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Application Notes: MAXCS Configuration For Bria

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These application notes are provided for dealers who are configuring AltiGen Communication's MAXCS to work with Bria's VoIP service for iPhones.

Introduction

Bria client phones can have both 3G and Wi-Fi enabled. If users are making or receiving calls while near their configured Wi-Fi access point then, Bria will use Wi-Fi for the signaling. If users are out of range of a Wi-Fi access point, or if they turn off the Wi-Fi option on the Smartphone, then Bria will use 3G signaling.

Requirements

To use the Bria client with MAXCS, you must meet the following requirements:

- You must have one 3rd party SIP device license for each extension that will be associated with a Bria user. This is in addition to the AltiGen station license.
- Your server must be running MAXCS release 6.7.0.205 or later (earlier releases of MAXCS do not support the Bria client).
- You must download and apply the MAXCS patch for the Bria client. You will find this patch on the AltiGen Communications web site. The instructions for applying this patch are detailed in the next section.
- Users must install the Bria VoIP SIP Phone client application, iPhone edition (downloaded from the App store).

Be aware of the following limitations when using the Bria client with MAXCS:

- MAXCS supports up to 25 concurrent extensions using the Bria client.
- MAXCS currently supports the Bria client only on iPhones and on iPod Touch devices.
- MAXCS does not support message notification with 3rd party clients, including Bria.
- MAXCS does not support call waiting (single, multiple) with 3rd party clients, including Bria.
- The MAXCS conference feature is not supported with Bria as conference master.
- MAXCS does not support switching networks mid-call; If the phone's data connection transitions between mobile data (3G/ 4G networks) and Wi-Fi, or between separate Wi-Fi networks while on a call, the call can drop or lose its voice stream.

Apply the Bria Patch

The MAXCS Bria patch can be applied ONLY to MAXCS ACC / ACM 6.7 servers version 6.7.0.205. The following files will be updated:

- C:\Altiserv\SP\SIPSP\SIPSP.DLL
- C:\Altiserv\SP\SIPSP\SIPSP.PDB

To install the Bria patch:

1. Download the Bria patch from the AltiGen Communications web site.



2. Make sure that your MAXCS SoftSwitch system software is version 6.7.0.205.
3. Shut down all of the AltiGen Services by using *Start & Stop All AltiGen Services* in the MAXCS SoftSwitch system.
4. Back up the current SIPSP.DLL and SIPSP.PDB files to a temporary folder.
5. Replace those files with the new versions.
6. Restart the system or start all AltiGen Services by using *Start & Stop All AltiGen Services* in the MAXCS SoftSwitch system.

Configure port forwarding

You must forward specific ports to support the Bria application.

- 1 Identify the port range for your voice resources, and forward these ports to MAXCS.

To identify these ports, in MaxAdministrator choose **View > Current Resource Statistics**. Scroll over to the *Local Ports* column; it lists all UDP ports used by the system.

Note: If you prefer to determine the port range manually, take twice the number of VoIP resources in the system and add that to one more than the base port (49152 for XP, 2000, 2003 or 49664 for 2008). For example, if you have an Office 1G running XP Pro with one 12-port and one 30-port board, your UDP port range for RTP (talkpath) traffic would be 49152 through 49237 (42 VoIP resources total, times two ports per resource is 84, added to one more than the base port of 49152 calculates to 49236).

- 2 Make sure port 5060 is open.

Gateway ID	G.711 only resources		G711 / G723 / G729 Resources			
	Total	Active G711	Total	Active G711	Active G723	Active G729
01	1000	0	200	0	0	0

cv	Network Pack...	JB Packet loss	Total Packet I...	Max Packet lo...	Jitter	Local Ports
-	-	-	-	-	-	50176/7
-	-	-	-	-	-	50178/9
-	-	-	-	-	-	50180/1
-	-	-	-	-	-	50182/3
-	-	-	-	-	-	50184/5
-	-	-	-	-	-	50186/7
-	-	-	-	-	-	50188/9
-	-	-	-	-	-	50190/1
-	-	-	-	-	-	50192/3
-	-	-	-	-	-	50194/5
-	-	-	-	-	-	50196/7
-	-	-	-	-	-	50198/9
-	-	-	-	-	-	50200/1

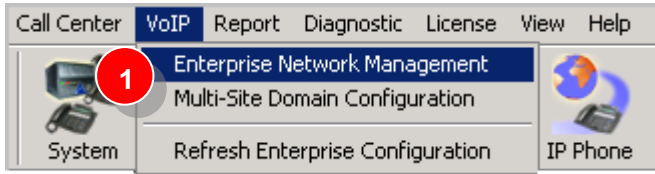
Set the default codec to G.711 Mu-Law

This section describes the steps you take to set the default codec to the G.711 codec.

