broadsoft



Communicator (iOS Tablet)

User Guide

Release 22.3.1

Document Version 1

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BroadSoft® Guide

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1 Summary of Changes

This section describes the changes to this document for each release and document version.

1.1 Changes for Release 22.3.1, Document Version 1

This version of the document includes the following change:

- Updated section *3.2 Sign In* to indicate support for Single Sign-On (SSO).

1.2 Changes for Release 22.2.1, Document Version 1

This version of the document includes the following changes:

- Added section *8.15 Seamless Call Handover for VoIP Calls.*
- Updated *Appendix A: Third-Party Software and Copyright*.

1.3 Changes for Release 22.1.1, Document Version 1

This version of the document includes the following change:

- Added CallKit integration.

1.4 Changes for Release 22.0.1, Document Version 1

This version of the document includes the following changes:

- Updated images.
- Added description for *About* screens.
- Updated section *6 Availability*.
- Added description for Short Names.

1.5 Changes for Release 21.2.1, Document Version 1

This version of the document includes the following changes:

- Added description for Enhanced Call Logs and Hunt Groups in Call History.
- Added description for Push Notifications for Chat Messages.
- Added description for duration of call in Call History.
- Added description for sending an e-mail to contact in Contact Card.
- Added description for Message History and Message Read Status Synchronization.
- Added Guest Client Support section.

1.6 Changes for Release 21.1.1, Document Version 2

This version of the document includes the following change:

- Added section *5.4 Filters* with description for contact ordering.

1.7 Changes for Release 21.1.1, Document Version 1

This version of the document includes the following changes:

- Added information about Dial into contact's My Room audio bridge.

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- Added information about default selector for soft phone.
- Added section *15 Push Notifications.*
- Added information about Clear History.

1.8 Changes for Release 21.0.1, Document Version 1

This version of the document includes the following changes:

- Added section *17.7 Emergency Call Address Change Service*.
- Added more participants to Video call or N-Way video.
- Added swipe between Chat, Audio/Video, and Screen Share.
- Updated section *10 Settings*.
- Added section *13 Screen Share*.
- Added section *14 Search*.
- Added section *12 Communicator and iPad Settings*.

1.9 Changes for Release 20.1.1, Document Version 2

This version of the document includes the following change:

- Removed the call quality reporting section.

1.10 Changes for Release 20.1.1, Document Version 1

This version of the document includes the following changes:

- Removed BroadTouch references from the document.
- Updated images.

1.11 Changes for Release 20.0.1, Document Version 1

This version of the document includes the following changes:

- Added a section for BroadWorks Mobility.
- Added a description for dial pad behavior.
- Added a description for spell check / autocorrect.

1.12 Changes for Release 20.0.0, Document Version 1

This document was created for Release 20.0.0.

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2 About Communicator for iOS Tablet

Communicator for iOS Tablet provides the following communication features:

- Instant Messaging and Presence (IM&P)
- Voice Calling (VoIP)
- Voice Calling (circuit-switched)
- Video Calling
- BroadWorks Call Settings

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3 Get Started

This section contains the essential information for getting started with Communicator for iOS Tablet.

3.1 Installation

The iOS Tablet client can be downloaded from the Apple App Store.

3.2 Sign In

When you first launch the application, you are prompted to sign in.

1) If displayed, enter the device configuration address (Uniform Resource Identifier [URI]) provided by your service provider.
2) Enter your BroadWorks user name and password.
3) Select whether you want Communicator to remember your password.
4) Select whether you want Communicator to sign you in automatically on subsequent launches.
5) Tap **Sign In**.

NOTE: Once you are signed in, the application does not ask again for the username and password until you sign out. The login is preserved even if the application is terminated or the device is restarted.

A pop-up with dialog about emergency calls and option to update your emergency location may appear on the *Sign In* screen. Depending on your service provider settings, the application may provide basic or advanced sign-in for updating the physical location.

With basic sign-in, there are three options on the emergency call pop-up:

- Update location – Opens a web browser where you can set the location. When the location is set, you can return to the client and you are signed in automatically.
- Ok – Sign-in completes and you can now use the application.
- Cancel – Sign-in is canceled and you are returned to the *Sign In* screen.

With advanced sign-in, there are two options:

- Update location – Opens a web browser where you can set the location. When the location is set, you must return to the client manually. If the location is updated successfully, sign-in completes and you can now use the client.
- Cancel – Sign-in is canceled and you are returned to the *Sign In* screen.

Starting with Communicator Android Release 22.2.1 and iOS Release 22.3.1, the solution supports Single Sign-On (SSO) using an external identity provider (IdP) if supported by the service provider. This initial release supports OKTA SAML 2.0 as an identity provider. When using an external IdP, users are redirected to the corresponding authentication page in an external browser. After successful authentication, users are returned to Communicator and signed in.

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4 Main Tabs

When you start Communicator for the first time, the *Contacts* list may be empty. Use the *search* field in *Directory* to find people and add them to your *Contacts* list. Contacts can also be added manually by tapping the **Add** button.



Figure 1 Main View

The main view contains a number of tabs that present information about the contacts and communications options available as follows:

- *My Room*
- *Contacts*
- *History*
- *Chat*
- *Call*
- *Settings*

Switching between tabs changes the left pane view only. Selecting an item from the left pane view changes the right pane view.

Icon	Description
	My Room – Join My Room.
	Contacts – View your contact list and local contacts or search for directory contacts.

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Icon	Description
	History – View incoming, outgoing, and missed calls.
	Chat – View Chat History.
	Call – Make calls.
	Settings – Set up your client.

