



# Configuring Bria Professional *Retail Edition*

CounterPath Corporation  
Suite 300, One Bentall Centre  
505 Burrard Street, Box 95  
Vancouver, BC V7X 1M3  
Tel: 604.320.3344  
sales@counterpath.com www.counterpath.com

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# About this Manual

This manual is intended for:

- System administrators who are deploying Bria Professional in their enterprise by remotely configuring the client through remote provisioning. (For more information on the options for configuring, see the *Bria Professional Administrator Guide*).
- VoIP service providers who have purchased the retail version of Bria Professional and want to remotely configure Bria Professional for their customers.

It gives an overview of the types of features that can be configured, and provides context for all the settings that you can provision.

This manual is intended to be read in conjunction with:

- “Provisioning Bria *Retail Edition*”, which describes the mechanism for configuring the features.
- The Bria Professional Settings reference documentation (a Microsoft® Excel® document). The Bria Professional Settings reference documentation provides detailed information on settings that may only be mentioned by name in this configuration manual.

# 1 About Configuration

## Bria Professional Settings

Configuration of Bria Professional is achieved largely through assigning appropriate values to settings. Settings let you:

- Configure Bria Professional for the environment (network and so on) in which it will work.
- Configure Bria Professional for server-side functions you support, such as WebDAV storage.
- Configure how some Bria Professional features work, and configure whether a feature is enabled or disabled.
  - How features work: For example, entering the phone numbers to use for voicemail.
  - Enable or disable features: The features that can be set in this way are those that have already been included in your brand before compiling. You can disable features for specific installs. For example, you could enable QoS for some users and disable it for others.

## Using this Manual

In the following pages, the settings are broken down into topics. Topics are organized alphabetically. Within each topic, general information is provided on how the settings in the topic work.

You can read a topic, then consult the Bria Professional Settings Reference documentation (available separately) for detailed information on each individual setting. Within that reference documentation, you can sort the table by the Topic column in order to group related settings together.

When configuring, you should always look at the settings that appear in the topics “Feature Enabling”, to ensure that you configure in a consistent way. For example, if your deployment does not include XMPP accounts (as described in “Account Setup” on page 3), then you will not configure XMPP accounts. But you probably also want to make sure that XMPP menu items and so on do not appear on the GUI. There are settings in the “Feature Enabling” topic let you configure which features appear on the GUI.

# 2 Configuration Settings by Topic

## 2.1 Account Credentials

For information on these settings, see “Provisioning Bria *Retail Edition*”.

## 2.2 Account Setup

These settings define the user’s account or accounts. There is one section for each account: proxy0, proxy1, and so on.

Each account is either a SIP or an XMPP account, as specified by the proxies:proxyn:protocol setting. For each account type, a different subset of the proxies settings is applicable. For example, proxies:proxyn:register applies only to a SIP account. proxies:proxyn:xmpp\_priority applies only to an XMPP account. A few settings (such as proxies:proxyn:account\_name) apply to both types.

Make sure you configure the appropriate settings for each account type. If a setting in a given section (proxyn) does not apply to that account type, it is simply ignored.

## How Bria Professional Selects an Account

Read this section if you have set up more than one SIP account, in order to determine how Bria Professional selects the account to use for phone calls.

### Incoming Phone Calls

The SIP 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.

### Outgoing Phone Calls

The SIP account to use is selected as follows:

- If the user selects a specific account when placing the call, that account is used.
- If not, the phone number SIP address is run through the dial plan process; see page 6.
- If that does not select an account, the domain specified in the SIP address is used.
- If no domain is specified, the first enabled SIP account is used.

## 2.3 Audio Quality

These settings provide controls for audio quality.

## 2.4 Codec Usage

Your brand includes a specific set of built-in codecs. A codec may be royalty-bearing or non-royalty-bearing: see the Bria Professional Settings reference documentation for details. You can restrict codec usage by enabling or disabling a codec and by setting the license count (even on non-royalty-bearing codecs).

### Enabling Codecs

To enable a codec, set its `codecs:<codec name>:enabled` setting to true. When a codec is enabled, it appears in the enabled panel in the Preferences > Audio Codecs or Preferences > Video Codecs tab.

