



Avaya Solution & Interoperability Test Lab

Application Note for Configuring the Ascom Wireless IP-DECT SIP Solution with Avaya Communication Manager, Avaya SIP Enablement Services, Avaya IA 770 INTUITY AUDIX and Avaya Modular Messaging - Issue 1.0

Abstract

These Application Notes describe a solution for supporting wireless interoperability between the Ascom wireless IP-DECT SIP solution and Avaya Communication Manager, Avaya SIP Enablement Services, Avaya IA 770 INTUITY AUDIX and Avaya Modular Messaging. Emphasis of the testing was placed on verifying good voice quality on calls from and to Ascom wireless IP-DECT SIP handsets registered to the Avaya telephony infrastructure.

Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes detail the steps for creating a SIP VoIP-enabled wireless network using Digital Enhanced Cordless Telecommunications (DECT) with connectivity that enables interoperability between the Ascom wireless IP-DECT SIP solution and Avaya Communication Manager, Avaya SIP Enablement Services, Avaya IA 770 INTUITY AUDIX and Avaya Modular Messaging. The specific calling features that were verified to operate correctly include transfer (attended and unattended), hold/return from hold, multiple call appearances, caller ID operation, call forwarding (unconditional, on busy/no answer and clear), pickup groups, call pickup, bridged appearance alerting, and voicemail Message Waiting Indicator (MWI).

1.1. Ascom IP DECT Base Station

The Ascom IP-DECT system is a modular solution for large and small deployments with full handover capabilities with one PBX. The Ascom IP-DECT Base Station works as a conduit between the Avaya SIP Enablement Services and the Ascom IP-DECT wireless handsets.

After the Ascom IP-DECT wireless handsets register with the Ascom IP-DECT Base Station, the Base Station registers the handsets to Avaya SIP Enablement Services.

1.2. Network Diagram

The network diagram shown in **Figure 1** illustrates the testing environment used for compliance testing. The network consists of Avaya Communication Manager running on an Avaya S8300 Server with an Avaya G700 Media Gateway, Avaya SIP Enablement Services Server, Avaya Modular Messaging Application Server, Avaya Modular Messaging Storage Server, one Avaya 9630 IP Telephone running Avaya one-X Deskphone SIP, one Avaya 9620 IP Telephone (SIP), one Avaya 2420 Digital Telephone, one Ascom wireless IP-DECT Base Station, one Ascom wireless 9d24 DECT handset, one Ascom wireless OfficeT DECT Handset and one OfficeM DECT Handset. One computer is present in the network providing network services such as DHCP, TFTP, HTTP and RADIUS.

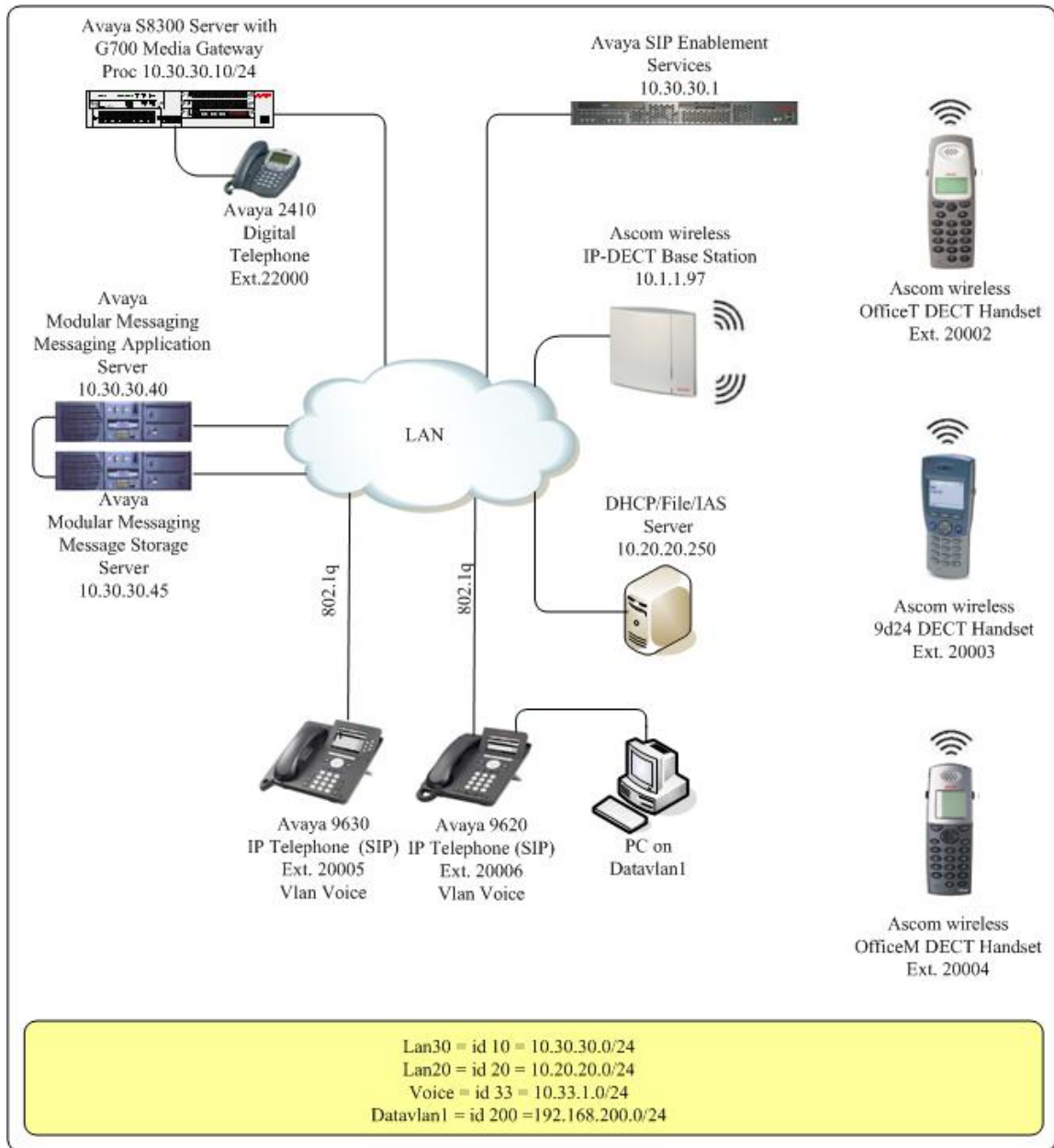


Figure 1: Sample Network Diagram

2. Equipment and Software Validated

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

Equipment	Software
Avaya S8300 Server	Avaya Communication Manager 5.0 - R015x.00.0.825.4
<ul style="list-style-type: none">• Avaya G700 Media Gateway• (MM712 DCP Media Module 8)	26.31.0 HW05 / FW08
Avaya SIP Enablement Services	5.0 - SES-5.0.0.0-825.31
Avaya Modular Messaging - Messaging Application Server (MAS)	3.1
Avaya Modular Messaging - Message Storage Server (MSS)	3.1
Avaya IA 770 INTUITY AUDIX	5.0
Avaya 2420 Digital Telephone	5.0
Avaya 9600 Series IP Telephones	Avaya one-X Deskphone SIP 2.0.3 (SIP)
Ascom wireless IP-DECT Base Station	2.1.5 (SIP)
Ascom wireless 9d24 DECT Handset	3.26
Ascom wireless OfficeT DECT Handset	1.08
Ascom wireless OfficeM DECT Handset	1.08

3. Configure Avaya Communication Manager, Avaya SIP Enablement Services, Avaya IA 770 INTUITY AUDIX and Avaya Modular Massaging

All of the telephones configured in the sample network in Figure 1 were administered as stations in Avaya Communication Manager. SIP stations were administered as Off-PBX stations in Avaya Communication Manager. For information on how to administer these types of stations refer to **Section 9 [1]** and **[2]**.

