**. Enter the *Lower IP* and *Upper IP* ranges. Select the *Phone Switch*, *Building*, and *Location* from the drop-down list fields. Click on **Save**, then **Done**.



15. From the **Tasks** list, click on **Launch IP setup and view station locations**.
    a) Select the Switch (e.g., **testlab**) and click on **Launch Initialization Proc**. The status message "Network Discovery Setup program is running" appears.
    b) Click on **Done** after the "Network Discovery Setup program is not running" status is displayed. The *IP Address* and *MAC Address* fields are now populated for those stations that are registered.

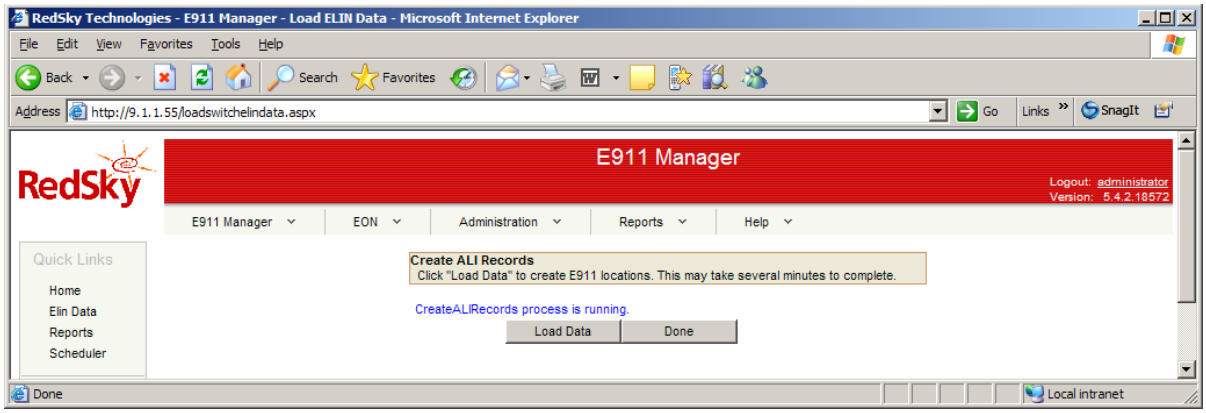
*Note that the ELE for station 23001 is not the same as the station because the IP address of station 23001 (e.g., **9.1.1.85**) fell within the IP network range entry that was created in Step 14. As a result, the ELIN (e.g., 7328523000) corresponding to the IP Emergency Response Location defined in Step 11 will be used instead.*



