hangups Documentation

Release 0.4.1

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October 01, 2016

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hangups is the first third-party instant messaging client for Google Hangouts. It includes both a Python library and a reference client with a text-based user interface.

Unlike its predecessor Google Talk, Hangouts uses a proprietary, non-interoperable protocol. hangups is implemented by reverse-engineering this protocol, which allows it to support features like group messaging that aren't available in clients that connect via XMPP.

hangups is still in an early stage of development. The reference client is usable for basic chatting, but the API is undocumented and subject to change. Bug reports and pull requests are welcome!

CHAPTER 1

Quick Links

- hangups on GitHub

CHAPTER 2

Documentation Contents

2.1 Installation

hangups requires Python 3.3, 3.4, or 3.5 and is known to work on Linux, Mac OS X, and Windows (with Cygwin).

2.1.1 Python Package Index (PyPI)

hangups is listed in PyPI, and may be installed using pip:

```
pip3 install hangups
```

2.1.2 Docker

hangups is available as an automated build on Docker Hub as tdryer/hangups.

Create a data-only container for hangups to allow upgrading without losing your login session:

```
docker run --name hangups-session --entrypoint true tdryer/hangups
```

Whenever you want to start hangups, run a new container:

```
docker run -it --rm --name hangups --volumes-from hangups-session tdryer/hangups
```

To upgrade hangups, pull the latest version of the image:

```
docker pull tdryer/hangups
```

2.1.3 Arch Linux

An unofficial hangups package is available for Arch Linux in the Arch User Repository.

2.1.4 Install from Source

The hangups code is available from GitHub. Either download and extract a hangups release archive, or clone the hangups repository:

```
git clone https://github.com/tdryer/hangups.git
```

Switch to the hangups directory and install the package:

```
cd hangups
python3 setup.py install
```

2.2 User Guide

This page is intended for end-users who want to use the textual user interface included with hangups.

2.2.1 Running

Once installed, run this command to start hangups:

```
hangups
```

For help with command line arguments, run:

```
hangups -h
```

2.2.2 Logging in

The first time you start hangups, you will need to log in to your Google account. hangups supports logging in using OAuth 2.0. You will be prompted to open a link in your browser. Google will prompt you to authorize the application, and then provide an authorization code. Copy and paste the authorization code into hangups to complete the process.

After a successful login, hangups will save a refresh token allowing it to login automatically. By default, the token is saved to a file in an OS-specific cache directory. The default token file path can be viewed using `hangups -h`. To specify a different path for the token file, use the `--token-path` option:

```
hangups --token-path /path/to/refresh_token.txt
```

hangups may be deauthorized from your Google account from the Google recently used devices page. hangups will be listed as "iOS".

2.2.3 Usage

After connecting, hangups will display the conversations tab, which lists the names of all the available conversations. Use the up and down arrow keys to select a conversation, and press `enter` to open it in a new tab.

hangups uses a tabbed interface. The first tab is always the conversations tab. Once multiple tabs are open, use `ctrl+u` and `ctrl+d` and move up and down the list of tabs. Use `ctrl+w` to close a tab.

In a conversation tab, type a message and press `enter` to send it, or use the up and arrows to scroll the list of previous messages. hangups supports readline commands for editing text. See the readlike library documentation for a full list. Note that some of hangouts' bindings conflict with these key combinations, see the Configuration section on how to adjust key bindings.

When new messages arrive, hangups will open a conversation tab in the background, and display the number of unread messages in the tab title. On Linux (with an appropriate desktop notification service running) and Mac OS X, hangups will also display a desktop notification. To mark messages as read, press any key (such as `enter`) while in a conversation tab.

When the network connection is interrupted, hangups will show a "Disconnected" message in each conversation. When the connection is restored a "Connected" message is shown, and hangups will attempt to sync any messages that were missed during the disconnection. If hangups is disconnected for too long, it will eventually exit.

To exit hangups, press `ctrl+e`.

2.2.4 Configuration

hangups may be configured through both command line arguments and a configuration file. See the output of *hangups -h* for details on using both of these methods.

Keybindings are specified using urwid's format, for example: *ctrl e* or *shift ctrl e*. Some key combinations may be unavailable due to terminal limitations or conflicts.

Colours are specified using urwid's colors, for example: *dark red* or *Xresources color1*. Standard Foreground and Background Colors can be found here for 16 bit palette.

Constants for 88-Color and 256-Color palettes for urwid's hcolors.

2.2.5 Troubleshooting

hangups can log information that may be useful for troubleshooting a problem. Run `hangups -h` to view the default log file path.

To specify a custom log file path, run:

```
hangups --log /path/to/mylog
```

To log detailed debugging messages, run:

```
hangups -d
```

2.3 Developer Guide

This page is intended for developers who want to use the hangups library to write their own applications.

2.3.1 Example

See the examples directory for examples of using hangups as a library.

2.4 Protocol Documentation

The Hangouts protocol is undocumented, as such any documentation here is unofficial and liable to be incomplete and/or incorrect.

2.4.1 Protocol Buffers

This file documents the reverse-engineered Protocol Buffers used by the Hangouts chat protocol. hangups and other projects may these Protocol Buffers to serialize and deserialize data for communicating with Google's servers.

Some of the most important Protocol Buffer messages include:

- *Conversation*
- *Entity*
- *Event*
- *StateUpdate*

DoNotDisturbSetting

The state of do-not-disturb mode. Not to be confused with DndSetting, which is used to change the state of do-not-disturb mode.

Field	Number	Type	Label	Description
`do_not_disturb`	1	bool	optional	Whether do-not-disturb mode is enabled.
`expiration_timestamp`	2	uint64	optional	Timestamp when do-not-disturb mode expires.
`version`	3	uint64	optional	Timestamp when this setting was applied. Not present when this message comes from a notification.

NotificationSettings

Field	Number	Type	Label	Description
`dnd_settings`	1	*DoNotDisturbSetting*	optional	

ConversationId

Identifies a conversation.

Field	Number	Type	Label	Description
`id`	1	string	optional	Unique identifier for a conversation.