### License Count

Each codec may have a limit to the number of simultaneous calls that can be made using that codec – in other words a limit to simultaneous use of a codec.

The built-in limit for royalty-bearing codecs is 2. There is no limit for non-royalty-bearing codecs.

You can restrict the codecs available by assigning a value to the `codecs:<codec name>:license_count` setting. To disable a codec entirely, assign a value of 0. If you assign a value that is higher than the built-in value, the value you assign is ignored.

For a limited-use codec, once the usage limit has been reached, that codec will not be offered in negotiation until the “in-use” count drops, for example, when one phone call ends.

Note that whether a codec is enabled and within its license count are only two of the factors in whether it will be used for a call. The other factors are:

- Whether the codec is also enabled by the other party
- Whether it is in under the bandwidth limit of the local Bria Professional computer.
- Its ranking in the SDP list (see below).
- How the codec is chosen (see below).

### Presenting Local Media Capabilities in SDP

For the incoming audio or video (the audio or video the other party sends), Bria Professional advertises a list of codecs in the INVITE or 200 OK SDP.

- For the invite (the offer), this list is made up of the codecs that are enabled and that are under the bandwidth limit of the local Bria Professional computer.
- For the 200 OK (the counter-offer), this list is controlled by the `media:sdp:specify_all_codecs_in_offer_answer` setting. False (the default) means the list is made up of the codecs in the invite that are in the bandwidth limit of the local Bria Professional computer. True means the list is made up of all codecs that are enabled in the local Bria Professional computer (not just those in the invite) and that are in the bandwidth limit of the local Bria Professional computer.

The codecs are prioritized within that list, with preferred codecs appearing first, based on the number each codec is assigned in `codecs:<codec name>:priority`.



## Handling the Media Capabilities of the Other Party

For outgoing audio or video (the audio or video you send the other party), there are two ways to configure Bria Professional:

- Let Bria Professional determine the codecs to use for each call. This is the default.  
From the list of codecs that advertised by the other party in their SDP, that are enabled on the local Bria Professional computer and that are under the bandwidth limit of the local Bria Professional, Bria Professional chooses the codec with the best sound, based on the network conditions.

To set up for this scenario, set `system:network:honor_first_codec` to false.

- Use the other party's preferred codec.  
From the list of codecs that advertised by the other party in their SDP, that are enabled on the local Bria Professional computer and that are under the bandwidth limit of the local Bria Professional, Bria Professional chooses the codec that is listed first.

To set up for this scenario, set `system:network:honor_first_codec` to true.

## 2.5 Diagnostics

These settings are typically set by the user as directed by customer service. Typically, you will provision these settings with the default values.

## 2.6 Dial Plan

The dial plan defines patterns that a number dialed by the user are matched to. A dial plan is used for any combination of these reasons:

- To prevent unresolvable calls being placed. For example, to prevent using network bandwidth on a call that will certainly fail. You define patterns that you know will work, and only place a call if it matches one of these patterns.
- To modify the input if that is required to ensure that the call gets established. For example, to add the “9” required to obtain an outside line from a PBX.
- To select the account to use to place a call, if users can have more than one account. For example, if you want calls that match one pattern to go through one account and calls that match another pattern to go through another account. See “How Bria Professional Selects an Account” on page 3 for more information on account selection.

### 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, then the Account for this dial plan is selected. The account prefixed 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.

### How Dial Plans Are Used

The input (what the user types, selects or drags onto the display) is processed as follows:

#### Cleanup

This step is not part of the dial plan: it is always performed even when there is no dial plan.

Input is cleaned up by removing spaces and dashes, open brackets, and close brackets. Cleanup allows Bria Professional 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 default account is selected and no transformation is performed. (The default account is the enabled account that appears first in the list in the Account Settings window.)

For details on matching see “How the Input Is Processed” on page 9.

## Transformation

The selected transformation is performed.

## Place Call

Then the call is placed using the transformed input.

## Quick Reference to the Dial Plan Settings

For information on the individual Bria Professional settings that relate to the dial plan:

- `digit_map`. See “Dial Plan Syntax”, below.
- `digit_map_timer_critical`. See “Timers” on page 8.
- `digit_map_timer_partial`. See “Timers” on page 8.