SIP stations were administered as users on the Avaya SIP Enablement Services. Media server extensions were associated with these SIP users to link the SIP users to the Avaya Communication Manager stations. For information on how to administer SIP stations on Avaya SIP Enablement Services refer to **Section 9 [3]**.

Voicemail services were provided by Avaya Modular Messaging and Avaya IA 770 INTUITY AUDIX. For information on how to administer Avaya Modular Messaging and Avaya IA 770 INTUITY AUDIX, refer to **Section 9 [4]** and **[5]**.

Certain Avaya Communication Manager features were tested with the Ascom wireless DECT Handsets. The configuration related to these specific features tested is included in this section.

Step	Description
1.	<p>To enable the features used for testing (Call Park, Call Answer Back, Call Forwarding and Call Pickup), administer the Feature Access Codes (FAC) and Feature Name Extensions (FNE) on Avaya Communication Manager. In order for the FACs and FNEs to be routed through the system properly the digits used for Auto Route Selection (ARS), Auto Alternate Routing (AAR) and FACs need to be administered in the dial plan. From the System Administration Terminal (SAT) interface on Avaya Communication Manager, use the “change dialplan analysis” command to configure the values displayed in bold below and submit the change. The values specified for the “Dialed String” field must match the ones configured in Step 2 for Auto Alternate Routing (AAR) Access Code and Auto Route Selection (ARS) - Access Code.</p> <div data-bbox="285 705 1503 1184" style="border: 1px solid black; padding: 10px;"> <pre> change dialplan analysis Page 1 of 12 DIAL PLAN ANALYSIS TABLE Percent Full: 3 Dialed Total Call Dialed Total Call Dialed Total Call String Length Type String Length Type String Length Type 1 3 dac 5 5 aar 7 5 ext 75000 5 ext 8 1 fac 9 1 fac * 3 fac 60 2 fac 61 2 fac # 3 fac </pre> </div>

Step	Description
2.	<p>Feature Access Codes (FACs) must be configured for the FNEs that will be accessed from the SIP stations. From the SAT interface on Avaya Communication Manager, use the “change feature-access-codes” command to configure the following values and submit the changes.</p> <div data-bbox="277 380 1495 989" style="border: 1px solid black; padding: 10px;"> <pre> Change feature-access-codes Page 1 of 7 FEATURE ACCESS CODE (FAC) Abbreviated Dialing List1 Access Code: Abbreviated Dialing List2 Access Code: Abbreviated Dialing List3 Access Code: Abbreviated Dial - Prgm Group List Access Code: Announcement Access Code: Attendant Access Code: Answer Back Access Code: #11 Auto Alternate Routing (AAR) Access Code: 60 Auto Route Selection (ARS) - Access Code: 61 Call Forwarding Activation Busy/DA: #15 All: #16 Deactivation: #17 Automatic Callback Activation: Deactivation: Call Forwarding Enhanced Status: Act: Deactivation: Call Park Access Code: #10 Call Pickup Access Code: #12 CAS Remote Hold/Answer Hold-Unhold Access Code: CDR Account Code Access Code: Change COR Access Code: Change Coverage Access Code: Contact Closure Open Code: Close Code: </pre> </div>


Step	Description
3.	<p>From the SAT interface, use the “change off-pbx-stations feature-name extensions” command to configure the following values and submit the changes. Note that the extensions used for FNEs match those used for FACs by pre-pending the FAC code with “710”. Having this uniformity between FACs and FNEs is recommended but not required.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <pre> change off-pbx-telephone feature-name-extensions Page 1 of 2 EXTENSIONS TO CALL WHICH ACTIVATE FEATURES BY NAME Active Appearance Select: Automatic Call Back: Automatic Call-Back Cancel: Call Forward All: 71016 Call Forward Busy/No Answer: 71015 Call Forward Cancel: 71017 Call Park: 71010 Call Park Answer Back: 71011 Call Pick-Up: 71012 Calling Number Block: Calling Number Unblock: Conference on Answer: Directed Call Pick-Up: Drop Last Added Party: Exclusion (Toggle On/Off): Extended Group Call Pickup: Held Appearance Select: </pre> </div>

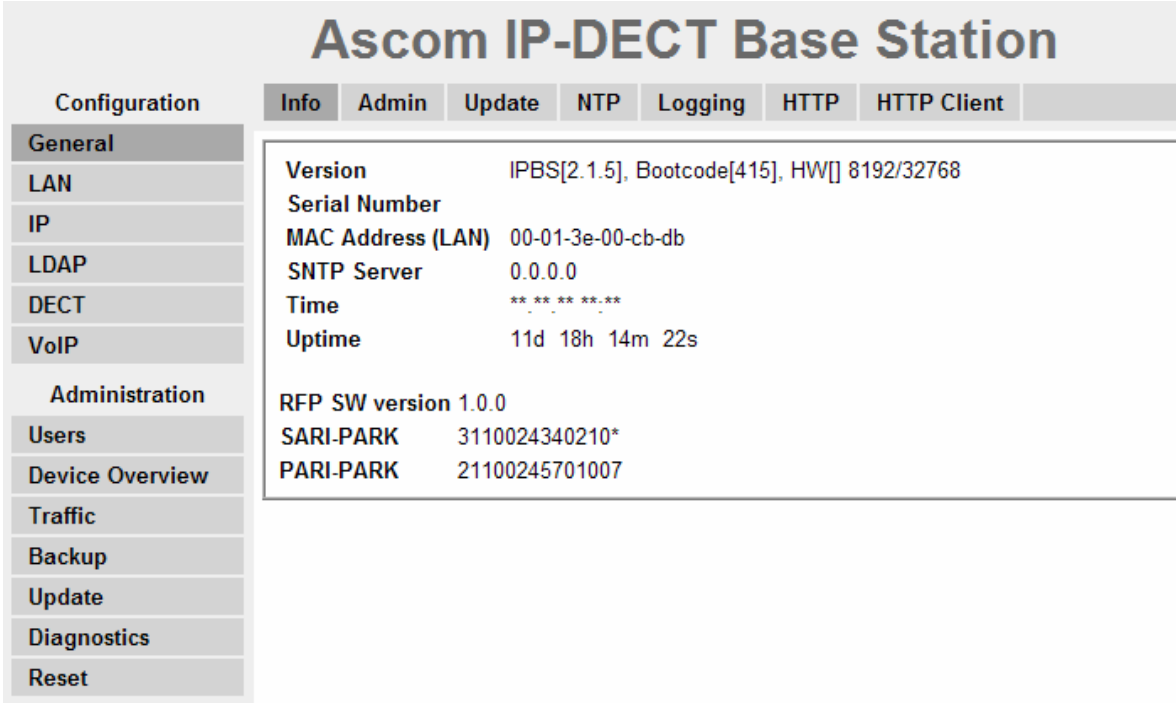
4. Configure Ascom wireless IP-DECT SIP Solution