ParticipantId

Identifies a user.

Field	Number	Type	Label	Description
`gaia_id`	1	string	optional	Unique identifier for a user's Google account.
`chat_id`	2	string	optional	Seems to always be the same as gaia_id.

DeviceStatus

Indicates whether Hangouts is active (running in the foreground) on different types of devices.

Field	Number	Type	Label	Description
`mobile`	1	bool	optional	True if a mobile phone is active.
`desktop`	2	bool	optional	True if a desktop or laptop is active.
`tablet`	3	bool	optional	True if a tablet is active.

LastSeen

Field	Number	Type	Label	Description
last_seen_timestamp_usec	1	uint64	optional	

Presence

Field	Number	Type	Label	Description
reachable	1	bool	optional	
available	2	bool	optional	
device_status	6	*DeviceStatus*	optional	
mood_message	9	*MoodMessage*	optional	
last_seen	10	*LastSeen*	optional	

PresenceResult

Field	Number	Type	Label	Description
user_id	1	*ParticipantId*	optional	
presence	2	*Presence*	optional	

ClientIdentifier

Field	Number	Type	Label	Description
resource	1	string	optional	(client_id in hangups).
header_id	2	string	optional	unknown (header_id in hangups).

ClientPresenceState

Field	Number	Type	Label	Description
identifier	1	*ClientIdentifier*	optional	
state	2	*ClientPresenceStateType*	optional	

UserEventState

Field	Number	Type	Label	Description
user_id	1	*ParticipantId*	optional	
client_generated_id	2	string	optional	
notification_level	3	*NotificationLevel*	optional	

Formatting

Field	Number	Type	Label	Description
bold	1	bool	optional	
italic	2	bool	optional	
strikethrough	3	bool	optional	
underline	4	bool	optional	

LinkData

Field	Number	Type	Label	Description
link_target	1	string	optional	

Segment

A segment of a message. Message are broken into segments that may be of different types and have different formatting.

Field	Number	Type	Label	Description
type	1	*SegmentType*	required	Note: This field is required because Hangouts for Chrome misbehaves if it isn't serialized.
text	2	string	optional	The segment text. For line breaks, may either be empty or contain new line character.
formatting	3	*Formatting*	optional	Formatting for this segment.
link_data	4	*LinkData*	optional	Link data for this segment, if it is a link.

PlusPhoto

Google Plus photo that can be embedded in a chat message.

Field	Number	Type	Label	Description
thumbnail	1	*PlusPhoto.Thumbnail*	optional	Thumbnail.
owner_obfuscated_id	2	string	optional	Owner obfuscated ID.
album_id	3	string	optional	Album ID.
photo_id	4	string	optional	Photo ID.
url	6	string	optional	URL of full-sized image.
original_content_url	10	string	optional	URL of image thumbnail.
media_type	13	*PlusPhoto.MediaType*	optional	The media type.
stream_id	14	string	repeated	List of stream ID parameters.

PlusPhoto.Thumbnail

Metadata for displaying an image thumbnail.

Field	Number	Type	Label	Description
url	1	string	optional	URL to navigate to when thumbnail is selected (a Google Plus album page).
image_url	4	string	optional	URL of thumbnail image.
width_px	10	uint64	optional	Image width in pixels.
height_px	11	uint64	optional	Image height in pixels.

PlusPhoto.MediaType

Media type.

Name	Number	Description
MEDIA_TYPE_UNKNOWN	0	
MEDIA_TYPE_PHOTO	1	
MEDIA_TYPE_ANIMATED_PHOTO	4	

Place

Place that can be embedded in a chat message via Google Maps.

Field	Number	Type	Label	Description
url	1	string	optional	Google Maps URL pointing to the map coordinates.
name	3	string	optional	Name of map location.
representative_image	185	*Place.RepresentativeImage*	optional	Representative image of the place (map with pin).

Place.RepresentativeImage

Representative image of a place.

Field	Number	Type	Label	Description
url	2	string	optional	URL of image.

EmbedItem

An item of some type embedded in a chat message.

Field	Number	Type	Label	Description
type	1	*ItemType*	repeated	List of embedded item types in this message.
id	2	string	optional	For photos this is not given, for maps, it's the URL of the map.
plus_photo	27639957	*PlusPhoto*	optional	Embedded Google Plus photo.
place	35825640	*Place*	optional	Embedded Google Map of a place.

Attachment

An attachment for a chat message.

Field	Number	Type	Label	Description
embed_item	1	*EmbedItem*	optional	

MessageContent

Chat message content.

Field	Number	Type	Label	Description
segment	1	*Segment*	repeated	
attachment	2	*Attachment*	repeated	

EventAnnotation

Annotation that can be applied to a chat message event. The only known use for this is "me" actions supported by the Chrome client (type 4).

Field	Number	Type	Label	Description
type	1	int32	optional	Annotation type.
value	2	string	optional	Optional annotation string value.

ChatMessage

A chat message in a conversation.

Field	Number	Type	Label	Description
annotation	2	*EventAnnotation*	repeated	Optional annotation to attach to message.
message_content	3	*MessageContent*	optional	The message's content.

MembershipChange

Field	Number	Type	Label	Description
type	1	*MembershipChangeType*	optional	
participant_ids	3	*ParticipantId*	repeated	

ConversationRename

Field	Number	Type	Label	Description
new_name	1	string	optional	
old_name	2	string	optional	

HangoutEvent

Field	Number	Type	Label	Description
event_type	1	*HangoutEventType*	optional	
participant_id	2	*ParticipantId*	repeated	

OTRModification

Field	Number	Type	Label	Description
old_otr_status	1	*OffTheRecordStatus*	optional	
new_otr_status	2	*OffTheRecordStatus*	optional	
old_otr_toggle	3	*OffTheRecordToggle*	optional	
new_otr_toggle	4	*OffTheRecordToggle*	optional	

HashModifier

Field	Number	Type	Label	Description
update_id	1	string	optional	
hash_diff	2	uint64	optional	
version	4	uint64	optional	

Event

Event that becomes part of a conversation's history.