## Dial Plan Syntax

The dial plan establishes the expected patterns of characters for a telephone number or SIP address, and allows for modification (transformation) of input based on the match to a pattern.

The dial plan is defined for each account in `proxies:proxyn:digit_map`, where `n` is the account number.

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. Each pattern is separated by a | pipe. The pipe is optional after the last pattern. Each pattern is implicitly numbered, starting from 1.
- **Match and Transformation:** A pair that identifies the pattern number to compare to the input, and the transformation or transformations to perform on the input when a match is obtained. The transformation is optional (meaning the input that matches this pattern is not transformed).

"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 6)!**

### 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.
- Some elements use the back slash \ character. If you are defining a pattern via remote provisioning (that is, in an HTTP response), you must enter two backslashes, because the Bria Professional provisioning software interprets one backslash as an escape key.

## 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.

Some elements use the back slash \ character. If you are defining pattern a via remote provisioning (that is, in an HTTP response), you must enter two backslashes, because the Bria Professional provisioning software interprets one backslash as an escape key.

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"> <li>The literal x character is represented by \x.</li> <li>The literal t character is represented by \t.</li> </ul>
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. Use of this element results in a pattern with "minimum requirements". For example, xxxx. 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. The typical timer value is 4 seconds, but a different value can be set in the setting proxies:common:digit_map_timer_critical.</p> <p>The T timer forces Bria Professional to wait after a match is made. This timer should always be included in the following situations:</p> <ul style="list-style-type: none"> <li>Any pattern that uses the . (dot). For example, if the pattern is xxxx. then adding a timer allows the user to type three or more digits. If there is no timer, then Bria Professional makes the match as soon as the user types three digits.</li> <li>Any dial plan that has two patterns that are similar in elements but different in length. For example, if one pattern is xxx and the other pattern is xxxxxxx, then adding the timer allows the user to continue typing past three digits, in order to get a match on the second pattern.</li> </ul> <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 9.

Both timers can be configured via the Bria Professional settings:

- T timer is set in proxies:common:digit\_map\_timer\_critical. The default value is 4000 milliseconds (4 seconds).
- The long timer is set in proxies:common:digit\_map\_timer\_partial. The default value is 20000 milliseconds (20 seconds).

### 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 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

## 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

How Call Placed	Type of Match	Meaning of Match	Result
User is typing	Partial match	The characters typed so far follow the pattern but there are not yet enough characters for a pending or complete match.	<ul style="list-style-type: none"> <li>If the user presses Enter or Dial, then the default account is used. No transformation is performed.</li> <li>If the user stops typing for the long timer length (usually 20 seconds), then the default account is selected. No transformation is performed on the characters typed so far.</li> </ul>
	Pending match	One of the following: <ul style="list-style-type: none"> <li>The pattern has no . (dot) but does have the T timer. There is a perfect match.</li> <li>The pattern has a . (dot) and the T timer. The minimum requirements are met.</li> </ul>	<ul style="list-style-type: none"> <li>If the user presses Enter or Dial, this pattern's account is immediately selected and the transformation is performed.</li> <li>If the T timer expires, this pattern's account is selected and the transformation is performed.</li> </ul>
	Complete match	One of the following: <ul style="list-style-type: none"> <li>The pattern has no . (dot) and no T timer. There is a perfect match.</li> <li>The pattern has a . (dot) but does have the T timer. The minimum requirements are met.</li> </ul>	This pattern's account is immediately selected and the associated transformation is performed.
	No match	The characters typed do not match the patterns for any dial plan.	<ul style="list-style-type: none"> <li>If the user stops typing, then after the T timer and long timer have expired, the call fails</li> <li>If the user presses Enter or Dial, then the default account is selected and no transformation is performed.</li> </ul>
Dragged or selected	Complete	The input is an exact match for the pattern.	The account is selected and the associated transformation is performed
	No match	The input does not match the patterns for any dial plan.	The default account is selected and no transformation is performed. The default account is the enabled account that appears first in the list in the Account Settings window.

## 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 SIP address, and to how add a "9" dialing prefix only to the PSTN number.

