

Avaya Solution & Interoperability Test Lab

Application Notes for IgeaCare apoloDS and igeacom with Avaya Aura® Communication Manager – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the IgeaCare apoloDS and igeacom with Avaya Aura® Communication Manager. The IgeaCare apoloDS used the analog user interface from Avaya Aura® Communication Manager to transfer resident calls from igeacom to the nurse staff, and used the Avaya PUSH API to push text to nurses with Avaya 4610SW IP Telephones. The igeacom500 and the igeamcom700 are covered in these Application Notes.

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 the configuration steps required to integrate the IgeaCare apoloDS and igeacom with Avaya Aura® Communication Manager. The IgeaCare apoloDS used the analog user interface from Avaya Aura® Communication Manager to transfer resident calls from igeacom to the nurse staff, and used the Avaya PUSH API to push text to nurses with Avaya 4610SW IP Telephones. The igeacom500 and the igeamcom700 are covered in these Application Notes.

In the compliance testing, apoloDS used an analog card to connect to Communication Manager. The analog ports were configured as analog stations, which were members of an apoloDS hunt group. In the testing, the two analog ports on apoloDS were pre-configured to integrate with igeacom.

igeacom is essentially an analog speaker telephone that can be activated by resident users via multiple call points to reach the nurse staff. Each igeacom is configured as an analog station on Communication Manager. When the resident activates igeacom via a call point to reach the nurse staff, igeacom originates a call to the apoloDS hunt group.

apoloDS answers the resident call from igeacom, and transfers the call to the notification points configured on apoloDS, which can be a coverage answer group consisting of nurse stations on Communication Manager. Upon connection with a nurse, apoloDS can use the text-to-speech capability to playback the information received from the DTMF outpulsed from igeacom, which includes resident extension and call point type. apoloDS can also push text to nurses with Avaya 4610SW and 4625SW IP Telephones.

2. General Test Approach and Test Results

All tests were performed manually.

2.1. 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 igeacom500 and igeacom700 to the nurse staff. The verification included proper announcement playback (which included resident name, patient name, and call point type), connected two-way talk paths, proper call termination, and proper call escalations. The feature testing also included verifying the 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.

2.2. Test Results

All test cases were executed and passed.

2.3. Support

Technical support on IgeaCare apoloDS and igeacom can be obtained through the following:

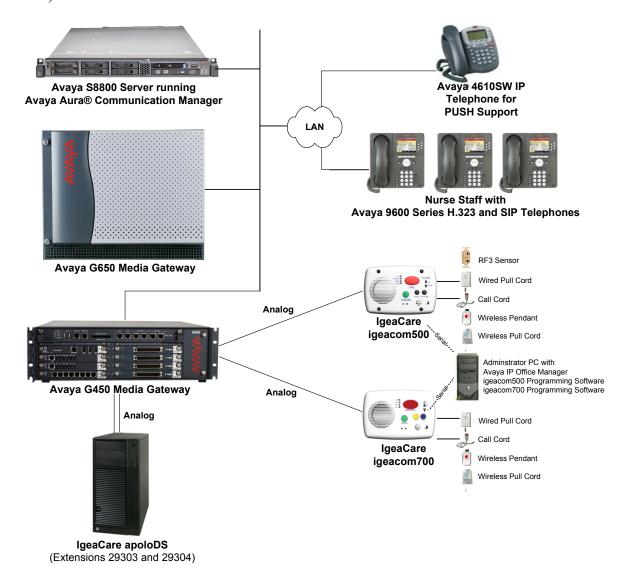
■ **Phone:** (866) 361-6225

■ Email: support@igeacare.com

3. Reference Configuration

As shown in the test configuration below, the apoloDS solution with igeacom consists of the apoloDS server, which dispatches calls to the nurse staff, the igeacom emergency monitoring base unit, analog line connections to Avaya Aura® Communication Manager for the apoloDS and igeacom. A PC with the igeacom programming software was used to configure and download the configuration to the igeacom devices.

igeacom supports various call points, including emergency button, wireless pendant, wireless pull cord, and RF3 sensor. The S8800 Server running Avaya Aura® Communication Manager managed G650 and G450 Media Gateways. apoloDS and igeacom used analog ports on the G450 Media Gateway for connectivity. The nurse staff was equipped with Avaya 9600 series SIP and H.323 stations, Avaya 4600 Series H.323 stations and Avaya 3631 Wireless Phone (not shown).