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5 Contacts

The *Contacts* list in *Contact* tab can contain different types of contacts as follows:

- Presence-enabled contacts
- Non-presence-enabled contacts

Any contact can be marked as a favorite and it appears at the top of the *Contacts* list in the *Favorites* section.

Presence-enabled contacts are users with an Extensible Messaging and Presence Protocol (XMPP) address. These can be other Communicator users or users from federated systems such as Google Talk. Non-presence-enabled contacts can be phone or conference numbers.

Contacts can also be organized in Groups.

The *Contacts* tab contains:

- Contacts list
- Local contacts
- Directory contacts

Directory provides the company directory contacts. The *Local* contact list provides the contacts from the local phone book.

5.1 Contact Card

The contact card displays information about a contact based on the contact type. This includes Communicator contacts, Local address book contacts, and contacts from directory search results.

You can initiate a call or chat session directly from the contact card. This includes joining another contact's My Room or dialing a My Room audio bridge from a directory contact search result.

If the contact has an associated e-mail address, then the application supports sending an e-mail to the contact by launching the native e-mail client on the mobile device.

5.2 Add Contacts

When you sign in for the first time, there are no contacts on your *Contacts* list. Add a new presence-enable contact at any time by selecting the option *Add Contact* from the plus icon in the navigation bar. Another way to add new contacts is to use the directory search option from the *Contacts* tab.

In the *Add Contact* screen, enter the contact's information and then select **Done**. By default, your presence information is always shared with a new contact if an XMPP address is provided.

If you receive a contact request, you can ignore or accept it. If you ignore the contact request, you can always share your presence information later by selecting **Subscribe** from the contact card. Note that the contact must accept your subscription request for you to establish the presence relationship successfully.

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Add a conference number by selecting the same option *Add Contact* from plus icon in the navigation bar by typing a conference number. You can also add a conference number from directory search. A conference contact is a special contact used for conference bridges to avoid having to remember a PIN code and a conference number, for example, for a recurring conference.

Add a local contact by selecting the *Add Local Contact* option using the plus icon in the navigation bar. The *Add Local Contact* option opens the native Address Book for adding a new contact in the local phone book.

Add a group in contacts list by selecting *Add Group* using the plus icon in the navigation bar. Type a group name and select contacts that you want to be in the group then select **Done**.

5.3 Edit Contacts

Tap a contact entry from the *Contacts* list to open a contact card. This is the same for presence-enabled and non-presence-enabled contacts.

- *Edit* opens the *Contact Information* dialog box where you can add, edit, or remove information. This works for both presence-enabled and non-presence-enabled contacts.
- *Unsubscribe* removes the presence relationship between you and that contact. This means you do not see the contact's presence information and your contact does not see your information. Select *Subscribe* to re-establish the presence relationship. An unsubscribed contact remains on your *Contacts* list and is always shown as "offline".
- *Remove contact* removes the contact from your *Contacts* list.

5.4 Filters

There are four contact filters available from the *Contacts* tab:

- *All* – Shows all presence-enabled and non-presence-enabled contacts.
- *Online* – Shows only the presence-enabled contacts that are currently online.
- *Local* Address Book – Shows the contacts from your local phone book.
- *Directory* – Shows the contacts from a company directory (which requires a search).

5.5 Sort and Display Order

The sort and display order for contacts is based on phone settings: *Settings* → *Mail, Contacts, Calendars* → *Contacts* for iOS 9 and lower, or *Settings* → *Contacts* for iOS 10.

- *Display order* – display First name or Last name first
- *Sort order* – sort by First name or Last name
- *Short name* – format of the name to be used in chat lists

NOTE 1: Short names are not supported on iOS 8. On iOS 8, the application always uses the full names for display in such lists.

NOTE 2: Asian names – Chinese, Japanese, and Korean (CJK):

On Android, Asian names (CJK) are not dependent on the above settings. Asian names are always sorted by Last name, and displayed with Last name first. For Asian names, the short name format is always the full name.

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On iOS, Asian names are sorted based on the iOS system settings; however, the display order is always Last name first, and the short name format is always the full name.

Local Contacts

Local contacts are ordered in groups by letter, based on the first letter of their display name. There is no further ordering within the group.

All contacts whose display name starts with non-Latin characters are put in the # group.

The display name of a local contact is taken from the first name, middle name, and last name. If names are missing, the display name is taken from the JID field.

If all of the above are missing, then the phone number is used for the display name.



Figure 2 Contact Info Screen

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6 Availability

For each contact you have subscribed to, you can see their availability. Similarly, your contacts can see your availability on their *Contacts* list.

NOTE: *Availability* can also be referred to as *presence status*, which was the term used in previous releases of Communicator.

Availability means that your friends are able to see whether you are available, for example, "I'm available" or "I'm busy".

Icon	What it means
 available	The green availability icon indicates that the user is online and ready for communication.
 mobile	The green availability icon indicates that the user is online on the Communicator mobile client and is ready for communication. The icon is accompanied by the text "mobile".
 away	The yellow availability icon indicates that the user is online on their Communicator client, but has been idle or away from their computer for more than 10 minutes.
 mobile	The yellow availability icon indicates that the user is online on their Communicator mobile client, but has been idle or away from their computer for more than 10 minutes.
 offline	The grey availability state icon indicates that the user is offline in a call and the only available contact method is calling or leaving a chat message.
 call	The grey availability state icon indicates that the user is offline and the only available contact method is calling or leaving a chat message.
 pending	The question mark indicates that a subscription is pending and the contact has not yet approved sharing their availability.
 busy	The red availability icon indicates that the user is busy and does not want to be disturbed.
 call	This icon indicates that the contact is busy due to a call. This is an automated availability status.
 meeting	This icon indicates that the contact is busy due to a meeting. This is an automated availability status. The *Busy – In Call* status overrides the *Busy – In Meeting* status so this icon is only seen when there is a meeting but no call.

