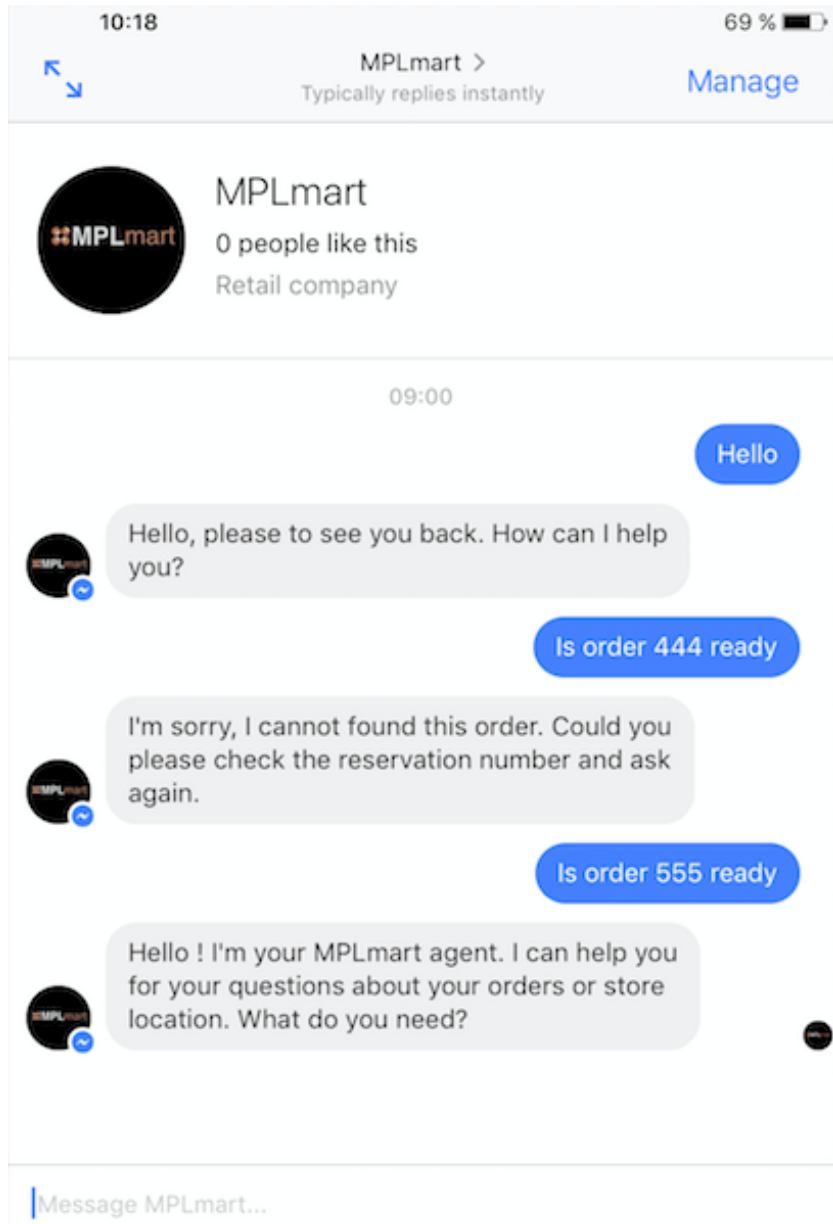


## Screenshot



## Code

```
middleware.after = function(message, conversationResponse, callback) {
  console.log("-----");
  console.log("message after ");
  console.log(message);
  console.log("-----");
  console.log("response after ");
  console.log(conversationResponse);

  if (conversationResponse.context) {

    if (conversationResponse.context.SQL_Request == "QUERY_ORDER"
      && conversationResponse.context.Launch_Request == "Yes") {

      // Query RMS Database using API
      console.log("Calling Power System on prems: " + URLGetReservation);

      . . .
      // Answer to Watson Conversation
      conversationResponse.context.SQL_Result = jResponse;
      console.log("Query OK, ResultCode : " + ResultCode +
        ". Now calling Watson Conversation...");

      console.log(jResponse);

      middleware.conversation.message({
        workspace_id: process.env.WORKSPACE_ID,
        input: {'text': ResultCode},
        context: conversationResponse.context
      }, function (err, response) {
        if (err) {
          console.log('error:', err);
          message.watsonData =
            "Something went wrong, I cannot answer now.";
          callback(null, conversationResponse);
        } else {
          console.log("Watson Conversation answer");
          console.log(response);
          message.watsonData = response;
          callback(null, response);
        }
      }); // end of middleware.conversation.message
    } else {
      console.log("No Query Order");
      callback(null, conversationResponse);
    }
  }
  else {
    console.log("No ConversationResponse.context ");
    callback(null, conversationResponse);
  }
} // fin middleware.after
```

## Step 1 : send message « Hello »

First message.

No access to database,

No code in middleware.before or middleware.after.

### Trace

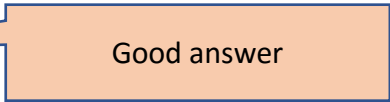
- conversationPayload before (in middleware.before)

```
{
workspace_id: '934773b3-ed68-43b3-aef2-ad3086ac587a',
Input: { text: 'Hello' }
}
```

- conversationResponse (in middleware.after)

