

**Application Notes: MAXCS** Configuration For Bria

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## **Contents**

Introduction	3
Requirements	3
Apply the Bria Patch	3
Configure port forwarding	4
Set the default codec to G.711 Mu-Law	4
Configure gateways	5
Configure an extension	7
Configure network settings	8
Configure Smartphones	9
Setting your preferred account	.13
Enabling and disabling accounts	.13
Verify configuration	.14

AltiGen Communications, Inc. 410 East Plumeria Dr. San Jose, CA 95134 Telephone: 888-AltiGen (258-4436) Fax: 408-597-9020 E-mail: info@altigen.com Web site: www.altigen.com

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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 3<sup>rd</sup> 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 3<sup>rd</sup> party clients, including Bria.
- MAXCS does not support call waiting (single, multiple) with 3<sup>rd</sup> 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.



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- 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.

📊 Current Resource Statistics 📃 🗆 🗙						
	Refresh Interval					
	G.711 only	resources		G71	l1 / G723 / G729 R	esources
Gateway ID	Total	Active G711	Total	Active G711	Active G723	Active G729
01	1000	0	200	0	0	0 🔽
cv Network Pack	JB Packet I	oss Total Packet	I Max Packet l	D	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.

Login Logout Password	2 Servers Codec User Department Glo	bal LCR Help About
Codec Profile Table	Profile Setting	
Name /	Name: Default	
Dialogic SIP G711 Only	Codec: G.711 Mu-La	w
Level 3		G 711 litter Puffer Pange: Min 10 ans May 100 me
SIP Trunk		O.711 Sitter Buller Kange. Mill 10♥ Mis Max 100♥ his
		G.723 Jitter Buffer Range: Min 30 🖨 ms Max 480 🖨 ms
		G.729 Jitter Buffer Range: Min 10 ms Max 480 ms
	G.711 RTP Packet Length (ms)	20
	G.729 RTP Packet Length (ms)	20
	DTMF Delivery	Default
	SIP Early Media	Disable
	SIP Transport	UDP
Add Remove		5 Apply

- 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.** 



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- 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**.
- 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).



Softswitch Component Confi Media Server/Gateway Appli	guration		×
ID Name	Туре	Status:	Active
00	Gateway	Name:	Giant
	Liateway	Туре:	Gateway 💌
		Address:	10 . 30 . 9 . 10
		Password:	жжжж
		Country:	U.S.A. & Canada 📃
		Home IP Exts:	0
		🗖 Enable Media	Server on Softswitch
		CT-Bus Mode	
		C A-Law	Mu-Law
		- Set CT-Bus Clock	
		Auto	I9ITritonT1-1@GW03
		C Manual	
•		Manual	
Board	Add Delete Attach	Detach Refre	sh Config
		ОК	Cancel Apply Help

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 MaxAdministator, 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).



If Thome conligu		
Num. tus	Type 🔺	
100 <b>3</b> TI		
101		
102 ACT	eneral   IP /10//20   IP /05   IP 600	
104 INAC	0	The Dischart
105 ACT	General Into	Time Display
107 INAC	Version	Offset 00:00
108 ACT	Version.	
110 INAC	Altiserv: 0 0 0 0	Format: 03:00PM - 12H
111 INAC		
113 ACT	Enable Configure Password	
114 INAC		TFTP
116 ACT		
122 INAC	1	Server: 0.0.0.0
146 INAC	- Default Trunk Access Code	
187 INAC	Delaut Hunk Access Code	Reset IP Phone Boot Download
195 INAC	9	
196 ACT		
197 AUT 1	-Debug	-NAT Setting-
199 INAC	Debug	
202 INAC	🔽 Enable Telnet 📄 Enable Log	NAT Status: Disable
205 ACT	Dump Debug Trace	
210 INAC		NAT Address
215 ACT	Password:	INAT Address:
217 ACT	I I I I I I I I I I I I I I I I I I I	
223 ACT	Trace Level:	
224 ACT		Registry Keep-Alive
226 ACT	Log Server 0 0 0	duration: 00 seconds
227 ACT	0.0.0	
228 ACT	710	
231 INAC [	-SIP Transport	- 3rd Party SIP Device
233 INAC		Enable SIP Telephony Service
235 ACT	Persistent ILS SRTP	
L236 INAC		v
Apply To T	Copy From	

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.



Local Area Connection Properties	<u>? ×</u>	
General Authentication Advanced		
Connect using:		
Intel(R) PR0/1000 CT Network	Internet Protocol (TCP/IP) Properties	? ×
This connection uses the following item	General You can get IP settings assigned automatically if your network support this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	s
Install     Inistall	Obtain an IP address automatically      Obtain an IP address:      IP address:      IP address:      I0 . 30 . 9 . 4	
Transmission Control Protocol/Intern wide area network protocol that pro- across diverse interconnected netwo	Sybnet mask:         255.255.224.0           Default gateway:         10.30.20.4	
<ul> <li>✓ Show icon in notification area when</li> <li>✓ Notify me when this connection has</li> </ul>	Obtain DN5 server address automatically     Obtain DN5 server addresses:     Preferred DN5 server:     Alternate DN5 server:     10 , 10 , 0 , 45	
	Advanced.	
	OK Can	tel

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.

User-defined Account	ts
SIP SIP - Making C	alls
XMPP XMPP - Preser	nce and IM >



- 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.

Cancel New SI	P Account Save
Account Status	Not Registered
Re	gister
Account Name	[account display]
User Details	
Display as	[Caller ID]
Username	e.g. 7771234567
Password	
Domain	e.g. example.com
Enabled	OFF

5. Scroll down the page and tap Account Advanced.



Voice Mail	
VM Number	
Dial Plan (Number Prefixes)	>
Account Specific Features	>
5 Account Advanced	>

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

	lecount /	Auvanceu
Account Ad	ditional	
Out. Proxy	[domain	is the default]
Auth Name	[username	is the default]
DTMF Type		
Send DTMF u	sing	RFC 2833 义
Media Netw	ork Trave	rsal
Suppress ST	JN Wi-Fi	6 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.

Settings Advance	d
Network Traversal Str	ategy 🔻
Current Strate 9 Serv	ver Managed >
VPN Support v	
Use VPN If Active	OFF
Media Options <b>v</b>	
Voice Activity Detection	OFF
Noise Reduction Rx	OFF

- 10. Tap > Settings > Preferences.
- 11. Set Use When Available to **ON** and set Allow VOIP Calls to **ON**.



Settings Preference	ces
Mobile Data Network	<u>.</u>
Use When Available	
Allow VoIP Calls	
General	
Run In Background	
Incoming Call	
Play Ringtone	
Vibrate	

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.