You can set your own availability by tapping on the availability icon from the status bar in the all tab views. The availability icon opens the *My status* screen where you can change your avatar, personal message, and availability status.

NOTE: With the introduction of push notifications, the application no longer maintains persistent connection to the server. Changing the availability status with push notifications enabled persists the status while the application is in the foreground and changes the status to Available on Mobile when the application is moved to the background.

Your avatar is the picture that represents you in your friends' *Contacts* lists and in chat screens. Tapping on an avatar opens a dialog with options to select an existing image, to take a new one with your device's camera, or to clear your avatar.

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You can enter a status message in the area next to the avatar. This status text is shown in your friends' *Contacts* lists.

If you see the error message "Chat Unavailable" under any tab, it means that XMPP connectivity has been lost for chat and availability; however, you can still make calls. In this case, you should contact your service provider.

The availability update is only triggered by appointments and meetings that are either accepted by the user or made by them. All-day meetings do not trigger an availability change to *Busy – In Meeting*.

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7 Instant Messaging

7.1 Chat Tab

Chat shows the list of recent chats since the last login. If User A chats with User B multiple times, their discussions appear as one item in the list.

Tapping the name from the *Chat* list opens the *Chat* view (IM view) in the right pane where new messages can be typed. Old messages are also shown.

New incoming messages are indicated with a notification badge to the right of the name. The icon remains next to the name until the message is read.

Chats are listed so that the newest one is always at the top. Chats are not in alphabetical order and are always listed with the most recent first.

Tapping the **Make all as Read** icon in the left navigation bar removes all notification badges from the *Chat History* list.

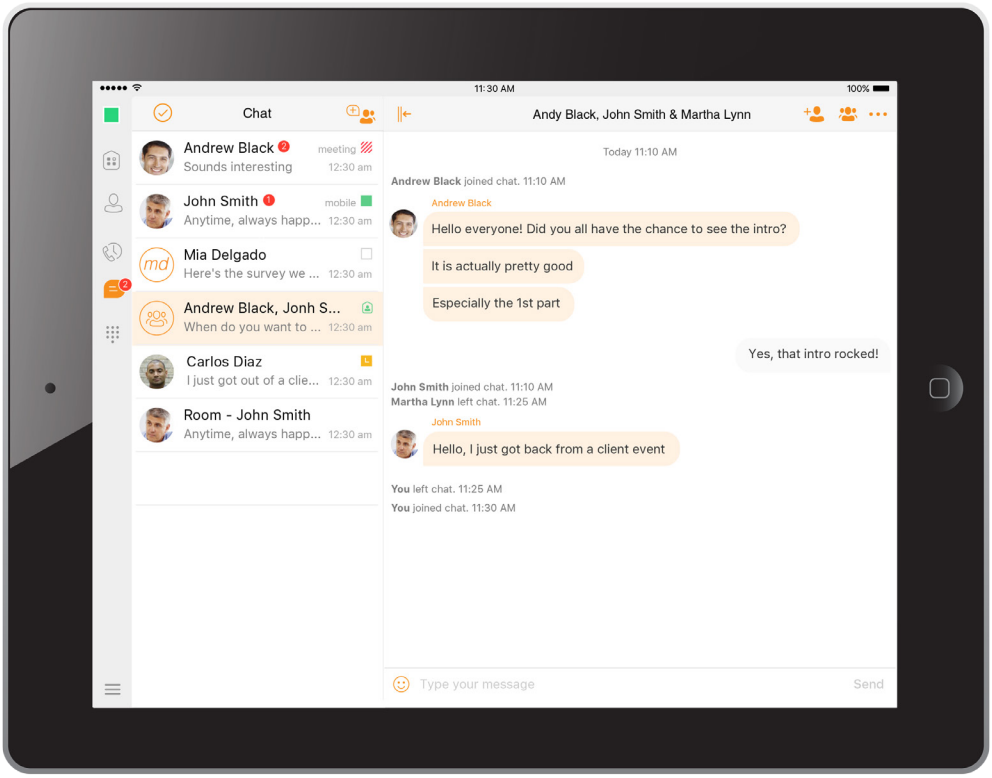

Figure 3 Chat Tab

Tap the availability status icon  to update your status or location and enter free text. The *My Status* popover allows you to update your status or location and enter free text. Tap the avatar to upload a picture. Tap the input field to update your status.

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7.2 Chat

Start a chat using one of the following methods:

- From the *Contact* list, tap a contact to open the contact card. From the contact card, choose the chat bubble icon to start a chat.
- In the *Chat History* list, tap a contact entry to start a chat.

When you initiate a chat, the *Chat* view opens in the right pane. To open chat in full screen, tap the collapse icon to hide the left pane. Selecting any tab from the vertical menu or tapping on the expand icon opens the left pane view. Chatting with a contact is possible only when you are both online. If your contact initiates a chat, you see a notification badge on the *Chat* tab and the entry appears on the top of *Chat History* list.

When the chat opens, the name of the recipient is on the top bar and there is an availability icon flag before the name. The recipient messages are presented in the orange background and the user is presented in white background.

A smiley can be added to a message by typing the corresponding character code or by selecting a smiley icon. The smiley is displayed with its character code in the input text area, and graphically in the chat area and when displayed to the remote party.