```
{ intents: [ { intent: 'greetings', confidence: 1 } ],
  entities: [],
  input: { text: 'Hello' },
  output:
    { log_messages: [],
      nodes_visited: [ 'node_6_1483366863215' ] },
  context:
    { conversation_id: 'c0a6711b-08d7-4fca-8438-8e781c3b30a6',
      system:
        { dialog_stack: [Object],
          dialog_turn_counter: 1,
          dialog_request_counter: 1,
          _node_output_map: [Object] } } }
```

No Query Order



## Step 2 : send message « is order 444 ready»

2nd message.

Access to database, implemented in middleware.after (no record will be found)

No code in middleware.before.

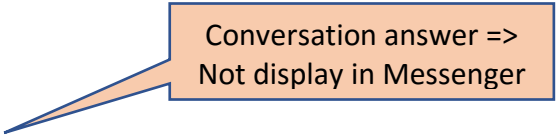
### Trace

- conversationPayload before (in middleware.before)

```
{ workspace_id: '934773b3-ed68-43b3-aef2-ad3086ac587a',
  input: { text: 'Is order 444 ready' },
  context:
    { conversation_id: 'c0a6711b-08d7-4fca-8438-8e781c3b30a6',
      system:
        { dialog_stack: [Object],
          dialog_turn_counter: 1,
          dialog_request_counter: 1,
          _node_output_map: [Object] } } }
```

- conversationResponse (in middleware.after)

```
{ intents: [ { intent: 'order-ready', confidence: 0.7682576250888935 } ],
  entities:
    [ { entity: 'sys-number',
      location: [Object],
      value: '444',
      metadata: [Object] } ],
  input: { text: 'Is order 444 ready' },
  output:
    { log_messages: [],
      text: [ 'Let me ask to the store for reservation #444' ],
      nodes_visited: [ 'node_1_1483366407988', 'node_10_1483371988727' ] },
  context:
    { conversation_id: 'c0a6711b-08d7-4fca-8438-8e781c3b30a6',
      system:
        { dialog_stack: [Object],
          dialog_turn_counter: 2,
```



Conversation answer =>  
Not display in Messenger

```
    dialog_request_counter: 2,
    _node_output_map: [Object] },
  SQL_Result: '',
  SQL_Request: 'QUERY_ORDER',
  Launch_Request: 'Yes',
  Reservation_Number: 444 } }
```

Conversation variables =>  
access to DB

Calling Power System on prems: <https://caplonsgprd-3.integration.ibmcloud.com:15080/reservations/444>  
Query OK, ResultCode : SQL100.