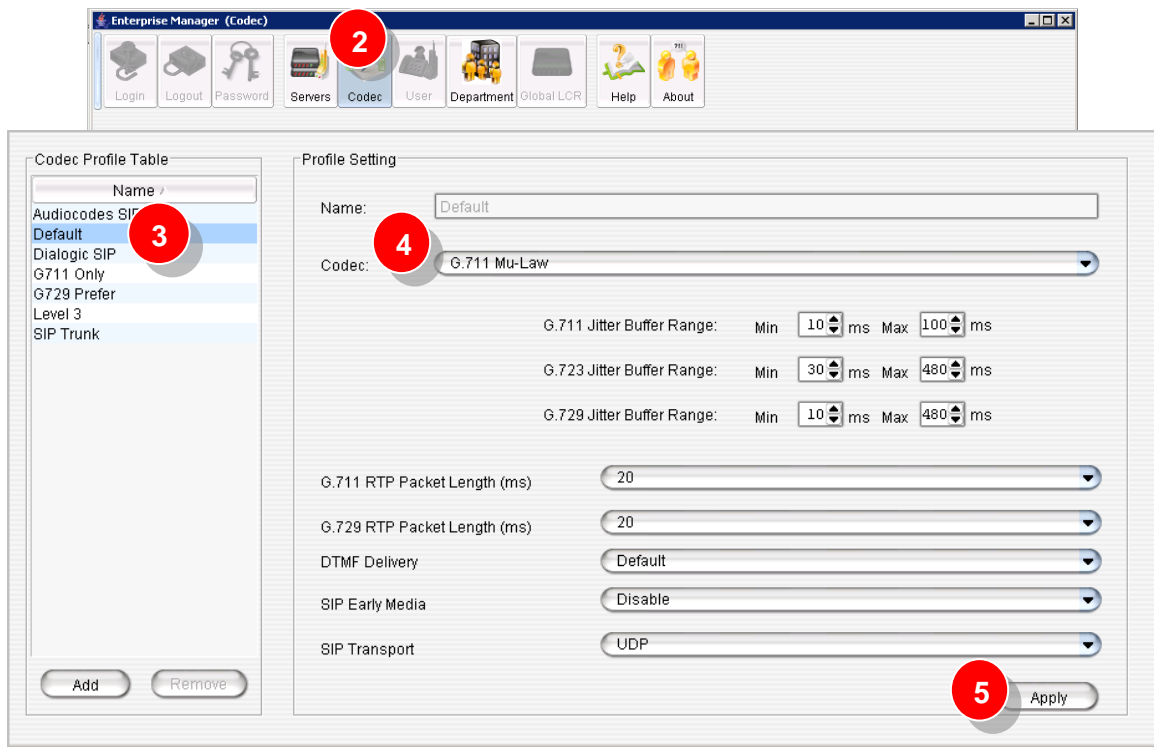
Note: The Bria client does not support the G.723 codec.



- 1 In MaxAdministrator, open Enterprise Manager by choosing **VoIP > Enterprise Network Management**.



- 2 In Enterprise Manager, click **Codec** on the menu bar.
- 3 Select the codec named **Default** in the left panel.



- 4 For the *Codec*, select **G.711 Mu-Law**.
- 5 Make sure that *SIP Transport* is set to **UDP**. Click **Apply**.