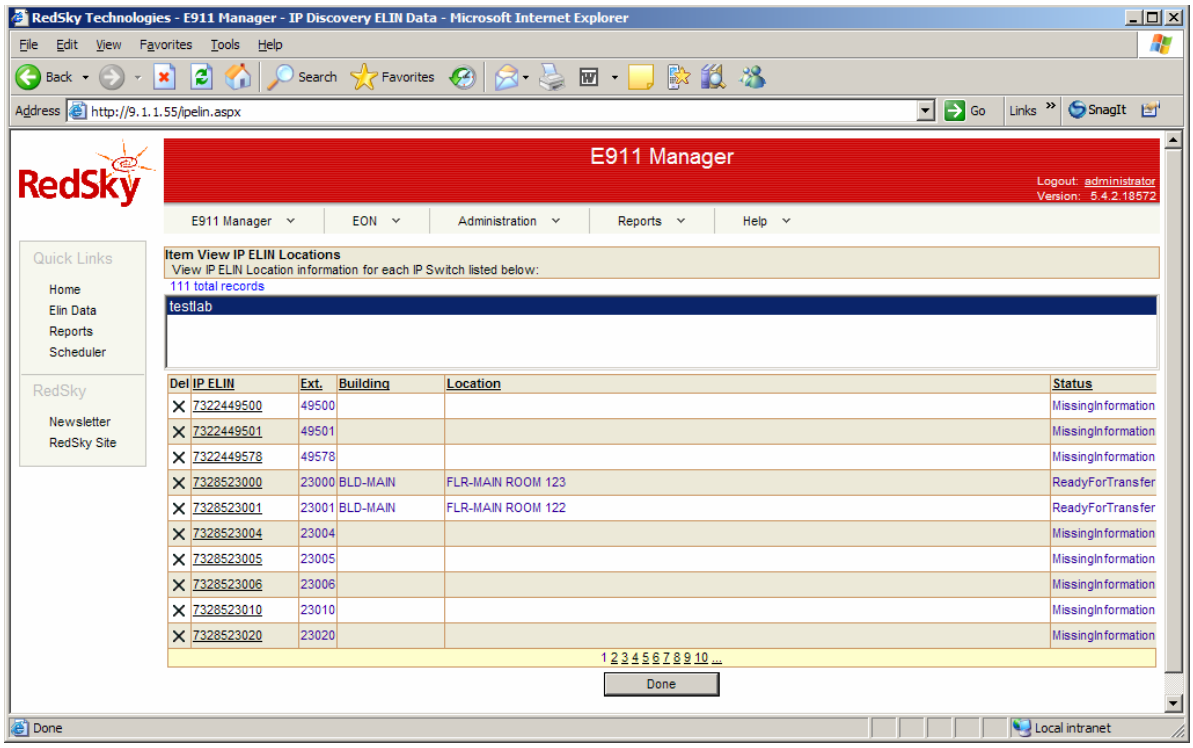
c) The **display station** SAT command can be used to verify that the *Emergency Location Ext* field has been set to **23000**.

```
display station 23001                                        Page   2 of   5
                                    STATION
FEATURE OPTIONS
           LWC Reception: none              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
                                                      EMU Login Allowed? y
        H.320 Conversion? n          Per Station CPN - Send Calling Number?
      Service Link Mode: as-needed
        Multimedia Mode: enhanced                 Audible Message Waiting? n
   MWI Served User Type:                     Display Client Redirection? n
             AUDIX Name:                    Select Last Used Appearance? n
                                              Coverage After Forwarding? s
                                               Multimedia Early Answer? n
                                          Direct IP-IP Audio Connections? y
  Emergency Location Ext: 23000        Always Use? y IP Audio Hairpinning? n
```

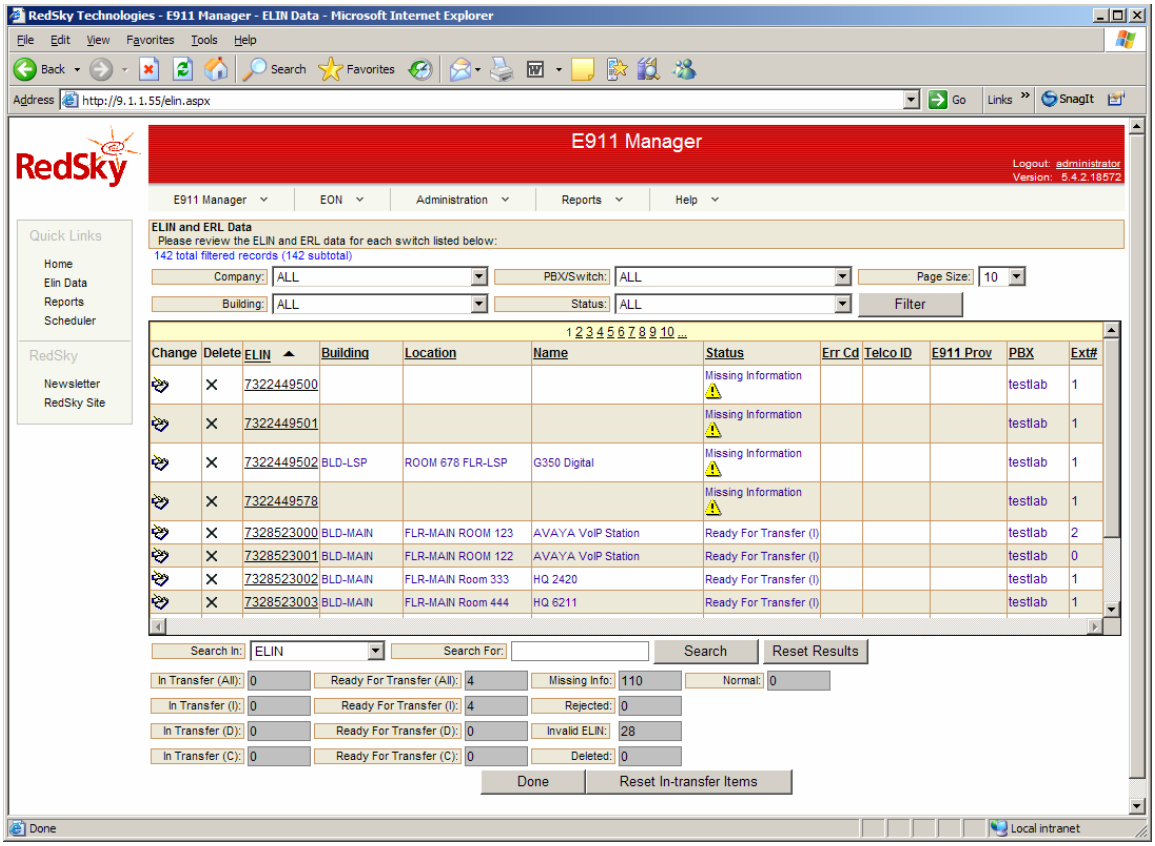
16. From the **Tasks** list, click on **Create ALI Records**. Click on **Load Data**. Click on **Done** after the load data completes.



