

TotalCloud PBX Hub User Guide: iOS Tablet v_1

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1 About Hub for iOS Tablet

Hub 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

2 Get Started

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

2.1 Installation

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

2.2 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 Hub to remember your password.
4. Select whether you want Hub to sign you in automatically on subsequent launches.
5. Tap **Sign In**.

NOTE: Once the user is signed in, the application will not ask again for the username and password until the user signs 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 client 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 the user can set the location. When the location is set, the user can return to the client and is signed in automatically.
- Ok – Sign-in completes and the user can use the client.
- Cancel – Sign-in is canceled and the user is returned to the *Sign In* screen.

With advanced sign-in, there are two options:

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

3 Main Tabs

When you start Hub 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 left pane view changes the right pane view.

Icon	Description
	My Room – Access your personal room.
	Contacts – View your buddy list and local contacts or search for directory contacts.
	History – View incoming, outgoing, and missed calls.
	Chat – View chat history.
	Call – Make calls.
	Settings – Set up your client.

4 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 Hub 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:
 - Contact (Buddy) list
 - Local contacts
 - Directory contacts

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

4.1 Contact Card

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

The user 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.

4.2 Add Contacts

When you sign in for the first time, there are no contacts on your *Contacts* list. Add a new presence-enabled 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 buddy request, you can ignore or accept it. If you ignore the buddy request, you can always share your presence information later by selecting *Subscribe* from the buddy contact card. Note that the contact must accept your subscription request for you to establish the presence relationship successfully.

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, select contacts that you want to be in the group, and then select **Done**.

4.3 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.