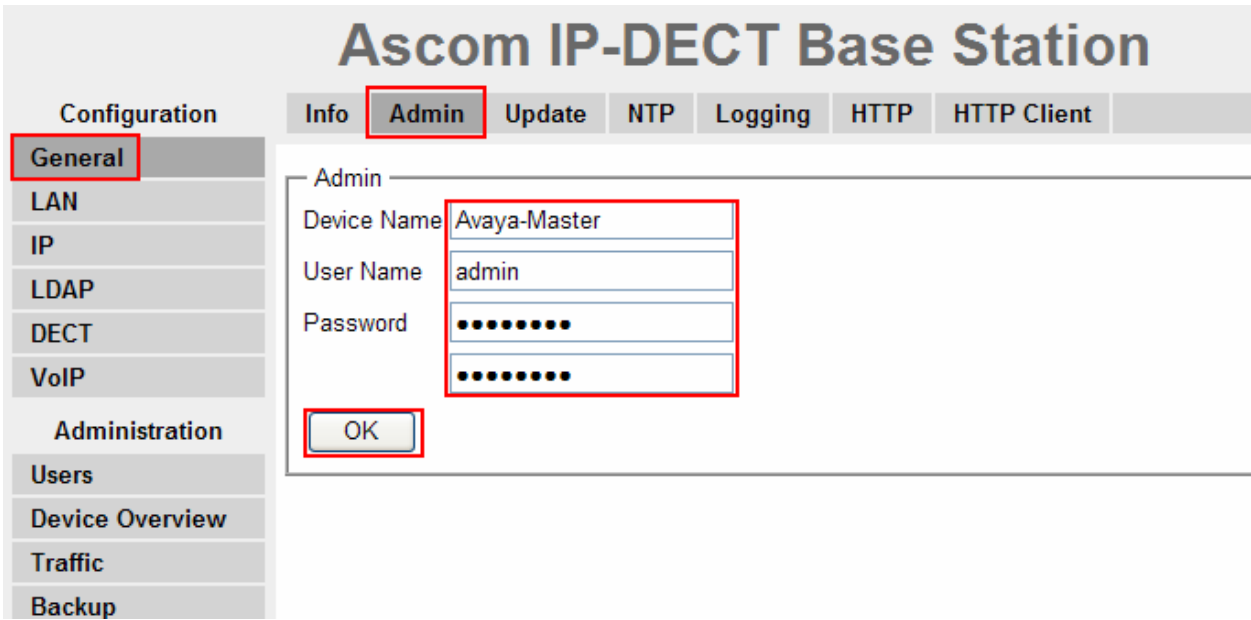
The following steps detail the initial configuration for the Ascom wireless IP-DECT SIP Solution. In the sample network, the DHCP server was configured to register DHCP client information to a DNS server. This allows the Ascom wireless IP-DECT Base Station to be reachable via a DNS name using the following format: <http://IPBS-XX-XX-XX>, where XX-XX-XX are the last 3 bytes of the MAC address of the Ascom wireless IP-DECT Base Station. For example, an Ascom wireless IP-DECT Base Station with a MAC address of 00-01-3E-00-CB-DB could be accessed using <http://IPBS-00-CB-DB> or via the IP address assigned by DHCP.

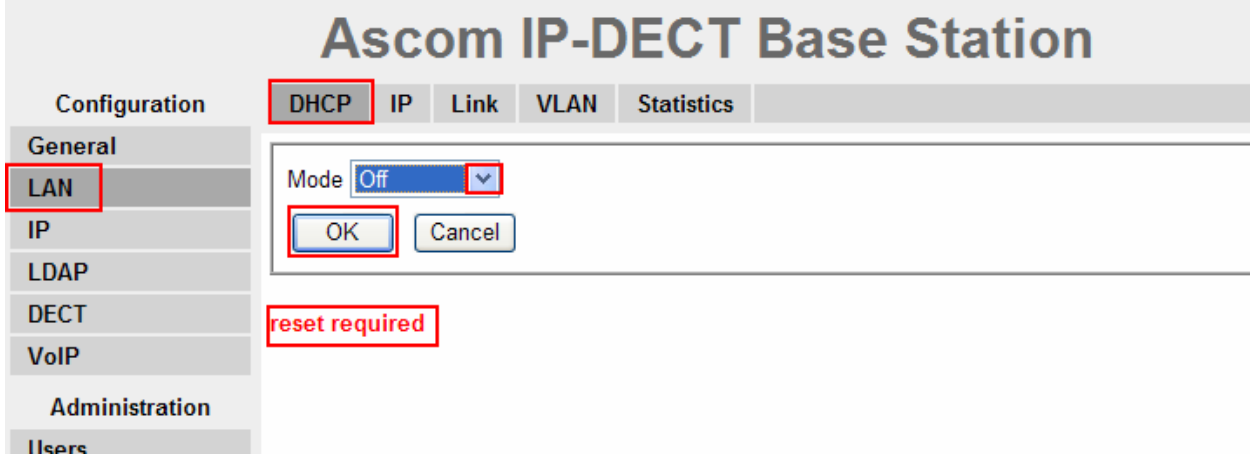
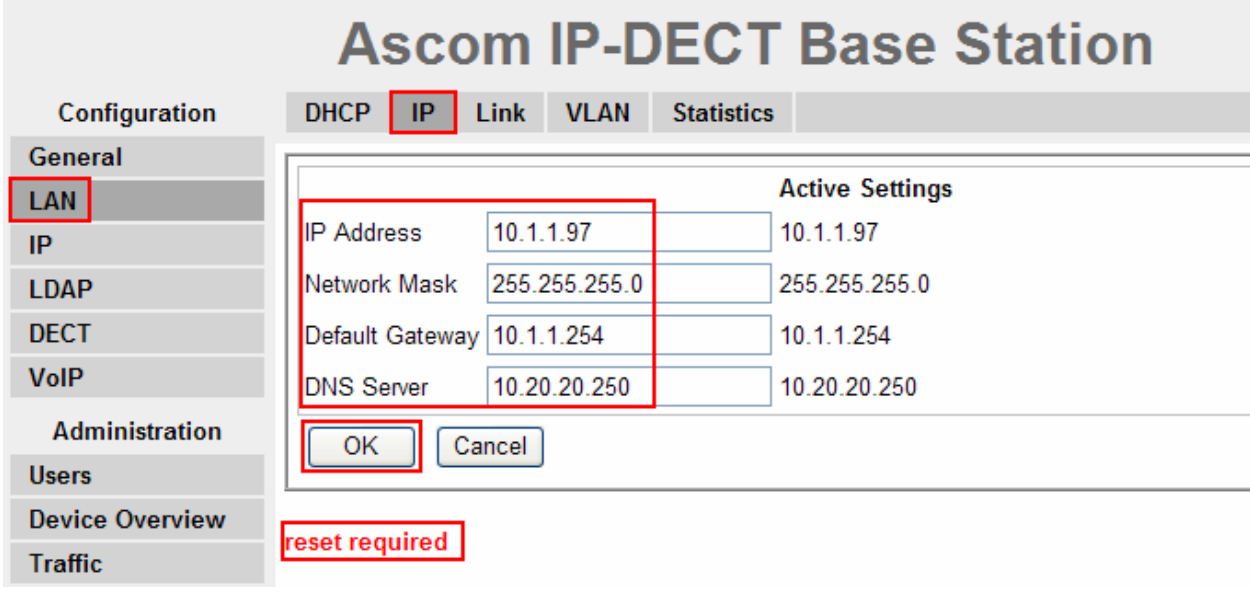
4.1. Configure IP-DECT Base Station