The text input field in *Chat* uses autocorrect, auto-cap, and spell check based on system settings. Use the system settings to enable or disable these features.

Upon Clear History, the chat history is removed from the view, but the chat view remains open in case you want to continue chatting. If you navigate back to the chat list, then this specific chat entry is removed from the list because there is no chat history associated with it.

7.3 Group Chat

Start a group chat using one of the following methods:

- In single chat session, tap the add participant icon to escalate from a single to a group chat.
- From the *Chat* tab, tap on the Crate Group Chat icon to create group chat.
- In the *Chat History* list, tap a group communication entry to start a group chat.

When you initiate a group chat, the *Chat* screen opens. More people can be added later to the chat using the **Add participant** icon. Anyone in the group chat can add participants. Tapping on the View participant icon opens a popover with the list of group participants. To remove a participant, select the **Edit** button, choose a participant to remove, and then select **Done**.

A group chat works the same way as a one-on-one chat. All messages from anyone are sent to everyone else. A group chat history is saved and is available to view later in the *Chat* tab.

You can leave a group chat by selecting the *Leave chat* option from the *More Options* icon in the right navigation pane. The chat is marked as “offline” and you no longer receive messages from the chat. When tapping on the “offline” chat, you re-join the room and start receiving messages. However, you do not receive messages that were sent in the chat while you were outside of the room.

The *Clear History* menu item works the same way as the corresponding option in a one-on-one chat and removes the local history.

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The **View Participants** button opens a dialog that shows the list of participants in the group chat.

Deleting a chat room is not supported.

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8 Audio and Video Calls

8.1 Dial Pad Tab

The *Dial Pad* tab displays a dial pad and a text field used to enter numbers. The dial pad is one of the options used to make audio and video calls. There are three buttons below the dial pad: Call, Video Call, and Dial Pad menu that are configurable by the service provider. The top text field also has a delete button that, when pressed, deletes one character at a time.

A badge notification appears on the *Dial Pad* tab when there are messages in the voice mail box. A long press on the "1" digit connects you to the voice mail box. When there is no voice mail in your voice mail box, no notification badge is shown.

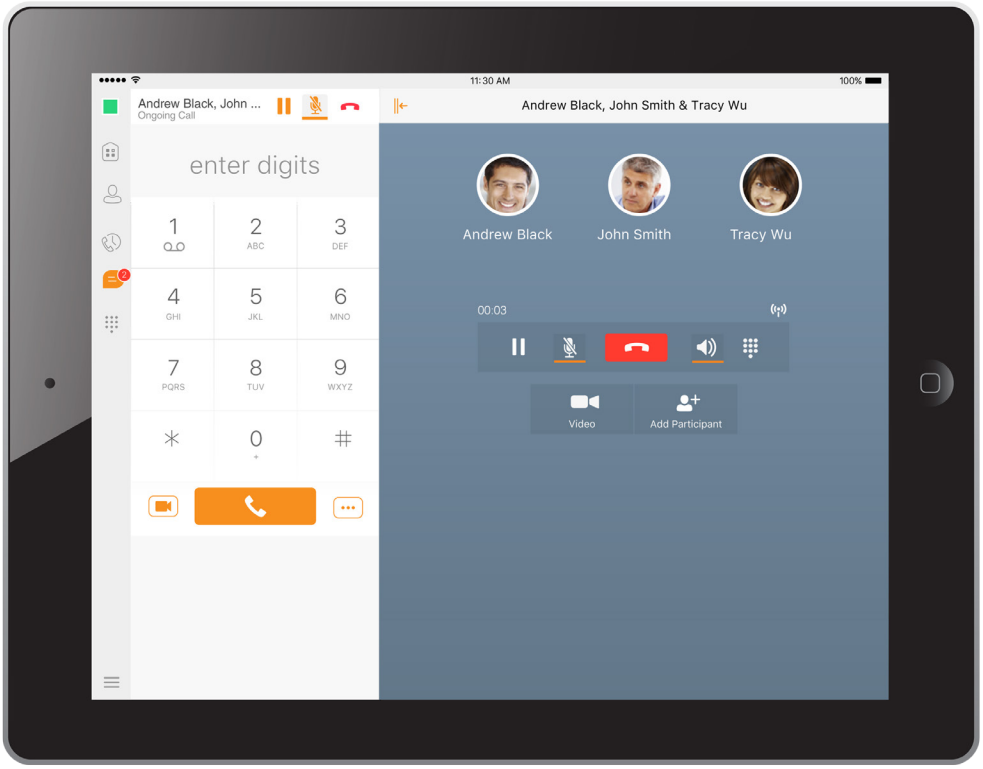

Figure 4 Dial Pad Tab

Except for making audio or video calls, the Dial pad is used for entering digits during an active outgoing call.

Tapping the right side keypad button opens the left pane Dial pad.

If the left pane is expanded and shows the Dial pad, tapping the right side keypad button "lights up" the input field of the Dial pad as an indication that the left pane Dial pad is connected/interacted with the right side keypad. The input field changes the hint text from "start new call" to "enter digits".

When a call is placed ON HOLD, the Dial pad is available for starting a new call only.

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8.2 Make Audio or Video Calls

Make an audio or video call using one of the following methods:

- Choose a contact from contact list to open the contact card and tap on the headset icon for an audio call or the video icon for a video call.
- From search results, open a contact card and tap on the headset icon for an audio call or the video icon for a video call.
- Open the dial pad, enter a phone number, and tap the **Call** or **Video** button.
- On the *Call History* list, tap a call entry.
- On the *Chat* screen, tap the headset icon for an audio call or the video icon for a video call.