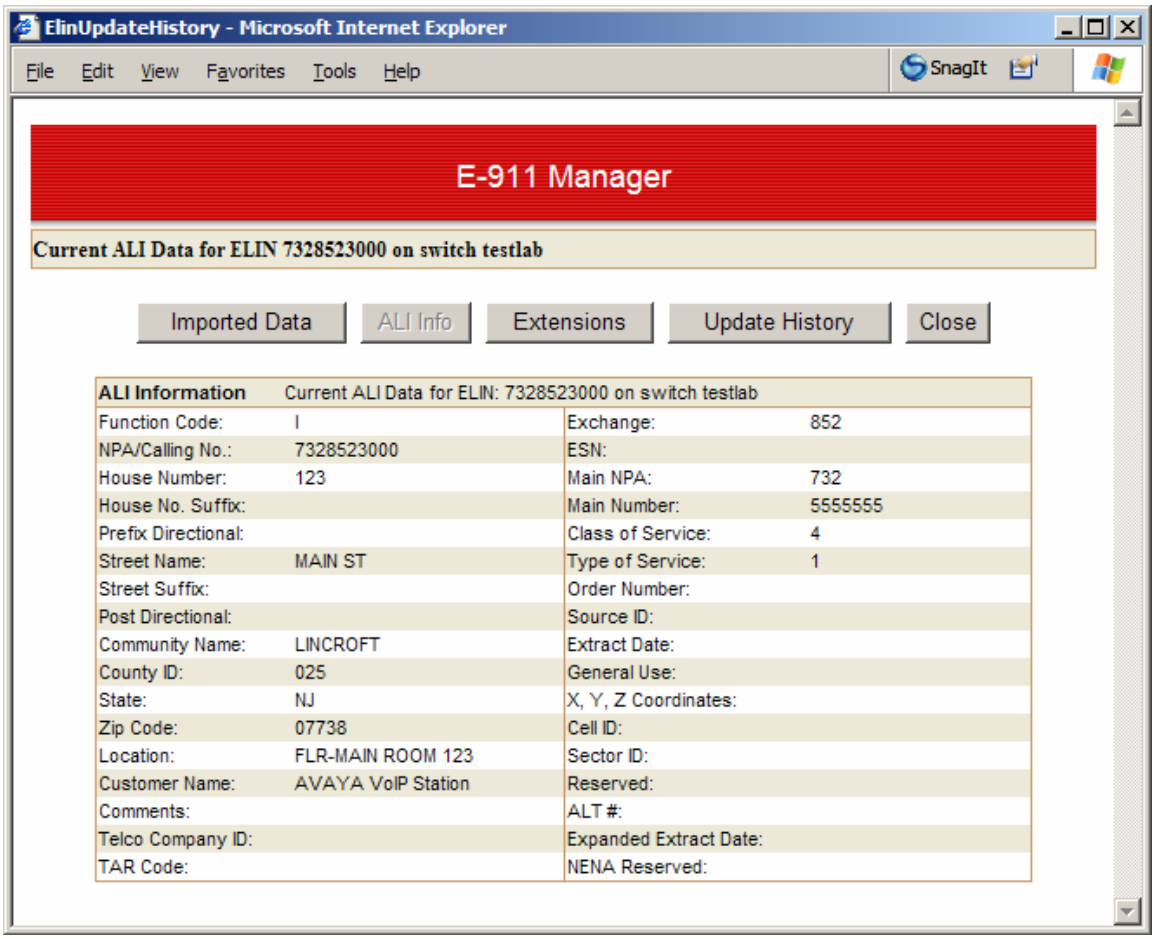
17. From the **Tasks** list, click on **View IP ELIN E-911 Locations**. Click on the Phone Switch (e.g., **testlab**). Note that the *Status* for extensions **23000** and **23001** is "**Ready for Transfer**". Click on **Done**.