4. Equipment and Software Validated

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

Hardware Component	Version
Avaya S8800 Servers and G650 and G450 Media Gateways	Avaya Aura® Communication Manager 6.0.1 SP 3
Avaya 9600 Series IP Telephones	3.101 (H.323)
	2.6.4 (SIP)
Avaya 4600 Series IP Telephones	2.9 SP1 (H.323)
Leaden and DC anwinden Wist Desire	3.10 – 1006744
IgeaCare apoloDS onWindows Vista Business	2007
IgeaCare igeacom500	IC500-B2.6-U-1210-0155
IgeaCare igeacom700	IC700-B1.6-U-0211-0009
igeacom500 Programming Software	6.11
igeacom700 Programming Software	6.08.3

5. Configure Avaya Aura® Communication Manager

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

- Administer apoloDS stations
- Administer apoloDS Hunt Group
- Administer igeacom station
- Administer coverage answer groups for nurse staff
- Administer coverage paths for each coverage answer group
- Administer stations with coverage paths

Use the System Access Terminal (SAT) to configure Communication Manager and log in with the appropriate credentials.

5.1. Administer apoloDS Stations

Use the **add station** command to add stations for apoloDS. Use 2500 for the station **Type**, specify an analog port, and provide a descriptive name. Use the default values for the other fields. Two analog stations were used for apoloDS in this sample configuration. The station extensions were 23903 and 23904, which will be specified in the hunt group in the next section. The following figure shows station 23903. Repeat this configuration for station 23904.

```
Page 1 of 4
add station 23903
                                          STATION
                                          Lock Messages? n
Security Code:
Coverage Path 1:
Coverage Path 2:
Hunt-to Station:
Extension: 23903
                                                                                 BCC: 0
    Type: 2500
                                                                                   TN: 1
                                                                                COR: 1
     Port: 001V202
     Name: apoloDS P3
                                                                               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
Passive Signalling Station? n
```

5.2. Administer apoloDS Hunt Group

Use the **add hunt-group** command to add a hunt group containing the apoloDS stations. igeacom uses the hunt group extension as the phone number to dial. When a resident uses a call point to contact the nurse staff, igeacom will dial the hunt group number to reach the apoloDS. In the hunt group, specify a descriptive **Group Name** and a **Group Extension**.

```
add hunt-group 100

HUNT GROUP

Group Number: 100

Group Name: Apolo DS

Group Extension: 29100

Group Type: ucd-mia

TN: 1

Night Service Destination:

COR: 1

Security Code:

Local Agent Preference? n

ISDN/SIP Caller Display:
```

On Page 3 of the Hunt Group form, specify the apoloDS station extensions configured in the previous section.

```
add hunt-group 100

HUNT GROUP

Group Number: 100 Group Extension: 29100 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: 23903
2: 23904
15:
```

5.3. Administer igeacom Station

Use the **add station** command to add a station for igeacom. Use 2500 for the station **Type**, specify an analog port, and provide the room number in the **Name** field (e.g., *Room 4000*). The station name will be displayed on the nurse's telephone display. Use the default values for the other fields.

```
add station 4000
                                                               Page 1 of 4
                                      STATION
                                       Lock Messages? n
Security Code:
Coverage Path 1:
Extension: 4000
                                                                         BCC: 0
     Type: 2500
                                                                           TN: 1
     Port: 001V201
                                                                          COR: 1
                                       Coverage Path 2:
    Name: Room 4000
                                                                         cos: 1
                                       Hunt-to Station:
                                                                       Tests? y
STATION OPTIONS
     XOIP Endpoint type: auto
Loss Group: 1
                                         Time of Day Lock Table:
                                      Time of Day 2001.
Message Waiting Indicator: none
   Off Premises Station? n
        Survivable COR: internal
   Survivable Trunk Dest? y
                                               Remote Office Phone? n
Passive Signalling Station? n
```

