Avaya Solution & Interoperability Test Lab

Application Notes for IgeaCare ApoloDS with Avaya Communication Manager – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for IgeaCare ApoloDS to interoperate with Avaya Communication Manager. In the compliance testing, the IgeaCare ApoloDS used the analog station interface from Avaya Communication Manager to transfer resident calls to the nurse staff, and used the Avaya Push API to push text to nurses with Avaya 4610SW and Avaya 4625SW IP Telephones.

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

The IgeaCare ApoloDS is a system that provides notification of events triggered by the IgeaCare igeacom nurse call devices to different types of media including pager, telephone, virtual marquee, email, and text push and text-to-speech to telephones.

The ApoloDS can use either the EI/T1 or analog line connections to Avaya Communication Manager. In the compliance testing, the ApoloDS used a 4-ports internal analog card to connect to Avaya Communication Manager. Each analog port was administered as an analog station and member of an ApoloDS hunt group on Avaya Communication Manager. The nurse staff was equipped with Avaya 4610SW and 4625SW IP Telephones, and configured as members of several hunt groups.

The igeacom nurse call devices are essentially analog speaker telephones that can be activated by residents via multiple call points to reach the nurse staff. Each igeacom device is configured as an analog station on Avaya Communication Manager. When the resident activates an igeacom via a call point to reach the nurse staff, the igeacom originates a call to the ApoloDS hunt group. The ApoloDS obtains information on the resident and the call point type via the DTMF digits out-pulsed by the igeacom device, and uses that information to transfer the call to the appropriate nurse hunt group.

When the call is delivered to a nurse station in the nurse hunt group, the telephone display for the nurse station will show the name of the resident's analog station along with the name of the called hunt group. The ApoloDS can be configured to call a different hunt group for each type of call point, such that the nurse can use the station display to identify both the name of the resident and the specific call point.

In the compliance testing, the ApoloDS also used the text-to-speech capability to play information such as resident name and call point type to the answering nurse, and used the Avaya Push API interface to push text to nurses with Avaya 4610SW and Avaya 4625SW IP Telephones.

Two types of igeacom nurse call devices were used in the compliance testing – the igeacom500 and igeacom700. As shown in **Figure 1**, a PC with the igeacom programming software was used to configure and download the configurations to the igeacom devices.

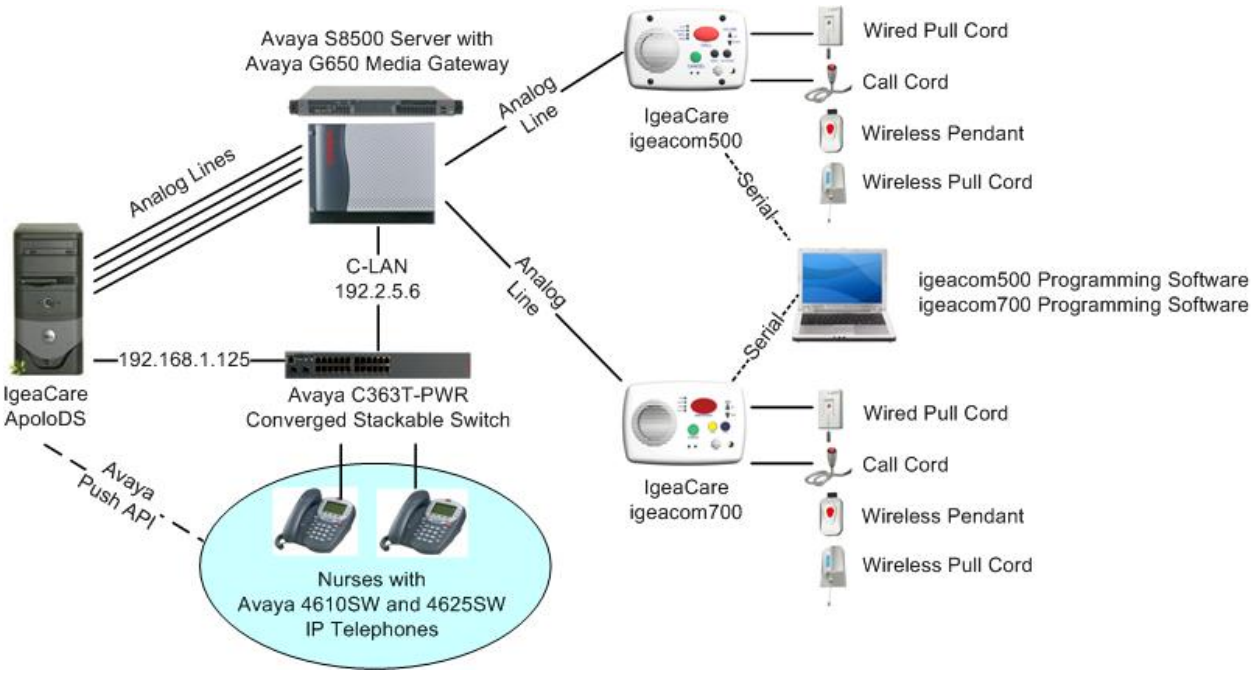


Figure 1: IgeaCare ApoloDS with Avaya Communication Manager

2. Equipment and Software Validated

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

Equipment	Software
Avaya S8500 Server	Avaya Communication Manager 5.0, R015x.00.0.825.4
Avaya G650 Media Gateway • TN799DP C-LAN • TN793CP Analog Line	 HW01 FW024 HW04 FW005
Avaya 4600 Series IP Telephones (H.323)	2.9
IgeaCare igeacom500	IC500-B1.4S 0807-0285
IgeaCare igeacom700	IC700-B1.0S 0806-0017
igeacom500 Programming Software	6.11
igeacom700 Programming Software	6.08.3
IgeaCare ApoloDS	2.0

3. Configure Avaya Communication Manager

This section provides the procedures for configuring Avaya Communication Manager. The procedures fall into the following areas:

- Administer resident stations
- Administer nurse stations
- Administer nurse hunt groups
- Administer ApoloDS stations
- Administer ApoloDS coverage
- Administer ApoloDS hunt group

3.1. Administer Resident Stations

Add a station for each resident's igeacom nurse call device using the "add station n" command, where "n" is an available extension number. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Type:** "2500"
- **Port:** The analog port connected to the igeacom device, in this case "01A0913".
- **Name:** A descriptive name.

```
add station 66001                                          Page   1 of   4
                                  STATION

Extension: 66001                      Lock Messages? n              BCC: 0
     Type: 2500                       Security Code:                 TN: 1
     Port: 01A0913                  Coverage Path 1:                COR: 1
     Name: Mary Jones               Coverage Path 2:                COS: 1
                                    Hunt-to Station:              Tests? y
STATION OPTIONS
      XOIP Endpoint type: auto           Time of Day Lock Table:
              Loss Group: 1            Message Waiting Indicator: none
    Off Premises Station? n
```

Repeat this section to administer an analog station for every resident's igeacom nurse call device. For the compliance testing, two stations were administered as shown below.

```
list station 66001 count 2

                                STATIONS

Ext/          Port/   Name/                      Room/         Cv1/ COR/ Cable/
 Hunt-to       Type      Surv GK NN        Move    Data Ext      Cv2  COS  Jack

66001         01A0913 Mary Jones                                  1
               2500                       no                      1
66002         01A0916 John Smith                                  1
               2500                       no                      1
```

3.2. Administer Nurse Stations

Add a station for each nurse using the "add station n" command, where "n" is an available extension number. Enter the following values for the specified fields, and retain the default values for the remaining fields. Note that the station type may vary, and needs to be a station type that supports display. If the nurse station will be receiving text push from ApoloDS, then the station type needs to be "4610" or "4625".

