

COUNTERPATH

Bria 3.0 Administrator Guide

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The content of this publication is intended to demonstrate typical uses and capabilities of the CounterPath Bria 3.0 softphone application from CounterPath Corporation. Users of this material must determine for themselves whether the information contained herein applies to a particular IP-based networking system.

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This manual corresponds to Bria 3.0 *for Windows* and Bria 3.0 *for Mac*.

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1 Overview

This manual is intended for:

- System administrators who have purchased Bria from the CounterPath website and are deploying Bria for use by the staff in an enterprise. The administrator should be familiar with PBX solutions, telephony and VoIP telephony.
- Service providers who have purchased Bria from CounterPath Sales, without further customization or engineering changes.

You can deploy Bria by manually configuring via the softphone GUI, or using a provisioning server. If you are planning to implement provisioning, you must also read:

- “Bria 3.0 Provisioning Guide - *Retail Edition*”

For more information on the documents you should read, go to <http://www.counterpath.com/bria.html>, click Resources, and read the “Bria 3.0 Administrator Orientation”.

Bria for Windows versus Bria for Mac

This guide describes administrator tasks for deploying both *Bria for Windows* and *Bria for Mac*.

It is assumed that you, the administrator, will be exploring deployment strategies using *Bria for Windows*. Therefore, all illustrations and instructions intended only for administrators are for *Bria for Windows*.

If information applies to your end users, details are provided for both Windows and Mac.

1.1 System Requirements

Requirements for Bria for Windows

Processor	Minimum: Pentium 4® 2.4 GHz or equivalent Optimal: Intel Core 2 Duo or equivalent; Video Card with DirectX 9.0c support Recommended to support HD video: Intel Core 2 Duo or equivalent with minimum 3.0 GHz, or a triple- or quad-core processor; Video Card with DirectX 9.0c support.
Memory	Minimum: 1 GB RAM Optimal: 2 GB RAM.
Hard Disk Space	50 MB
Operating System	Microsoft Windows XP Service Pack 2 Microsoft Windows® Vista®, 32-bits and 64-bits arch Microsoft Windows 7.
Additional	Microsoft Windows Installer 3.1 Microsoft .NET 3.5 SP1 Microsoft VC 9.0 Runtime Service Pack 1 (Note that the installer will take care of installing those if you do not have them).
Connection	Minimum: IP network connection (broadband, LAN, wireless) Recommended to support HD video: A 2.0 Mbps connection Note that Bria requires a continual internet connection.
Sound Card	Full-duplex, 16-bit or use USB headset
Web browser	Microsoft Internet Explorer® 6.0 or later.

Requirements for Bria for Mac

- Operating System: Mac OS™ 10.5 or above.
- Connection: IP network connection (broadband, LAN, wireless). Note that Bria requires a continual internet connection.

1.2 Multimedia Device Requirements

Requirements for Bria for Windows

Bria requires both speakers and a microphone to make calls. Any of the following are acceptable:

- External speakers and microphone
- Built-in speakers and microphone
- Dual-jack multimedia headset
- USB multimedia headset
- USB phone.

HID-compliant devices can be configured to work with Bria.

Video Cameras

Calls made with Bria will work without a video camera, but one is necessary to allow users to see each others' images. Bria will work with most USB video cameras.

Requirements for Bria for Mac

Bria is optimized to work with Apple iSight™

1.3 Deploying through Manual Configuration: Recommended Procedure

If you have chosen to manually configure Bria and will not implement remote provisioning, read this entire manual.

If you are a service provider, you should be aware that if you deploy through manual configuration then users do not log in, which exposes your service to abuse and may compromise the user's privacy.

It is assumed that you, the administrator, will be exploring deployment strategies using Bria *for Window*. Therefore, instructions in this section are for *Bria for Windows* only.

Configuring Bria: Administrator Steps

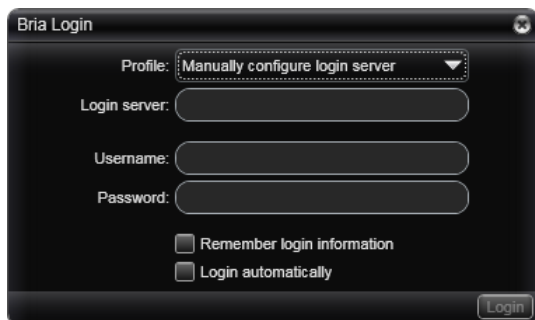
The general procedure is:

1. Install and start Bria. The Bria Login dialog appears with the Profile set to "Manually enter login server". Set the profile to "No login required" and click Continue. The softphone GUI appears.
2. Configure Bria to work on your network and with your services. Use the Account Settings window (Softphone > Accounts) and the Preferences window (Softphone > Preferences).

The Troubleshooting Assistant (Help > Troubleshooting) may help you identify problems with your configuration.

The rest of this manual describes this configuration.

3. When you are satisfied with the configuration, deploy to your employees or users.
4. Then either configure the application for each employee, or provide them with a list of settings so that they can configure it themselves (see page 45 for a sample form).

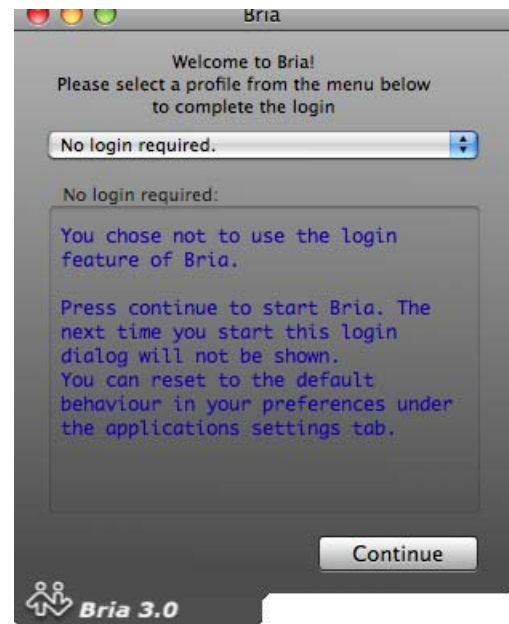
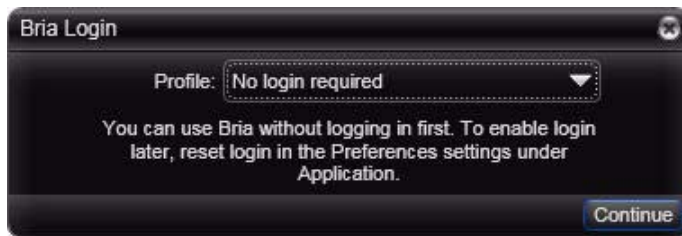


Instructions for your Users

Because you are not provisioning Bria, your users do not need to log on. Instruct your users to start Bria as follows:

- The first time the user starts Bria, the Login dialog appears. The Login dialog for Bria *for Windows* and Bria *for Mac* Login dialogs are shown below.
- The user should set the profile to "No login required" and click Continue.

Bria will start and the user can configure the softphone. The next time the user starts Bria, the Login dialog will *not* appear: Bria will start immediately.

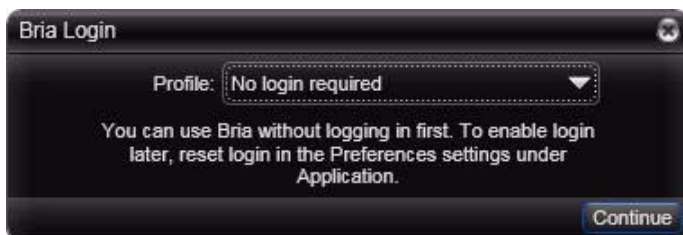


1.4 Deploying through Remote Provisioning: Recommended Procedure

Configuring Bria: Administrator Steps

If you are deploying through remote provisioning you will need to start Bria without provisioning in order to explore configuration options.

1. Install and start Bria. The Bria Login dialog appears with the Profile set to “Manually enter login server”. Set the profile to “No login required” and click Continue. The softphone GUI appears. From now on, when Bria starts, the Login dialog will *not* appear.

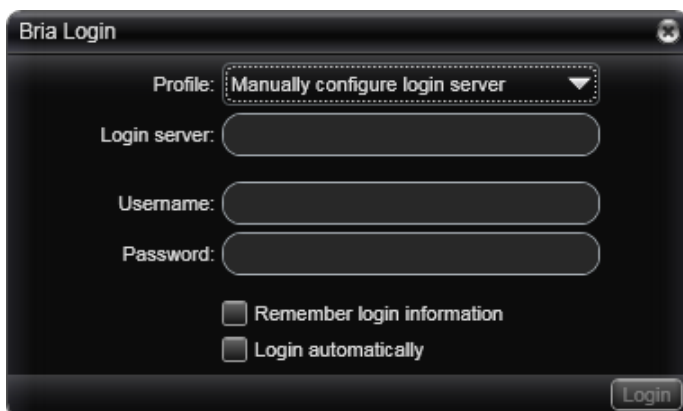


2. Manually configure Bria to work on your network and with your services. Use the Account Settings window (Softphone > Accounts) and the Preferences window (Softphone > Preferences).

The Troubleshooting Assistant (Help > Troubleshooting) may help you identify problems with your configuration.

The rest of this manual describes this configuration.

3. When you are satisfied with the configuration, see the “Bria 3.0 Provisioning Guide - *Retail Edition*” for information on setting up your users for remote login and remote provisioning.
4. In addition, just before you deploy across your enterprise, change the setup for your own Bria to follow the correct login procedure:
 - Start Bria, go to the Preferences > Application page and check Enable login screen.
 - Shut down Bria and restart. The Login dialog will appear.
 - Choose the appropriate option: “DHCP” or “Manually enter login server” and complete the other fields. Click Login.



Using the “No Login” Profile

If you ever need to start Bria without logging in:

1. Go to the Preferences > Application page and check Enable Login screen.
2. Restart Bria. The Login dialog will appear and a countdown to login will occur. Click Cancel to stop the login process.

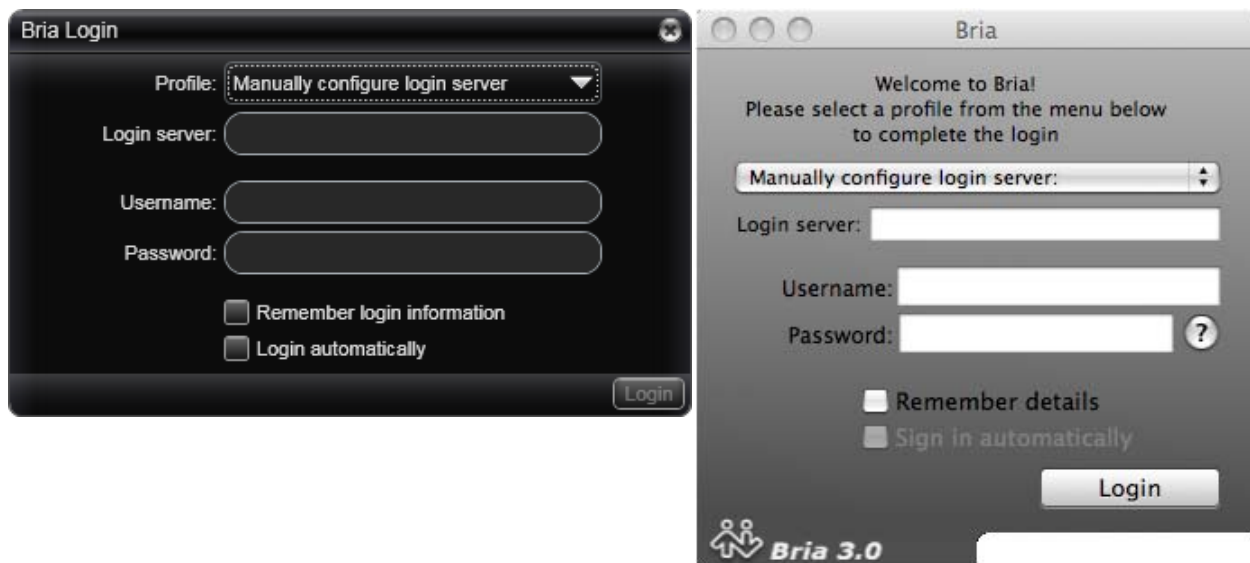
Bria will start, using the local version of the configuration data that is saved on your computer (from the first time you used Bria without logging in).

Keep in mind that when you are supporting remote provisioning, starting Bria without logging in is intended to allow you, the administrator, to experiment with login options. It is not intended to allow users to skip login, for example, by displaying the Login dialog and choosing the “No login required” option.