5.4. Administer Nurse Coverage Answer Groups

For this solution, coverage answer groups were used to allow all nurses to receive the call simultaneously. An available nurse can then respond to the call. Two coverage answer groups were configured in order to create two escalation levels. If a nurse in the first answer group does not answer the call within a configured time interval, igeacom will place the call to the second coverage answer group for the appropriate call point.

Use the **add coverage answer-group** command to create an answer group comprised of nurse extensions. The following coverage answer group includes three nurse extensions, including an H.323, SIP, and 3631 wireless phone. When each of these phones received a call, the igeacom station name (or room number) was displayed.

```
add coverage answer-group 1
                                                            Page
                                                                   1 of
                                                                          1
                      COVERAGE ANSWER GROUP
                     Group Number: 1
                       Group Name: NURSE GROUP 1
GROUP MEMBER ASSIGNMENTS
   Extension
                Name
Nurse 77301
1: 77301
2: 78005
                  Avaya 78005
3: 71000
                  Wireless 71000
 4 •
 5:
 6:
 7:
 8:
```

Below is the coverage answer group for the second escalation level.

```
add coverage answer-group 2
                                                            Page
                                                                   1 of
                      COVERAGE ANSWER GROUP
                     Group Number: 2
                       Group Name: NURSE GROUP 2
GROUP MEMBER ASSIGNMENTS
   Extension
                   Name
1: 77307
                   Head Nurse
2: 77308
                   Asst Nurse
 3:
 4:
 5:
 6:
 7:
 8:
```

5.5. Administer Coverage Paths

This section covers two coverage paths corresponding to each coverage answer group configured in the previous section. The coverage answer groups, c1 and c2, are specified in the **Point 1** field of each coverage path, respectively.

The following coverage path directs the call to coverage answer group 1.

```
add coverage path 1

COVERAGE PATH

Coverage Path Number: 1
Cvg Enabled for VDN Route-To Party? n Hunt after Coverage? n
Next Path Number: Linkage

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

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

The following coverage path directs the call to coverage answer group 2.

```
add coverage path 2
                                                                   Page
                                                                          1 of 1
                                    COVERAGE PATH
                   Coverage Path Number: 2
     Cvg Enabled for VDN Route-To Party? n Hunt after Coverage? n Next Path Number: Linkage
COVERAGE CRITERIA
   Station/Group Status Inside Call Outside Call
Active? n n
Busy? y y
Don't Answer? y y
All? n n
D/SAC/Goto Cover? y y
                                                  y Number of Rings: 2
DND/SAC/Goto Cover?
  Holiday Coverage?
COVERAGE POINTS
   Terminate to Coverage Pts. with Bridged Appearances? n
 Point1: c2 Rng: Point2: Point4:
                           Point6:
 Point5:
```

5.6. Administer Stations with Coverage Paths

This section covers stations that cover to a nurse answer group. There will be a primary and secondary station configured for each call point type. Having a primary and secondary station provides two escalation levels. If a nurse in the primary answer group doesn't answer, apoloDS can call a secondary nurse answer group.

The following phantom station will forward the call to coverage answer group 1, consisting of nurses in the first escalation level, as specified by **Coverage Path 1**. This station will be called by apoloDS when a resident user presses the call button.

```
Add station 29501

Extension: 29501

Type: 6408D+
Port: X
Coverage Path 1: 1
Coverage Path 2:
Hunt-to Station:

STATION

Time of Day Lock Table:
Personalized Ringing Pattern: 1
Data Module? n
Speakerphone: 2-way
Display Language: english

Survivable COR: internal
Survivable Trunk Dest? y

Media Complex Ext:
Survivable Trunk Dest? y

Remote Office Phone? n
Remote Office Phone? n
IP Video? n
```

The following phantom station will forward the call to coverage answer group 2, consisting of nurses in the second escalation level, as specified by **Coverage Path 2**. apoloDS will call this station to escalate to the next level.