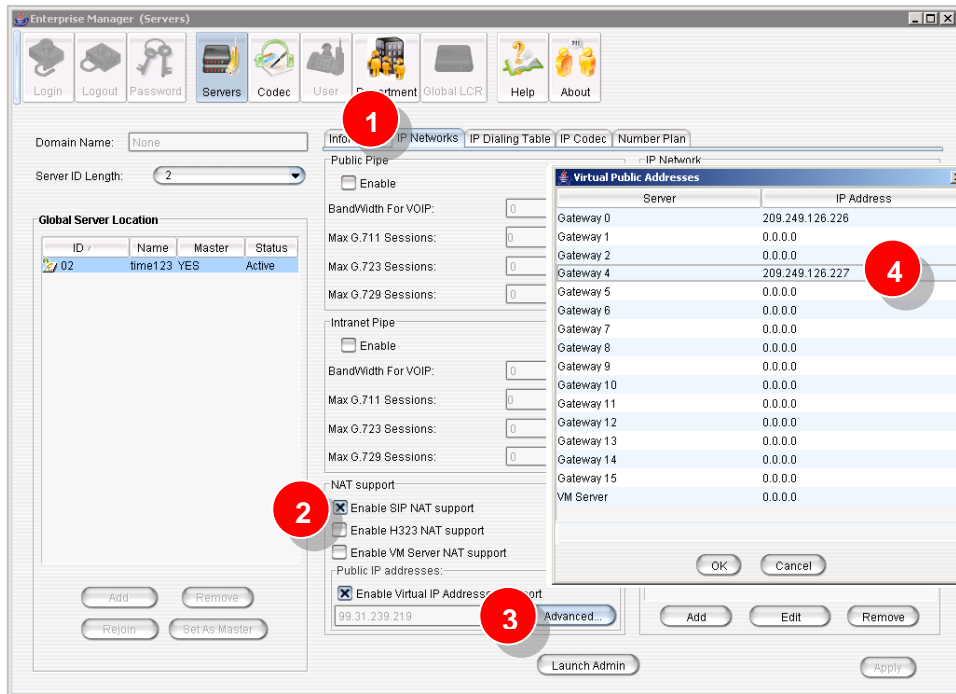
Configure gateways

If you have one or more gateways working with MAXCS Softswitch, and if you want the ability to use the Bria client to make 3G calls through the gateways, you must configure the public address of each gateway:

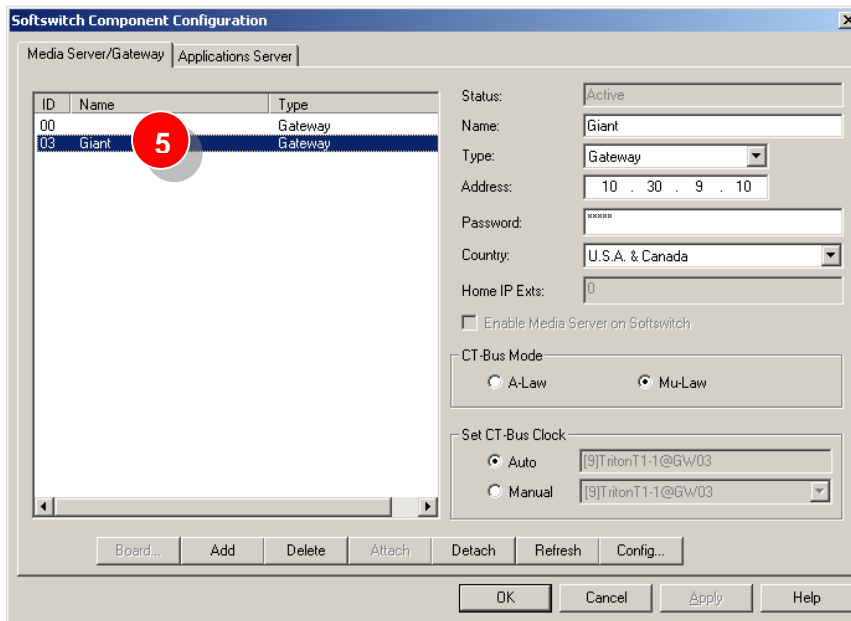
1. In Enterprise Manager, select **Servers > IP Networks**.



2. If MAXCS is running behind NAT, select *Enable SIP NAT support*.
3. Click **Advanced**.



4. For each gateway, enter the public IP address. Click **OK**.
5. Make sure that each gateway number matches the gateway number in the server. To check, open MaxAdministrator, select **System > Softswitch Component Management**, and click the **Media Server/Gateway** tab).