If a user first logs on using DHCP or by manually entering the server URL and then later changes to “No login required”, Bria will start but none of the user’s account credentials or account settings will be available, so Bria will not be usable.

Instructions for your Users

1. When the user starts Bria, the Login dialog appears. The Login dialog for Bria *for Windows* and Bria *for Mac* Login dialogs are shown below
2. The user should set the profile to “DHCP” or “Manually enter login server” (depending on how you have set up provisioning).
3. The user should complete the remaining fields (with information you have provided to each user, perhaps through an e-mail) and click Login. Bria will start. From now on, the Login dialog will appear at each startup.



2 Configuring Bria

2.1 Summary of Features

You configure Bria by completing the fields on the Account Settings window and the Preferences window. The following table specifies the window where each feature is configured.

Topic	Window	Reference
Account credentials (SIP accounts)	Accounts > Account (SIP)	page 18
Account credentials (XMPP accounts)	Accounts > Account (XMPP)	page 17
Active Directory (Windows only)	Preferences > Directory	page 37
Bandwidth	Preferences > Network	page 32
BLA - Bridge Line Appearance (Windows only)	Accounts > Presence	page 24
BLF - Busy Lamp Field (Windows only)	Accounts > Presence	page 24
Buddy list for SIP accounts, storage	Accounts > Storage	page 26
Call forwarding	Accounts > Voicemail	page 20
Codecs	Preferences > Audio Codecs and Video Codecs	page 33
Contact list, setting up a corporate contact list		page 13
Contact list, storage	Preferences > Contact Storage	page 41
Corporate Directory (Windows only)	Preferences > Directory	page 37
Dial plan	Accounts > Account (SIP)	page 18
DTMF; method for handling DTMF	Preferences > Advanced	page 43
Encryption (call security)	Accounts > Transport	page 27
Hold; method for handling hold	Preferences > Advanced	page 43
IM, set the IM/Presence account	Accounts List	page 11
LDAP Directory (Windows only)	Preferences > Directory	page 37
Login	Preferences > Application	page 4
Media - RTP inactivity timer	Preferences > Advanced	page 43
Media Encryption	Accounts > Transport	page 27
MWI - Message Waiting Indicator	Accounts > Voicemail	page 20
Network (SIP accounts)	Accounts > Account (SIP)	page 18
	Accounts > Topology	page 22
	Accounts > Advanced	page 29
Network (XMPP accounts)	Accounts > Account (XMPP)	page 17
Network connection speed	Preferences > Network	page 32
Presence (online status)	Accounts > Presence	page 24

Topic	Window	Reference
Presence, set the IM/Presence account	Accounts List	page 11
Quality of Service (Windows only)	Preferences > Quality of Service	page 36
Transport	Accounts > Transport	page 27
Voicemail	Accounts > Voicemail	page 20
Workgroups (BLF - Busy Lamp Field and BLA - Bridge Line Appearance) (Windows only)	Accounts > Presence	page 24

2.2 Configuring Accounts

Each user will need at least one SIP account, in order to make phone calls. The SIP account may also be used for presence (online status sharing) and instant messaging; see page 11 for information on tying these features to a SIP account.

Setup of an XMPP account is optional; if it is set up, it will automatically be used for presence subscriptions and instant messaging; these features will not be available on the SIP account.

SIP Accounts

Each user requires the following information in order to register with the SIP registrar:

- User name
- Password
- Authorization Name (if applicable; see page 18 for information)
- Domain

XMPP Accounts

Each user requires the following information:

- User ID
- Domain
- Password.

Procedure

1. From the Bria menu, choose Softphone > Account Settings. The SIP Account window appears.
2. Enter the User Details and then change or complete all other fields. See “Account Configuration Reference” on page 15 for details.
3. When done with the SIP account, click OK; the account is created and registered.
4. If you are setting up an XMPP account, choose Softphone > Account Settings again. This time the Account Settings window appears, showing the SIP account you have already set up.
5. Click Add > New XMPP Account. The XMPP Account window appears. Complete the window (page 17) and click OK.
6. On the Account Settings window, click Apply to register the newly added account. Click OK when the Status column is “Ready”.

Setting the IM/Presence Account

Presence subscriptions (for online status sharing) and instant messages can be handled through only one account.

- If you have an XMPP account, presence subscriptions and instant messages are handled through that account.
- If you do not have an XMPP account and you have more than one SIP account, you must select which SIP account to use.
 - If you are deploying manually, instruct all users on which SIP account to use. All users must use the same account and they must not change the account without your instructions. When users set up presence on the appropriate account, that account will show on the Accounts be selected
 - If you will later be provisioning Bria, you will be able to set this account through provisioning.

When using SIP, there are two ways to set this account:

- In the Presence tab for the specified account. When you set the Mode to “Peer-to-peer” or “Presence agent” and press OK, a checkmark appears in the IM column for this account on the Account Settings window. In addition, the Mode of all other accounts is set to “Disabled”.
- On the Account Settings window, by clicking the Set as IM/Presence button.
Presence is set to peer-to-peer for this account, so do not use this mechanism if you are actually using a presence agent. In addition, the Mode of all other accounts is set to “Disabled”.

Switching Accounts

You should not change the account used for presence: choose one account when you first set up your SIP accounts. If you switch accounts and then switch again, the presence subscription for some contacts will be lost and users will have to set up the subscription again. Windows users do this for each contact individually by checking the presence checkbox on the Contact Profile. Mac users can select affected contacts, and right-click and choose Subscribe to presence.

Configuring Global Settings (Preferences)

Use the Preferences window (Softphone > Preferences) to configure features that apply globally, rather than on a per-account basis. The panels that you, as the system administrator, should set are:

- Network. You should complete these fields to suit your network.
- Audio Codecs and Video Codecs. You should enable the codecs that are suitable to your environment.
- Quality of Service. If your VoIP service provider supports QoS, you can configure Bria for it.
- Directory. You can set up a company directory on a server and connect Bria to it via the LDAP or ADSI protocol. The directory will appear in the Directory tab. Information in this tab will update automatically whenever the information on the LDAP or ADSI directory changes.
Note that *Bria for Mac* does not support directories.
- Contact Storage. This panel lets you set up a remote storage system for your contact list via WebDAV, XCAP or the user’s Microsoft® Outlook® address book (*Bria for Windows* only) or Mac address book (*Bria for Mac* only). Note that the storage that is configured here is for the contact list (which contains SIP addresses and other addresses), while the storage that is configured on each SIP account is for the buddy list (which contains only online status information).
- Advanced, but only the DTMF and hold fields. Leave the other fields for users to complete.

See “Preferences Reference” on page 31. For information on the panels that are not discussed in this guide, see “*Bria 3.0 for Windows* User Guide – Enterprise Deployments”.

One of the differences between *Bria for Windows* and *Bria for Mac* is in the organization of configuration information:

- In *Bria for Windows*, account information is in the Accounts window, which is accessed by choosing Softphone > Accounts. Preferences are in the Preferences window, which is accessed by choosing Softphone > Preferences.
- In *Bria for Mac*, all information is in the Accounts window, which is accessed by choosing Softphone > Preferences.

2.3 Setting up Contacts

Typically, users will want to create contacts in order to easily make phone calls. In addition, in order to send IMs, shared online information and transfer files, contacts are required.

Contact Storage

You can set up Bria so that contacts are stored locally on each user's computer, or remotely on a WebDAV or XCAP server, or in the user's Microsoft® Outlook® address book or Mac address book (in this case, users are actually using their Outlook contacts (or Mac contacts) from within Bria; nothing is saved in Bria).

See page 41.

Populating the Contact List: Bria *for Windows* Only

You may want to provide an initial contact list for users who are using Bria *for Windows*. You can:

- Provide a file that users can import. See below.
 - This option makes sense if users will be set up to store their contacts locally or on a WebDAV or XCAP server. It cannot be used if users will be set up to use the Outlook address book for contacts.
- Create an LDAP directory or Microsoft Active Directory® and set up users to connect to this directory. Once Bria is connected to the directory, the directory contents appear in the Directory tab (alongside the Contacts and History tabs) and users can choose to create a contact from any entry.
 - This option makes sense for all storage methods: local, remote server, and Outlook.

See page 37.

Importing Contacts

You can provide a file (for example, the company contact list) that each user can import as desired. The import file can be:

- A comma-separated file. Use this method to import from a Microsoft® Excel® file. You will first have to set up the file; see below.
- A vCard file (*.vcf file). A vCard is an electronic business card that is often attached to an email.
- A Microsoft® Outlook® or Microsoft® Exchange contact list (a *.pst file).

Setting up an Excel File for Import

1. Remove any introductory text or headings from the top of the file. (You can keep text at the end of the file; it will be ignored during the import.)
2. Insert a blank row as the first row. In this row, type the headings that Bria will use to interpret the meaning of each column. The columns can be in any order. The most popular headings are:
 - display-name
 - entry_id
 - given_name
 - surname
 - postal_address.

For a complete list of headings, see page 85.

3. Save the file as *.csv.

Testing

1. From the main menu, click the Contacts menu and choose Import Contacts. The Import Contacts wizard starts.
2. As soon as you click Finish on the wizard, the Contacts tab in Bria is updated to show the imported entries.

Note that none of the entries are set up with “share online status” turned on; to share online status, users will have to view each contact’s Profile and click the online presence checkbox.

2.4 Managing Licenses

When you obtain Bria, you purchase a license with a specified number of seats. Each time a user enters the license key, the license count is drawn down on the CounterPath license database. When the count is drawn down to 0, then the next time the key is entered, an error message appears for that user.

You can either increase your license count or revoke unused seats. To revoke seats, go to ww.counterpath.com, click the Store link, click the Your Account link, and log in.

Currently, a license count can be shared by users on the same computer if the users are using the Windows administrator or regular user accounts. However, a user who uses this computer with the Windows guest account and starts Bria will automatically draw down the license count (assuming that a license key has already been entered).

Therefore, if you seem to have drawn down more license counts than expected, the problem may be that one or more guests have used seats. You can request that CounterPath revoke these licenses in order to reinstate the number of seats actually in use.

Setting up for the Licensing Server

Periodically, Bria connects to CounterPath’s license server in order to verify that a valid license is being used. Therefore, at all times, Bria will need to have an internet connection.

Bria connects to <https://secure.counterpath.com> via port 443; make sure your firewall allows this HTTPS traffic to this URL. In addition, if you have explicitly set a web proxy (Start > Control Panel > Internet Options > Connections) then Bria will use this proxy; make sure the proxy allows this traffic.

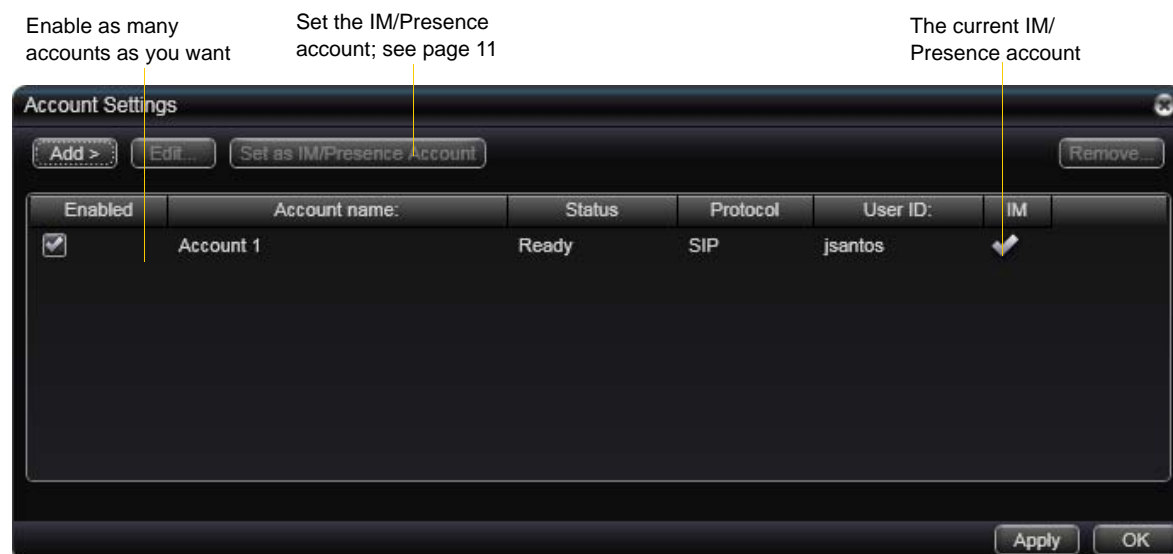
3 Account Configuration Reference

The Account Settings window lets you configure features that apply on a per-account basis. (The preferences window lets you configure features that apply across all accounts.)