## Example 2

```
3xxT|1xxxxxxxxxx|[2-9]xxxxxxxx|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 Professional to wait after detecting a three-digit number beginning with 3, in case the user is 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]xxxxxxxx	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 in 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

```
#1xxxxxxT|#19xxxxxx|xxxxxxT|9xxxxxx;match=1;prestrip=2;pre=9;match=2;prestrip=2;
match=3;pre=9;
```

#1xxxxxxT	The pattern is a dialing prefix followed by seven digits. The timer forces Bria Professional to wait to allow a match to the second pattern. The #1 is stripped off and 9 is prepended to access an outside line.
#19xxxxxx	The pattern is a dialing prefix followed by a 9 and seven digits. The #1 is stripped off.
xxxxxxT	The pattern is seven digits. The timer forces Bria Professional to wait to allow matching to the fourth pattern. 9 is prepended to access an outside line.
9xxxxxx	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), to deal with users who have upgraded from eyeBeam. These users may have been accustomed to dialing an account prefix to force eyeBeam to use a specific account. 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 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.

## 2.7 DTMF

This group of settings configures Bria Professional to handle DTMF.

DTMF will be sent using either:

- Out-of-band, using 2833 DTMF packets
- Out-of-band, using INFO DTMF.
- In-band, by encoding the DTMF signal in the audio stream.

The preferred method is out-of-band. In-band is used only to deal with specific network situations, as described in the reference section for these settings.

You must configure Bria Professional to use either in-band or out-of-band. If you configure it to use out-of-band, it will use 2833 packets if 2833 is available. Otherwise, it will use the fallback you configured:

- INFO, or
- in-band.

## 2.8 Encryption (Call Security)

### About Encryption

Bria Professional can be configured to support specific combinations of signaling and media encryption (security) for phone calls.

- Signaling encryption is only possible using TLS as the transport; UDP and TCP do not support signaling encryption.
- Media encryption, which is performed using SRTP, can only be supported if signaling encryption is in place, in other words, if TLS is used for the transport.

### Setting up for Security outside of Bria Professional

When using TLS, the user 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 exchange of certificates are outside the scope of this documentation. The certificates must be stored on the Bria Professional computer, in the root certificate store.

Setting up the root certificate on the Bria Professional user's computer ensures that the connection to the proxy is TLS secure (the first hop). Any proxy in the chain (between the user and the other party) 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.

When a call with both signaling and media encryption is established, Bria Professional displays the encryption icon. This icon indicates that the call is secure between each caller and their proxy (the first and last hops); the call may or may not be secure for other hops.



## Encryption Options Supported by Bria Professional

You must set up Bria Professional so that security matches one of the four encryption options included on the Bria Professional GUI.

Option	How Outgoing Calls are Handled	How Incoming Calls Are Handled
Make and accept only encrypted calls	Bria Professional 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 Professional will only accept INVITES that are for encrypted calls. If Bria Professional receives a call INVITE that is not encrypted, the call will be rejected.
Prefer to make and accept encrypted calls	Bria Professional 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 Professional will then place the call without encryption.	Bria Professional will accept INVITES for both encrypted and unencrypted calls.
Make unencrypted calls, accept all calls	Bria Professional will place only unencrypted calls. If the other party does not accept unencrypted calls, the call will fail.	Bria Professional will accept INVITES for both encrypted and unencrypted calls. If the correct certificates are not in place, the call will fail if the other party cannot fall back to placing an unencrypted call.
Do not allow encrypted call	Bria Professional will place only unencrypted calls. If the other party does not accept unencrypted calls, the call will fail.	Bria Professional will only accept INVITES that are for unencrypted calls. If Bria Professional receives a call invite that is encrypted, the call will be rejected.

## Configuring for these Encryption Options

To configure for one of these options, set the relevant settings as follows:

Security Options		Settings			
	Transport	security_incoming_level_max	security_outgoing_fallback	security_outgoing_srtp	security_outgoing_tls
Make and accept only encrypted calls	“encrypted” or “TLS”	4	false	true	true