Now calling Watson Conversation...

```
{}
```

#### Watson Conversation answer

```
{ intents: [ { intent: 'greetings', confidence: 0.4314774354720175 } ],
  entities: [],
  input: { text: 'SQL100' },
  output:
  { log_messages: [],
    text: [ 'I\'m sorry, I cannot found this order. Could you please
check the reservation number and ask again.' ],
    nodes_visited: [ 'node_13_1483372399503' ] },
  context:
  { conversation_id: 'c0a6711b-08d7-4fca-8438-8e781c3b30a6',
    system:
    { dialog_stack: [Object],
      dialog_turn_counter: 3,
      dialog_request_counter: 3,
      _node_output_map: [Object] },
    SQL_Result: {},
    SQL_Request: 'QUERY_ORDER',
    Launch_Request: '',
    Reservation_Number: '' } }
```

Good answer, will be sent to  
Messenger (callback just after)

Conversation variables =>  
were reset by conversation

### Step 3 : send message « is order 555 ready»

3rd message sent by user.

Access to database, implemented in middleware.after (no record will be found)

No code in middleware.before.

#### Trace

- conversationPayload before (in middleware.before)

```
{ workspace_id: '934773b3-ed68-43b3-aef2-ad3086ac587a',
  input: { text: 'Is order 555 ready' },
  context:
    { conversation_id: 'c0a6711b-08d7-4fca-8438-8e781c3b30a6',
      system:
        { dialog_stack: [Object],
          dialog_turn_counter: 2,
          dialog_request_counter: 2,
          _node_output_map: [Object] },
      SQL_Result: {},
      SQL_Request: 'QUERY_ORDER',
      Launch_Request: 'Yes',
      Reservation_Number: 444 } }
```

**WRONG** value ?  
(3 was the last)

**WRONG** Conversation  
variables

- conversationResponse (in middleware.after)

```
{ intents: [ { intent: 'order-ready', confidence: 0.7682576250888935 } ],
  entities:
    [ { entity: 'sys-number',
      location: [Object],
      value: '555',
      metadata: [Object] } ],
  input: { text: 'Is order 555 ready' },
  output:
    { log_messages: [],
      text: [ 'Something went wrong, I cannot answer now.' ],
      nodes_visited: [ 'node_1_1483626565453' ] },
  context:
    { conversation_id: 'c0a6711b-08d7-4fca-8438-8e781c3b30a6',
      system:
```

```
{ dialog_stack: [Object],
  dialog_turn_counter: 3,
  dialog_request_counter: 3,
  _node_output_map: [Object] },
SQL_Result: {},
SQL_Request: 'QUERY_ORDER',
Launch_Request: 'Yes',
Reservation_Number: 444 } }
```

**WRONG** Conversation variables

Calling Power System on prems: <https://caplonsgprd-3.integration.ibmcloud.com:15080/reservations/444>

Query OK, ResultCode : SQL100. Now calling Watson Conversation...  
{}

#### Watson Conversation answer

```
intents: [ { intent: 'greetings', confidence: 0
entities: [],
input: { text: 'SQL100' },
output:
  { log_messages: [],
    text: [ 'Hello ! I\'m your MPLmart agent. I can help you for your
questions about your orders or store location. What do you need?' ],
    nodes_visited: [ 'node_1_1483459757430', 'node_6_1483366863215' ]
context:
  { conversation_id: 'c0a6711b-08d7-4fca-8438-8e781c3b30a6',
    system:
      { dialog_stack: [Object],
        dialog_turn_counter: 4,
        dialog_request_counter: 4,
        _node_output_map: [Object] },
      SQL_Result: '',
      SQL_Request: '',
      Launch_Request: '',
      Reservation_Number: '' } }
```

Conversation **WRONG** answer