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	ID of the conversation this event belongs to.
sender_id	2	*ParticipantId*	optional	ID of the user that sent this event.
timestamp	3	uint64	optional	Timestamp when the event occurred.
self_event_state	4	*UserEventState*	optional	
source_type	6	*SourceType*	optional	
chat_message	7	*ChatMessage*	optional	
membership_change	9	*MembershipChange*	optional	
conversation_rename	10	*ConversationRename*	optional	
hangout_event	11	*HangoutEvent*	optional	
event_id	12	string	optional	Unique ID for the event.
expiration_timestamp	13	uint64	optional	
otr_modification	14	*OTRModification*	optional	
advances_sort_timestamp	15	bool	optional	
otr_status	16	*OffTheRecordStatus*	optional	
persisted	17	bool	optional	
medium_type	20	*DeliveryMedium*	optional	
event_type	23	*EventType*	optional	The event's type.
event_version	24	uint64	optional	Event version timestamp.
hash_modifier	26	*HashModifier*	optional	
group_link_sharing_modification	31	*GroupLinkSharingModification*	optional	

UserReadState

Field	Number	Type	Label	Description
participant_id	1	*ParticipantId*	optional	
latest_read_timestamp	2	uint64	optional	

DeliveryMedium

Field	Number	Type	Label	Description
medium_type	1	*DeliveryMediumType*	optional	
phone_number	2	*PhoneNumber*	optional	Phone number to use for sending Google Voice messages.

DeliveryMediumOption

Field	Number	Type	Label	Description
delivery_medium	1	*DeliveryMedium*	optional	
current_default	2	bool	optional	

UserConversationState

Field	Number	Type	Label	Description
client_generated_id	2	string	optional	
self_read_state	7	*UserReadState*	optional	
status	8	*ConversationStatus*	optional	
notification_level	9	*NotificationLevel*	optional	
view	10	*ConversationView*	repeated	
inviter_id	11	*ParticipantId*	optional	
invite_timestamp	12	uint64	optional	
sort_timestamp	13	uint64	optional	
active_timestamp	14	uint64	optional	
invite_affinity	15	*InvitationAffinity*	optional	
delivery_medium_option	17	*DeliveryMediumOption*	repeated	

ConversationParticipantData

Field	Number	Type	Label	Description
id	1	*ParticipantId*	optional	
fallback_name	2	string	optional	
invitation_status	3	*InvitationStatus*	optional	
participant_type	5	*ParticipantType*	optional	
new_invitation_status	6	*InvitationStatus*	optional	

Conversation

A conversation between two or more users.

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
type	2	*ConversationType*	optional	
name	3	string	optional	
self_conversation_state	4	*UserConversationState*	optional	
read_state	8	*UserReadState*	repeated	
has_active_hangout	9	bool	optional	True if the conversation has an active Hangout.
otr_status	10	*OffTheRecordStatus*	optional	The conversation's "off the record" status.
otr_toggle	11	*OffTheRecordToggle*	optional	Whether the OTR toggle is available to the user for this conversation.
conversation_history_supported	12	bool	optional	
current_participant	13	*ParticipantId*	repeated	
participant_data	14	*ConversationParticipantData*	repeated	
network_type	18	*NetworkType*	repeated	
force_history_state	19	*ForceHistory*	optional	
group_link_sharing_status	22	*GroupLinkSharingStatus*	optional	

EasterEgg

Field	Number	Type	Label	Description
message	1	string	optional	

BlockStateChange

Field	Number	Type	Label	Description
participant_id	1	*ParticipantId*	optional	
new_block_state	2	*BlockState*	optional	

Photo

Field	Number	Type	Label	Description
photo_id	1	string	optional	Picasa photo ID.
delete_albumless_source_photo	2	bool	optional	
user_id	3	string	optional	Optional Picasa user ID needed for photos from other accounts (eg. stickers).
is_custom_user_id	4	bool	optional	Must be true if user_id is specified.

ExistingMedia

Field	Number	Type	Label	Description
photo	1	*Photo*	optional	

EventRequestHeader

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
client_generated_id	2	uint64	optional	
expected_otr	3	*OffTheRecordStatus*	optional	
delivery_medium	4	*DeliveryMedium*	optional	
event_type	5	*EventType*	optional	

ClientVersion

The client and device version.

Field	Number	Type	Label	Description
client_id	1	*ClientId*	optional	Identifies the client.
build_type	2	*ClientBuildType*	optional	The client build type.
major_version	3	string	optional	Client version.
version_timestamp	4	uint64	optional	Client version timestamp.
device_os_version	5	string	optional	OS version string (for native apps).
device_hardware	6	string	optional	Device hardware name (for native apps).

RequestHeader

Header for requests from the client to the server.

Field	Number	Type	Label	Description
client_version	1	*ClientVersion*	optional	
client_identifier	2	*ClientIdentifier*	optional	
language_code	4	string	optional	

ResponseHeader

Header for responses from the server to the client.

Field	Number	Type	Label	Description
status	1	*ResponseStatus*	optional	
error_description	2	string	optional	
debug_url	3	string	optional	
request_trace_id	4	string	optional	
current_server_time	5	uint64	optional	

Entity

A user that can participate in conversations.

Field	Number	Type	Label	Description
id	9	*ParticipantId*	optional	The user's ID.
presence	8	*Presence*	optional	Optional user presence status.
properties	10	*EntityProperties*	optional	Optional user properties.
entity_type	13	*ParticipantType*	optional	
had_past_hangout_state	16	*Entity.PastHangoutState*	optional	

Entity.PastHangoutState

Name	Number	Description
PAST_HANGOUT_STATE_UNKNOWN	0	
PAST_HANGOUT_STATE_HAD_PAST_HANGOUT	1	
PAST_HANGOUT_STATE_NO_PAST_HANGOUT	2	

EntityProperties

Field	Number	Type	Label	Description
type	1	*ProfileType*	optional	
display_name	2	string	optional	
first_name	3	string	optional	
photo_url	4	string	optional	Photo URL with protocol scheme omitted (eg. "//lh.googleusercontent.com/...").
email	5	string	repeated	
phone	6	string	repeated	
in_users_domain	10	bool	optional	
gender	11	*Gender*	optional	
photo_url_status	12	*PhotoUrlStatus*	optional	
canonical_email	15	string	optional	

ConversationState

State of a conversation and recent events.