```
Page 1 of 5
add station 29601
                                              STATION
                                              Lock Messages? n BCC: 0
Security Code: TN: 1
Coverage Path 1: 2 COR: 1
Extension: 29601
     Type: 6408D+
      Port: X
                                              Coverage Path 2:
     Name: Call Button
                                                                                         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: 29

Speakerphone: 2-way Mute Button Enabled? y

Display Language: english
                                                         Message Lamp Ext: 29601
           Survivable COR: internal able Trunk Dest? y
                                                        Media Complex Ext:
   Survivable Trunk Dest? v
                                               Remote Office Phone? n
                                                           IP SoftPhone? n
                                                                   IP Video? n
```

Repeat this section to add a station for every call point type, including a primary and secondary station, if desired. The stations that were used for the compliance testing are shown below.

Station Extension	Name	Used by igeacom500	Used by igeacom700
29501	Call Button	X	X
29502	Bed Cord	X	X
29503	Wired Cord	X	X
29504	Pendant	X	X
29505	Wireless Pull	X	X
29506	Smoke Detector RF3	X	
29507	Code Blue		X
29508	Staff Assist		X

The stations for the second escalation level are listed below. This may or not be required depending on customer requirements.

Station Extension	Name	Used by igeacom500	Used by igeacom700
29601	Call Button	X	X
29602	Bed Cord	X	X
29603	Wired Cord	X	X
29604	Pendant	X	X
29605	Wireless Pull	X	X
29606	Smoke Detector RF3	X	
29607	Code Blue		X
29608	Staff Assist		X

6. Configure Avaya 46xx IP Telephones

This section provides the procedures for configuring the Avaya 46xx IP Telephones to support the push interface.

From the appropriate HTTP or TFTP server serving the Avaya 46xx 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 46xx IP Telephones.

In the compliance testing, the Avaya 4610SW IP Telephone was used.