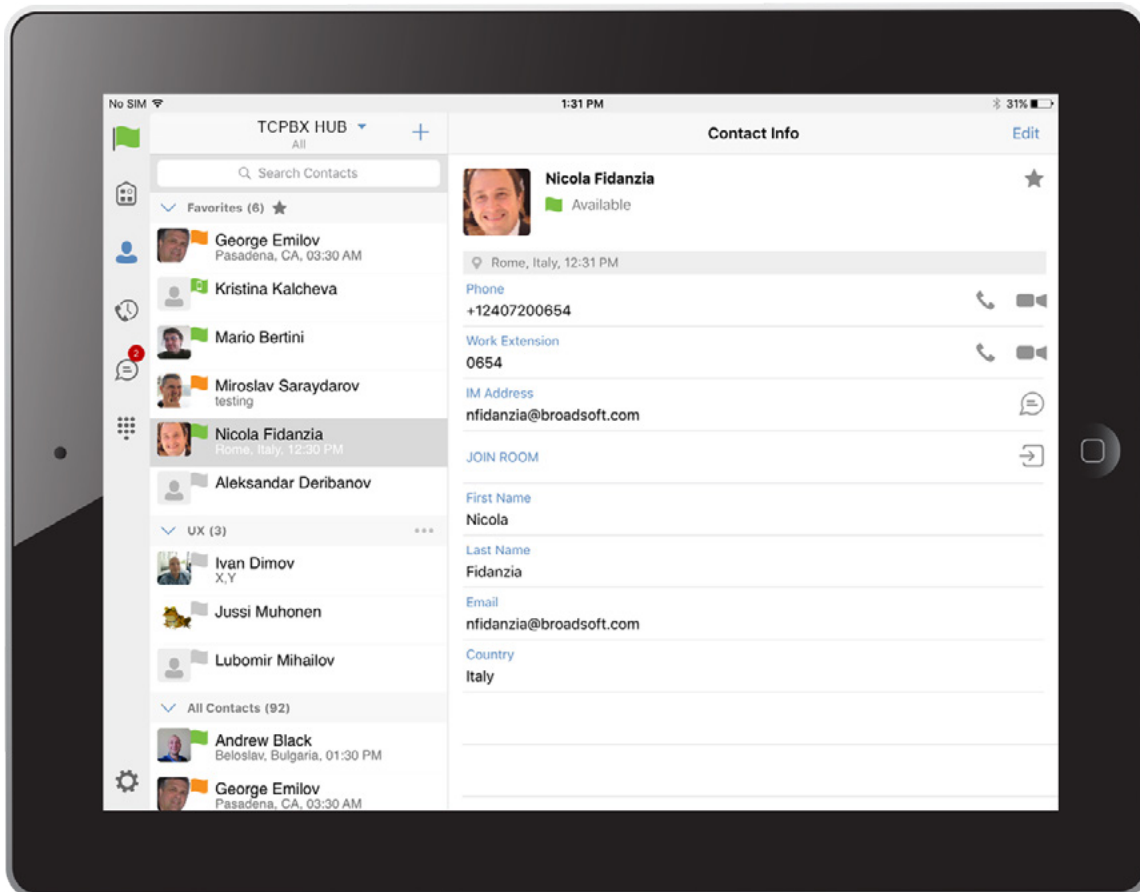


Figure 2 Contact Info Screen

4.4 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).

Contacts sorting and ordering:








- 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 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 display name.
- All Contacts with Groups are ordered as in the native app, based on the following phone settings: *Settings* → *Mail, Contacts, Calendars* → *Contacts* → *Sort Order*.

5. 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 Hub.

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
	The green availability icon indicates that the user is online and ready for communication.
	The yellow availability icon indicates that the user is online on their Hub Desktop client, but has been idle or away from their computer for more than 10 minutes.
	The red availability icon indicates that the user is busy and does not want to be disturbed.
	The grey availability icon indicates that the user is offline and the only available contact method is calling or chatting.
	The question mark indicates that a subscription is pending and the contact has not yet approved to share their availability.
	This icon indicates that the contact is busy due to a call. This is an automated availability status.
	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 all tab views. The availability icon opens the *My status* screen where you can change your avatar, personal message, and availability status.

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.

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*.

6 Instant Messaging

6.1 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.

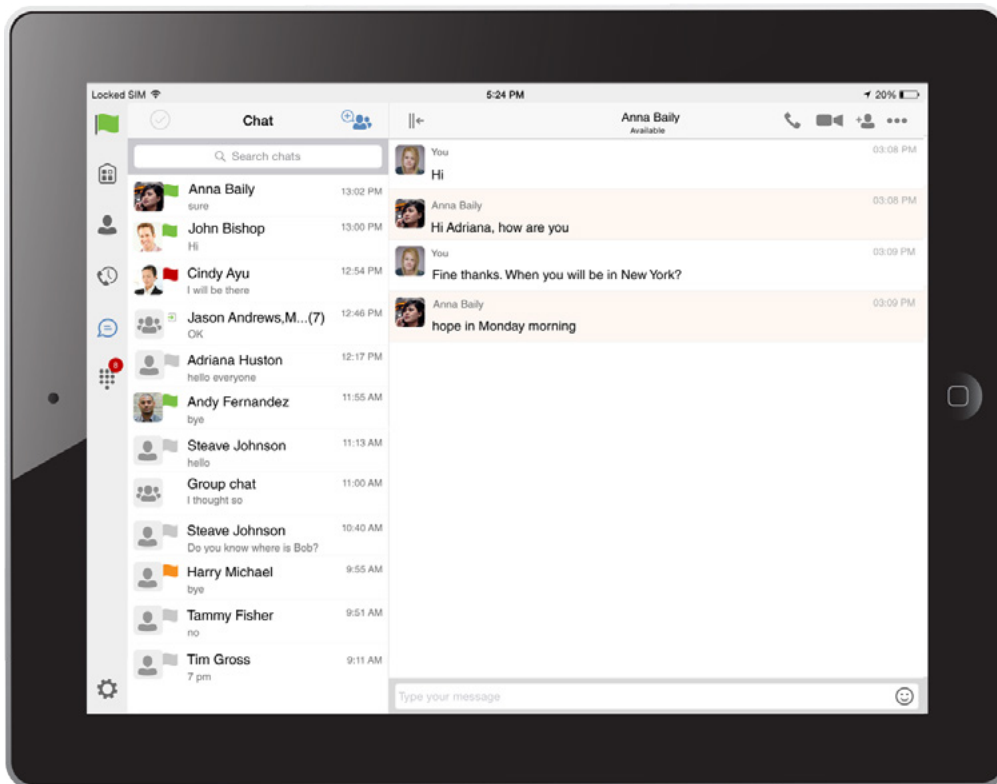





Figure 3 Chat Tab

Tap the availability status icon  to update your status or location and enter free text. Tap the *My Status* popover 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.