8.3 Answer Call

An incoming call is indicated by a ringtone. There are two options on the incoming call screen: *Answer* and *Decline.* If you decline the call, it causes the line to sound busy at the caller's end and they know that you rejected the call.

8.4 CallKit

Starting with iOS 10, Communicator supports integration with the iPhone UI using the CallKit Framework. This integration enables the functionality described in the following subsections.

8.4.1 Answer Incoming VoIP Call on Locked Screen

When an incoming VoIP call is received and the device is locked, iOS shows the native incoming call screen with the caller ID, avatar, and the "Communicator Audio" label.

Sliding the device lock establishes the call with no additional user interaction. You are not required to enter the device unlock code if such is set.

You can perform basic mid-call control functions from the native screen. For advanced mid-call control functionality, you must activate the application by using the application button on the native screen. Entering the device lock code, if set, is required at that point.

Incoming calls are always accepted as audio. You have the option on the native in-call screen to add video. Upon adding video from the native incoming screen and unlocking the phone, the application comes to the foreground with the video call enabled.

If you do not want to accept the call, you can tap the power button once to silence the call, and twice to reject it.

8.4.2 Answer Incoming VoIP Call on Unlocked Screen

When an incoming VoIP call is received while the device is unlocked and the application is either on foreground or background, you are notified with iOS native incoming call screen, which shows the caller ID, avatar, and the "Communicator Audio" label.

You can answer the call using the **Accept** button, which opens the application in call screen.

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8.4.3 Receive Second Incoming Call (Call Waiting)

When a new incoming call is received during an ongoing VoIP call, you are notified with the iOS native incoming call screen, which shows the caller ID and avatar of the new calling party. You have the choice to hold the current call and answer, or end the current call and answer or decline the new call to voice mail. Upon accepting the new call, the previous call is put on hold. You have the option to swap between the calls or to end any or both of them.

8.4.4 Integration with Native Contacts and Call History

Communicator calls can be initiated directly from the contact profile of an address book entry. Long press on the call or video button in a contact profile opens a list of calling options which includes Communicator.

If the last call to a contact has been handled by Communicator, the call button in the profile changes to “Communicator”.

8.5 In Call Actions

You can perform the following actions from the *In Call* screen:

- End a call
- Mute the microphone
- Open the key pad
- Adjust the volume
- Escalate from an audio to video call
- Downgrade from a video to audio call
- Place a call on hold
- Make a new call
- Transfer a call – Attended
- Transfer a call – Unattended
- Make a conference
- Transfer a call to a circuit-switched call
- Add more participants (on conference call only)
- Merge two separate calls
- Swap two separate calls
- View participants (on a conference call)

8.6 Missed Calls and New Messages

Notifications (for example, missed calls or new messages) are shown as badges on the tab icons.

8.7 Message Waiting Indicator and Voice Mail Access

If you have pending voice mail (VM) messages, then a badge is displayed on the *Call* tab icon indicating the number of pending VM messages.

Voice mail is accessible with a long press of the dial pad digit “1” (similar to how it is done on a regular mobile keyboard).

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8.8 Business Line Call Back

Communicator allows you to originate a call using your desk phone or another configured phone or device. This is done using the Call Back functionality on BroadWorks.

When you select Call Back, your other devices ring based on your service provider configuration.

8.9 Contact Name Lookup for Incoming Calls and Call Logs

Upon receiving a call, Communicator searches for the name in the following contact sources and order: XMPP contact name, Enterprise directories, Local Contact, and *P-Identifier* header (SIP) and *From* header (SIP). If the number matches one of the contacts, the name is shown on the incoming call screen.

8.10 N-Way Calling (Conference)

Communicator supports network SIP-based conference calls. While on a two-way audio or video call, you can add more participants by using the **Conference** button. It enters Conference Mode on the device and allows you to search for and select the new participant. Once the conference is established, the participants are shown on the device screen.

The other way to create Conference call or to add participant in the existing Conference is to make a *new* second call then select the *merge* option.

8.11 Call Waiting

You can have one active call at any one time if you receive a new incoming call and accept it. The existing call is put on hold and you can change between these two calls by using the **Hold** and **Unhold** buttons.

8.12 New Call

The client supports starting a new call while in an ongoing call. To establish a call, choose one of the options in section *8.2 Make Audio or Video Calls*. After the new call is established, the first call is put on hold. You can swap the two calls or merge them into a conference.

8.13 Call Transfer

The client supports transferring VoIP calls to another party. Two modes of transfer are supported:

- Attended Transfer – Establish a call with a remote party. Select a contact then choose a number. Select the *call first* option. If the call is successfully established, you can talk with the third party privately before completing the transfer by tapping the **Complete** button.
- Unattended Transfer – Establish a call with a remote party. Select a contact then choose a number. Select the *Transfer* option and the transfer is completed.

8.14 Swipe between Chat, Audio/Video, and Screen Share Communication Views

Communicator provides the ability to switch between Chat, Audio/Video, and Screen Share communications sessions for own My Room, other users' My Room, and two-way chat. The ability to switch between sessions is indicated by the presence dots at the bottom of the screen. You can perform a swipe to switch between sessions.

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8.15 Seamless Call Handover for VoIP Calls

Starting with Release 22.2.1, Communicator for iOS Tablet clients support seamless call handover for VoIP calls between WiFi and cellular data networks.

If the data connection drops during an ongoing VoIP call, then the application tries to use another data connection, if available, or waits for a configurable period of time, (for example, one minute) for the data connection to be re-established. At that point, the call is retried on the new or re-established connection.

During the transition, there is a beeping sound played to the user and an indication in the user interface that the application is trying to reconnect the call.