```
SET WMLEXCEPT 192.168.100.188
SET TPSLIST 192.168.100.188
SET FILTERLIST 192.168.100.188
SET SUBSCRIBELIST http://192.168.100.188/ASPpushsamples/subscribe.asp
```

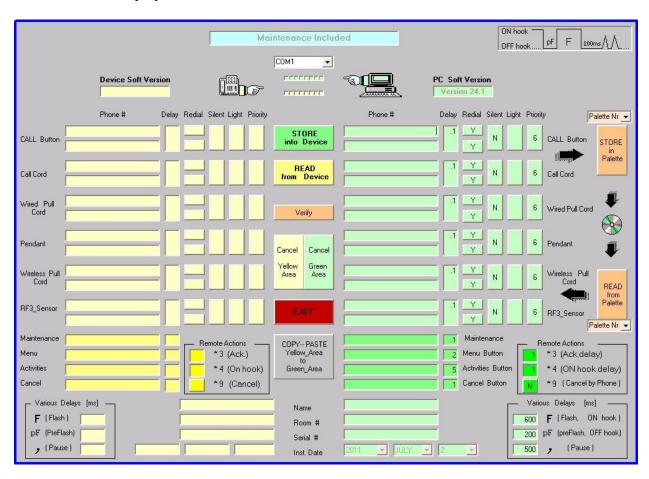
7. Configure IgeaCare igeacom500

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

7.1. Launch igeacom500 Programming Software

From a 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 \rightarrow All Programs \rightarrow IgeaCare System Inc. from the PC. The screen below is displayed.



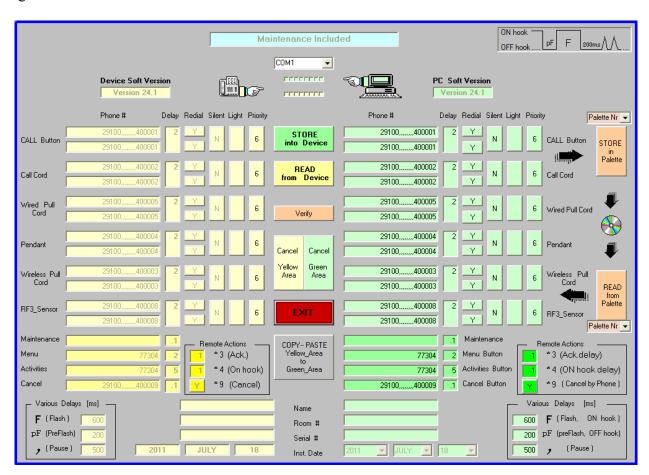
7.2. Administer Call Point Destinations

Configure igacom500 using the apoloDS hunt group extensions. The Phone # field is configured as follows. First, the apoloDS hunt group (29100) is specified followed by eight commas to insert a pause before outpulsing the room number (4000) followed by the 2-digit call point code. In the compliance testing, the same hunt group extension was used for both primary and rollover destinations. Update the remaining fields associated with each call point type as desired.

For **Menu button** and **Activities button**, enter the desired destinations, which are typically messaging extensions on Communication Manager. In the compliance testing, the head nurse extension "77304" was used. Enter desired values in the associated **Delay** field.

For Cancel Button, enter the cancel hunt group extension from Section 5.2.

Follow [3] to configure the other fields as desired and store the resultant configuration to igeacom500.



8. Configure IgeaCare igeacom700

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

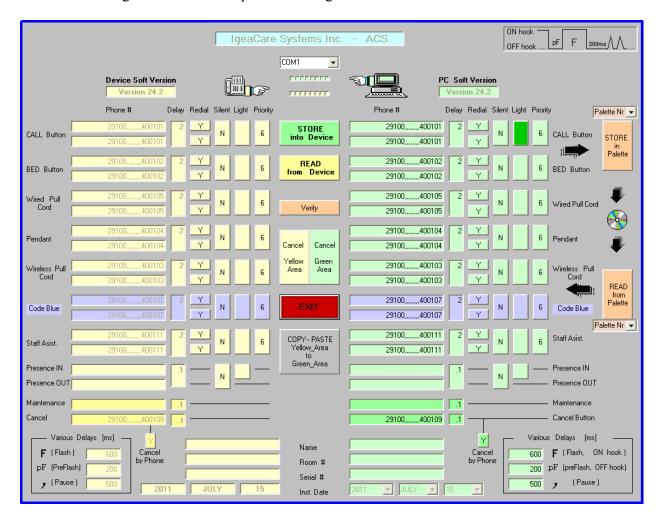
- Launch igeacom700 programming software
- Administer call point destinations

8.1. Launch igeacom700 Programming Software

From a 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 System Inc → IgeaCare System Inc. – ACS from the PC.

8.2. Administer Call Point Destinations

Follow the steps in **Section 7.2** to similarly configure the igeacom700. The screenshot below shows the settings used in the compliance testing.