18. From the **Tasks** list, click on **Review ELIN E-911 location data**.
    a) Click on **Filter**. The subsequent screen shows the ALI records that were generated based on the information retrieved from Avaya Communication Manager. Only those records with **"Ready For Transfer"** status will be uploaded to the E911 database service provider. The records with **"Missing Information"** status are displayed because the Building (e.g., **BLD-LSP**) associated with the stations on the PBX has not been defined on E911 Manager. Repeat Steps 5 and 6 to define the building in E911 Manager and import the data from the phone switch again. Repeat Step 16 to create the ALI records. Click on **Done** to return to the Task list.

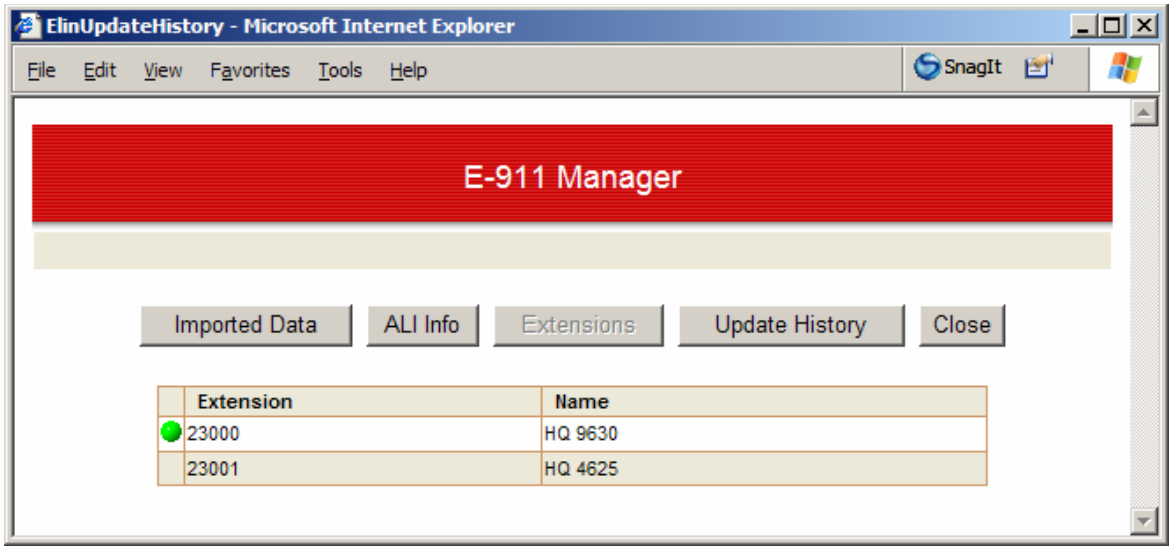


b) Notice that the number of Extensions listed under the *Ext#* column is "**2**" for ELIN "**7328523000**" and "**0**" for ELIN "**7328523001**". Click on ELIN "**732852300**" in the previous figure to display the ALI data.



