Qlik Insight Bot
Configuring Webchat and the Qlik Sense Extension

Qlik Insight Bot®
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1. Introduction

Qlik Insight Bot's chat extension for Qlik Sense enables you to have a conversational experience with your data within the Qlik Sense app itself. You no longer need to stick to a specific chat platform to know the facts about your data. The chat extension gives you the liberty to talk to your data within your Qlik Sense app.

For Qlik Sense June 2019 to Nov 2019, you must install the Webchat service separately. For Qlik Sense Enterprise February 2020, the service is integrated with Qlik Sense.

Note: The extension is only compatible with Qlik Sense Server edition and not the Desktop edition.

The purpose of this document is to guide you how to configure the both Webchat on Hub and the chat extension.

2. Prerequisites (QSEfW Jun 2019 – Nov 2019)

1. `webchat.key` and `webchat.crt` files of a server’s SSL certificate (must be signed through trusted CA) where Qlik Insight Bot Webchat service is installed.
2. `webchat.key` and `webchat.crt` files must be placed at in “C:/ProgramData/Qlik Insight Bot/Certificate” directory of a server where Qlik Insight Bot components are installed.
   Note: See Appendix I for information about converting PFX into CRT and KEY
3. If Qlik Insight Bot and Qlik Sense are installed on separate machines
   A Service User: If the both machines on which Qlik Insight Bot and Qlik Sense Server are installed are in the same domain, you can use a service user of that domain.
4. The hostname of the server on which Qlik Insight Bot is installed must be whitelisted from Virtual Proxy of a Qlik Sense Server.
5. If Qlik Insight Bot and Qlik Insight Bot Webchat service are installed on a separate server, 4431 port must be opened in firewall on server where Qlik Insight Bot Webchat service is installed.
6. Qlik Insight Bot Webchat service and Qlik Sense server URL must fall under the same domain. e.g. If Qlik Insight Bot Webchat service URL is https://webchat.domain.com, the Qlik Sense server URL must be https://qliksense.domain.com.

3. Download

You can download the zip of Qlik Sense Extension and Webchat for Qlik Sense Hub from the Add On tab of the Qlik Insight Bot Configuration application.

Note: If you make any changes in the Qlik Insight Bot Configuration application related to webchat service, you are required to re-download and re-configure the Qlik Sense Extension and Webchat for Qlik Sense Hub.

The Webchat service can be installed on any machine – either on a machine where Qlik Sense server is installed or on a machine where Qlik Insight Bot components are installed, or it can be installed on any non-Qlik Sense or non-Qlik Insight Bot machine. Based on the installation location of a Webchat service, appropriate configurations must be done.

Below scenarios describe which configurations needed to be performed.

I. **Qlik Insight Bot, Webchat service and Qlik Sense server are installed on same machine**
   If everything resides on a same machine, there are no configurations needed to be performed except virtual proxy.
   
   **Virtual Proxy settings:**
   1. Open QMC.
   2. Go to Virtual Proxies under Configure System on left pane.
   3. In Host white list section, add the host name of the Qlik Sense server.

II. **Qlik Insight Bot (with Webchat Service) and Qlik Sense server installed on separate machine**
   If Qlik Insight Bot components are installed on a different machine than the Qlik Sense server and the Webchat service resides with Qlik Insight Bot components, there are no configurations needed to be performed except virtual proxy.
   
   **Virtual Proxy settings:**
   1. Open QMC.
   2. Go to Virtual Proxies under Configure System on left pane.
   3. In Host white list section, add the host name of – Qlik Sense server, QIB machine.

III. **Qlik Insight Bot (Webchat Service is not on QIB server) and Qlik Sense server installed on separate machine**
   If both Qlik Insight Bot and Qlik Sense server are installed on separate machines and the Webchat service doesn’t reside on Qlik Insight Bot machine i.e. the Webchat service is installed on Qlik Sense server or any other non-Qlik Insight Bot machine, there are needed several configurations to be done.

   Follow below steps to configure the Webchat service.
   