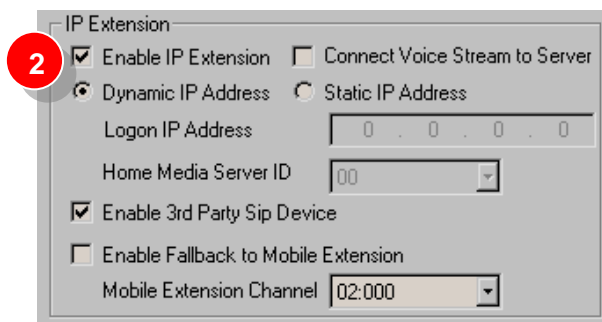


6. Open UDP ports 50688 – 50759 for the IP address of the gateway.

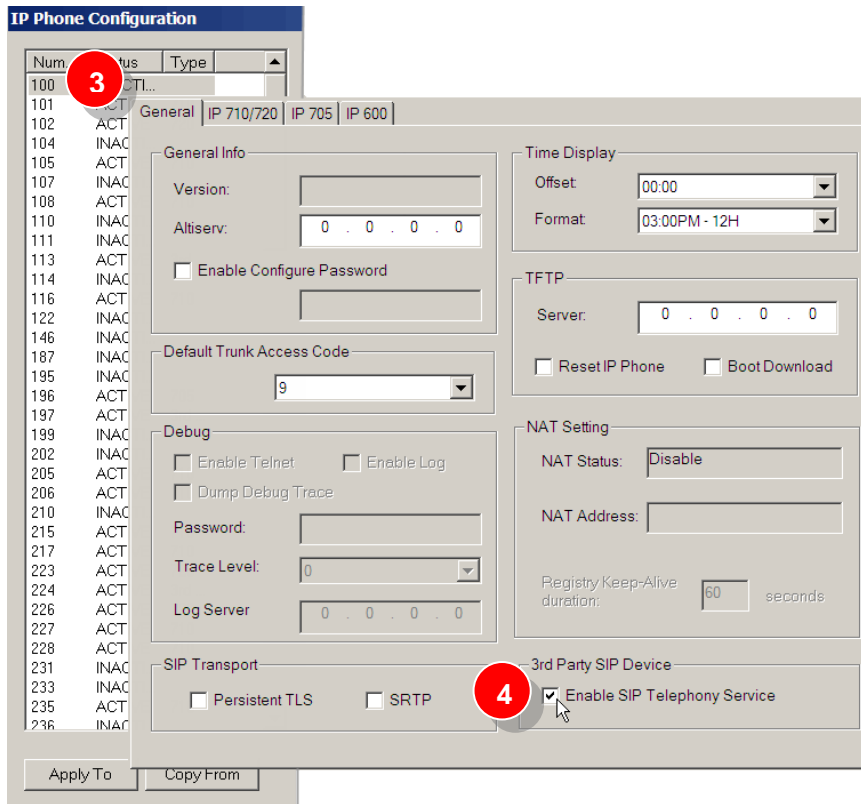
Configure an extension

Next, you will configure an extension to accept 3rd party SIP devices. The next few steps use extension 100 as an example.

1. In MaxAdministrator, select **PBX > Extension Configuration > General**.
2. Create an extension with *Enable IP Extension* and *Enable 3rd Party Sip Device* checked.



3. Select PBX > **AltiGen IP Phone Configuration**. Select the extension you created (our example uses extension 100).

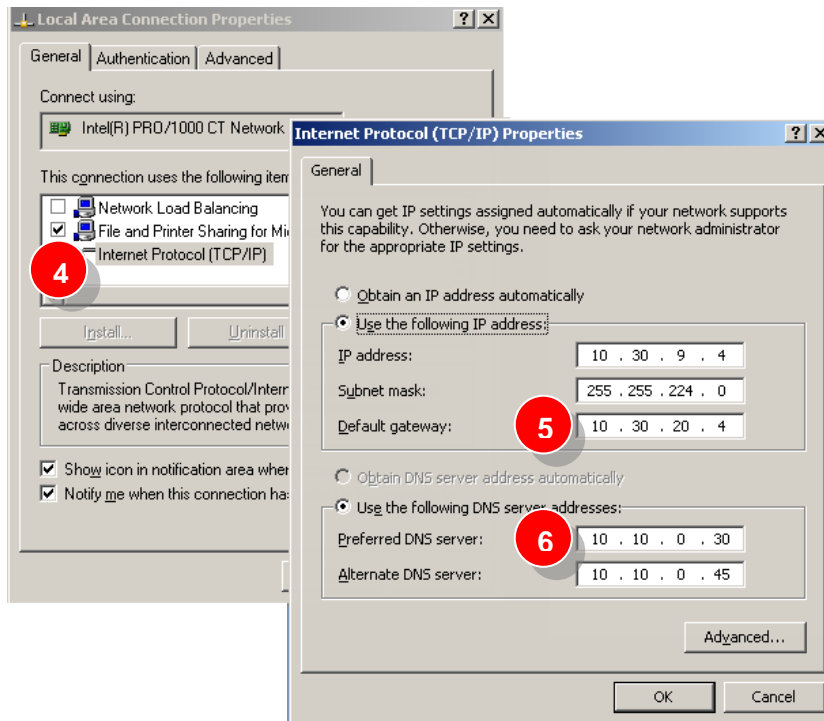


4. On the *General* tab, check **Enable SIP Telephony Service**. This will allow the extension to use SIP hold and transfer features.