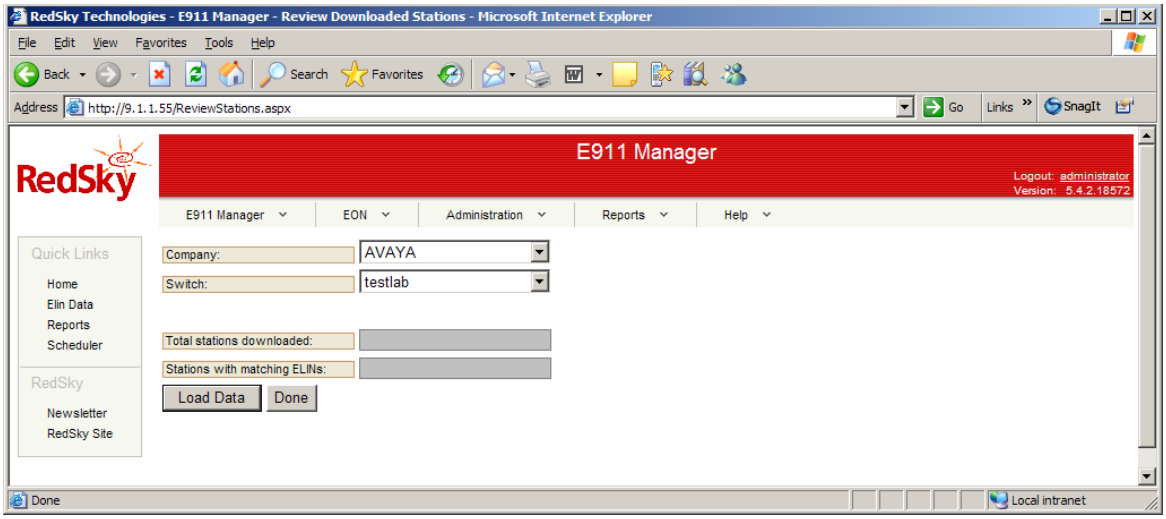
ALI Information	Current ALI Data for ELIN: 7328523000 on switch testlab		
Function Code:	I	Exchange:	852
NPA/Calling No.:	7328523000	ESN:	
House Number:	123	Main NPA:	732
House No. Suffix:		Main Number:	5555555
Prefix Directional:		Class of Service:	4
Street Name:	MAIN ST	Type of Service:	1
Street Suffix:		Order Number:	
Post Directional:		Source ID:	
Community Name:	LINCROFT	Extract Date:	
County ID:	025	General Use:	
State:	NJ	X, Y, Z Coordinates:	
Zip Code:	07738	Cell ID:	
Location:	FLR-MAIN ROOM 123	Sector ID:	
Customer Name:	AVAYA VoIP Station	Reserved:	
Comments:		ALT #:	
Telco Company ID:		Expanded Extract Date:	
TAR Code:		NENA Reserved:	

c) Click on **Extensions** in the previous figure to display the *Extensions* associated with ELIN "7328523000". Click on **Close**.