9. Configure IgeaCare apoloDS

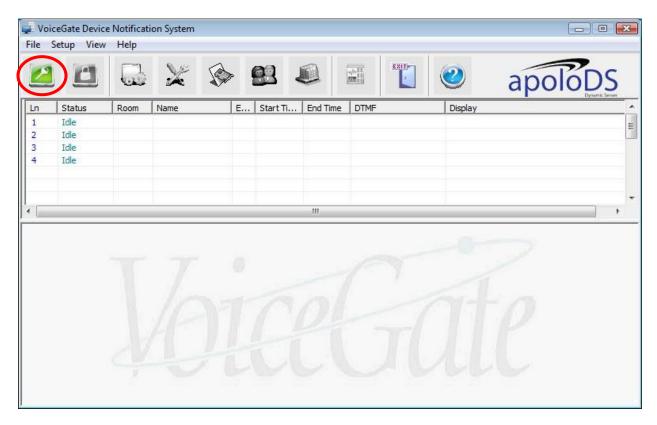
This section provides the procedures for configuring the IgeaCare apoloDS. The procedures fall into the following areas:

- Launch apoloDS
- Administer program setup
- Administer channel setup
- Administer room setup

9.1. Launch apoloDS

From the apoloDS server, double-click on the apoloDS icon if from the system tray.

The **VoiceGate Device Notification System** screen is displayed. Click the **Logon** icon, and enter the appropriate credentials in the pop-up box (not shown).

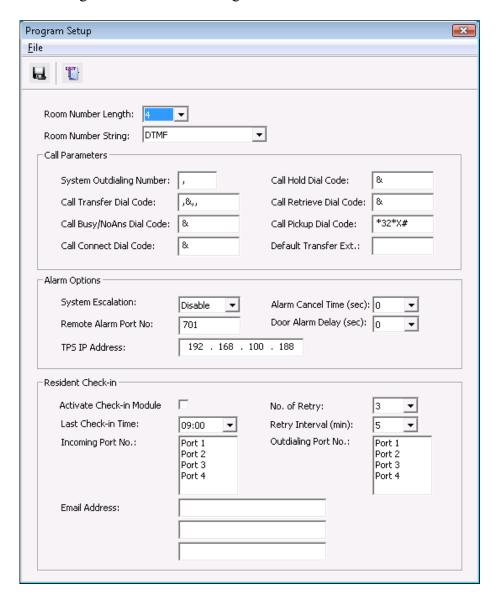


9.2. Administer Program Setup

The **VoiceGate Device Notification System** screen is displayed again. Click the **Program Setup** icon from the top menu.



The **Program Setup** screen is displayed. For **Room Number String**, select "DTMF". For **TPS IP Address**, enter the IP address of the apoloDS server, as shown below. Retain the default values in the remaining fields. Save the settings.

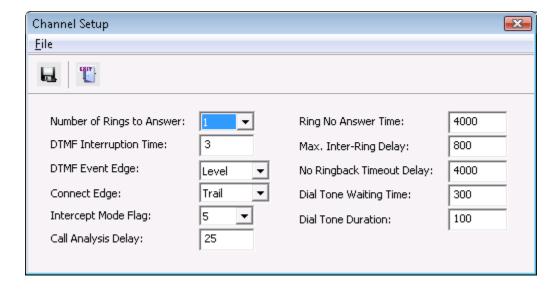


9.3. Administer Channel Setup

The VoiceGate Device Notification System screen is displayed again. Click the Channel Setup icon from the top menu.



The **Channel Setup** screen is displayed. For **Number of Rings to Answer**, select "1" from the drop-down list. Retain the default values in the remaining fields. Save the settings.

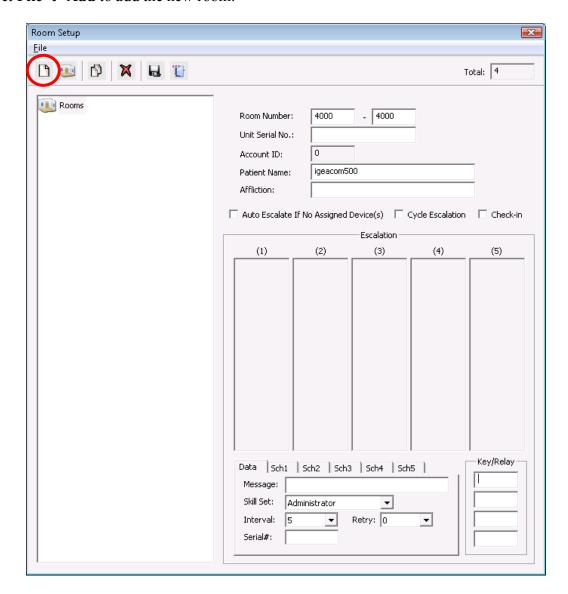


9.4. Administer Room Setup

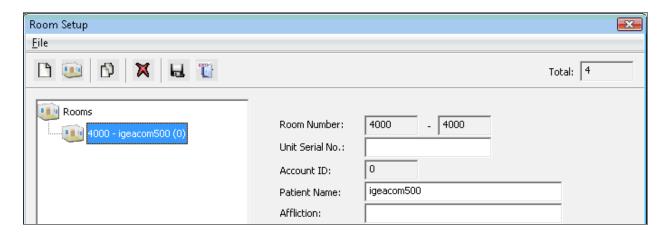
The VoiceGate Device Notification System screen is displayed again. Click the Room Setup icon from the top menu.



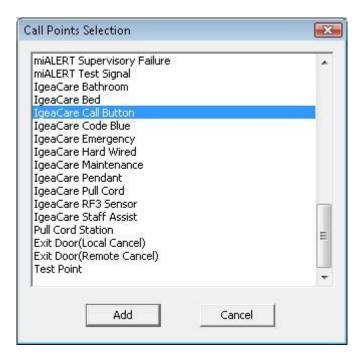
The **Room Setup** screen is displayed. Click the **New** icon to add a new room. For **Room Number**, enter the igeacom user extension from **Section 5.3**. Enter a desired **Patient Name**. Select **File** → **Add** to add the new room.



Right click on the newly created room entry in the left pane, and select **Add Call Point** from the pop-up box (not shown).