3.1 Accounts Settings Window

Choose Softphone > Account Settings from the menu.

The first time you (or the user) chooses Softphone > Account Settings, the SIP Account window appears to allow setup of a SIP account. Once that first account has been set up, choosing Softphone > Account Settings displays the Account Settings window.



You can:

- Add or remove an account. (You can only add one XMPP account; you can add multiple SIP accounts.)
- Enable one or more accounts.
- Set or change the properties of an account. Select the account and click Edit. See the following pages for details.

Enabling Accounts

An account must be enabled in order to make and receive calls on that account. Several accounts can be enabled at the same time.

Account Used for Incoming Phone Calls

The account that an incoming phone call comes in on is controlled by the other party. However, an account must be enabled in order for a phone call to be received on it.

Account Used for Outgoing Phone Calls

Bria selects the account to use by running the phone number or SIP address through the dial plan process; see “How Dial Plans Are Used” on page 52.

If that does not select an account, the first enabled SIP account is used.

3.2 XMPP Account

Fields with a red asterisk are required

Table 1: XMPP Account Properties – Account

Field	Description
Account name	If desired, change the account name to something that is meaningful to you.
Protocol	Read-only. Always specifies XMPP.
User Details	
User ID	Typically the account number for the softphone account. For example, kperera.
Domain	For example, domainXMPP.com.
Password	
Display name	This name is displayed in the Bria display. Other parties will see this name when they are connected to you.
Advanced	
Port selection	Configures the port to use. If you choose “User selected”, complete the Connect port field.
Connect port	Complete only if Port selection is set to “User selected”
Outbound proxy	The values in User ID and Domain and in this setting may be used by Bria to compose a valid jid: <ul style="list-style-type: none"> • If User ID/Domain=bob@ABC.com and Outbound proxy is empty, jid=User ID: bob@ABC.com • If User ID/Domain=bob@ABC.com/home and Outbound proxy is empty, jid=User ID: bob@ABC.com • If User ID/Domain=bob@ABC.com and Outbound proxy=XYZ.com, ignore the Outbound proxy; User ID=bob@ABC.com • If User ID/Domain=bob@ABC.com and Outbound proxy=IP address or host address, jid=User ID. (IP address is used as the outbound proxy). • If User ID/Domain=bob and Outbound proxy=ABC.com, jid=bob@ABC.com.
Resource	Optional resource, as specified in RFC 3920. For example “/home”. If this setting is blank and the User ID includes a resource, the value from that ID is used. If both are specified, the value from this Resource field is used. If no resource is specified, the XMPP server will assign a temporary resource.
Priority	The priority, as per RFC 3921. The default is 0.

3.3 SIP Account Properties – Account

Screenshot of the SIP Account Properties dialog box, Account tab. The dialog has tabs for Storage, Transport, and Advanced. Under Advanced, there are sub-tabs for Account, Voicemail, Topology, and Presence. The Account tab is active. Fields include: Account name (Account 1), Protocol (SIP), User ID (required), Domain (required), Password, Display name, Authorization name, Register with domain and receive calls (checked), Send outbound via (Domain selected), and Dial plan (#1'a.l.T;match=1;prestrip=2;). A yellow arrow points to the User ID and Domain fields with the text "Fields with a red asterisk are required".

Table 2: SIP Account Properties – Account

Field	Description
Account name	If desired, change the account name to something that is meaningful to you.
Protocol	Read-only. Always specifies SIP.
User Details	
User ID	Typically the account number for the softphone account plus the domain. For example, kpereira@domain.com.
Password	
Display name	This name is displayed in the Bria display. Other people will see you as this name.
Authorization name	Typically not used in an enterprise environment. This name is useful if, for example, you allow user IDs that are short and therefore easy to guess. The authorization name is used in place of the user name to register the account with the SIP registrar.
Domain Proxy	
Register with domain and receive calls	Typically, this field is checked. A situation in which this field is unchecked is, for example, if your level of service does not include the ability to receive incoming calls. In this case, turning this field on may cause registration to fail (when you close the Account Properties window), meaning that your Bria cannot register.
Send outbound via	<ul style="list-style-type: none"> • Domain: If your VoIP service provider requires that traffic be directed to proxies that are discovered via the domain. • Proxy Address: If your VoIP service provider has an outbound proxy address and requires that you provide the address to Bria. For the address enter a domain name (for example, domain.com) or an IP address (for example, 123.456.789.012). <p>If you are using Bria in a test lab, it is possible that neither of these settings is suitable; see page 30 for a third way to direct traffic.</p>

Table 2: SIP Account Properties – Account

Field	Description
Dial Plan	The default plan is: #1\a\a.T;match=1;prestrip=2; See page 45.

3.4 SIP Account Properties – Voicemail



These settings let you configure client-side voicemail features.

Your IP PBX may also provide the ability to configure voicemail (server-side handling). An incoming phone call first goes through server-side handlers and then through the client-side handlers. Keep in mind that the fields on this Voicemail tab are not written to the server; they are configuring a second, separate handler.

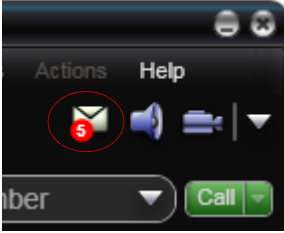
You must decide how you want phone calls to be handled: by the server only, by the Bria client only, or by both. Instruct your users accordingly.

If you decide to allow both, you must make sure that your users understand how the server-side and client-side voicemail configuration must be synchronized to work together. You must also check what the server-side settings are and make sure you enter compatible information in Bria.

Table 3: SIP Account Properties – Voicemail

Field	Description
Check for voicemail	<p>Set the checkbox in one of these ways:</p> <ul style="list-style-type: none"> • Check the box if Bria must subscribe to be notified when there is a voicemail for you. In other words, to configure for “subscribe for message waiting”. • Clear the checkbox if your voicemail server sends notifications without Bria subscribing. In other words, to configure for “implicit subscription”. • Clear the checkbox if you do not support voicemail. <p>Voicemail is controlled by your IP PBX, not by Bria.</p>

Table 3: SIP Account Properties – Voicemail

Field	Description
Number to dial for checking voicemail	<p>This is the number that will be called when a user clicks the Check for voicemail icon on the softphone, in order to connect to voicemail and listen to messages.</p> <ul style="list-style-type: none"> • Completing this field activates the voicemail icon on the softphone. • If you leave this field empty, then this icon will not work; users will have to manually dial this number in order to connect to voicemail. 
Number for sending calls to voicemail	<p>This is the number that incoming calls will be forwarded to if they are unanswered after the specified interval (below).</p>
Send calls to voicemail if unanswered	<p>To send to voicemail after the specified number of seconds.</p> <p>Your IP PBX may also provide a similar feature that is set up outside of Bria. If so, make sure you do not enter competing information in Bria and in the IP PBX's user interface. For example, if you turn off this field, make sure the same feature at your service provider is also turned off. Otherwise, all your calls will continue to be forwarded.</p>
Always forward to this address	<p>Typically, each user sets this field up individually, to suit their needs. This feature works even if the VoIP service does not include voicemail.</p> <p>To always forward phone calls received on this account.</p> <p>Enter the address to forward to, but leave the checkbox cleared (the individual user will click it when desired). Phone calls received on other accounts (if you have them) are not affected by enabling this field for this particular account.</p>
When on the phone, forward to	<p>Typically, each user sets this field up individually, to suit their needs. This feature works even if the VoIP service does not include voicemail.</p> <p>To forward only when you are on another phone call.</p> <p>Enter the address to forward to, but leave the checkbox cleared (the individual user will click it when desired). Phone calls received on other accounts (if you have them) are not affected by enabling this field for this particular account.</p> <p>Your service provider may provide a similar feature that is set up outside of Bria. If so, your users must make sure they do not enter competing information in Bria and in the service provider's user interface. For example, if they turn off this field, make sure the same feature at your service provider is also turned off.</p>

3.5 SIP Account Properties – Topology

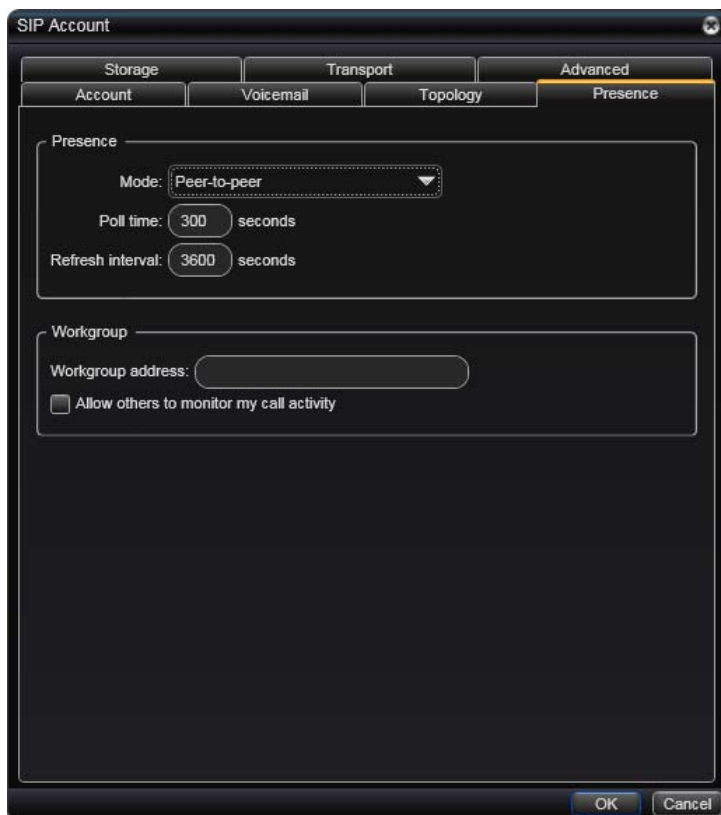


Table 4: SIP Account Properties – Topology

Field	Description
Firewall traversal mode	<ul style="list-style-type: none"> • Auto detect using ICE: Automatically determine the contact address for signaling traffic. Advertise the local IP, public IP (discovered via STUN, if available), and media relay IP (discovered via TURN, if available), and use these to automatically determine the best route for media traffic during calls. • Discover public IP address: Advertise the public IP address (discovered via STUN) for the contact address for signaling traffic, and for the connection address for media traffic. • Use media relay (TURN): Advertise the public IP address (discovered via STUN) for the contact address for signaling traffic. Advertise the address of a media relay server (discovered via TURN) for the connection address for media traffic. • None: Advertise the local IP address only for both signaling and media traffic.
Server address	<ul style="list-style-type: none"> • Empty: Discover the address of the firewall traversal server (the STUN or TURN server), if available, using DNS SRV. • Specified: Use the firewall traversal server specified as either an IP address or a fully qualified hostname.
Range of ports used on local computer	<p>The appropriate setting depends on your computer setup:</p> <ul style="list-style-type: none"> • Checked: If your computer is behind a restrictive firewall that only allows specific port ranges to be used. Enter the range of ports to use for your SIP account. (You must also open those ports on your firewall; refer to applicable firewall documentation for information.) • Unchecked: If your computer is not behind a restrictive firewall.

Firewall Traversal Method	Server	Result
Auto detect using ICE	Empty	<ul style="list-style-type: none">• Auto detect the firewall traversal server (if any) using DNS lookup.• Automatically determine how to set up a call using ICE.
Auto detect using ICE	Specified	Use the specified firewall traversal server (the server can be a STUN server or a TURN server) to set up the call.
Discover public IP address (STUN)	Empty	<ul style="list-style-type: none">• Auto detect a STUN server using DNS lookup.• Use the specified server to set up the call.
Discover public IP address (STUN)	Specified	Use the specified STUN server to set up the call.
Use media relay (TURN)	Empty	<ul style="list-style-type: none">• Auto detect a TURN server using DNS lookup.• Use the specified server to set up the call.
Use media relay (TURN)	Specified	Use the specified TURN server to set up the call.
None	Empty	When this option is selected, Bria will attempt to make an IP-to-IP phone call. This option is not recommended.

3.6 SIP Account Properties – Presence



This tab lets you set up presence and workgroups (*Bria for Windows* only).

If you are using SIP SIMPLE for online status sharing (presence), you must configure one SIP account to handle subscriptions. You can only set up one account for presence; see “Setting the IM/Presence Account” on page 11 for details.