- **Type:** The type of the nurse telephone, in this case "4610".
- **Port:** The port for the nurse telephone, in this case "IP".
- **Name:** A descriptive name.
- **Security Code:** A desired security code for authentication.

```
add station 60201                                          Page   1 of   5
                                  STATION

Extension: 60201                      Lock Messages? n              BCC: 0
     Type: 4610                       Security Code: 60201           TN: 1
     Port: IP                       Coverage Path 1:                COR: 1
     Name: Nurse 60201              Coverage Path 2:                COS: 1
                                    Hunt-to Station:
STATION OPTIONS
                                         Time of Day Lock Table:
             Loss Group: 2          Personalized Ringing Pattern: 1
           Data Module? n                     Message Lamp Ext: 60201
       Speakerphone: 2-way                Mute Button Enabled? y
    Display Language: english

         Survivable COR: internal             Media Complex Ext:
  Survivable Trunk Dest? y                          IP SoftPhone? n
                                               Remote Office Phone? N
```

Repeat this section to administer a station for every nurse. For the compliance testing, two nurse stations were administered as shown below.

```
list station 60201 count 2

                                STATIONS

Ext/          Port/   Name/                       Room/         Cv1/ COR/ Cable/
 Hunt-to       Type      Surv GK NN        Move    Data Ext      Cv2  COS  Jack

60201         S00000  Nurse 60201                                 1
               4610                       no                      1
60202         S00166  Nurse 60202                                 1
               4625                       no                      1
```

3.3. Administer Nurse Hunt Groups

Add a hunt group for each type of call point using the "add hunt n" command, where "n" is an available hunt group number. For **Group Name**, enter a descriptive value that can identify the call point type. For **Group Extension**, enter an available extension number.

```
add hunt-group 701                                              Page   1 of  60
                                  HUNT GROUP

            Group Number: 701                               ACD? n
              Group Name: Call Button                     Queue? n
         Group Extension: 67001                          Vector? n
              Group Type: ucd-mia                 Coverage Path:
                      TN: 1           Night Service Destination:
                     COR: 1                     MM Early Answer? n
           Security Code:                 Local Agent Preference? n
 ISDN/SIP Caller Display:
```

Navigate to **Page 3**, and enter the nurse station extensions from **Section 3.2** as members.

```
add hunt-group 701                                              Page   3 of  60
                                  HUNT GROUP
         Group Number: 701  Group Extension: 67001         Group Type: ucd-mia
  Member Range Allowed: 1 - 1500       Administered Members (min/max): 1   /2
                                           Total Administered Members: 2
GROUP MEMBER ASSIGNMENTS
      Ext           Name(19 characters)       Ext           Name(19 characters)
   1: 60201                                  14:
   2: 60202                                  15:
   3:                                        16:
   4:                                        17:
```

Repeat this section to add a hunt group for every call point type. The hunt groups that were used for the compliance testing are shown below.

Hunt Group	Extension	Name
701	67001	Call Button
702	67002	Bed Cord
703	67003	Wired Cord
704	67004	Pendant
705	67005	Wireless Pull
706	67006	Code Blue
707	67007	Staff Assist

3.4. Administer ApoloDS Stations

Add a station for each analog port connected to ApoloDS using the "add station n" command, where "n" is an available extension number. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Type:** "2500"
- **Port:** The analog port, in this case "01A0922".
- **Name:** A descriptive name.

```
add station 68001                                          Page   1 of   4
                                  STATION

Extension: 68001                      Lock Messages? n              BCC: 0
     Type: 2500                       Security Code:                 TN: 1
     Port: 01A0922                  Coverage Path 1:                COR: 1
     Name: DS 68001                 Coverage Path 2:                COS: 1
                                    Hunt-to Station:              Tests? y
STATION OPTIONS
      XOIP Endpoint type: auto           Time of Day Lock Table:
              Loss Group: 1           Message Waiting Indicator: none
    Off Premises Station? n



          Survivable COR: internal
   Survivable Trunk Dest? y
                                              Remote Office Phone? n
```

Repeat this section to administer an analog station for every analog port connected to ApoloDS. For the compliance testing, four stations were administered as shown below.

```
list station 68001 count 2

                                STATIONS

Ext/          Port/   Name/                      Room/         Cv1/ COR/ Cable/
 Hunt-to       Type      Surv GK NN        Move    Data Ext      Cv2  COS  Jack

68001         01A0922 DS 68001                                     1
               2500                       no                       1
68002         01A0919 DS 68002                                     1
               2500                       no                       1
68003         01A0910 DS 68003                                     1
               2500                       no                       1
68004         01A0904 DS 68004                                     1
               2500                       no                       1
```

3.5. Administer ApoloDS Coverage

Add a coverage path using the "add coverage path n" command, where "n" is an available coverage path number. For the **Point1** field, enter the destination of the first coverage point. In the compliance testing, "60211" is an existing station. This coverage path will be used by the ApoloDS hunt group in **Section 3.6**.

```
add coverage path 68
                                COVERAGE PATH

                  Coverage Path Number: 68
                                                Hunt after Coverage? n
                      Next Path Number:         Linkage

COVERAGE CRITERIA

    Station/Group Status    Inside Call     Outside Call
              Active?             n              n
                Busy?             n              n
       Don't Answer?              y              y         Number of Rings: 2
                 All?             n              n
 DND/SAC/Goto Cover?              n              n
   Holiday Coverage?              n              n

COVERAGE POINTS
    Terminate to Coverage Pts. with Bridged Appearances? n
  Point1: 60211          Rng:    Point2:
  Point3:                        Point4:
  Point5:                        Point6:
```

3.6. Administer ApoloDS Hunt Group

Add a hunt group using the "add hunt n" command, where "n" is an available hunt group number. For **Group Name**, enter a descriptive value. For **Group Extension**, enter an available extension number. For **Coverage Path**, enter the coverage path number from **Section 3.5**.

```
add hunt-group 68                                               Page   1 of  60
                                  HUNT GROUP

            Group Number: 68                                 ACD? n
              Group Name: DS Group                         Queue? n
         Group Extension: 68000                           Vector? n
              Group Type: ucd-mia                  Coverage Path: 68
                     TN: 1          Night Service Destination:
                    COR: 1                    MM Early Answer? n
           Security Code:                Local Agent Preference? n
 ISDN/SIP Caller Display:
```

Navigate to **Page 3**, and enter the ApoloDS station extensions from **Section 3.4** as members.

```
add hunt-group 68                                               Page   3 of  60
                                  HUNT GROUP
         Group Number: 68   Group Extension: 68001         Group Type: ucd-mia
  Member Range Allowed: 1 - 1500       Administered Members (min/max): 1   /2
                                           Total Administered Members: 2
GROUP MEMBER ASSIGNMENTS
      Ext           Name(19 characters)       Ext           Name(19 characters)
   1: 68001                                  14:
   2: 68002                                  15:
   3: 68003                                  16:
   4: 68004                                  17:
   5:                                        18:
```

4. Configure Avaya 4610SW and 4625SW IP Telephones

This section provides the procedures for configuring the Avaya 4610SW and 4625SW IP Telephones to support the push interface.