   A. **Change the service user of Qlik Insight Bot Webchat Service**
      1. Go to Services on a server where Qlik Insight Bot Webchat Service is installed.
      2. Right click on the Webchat service and select Properties.
4. Select **This Account** option and enter the **service user** credentials, click **OK**.

This will change the log on account of Webchat Service from Local System user to the Service User of your domain.

B. Share the Qlik Insight Bot folder from Qlik Insight Bot Server
   1. Locate **C:\ProgramData** on a server where Qlik Insight Bot components are installed.
   2. Share the **Qlik Insight Bot** folder with a **service user** of your domain using which service is running.

C. Modify Configuration file with shared folder path
   1. Locate “**C:\Program Files (x86)\Qlik Insight Bot\Qlik Insight Bot Webchat Service**” on a Qlik Server where the Qlik Insight Bot Webchat Service is installed.
   2. Open “**config.json**” file in a text editor.
   3. Change the ROOT PATH value - “**C:\ProgramData\Qlik Insight Bot\**” with the path of Qlik Insight Bot’s shared folder on Qlik Insight Bot server. The ROOT PATH (Network Path) should look like “**\<QIB machine name>\Qlik Insight Bot\**”.
Configuring Webchat to Qlik Sense Hub

Virtual Proxy settings:
1. Open QMC.
2. Go to Virtual Proxies under Configure System.
3. Select the virtual proxy (from which hub should be accessible) and click Edit. If there is no virtual proxy available, create a new one –
   - Click Create new
   - Add appropriate Description
   - Leave Prefix blank
   - Add appropriate Session cookie header name. e.g. X-Qlik-Session-Central
4. Apply below settings under Advanced property –
   - Add appropriate Session cookie domain name e.g. .qliktech.com
   - Add below in Additional response headers –
     - Access-Control-Allow-Origin: https://<webchat service url>:4431
     - Access-Control-Allow-Credentials: true
   - In Host white list section, add the host name of –
     - Qlik Sense server machine, Qlik Insight Bot machine and machine where Webchat service is installed.
5. Click Apply.
6. Repeat step 2-5 for each proxy node on which Qlik Sense hub should be accessible.
7. Restart Qlik Insight Bot Webchat Service.

5. Configuring Webchat to Qlik Sense Hub
Follow the integration steps based on the Qlik Sense version you are using.
In a multi node environment, do the following for each proxy node from which the hub will be accessed.

5.1 Qlik Sense April 2020
To use QIB with Qlik Sense April 2020, you must install QIB Feb 2020 patch 1.

Configure appsettings.json
You must be logged in as a Windows administrator to make changes to this file.

1. On the Qlik Insight Bot server, go to C:\ProgramData, copy the folder Qlik Insight Bot, and move the copy to the same folder on the Qlik Sense server.
2. On the Qlik Sense server, go to C:\Program Files\Qlik\Sense\QibWebchatService and open appsettings.json in a text editor.
3. Under QIBPath, enter the location of the system file (usually C:\\ProgramData\\Qlik Insight Bot) and save the file.
4. Go to C:\inetpub\wwwroot\qlikinsightbotengineservice, and in the file web.config, set the value of a variable “EnableChatIconAccess” to ‘True’.
The Chat icon will now be visible only to those users who have Qlik Insight Bot access defined in the Qlik Sense security rule.
5. Restart all Qlik Sense services.
5.2 Qlik Sense February 2020

Configure appsettings.json

You must be logged in as a Windows administrator to make changes to this file.

6. On the Qlik Insight Bot server, go to C:\ProgramData\Qlik Insight Bot\Configuration, copy the file System.xml, and move the copy to the same folder on the Qlik Sense server.

7. On the Qlik Sense server, go to C:\Program Files\Qlik\Sense\QibWebchatService and open appsettings.json in a text editor.

8. Under QIBSystemPath, enter the location of the system file (usually C:\ProgramData\Qlik Insight Bot\Configuration) and save the file.

