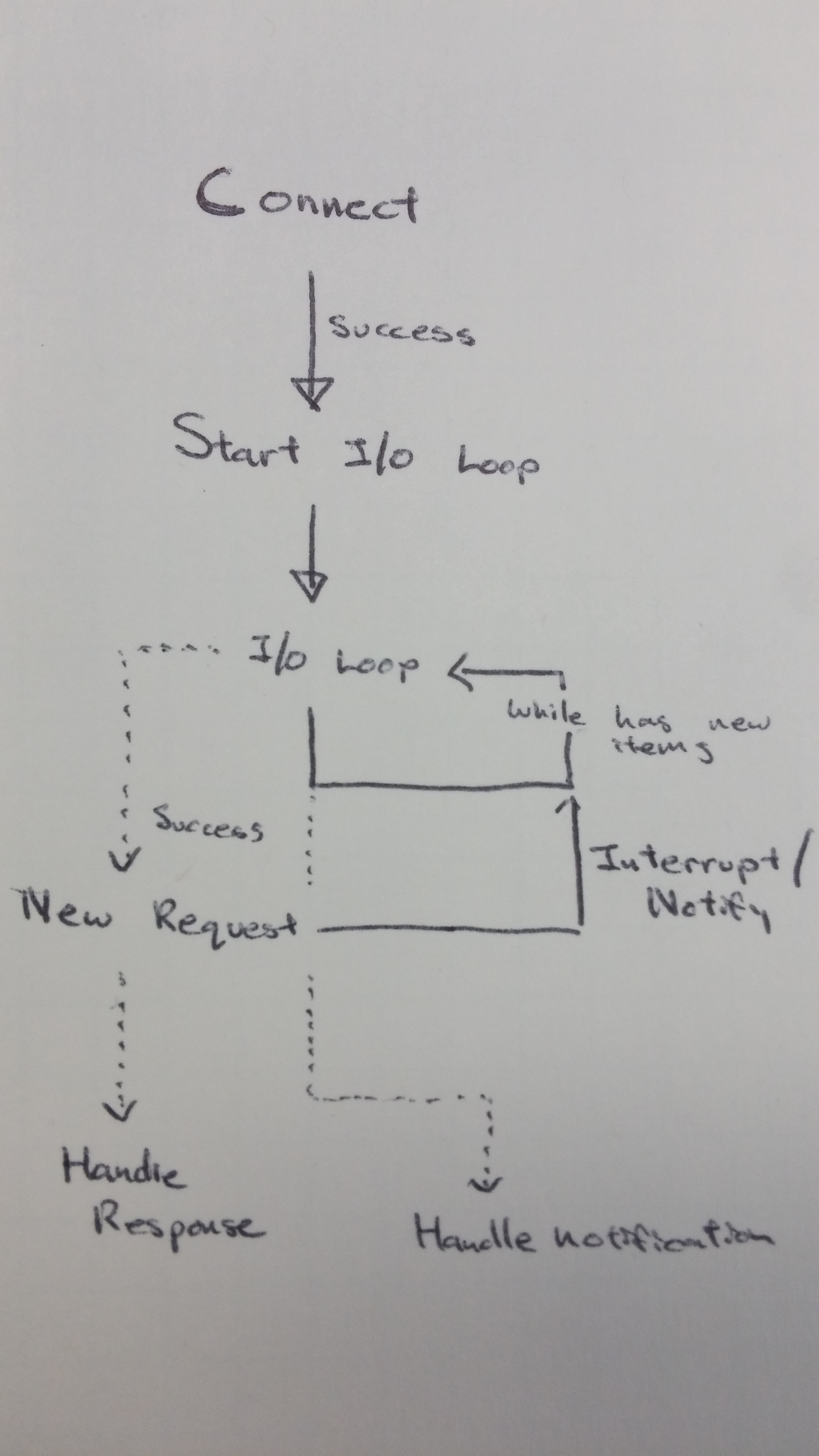
Bakkle WebSocket API Documentation

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**Intro:**

WebSockets are real-time, asynchronous and event based, thus requiring a different approach to handling connections. Generally, WebSockets are not meant to be created, queried and closed, but rather opened for longer periods of time, where multiple requests and responses are sent over the same connection. Also, since these requests are not necessarily returned in the same order, a system of tagging requests and response handlers must be implemented.



Within the Bakkle iOS project, all WebSocket connections are handled by the WSManager class, with the request models as shown in the WSRequest class. The goal of these is to unify the requests, and create a queue of requests to be sent once the websocket connection is open.

In addition, the server can also send responses/notifications that have not corresponding request, which have to be handled appropriately.

Note that WebSockets tend to deal with multi-threading, so synchronization and wait/notify cycles become extremely important.