From the appropriate HTTP or TFTP server serving the Avaya 4610SW and 4625SW IP Telephones, locate the **46xxsettings.txt** file. Set the **WMLEXCEPT, TPSLIST,** and **FILTERLIST** parameters to point to the ApoloDS server. Set the **SUBSCRIBELIST** parameter to the specific path on the ApoloDS server shown below.

Reboot the Avaya 4610SW and 4625SW IP Telephones.

```
SET WMLEXCEPT  192.168.1.125
SET TPSLIST    192.168.1.125
SET FILTERLIST 192.168.1.125

SET SUBSCRIBELIST http://192.168.1.125/ASPpushsamples/subscribe.asp
```

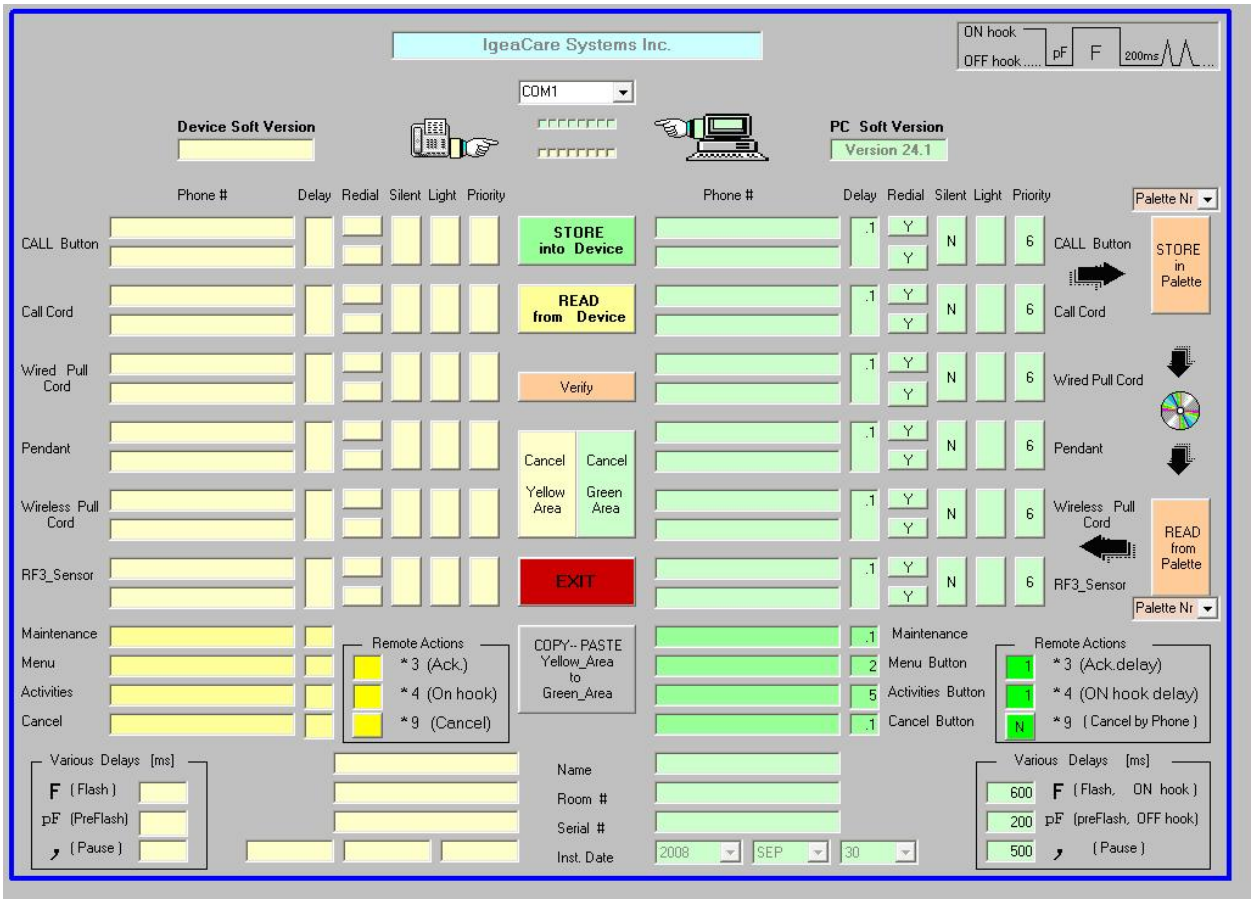
5. Configure IgeaCare igeacom500

This section provides the procedures for configuring the IgeaCare igeacom500 nurse call device. The procedures fall into the following areas:

- Launch igeacom500 programming software
- Administer call point destinations and coverage