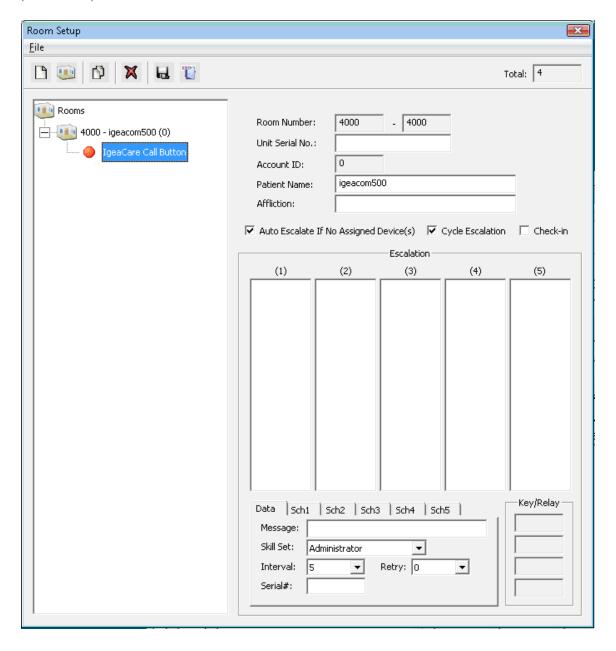


The **Call Points Selection** screen is displayed. Scroll the screen as necessary to select the entry corresponding to the first call point for this igeacom device, in this case "IgeaCare Call Button".



The **Room Setup** screen is displayed again, and updated with the new call point shown in the left pane. Select the new call point in the left pane. In the right pane, check the desired escalation parameters. In the compliance testing, **Auto Escalate If No Assigned Devices(s)** and **Cycle Escalation** were checked.

In the **Escalation** sub-section, right-click on an empty column and select **Add** from the pop-up list (not shown).

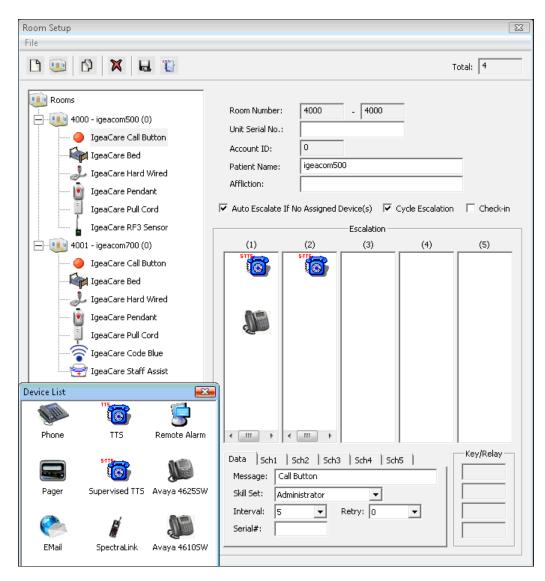


The **Device List** pop-up box is displayed. Drag and drop the desired devices to the **Escalation** sub-section. In the compliance testing, each call point type is configured with a "Phone" in the first and second escalation levels, and an "Avaya 4610SW" in the first escalation level.

For each "Phone" and "Avaya 4610SW" escalation point, configure **Data** \rightarrow **Message** with a string to denote the call point type. Note that the text in the **Message** field will be used by apoloDS to playback to the connected nurse. For each Phone escalation point, specify the station extension that covers to a nurse answer group in **Sch1** \rightarrow **Number**.

For each Avaya 4610SW escalation point, configure **Sch1 Number** (not shown) with the IP address of the 4610SW telephone, which will be used to push the escalation information.

Repeat this section to add all desired escalation notification points for all call points associated with all igeacom devices, as shown below.



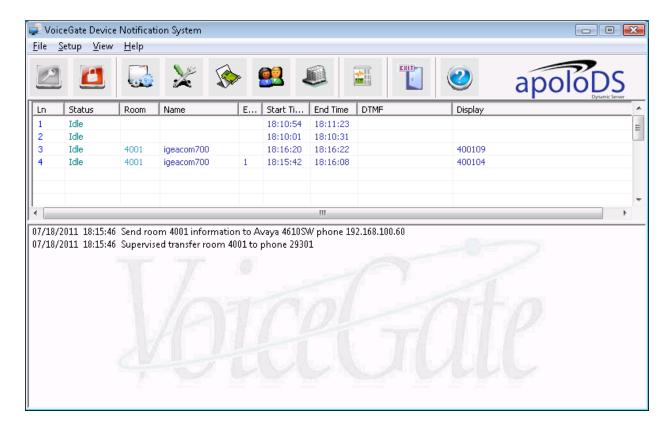
10. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Aura® Communication Manager, Avaya 46xx IP Telephones, IgeaCare igeacom, and IgeaCare apoloDS.