**Suggestions:**

* Use the SocketRocket library for websocket connections. The same library is used on iOS, and should make it easier to port from iOS to Android, having to worry only about syntax, rather than implementation.
* Keep a thread running for only WebSocket operations, and set it to read from a queue.

**Requests:**

* All request headers must be given, unless otherwise specified.
* ALL requests, except connect, **must specify uuid and auth\_token.**

Connect:

* HTTP GET: app.bakkle.com/ws/
  + Query params:
    - userId: <String>
    - uuid: <String>

Example Request:

* HTTP GET: ws://bakkle.rhventures.org:8000/ws/?uuid=E7F742EB-67EE-4738-ABEC-F0A3B62B45EB&userId=10

Example Response:

* {"message": "Welcome", "success": 1}

Echo:

Description:

* Mainly for testing connection of WS during development. No use otherwise.

Request:

* auth\_token:
* method: “echo”
* message: <String>

Example Request:

* {"method": "echo", "message": "Testing Websocket Connection", "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}

Example Response:

* {"message": "Testing Websocket Connection", "success": 1}

Start Chat:

Description:

* Starts a new chat between current user and user selling item.

Request:

* method: chat\_startChat
* itemId: <String> (of an int)

Example Request:

* {"method": "chat\_startChat", "itemId": 14, "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}

Example Response:

* {"success": 1, "chatId": 882}

Get Chat IDs:

Description:

* Gets list of chats for an item. (Used in sellers garage). Will only return chats that the requesting user is involved in – thus, only 1 if user is buyer of itemId.

Request:

* method: chat\_getChatIds
* itemId: <String> (of an int)

Example Request:

* {"method": "chat\_getChatIds", "itemId": 14, "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}

Example Response:

* {"chats": [{"item": {"status": "Active", "description": "Basic home security system.", "tags": "baseball, security, bat", "price": "10.00", "image\_urls": ["https://app.bakkle.com/img/00808\_k0TscttMik5\_600x450.jpg"], "post\_date": "2015-05-28 10:44:30 ", "title": "Baseball bat", "seller": {"buyer\_rating": null, "display\_name": "Test Seller", "description": null, "facebook\_id": "1020420", "pk": 1, "flavor": 1, "user\_location": "37.0,83.0", "seller\_rating": null}, "location": "39.28,-87.23", "pk": 14, "method": "Pick-up"}, "hasUnreadBuyer": false, "closed": false, "buyer": {"buyer\_rating": null, "display\_name": "Tom Ward", "description": "test", "facebook\_id": "1389969691332367", "pk": 10, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "pk": 882, "hasUnreadSeller": false, "start\_date": "2015-08-04 19:01:09", "seller": {"buyer\_rating": null, "display\_name": "Test Seller", "description": null, "facebook\_id": "1020420", "pk": 1, "flavor": 1, "user\_location": "37.0,83.0", "seller\_rating": null}}], "success": 1}

Get Messages for Chat:

Description:

* Gets all the messages (and offers) for a chat.

Request:

* method: “chat\_getMessagesForChat”
* chatId: <String> (of an int)

Example Request:

* {"method": "chat\_getMessagesForChat", "chatId": 58, "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}

Example Response: (The response is size 2, due to length)