Configure network settings

The next step is to adjust network settings. If you are running a gateway, you must make changes on the gateway as well as on the MAXCS server.

1. In Windows, open the Control Panel.
2. In the Control Panel, open **Network Connections**.
3. Right-click the active Local Area Network and click **Properties**.
4. Select *Internet Protocol (TCP/IP)*.
5. In the dialog box, set the *Default gateway* address to the IP address associated with the public address of MAXCS.



6. Set *Preferred DNS server* to the DNS server associated with the public network.

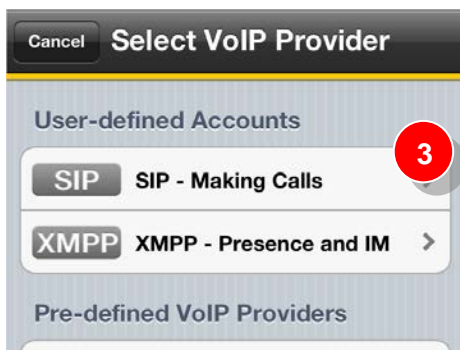
If you are using a gateway, repeat these steps for the gateway server.

Configure Smartphones

This section describes how users set up their Bria accounts on their iPhones or other devices.

You can set up one account for Wi-Fi calls and another account for 3G calls, if desired.

1. Download and install the appropriate Bria application for your device.
2. After it downloads, open the Bria application.
3. To set up your first account, on the initial page, tap **SIP – Making Calls**.



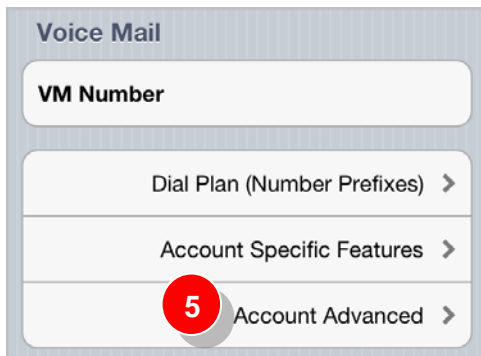


4. Complete the information on the SIP Account page.
 - **Account Name** – Enter a name for this account.

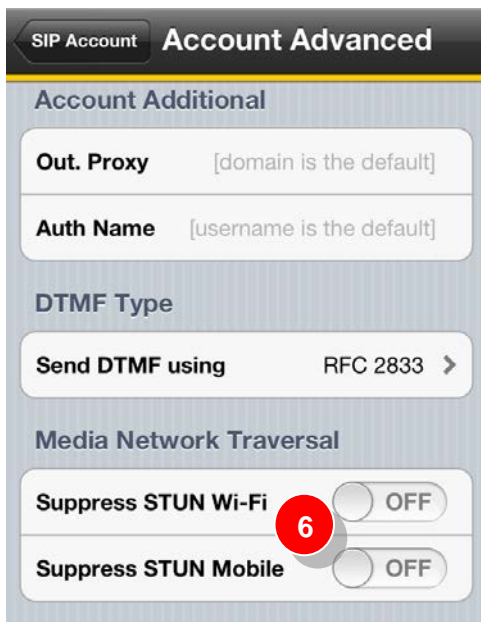
Tip: If you are setting up one account to place calls over Wi-Fi, and another account to place calls via 3G, name them appropriately so that you can tell them apart. (For example, name one *119 WiFi* and the other *119 3G*)
 - **Display As** – This field is not used.
 - **Username** – The extension number that matches the 3rd party extension added in MAXCS. This also appears as the Caller ID when calls are made.
 - **Password** – The password for your IP phone.
 - **Domain** – The IP address of MAXCS; use either the private or public IP address, as follows:
 - To set this account as a Wi-Fi account, to place outgoing calls over your wireless network, enter the **private** IP address of MAXCS.
 - To set this account as a 3G account, to place outgoing calls over your 3G network, enter the **public** IP address of MAXCS.