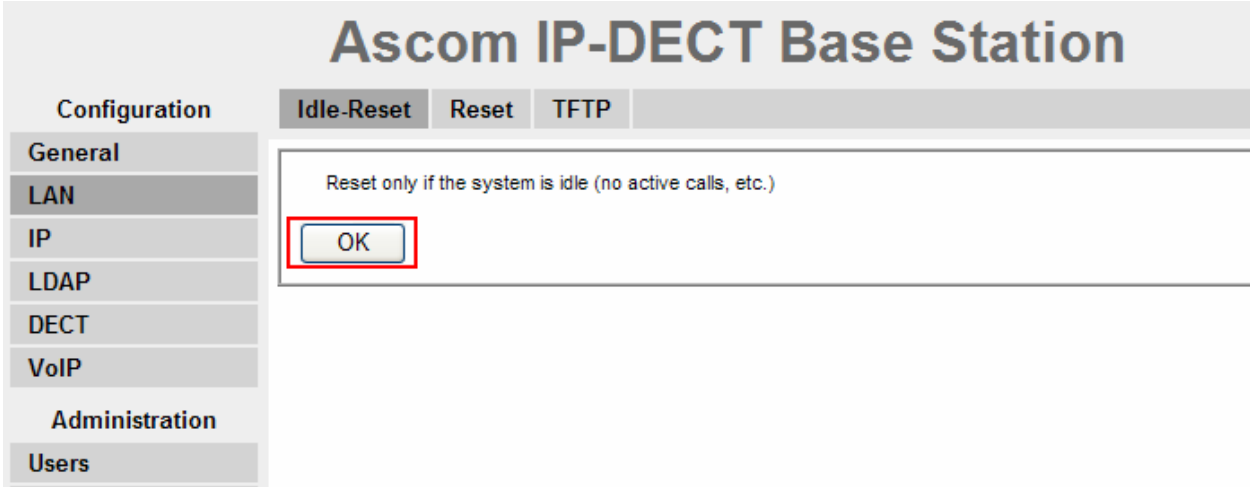
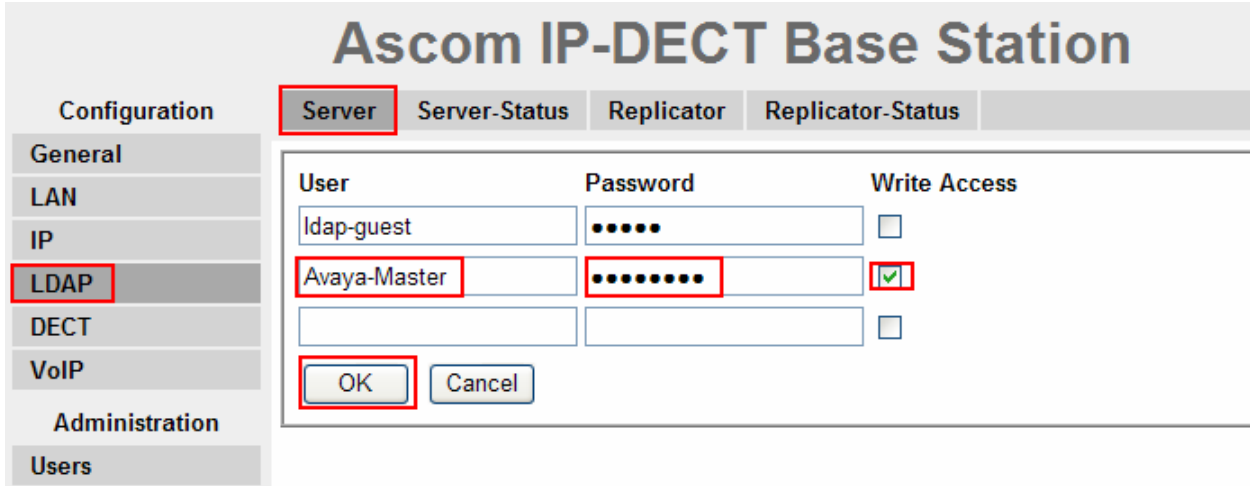
The Ascom wireless IP-DECT Base Stations can be configured in a Master/Standby Master scenario to provide redundancy or to extend the radius of coverage. The following configuration steps detail the configuration process used to configure an Ascom wireless IP-DECT Base Station in Master mode only.

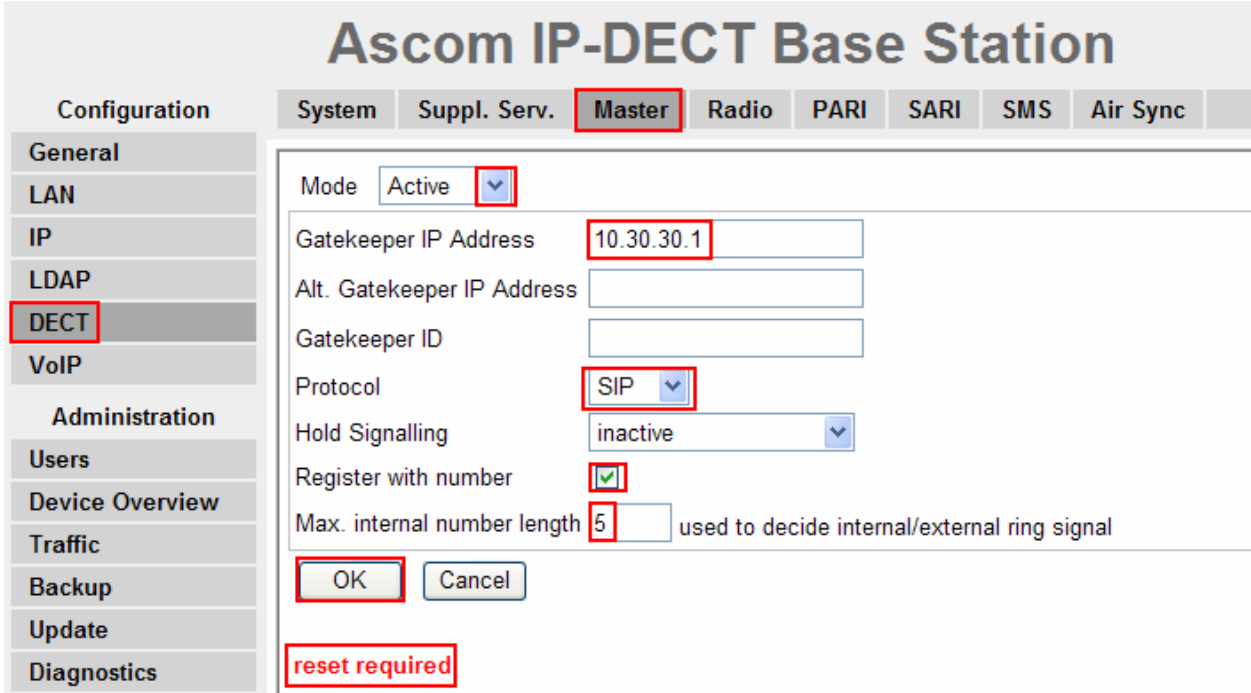
Step	Description
1.	<p>Launch a web browser and place either the IP address or the DNS name of the Ascom wireless IP-DECT Base Station into the URL. The user will be presented with a login screen. Refer to Section 9 [7] for appropriate credentials needed to access the Ascom wireless IP-DECT Base Station. Enter the appropriate login information and then click OK.</p> <div data-bbox="597 1062 1198 1551" data-label="Image"></div>