5.1. Launch igeacom Programming Software

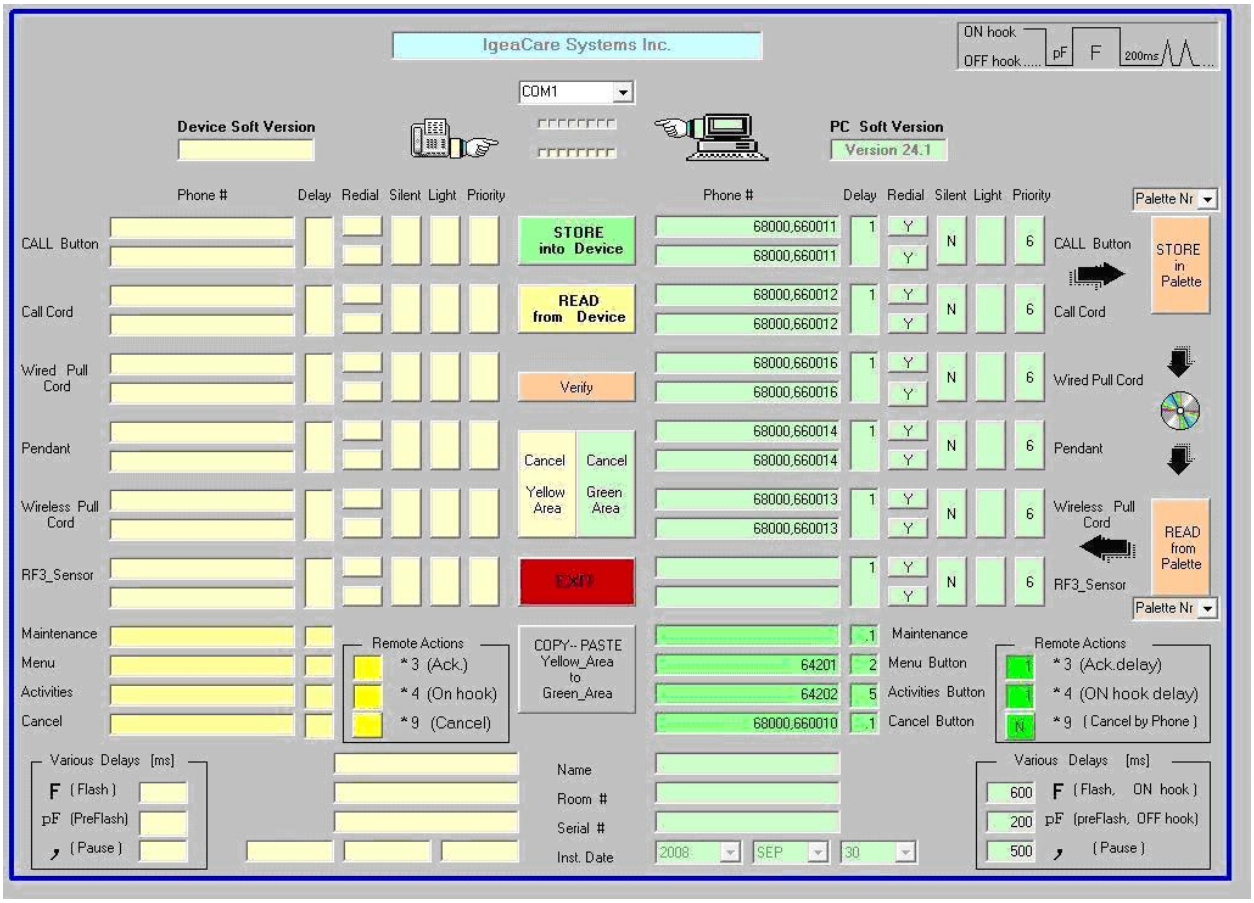
From any PC running the igeacom500 programming software, physically connect the PC serial COM port to the igeacom500 circuit board. Launch the administration application by selecting **Start > All Programs > IgeaCare Systems Inc > IgeaCare Systems Inc.** from the PC. The screen below is displayed.



Configure igacom500 as shown below. The format for the **Phone #** field value is "x,yz", where "x" is the extension of the ApoloDS hunt group from **Section 3.6**, "y" is the extension of the igeacom500 device from **Section 3.1**, and "z" is a unique default value associated with the specific call point type. Note that the second **Phone #** associated with each call point below is the escalation point, used in the event that the call has not been successfully canceled within the time specified in the **Delay** field.

Enter desired destinations for the **Menu Button** and **Activities Button**, which are typically announcement extensions on Avaya Communication Manager. For the compliance testing, "64201" and "64202" corresponded to existing stations on Avaya Communication Manager.

Configure the other fields as desired using the appropriate documentation from **Section 11**, and download the resultant configuration to igeacom500.



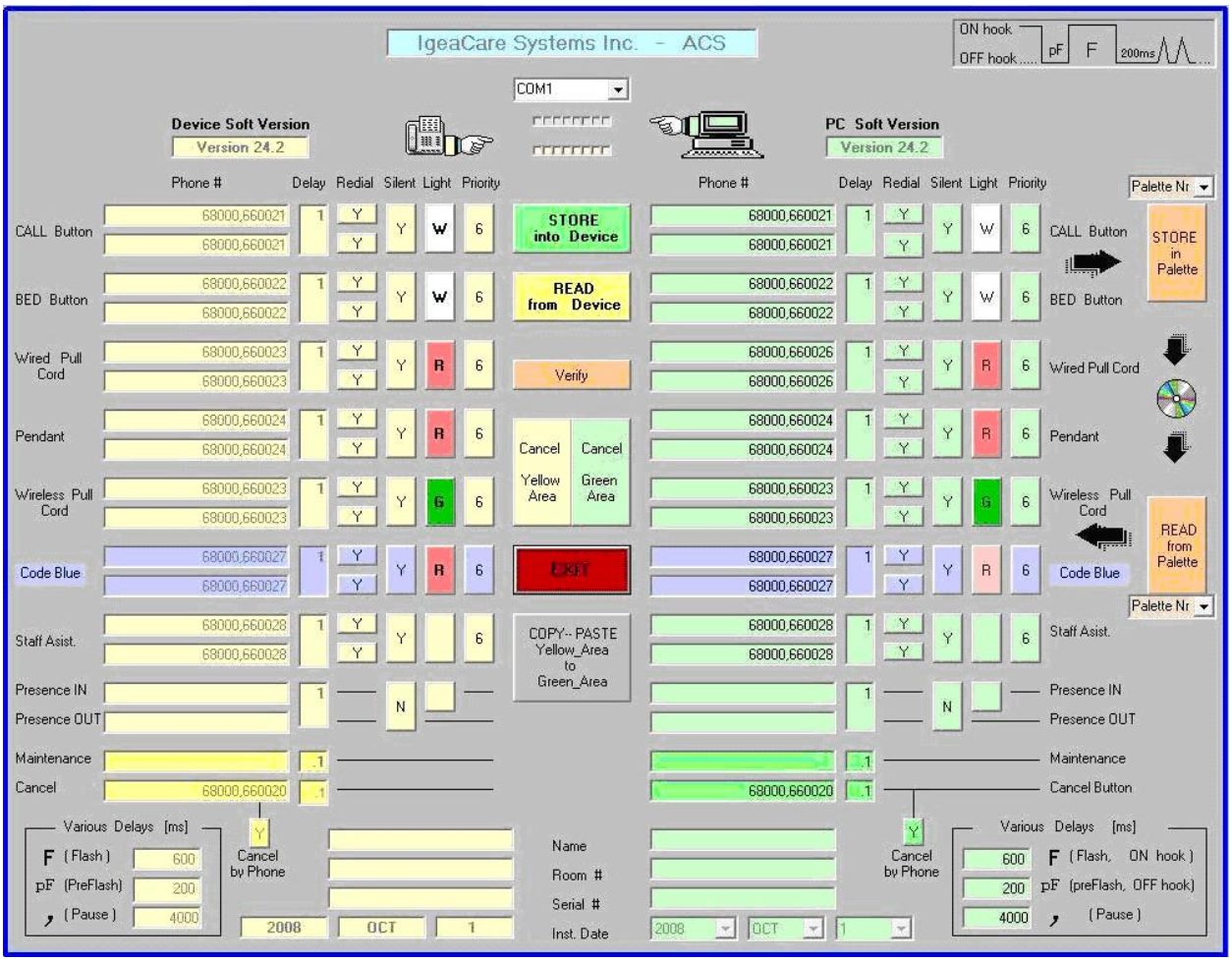
6. Configure IgeaCare igeacom700

This section provides the procedures for configuring the IgeaCare igeacom700 nurse call device. The procedures fall into the following areas:

- Launch igeacom700 programming software
- Administer call point destinations and coverage

6.1. Launch igeacom Programming Software

From any PC running the igeacom700 programming software, physically connect the PC serial COM port to the igeacom700 circuit board. Launch the administration application by selecting **Start > All Programs > IgeaCare Systems Inc > IgeaCare Systems Inc. – ACS** from the PC. Follow the steps in **Section 4.1** to similarly configure the igeacom700. The resultant screenshot after pushing the configuration to igeacom700 is shown below.