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
conversation	2	*Conversation*	optional	
event	3	*Event*	repeated	
event_continuation_token	5	*EventContinuationToken*	optional	

EventContinuationToken

Token that allows retrieving more events from a position in a conversation. Specifying event_timestamp is sufficient.

Field	Number	Type	Label	Description
event_id	1	string	optional	
storage_continuation_token	2	bytes	optional	
event_timestamp	3	uint64	optional	

EntityLookupSpec

Specifies an entity to lookup by one of its properties.

Field	Number	Type	Label	Description
gaia_id	1	string	optional	
email	3	string	optional	
phone	4	string	optional	Phone number as string (eg. "+15551234567").
create_offnetwork_gaia	6	bool	optional	Whether create a gaia_id for off-network contacts (eg. Google Voice contacts).

ConfigurationBit

Field	Number	Type	Label	Description
configuration_bit_type	1	*ConfigurationBitType*	optional	
value	2	bool	optional	

RichPresenceState

Field	Number	Type	Label	Description
get_rich_presence_enabled_state	3	*RichPresenceEnabledState*	repeated	

RichPresenceEnabledState

Field	Number	Type	Label	Description
type	1	*RichPresenceType*	optional	
enabled	2	bool	optional	

DesktopOffSetting

Field	Number	Type	Label	Description
desktop_off	1	bool	optional	State of "desktop off" setting.

DesktopOffState

Field	Number	Type	Label	Description
desktop_off	1	bool	optional	Whether Hangouts desktop is signed off or on.
version	2	uint64	optional	

DndSetting

Enable or disable do-not-disturb mode. Not to be confused with DoNotDisturbSetting, which is used to indicate the state of do-not-disturb mode.

Field	Number	Type	Label	Description
do_not_disturb	1	bool	optional	Whether to enable or disable do-not-disturb mode.
timeout_secs	2	uint64	optional	Do not disturb expiration in seconds.

PresenceStateSetting

Field	Number	Type	Label	Description
timeout_secs	1	uint64	optional	
type	2	*ClientPresenceStateType*	optional	

MoodMessage

Field	Number	Type	Label	Description
mood_content	1	*MoodContent*	optional	

MoodContent

Field	Number	Type	Label	Description
segment	1	*Segment*	repeated	

MoodSetting

The user's mood message.

Field	Number	Type	Label	Description
mood_message	1	*MoodMessage*	optional	

MoodState

Field	Number	Type	Label	Description
mood_setting	4	*MoodSetting*	optional	

DeleteAction

Field	Number	Type	Label	Description
delete_action_timestamp	1	uint64	optional	
delete_upper_bound_timestamp	2	uint64	optional	
delete_type	3	*DeleteType*	optional	

InviteeID

Field	Number	Type	Label	Description
gaia_id	1	string	optional	
fallback_name	4	string	optional	

Country

Describes a user's country.

Field	Number	Type	Label	Description
region_code	1	string	optional	Abbreviated region code (eg. "CA").
country_code	2	uint64	optional	Country's calling code (eg. "1").

DesktopSoundSetting

Sound settings in the desktop Hangouts client.

Field	Number	Type	Label	Description
desktop_sound_state	1	*SoundState*	optional	Whether to play sound for incoming messages.
desktop_ring_sound_state	2	*SoundState*	optional	Whether to ring for incoming calls.

PhoneData

Field	Number	Type	Label	Description
phone	1	*Phone*	repeated	
caller_id_settings_mask	3	*CallerIdSettingsMask*	optional	

Phone

Field	Number	Type	Label	Description
phone_number	1	*PhoneNumber*	optional	
google_voice	2	bool	optional	
verification_status	3	*PhoneVerificationStatus*	optional	
discoverable	4	bool	optional	
discoverability_status	5	*PhoneDiscoverabilityStatus*	optional	
primary	6	bool	optional	

I18nData

Field	Number	Type	Label	Description
national_number	1	string	optional	
international_number	2	string	optional	
country_code	3	uint64	optional	
region_code	4	string	optional	
is_valid	5	bool	optional	
validation_result	6	*PhoneValidationResult*	optional	

PhoneNumber

Field	Number	Type	Label	Description
e164	1	string	optional	Phone number as string (eg. “+15551234567”).
i18n_data	2	*I18nData*	optional	

SuggestedContactGroupHash

Field	Number	Type	Label	Description
max_results	1	uint64	optional	Number of results to return from this group.
hash	2	bytes	optional	An optional 4-byte hash. If this matches the server's hash, no results will be sent.

SuggestedContact

Field	Number	Type	Label	Description
entity	1	*Entity*	optional	The contact's entity.
invitation_status	2	*InvitationStatus*	optional	The contact's invitation status.

SuggestedContactGroup

Field	Number	Type	Label	Description
hash_matched	1	bool	optional	True if the request's hash matched and no contacts will be included.
hash	2	bytes	optional	A 4-byte hash which can be used in subsequent requests.
contact	3	*SuggestedContact*	repeated	List of contacts in this group.

GroupLinkSharingModification

Field	Number	Type	Label	Description
new_status	1	*GroupLinkSharingStatus*	optional	

StateUpdate

Pushed from the server to the client to notify it of state changes. Includes exactly one type of notification, and optionally updates the attributes of a conversation.