Prefer to make and accept encrypted calls	“encrypted” or “TLS”	4	true	true	true
Make unencrypted calls, accept all calls	“encrypted” or “TLS”	4	false	false	false
Do not allow encrypted call	“TCP”, “UDP”, “TLS” or “Automatic”	0	false	false	false

Only these four combinations are supported. Setting these settings in any other way will result in invalid behavior.

## 2.9 Feature Enabling

This group of settings covers features that are enabled by only one or two settings. Features that need more extensive configuration are covered in other sections in this manual: “File Transfer” on page 14, “LDAP” on page 15, “MWI Notification” on page 16, “Presence” on page 18, “Voicemail: “Send to Voicemail”” on page 20.

For other settings related to features, see “User Experience” on page 19.

## 2.10 File Transfer

File transfer lets users send and receive files. There are two ways to support file transfer.

### Via Content Indirection

When content indirection is used, files are transferred to a content indirection server. At the same time, a message is sent through a SIP IM session to the other party to provide the URL of the content indirection server. Content indirection requires that the local user is subscribing to the recipient’s presence.

#### Configuring to Receive Files

For the local user to be able to receive a file transfer, `feature:file_transfer_content_indirection:enable` must be true.

#### Configuring to Send Files

For the local user to be able to initiate a file transfer, the following configuration must be performed:

1. The setting `feature:file_transfer_content_indirection:enable` must be true.
2. In the presence-enabled SIP account, specify the URL of the content indirection server in the `proxies:proxyn:send_file_server` setting.
3. Configure the content indirection server to allow the PUT HTTP method. If you have enabled WebDAV on an HTTP server, then PUT is automatically enabled. (WebDAV may be used for remote storage; see “Resources” on page 19).
4. Create the root folder on the content indirection server. This folder is part of the URL specified in the setting `proxies:proxyn:send_file_server`. In order for the upload to the server to work, the root folder must exist; Bria Professional will not automatically create it on the first upload.

Once this configuration is in place, then for content indirection to be possible from the sending side, the recipient must exist as a contact with a SIP address and presence must be enabled for that contact. If the sending side is set up appropriately, the transfer should succeed if the recipient’s client supports file transfer via content indirection. The recipient’s client does not have to be configured for a content indirection server.

### Via XMPP

When XMPP is used for file transfer, both the sender and the recipient must have XMPP accounts and the local user must be subscribing to the recipient’s presence through the XMPP account. In addition, both sides must be enabled for XMPP file transfer.

To enable XMPP file transfer on the local client, set `feature:file_transfer:enable` to true.

XMPP file transfer is direct if a peer-to-peer connection exists between the two sides. If such a connection is not possible, then the transfer is sent via the XMPP proxy that the XMPP service provides or via the public server proxy.jabber.org.

## 2.11 LDAP

If you have set up an LDAP directory on a remote server, you can configure Bria Professional to fetch data from it. This data will be displayed in the LDAP directory in the Contacts module.

Set feature:ldap:allow and feature:ldap:enable as described in the Settings reference documentation.

Set all the settings with "key" in their name. These settings are used to map the attribute in your LDAP directory to the corresponding attribute in Bria Professional. Be careful with this mapping, because if the user creates a contact from the LDAP entry, the application will allow/disallow certain functions (such as sending an IM) based on whether a property of that contact is populated.

Complete the remaining settings in this topic to allow Bria Professional to connect to your LDAP server.

## 2.12 License

### Provisioning the License

The license key can be provided to the client through remote provisioning. See “Provisioning Bria *Retail Edition*” for details.

Or the key can be provided to the user outside of Bria Professional, through an e-mail, for example. In this case, you may want to set feature:help\_menu:has\_license\_key to true, to include the menu item that displays the Enter License dialog.

### Revoking Licenses

Whether you provision licenses or users enter the license key manually, you can manage licenses by logging onto your account on the CounterPath store.

Note that to revoke a license, you must do so through the store. It is not enough to remotely provision an empty license key string the next time that the user logs on, because after the initial provisioning, the key is stored outside of settings and Bria Professional reads it in that outside location.