7. Configure IgeaCare ApoloDS

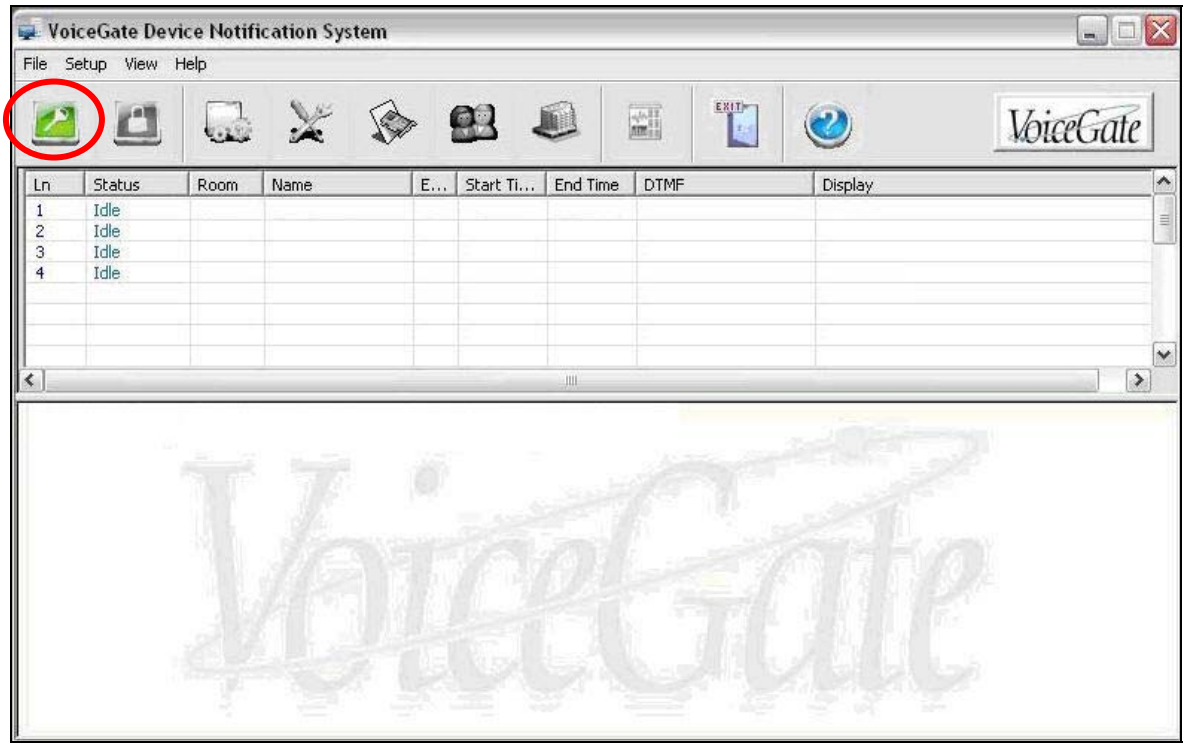
This section provides the procedures for configuring the IgeaCare ApoloDS. The procedures fall into the following areas:

- Launch administration application
- Administer program setup
- Administer channel setup
- Administer room setup

7.1. Launch Administration Application

From the IgeaCare ApoloDS server, launch the administration application by double-clicking the **VG_DNS** icon shown below, which was created as part of installation.

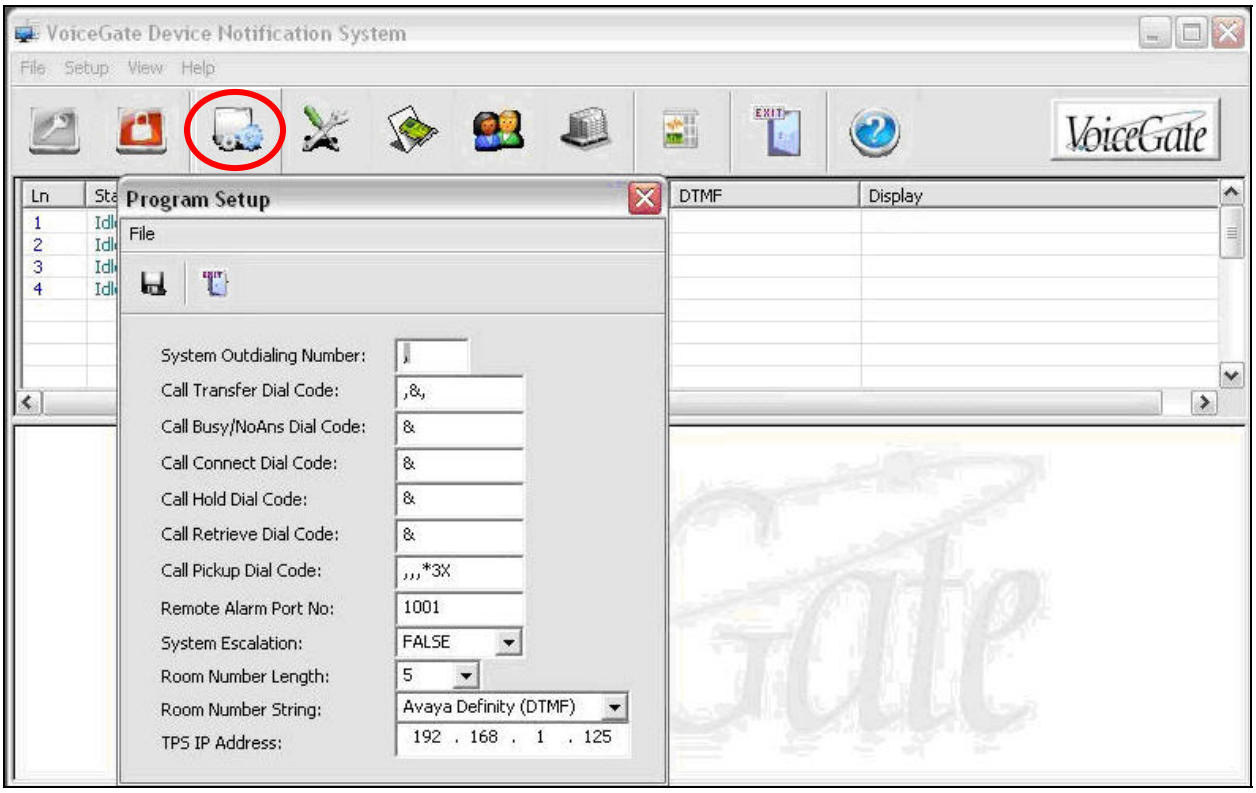
The **VoiceGate Device Notification System** screen is displayed. Click the login icon, located at the upper left corner of the screen, and enter the appropriate credentials to log in (not shown below).