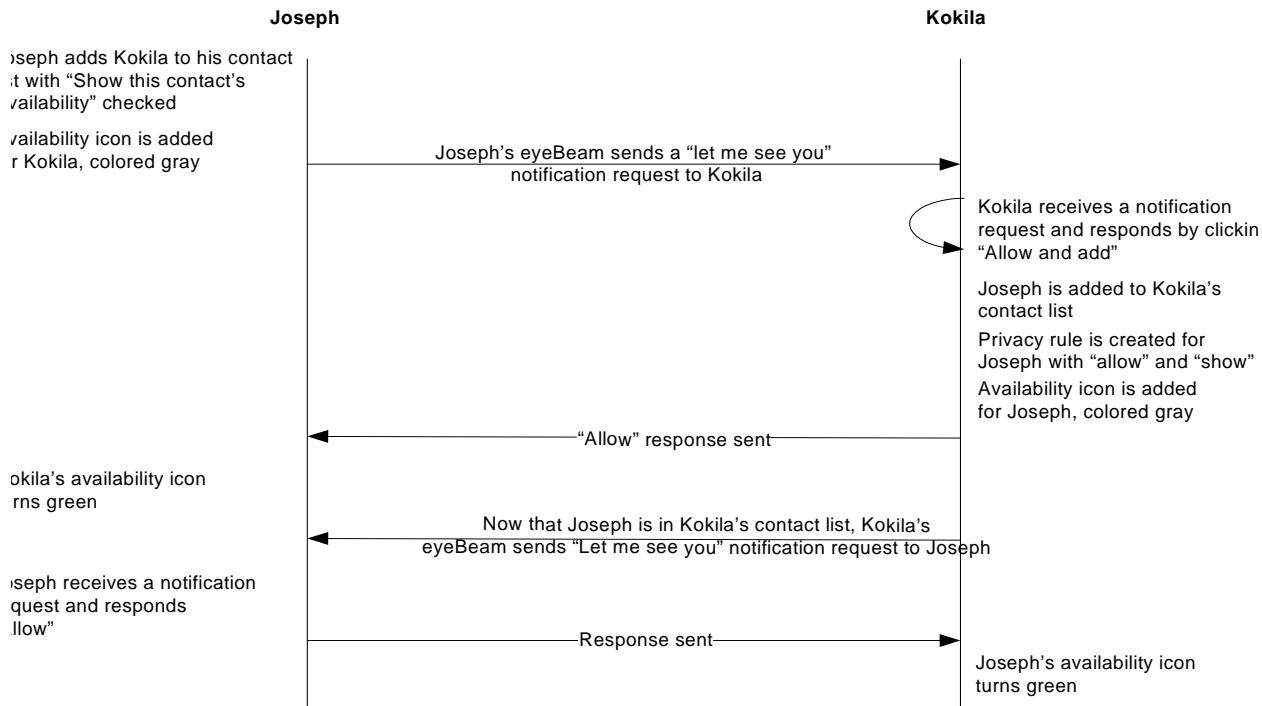
Note that you do not have to set up to share presence information on an XMPP account.

Table 5: SIP Account Properties – Presence

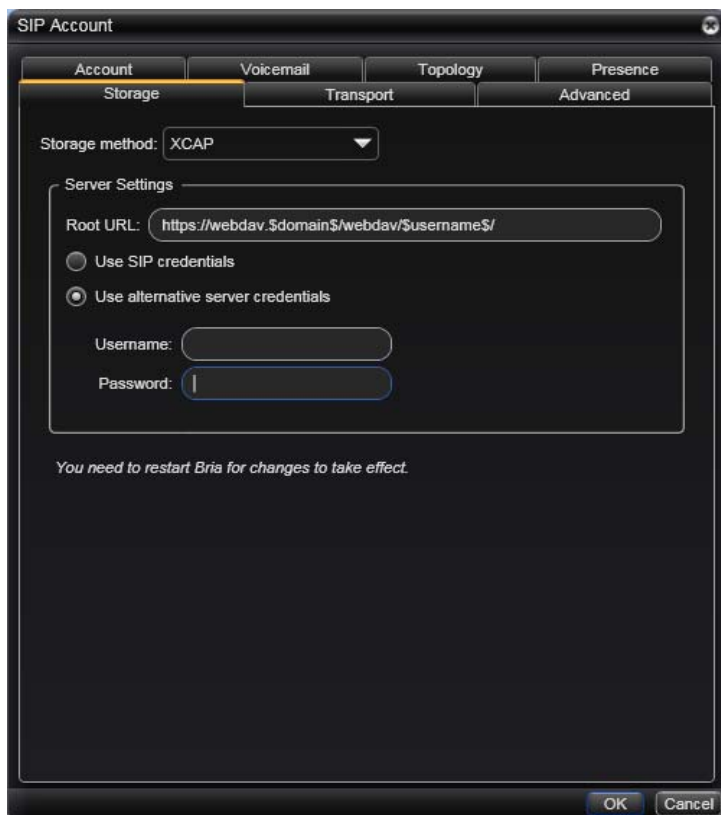
Field	Description
Presence	
Mode	<ul style="list-style-type: none"> • Disabled: Presence is not supported. • Presence Agent. • Peer-to-Peer.
Poll time	The factory setting is 300.
Refresh interval	The factory setting is 3600.
Workgroup	
Workgroup address	<p>The AoR for subscribing to the Resource List server (RLS) for the workgroup. The content of this AoR is defined by the RLS. <i>Bria for Windows</i> supports resource list subscriptions for the “dialog” event package (not the “presence” event package). It uses full updates for dialog events. Your phone setup must support RFC 4235 and RFC 4662.</p> <p>When an AoR is entered in this field, <i>Bria</i> will subscribe to the resource list on the RLS and support the following features in the Workgroup window on the client:</p> <ul style="list-style-type: none"> • Indicator showing the status of phone features for endpoints in the resource list: outgoing call ringing, incoming call ringing, one the phone, and so on. • Ability to pick up a call that is incoming to an endpoint. • Ability to join a call that is established at an endpoint.

How Presence Subscriptions Work

The following chart illustrates how the sharing of online status occurs. This chart illustrates a peer-to-peer subscription, but the same principle applies when a presence agent is used.



3.7 SIP Account Properties – Storage



These settings let you set up a remote storage system for the buddy list for this SIP account. Remote storage of the buddy list can be via XCAP or WebDAV.

Note that the buddy list for an XMPP account is always stored on the XMPP server; no configuration is required.

If you plan to instruct users to set contact list storage to their Outlook or Mac address book (so that users use their Microsoft Outlook or Mac address book from within Bria (page 41)), your buddy list must be stored locally.

Table 6: SIP Account Properties – Storage

Field	Description
Storage method	The storage method to be used for the buddy list and presence rules. The file can be stored locally or both locally and on a remote computer.
Server Settings (not used for “Local”)	
Use SIP credentials	Check this box to use the username and password from your SIP account in order to log into the storage server. Otherwise, uncheck this box and complete the Username and Password fields.
Use alternative server credentials	Check this box to use specific credentials. Enter data for connecting to the server.

3.8 SIP Account Properties – Transport

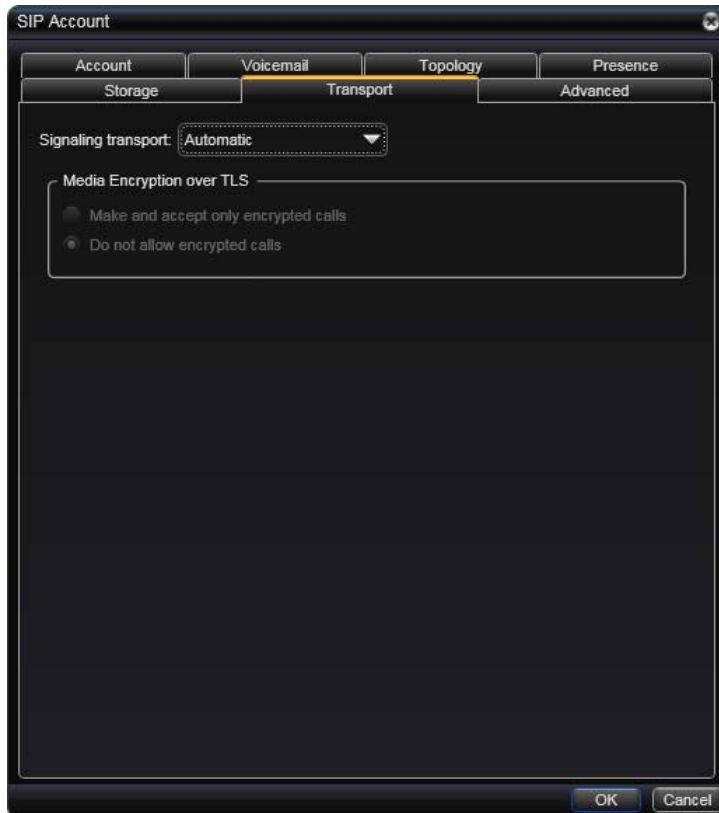


Table 7: SIP Account Properties – Security

Field	Description
Signaling Transport	<ul style="list-style-type: none"> • Automatic: Bria sets up the transport based on the capabilities of the network and the Bria computer. Choose this option if you do not care which transport is used. • TCP: This transport provides no signaling security. • UDP: This transport provides no signaling security. • TLS: Choose this option to request signaling encryption or both signaling and media encryption.
Media Encryption over TLS	See Table 8 on page 28. The factory setting is Do not allow encrypted call.

You can set up Bria for the type of security (encryption) you want for incoming and outgoing calls.

Bria supports:

- Signaling encryption using TLS
- Media encryption using SRTP.

Setting up for Security outside of Bria

When using TLS, you must have the root certificate that signs the proxy's chain of certificates. In most cases, the root certification will already be installed. Procedures for the exchange of certificates are outside the scope of this documentation. The certificates must be stored on the Bria computer, in the root certificate store.

Setting up the root certificate on your computer ensures that the connection to the proxy is TLS secure (the first hop). Any proxy in the chain (between you and the caller) that does not support TLS may cause an insecure link in the chain. Therefore, if the other party is outside your domain, you cannot be completely sure that the call is secured at the signaling level, which means that you cannot be sure that it is secured at the media level.

Setting up for Security within Bria

The options for media encryption are described in the following table.

Table 8: Media Encryption Options

Option	How Outgoing Calls are Handled	How Incoming Calls Are Handled
Make and accept only encrypted calls	Bria will place all calls with TLS. The call INVITE will specify SRTP media encryption. If the correct certificates are not in place or if the other party does not accept encrypted calls, the call will fail.	Bria will only accept INVITES that are for encrypted calls. If Bria receives a call INVITE that is not encrypted, the call will be rejected
Do not allow encrypted calls	Bria will place only unencrypted calls. If the other party does not accept unencrypted calls, the call will fail.	Bria will only accept INVITES that are for unencrypted calls. If Bria receives a call INVITE that is encrypted, the call will be rejected.

3.9 SIP Account Properties – Advanced



Table 9: SIP Account Properties – Advanced

Field	Description
Register Settings	
Reregister every	<p>The time interval between Bria's attempts to reregister in order to refresh the account registration. A value of zero means not to reregister after the initial registration.</p> <p>This value is placed in the "Expires" header field of the REGISTER message.</p> <p>The factory setting is 3600.</p>
Minimum time	<p>If the reregistration fails, Bria will wait this amount of time, then attempt to reregister. If the second attempt fails, Bria will wait twice this time and try again, then four times this time, and so on, until reregistration succeeds.</p> <p>The factory setting is 20.</p>
Maximum time	<p>This is the maximum wait time between attempts to reregister. Once this maximum is reached, Bria will wait this time for all subsequent attempts.</p> <p>For example, the min. time is 20 secs, the maximum time is 120 secs. Bria will attempt to reregister as follows:</p> <ul style="list-style-type: none"> • Wait 20 secs. • Attempt to connect. • If fail, wait 40 secs. • Attempt to connect. • If fail, wait 80 secs. • Attempt to connect. • If fail, wait 120 secs (the maximum) • Attempt to connect. • If fail, wait 120 secs, and so on. <p>The factory setting is 1800.</p>

Table 9: SIP Account Properties – Advanced

Field	Description
Timers	
Enable session timers Default session time	<p>A session timer is a mechanism to detect whether a call session is still active from the signaling point of view. When the timer expires, a refresh is sent from one party to the other. The timer is then reset.</p> <ul style="list-style-type: none"> • Turn on to enable session timer. Enter a value in Default session time. The factory setting is 60. • Turn off to disable session timer; refreshes will never be sent.
Session timer preference	<p>This field specifies your preference for which party should send the refresh. The preference is not a guarantee that the refresh will be performed by the specified party. The choices are:</p> <ul style="list-style-type: none"> • None: No preference. • Local refreshes: Your computer sends. • Remote refreshes: The other party sends. • UAC refreshes: The user agent client (the party that initiated establishment of the communications) sends. • UAS refreshes: The user agent server (the other party) sends.
Send SIP keep-alives	Typically on, to instruct Bria to send SIP keep-alive messages in order to maintain a “pinhole” through your firewall for SIP messaging.
Use rport	Typically on.
Send outgoing request directly to target	<p>When checked, requests with a complete URI (user@ABC.com) go to ABC.com and the “Send outbound via” field on the Account tab (page 18) is ignored.</p> <p>If you check this field, make sure you also set “Send outbound via” (on Accounts > Account) to “Domain”.</p> <p>Typically off. This field is intended for test labs and may cause problems in a NAT environment.</p>