## 2.13 MWI Notification

This group of settings let you configure Bria Professional to subscribe to your voicemail server to receive notification that messages are waiting for the user. To use MWI, you must have a voicemail server that supports MWI.

MWI is set up in each account, that is, in the proxies:proxyn settings.

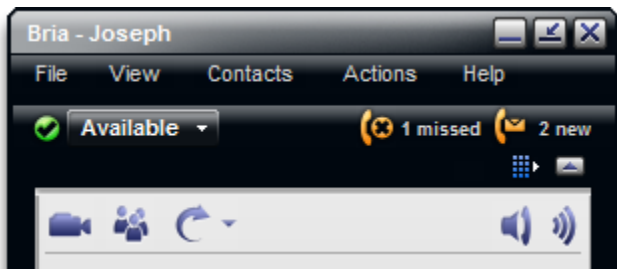
### Receiving MWI Information

MWI subscription can be performed using SIP subscriptions or via MWI NOTIFY (implicit subscription).

- To use SIP subscriptions, set proxies:proxyn:subscribe\_to\_message\_waiting to 1 and set the subscription parameters via the proxies:proxyn:message\_waiting\_<xx> settings.
- To use MWI NOTIFY, set proxies:proxyn:subscribe\_to\_message\_waiting to 0. Bria Professional will not subscribe to your voicemail server. Whenever Bria Professional receives an MWI NOTIFY, it will handle it as per RFC 3842.
- To disable MWI, set proxies:proxyn:subscribe\_to\_message\_waiting to 0.

### Connecting to the Voicemail Server

If you support MWI, you can make the MWI icon clickable. To do so, enter the voicemail server URL in proxies:proxyn:voicemail\_url.



## 2.14 Network

This group covers settings in several subtopics, all relating to SIP accounts (not XMPP accounts). Make sure you set them for each of your SIP accounts. For your XMPP accounts, the settings are simply ignored.

### Firewall Traversal

This group of settings lets you configure Bria Professional for firewall traversal. This group can be divided into several groupings:

- ICE, one setting.
- Keep alive: Settings to configure how keep-alive messages work.
- Outbound proxy: Settings to configure a firewall outbound proxy.
- Port: Settings to configure the listening port. In the Settings reference documentation, start with the setting `proxies:proxyn:listen_sip_port`.
- Relay server: Settings to configure a relay server (such as XTunnels), if applicable.
- SIP: One setting for rport usage.
- STUN: Settings to configure Bria Professional to use a STUN server for firewall traversal. In the Settings reference documentation, start with the setting `proxies:proxyn:override_stun_server`.

### SIP Signaling

This group of settings let you configure how Bria Professional handles SIP signaling.

### RTP Session

This group of settings let you configure how RTP session activity will be managed.

### DNS

This group of settings let you configure timing for DNS query requests, and lets you optionally specify a primary and secondary DNS server to use.

### SDP

This group of settings lets you configure how SDP session activity will be managed.

## 2.15 Presence

This group of settings lets you configure how presence is supported when presence is handled using SIMPLE on SIP accounts. For presence on XMPP accounts, no special configuration is required: presence subscriptions are always created for XMPP buddies.

If you are not supporting presence through SIP, make sure you disable presence on every SIP account.

If you are supporting presence through SIP and your users have several SIP accounts, you will typically enable presence on only one SIP account. Make sure you disable presence on the other SIP accounts.

If you support presence, you should also read “Resources” on page 19 for information on how Bria Professional stores the presence information (buddy list) and privacy rules.

### **How Presence Subscriptions are Handled**

Bria Professional supports IETF standard SIMPLE presence using a SIP subscription to the presence event package. Bria Professional supports the SIMPLE rich presence extensions (RPID - RFC 4480), which allows detailed presence information to be conveyed in a standards-compliant manner.

### **Peer-to-Peer Presence Mode**

In peer-to-peer presence modes, the clients in the network send SIP SUBSCRIBE and NOTIFY messages directly to one another. The Bria Professional that receives the request consults the local copy of the privacy rules to determine whether a rule already exists. If no rule exists for the other party, then the request is deferred to the user through a popup; the user’s action typically results in a privacy rule being created. The amount of SIP message traffic on the network can be substantially larger than in presence agent mode.

### **Presence Agent Mode**

In presence agent mode, when Bria Professional is first started, it sends presence information to the network using the SIP PUBLISH mechanism (RFC 3903). Bria Professional still sends a SUBSCRIBE message per contact found in the contact list when it is first started, but the presence agent will simply return a NOTIFY message with the current presence document on behalf of the contact that was subscribed to. As well, Bria Professional subscribes to the presence info (winfo - RFC 3857, 3858) event package which will inform the user when they have to make a presence authorization decision.

## 2.16 QoS

This group of settings lets you configure the quality of service you offer, if applicable.