7.2. Administer Program Setup

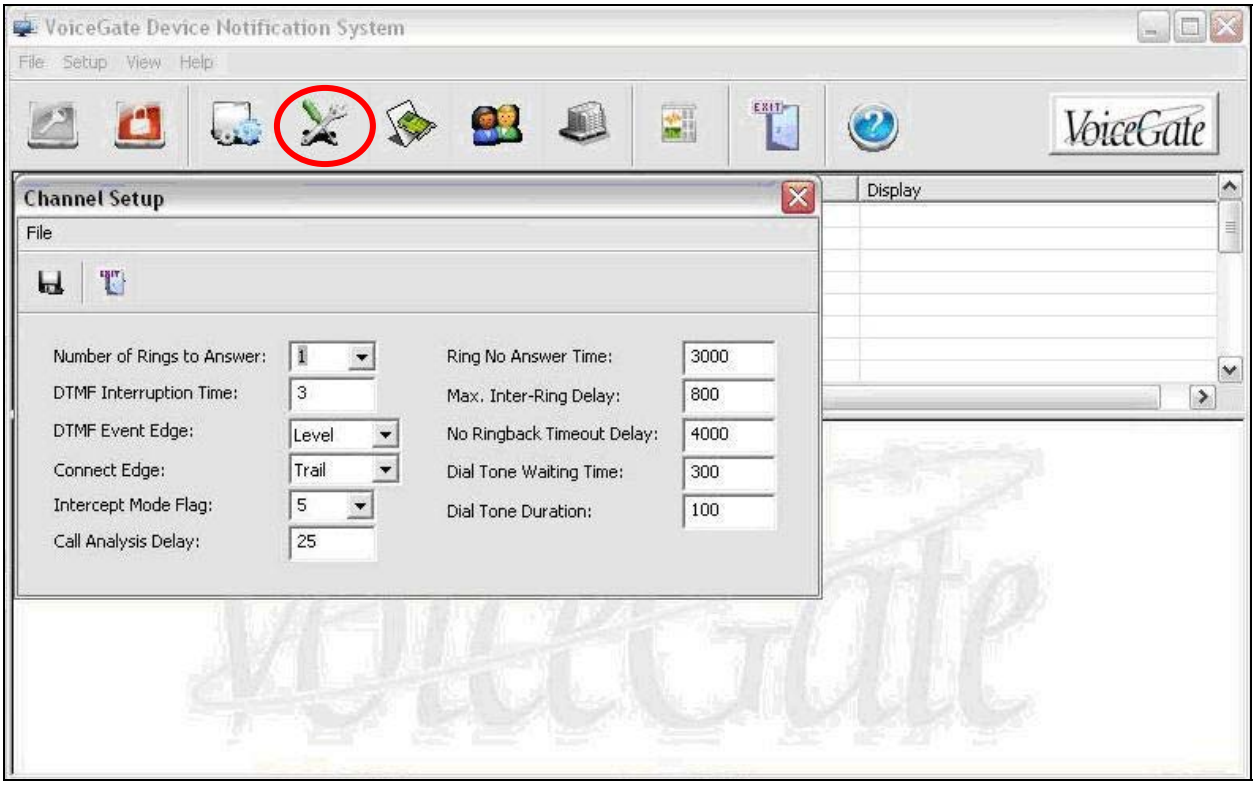
Click the program setup icon circled below, to display the **Program Setup** pop-up screen. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **System Escalation:** "FALSE"
- **Room Number Length:** The number of digits in the resident extensions, in this case "5".
- **Room Number String:** "Avaya Definity (DTMF)"
- **TPS IP Address:** The IP address of the ApoloDS server.



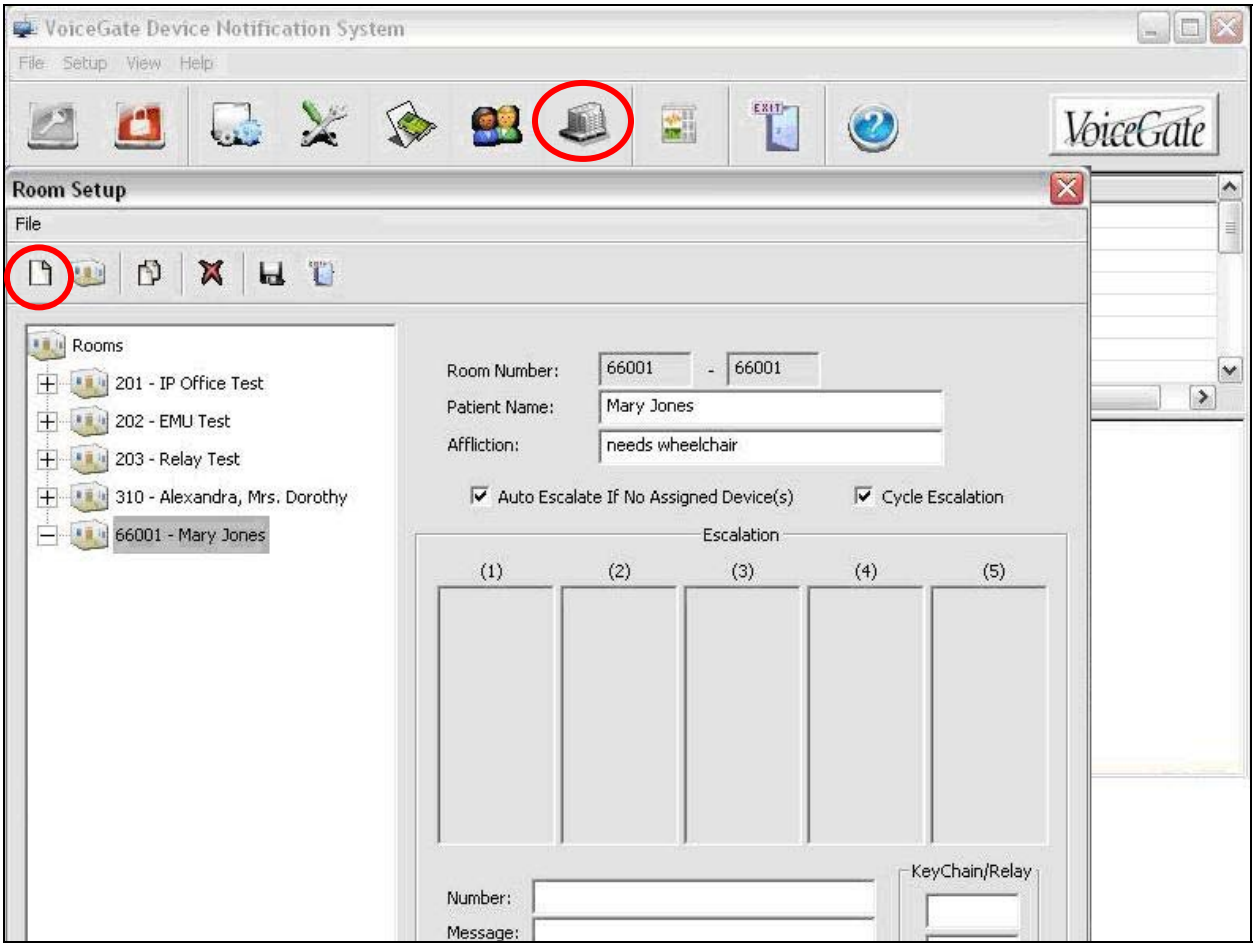
7.3. Administer Channel Setup

Click the channel setup icon circled below, to display the **Channel Setup** pop-up screen. For **Number of Rings to Answer**, select "1" from the drop-down list. Retain the default values in the remaining fields.