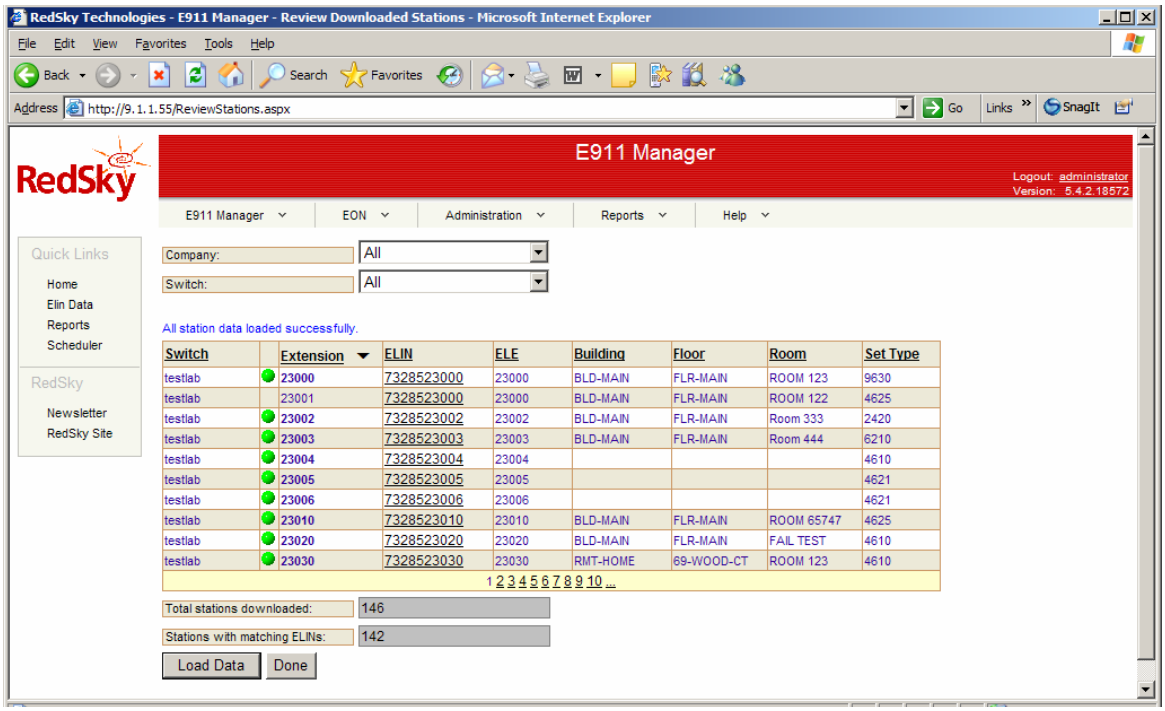


	Extension	Name
	23000	HQ 9630
	23001	HQ 4625

19. From the **Tasks** list, click on **Review Downloaded Stations**. Select **AVAYA** in the *Company* drop-down list and **testlab** for the *Switch* drop-down list. Click on **Load Data.**



The *Extension*s that have matching *ELIN*s are indicated with a green circle. Click on **Done**.



20. Notice all of the task items on the main menu are now marked “Complete”.

5. Interoperability Compliance Testing

The interoperability compliance testing included functionality and serviceability testing. The functionality testing evaluated the ability of the RedSky E911 Manager to accurately retrieve station emergency numbering and location information from Avaya Communication Manager, and Network Discovery to determine the location of the telephone based on its IP address, port, and network device, and assigns an ELIN to a station based on Network Range entries. The serviceability testing introduced failure scenarios to see if the RedSky E911 Manager can resume operation after failure recovery.

5.1. General Test Approach

The main objective was to verify that:

- The RedSky E911 Manager accurately obtains station emergency numbering and location information from Avaya Communication Manager after stations were added, deleted, or changed.
- The RedSky E911 Manager can use Network Discovery to determine the location of the telephone based on its IP address, port, and network device,
- The RedSky E911 Manager can assign an ELIN to a station based on Network Range entries.

For serviceability testing, Ethernet cable disconnects and reconnects as well as device resets were applied.

5.2. Test Results

The main objectives of Section 5.1 were verified. For serviceability testing, the RedSky E911 Manager was able to retrieve station emergency numbering and location information from Avaya Communication Manager after connection to the active Avaya S8720 Server was disconnected and reconnected, as well as after resets of Avaya Communication Manager and the RedSky E911 Manager server.

6. Verification Steps

The following steps may be used to verify the configuration:

- Compare the station emergency numbering and location information reported in the RedSky E911 Manager and Avaya Communication Manager, and verify consistency.
- Register IP telephones and verify that the RedSky E911 Manager can use Network Discovery to determine the location of the telephone based on its IP address, port, and network device.
- Register IP telephones using IP addresses that fall within the range specified on the Network Range entries in the RedSky E911 Manager and verify that the Emergency Location Extension (ELE) for the station on the PBX reflects the Emergency Location Identification Number (ELIN) that corresponds to the Emergency Response Location specified for the Network Range entry.

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 and the RedSky Technologies E911 Manager with Network Discovery. During compliance testing, the RedSky E911 Manager successfully obtained station emergency numbering and location information after Avaya Communication stations were added, deleted and changed. The RedSky E911 Manager, using Network Discovery, was able to determine the location of the telephone based on its IP address, port, and network device. The RedSky E911 Manager was also able to assign an ELIN to a station based on Network Range entries.

9. Additional References

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

[1] *Administrator Guide for Avaya Communication Manager*, Document ID 03-300509.
[2] *Feature Description and Implementation for Avaya Communication Manager*, Document ID 555-245-205.

Product information for RedSky Technologies E911 Manager may be found at http://www.redskye911com.

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 DevConnect Program at devconnect@avaya.com.