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 Professional supports 802.1p QoS packet tagging. If you set up for QoS, Bria Professional 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.

## 2.17 Resources

Typically the contact list is stored locally. Privacy and presence information associated with a SIP account are also typically stored remotely. Privacy and presence information associated with an XMPP account are always stored on the XMPP server.

To store the contact list and SIP information remotely using WebDAV or XCAP, see the “Configuring for Remote Storage of Resources” manual.

If you support both local and remote storage, Bria Professional continually synchronizes the local and remote lists.

## 2.18 SIP Handling

This group of settings lets you configure some of the SIP reason codes that Bria Professional includes in the SIP response.

## 2.19 User Experience

This group of settings let the user change the behavior of the Bria Professional GUI.

Also look at the settings in “Feature Enabling” on page 14.

## 2.20 Video

These settings provide controls for video quality.

## 2.21 Voicemail: “Send to Voicemail”

You can configure Bria Professional to automatically send unanswered phone calls to voicemail. (Other call handling features are described in “MWI Notification” on page 16).

There are two ways to send to voicemail, using a 486 SIP response or using a 302 SIP response.

To configure for “send to voicemail”, set these settings in proxies:proxyn:

Option for “Send to voicemail”	forward_no_answer	forward_no_answer_uri	forward_no_answer_after_in_secs
Disabled	0	Empty	Ignored
Using 486	1	Empty	Ignored
Using 302	1	The phone number for sending to voicemail	As desired

Note that there are some drawbacks to enabling client-side send-to-voicemail. Firstly, the Bria Professional client will probably not handle redirects as well as your voicemail server. For example, in Bria Professional voicemail, if Bob forwards to Alice and Alice does not answer, the next forward will be to Alice’s voicemail; the call will not be directed back to Bob’s voicemail.

Secondly, the Bria Professional configuration may conflict with the corresponding settings on your voicemail server.

### Forwarding Calls

The “forward\_<xx>” settings are typically set at runtime by the user, not through remote provisioning.

## 2.22 Workgroup

You can configure Bria Professional to display information about users in a workgroup. Workgroup functionality is implemented through support of dialog events (RFC 4235) and through subscription to a “resource list server” in accordance with RFC 4662. The full RFC 4662 format is followed, which means that for any given monitored extension, Bria Professional reveals each separate appearance of that extension and its activity.

You must configure for workgroups as follows:

- On your SIP server, create users.
- On your SIP server, create workgroups and add users to the desired workgroups.
- In Bria Professional, set proxies:proxyn:workgroup\_subscription\_AOR to the URL where the client can subscribe to the workgroup. Set this setting only in the default account.
- Set feature:workgroup:enable to true.

When the user chooses to view workgroup and if the workgroup\_subscription\_AOR for any given proxy (account) specifies a URL, then Bria Professional immediately registers with the SIP registrar and if the workgroup\_subscription\_AOR for any given proxy (account) specifies a URL, then Bria Professional automatically subscribes to the workgroup. If the subscription succeeds, the user will be able to display the Workgroup window on the softphone.



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## 2.23 Zero-Touch Configuration

These settings control whether zero-touch configuration is enabled. When this configuration is enabled, Bria Professional automatically detects the audio and video devices connected to the Bria Professional computer, automatically detects the type of connection, and displays device configuration messages.

### Bandwidth Detection

Zero-touch configuration includes a feature that lets Bria Professional calculate the connection for local Bria Professional's computer, by determining how long it takes to download a file of a fixed file: the faster the download, the better the connection is assumed to be.

If you decide to support this feature (`zero_touch_bw_enabled=true`), you must provide a file of size 100 to 200 KB, at the specified URL. You must configure Bria Professional for this URL by completing the setting `auto_bandwith_url`.

If you do not want to provide this file, you must disable the feature (`zero_touch_bw_enabled=false`). The user will be able to specify their connection type on the Preferences > Advanced > Network panel.

### Devices

These settings let you specify whether or not Bria Professional will automatically detect the devices connected to the computer. If device detection is enabled, you can optionally identify the device that you want Bria Professional to chose, if that device is present.