Step	Description																		
2.	<p>The user is presented with the General Info frame where the system information for the Ascom wireless IP-DECT Base Station is displayed.</p>  <p>The screenshot shows the 'Ascom IP-DECT Base Station' web interface. On the left is a navigation menu with categories: Configuration (General, LAN, IP, LDAP, DECT, VoIP), Administration (Users, Device Overview, Traffic, Backup, Update, Diagnostics, Reset), and other tabs (Info, Admin, Update, NTP, Logging, HTTP, HTTP Client). The 'Info' tab is selected, displaying system information:</p> <table border="1"> <tr> <td>Version</td> <td>IPBS[2.1.5], Bootcode[415], HW[] 8192/32768</td> </tr> <tr> <td>Serial Number</td> <td></td> </tr> <tr> <td>MAC Address (LAN)</td> <td>00-01-3e-00-cb-db</td> </tr> <tr> <td>SNTP Server</td> <td>0.0.0.0</td> </tr> <tr> <td>Time</td> <td>** ** * ** ** *</td> </tr> <tr> <td>Uptime</td> <td>11d 18h 14m 22s</td> </tr> <tr> <td colspan="2">RFP SW version 1.0.0</td> </tr> <tr> <td>SARI-PARK</td> <td>3110024340210*</td> </tr> <tr> <td>PARI-PARK</td> <td>21100245701007</td> </tr> </table>	Version	IPBS[2.1.5], Bootcode[415], HW[] 8192/32768	Serial Number		MAC Address (LAN)	00-01-3e-00-cb-db	SNTP Server	0.0.0.0	Time	** ** * ** ** *	Uptime	11d 18h 14m 22s	RFP SW version 1.0.0		SARI-PARK	3110024340210*	PARI-PARK	21100245701007
Version	IPBS[2.1.5], Bootcode[415], HW[] 8192/32768																		
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RFP SW version 1.0.0																			
SARI-PARK	3110024340210*																		
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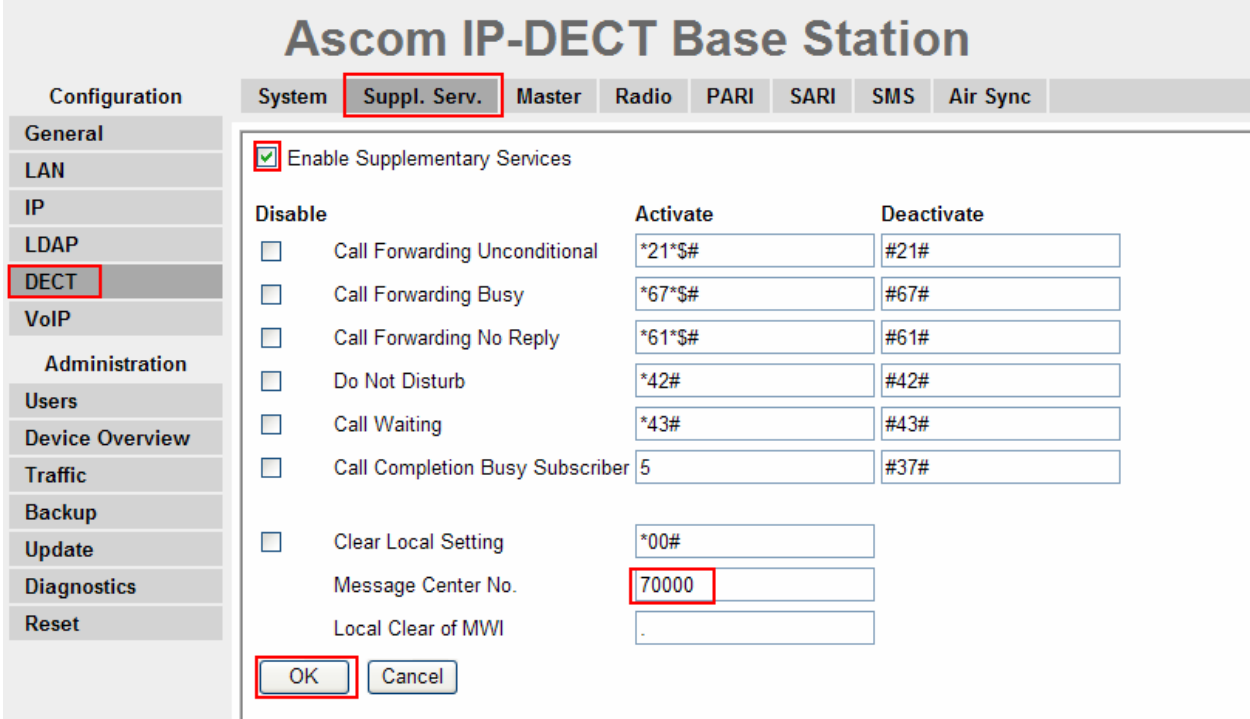
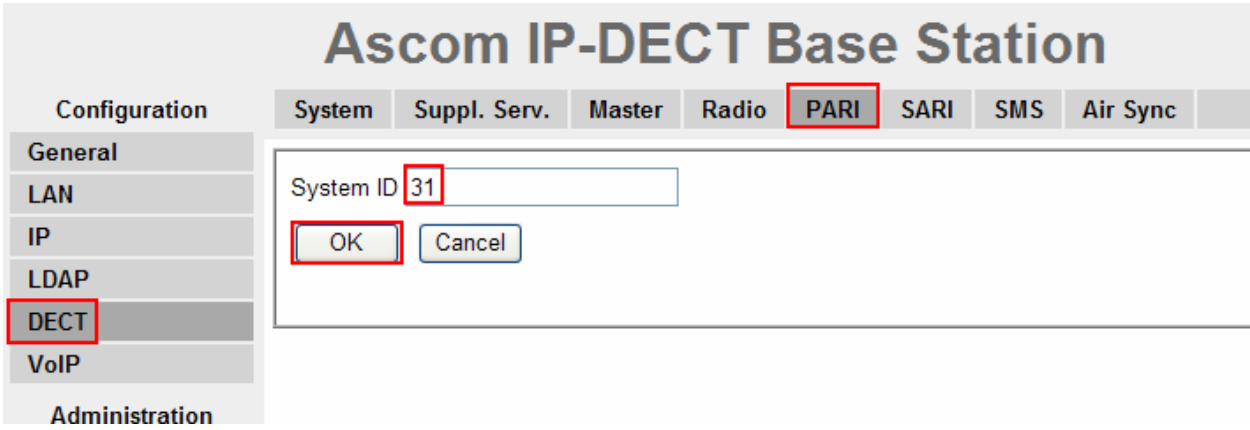
Step	Description
3.	<p>The web interface on the Ascom wireless IP-DECT Base Station consists of a series of frames selected by a two-click process, where a category and then an option are clicked. Categories are found below Configuration, which is displayed in the top left portion of the frame, and options are found to the right.</p> <p>Navigate to the General Admin frame by clicking General and then clicking Admin. Configure the fields displayed below and then click OK. The Device Name can be any descriptive name that identifies this Ascom wireless IP-DECT Base Station. In the sample network the name “Avaya-Master” was chosen. The User Name and Password fields were populated using the default credentials. The box below Password is to confirm the password and the value entered for the Password field must be entered here. Click OK to continue.</p> 