The screenshot shows a mobile application interface for creating a new SIP account. At the top, there are 'Cancel' and 'Save' buttons. Below them, the title 'New SIP Account' is displayed. The account status is 'Not Registered', and a green 'Register' button is visible. The form contains several fields: 'Account Name' with a placeholder '[account display]', 'User Details' section with 'Display as' (placeholder '[Caller ID]'), 'Username' (placeholder 'e.g. 7771234567'), 'Password', and 'Domain' (placeholder 'e.g. example.com'). At the bottom, there is an 'Enabled' toggle switch currently set to 'OFF'. A red circle with the number '4' is positioned to the right of the 'Account Name' field, with a red line pointing to it.

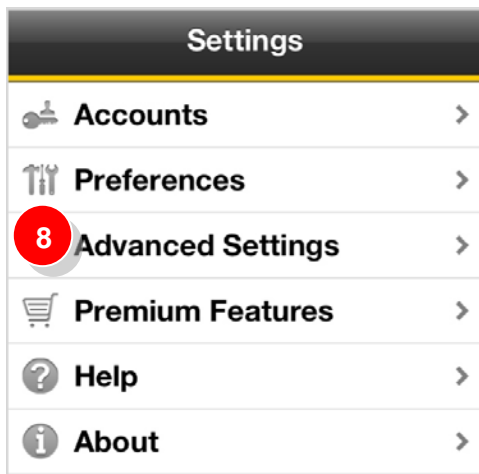
5. Scroll down the page and tap **Account Advanced**.



6. Make sure that both *Suppress STUN Wi-Fi* and *Suppress STUN Mobile* are set to **Off**.



7. Tap **SIP Account** to return to the previous page, and set *Enabled* to **ON**. The application will automatically register your phone.
8. Next, tap **Settings > Advanced Settings**.



9. For *Current Strategy*, select **Server Managed**.



10. Tap > **Settings** > **Preferences**.

11. Set *Use When Available* to **ON** and set *Allow VOIP Calls* to **ON**.

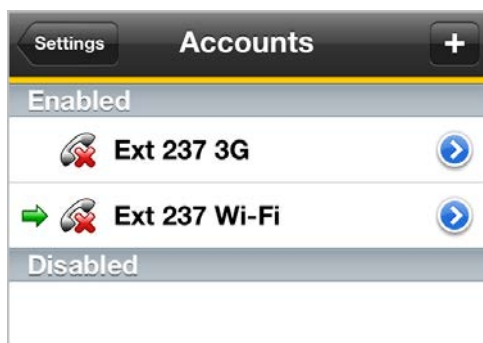


12. To create additional accounts, return to the Accounts page and tap the Plus sign (+) in the top corner.

Setting your preferred account

You can have different accounts on different (Wi-Fi and 3G) protocols enabled at the same time, and select one as the preference for outgoing calls.

To indicate which account is preferred for outgoing calls, tap **Settings** > **Accounts** and then tap the account. A green arrow indicates the preferred account.



Enabling and disabling accounts

For best performance, we recommend that you have only one account enabled at a time.

If you have trouble with voice connections using one protocol, you can disable one account and use an account on the other protocol.



Follow these steps if you have voice issues with one account and want to switch to another. This process will disable one account (you can enable it again later, as needed), to force Bria to use the other account.

1. Tap **Settings** > **Accounts**.
2. Tap the blue arrow beside the account you want to disable.
3. On the SIP Account page, set *Enabled* to **OFF**.
4. Tap **Accounts** to return to that page. The account should now appear below “Disabled.”

Next, clear the Bria application from memory, so that your change takes effect:

1. On your device, press the **Home** button once.
2. Double-press the Home button, to open the list of apps that are active. This list appears at the bottom of the page.
3. Touch **and hold** the Bria icon.
4. Tap the minus sign on the Bria icon to clear it from memory. Then press the Home button to close this list.
5. Tap the Bria icon to start the Bria application again.

Verify configuration

At this point, you should verify the configuration and make sure that the voice path can be heard in both directions. Make and receive calls from each Bria client phone.

If the voice is not heard in both directions, please review the configuration steps to make sure you have configured the account properly. If you still have a problem, contact AltiGen Communications.