Field	Number	Type	Label	Description
state_update_header	1	*StateUpdateHeader*	optional	
conversation	13	*Conversation*	optional	If set, includes conversation attributes that have been updated by the notification.
conversation_notification	2	*ConversationNotification*	optional	
event_notification	3	*EventNotification*	optional	
focus_notification	4	*SetFocusNotification*	optional	
typing_notification	5	*SetTypingNotification*	optional	
notification_level_notification	6	*SetConversationNotificationLevelNotification*	optional	
reply_to_invite_notification	7	*ReplyToInviteNotification*	optional	
watermark_notification	8	*WatermarkNotification*	optional	
view_modification	11	*ConversationViewModification*	optional	
easter_egg_notification	12	*EasterEggNotification*	optional	
self_presence_notification	14	*SelfPresenceNotification*	optional	
delete_notification	15	*DeleteActionNotification*	optional	
presence_notification	16	*PresenceNotification*	optional	
block_notification	17	*BlockNotification*	optional	
notification_setting_notification	19	*SetNotificationSettingNotification*	optional	
rich_presence_enabled_state_notification	20	*RichPresenceEnabledStateNotification*	optional	

StateUpdateHeader

Header for StateUpdate messages.

Field	Number	Type	Label	Description
active_client_state	1	*ActiveClientState*	optional	
request_trace_id	3	string	optional	
notification_settings	4	*NotificationSettings*	optional	
current_server_time	5	uint64	optional	

BatchUpdate

List of StateUpdate messages to allow pushing multiple notifications from the server to the client simultaneously.

Field	Number	Type	Label	Description
state_update	1	*StateUpdate*	repeated	

ConversationNotification

Field	Number	Type	Label	Description
conversation	1	*Conversation*	optional	

EventNotification

Field	Number	Type	Label	Description
event	1	*Event*	optional	

SetFocusNotification

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
sender_id	2	*ParticipantId*	optional	
timestamp	3	uint64	optional	
type	4	*FocusType*	optional	
device	5	*FocusDevice*	optional	

SetTypingNotification

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
sender_id	2	*ParticipantId*	optional	
timestamp	3	uint64	optional	
type	4	*TypingType*	optional	

SetConversationNotificationLevelNotification

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
level	2	*NotificationLevel*	optional	
timestamp	4	uint64	optional	

ReplyToInviteNotification

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
type	2	*ReplyToInviteType*	optional	

WatermarkNotification

Field	Number	Type	Label	Description
sender_id	1	*ParticipantId*	optional	
conversation_id	2	*ConversationId*	optional	
latest_read_timestamp	3	uint64	optional	

ConversationViewModification

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
old_view	2	*ConversationView*	optional	
new_view	3	*ConversationView*	optional	

EasterEggNotification

Field	Number	Type	Label	Description
sender_id	1	*ParticipantId*	optional	
conversation_id	2	*ConversationId*	optional	
easter_egg	3	*EasterEgg*	optional	

SelfPresenceNotification

Notifies the status of other clients and mood.

Field	Number	Type	Label	Description
client_presence_state	1	*ClientPresenceState*	optional	
do_not_disturb_setting	3	*DoNotDisturbSetting*	optional	
desktop_off_setting	4	*DesktopOffSetting*	optional	
desktop_off_state	5	*DesktopOffState*	optional	
mood_state	6	*MoodState*	optional	

DeleteActionNotification

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	
delete_action	2	*DeleteAction*	optional	

PresenceNotification

Field	Number	Type	Label	Description
presence	1	*PresenceResult*	repeated	

BlockNotification

Field	Number	Type	Label	Description
block_state_change	1	*BlockStateChange*	repeated	

SetNotificationSettingNotification

Field	Number	Type	Label	Description
desktop_sound_setting	2	*DesktopSoundSetting*	optional	

RichPresenceEnabledStateNotification

Field	Number	Type	Label	Description
rich_presence_enabled_state	1	*RichPresenceEnabledState*	repeated	

ConversationSpec

Field	Number	Type	Label	Description
conversation_id	1	*ConversationId*	optional	

OffnetworkAddress

Field	Number	Type	Label	Description
type	1	*OffnetworkAddressType*	optional	
email	3	string	optional	

EntityResult

Field	Number	Type	Label	Description
lookup_spec	1	*EntityLookupSpec*	optional	
entity	2	*Entity*	repeated	

AddUserRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
invitee_id	3	*InviteeID*	repeated	
event_request_header	5	*EventRequestHeader*	optional	

AddUserResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
created_event	5	*Event*	optional	

CreateConversationRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
type	2	*ConversationType*	optional	
client_generated_id	3	uint64	optional	
name	4	string	optional	
invitee_id	5	*InviteeID*	repeated	

CreateConversationResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
conversation	2	*Conversation*	optional	
new_conversation_created	7	bool	optional	

DeleteConversationRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_id	2	*ConversationId*	optional	
delete_upper_bound_timestamp	3	uint64	optional	

DeleteConversationResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
delete_action	2	*DeleteAction*	optional	

EasterEggRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_id	2	*ConversationId*	optional	
easter_egg	3	*EasterEgg*	optional	

EasterEggResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
timestamp	2	uint64	optional	

GetConversationRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_spec	2	*ConversationSpec*	optional	
include_conversation_metadata	3	bool	optional	Whether the ConversationState in the response should include metadata other than the conversation ID (default true).
include_event	4	bool	optional	Whether to include list of events in the response (default true).
max_events_per_conversation	6	uint64	optional	
event_continuation_token	7	*EventContinuationToken*	optional	

GetConversationResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
conversation_state	2	*ConversationState*	optional	

GetEntityByIdRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
batch_lookup_spec	3	*EntityLookupSpec*	repeated	

GetEntityByIdResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
entity	2	*Entity*	repeated	Resulting entities of PARTICIPANT_TYPE_GAIA only.
entity_result	3	*EntityResult*	repeated	All resulting entities.

GetGroupConversationUrlRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_id	2	*ConversationId*	optional	Conversation to retrieve URL for.

GetGroupConversationUrlResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
group_conversation_url	2	string	optional	URL for others to join conversation.

GetSuggestedEntitiesRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
max_count	4	uint64	optional	Max number of non-grouped entities to return.
favorites	8	*SuggestedContactGroupHash*	optional	Optional hash for "favorites" contact group.
contacts_you_hangout_with	9	*SuggestedContactGroupHash*	optional	Optional hash for "contacts you hangout with" contact group.
other_contacts_on_hangouts	10	*SuggestedContactGroupHash*	optional	Optional hash for "other contacts on hangouts" contact group.
other_contacts	11	*SuggestedContactGroupHash*	optional	Optional hash for "other contacts" contact group.
dismissed_contacts	12	*SuggestedContactGroupHash*	optional	Optional hash for "dismissed contacts" contact group.
pinned_favorites	13	*SuggestedContactGroupHash*	optional	Optional hash for "pinned favorites" contact group.

GetSuggestedEntitiesResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
entity	2	*Entity*	repeated	
favorites	4	*SuggestedContactGroup*	optional	
contacts_you_hangout_with	5	*SuggestedContactGroup*	optional	
other_contacts_on_hangouts	6	*SuggestedContactGroup*	optional	
other_contacts	7	*SuggestedContactGroup*	optional	
dismissed_contacts	8	*SuggestedContactGroup*	optional	
pinned_favorites	9	*SuggestedContactGroup*	optional	

GetSelfInfoRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	

GetSelfInfoResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
self_entity	2	*Entity*	optional	
is_known_minor	3	bool	optional	
dnd_state	5	*DoNotDisturbSetting*	optional	
desktop_off_setting	6	*DesktopOffSetting*	optional	
phone_data	7	*PhoneData*	optional	
configuration_bit	8	*ConfigurationBit*	repeated	
desktop_off_state	9	*DesktopOffState*	optional	
google_plus_user	10	bool	optional	
desktop_sound_setting	11	*DesktopSoundSetting*	optional	
rich_presence_state	12	*RichPresenceState*	optional	
default_country	19	*Country*	optional	

QueryPresenceRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
participant_id	2	*ParticipantId*	repeated	
field_mask	3	*FieldMask*	repeated	

QueryPresenceResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
presence_result	2	*PresenceResult*	repeated	

RemoveUserRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
participant_id	3	*ParticipantId*	optional	Optional participant to remove from conversation, yourself if not given.
event_request_header	5	*EventRequestHeader*	optional	

RemoveUserResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
created_event	4	*Event*	optional	

RenameConversationRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
new_name	3	string	optional	
event_request_header	5	*EventRequestHeader*	optional	

RenameConversationResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
created_event	4	*Event*	optional	

SearchEntitiesRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
query	3	string	optional	
max_count	4	uint64	optional	

SearchEntitiesResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
entity	2	*Entity*	repeated	

SendChatMessageRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
annotation	5	*EventAnnotation*	repeated	
message_content	6	*MessageContent*	optional	
existing_media	7	*ExistingMedia*	optional	
event_request_header	8	*EventRequestHeader*	optional	

SendChatMessageResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
created_event	6	*Event*	optional	

SendOffnetworkInvitationRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
invitee_address	2	*OffnetworkAddress*	optional	

SendOffnetworkInvitationResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	

SetActiveClientRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
is_active	2	bool	optional	Whether to set the client as active or inactive.
full_jid	3	string	optional	'email/resource'.
timeout_secs	4	uint64	optional	Timeout in seconds for client to remain active.

SetActiveClientResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	

SetConversationLevelRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	

SetConversationLevelResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	

SetConversationNotificationLevelRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_id	2	*ConversationId*	optional	
level	3	*NotificationLevel*	optional	

SetConversationNotificationLevelResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
timestamp	2	uint64	optional	

SetFocusRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_id	2	*ConversationId*	optional	
type	3	*FocusType*	optional	
timeout_secs	4	uint32	optional	

SetFocusResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
timestamp	2	uint64	optional	

SetGroupLinkSharingEnabledRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
event_request_header	2	*EventRequestHeader*	optional	
group_link_sharing_status	4	*GroupLinkSharingStatus*	optional	New group link sharing status.

SetGroupLinkSharingEnabledResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
created_event	2	*Event*	optional	Created event of type EVENT_TYPE_GROUP_LINK_SHARING_MODIFICATION.
updated_conversation	3	*Conversation*	optional	Updated conversation.

SetPresenceRequest

Allows setting one or more of the included presence-related settings.

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
presence_state_setting	2	*PresenceStateSetting*	optional	
dnd_setting	3	*DndSetting*	optional	
desktop_off_setting	5	*DesktopOffSetting*	optional	
mood_setting	8	*MoodSetting*	optional	

SetPresenceResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	

SetTypingRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_id	2	*ConversationId*	optional	
type	3	*TypingType*	optional	

SetTypingResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
timestamp	2	uint64	optional	

SyncAllNewEventsRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
last_sync_timestamp	2	uint64	optional	Timestamp after which to return all new events.
max_response_size_bytes	8	uint64	optional	

SyncAllNewEventsResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
sync_timestamp	2	uint64	optional	
conversation_state	3	*ConversationState*	repeated	

SyncRecentConversationsRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
max_conversations	3	uint64	optional	
max_events_per_conversation	4	uint64	optional	
sync_filter	5	*SyncFilter*	repeated	

SyncRecentConversationsResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	
sync_timestamp	2	uint64	optional	
conversation_state	3	*ConversationState*	repeated	
event_continuation_token	4	*EventContinuationToken*	optional	

UpdateWatermarkRequest

Field	Number	Type	Label	Description
request_header	1	*RequestHeader*	optional	
conversation_id	2	*ConversationId*	optional	
last_read_timestamp	3	uint64	optional	

UpdateWatermarkResponse

Field	Number	Type	Label	Description
response_header	1	*ResponseHeader*	optional	

ActiveClientState

Describes which Hangouts client is active.

Name	Number	Description
ACTIVE_CLIENT_STATE_NO_ACTIVE	0	No client is active.
ACTIVE_CLIENT_STATE_IS_ACTIVE	1	This is the active client.
ACTIVE_CLIENT_STATE_OTHER_ACTIVE	2	Other client is active.