6.2 Chat

Start a chat using one of the following methods:

- From the *Buddies* 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 auto-correct, 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 the user wants to continue chatting. If the user navigates back to the chat list, then this specific chat entry is removed from the list because there is no chat history associated with it.

6.3 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 Create 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 and choose a participant to remove 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.

A user 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 the user no longer receives messages from the chat. When tapping on the “offline” chat, the user re-joins the room and starts receiving messages. However, the user does not receive the messages that were sent in the chat while the user was 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.

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

Deleting a chat room is not supported.

7 Audio and Video Calls

7.1 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 voicemail box. A long press on the “1” digit connects you to the voicemail box. When there is no voice mail in your voicemail box, no notification badge is shown.

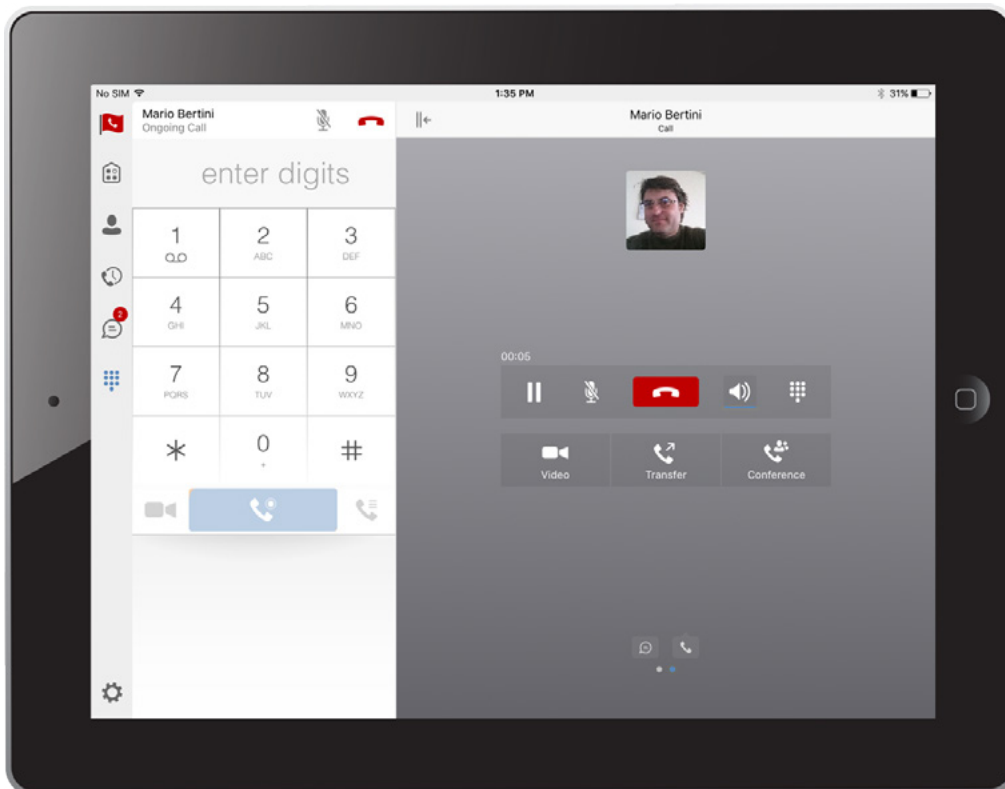


Figure 4 Dial Pad Tab

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.

7.2 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.

7.3 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.

7.4 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)

7.5 Missed Calls and New Messages

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

7.6 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).

7.7 Business Line Call Back

Hub 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.

