How to Setup MQTT Server on a Windows 10 Desktop

[16th July 2017](https://www.kolkataonweb.com/code-bank/miscellaneous/how-to-setup-mqtt-server-on-a-windows-10-desktop/)[Arduino](https://www.kolkataonweb.com/code-bank/category/arduino/), [Miscellaneous](https://www.kolkataonweb.com/code-bank/category/miscellaneous/), [PHP](https://www.kolkataonweb.com/code-bank/category/php/)

1. Download the Win32 installer from the below link (I couldn’t successfully installed the CygWin version)  
   <https://mosquitto.org/download/>
2. Once downloaded, install the package
3. During the start of the installation process it will show links from where some dependencies will have to be downloaded  
   [Graphical user interface, text, application, email

   Description automatically generated](https://www.kolkataonweb.com/code-bank/wp-content/uploads/2017/07/MQTT-Server-Setup-Windows-10.png)
4. Copy/Open the links
5. Once the installation finishes go to the websites opened in the previous step
6. Download the *OpenSSL* installer and the *pthreadVC2.dll* file
7. Install the OpenSSL
8. Copy the *pthreadVC2*.*dll* file to the directory where mosquitto executable has been installed. Normally *C:\Program Files (x86)\mosquitto*
9. Open folder where OpenSSL got installed (normally*C:\OpenSSL\*) and open the *lib* folder (normally *C:\OpenSSL\lib*)
10. Copy *ssleay32.lib* and *libeay32.lib* into the folder where mosquitto executable has been installed.
11. Please note – while copying the files Windows might ask for giving Admin permission. Go ahead.
12. At this point Mosquitto should be ready to run————————————————————–
13. Now **testing** mosquitto
14. Open a Command Prompt
15. Goto the folder where mosquitto is installed
16. Give command *mosquitto.exe -v -c mosquitto.conf*
17. The server should now start listening on port 1883
18. Now open another Command Prompt
19. Give the command *mosquitto\_sub -h localhost -t channel1/data1*
20. Open a third Command Prompt and give the command m*osquitto\_pub -h localhost -t channel1/data1 -m “test data”*
21. In the command prompt where we used *mosquitto\_sub*(step 18 and 19) will show the message “test data” sent from the third command prompt.
22. Reaching this point means *mosquitto* is working fine———————————————-
23. To **secure** the transmission we can username and password authentication
24. Open a command prompt with Admin privileges
25. Goto the folder where Mosquitto is installed
26. Create a password file (for the first time only) using the command*mosquitto\_passwd.exe -c passfile.txt username*
27. It will ask for password. Give the password and confirm the password
28. After this point further users can be added using the below command *mosquitto\_passwd.exe -b passfile.txt username password*Please note – this time we supplied the password also along with the username
29. Now edit the config file (*mosquitto.conf* normally located in *C:\Program Files (x86)\mosquitto*) to enforce only authenticated data transfers
30. Uncomment *allow\_anonymous* and set it false
31. Uncomment *password\_file* and put the password file name after it. It will look like *password\_file passfile.txt*
32. Now onwards all sub and pub requests will have to be with username and password of a user whose details exists in the password file. Examples below
33. mosquitto\_pub -h localhost -t channel1/data1 -m "test data" -u john -P johnpass

mosquitto\_sub -h localhost -t channel1/data1 -u jane -P janepass

1. Access control can be done using a acl file or using mosquitto-auth-plug (*https://github.com/jpmens/mosquitto-auth-plug*)
2. There should be a *aclfile.example* inside your mqtt directory. If not then also no problem we will shortly see the contents of the file below.
3. Create a file with any name. Here we will use *aclFile.txt*
4. In the *mosquitto.conf* file uncomment *acl\_file* and put the name of your acl file after that. It will look something like *acl\_file aclFile.txt*
5. Example content of aclFile.txt as below
6. # user jane given full permission to channel1/data1 and only read permission to channel1/data2
7. user jane
8. topic channel1/data1
9. topic read channel1/data2
10. # user jane given full permission to both data1 and data2 channel
11. user john

topic channel1/#

Please put in your suggestions in comment.

[*MQTT on Windows*](https://www.kolkataonweb.com/code-bank/wp-content/uploads/2017/07/MQTT-on-Windows.docx)*— Download link of Word File containing the above steps. WordPress had made some filenames missing. So uploaded the original word doc.*