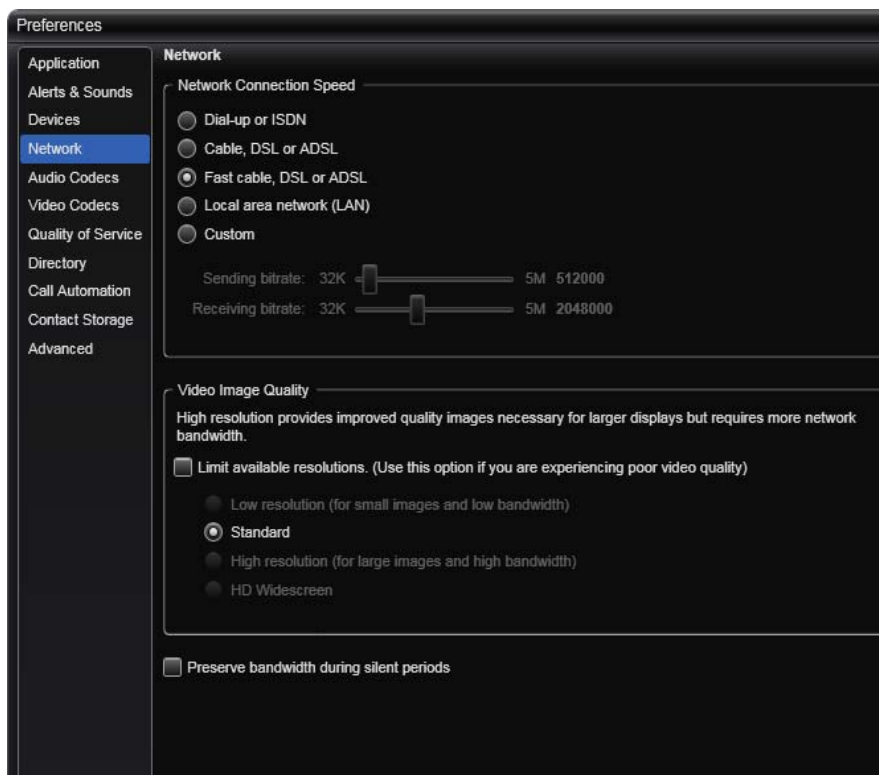
4 Preferences Reference

Choose Softphone > Preferences. The Preferences window appears.

The Preferences panels let users control the way that they work with Bria. It also contains fields to configure features that apply globally, rather than on a per-account basis.

The following sections discuss only the tabs and fields that you, the administrator, should complete. Other fields, which control user preferences, are not discussed.

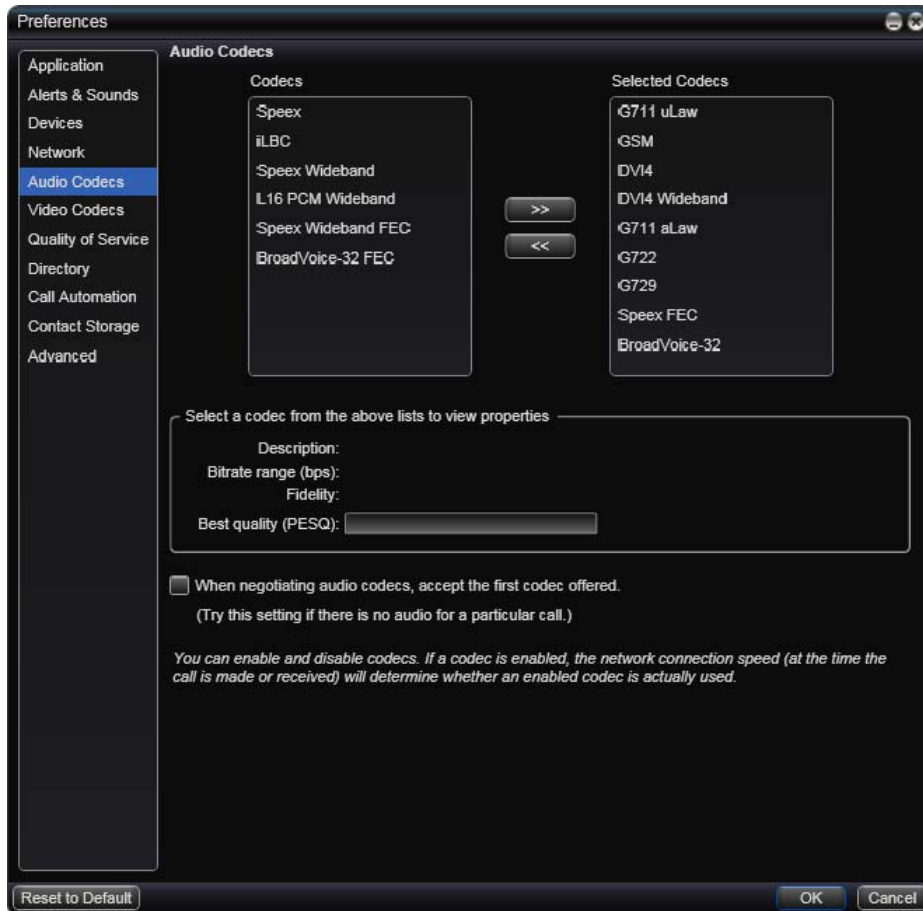
4.1 Preferences – Network



On this panel, complete the network connection speed section and Preserve bandwidth field to suit your environment. Typically, you will leave the Video Image Size (Bria for Windows only) for the user to complete.

Field	Description
Network Connection Speed	<p>Select the type of network connection for your computer.</p> <p>The sliders move to show the bitrate that will be used for sending and receiving. These rates are typical rates for the selected configuration.</p> <p>If you know that your computer and network can handle a faster sending speed, click Custom and move the slider.</p> <p>It is recommended that you not change the receiving speed.</p> <p>You will know that you have set the sending speed too high if:</p> <ul style="list-style-type: none"> • The remote video shows black areas or is slow or jerky. • The remote audio is garbled. <p>You will know that you have set the sending speed too low if the audio is good but the video is of poor quality (grainy).</p>
Preserve bandwidth	<p>When this feature is on, Bria stops sending audio when you are not talking.</p> <p>When this feature is off, Bria always sends audio, which uses more bandwidth but may result in better call quality.</p> <p>Typically off. However, if you are using a slow (dial-up or ISDN) connection, you may want to turn it on.</p>

4.2 Preferences – Audio Codecs



This panel shows all the codecs that are included in the retail version of Bria. You can enable or disable codecs as desired.

With only one codec enabled, all calls made will use that codec. With more than one codec enabled, Bria automatically chooses the best codec based on the other party's capability, the available bandwidth, and network conditions.

You cannot change the properties of any codecs.

About Codecs

Audio codecs describe the format by which audio streams are compressed for transmission over networks. Codecs can be categorized as either narrowband or wideband:

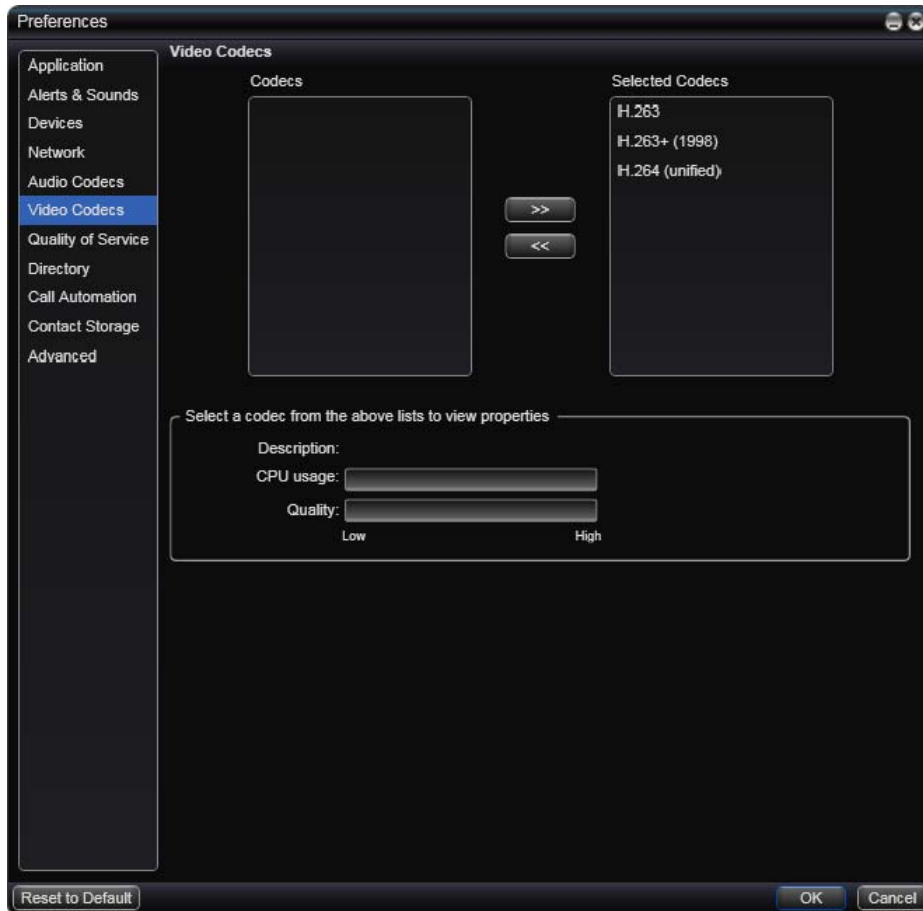
- Narrowband codecs work with low bandwidth such as a dialup internet connection. These codecs have a sampling rate of 8 kHz.
- Wideband codecs work with high bandwidths and result in better audio quality. However, they do not work with PSTN. These codecs have a sampling rate of 16 kHz.

Supported Codecs

Bria supports a wide range of codecs. See the table.

Codec	Narrowband	Wideband	Royalty-bearing	Included in Retail Bria for Windows	Included in Retail Bria for Mac
AMR Wideband (G.722.2)		✓	✓		
Broadvoice-32		✓		✓	
Broadvoice-32 FEC		✓		✓	
DVI4	✓			✓	✓
DVI4 Wideband		✓		✓	✓
EVRC	✓		✓		
G.711aLaw *	✓			✓	✓
G.711uLaw *	✓			✓	✓
G.722		✓		✓	✓
G.723	✓		✓		
G.726	✓		✓		
G.729 *	✓		✓	✓	✓
GSM	✓			✓	✓
iLBC	✓			✓	✓
L16 PCM Wideband	✓			✓	✓
Speex	✓			✓	✓
Speex FEC	✓			✓	✓
Speex Wideband		✓		✓	✓
Speex Wideband FEC		✓		✓	✓
* Generally, at least one of these codecs must be enabled in order to place a PSTN (land line) call.					

4.3 Preferences – Video Codecs



Video codecs describe the format by which video streams are compressed for transmission over networks. Some codecs require less bandwidth than others, but may result in lower video quality.

You can enable or disable codecs as desired.

With only one codec enabled, all calls made will use that particular compression format. With more than one codec enabled, Bria automatically chooses the best codec based on the other party's capability, the available bandwidth, and network conditions.