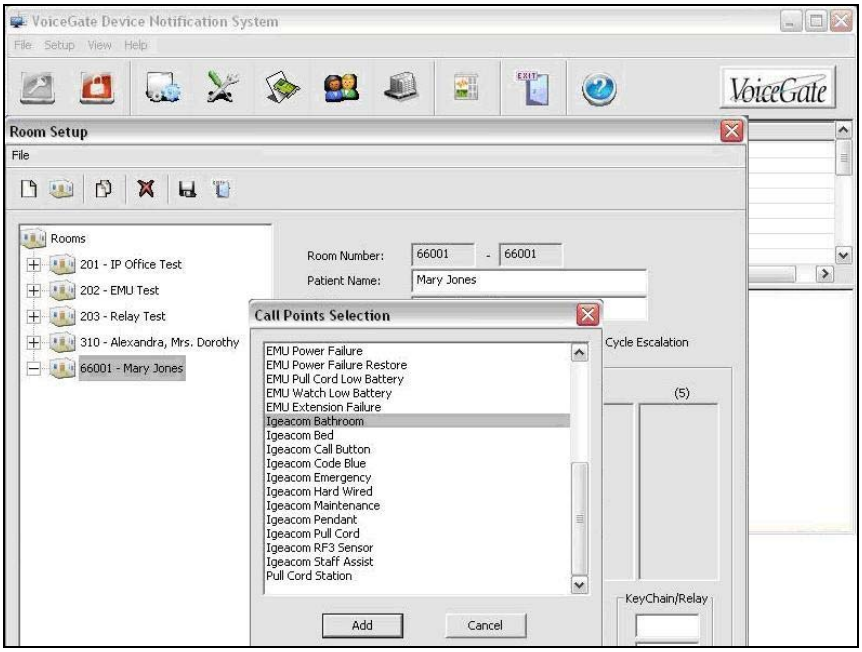
7.4. Administer Room Setup

Click the room setup icon circled below, to display the **Room Setup** pop-up screen. In the **Room Setup** screen, click the add icon to add a new room. For **Room Number**, enter the igeacom station extension from **Section 3.1**. For **Patient Name**, enter a desired name. For **Affliction**, enter any important information regarding this resident. The screen shot below shows the room number and the patient name in the left pane, after the entry has been saved.

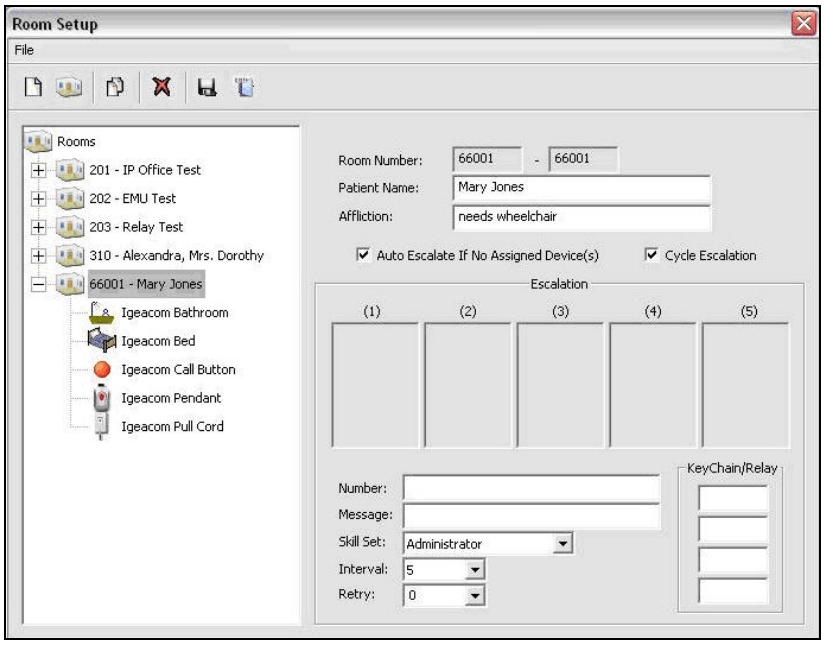


7.4.1. Administer Call Points

Right-click on the newly created room entry in the left pane, in this case "66001 – Mary Jones", and select **Add Call Point** from the drop-down list to display the **Call Points Selection** pop-up screen. Select an applicable call point for this igeacom device, and click **Add**. Note that the **Igeacom Bathroom** entry below corresponds to the wired cord call point from **Section 3.3**.



Repeat this section to add all applicable call points for the igeacom device. The screen shot below shows all call points that have been added for this device.



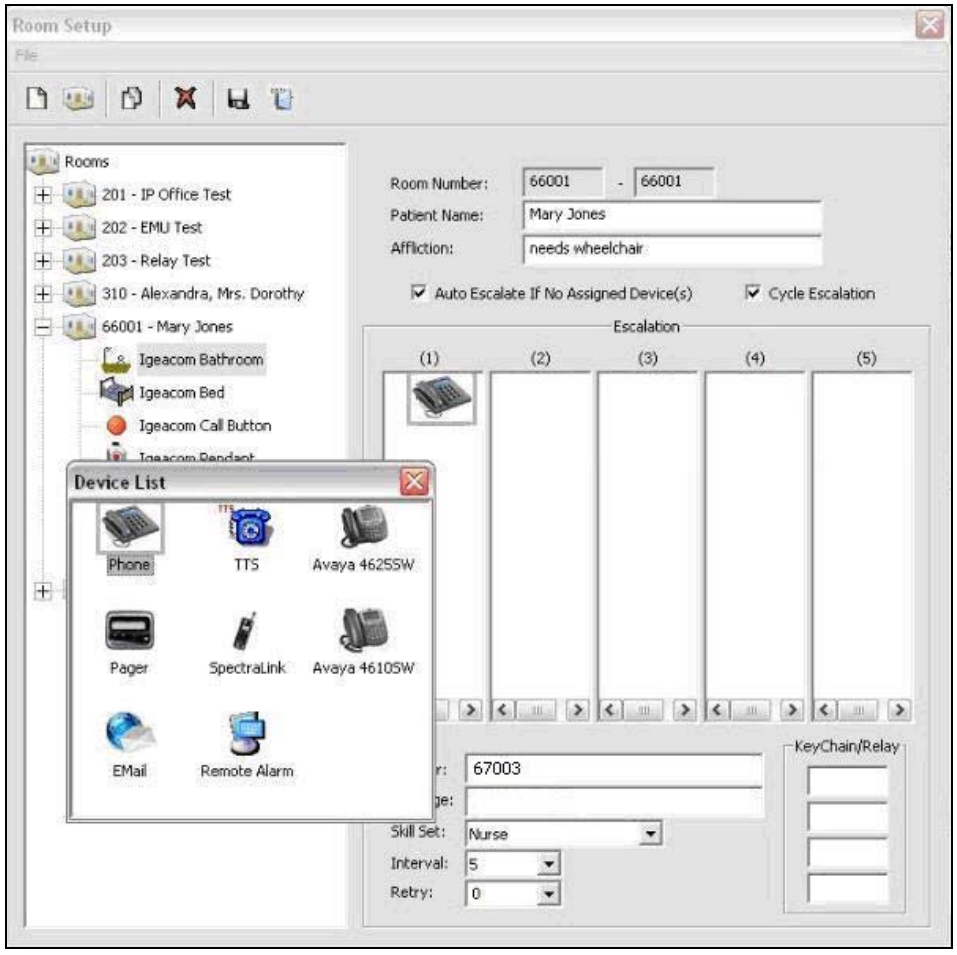
7.4.2. Administer Escalations

Click on the first call point in the left pane for the resident, in this case **Igeacom Bathroom**. Right click in any of the white column area in the **Escalation** section, and select **Add** from the pop-up list (not shown below) to administer notification points for each escalation level. The **Device List** pop-up screen is displayed.