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9 Call History

The client supports displaying basic and enhanced BroadWorks Call History.

Communicator can also show information about Hunt Groups and call duration, which is only available as part of enhanced call logs.

From the segmented controls, Call History can be set to show all or missed calls.

On the list of calls, there are icons indicating whether a call was incoming, outgoing, or missed.

The list of the call items consists of an icon showing what kind of call it was (a green arrow means incoming, a blue arrow means outgoing, a red arrow means missed, and a green group icon means hunt group). It also shows the name, number, and *Unavailable* status for the caller. Below the name, it shows the number, if available. Below the number, it shows the date and time of the call.

In the *Call Details* screen, you can find information about the duration of the call.

Call History makes it easy for you to redial and call back when you miss a call or when you want to dial a contact with whom you have recently spoken.

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10 Settings

The *Settings* pop-up contains the following items, which can be configured by the end user:

- Call Settings
- Preferences
- Update 911 Location
- Test Call
- About
- Help
- Sign Out

10.1 Call Settings

The client supports the following BroadWorks service management features, allowing BroadWorks supplementary services to be turned on or off using the native client Call Settings window:

Call Options

- Block My Caller ID
- Dialing Service
- VoIP Calls

iPhone

Call Forwarding

- When No Answer
- Always
- When Not Reachable
- When Busy
- Do Not Disturb

Incoming Calls

- Simultaneous Ring

BroadWorks

- BroadWorks Anywhere
- Remote Office

10.1.1 Call Forwarding

By tapping on a different *Call Forward* option, you can enter a number to forward your calls as follows: Call Forward Always, Busy, or When Unreachable.

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10.1.2 Do Not Disturb

When you activate this service, all calls are typically blocked by the server and sent to voice mail.

10.1.3 BroadWorks Anywhere

BroadWorks Anywhere allows service providers to offer fixed-mobile convergence (FMC) services without additional equipment.

BroadWorks Anywhere simplifies communications for on-the-go users and remote users by extending the features of a desk phone to any other fixed or mobile device, regardless of the network or handset manufacturer. Callers dial one number and can reach you on any phone the user chooses. A desk phone, cell phone, and/or a soft phone can ring simultaneously.

Voice call continuity is possible with the ability to move live calls from one device to another without hanging up.

Add locations (numbers) that can be used in the service using the **Add New Location** button. Use the *Alert all locations* to activate parallel ringing.

Select “Prevent Diverting” to prevent a call from ending up as a voice mail, which can be problematic, for example, in conference call situations.

Select “Answer Confirmation” to receive a separate audio prompt when answering a call from that number (location). It may be useful in cases where, for example, mobile numbers are being used to prevent incoming calls going to mobile voice mail since the call is ended without going to voice mail if the answer confirmation is not provided.

Select “Call Control” to enable the server platform to provide mid-call services such as Call Transfer and Conferencing for that number (location).

10.1.4 Remote Office

This service allows the use of any phone as the office phone from a charging and numbering perspective. For instance, a hotel room phone can be used as the office phone.

Enable Remote Office and specify a phone number to be used as the Remote Office number.

10.2 Preferences

The client supports the following preferences:

- Language
- Remember Password
- Sign in automatically
- Caller ID Lookup
- Troubleshooting

The following preferences are available through the *Sign In* screen:

- Language
- Version
- Device ID
- Help

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- About
- Troubleshooting

10.2.1 Language Support

The client is prepared for localization and can be delivered in any language. Currently, the client is available in the following languages:

- U.S. English
- French
- French (Canadian)
- German
- Italian
- Spanish (European)
- Spanish (Latin America)
- Korean
- Japanese
- Chinese

Additional languages are available upon request as part of a customization project.

10.2.2 Caller ID Lookup

When there is an incoming call, Communicator matches it by searching in the contact list, local address book, and BroadWorks directory. To improve the performance, Communicator provides the ability to turn on/off searching in local address book.

10.2.3 Device ID

Communicator has the ability to lock the user to a single desktop or mobile device so that the software cannot be used on other hardware. The iPhone user can copy the Device ID from *Preferences* before signing into the application and provide it to the company administrator. The administrator locks Communicator to the reported device and the user can sign in only from that device.

10.2.4 Troubleshooting

The troubleshooting function can be used if there are issues encountered with the application. It collects and sends diagnostic information to a predefined support e-mail address that is configurable via the branding process. This helps support personnel to identify the issues. The information sent consists of the application and media engine diagnostic logs.

Troubleshooting is managed by a menu entry in *Settings*. It can be accessed from two places in the client:

- From the Settings button on the *Sign In* screen – This opens the screen that contains the help and troubleshooting-related entries. This can be used before the user has signed in, which is most often for cases when a user has issues with signing in or with connectivity.
- From the *Preferences* screen, accessible from the side navigation. This is available while the user is logged in.

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Troubleshooting options:

- **Console logging** – Gets logs in a development environment. The device should be connected to a PC/MAC and the logs appear in real-time in the console.
- **File Logging** – Saves logs to the device memory for subsequent sending by e-mail.
- **XMPP logging** – Includes IM&P-related information (XMPP stanzas) in the logs.
- **Other logging** – Includes additional logs different from XMPP.
- **PN logging** – Includes push notification-related information (only when push notifications are enabled).
- **Crash reporting** – Send crash logs to a crash report.
- **Display Diagnostic Info in Calls** – Displays information about ongoing calls like the codec type.

10.3 About

The *About* screen includes three sub views:

- Info – This view contains short info text, version, copyright, website URL, app ID, and build version.
- License – This view contains the End User License Agreement.
- Legal Notices – This view lists the third parties used from the application.