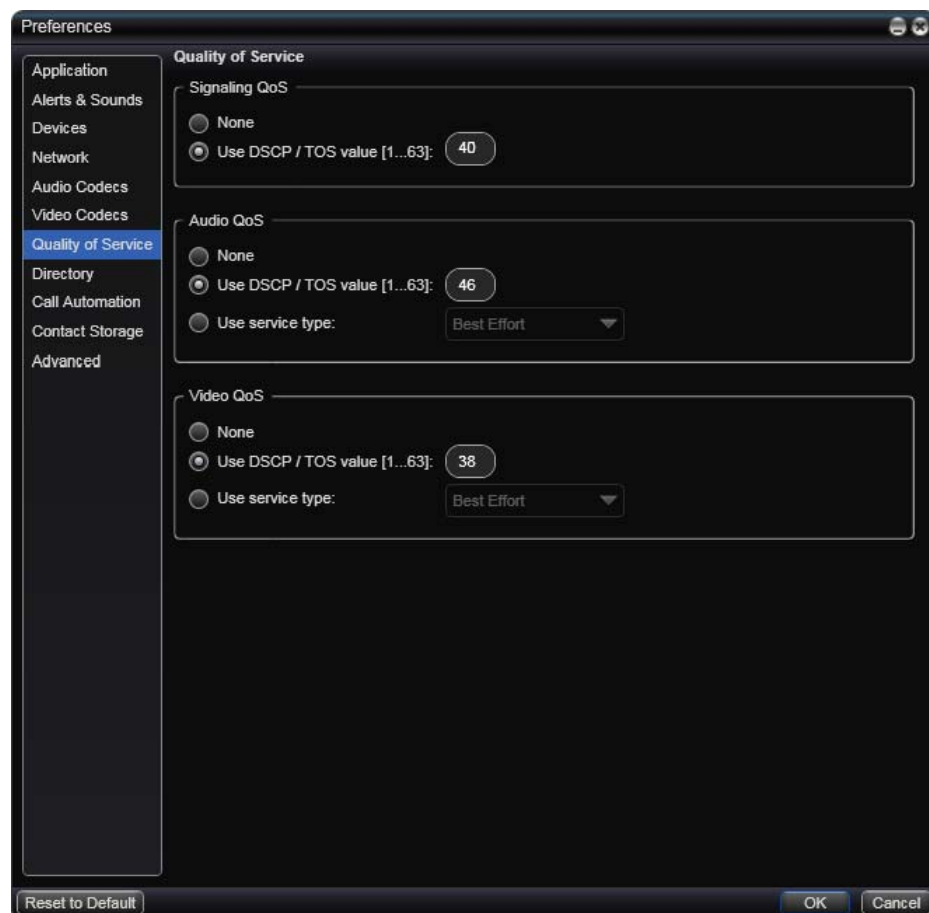
You cannot change the properties of any codecs.

Supported Codecs

Codec	Royalty-bearing	Included in Retail Bria for Windows	Included in Retail Bria for Mac
H.263		✓	✓
H.263+ 1998		✓	✓
H.264 (unified)	✓	✓	

4.4 Preferences – Quality of Service

Quality of Service is supported only in Bria for Windows.



The Quality of Service panel lets you request a specific transport service for audio, video and signaling traffic. This service is through DSCP (also known as ToS). In a network that has the default configuration, the recommended value for audio is 46, because “46” is the standard marking for audio.

The Quality of Service panel lets you request a specific transport service for audio, video and signaling traffic.

There are two types of services. The service to use depends on what your VoIP service provider supports:

- GQoS, which is available for audio and video.
- DSCP (also known as ToS), which is available for audio, video and signaling.

In a network that has the default configuration, the recommended value for audio is 46, because “46” is the standard marking for audio.

Bria supports 802.1p QoS packet tagging. If you set up for QoS, Bria will include the specified information in the packets that it sends to the network provider. Whether the packet is delivered with the specified service depends on whether your broadband router and the network provider between you and the other party supports multiple transport services. In other words, whether each network provider reads the QoS information and prioritizes packet delivery based on the requested service.

4.5 Preferences – Directory

Directories are supported only in Bria for Windows.

If your organization has an LDAP or Active Directory server, you can configure Bria to connect to that server. The entries from the directory will appear in the Directory tab (alongside the Contacts and History tabs).

In Directory Type, select the desired option. Other fields appears; see below.

LDAP

The screenshot shows the 'Preferences' dialog box with the 'Directory' tab selected. The 'Directory Type' dropdown is set to 'LDAP'. Under 'Server Settings', the 'Authentication method' is 'Anonymous'. The 'Search Options' section shows a query timeout of 2000 seconds and 500 maximum search results. The 'Attribute Mapping' section shows various fields mapped to LDAP attributes, such as 'Display name' to 'cn' and 'E-mail' to 'mail'.

LDAP Settings	
Field	Description
Server Settings	
Server	The hostname or IP address of the directory server. For example, ldap.example.com.
Authentication method	Anonymous or Simple. Choose Simple if your LDAP server requires a valid login in order to allow binding and searching the directory.
Username	The full DN of the username that will be used for authenticating to the directory. For example: CN=ldapauthuser,OU=users,OU=company,DC=example,DC=com Leave blank if Authentication is set to Anonymous.
Credential	The password for the username. Leave blank if Authentication is Anonymous.

LDAP Settings	
Field	Description
Root DN	The “base” DN of the server where searches will begin. The entire subtree under the Root DN will be used for searching. For example: OU=users, OU=company, DC=example,DC=com
Search expression	The query used to filter valid users in the directory. This query can be used to retrieve only members of a group, for example. For example: (memberOf=CN=Corporate Users, Ou=Groups, OU=company, DC=example,DC=com)
Search Options	
<ul style="list-style-type: none"> To set up for manual search (recommended for directories with more than 500 entries), check On demand search. The Query polltime is ignored. The Directory tab on the softphone will have a Search button that users will click in order to search. To set up for automatic search (so that the directory is continually being queried for entries), do not check On demand search. Change the Query polltime if required. The Directory tab on the softphone will <i>not</i> have a Search button. 	
Query timeout	A search made by Bria will stop if it has not succeeded by this timeout.
Query polltime	The frequency of polling, if automatic search is configured.
Max results	Optional. 0 means no maximum number of records.
On demand search	To set up so that the directory is queried only when the user clicks the Search button on the Directory tab, check this box. (The value in Query polltime will be ignored).
Attribute Mapping	
All fields	In this section, map the names of the attributes that are in your directory to the corresponding fields in Bria. The field label is the Bria field. The field box specifies the attribute name. Be careful with this mapping because when users create a contact from a directory entry, the phone number is mapped into the different contact methods in the contact. For example, the phone number in “Softphone” will appear as a softphone number contact method in the contact, and Bria will allow/disallow certain actions (for example sending an IM) to that phone number.

Active Directory

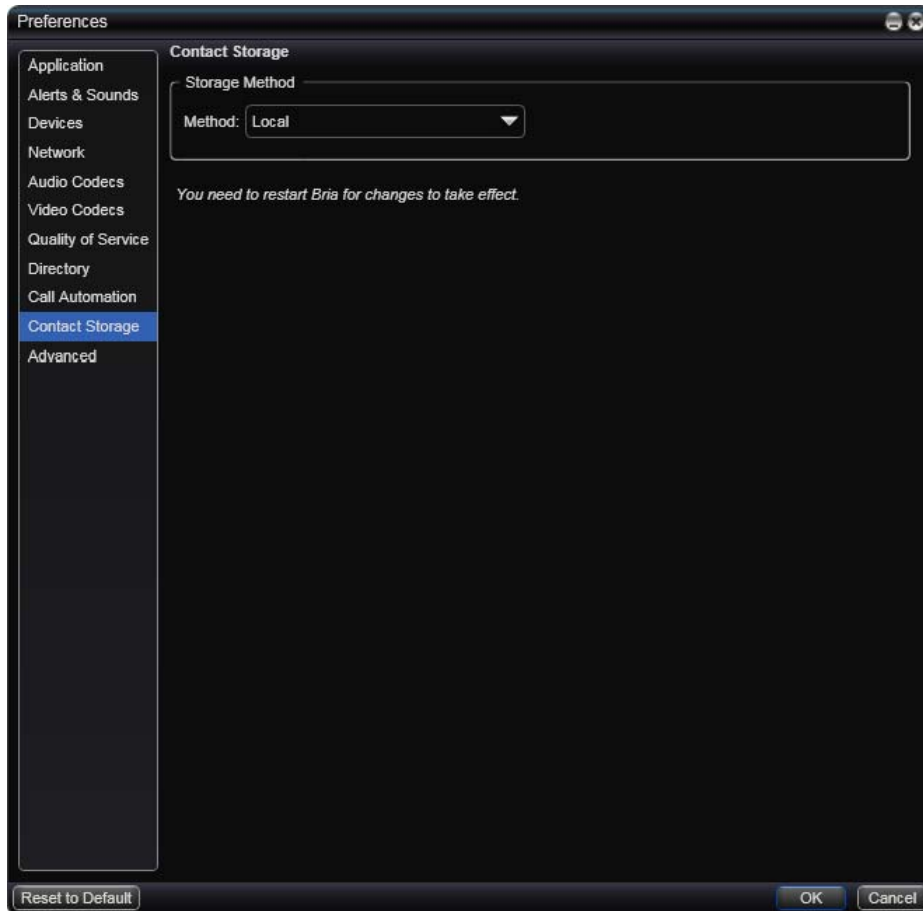
The screenshot shows the 'Preferences' window for Bria 3.0, specifically the 'Directory' tab. The 'Directory Type' is set to 'ADSI'. The 'Server Settings' section includes a 'Subtree DN' field. The 'Search Options' section includes 'Query timeout' (2000 seconds), 'Maximum search results' (500), 'Query polltime' (600 seconds), and an 'On demand search' checkbox. The 'Attribute Mapping' section includes fields for 'Display name' (cn), 'Work number' (workNumber), 'First name' (givenName), 'Mobile number' (mobile), 'Last name' (sn), 'Softphone' (sipUri), 'Job title', 'Office phone' (telephoneNumber), 'Department', 'E-mail' (mail), 'Location', and 'Jabber' (jid). The window also has 'Reset to Default', 'OK', and 'Cancel' buttons.

ADSI (Active Directory) Settings

Field	Description
Server Settings	
Subtree DN	The Active Directory subdirectory to restrict the search to.
Search Options	
<ul style="list-style-type: none"> To set up for manual search (recommended for directories with more than 500 entries), check On demand search. The Query polltime is ignored. The Directory tab on the softphone will have a Search button that users will click in order to search. To set up for automatic search (so that the directory is continually being queried for entries), do not check On demand search. Change the Query polltime if required. The Directory tab on the softphone will <i>not</i> have a Search button. 	
Query timeout	A search made by Bria will stop if it has not succeeded by this timeout.
Query polltime	The frequency of polling, if automatic search is configured.
Max results	Optional. 0 means no maximum number of records.
On demand search	To set up so that the directory is queried only when the user clicks the Search button on the Directory tab, check this box. (The value in Query polltime will be ignored).

ADSI (Active Directory) Settings	
Field	Description
Attribute Mapping	
All fields	<p>In this section, map the names of the attributes that are in your directory to the corresponding fields in Bria. The field label is the Bria field. The field box specifies the attribute name.</p> <p>Be careful with this mapping because when users create a contact from a directory entry, the phone number is mapped into the different contact methods in the contact. For example, the phone number in “Softphone” will appear as a softphone number contact method in the contact, and Bria will allow/disallow certain actions (for example sending an IM) to that phone number.</p>

4.6 Preferences – Contact Storage



These settings let you set up a remote storage system for your contact list. The contact list holds general information for contacts and is automatically loaded at startup, even if no accounts are enabled.

These settings let you set up a remote storage system for your contact list via WebDAV, XCAP or the Outlook address book (Bria *for Windows*) or Mac Address Book (Bria *for Mac*).

- If you set storage to Local, the contact list is stored only on the user's computer.
- If you set storage to WebDAV or XCAP, the contact list is stored remotely via the specified method and is also stored locally, on the user's computer.
- If you set storage to the Outlook or Mac Address Book, the contact list is not stored locally. Instead, users are actually using their Outlook or Mac address book from within Bria. When Bria starts, contacts are fetched from the Outlook or Mac address book. When the user adds or modifies a contact in Bria, the contact is actually saved in the address book.

Users who choose Outlook must provide connection information on this panel. For Mac users, no further information is required.

Note that the storage that is configured here is for the contact list (which contains SIP addresses and other addresses), while the storage that is configured on each SIP account (page 26) is for the buddy list (which contains only online status information and therefore cannot be stored in Outlook or the Mac address book).

The contact list is automatically loaded at startup, and is loaded even if no accounts are enabled.

Table 10: SIP Account Properties – Storage

Field	Description
Storage method	The storage method to be used for the Contact list file. The file can be stored locally or both locally and on a remote computer.
WebDAV Settings	
Username and password	The user name and password to log into the storage server.
Root URL	URL of an appropriate root folder on the remote server. The factory setting is https://webdav.\$domain\$/webdav/\$username\$/ /
WebDAV poll time	Enabled only for WebDAV. The time that elapses between polling for new contact data from the remote server. The factory setting is 600.
XCAP Settings	
Username and password	The user name and password to log into the storage server.
Root URL	URL of an appropriate root folder on the remote server. The factory setting is https://webdav.\$domain\$/webdav/\$username\$/ /
WebDAV poll time	Enabled only for WebDAV. The time that elapses between polling for new contact data from the remote server. The factory setting is 600.
Outlook Settings	
Outlook profile	The profile to use
Profile password	The password for the selected profile
Field to use	The field where softphone addresses are stored in Outlook contacts. When a Bria contact is created from the Outlook contact, the Softphone field in the Bria contact will be populated with the data from this Outlook field. Bria will assume that this data is a SIP address.