* {"messages": [{"sent\_by\_buyer": true, "offer": {"status": "Accepted", "item": {"status": "Sold", "description": "", "tags": "S'MORES, OREOS, TASTY, SNACK", "price": "4.64", "image\_urls": ["https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_e2b151b5bcf6e8ddd0165bba45e20f0d.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_ab1c1ca9cfcc11752f6d4eaa3f5caff.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_dd7450e76cc0854eee7ece5d66e1a55e.jpg"], "post\_date": "2015-06-23 08:05:26 ", "title": "S'mores Oreos", "seller": {"buyer\_rating": null, "display\_name": "Joseph Carroll", "description": "Hey! I have a neat description.", "facebook\_id": "10202654908893128", "pk": 4, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "location": "39.28,-87.23", "pk": 2504, "method": "Pick up"}, "sent\_by\_buyer": true, "date\_sent": "2015-06-25 11:43:37", "proposed\_price": "25.00", "buyer": {"buyer\_rating": null, "display\_name": "Tom Ward", "description": "test", "facebook\_id": "1389969691332367", "pk": 10, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "pk": 3, "proposed\_method": "Meet"}, "chat": 58, "date\_sent": "2015-06-25 11:43:38", "pk": 172, "message": ""}, {"sent\_by\_buyer": true, "offer": {"status": "Retracted", "item": {"status": "Sold", "description": "", "tags": "S'MORES, OREOS, TASTY, SNACK", "price": "4.64", "image\_urls": ["https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_e2b151b5bcf6e8ddd0165bba45e20f0d.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_ab1c1ca9cfcc11752f6d4eaa3f5caff.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_dd7450e76cc0854eee7ece5d66e1a55e.jpg"], "post\_date": "2015-06-23 08:05:26 ", "title": "S'mores Oreos", "seller": {"buyer\_rating": null, "display\_name": "Joseph Carroll", "description": "Hey! I have a neat description.", "facebook\_id": "10202654908893128", "pk": 4, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "location": "39.28,-87.23", "pk": 2504, "method": "Pick up"}, "sent\_by\_buyer": true, "date\_sent": "2015-06-25 11:17:22", "proposed\_price": "25.00", "buyer": {"buyer\_rating": null, "display\_name": "Tom Ward", "description": "test", "facebook\_id": "1389969691332367", "pk": 10, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "pk": 2, "proposed\_method": "Pick-up"}, "chat": 58, "date\_sent": "2015-06-25 11:17:22", "pk": 171, "message": ""}, {"sent\_by\_buyer": true, "offer": {"status": "Retracted", "item": {"status": "Sold", "description": "", "tags": "S'MORES, OREOS, TASTY, SNACK", "price": "4.64", "image\_urls": ["https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_e2b151b5bcf6e8ddd0165bba45e20f0d.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_ab1c1ca9cfcc11752f6d4eaa3f5caff.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_dd7450e76cc0854eee7ece5d66e1a55e.jpg"], "post\_date": "2015-06-23 08:05:26 ", "title": "S'mores Oreos", "seller": {"buyer\_rating": null, "display\_name": "Joseph Carroll", "description": "Hey! I have a neat description.", "facebook\_id": "10202654908893128", "pk": 4, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "location": "39.28,-87.23", "pk": 2504, "method": "Pick up"}, "sent\_by\_buyer": true, "date\_sent": "2015-06-25 11:12:43", "proposed\_price": "25.00", "buyer": {"buyer\_rating": null, "display\_name": "Tom Ward", "description": "test", "facebook\_id": "1389969691332367", "pk": 10, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "pk": 1, "proposed\_method": "Pick-up"}, "chat": 58, "date\_sent": "2015-06-25 11:12:43", "pk": 170, "message": ""}, {"date\_sent": "2015-06-25 06:46:45", "pk": 169, "message": "asdf", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-25 06:44:22", "pk": 168, "message": "asdf", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-25 06:40:53", "pk": 167, "message": "wasd", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-25 06:39:33", "pk": 166, "message": "asdf", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-25 06:31:11", "pk": 164, "message": "asdf", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-25 06:29:28", "pk": 163, "message": "asdf", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-25 06:26:42", "pk": 162, "message": "asdf", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-25 06:24:34", "pk": 161, "message": "tes", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 13:57:05", "pk": 154, "message": "testestasdftest", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 13:54:09", "pk": 152, "message": "test", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 13:44:51", "pk": 149, "message": "is this working any better?", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 13:43:15", "pk": 148, "message": "hi joe\n", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 13:42:22", "pk": 147, "message": "Test", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 13:42:02", "pk": 146, "message": "Hi", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 13:23:58", "pk": 130, "message": "test", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 13:03:49", "pk": 123, "message": "good", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 12:43:13", "pk": 116, "message": "\u4eca\u5929", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 12:40:50", "pk": 115, "message": "\ud83d\ude01\ud83d\ude01\ud83d\ude01\ud83d\ude01", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 12:40:15", "pk": 114, "message": "hey", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 12:27:08", "pk": 99, "message": "Hey Ben", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 12:24:59", "pk": 93, "message": "let's see if it works\n", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 12:24:50", "pk": 92, "message": "ohHey.", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 12:06:29", "pk": 90, "message": "Hi Ben", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 11:29:07", "pk": 52, "message": "yea?", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 11:29:07", "pk": 50, "message": "Where do you want to go to lunch tomorrow?", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 11:29:07", "pk": 49, "message": "hey.", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 11:29:07", "pk": 53, "message": "does this work?", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 11:29:07", "pk": 51, "message": "Taj? for the buffet lunch?", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 07:45:45", "pk": 54, "message": "Nice! it works!", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:30:52", "pk": 44, "message": "Hey Tom", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 06:30:20", "pk": 43, "message": "Hi", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:28:29", "pk": 42, "message": "Gujarat", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:27:20", "pk": 41, "message": "Aa", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:26:30", "pk": 40, "message": "Test", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:24:37", "pk": 39, "message": "This is a fun conversation", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 06:18:26", "pk": 38, "message": "Blah blah blah", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 06:17:47", "pk": 37, "message": "H", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 06:17:01", "pk": 36, "message": "G", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:15:58", "pk": 35, "message": " Test", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:12:23", "pk": 34, "message": "hi joe", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 06:08:09", "pk": 33, "message": "This is a test message", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 06:07:30", "pk": 32, "message": "hi joe", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 05:54:57", "pk": 31, "message": "Hi joe", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 05:54:01", "pk": 30, "message": "Hi Ben", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 05:46:42", "pk": 29, "message": "Test the update", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 05:20:12", "pk": 28, "message": "Hey Tom, would you be willing to come pick up the Oreos?", "sent\_by\_buyer": false, "chat": 58}, {"date\_sent": "2015-06-23 05:18:40", "pk": 27, "message": "dem smores oreos.", "sent\_by\_buyer": true, "chat": 58}, {"date\_sent": "2015-06-23 05:18:12", "pk": 26, "message": "hi joe", "sent\_by\_buyer": true, "chat": 58}], "success": 1}