10.4 Test Call

The client provides the ability to perform an audio or video test call to an echo number. Note that the echo service is provided and enabled by the service provider.

A common example of using an echo service is:

- Tap **Test Call** to initiate a call to the echo service, then follow the operator's instructions until you hear back your recorded message.

10.5 Help Page

The client provides web-based help that can be launched from the *Settings* view.

10.6 Sign Out

You can sign out at the bottom of the left-side navigation drawer.

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11 My Room

My Room is an always available and permanent room you can use to chat with anyone that joins.

My Room is accessible from the *Chat* tab using the menu icon on the navigation bar. You can add more participants using the add participants icon or they can join your room from your contact card. Once people join the chat room, they can tap the **Call** button of that screen to automatically join the conference.

My Room uses your permanent chat room, permanent collaboration room, and conference bridge (audio or video). All *My Room* sessions start as chats but calls can be added to the session while in progress.

Others join your room by tapping your name on their *Contacts* list and selecting *Join Room* from the contact card.

You can dial into another contact's My Room audio bridge from the directory contact card.

11.1 Guest Client

The Guest Client feature is specifically intended for users outside of the company. Communicator users can invite Guest Client users to their My Room by selecting “Copy Guest Join Link” from a My Room menu button on the right of the Participants title bar. The copied link delivery (that is, e-mail) is outside the scope of Communicator.

Guest users can join a session with audio in the web browser by requesting a Call Back using the provided dial-in number and conference PIN. They can also use group chat and sharing inside the web browser. However, guest clients do not have the private chat possibility and they can only see the chat history of messages that occurred after they joined the session.

The My Room owner is prompted to *accept* or *reject* guest client users requesting to join the My Room session.

Guest client user invitations can be revoked by selecting “Reset Guest Link” from the *Participants* menu button.

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12 Communicator and iPad Settings

From iPad *Settings* → *Communicator*, you can allow Communicator to access:

- Contacts
- Microphone
- Camera
- Notifications

It is recommended that Communicator have access to all resources in the previous list.

In addition, you can configure the type of notifications you want to get with Communicator:

- Allow Notifications
- Show in Notification Center
- Sounds
- Badge App Icon
- Show on Lock Screen

It is recommended for all items in the previous list to be enabled.

In addition, it is recommended to configure the option “Alert style when unlocked” to “Alerts”.

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13 Screen Share

Communicator for iOS Tablet supports only view of Screen Share. When a Screen Share invitation is sent via Desktop Communicator, the badge notification appears on the main bar and in the chat list view. Selecting the entry with screen sharing from chat list opens a communication pane with the share by default. You can return to the chat / call (if present) with a swipe. When the share is paused, the screen share view remains active showing the last image that was shared.

Viewing Screen Share is available in all communication modes:

- My Room
- One-to-one chat
- Ad Hoc group chat room (Multi-User Chat [MUC])

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14 Search

Communicator supports search in Communicator Contacts and Contact Directories. The search is performed in a separate input field in the *Contacts* tab. Depending on the selected filter (All, Online, Local Address Book, or Directories), search results display contacts only from the current selected category.

In addition to results from the Enterprise Directory, the search is also performed in several more search sources:

- User's Personal Phone List
- Group's Common Phone List
- Enterprise's Common Phone List

The enhanced search is applied for both contacts searching initiated by the user and upon receiving an incoming call, and searching for a display name corresponding to an unknown number.

Communicator for iOS also supports search in an LDAP-compatible directory like Microsoft Exchange. If the device e-mail and contact applications are synchronized with Microsoft Exchange or compatible e-mail provider, then Communicator can look up contacts from the directory Global Address List (GAL). This search is available through Contacts, Local Address Book, All Contacts with Groups, Groups, and GAL.

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15 Push Notifications

15.1 Push Notifications for Incoming Calls

Communicator introduced support for Push Notifications for Incoming Calls.

Mobile client applications use Push Notifications to get alerted for incoming calls and for accepting the call as VoIP.

When there is new call, a Push Notification is sent to the client which is presented to the user as either a platform-specific visual notification or in the user interface of the client application.

From a user experience standpoint, accepting a call works in the same way for both push-enabled clients and non-push-enabled clients.

On iOS, when the client is in the background, the call is presented to the user with an iOS-specific local notification (alert or banner). When the client is in the foreground, the call is presented with an application-specific *Incoming Call* screen with Answer and Decline buttons.

Outgoing VoIP calls are performed with SIP registration on demand, which is transparent to the user. The SIP registration is done only when the user initiates the VoIP call.

In addition to Push Notifications for new calls, the solution also supports Push Notifications for new voice mail.

NOTE: Using Push Notifications for calls with Apple Watch:

When using Push Notifications for calls and Apple Watch, notifications go to the iPhone or the Apple Watch, depending on the device that is being used. When there is an incoming call and the phone is locked, the notification is shown only on the watch. You can see the notification on the watch but cannot pick up the call from the watch. For more information, see the following Apple support document: https://support.apple.com/en-us/HT204791.

15.2 Push Notifications for Chat Messages

Communicator introduces support for Push Notifications for Chat Messages.

Mobile client applications use Push Notifications to get alerted for incoming messages and for chat invitations.

When there is new message, a Push Notification is sent to the client which is presented to the user as either a platform-specific visual notification or in the user interface of the client application.

The following functionality is supported with Push Notifications:

- Receiving one-on-one messages.
- Receiving My Room and chat invitations.
- Receiving requests for approving guest invitations.