4.7 Preferences – Advanced

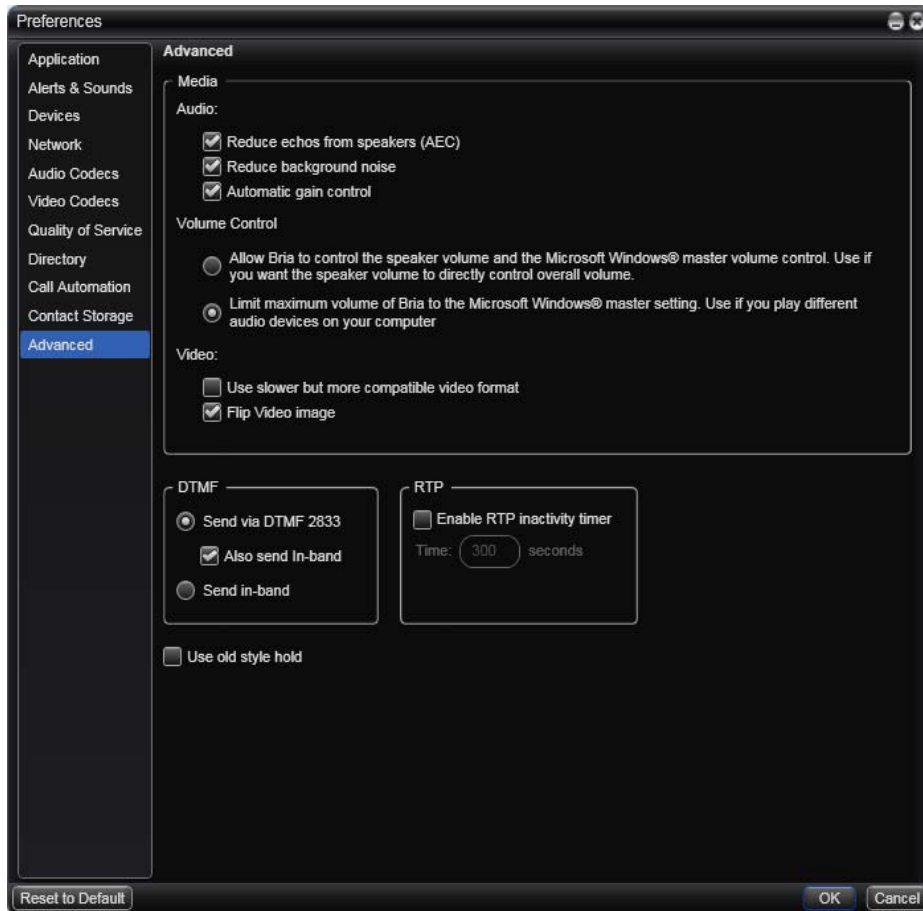


Table 11: Preferences – Advanced

Field	Description
Media – Audio	
Reduce device echo	Turning this feature on improves sound quality. This feature is typically on.
Reduce background noise	Automatically attempts to remove background noise. Typically on for the speakerphone.
Automatic gain control	This feature is typically on.
Media – Volume Control	Choose the setting that suits.
Media – Video	
Use slower but more compatible video format	Turning this field on may improve performance when running Bria on older hardware.

Table 11: Preferences – Advanced

Field	Description
DTMF	<p>Choose the method for sending DTMF that is supported by your VoIP service provider.</p> <p>In-band means that Bria will encode the DTMF signals in the audio stream as regular sound. Typically, DTMF is not sent in-band; in-band is only used in specific situations.</p> <p>One scenario in which it might be advisable to send in-band is if you own your gateways and:</p> <ul style="list-style-type: none"> • One or more of these gateways does not support 2833 or does not handle it well, and • Your gateway is using codes that reproduce DTMF tones well. <p>In this case, sending in-band will ensure that DTMF tones get through (because the DTMF tones will bypass the gateway) and that they reproduce accurately at the receiving end.</p> <p>Another scenario is:</p> <ul style="list-style-type: none"> • One or more of these gateways does not support 2833 or does not handle it well. • Your gateway is using codecs that do not reproduce DTMF tones well (because they are designed to handle human voice rather than artificial sounds). <p>In this scenario, using in-band will not help ensure DTMF ones get through. There is in fact no solution in this scenario.</p>
RTP	<p>The RTP inactivity timers control how phone calls are disconnected when RTP and/or RTCP are not detected. You can choose to enable or disable the timers. The timers are enabled by default.</p> <p>If you leave the timers enabled, you can set the value of the RTCP timer. The RTP timer is fixed at 30 seconds.</p> <ul style="list-style-type: none"> • Bria ends a call if it has never detected RTCP in the call and no RTP is received for the length of the RTP timer (30 seconds). • Bria ends a call if it has detected RTCP on this call but then it does not receive an RTCP for the length of the RTCP timer (default value: 300 seconds). You can change the length of this timer.
Use old style hold	<p>Choose the appropriate value:</p> <ul style="list-style-type: none"> • Unchecked: Indicate the hold request in the SDP m-line (as per the latest standard) • Checked: Indicate the hold request in the SDP m-line and in the SDP c-line.

A Configuration Form

This form provides space for configuration information for one SIP account. Fields that are typically completed by the user to suit their preference are not included.

SIP Accounts

Dialog	Field	Account 1	Account 2
Accounts List	IM/Presence account		
Account > Account Tab	Account Name		
	User ID		
	Domain		
	Password		
	Display name		
	Authorization name		
	Register with domain		
	Send outbound via		
	Dial plan		
Account > Voicemail Tab	Check for Voicemail		
	Number to dial for checking voicemail		
	Number for sending calls to voicemail		
	Send calls to voicemail if unanswered		
	seconds		
	Always forward to		
	When on the phone, forward to		
Account > Topology Tab	Firewall traversal method		
	Server address		
	User name		
	Password		
	Range of ports (checkbox)		
	Range of ports (from, to)		
Account > Presence Tab	Mode		
	Poll time		
	Refresh interval		
	Workgroup address		
	Allow others to monitor		

Dialog	Field	Account 1	Account 2
Account > Storage Tab (for buddies)	Storage method		
	Credentials (radio button)		
	Username		
	Password		
	Root URL		
Account > Security Tab	WebDAV poll time		
	Signaling Transport		
Account > Advanced Tab	Media Encryption over TLS		
	Reregister every		
	Min. time		
	Max. time		
	Enable session timers		
	Session timer preference		
	Default session time		
	Send SIP keep-alives		
	Use rport		
Send outgoing request directly to target			
Preferences > Network	Network connection speed		
Preferences > Audio Codecs	Enabled codecs		
Preferences > Video Codecs	Enabled codecs		
Preferences > Quality of Service (Bria for Windows)	Signaling Qos		
	Audio Qos		
	Video Qos		

Dialog	Field	Account 1	Account 2
Preferences > Directory (Bria for Windows)	Directory type		
	LDAP		
	Server		
	Authentication method		
	Username		
	Credential		
	Root DN		
	ADSI		
	Subtree DN		
	Search (Both Types)		
	Query timeout		
	Query polltime		
	Maximum records		
	On demand (checkbox)		
	Attribute Mapping (Both Types)		
	Display name		
	First name		
	Last name		
	Job title		
	Department		
	Location		
	Work number		
	Mobile number		
	Softphone		
	Office phone		
	E-mail		
	Jabber		

Dialog	Field	Account 1	Account 2
Preferences > Contact Storage	Storage method		
	WebDAV		
	Username		
	Password		
	Root URL		
	WebDAV Poll time		
	XCAP		
	Username		
	Password		
	Root URL		
	Outlook Personal Contacts		
	Profile		
	Password		
	Field to use		
Preferences > Advanced	DTMF method		
	RTP - enable inactivity timer		
	RTP - time		
	Use old style hold (checkbox)		

XMPP Account

Field	Account 1
Account Name	
User ID	
Domain	
Password	
Display name	
Port selection	
Connect port	
Outbound proxy	
Resource	
Priority	

B Dial Plan

When a call attempt is made, the call input (what you type, select or drag onto the Call display) is processed to select the SIP account to use and to modify the input if that is required to ensure that the call gets placed successfully. Each dial plan contains one or more patterns; if the input matches a particular pattern, then the input is modified according to the rules for that pattern, and then the call is placed using the account that the dial plan belongs to.

Determining whether You Need a Dial Plan

If you are deploying Bria in an enterprise, you will typically need to modify the default dial plan.

1. Check with your VoIP service provider for any dial plan information. If your service provider has a dial plan, use it. If you have several SIP accounts, each with a different service provider, obtain the dial plan for each account. Enter the dial plan in the account information, page 10.
2. If no ready-made dial plan is available for an account, enable only that account and make different types of phone calls:
 - Calls to another SIP address (rather than to the PSTN).
 - Local calls to the PSTN (if your VoIP service provider supports these calls)
 - Long-distance calls to the PSTN (if your VoIP service provider supports these calls).

Try placing calls by typing in the entry field and also by selecting a contact.

3. If all types of calls succeed, the default dial plan does not need to be modified for that account.

If at least one type of call fails, you must modify the default dial plan for that account.

The Default Dial Plan

The default dial plan is:

```
#n\a\a.T;match=1;prestrip=2;
```

where #n is the account prefix (#1 for the first account in the list (proxy0), #2 for the second account (proxy1), and so on).

If the input is the account prefix and the number (for example, #16045551212), then the Account for this dial plan is selected. The account prefix is stripped from the number before the call is placed.

If all Accounts use this dial plan, then the behavior is as follows: if the input includes the account, then that account is used. In other words, you can force selection of a specific account by including the account prefix. If the input does not include #n, then the default account is used.

B.1 How Dial Plans Are Used

When you make a call, Bria takes the phone number (the input) and performs the following:

Cleanup

Input is cleaned up by removing spaces, dashes, open brackets, and close brackets. Cleanup allows Bria to support calls placed using contacts from a contact list, including Microsoft® Outlook®.

Matching

The input is compared to the patterns defined by the dial plan for each enabled account. Each account has one dial plan, and each dial plan has one or more patterns.

- When a match is found between the input and the pattern, the account that this pattern belongs to is selected and the transformation for this pattern is performed.
- If no match is found, the first enabled account is selected and no transformation is performed.

For details on matching see “How the Input Is Processed” on page 54.

Transformation

The selected transformation is performed.

Place Call

Then the call is placed using the transformed input.

B.2 Dial Plan Syntax

In Bria, the dial plan establishes the expected patterns of characters for a telephone number or softphone address, and allows for modification (transformation) of input based on the match to a pattern. The dial plan has the following syntax:

```
pattern[ |pattern];match=1;<transformation>=<value>;[match=2;  
<transformation>=<value>;]
```

Where:

- Items in [] are optional.
- Pattern: the pattern that will be matched. One or more patterns. Each pattern is separated by a | pipe. The pipe is optional after the last pattern. Each pattern is implicitly numbered, starting from 1.
- Match; Transformation: A pair that identifies the pattern number to compare with the input, and the transformation to perform on the input when a match is obtained. The transformation is optional (meaning that if there is no transformation for a pattern, then the input that matches this pattern is not transformed). One or more pairs.

“match=” is a literal. “n” identifies the pattern. “transformation=” is replaced by a keyword, see below.
“value” is replaced by a value.

Spaces are allowed only in the <value> items.

Remember that dial plans are applied after the input has been cleaned up (page 52)!

Example

```
\a\a.T|xxxxxxxxxx;match=1;prestrip=2;match=2;pre=8;
```

where:

- `\a\a.T` is the first pattern.
- `xxxxxxxxxx;` is the second pattern.
- `match=1;prestrip=2;` is the first match-transformation pair.
- `match=2;pre=8;` is the second match-transformation pair.

Pattern

Valid Content

The content for a pattern follows the digit map rules of RFC 2705, supplemented by the rules for regular expressions. Where there is an overlap between the digit map and regular expression rules, the digit map rules apply. For this reason, there are some special cases, included in the table below.

The following table describes the most common elements. As mentioned, all regular expression elements are supported.