Click and drag the **Phone** device to **Escalation (1),** as shown below. For the **Number** field (partly blocked by the **Device List** screen below), enter the hunt group extension from **Section 3.3** that corresponds to this call point type, in this case "67003". In the **Skill Set** field, select "Nurse" from the drop-down list.

Repeat this section to administer all desired escalation points and escalation levels. For text-to-speech notifications, drag the **TTS** icon from the **Device List** screen, and administer the hunt group extension from **Section 3.3** that corresponds to this call point type in the **Number** field. For text push notifications, drag the appropriate Avaya 4625SW or Avaya 4610SW icon from the **Device List** screen, and administer the IP address of the receiving telephone in the **Number** field. Note that each escalation level can consist of multiple notification points.

Repeat **Section 7.4** to administer room setup for all remaining residents.



8. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the ability of ApoloDS to transfer resident calls from the igeacom500 and igeacom700 nurse call devices to the proper nurse hunt groups associated with various call points. The verification included proper nurse station display, connected two-way talk paths, proper call termination, and proper call coverage. The feature testing also included verifying the text-to-speech and text push to the notification points.

The serviceability testing focused on verifying the ability of ApoloDS to recover from adverse conditions, such as disconnecting and reconnecting the analog line cable to the devices.

8.1. General Test Approach

All tests were performed manually.

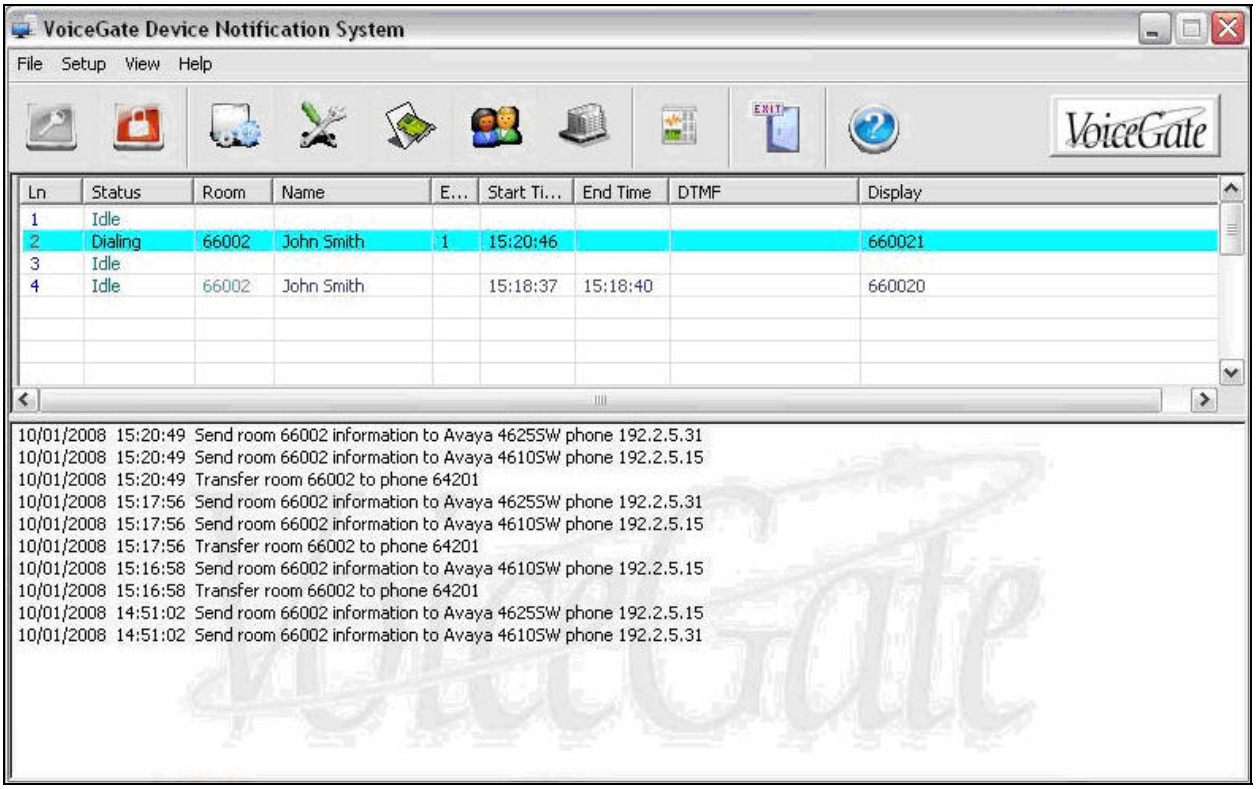
8.2. Test Results

All tests were executed and passed.

9. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Communication Manager, IgeaCare igeacom500 and igeacom700, and IgeaCare ApoloDS.

From a call point, activate a call from the resident's igeacom device to the nurse staff (such as pulling the cord or pressing the button, depending on the call point type). Verify that the call is ringing on a nurse station. On the **VoiceGate Device Notification System** screen on ApoloDS, verify that an active entry is highlighted. Verify that the **Status** field shows the appropriate status, the **Room** field shows the extension of the resident, and the **Name** field shows the name of the resident. Also verify that the **Display** field shows the extension of the resident and the unique value corresponding to the call point type.



10. Support

Technical support on IgeaCare ApoloDS can be obtained through the following:

- **Phone:** (866) 361-6225
- **Email:** support@igeacare.com

11. Conclusion

These Application Notes describe the configuration steps required for IgeaCare ApoloDS to interoperate with Avaya Communication Manager. All feature and serviceability test cases were completed successfully.

12. Additional References

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

- *Administrator Guide for Avaya Communication Manager*, Document 03-300509, Issue 4.0, Release 5.0, January 2008, available at http://support.avaya.com.
- *IgeaCare Resident Unit Installation Guide*, Release 2, available at http://www.igeacare.com.
- *IgeaCare 600-700 igeacom Installation Guide*, available at http://www.igeacare.com.
- *Resident Unit Specification Sheet*, Release 4, available at http://www.igeacare.com.
- *Patient Unit Specification Sheet*, Release 3, available at http://www.igeacare.com.
- *ApoloDS User Guide*, 2008, available at http://www.igeacare.com.

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 http://www.avaya.com/devconnect.