NOTE: Receiving Push Notifications when the application is not running:

You can decide to explicitly remove the application from memory by swiping it, at which point the application is no longer be running in the background.

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Push Notifications for incoming calls and one-on-one messages are received even if the client application is not running, provided that you are signed in and registered for Push Notifications before the application is removed from memory.

The following types of Push Notifications and functionality require the application to be running:

Push Notifications for invitations into My Room or group chats, Push Notifications for approving Guest Client invitations, as well as ongoing communication in a chat room require that the client application to be running either in the background or foreground.

In addition, the application icon badge for unread conversations is updated only if the application is running in the background.

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16 Multi-Device Support

Communicator provides support for users with multiple devices. This includes several features:

- Chat invitations are sent to all devices. Before the session is accepted, messages are sent to all devices, and once answered, the chat messages go to the device that sent a reply message.
- Retrieving one's own presence notifications when another client updates the user's presence. The client updates its own status based on the information it receives from the server.
- Accepting a shared presence invitation in one client is also recognized by another client and both clients start receiving presence updates.
- A new presence subscription made in one client is recognized in another. If the contact blocks the invitation, there are presence notifications sent from the server to all of the user's clients indicating that the subscription was terminated. This information is shown to the user. If the client receives two presence authorization requests from two or more devices for the same user, it only shows one request to the user.
- Removing a contact from a contact list in one device is recognized in another client and the contact list is updated (that is, the contact is removed) in the other client as well.

16.1 Message History and Message Read Status Synchronization

Communicator introduces support for synchronizing message history and message read status on all devices.

- Message history is retrieved and synchronized on all devices. This includes all received and sent messages, even if the particular user device was not online when a message is received or sent.
- Message history is fetched when the mobile application is brought from the background to the foreground, or at certain time periods when receiving messages in the background.

NOTE: Received messages are immediately available on all logged clients, while sent messages are synchronized when the message history is fetched from the server.

- Messages read status is also synchronized when a message is read on another device and unread message counts are appropriately updated on the badges.

NOTE: The application icon badge for unread messages is updated only if the application is running in the background.

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17 Other Features

17.1 Version Control

Version control is supported using the App Store mechanism. When a new release is available, the old version is removed from the App Store and users of the previous version are notified about the update possibility.

17.2 Privacy Management

Communicator supports authentication with a user name and password for different services and servers requiring authentication. For convenience, the end user can save a user name and password for different realms.

When the end user adds contacts to the *Contacts* list, these contacts receive a New Subscriber dialog asking whether they want to allow the end user to see their presence. This information is stored in this contact's presence policies.

At any time, the user can edit the presence policies (which are stored on the server). The user can see all contacts that are allowed to view their presence (white list) and users that are not allowed to view their presence (blacklist). This feature requires a compatible presence server.

17.3 Firewalls and NATs

The client supports *rport* (*RFC 3581*) for network address translation (NAT) traversal and for using the client behind a firewall. However, it is assumed that the client is mainly used with a session border controller (SBC), which also provides support for NAT traversal for several key features, such as calling (which is currently unlikely to work without an SBC).

17.4 Failover and Failback

The client supports failover and failback mechanisms for all used protocols: Xsi, XMPP, and SIP. This feature is used to:

- Detect multiple connection endpoints (per protocol).
- Order connection points by priority.
- Connect to the highest priority connection point.
- Reconnect to the next connection point by priority one (if there is a problem with the primary connection point).
- Provide a failback mechanism to switch back to the primary (which is the highest priority connection point).

17.5 Secure VoIP Communication

The client supports secure VoIP communication using encrypted call negotiation and media streams. Mandatory, preferred, and optional secure modes are supported.

17.6 VoIP Quality of Service

The client can mark audio and video streams with Differentiated Services Code Point (DSCP) or Type of Service (ToS) flags using the Quality of Service (QoS) capabilities of the network equipment.

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17.7 Emergency Call Address Change Service

Depending on service provider settings, a special dialog can be shown at login asking if the physical address must be updated. If not, login proceeds normally. If the user replies “yes”, a web browser opens with the possibility to update the physical address for emergency calls. Once the address update is complete, login continues.

Depending on service provider settings, a separate Emergency Call Address Change Service (ECACS) menu item may also be visible in the application. This menu item allows the ECACS service to be invoked at any time after login.

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Acronyms and Abbreviations

This section lists the acronyms and abbreviations found in this document. The acronyms and abbreviations are listed in alphabetical order along with their meanings.

CKJ	Chinese, Japanese, and Korean
CS	Circuit Switched
DSCP	Differentiated Services Code Point
ECACS	Emergency Call Address Change Service
FMC	Fixed-Mobile Convergence
GAL	Global Address List
IdP	Identity Provider
IM	Instant Message
IM&P	Instant Messaging and Presence
IP	Internet Protocol
JID	Jabber Identifier
NAT	Network Address Translation
PIN	Personal Identification Number
QoS	Quality of Service
RTCP	Real-Time Control Protocol
SAML	Security Assertion Markup Language
SBC	Session Border Controller
SIP	Session Initiation Protocol
SSO	Single Sign-On
ToS	Type of Service
UC	Unified Communications
UI	User Interface
URI	Uniform Resource Identifier
VM	Voice Mail
VoIP	Voice Over IP
WebRTC	Web Real-Time Communication
XMPP	Extensible Messaging and Presence Protocol
Xsi	Xtended Services Interface

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Appendix A: Third-Party Software and Copyright

This software uses XMPP Framework (https://github.com/robbiehanson/XMPPFramework), license: https://github.com/robbiehanson/XMPPFramework/blob/master/copying.txt

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