Send Message (Or offer):

Description:

* Sends message or offer, depending on provided parameters:
  + message not null or empty → new message
  + offerPrice, offerMethod not null or empty → new offer.
  + All parameters required (can be empty strings), defaults to message on all empty, becomes offer if all provided.

Request:

* method: “chat\_sendChatMessage”
* chatId: <String> (of an int)
* message: <String>
* offerPrice: <String>
* offerMethod: <String>

Example request:

* Message:
  + {"method": "chat\_sendChatMessage", "chatId": 58, "message": "Example message...","offerPrice": "","offerMethod": "", "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}
* Offer:
  + {"method": "chat\_sendChatMessage", "chatId": 58, "message": "","offerPrice": "25.01","offerMethod": "Ship", "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}

Example Response:

* {"success": 1}

Accept Offer:

Description:

* Accepts a previous offer (will mark item as sold, removing from feed and active items lists).

Request:

* method: “purchase\_acceptOffer”
* offerId: <String> (of an int)

Example Request:

* {"method": "purchase\_acceptOffer", "offerId": 63, "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}

Example Response:

* {"saleId": 21, "success": 1}

Retract Offer:

Description:

* Retracts a previous offer.

Request:

* method: “purchase\_retractOffer”
* offerId: <String> (of an int)

Example Request:

* {"method": "purchase\_retractOffer", "offerId": 65, "uuid": "E7F742EB-67EE-4738-ABEC-F0A3B62B45EB", "auth\_token": "f02dfb77e9615ae630753b37637abb31\_10"}

Example Response:

* {"success": 1}

**Server-Sent Events:**

New Message:  
Event:

* Receives JSON object with keys:
  + success: 1 (if successful)
  + messageOrigin: senderId (sender's account ID)
  + notificationType: 'newMessage'
  + message: <Message body>

Example Event:

* {"message": {"date\_sent": "2015-08-04 19:15:41", "pk": 390, "message": "Example message...", "sent\_by\_buyer": true, "chat": 58}, "messageOrigin": 10, "success": 1, "notificationType": "newMessage"}

New Offer:  
Event:

* Receives JSON object with keys:
  + success: 1 (if successful)
  + messageOrigin: senderId (sender's account ID)
  + notificationType: 'newOffer'
  + offer: <Message body>
* Note that an offer is still a message object, but just may not contain a message string.

Example Event:

* {"message": {"sent\_by\_buyer": true, "offer": {"status": "Active", "item": {"status": "Sold", "description": "", "tags": "S'MORES, OREOS, TASTY, SNACK", "price": "4.64", "image\_urls": ["https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_e2b151b5bcf6e8ddd0165bba45e20f0d.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_ab1c1ca9cfcc11752f6d4eaa3f5caff.jpg", "https://s3-us-west-2.amazonaws.com/com.bakkle.prod/com.bakkle.prod\_4\_dd7450e76cc0854eee7ece5d66e1a55e.jpg"], "post\_date": "2015-06-23 08:05:26 ", "title": "S'mores Oreos", "seller": {"buyer\_rating": null, "display\_name": "Joseph Carroll", "description": "Hey! I have a neat description.", "facebook\_id": "10202654908893128", "pk": 4, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "location": "39.28,-87.23", "pk": 2504, "method": "Pick up"}, "sent\_by\_buyer": true, "date\_sent": "2015-08-04 19:19:38", "proposed\_price": "25.01", "buyer": {"buyer\_rating": null, "display\_name": "Tom Ward", "description": "test", "facebook\_id": "1389969691332367", "pk": 10, "flavor": 1, "user\_location": "39.42,-87.33", "seller\_rating": null}, "pk": 64, "proposed\_method": "Ship"}, "chat": 58, "date\_sent": "2015-08-04 19:19:39", "pk": 393, "message": ""}, "messageOrigin": 10, "success": 1, "notificationType": "newOffer"}