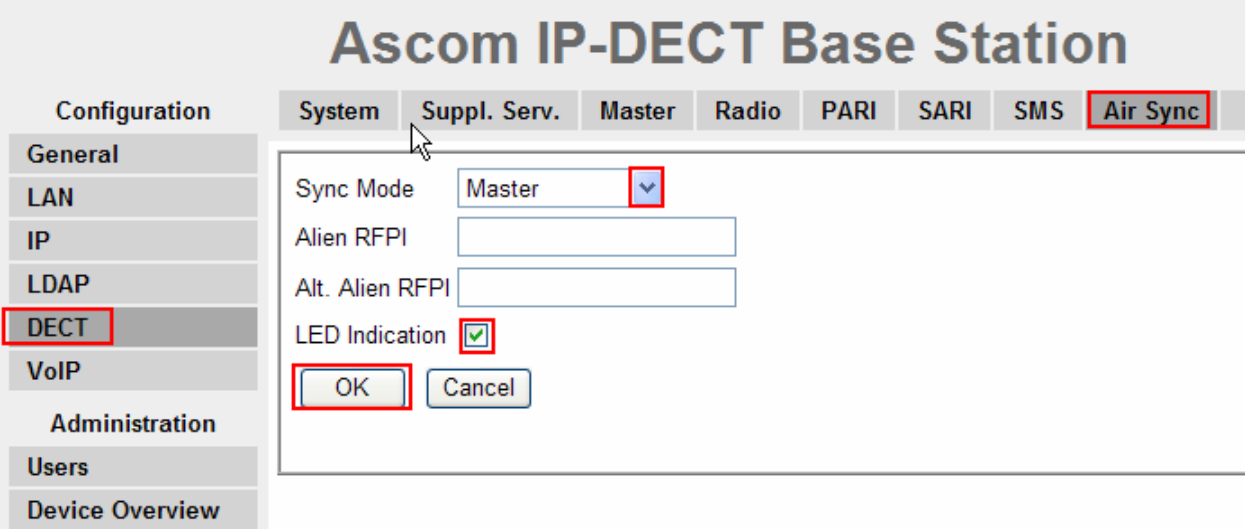
Step	Description
4.	<p>Navigate to the LAN DHCP frame by first clicking LAN and then clicking DHCP. Using the drop-down list, set Mode to “Off” and then click OK. This will present the user with the clickable red text which reads “reset required”. Click IP tab to continue to the LAN IP frame.</p> 
5.	<p>Set the static IP Address, Network Mask, Default Gateway, and DNS Server, and Click OK. Click reset required to continue.</p> 

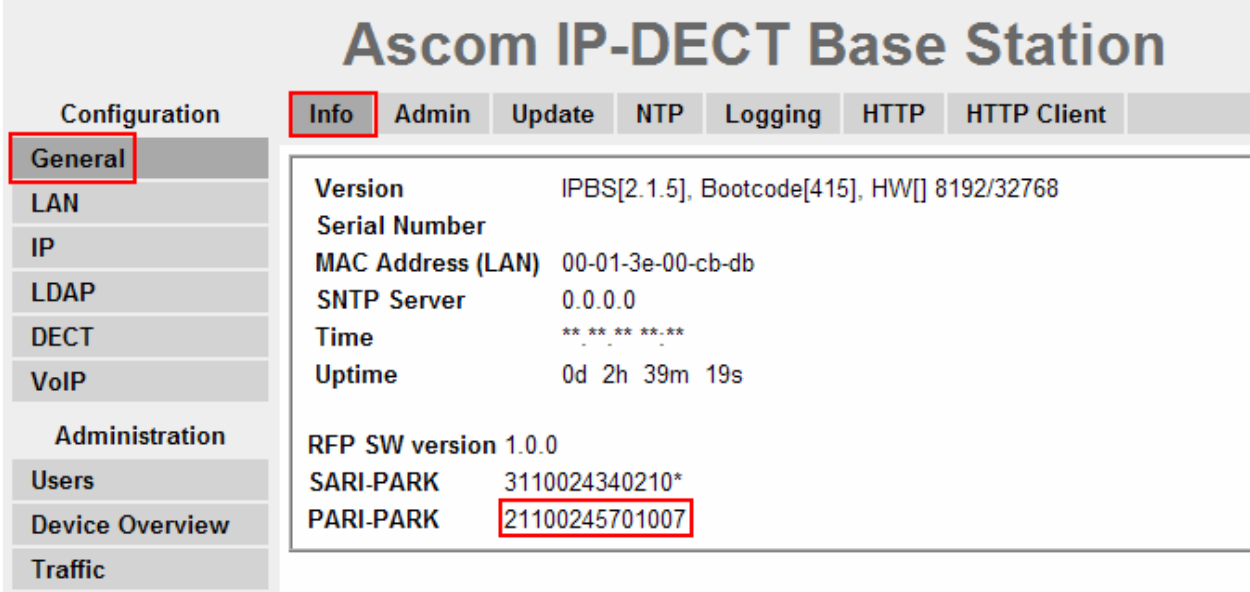

Step	Description
6.	<p>Click OK to initiate the system reset. Many of the other changes made to the system during the configuration process require a reboot. Repeat this process whenever a reset is required.</p> 
7.	<p>After the Ascom wireless IP-DECT Base Station (Avaya-Master) has rebooted, navigate to the LDAP Server frame by clicking LDAP and then clicking Server. The "ldap-guest" account is a default system account. Configure User using the Device Name used in Step 3. Configure the Password field with the Password used in Step 3. Check the Write Access check box for the "Avaya-Master" user account and then click OK to continue.</p> 