9. Restart all Qlik Sense services.

5.3 Qlik Sense Jun 2019 – Nov 2019

Qlik Sense and Qlik Insight Bot Webchat service installed on same machine

If you are not able to see the Qlik Insight Bot chat option in Qlik Sense hub, restart the Qlik Sense Proxy service.

Qlik Sense and Qlik Insight Bot Webchat service installed on different machines under same domain

1. Go to “C:\Program Files\Qlik\Sense\ServiceDispatcher”.
2. Open the services.conf in text editor.
3. Go to [hub.parameters] section.
   a. Uncomment insight bot uri i.e. remove // from the starting of the statement.
   b. Replace “HOSTNAME” with the hostname on which Qlik Insight Bot Webchat service is installed.
   c. Replace “PORT” with 4431.
   d. Now, the URI should be like – https://example.com:4431/connection
4. Save and close the file
5. Restart the Qlik Sense Service Dispatcher.
6. Restart Qlik Sense Proxy service.
6. Configuring the Chat Extension

6.1 Installation

Follow below steps to install the extension.

1. Open Qlik Management Console (QMC) of Qlik Sense server on which you want to configure Qlik Insight Bot chat extension.

2. Go to Extensions under Manage Resources on left pane.

3. Click Import to import Qlik Insight Bot chat extension.
4. Select the zip file of Qlik Insight Bot chat extension you have downloaded from Configuration Application.

5. Leave the zip file password field blank, click Import to import zip file.

6. Once imported successfully, you can see QlikInsightBotV2 in Name column. Qlik Insight Bot Chat Extension should be ready to use.

6.2 How to use

1. Open Qlik Sense application on which you want to use Qlik Insight Bot chat extension.
2. Drag Qlik Insight Bot from custom objects -> Extensions, drop it on every sheets of an application.
3. Once you drag and drop Qlik Insight Bot chat extension on each sheet, you will see a button with bot icon on the top of the sheet.

In enterprises, Qlik Sense architecture consists of one or more nodes where on each node, all or specific services run.

Below is a sample scenario of multi node Qlik Sense environment and configuration of webchat on hub/extension.

In this scenario, below are the servers which reside under the same domain and network. Hub can be accessed from each of the proxy.

1. Central Node – qlik-central.qliktech.com (All services + Webchat Service)
2. Rim Node – qlik-rim.qliktech.com (Proxy + Engine)
3. Rim1 Node – qlik-rim1.qliktech.com (Proxy + Engine)
4. Qlik Insight Bot Server – qib.qliktech.com

Follow below steps to enable the webchat on hub.

1. Webchat service must be installed on the Central Node and the steps needed to be performed are mentioned in Integrating webchat to Qlik Sense Hub section.
2. The client certificate of all nodes should be placed and renamed on Qlik Insight Bot server in C:\ProgramData\Qlik Insight Bot\Certificates folder. The client certificate should be renamed with the hostname of a node.
   e.g. If hostname is "qlik-central", the client certificate should be named as "qlik-central.pfx".
3. Virtual proxies need to be created for each rim node from where the Qlik Sense hub will be accessed (If virtual proxies are already available, skip to d)
   Follow Below steps to create a virtual proxy for a rim node.
   a. Go to QMC.
   b. Select Virtual Proxies, from the left pane under Configure System.
   c. Under Identification property
      i. Add appropriate Description.
      ii. Add appropriate Prefix.
      iii. Add appropriate Session cookie header name. e.g. X-Qlik-Session-Rim1
   d. Under Advanced property
      i. Set appropriate session cookie domain. e.g. qliktech.com
      ii. Set the additional response headers as below –
         Access-Control-Allow-Origin: <webchat service url>
         e.g. https://qlik-central.qliktech.com:4431
         Access-Control-Allow-Credentials: true
      iii. Add the host address of central node in Host white list. E.g. qlik-central.qliktech.com
   4. Click Apply.
   5. Restart the Qlik Insight Bot Webchat service.
Below configuration needs to be done for Qlik Insight Bot Webchat Service.