FocusType

Name	Number	Description
FOCUS_TYPE_UNKNOWN	0	
FOCUS_TYPE_FOCUSED	1	
FOCUS_TYPE_UNFOCUSED	2	

FocusDevice

Name	Number	Description
FOCUS_DEVICE_UNSPECIFIED	0	
FOCUS_DEVICE_DESKTOP	20	
FOCUS_DEVICE_MOBILE	300	

TypingType

Name	Number	Description
TYPING_TYPE_UNKNOWN	0	
TYPING_TYPE_STARTED	1	Started typing.
TYPING_TYPE_PAUSED	2	Stopped typing with inputted text.
TYPING_TYPE_STOPPED	3	Stopped typing with no inputted text.

ClientPresenceStateType

Name	Number	Description
CLIENT_PRESENCE_STATE_UNKNOWN	0	
CLIENT_PRESENCE_STATE_NONE	1	
CLIENT_PRESENCE_STATE_DESKTOP_IDLE	30	
CLIENT_PRESENCE_STATE_DESKTOP_ACTIVE	40	

NotificationLevel

Name	Number	Description
NOTIFICATION_LEVEL_UNKNOWN	0	
NOTIFICATION_LEVEL_QUIET	10	Notifications are disabled.
NOTIFICATION_LEVEL_RING	30	Notifications are enabled.

SegmentType

Name	Number	Description
SEGMENT_TYPE_TEXT	0	Segment is text.
SEGMENT_TYPE_LINE_BREAK	1	Segment is a line break.
SEGMENT_TYPE_LINK	2	Segment is hyperlinked text.

ItemType

A type of embedded item.

Name	Number	Description
ITEM_TYPE_THING	0	
ITEM_TYPE_PLUS_PHOTO	249	Google Plus photo.
ITEM_TYPE_PLACE	335	
ITEM_TYPE_PLACE_V2	340	Google Map place.

MembershipChangeType

Name	Number	Description
MEMBERSHIP_CHANGE_TYPE_JOIN	1	
MEMBERSHIP_CHANGE_TYPE_LEAVE	2	

HangoutEventType

Name	Number	Description
HANGOUT_EVENT_TYPE_UNKNOWN	0	
HANGOUT_EVENT_TYPE_START	1	
HANGOUT_EVENT_TYPE_END	2	
HANGOUT_EVENT_TYPE_JOIN	3	
HANGOUT_EVENT_TYPE_LEAVE	4	
HANGOUT_EVENT_TYPE_COMING_SOON	5	
HANGOUT_EVENT_TYPE_ONGOING	6	

OffTheRecordToggle

Whether the OTR toggle is available to the user.

Name	Number	Description
OFF_THE_RECORD_TOGGLE_UNKNOWN	0	
OFF_THE_RECORD_TOGGLE_ENABLED	1	
OFF_THE_RECORD_TOGGLE_DISABLED	2	

OffTheRecordStatus

Name	Number	Description
OFF_THE_RECORD_STATUS_UNKNOWN	0	
OFF_THE_RECORD_STATUS_OFF_THE_RECORD	1	Conversation is off-the-record (history disabled).
OFF_THE_RECORD_STATUS_ON_THE_RECORD	2	Conversation is on-the-record (history enabled).

SourceType

Name	Number	Description
SOURCE_TYPE_UNKNOWN	0	

EventType

Name	Number	Description
EVENT_TYPE_UNKNOWN	0	
EVENT_TYPE_REGULAR_CHAT_MESSAGE	1	
EVENT_TYPE_SMS	2	
EVENT_TYPE_VOICEMAIL	3	
EVENT_TYPE_ADD_USER	4	
EVENT_TYPE_REMOVE_USER	5	
EVENT_TYPE_CONVERSATION_RENAME	6	
EVENT_TYPE_HANGOUT	7	
EVENT_TYPE_PHONE_CALL	8	
EVENT_TYPE_OTR_MODIFICATION	9	
EVENT_TYPE_PLAN_MUTATION	10	
EVENT_TYPE_MMS	11	
EVENT_TYPE_DEPRECATED_12	12	
EVENT_TYPE_OBSERVED_EVENT	13	
EVENT_TYPE_GROUP_LINK_SHARING_MODIFICATION	14	

ConversationType

Name	Number	Description
CONVERSATION_TYPE_UNKNOWN	0	
CONVERSATION_TYPE_ONE_TO_ONE	1	Conversation is one-to-one (only 2 participants).
CONVERSATION_TYPE_GROUP	2	Conversation is group (any number of participants).

ConversationStatus

Name	Number	Description
CONVERSATION_STATUS_UNKNOWN	0	
CONVERSATION_STATUS_INVITED	1	User is invited to conversation.
CONVERSATION_STATUS_ACTIVE	2	User is participating in conversation.
CONVERSATION_STATUS_LEFT	3	User has left conversation.

ConversationView

Name	Number	Description
CONVERSATION_VIEW_UNKNOWN	0	
CONVERSATION_VIEW_INBOX	1	Conversation is in inbox.
CONVERSATION_VIEW_ARCHIVED	2	Conversation has been archived.

DeliveryMediumType

Name	Number	Description
DELIVERY_MEDIUM_UNKNOWN	0	
DELIVERY_MEDIUM_BABEL	1	
DELIVERY_MEDIUM_GOOGLE_VOICE	2	
DELIVERY_MEDIUM_LOCAL_SMS	3	

InvitationAffinity

Name	Number	Description
INVITE_AFFINITY_UNKNOWN	0	
INVITE_AFFINITY_HIGH	1	
INVITE_AFFINITY_LOW	2	

ParticipantType

Name	Number	Description
PARTICIPANT_TYPE_UNKNOWN	0	
PARTICIPANT_TYPE_GAIA	2	
PARTICIPANT_TYPE_GOOGLE_VOICE	3	

InvitationStatus

Name	Number	Description
INVITATION_STATUS_UNKNOWN	0	
INVITATION_STATUS_PENDING	1	
INVITATION_STATUS_ACCEPTED	2	

ForceHistory

Name	Number	Description
FORCE_HISTORY_UNKNOWN	0	
FORCE_HISTORY_NO	1	

NetworkType

Name	Number	Description
NETWORK_TYPE_UNKNOWN	0	
NETWORK_TYPE_BABEL	1	
NETWORK_TYPE_GOOGLE_VOICE	2	

BlockState

Name	Number	Description
BLOCK_STATE_UNKNOWN	0	
BLOCK_STATE_BLOCK	1	
BLOCK_STATE_UNBLOCK	2	

ReplyToInviteType

Name	Number	Description
REPLY_TO_INVITE_TYPE_UNKNOWN	0	
REPLY_TO_INVITE_TYPE_ACCEPT	1	
REPLY_TO_INVITE_TYPE_DECLINE	2	

ClientId

Identifies the client.