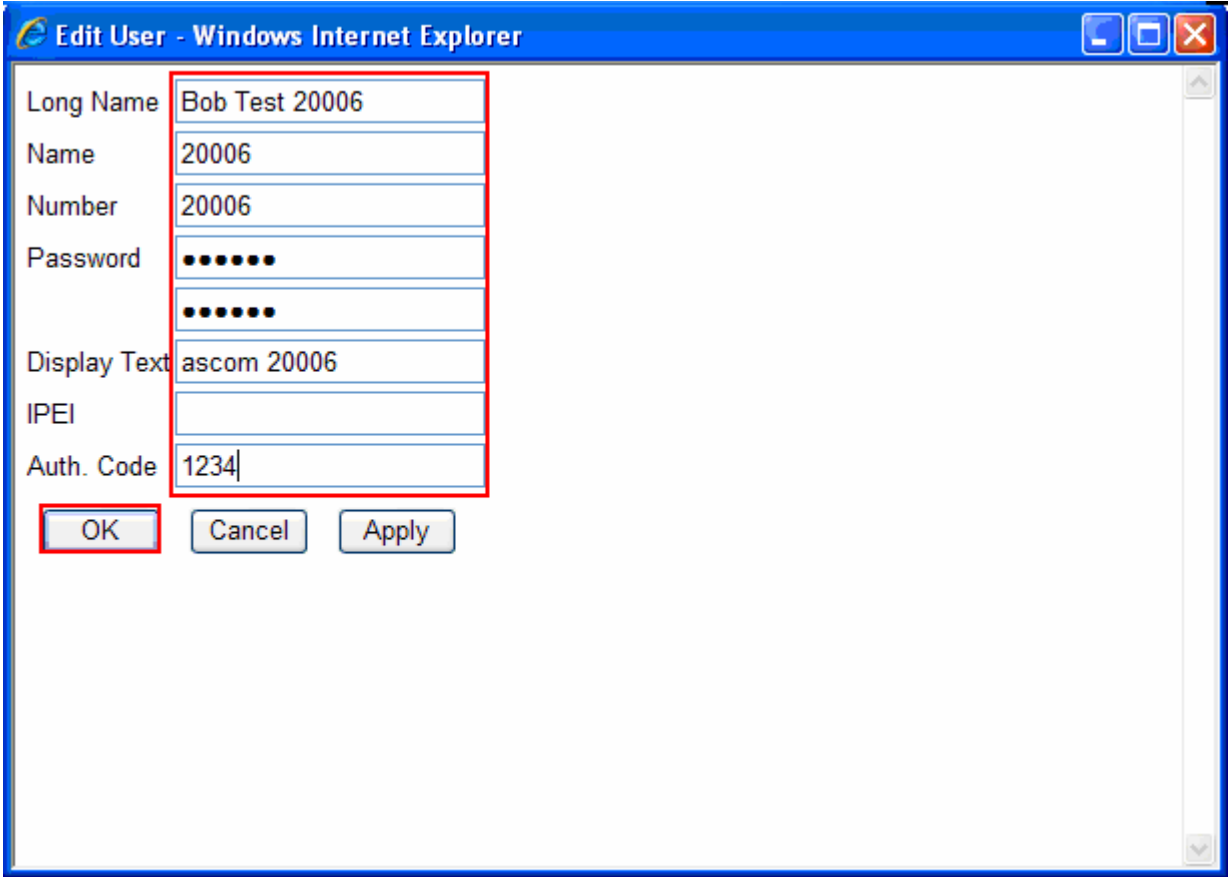
Step	Description
8.	<p>Navigate to the DECT Master frame by clicking DECT and then clicking Master. Configure the fields displayed below and then click OK. Use the drop-down list for Mode and select “Active”. Gatekeeper IP Address was set to the IP address of the Avaya SES (see Figure 1). Use the drop-down list for Protocol, select “SIP”, and select the Register with number box. In the sample network, five digit extensions were used and Max. internal number length was set to “5”. Click OK. Click reset required to continue</p> 

Step	Description
9.	<p>Navigate to the DECT System frame by clicking DECT and then clicking System. Configure the fields displayed below and then click OK. System Name is the Device Name used in Step 3. Password is the “Password” used in Step 3. The box below Password is to confirm the password and the value configured for Password field must be entered here. The Authentication Code is a numerical code that every DECT handset will need to use to subscribe to this system. Using the drop-down list, Subscriptions can be set to “With User AC”, “With System AC”, or “Disable”. In the sample configuration “With System AC” was used. This enables the system to use the Authentication Code when challenging DECT handsets during registration. Use the drop-down list for Tones and select “US”. Use the drop-down list for Default Language and select “English”. Use the drop-down list for Frequency and select “North America”. Check the 0,1,2,3 and 4 check boxes. The Enabled Carriers check boxes enable the DECT handsets to use different channels or frequencies when transmitting. Check the DTMF through RTP channel check box. Use the drop-down list for Coder and select “G711u”. Ensure that the codec chosen matches whatever is used on the Avaya Communication Manager.</p> <p>Note: The G.729A codecs are set the same way.</p> <p>The screenshot shows the 'Ascom IP-DECT Base Station' configuration window. The 'System' tab is active. The left sidebar has 'DECT' selected. The configuration fields are as follows:</p> <ul style="list-style-type: none"> System Name: Avaya-Master Password: [Masked] Authentication Code: 1234 Subscriptions: With System AC Tones: US Default Language: English Frequency: North America Enabled Carriers: 0, 1, 2, 3, 4 (checked) DTMF through RTP channel: (checked) Coder: G711u

Step	Description
10.	<p>Navigate to the DECT Suppl. Serv. frame by clicking DECT and then clicking Suppl. Serv.. Check the Enable Supplementary Services check box. Enter the extension used for Avaya Modular Messaging in the Message Center No. field. Click OK.</p>  <p>The screenshot shows the 'Ascom IP-DECT Base Station' configuration window. The 'Suppl. Serv.' tab is active. The 'Enable Supplementary Services' checkbox is checked. Below it, there are several rows of settings for 'Disable', 'Activate', and 'Deactivate' with corresponding checkboxes and input fields. The 'Message Center No.' field is highlighted with a red box and contains the value '70000'. The 'OK' button is also highlighted with a red box.</p>
11.	<p>Navigate to the DECT PARI frame by clicking DECT and then clicking PARI. PARI is a user-defined system value and must range from 1-35. Enter any number from 1-35. Click OK to continue.</p>  <p>The screenshot shows the 'Ascom IP-DECT Base Station' configuration window. The 'PARI' tab is active. The 'System ID' field is highlighted with a red box and contains the value '31'. The 'OK' button is also highlighted with a red box.</p>

Step	Description
12.	<p>Navigate to the DECT SARI frame by clicking DECT and then clicking SARI. SARI is an Ascum wireless provided activation code which is needed for the system to function. Contact Ascum wireless to obtain a SARI. Enter the SARI value. Click OK to continue.</p> 
13.	<p>Navigate to the DECT Air Sync frame by clicking DECT and then clicking Air Sync. Use the drop-down list for Sync Mode and select “Master”. Check the LED Indication check box. Click OK to continue.</p> 

Step	Description
14.	<p>Navigate to the General Info frame by clicking General and then clicking Info. The PARI-PARK is displayed. This value is needed when programming Ascom wireless DECT handsets. The PARI-PARK is similar to an SSID in an 802.11 wireless environment.</p>  <p>The screenshot shows the 'Ascom IP-DECT Base Station' configuration interface. On the left is a navigation menu with 'Configuration' and 'Administration' sections. Under 'Configuration', 'General' is selected. At the top, the 'Info' tab is active. The main content area displays system information: Version (IPBS[2.1.5], Bootcode[415], HW[] 8192/32768), Serial Number, MAC Address (LAN) 00-01-3e-00-cb-db, SNTP Server 0.0.0.0, Time, and Uptime 0d 2h 39m 19s. Under 'RFP SW version 1.0.0', the 'SARI-PARK' is 3110024340210* and the 'PARI-PARK' is 21100245701007, which is highlighted with a red box.</p>
15.	<p>Navigate to the Users frame by clicking Users and then clicking Users. Click new to provision a new user account.</p>  <p>The screenshot shows the 'Ascom IP-DECT Base Station' configuration interface. In the navigation menu, 'Administration' is expanded and 'Users' is selected. At the top, the 'Users' and 'Anonymous' tabs are visible. The main content area contains a search input field, a 'show' button, and a 'new' button, both of which are highlighted with red boxes.</p>

Step	Description
16.	<p>The user is presented with the Edit User web page. Long Name and Name can be any descriptive name that identifies this user. The Number field is the extension assigned to this user. The Password field is the password used to register with the Avaya SIP Enablement Services. The box below Password is to confirm the password and the value entered for the Password field must be entered here. Display Text is the text string that will be displayed on the LCD screen of the Ascom wireless DECT Handset. Auth. Code is used only if Subscriptions in Step 8 is set to “With User AC”. Once all the user information has been configured, click OK. Repeat this process for each user being added to the system.</p> 

4.2. Configure Ascom wireless DECT Handset

Refer to **Section 9** [7], [8], [9] and [10] to obtain information on the procedures for subscribing and registering the Ascom wireless DECT Handsets to the Ascom wireless IP-DECT Base Station.