7.8 Contact Name Lookup for Incoming Calls and Call Logs

At receiving a call, Hub 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.

7.9 N-Way Calling (Conference)

Hub 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 the user 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.

7.10 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.

7.11 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 [7.2 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.

7.12 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 pressing 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.

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

Hub provides 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. The user can perform a swipe to switch between the sessions.

8 Call History

The client supports the basic BroadWorks Call History. From the segmented controls, the *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 call items consists of an icon showing what kind of call it was (a green arrow means incoming, a blue arrow means outgoing, and a red arrow means missed). It also shows the name, number, *Unavailable* status for the caller, and below the name, it shows the number, if available. To the right is the date of the call and the time the call was initiated.

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

9 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
- Version
- Help

9.1 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 Anywhere
- BroadWorks Remote Office

9.1.2 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.

9.1.3 Do Not Disturb

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

9.1.4 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 will be 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).

9.1.5 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.

9.2 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
 - About
 - Troubleshooting

9.2.1 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.

9.2.2 Caller ID Lookup

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

9.2.3 Device ID

Hub 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 Hub to the reported device and the user can sign in only from this device.

9.2.4 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 email 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.

Troubleshooting options:

- **Console logging** – Option for getting logs in a development environment. The device should be connected to a PC/MAC and the logs to appear real-time in the console.
- **File Logging** – Saves logs to the device memory for subsequent sending by email.
- **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.

9.3 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:

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

9.4 Help Page

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

9.4 Sign Out

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

10 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 others contact's *My Room* audio bridge from directory contact card.

11 Hub and iPad Settings

From iPad Settings → Hub, the user can allow Hub to access:

- Contacts
- Microphone
- Camera
- Notifications

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

In addition, the user can configure the type of notifications they want to get with Hub:

- Allow Notifications
- Show in Notification Center
- Sounds
- Badge App Icon
- Show on Lock Screen
- It is recommended for all of the items in the previous list to be enabled.
- In addition, it is recommended to configure the option "Alert style when unlocked" to "Alerts".

12 Screen Share

Hub for iPad supports only view of Screen Share. When a Screen Share invitation is sent via Desktop Hub, 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. The user 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])

13 Search

Hub supports search in Hub 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.

Hub for iOS also supports search in an LDAP-compatible directory like Microsoft Exchange. If the device email and contact applications are synchronized with Microsoft Exchange or compatible email provider, then Hub 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.

14 Push Notifications

Hub introduces support for Push Notifications for Incoming Calls.

NOTE: This feature is available in preview mode only. Customers can install and try the functionality in a lab environment; however, the feature is not available for deployment to end users in a production environment.

The feature leverages support on the BroadWorks Application Server to send Push Notifications to mobile applications over Apple Push Notification services, using the BroadWorks Push Notification Server to send the messages to the Google and Apple servers.

Mobile client applications use push notifications to get alerted for incoming calls and accept the call as VoIP.

When there is new call, BroadWorks sends a push notification to the client, which is presented to the user as either an OS-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 Android, the call is presented to the user 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.

15 Multi-Device Support

Hub 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 Other Features

16.1 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.

16.2 Privacy Management

Hub 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.

16.3 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).

16.4 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).

16.5 Secure VoIP Communication

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

16.6 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.

16.7 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.

Acronyms and Abbreviations

CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
CS	Circuit Switched
DSCP	Differentiated Services Code Point
FMC	Fixed-Mobile Convergence
IM&P	Instant Messaging and Presence
IP	Internet Protocol
NAT	Network Address Translation
PIN	Personal Identification Number
QoS	Quality of Service
RTCP	Real-Time Control Protocol
SBC	Session Border Controller
SIP	Session Initiation Protocol
ToS	Type of Service
UC	Unified Communications
URI	Uniform Resource Identifier
VM	Voice Mail
VoIP	Voice Over IP
XMPP	Extensible Messaging and Presence Protocol
XR	Extended Reports
Xsi	Xtended Services Interface

Appendix A: Third Party Software and Copyright

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