Name	Number	Description
CLIENT_ID_UNKNOWN	0	
CLIENT_ID_ANDROID	1	Hangouts app for Android.
CLIENT_ID_IOS	2	Hangouts app for iOS.
CLIENT_ID_CHROME	3	Hangouts Chrome extension.
CLIENT_ID_WEB_GPLUS	5	Hangouts web interface in Google Plus.
CLIENT_ID_WEB_GMAIL	6	Hangouts web interface in Gmail.
CLIENT_ID_ULTRAVIOLET	13	Hangouts Chrome app (“ultraviolet”).
CLIENT_ID_WEB_HANGOUTS	44	Hangouts web app (https://hangouts.google.com).

ClientBuildType

Build type of the client.

Name	Number	Description
BUILD_TYPE_UNKNOWN	0	
BUILD_TYPE_PRODUCTION_WEB	1	Web app (not used anymore?).
BUILD_TYPE_PRODUCTION_APP	3	Native app.

ResponseStatus

Status of the response from the server to the client.

Name	Number	Description
RESPONSE_STATUS_UNKNOWN	0	
RESPONSE_STATUS_OK	1	
RESPONSE_STATUS_UNEXPECTED_ERROR	3	
RESPONSE_STATUS_INVALID_REQUEST	4	

PhotoUrlStatus

Status of EntityProperties.photo_url.

Name	Number	Description
PHOTO_URL_STATUS_UNKNOWN	0	
PHOTO_URL_STATUS_PLACEHOLDER	1	URL is a placeholder.
PHOTO_URL_STATUS_USER_PHOTO	2	URL is a photo set by the user.

Gender

Name	Number	Description
GENDER_UNKNOWN	0	
GENDER_MALE	1	
GENDER_FEMALE	2	

ProfileType

Name	Number	Description
PROFILE_TYPE_NONE	0	
PROFILE_TYPE_ES_USER	1	

ConfigurationBitType

A type of binary configuration option.

Name	Number	Description
CONFIGURATION_BIT_TYPE_UNKNOWN	0	
CONFIGURATION_BIT_TYPE_UNKNOWN_1	1	
CONFIGURATION_BIT_TYPE_UNKNOWN_2	2	
CONFIGURATION_BIT_TYPE_UNKNOWN_3	3	
CONFIGURATION_BIT_TYPE_UNKNOWN_4	4	
CONFIGURATION_BIT_TYPE_UNKNOWN_5	5	
CONFIGURATION_BIT_TYPE_UNKNOWN_6	6	
CONFIGURATION_BIT_TYPE_UNKNOWN_7	7	
CONFIGURATION_BIT_TYPE_UNKNOWN_8	8	
CONFIGURATION_BIT_TYPE_UNKNOWN_9	9	
CONFIGURATION_BIT_TYPE_UNKNOWN_10	10	
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RichPresenceType

Name	Number	Description
RICH_PRESENCE_TYPE_UNKNOWN	0	
RICH_PRESENCE_TYPE_IN_CALL_STATE	1	
RICH_PRESENCE_TYPE_UNKNOWN_3	3	
RICH_PRESENCE_TYPE_UNKNOWN_4	4	
RICH_PRESENCE_TYPE_UNKNOWN_5	5	
RICH_PRESENCE_TYPE_DEVICE	2	
RICH_PRESENCE_TYPE_LAST_SEEN	6	

FieldMask

Name	Number	Description
FIELD_MASK_REACHABLE	1	
FIELD_MASK_AVAILABLE	2	
FIELD_MASK_MOOD	3	
FIELD_MASK_IN_CALL	6	
FIELD_MASK_DEVICE	7	
FIELD_MASK_LAST_SEEN	10	

DeleteType

Name	Number	Description
DELETE_TYPE_UNKNOWN	0	
DELETE_TYPE_UPPER_BOUND	1	

SyncFilter

Name	Number	Description
SYNC_FILTER_UNKNOWN	0	
SYNC_FILTER_INBOX	1	
SYNC_FILTER_ARCHIVED	2	

SoundState

Name	Number	Description
SOUND_STATE_UNKNOWN	0	
SOUND_STATE_ON	1	
SOUND_STATE_OFF	2	

CallerIdSettingsMask

Name	Number	Description
CALLER_ID_SETTINGS_MASK_UNKNOWN	0	
CALLER_ID_SETTINGS_MASK_PROVIDED	1	

PhoneVerificationStatus

Name	Number	Description
PHONE_VERIFICATION_STATUS_UNKNOWN	0	
PHONE_VERIFICATION_STATUS_VERIFIED	1	

PhoneDiscoverabilityStatus

Name	Number	Description
PHONE_DISCOVERABILITY_STATUS_UNKNOWN	0	
PHONE_DISCOVERABILITY_STATUS_OPTED_IN_BUT_NOT_DISCOVERABLE	2	

PhoneValidationResult

Name	Number	Description
PHONE_VALIDATION_RESULT_IS_POSSIBLE	0	

OffnetworkAddressType

Name	Number	Description
OFFNETWORK_ADDRESS_TYPE_UNKNOWN	0	
OFFNETWORK_ADDRESS_TYPE_EMAIL	1	

GroupLinkSharingStatus

Name	Number	Description
GROUP_LINK_SHARING_STATUS_UNKNOWN	0	
GROUP_LINK_SHARING_STATUS_ON	1	
GROUP_LINK_SHARING_STATUS_OFF	2	

CHAPTER 3

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