Element	Origin	Description
0 1 2 3 4 5 6 7 8 9	Literals	Literal digits, used as is.
# * a to z	Literals	Literal characters, used as is. Special cases: <ul style="list-style-type: none"> • The literal x character is represented by <code>\x</code>. • The literal t character is represented by <code>\t</code>.
x	Digit map rules	Wildcard for any single digit, 0 to 9.
\a	Regular expression rules	Wildcard for any single alphanumeric character.
[digit-digit]	Regular expression rules	A digit within the specified range.
[character-character]	Regular expression rules	A character within the specified range.
[digit1, digit2, digit3]	Regular expression rules	One of the characters in the collection.
.	Digit map rules	Repeat the last element 0 or more times. For example, <code>xxxx.</code> means repeat the last x 0 or more times, which means this pattern matches three or more digits (not four or more digits)! Use of this element results in a pattern with “minimum requirements”.
T	Digit map rules	<p>A timeout period will take place before automatic dialing starts.</p> <p>The T timer forces Bria to wait after a match is made. This timer should always be included in these situations:</p> <ul style="list-style-type: none"> • Any pattern that uses the . (dot). For example, if the pattern is <code>xxxx.</code> then adding a timer lets you type three or more digits. If there is no timer, then as soon as you type three digits, Bria makes the match as soon as you type three digits. • Any dial plan that has two patterns that are similar in elements but different in length. For example, if one pattern is <code>xxx</code> and the other pattern is <code>xxxxxxx</code>, then adding the timer lets you continue typing past three digits, in order to get a match on the second pattern. <p>In this situation, the T timer should be included in the shorter pattern.</p>

Timers

There are two timers, the T timer and the long timer.

These timers are used in input comparison, as described in “How the Input Is Processed” on page 54.

Transformation Keywords

Keyword	Description
prestrip	Strip the first n characters from the input before placing the call.
poststrip	Remove n number of characters from the end of the input before placing the call.
pre	Add the specified account prefix to the input before placing the call.
post	Attach the specified postfix to the input before placing the call.
replace	Replaces the input with the specified string before placing the call.

Order of Transformations

These transformations are always performed in the following order (the order in which the transformations are entered in the dial plan is not significant):

prestrip > poststrip > pre > post > replace

B.3 How the Input Is Processed

Comparing Input to the Dial Plan Patterns

The input is compared to each dial plan in turn, starting with the first listed account. The process is slightly different depending on how the call is placed:

- If the input was dragged or selected, then the entire input is compared to each dial plan. If a complete match is found, then that account is selected and the associated transformation is performed. If no match is found, the default account is selected and no transformation is performed.
- If you are typing the input, the digits are compared one by one as they are entered. The comparison will result in one of the types of matches described in the table below.

It is possible for the same input to get matched to different dial plans depending on whether the input is entered on the fly or dragged. It is important to keep this in mind when designing dial plan patterns.

Results of the Comparison

Bria finds a match according to the following rules. These rules work on three elements:

- The patterns specified in the dial plan.
- The T timer, if it is included in the pattern. This timer is a short (critical) timer. T timer is 4 seconds.
- The long timer, which is always effective (it does not have to be included in the pattern). The long timer is 20 seconds.

Type of Match	Conditions	Result if You Press Enter or Dial	Result if You Stop Typing
Partial match	The characters typed so far follow the pattern but there are not yet enough characters for a pending or complete match.	The default account is selected. No transformation is performed.	If you stop typing for the long timer length (20 seconds), then the default account is selected. No transformation is performed on the characters typed so far.
Pending match	<ul style="list-style-type: none"> • The pattern has no . (dot) but does have the T timer. There is a perfect match. • The pattern has a . (dot) and the T timer. The minimum requirements are met. 	This pattern's account is selected and the transformation is performed.	If the T timer expires, this pattern's account is selected and the transformation is performed.
Complete match	<ul style="list-style-type: none"> • The pattern has no . (dot) and no T timer. There is a perfect match. • The pattern has a . (dot) but does not have the T timer. The minimum requirements are met. 	This pattern's account is selected and the associated transformation is performed.	This pattern's account is selected and the associated transformation is performed.
No match	The characters typed do not match the patterns for any dial plan.	The default account is selected and no transformation is performed.	Nothing happens even after the T timer and long timer have expired.

B.4 Examples

Example 1

```
\a\a.T|xxxxxxx.T;match=2;pre="9"
```

This simple example shows how to differentiate between a PSTN number and a softphone address, and how to add a “9” dialing prefix only to the PSTN number.

Example 2

```
3xxT|1xxxxxxxxxx|[2-9]xxxxxxxxx|+x.T;match=2;pre="9";
match=3;pre="91";match=4;prestrip=1;pre="9011"
```

3xxT	The first pattern is any three-digit number beginning with 3. No transformation. The assumption is that this is an internal extension. The timer forces Bria to wait after detecting a three-digit number beginning with 3, in case you are actually dialing a local call starting with 3.
1xxxxxxxxxx	The second pattern is any eleven-digit number beginning with 1. Prefix with 9 and dial as is. The assumption is that this is a long-distance PSTN call within North America (within North America, all long-distance calls start with 1).
[2-9]xxxxxxxxx	The third pattern is any ten-digit number beginning with a number other than 1. The assumption is that this is a local PSTN call within a ten-digit dialing zone.
+x.T;	The fourth pattern is a number of any length that begins with +, to indicate an international PSTN call from North America. Delete the +, prefix with 9011 (011 is the number to access an international line from North America).
match=2;pre="9";	For the second pattern, prefix 9 to access an outside line.
match=3;pre="91";	For the third pattern, prefix 9 and 1 to access an outside line and enter the long-distance code.
match=4;prestrip=1;pre="9011"	For the fourth pattern, remove the + and prefix 9011 to access an outside line and enter the international code.

Example 3

```
#1xxxxxxxT|#19xxxxxxx|xxxxxxxT|9xxxxxxx|;match=1;prestrip=2;pre=9;match=2;
prestrip=2;match=3;pre=9;
```

#1xxxxxxxT	The pattern is an account prefix followed by seven digits. The timer forces Bria to wait to allow a match to the second pattern. The #1 is stripped off and 9 is prepended to access an outside line.
#19xxxxxxx	The pattern is an account prefix followed by a 9 and seven digits. The #1 is stripped off.
xxxxxxxT	The pattern is seven digits. The timer forces Bria to wait to allow matching to the fourth pattern. 9 is prepended to access an outside line.
9xxxxxxx	The pattern is a 9 and seven digits. The input is not transformed.

This example assumes that the dial plan belongs to the first account.

The dial plan is slightly trivial, because it does not cover all the situations that a dial plan should be designed for (local calls, long-distance calls, international calls, and so on for the locale).

However, the example does illustrate two ideas:

- Handling of the account prefix (#1), if you are upgrading from eyeBeam and are accustomed to entering the account number.

Use of # to identify the account is now deprecated. The dial plan should be capable of determining the account to use for this number. However, since users may still be in the habit of entering the account prefix, you may want to include this pattern to handle such a scenario.

- Distinguishing between a local seven-digit call in which 9 is not dialed (to access an outside line) and one in which 9 is dialed to access an outside line.

C Contact List Headings

Following is a list of all the headings that are used in the Bria contact list. This list can be useful when formatting a contact list in order to import it into Bria *for Windows*. For details, see “Setting up Contacts” on page 13.

uri	business_number	sms_address5
display-name	business_number2	ms_address2
entry_id	business_number3	sms_address3
given_name	business_number4	sms_address4
surname	business_number5	sms_address5
email_address	business_number6	sms_address6
email_address2	mobile_number	custom_fields
email_address3	mobile_number2	custom_fields2
email_address4	mobile_number3	custom_fields3
email_address5	mobile_number4	custom_fields4
email_address6	mobile_number5	pres_subscription
sip_address	mobile_number6	
sip_address2	fax_number	
sip_address3	fax_number2	
sip_address4	fax_number3	
sip_address5	fax_number4	
sip_address6	fax_number5	
home_number	fax_number6	
home_number2	groups	
home_number3	comment	
home_number4	postal_address	
home_number5	default_address	
home_number6	default_address_type	

D Glossary

AEC	Acoustic echo cancellation. Processing of the audio or video signal to reduce the echo effect that can arise with a speakerphone or that can arise if the sound from the speakerphone or headphone leaks into the microphone.
AGC	Automatic gain control. Processing of the audio or video signal to adjust the microphone volume level so that the other party does not hear the distortion that might be caused by too high a microphone input or too low volume (due to too low input level).
AVI	Audio Video Interleave. A multimedia container format. AVI files contain both audio and video data in a standard container that allows simultaneous playback.
Broadband	Broad or wide bandwidth. In data transmission, the wider the band, the more data it is possible to transmit in a given time span. A cable, DSL and ADSL connection to the network provide broadband for data transmission. A dialup or ISDN connection typically provide a narrow bandwidth for data transmission.
Codec	The format by which audio or video streams are compressed for transmission over networks.
Dial plan	The rules that Bria follows in order to interpret the softphone address or phone number that the user has entered and to modify the number or address, as required, to ensure that the call will be placed successfully.
DTMF	Dual-tone multi frequency. DTMF is the system that is used in interactive voice-response menu systems such as the menu system for accessing voicemail messages. The DTMF system allows the user to interact with the menu by pressing keys on a dialpad or keyboard.
IM	Instant Messaging. A technology that lets users send text message and files for near instantaneous delivery and display on each others' computers.
IP	Internet Protocol. A data-oriented protocol used for communicating data across a network. IP is the most common protocol used on the internet.
IP address	A unique number that devices use in order to identify and communicate with each other on a computer network using the IP standard.
Media	In a VoIP phone call, the audio and video portion of the information in a call. Compare to "Signaling".
MOV	The Mac QuickTime multimedia container format. MOV files contain both audio and video data in a standard container that allows simultaneous playback.
MWI	Message Waiting Indicator. An indicator that there is a voicemail message for the owner of an account.
Narrowband	In data transmission, the wider the band, the more data it is possible to transmit in a given time span. A cable, DSL and ADSL connection to the network provide broadband for data transmission. A dialup or ISDN connection typically provide a narrow bandwidth for data transmission.
Presence	An instant messaging feature that allows users to share information about their online status.
Proxy	See SIP account.
PSTN	Public Switch Telephone Network. The traditional land-line phone network.
RFC	Request for Comment. A document that describes an aspect of an internet technology. An RFC may be a proposed, draft or full internet standard.
RTP	Real-time Transport Protocol. A protocol for delivering the media portion of a data transmission over an IP network. SRTP is another media protocol.
Signaling	In a VoIP phone call, the information in a call that deals with establishing and

	controlling the connection, and managing the network. The non-signaling portion of the call is the Media.
SIMPLE protocol	Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions. The instant messaging (IM) protocol followed by Bria. It encapsulate the rules for exchanging instant messages.
SIP	Session Initiation Protocol. The signaling protocol followed by Bria for handling phone calls.
SIP account	An account that provides the user the ability to make VoIP phone calls. The account encapsulates the rules and functions the user can access.
softphone address	The address used to connect to a SIP endpoint. In other words, the “phone number” used in a VoIP phone call. For example, sip:joseph@domainA.com.
SRTP	Secure Real-time Transport Protocol. A protocol for delivering the media portion of a data transmission over an IP network. SRTP is a secure protocol, which means that the media is encrypted. RTP is another media protocol.
TCP	Transmission Control Protocol. A transport protocol for delivering data over an IP network. Other transport protocols are TLS and UDP.
TLS	Transport Layer Security. A transport protocol for delivering data over an IP network. TLS is a secure transport protocol, which means that all the data being transmitted (signaling and media) is encrypted. Other transport protocols are TCP and UDP.
UDP	User Datagram Protocol. A transport protocol for delivering data over an IP network. Other transport protocols are TCP and TLS.
URI	Uniform Resource Identifier. A name or address that identifies a location on the world wide web. A softphone address is a type of URI.
URL	Uniform Resource Locator. A URI that both identifies a name or address and indicates how to locate it.
USB device	Universal Serial Bus device. A device that follows a specific communications standard. A headset may be a “USB type” of headset.
VAD	Voice Activity Detection. A technology that detects if audio is a human voice or background noise. Bria includes a feature (Preserve bandwidth on the Network panel of the Preferences window) that controls whether audio is transmitted when VAD determines that none is actually speaking.
vCard	An electronic business card that is often attached to an email. It often appears as a “signature” block that identifies the person, their title, and their business.
VoIP	Voice over Internet Protocol. A variation of IP used for sending voice data over the internet, in other words, used for making phone calls over the internet.
VoIP service provider	A business that provides a VoIP service, allowing a user to connect to the internet in order to make VoIP phone calls using Bria. The VoIP service provider sets up a SIP account for the user.
WAV	Or WAVE. A file format standard for storing audio on PCs.