From an igeacom call point, activate a call to apoloDS (such as pulling the cord or pressing the button, depending on the type of call point). Verify that the call is ringing at the nurse specified in the first escalation level.

Answer the call at the nurse, and verify that an announcement is played that includes the igeacom room number from **Section 5.3**, and the patient name and call point type message from **Section 9.4**. From the nurse's telephone, press the appropriate key to accept the call, and verify that that the nurse is connected to the igeacom user with two-way talk paths. Press the appropriate keys from the nurse telephone to end the call and cancel the notification. Press and hold down the Emergency button on the igeacom to cancel the call on the unit. Also verify that the nurse telephone associated with the PUSH notification receives the appropriate text that includes the same igeacom room number, patient name, and call point type information.

From the **VoiceGate Device Notification System** screen on the apoloDS server, verify that there are entries showing the successful supervised transfer of the igeacom call to the nurse and sending of call information to the configured Avaya 4610SW telephone from **Section 9.4**, as shown below.



11. Conclusion

These Application Notes describe the configuration steps required for IgeaCare apoloDS and igeacom to interoperate with Avaya Aura® 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.

- [1] *Administering Avaya Aura*® *Communication Manager*, June 2010, Release 6.0, Issue 6.0, Document Number 03-300509.
- [2] IgeaCare Resident Unit Installation Guide, Release 2, available at http://www.igeacare.com.
- [3] IgeaCare 600-700 igeacom Installation Guide, available at http://www.igeacare.com.
- [4] Resident Unit Specification Sheet, Release 4, available at http://www.igeacare.com.
- [5] Patient Unit Specification Sheet, Release 3, available at http://www.igeacare.com.
- [6] ApoloDS User Guide, 2008, available at http://www.igeacare.com.

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