1. Machines on which Qlik Insight Bot Webchat service and other Qlik Insight Bot services are installed, must be under the same domain.
2. Qlik Insight Bot Webchat service must be running using the same domain user.
3. Qlik Insight Bot Webchat service must have access to the “C:\ProgramData\Qlik Insight Bot” folder.
4. Export the Client certificate of all associated proxy using host name of that proxy. Place those all certificates on QIB server at C:\ProgramData\Qlik Insight Bot\Certificates location.
   e.g. If hostname of associate proxy is “qlik-central”, the client certificate should be “qlik-central.pfx”.
5. For webchat on Hub, follow steps – Integrating Webchat in Qlik Sense Hub on all rim nodes.
6. On each node, the Qlik Insight Bot Webchat service URL is needs to be changed in configuration.js file located at C:\Program Files\Qlik Sense\Client\hub\external\requirejs
   The URL must be of node where Qlik Insight Bot Webchat service is running followed by port 4431.
9. Troubleshooting the Qlik Insight Bot Webchat service errors

1. If Bot doesn’t respond

   a. Qlik Insight Bot Webchat service is not accessible from the machine you are working.
   b. Open dev-hub of browser, if there is an error in connection establishment, reason could be the self-signed certificate or an invalid certificate.

   **Reason:**

   a. Qlik Insight Bot Webchat service is not accessible from the machine you are working.
   b. Open dev-hub of browser, if there is an error in connection establishment, reason could be the self-signed certificate or an invalid certificate.

   **Solution:**

   First check that the Qlik Insight bot Webchat service is running or not. If not, start the service.
Troubleshooting the Qlik Insight Bot Webchat service errors

A valid SSL certificate signed by certificate authority should be bound with the Qlik Insight Bot Webchat service.

2. When you get message like “You are not authorized to connect”.

   ![Image of the Qlik Insight Bot Webchat service error message]

   Open log file of Qlik Insight Bot Webchat service. If you find the error like below

   **Case 1:**

   ```
   2019-06-17 11:11:45,968] QMC:anonymous_user:Reading port..
   ```

   **Reason:**
   Qlik User Session is not passed or validated with the Qlik Insight Bot Webchat service.

   **Solution:**
   Make sure the Virtual proxy in QMC is configured properly. If not reconfigure it. (as mentioned above).

   **Case 2:**

   ```
   ```

   **Reason:**
   a. Qlik Insight Bot Webchat service is not able to connect with repository service.
   b. Qlik Insight Bot Webchat service may not be bound with the proper certificate.

   **Solution:**
   Webchat service should be bound with proper certificate. Also, add the host name along with IP address in to the hosts file located at “C:\Windows\System32\drivers\etc”.

   **Case 3:**

   ```
   ```

   **Reason:**
   IP address or Host name is not added in the virtual proxy.

   **Solution:**
   Add IP address or Host name in virtual proxy to the host white list in the virtual proxy in QMC.

3. When you get message like “Please clear cookie and cache and try again!”

   **Reason:**

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Appendix I - Convert PFX certificate into CRT and KEY

There might be multiple active Qlik session for Qlik Insight Bot Webchat service.

Solution:
Clear browser cookies and restart the session.

Appendix I - Convert PFX certificate into CRT and KEY

You will need OpenSSL (download it from here) to generate the KEY and CRT files.

1. Open Bin where openssl.exe is installed.
2. Put the PFX file to aforementioned directory.
3. Execute openssl.exe as an administrator.
4. Run below commands

   ```bash
   pkcs12 -in <certificate name>.pfx -nocerts -out webchatencrypted.key
   ```

   • Enter the certificate password if and hit enter. If no password had been set for the certificate, hit enter.
   • Set the pass phase. Its length must be no shorter than 4.

   ```bash
   rsa -in webchatencrypted.key -out webchat.key
   ```

   • Enter the pass phase (set earlier)

   ```bash
   pkcs12 -in <certificate name>.pfx -clcerts -nokeys -out webchat.crt
   ```

   • Enter the certificate password one more time (if asked).