5. Interoperability Compliance Testing

The compliance testing focused on verifying interoperability of the Ascom wireless IP-DECT SIP solution (comprised of the Ascom wireless IP-DECT Base Station and Ascom wireless DECT Handsets) with Avaya Communication Manager, Avaya SIP Enablement Services, Avaya

IA 770 INTUITY AUDIX and Avaya Modular Messaging. Additional testing verified proper operation with the Avaya 9630 IP Telephone, Avaya 9620 IP Telephone and the Avaya 2420 Digital Telephone. Voicemail and MWI using Avaya Modular Messaging and Avaya IA 770 INTUITY AUDIX was tested and verified to operate correctly.

Avaya's formal testing and Declaration of Conformity is provided only on the headsets/handsets that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headsets/handsets to determine interoperability with Avaya telephones. However, Avaya does not conduct the testing of non-Avaya headsets/handsets for: Acoustic Pressure, Safety, Hearing Aid Compliance, EMC regulations, or any other tests to ensure conformity with safety, audio quality, long-term reliability or any regulation requirements. As a result, Avaya makes no representations whether a particular non-Avaya headset will work with Avaya's telephones or with a different generation of the same Avaya telephone.

Since there is no industry standard for handset interfaces, different manufacturers utilize different handset/headset interfaces with their telephones. Therefore, any claim made by a headset vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headset will provide adequate safety protection or audio quality.

5.1. General Test Approach

The general test approach was to register the Ascom wireless DECT Handsets with Avaya SIP Enablement Services through the Ascom wireless IP-DECT wireless network and that voice mail left on Avaya Modular Messaging was able to be retrieved and that MWI worked. Calls were made between both wired and wireless telephones and specific calling features were exercised.

5.2. Test Results

The Ascom wireless DECT Handsets passed all test cases. Ascom wireless DECT Handsets were verified to successfully register with Avaya SIP Enablement Services. Two codecs were used for testing: G.711MU and G.729AB. Telephone calls were verified to operate correctly with the media path direct between the telephones (shuffling enabled) and with the media path centralized through Avaya Communication Manager (shuffling disabled). Calls were maintained for durations over one minute without degradation to voice quality. The telephony features verified to operate correctly included transfer (attended and unattended), hold/return from hold, multiple call appearances, caller ID operation, call forwarding (unconditional, on busy/no answer and clear), pickup groups, call pickup, bridged appearance alerting, and Avaya Modular Messaging voicemail and MWI.

6. Verification Steps

6.1. Ascom wireless DECT Handset Registration Verification

The following steps can be used to ascertain the registration state of the Ascom wireless DECT Handsets that the Ascom wireless IP-DECT Base Station is configured to support.

From a web browser open up a connection to the Ascom wireless IP-DECT Master Base Station, refer to **4.1 Step 1**. Navigate to the **Users Users** frame by clicking **Users**, then clicking **Users**,

and then clicking **show**. A **Registration** state of “Pending” indicates an Ascom wireless DECT Handset has not registered to the Ascom wireless IP-DECT Base Station. A **Registration** state of “Subscribed” indicates that an Ascom wireless DECT Handset has connected to the Ascom wireless IP-DECT Base Station and requested the use of that particular extension. A **Registration** state that displays the IP Address of the Avaya SIP Enablement Services indicates the extension has successfully registered to both the Ascom wireless IP-DECT Base Station and Avaya SIP Enablement Services.

Ascom IP-DECT Base Station

Configuration

Users Anonymous

General

LAN

IP

LDAP

DECT

VoIP

Administration

Users

Device Overview

Traffic

Backup

Update

Diagnostics

Reset

Long Name	Name	No	Display	IPEI	AC	Registration
Ascom-DECT-9d24	20005	20005	20005	002020391142	1234	Subscribed
Ascom-OfficeM	20003	20003	20003	005930783948	1234	10.30.30.1
Ascom-OfficeT	20002	20002	20002		1234	Pending

Users: 3, Registrations: 1

Ascom IP-DECT Base Station

Configuration

Users Anonymous

General

LAN

IP

LDAP

DECT

VoIP

Administration

Users

Device Overview

Traffic

Backup

Update

Diagnostics

Reset

Long Name	Name	No	Display	IPEI	AC	Registration
Ascom-DECT-9d24	20005	20005	20005	002020391142	1234	10.30.30.1
Ascom-OfficeM	20003	20003	20003	005930783948	1234	10.30.30.1
Ascom-OfficeT	20002	20002	20002	005930783661	1234	10.30.30.1

Users: 3, Registrations: 3

6.2. Ascom wireless DECT Handset Function Verification

The following steps can be used to verify proper operation of the Ascom wireless DECT Handsets.

- Place calls from the Ascom wireless DECT Handsets and verify two-way audio.
- Place a call to the Ascom wireless DECT Handsets, allow the call to be directed to voicemail, leave a voicemail message and verify the MWI message is received.
- Using each Ascom wireless DECT Handset that received a voicemail, connect to the voicemail system to retrieve the voicemail and verify the MWI clears.
- Place calls to the Ascom wireless DECT Handsets and exercise calling features such as transfer and hold.

7. Support

Technical support for the Ascom wireless IP-DECT Base Station and Handsets can be obtained through the following:

- **Phone:** 1-877-71ASCOM or 1-877-712-7266
- **Email:** techsupport@ascomwireless.com

8. Conclusion

These Application Notes demonstrate how to build a sample SIP VoIP-enabled wireless network using the Ascom wireless IP-DECT Base Station with the Ascom wireless DECT Handsets. These Application Notes also demonstrate how to provide interoperability between Avaya Communication Manager, Avaya SIP Enablement Services, Avaya IA 770 INTUITY AUDIX and Avaya Modular Messaging with the Ascom wireless IP-DECT Base station and Handsets.

9. Additional References

The following Avaya product documentation can be found at <http://support.avaya.com>.

- [1] *“Administrator Guide for Avaya Communication Manager, February 2007, Issue 3.1, Document Number 03-300509*
- [2] *SIP Support in Release 3.1 of Avaya Communication Manager Running on Avaya S83xx Servers, Issue 8, Doc ID 555-245-206, January, 2008*
- [3] *Installing and Administering SIP Enablement Services, March 2007, Issue 2.1, Document Number 03-600768*
- [4] *Avaya IA 770 INTUITY AUDIX Messaging Application Release 5.0 Administering Communication Manager Servers to Work with IA 770 November 2007*
- [5] *Messaging Application Server (MAS) Administration Guide Release 3.1 with the Avaya, February 2007*
- [6] *Avaya one-X Deskphone Edition for 9600 Series IP Telephones Administrator Guide*

The following Ascom product documentation can be found at <http://www.Ascomwireless.com>.

- [7] *Installation and Operation Manual IP-DECT Base Station, January 2007 Ver. C, Document Number TD 92372GB*
- [8] *User Manual 9d24 MkII Cordless Handset USA, February 2007 Ver. C, Document Number TD 92411GB*
- [9] *User Manual OfficeM Cordless Telephone, May 2006 Ver. C, Document Number TD 92288GB*
- [10] *User Manual Cordless Telephone OfficeT, May 2006 Ver. C, Document Number TD 92282GB*

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