## **Nullzec Qt Application Instructions to make it work on Windows:**

## Stack needed:

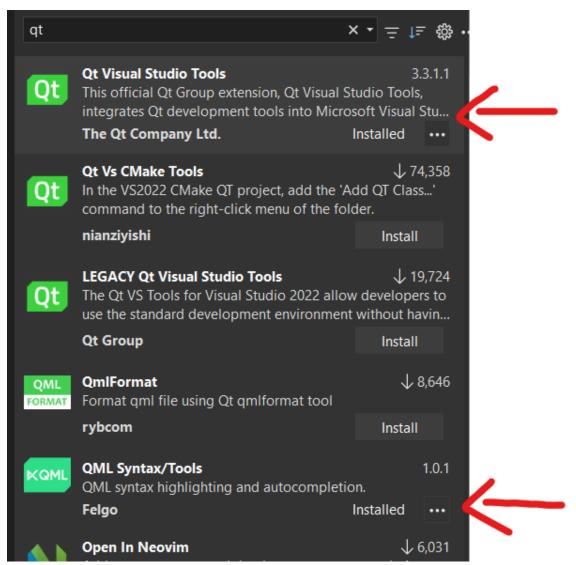
- Qt version 6.8.2 <u>with</u> msvc 2022 64-bit kit
- MS Visual Studio 2022

## How to set up Qt on Visual Studio:

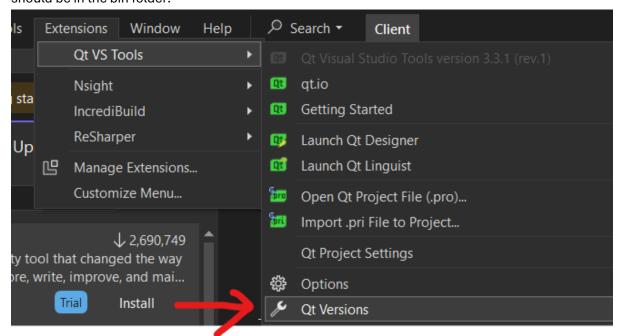
• After installing the required Qt version and the kit, configure VS to run the Qt client application.

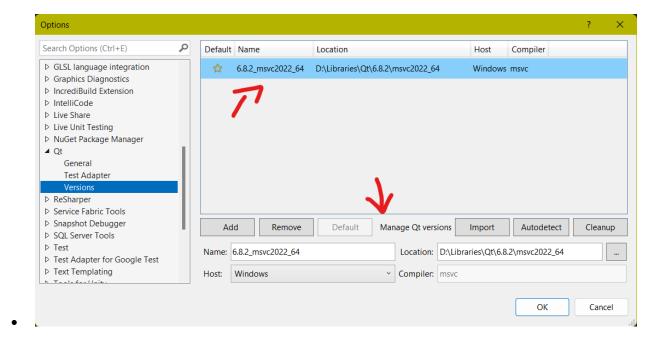
Preview		1.0.2	2020-11-12
<ul><li>Qt 6.10.0 Snapshot from 'dev'</li></ul>		6.10.0-0-202501171141	2025-01-17
Qt Design Studio		1.0.0-0	2025-02-17
Extensions		1.0.0-0-202406111003	2024-06-11
▼ Qt	1.0.19	1.0.19	2024-12-05
▶ □ Qt 6.9.0-rc		6.9.0-0-202503100709	2025-03-10
▼ ■ Qt 6.8.2	6.8.2-0-20250126	6.8.2-0-202501260838	2025-01-26
☐ WebAssembly (multi-threaded)		6.8.2-0-202501260838	2025-01-26
☐ WebAssembly (single-threaded)		6.8.2-0-202501260838	2025-01-26
☐ MSVC 2022 ARM64		6.8.2-0-202501260838	2025-01-26
☐ LLVM-MinGW 17.0.6 64-bit		6.8.2-202501260838	2025-01-26
MSVC 2022 64-bit	6.8.2-0-20250126	6.8.2-0-202501260838	2025-01-26
MinGW 13.1.0 64-bit	6.8.2-0-20250126	6.8.2-0-202501260838	2025-01-26
☐ Android		6.8.2-0-202501260838	2025-01-26
☐ Sources		6.8.2-0-202501260838	2025-01-26
Additional Libraries	6.8.2-0-20250126	6.8.2-0-202501260838	2025-01-26
☐ Qt Debug Information Files		6.8.2-0-202501260838	2025-01-26
▶ □ Qt 6.7.3		6.7.3-0-202409200836	2024-09-20
▶ □ Qt 6.6.3		6.6.3-0-202403191840	2024-03-19
▶ □ Qt 6.5.3		6.5.3-0-202309260341	2023-09-26
▶ ■ Build Tools	1.2.2-0-20241205	1.2.2-0-202412051107	2024-12-05
Qt Creator	1.0.0	1.0.0	2025-03-11

• Install **Qt Visual Studio Tools** and **QML Syntax/Tools** extensions on VS, as shown in the image below:



 Once installed, go to Qt Versions and select the qmake.exe in the msvc2022\_64 folder. It should be in the bin folder.





## Other instructions:

- The client application has a kill switch. When it fails to receive message from the server, it will reinitialize after a certain number of re-tries.
- The client will exit when no server is found to connect to. You must have the server running before you run the client.
- I am sending only the modified rects, although it may have O(width \* height) as the worst case complexity, it usually ends up with O(log(width \* height)).
- I have kept the old code in the project either commented out of the way or in unused files and classes. I have kept the actual code clean. This is to show my learning process as I was figuring out 2 libraries: Qt, and vncserver and vncclient.
- I tried sending frame buffer in packets via UDP. However, there involved quite a bit of logic to assemble the packets on the client side into meaningful buffer. Given more time, I can achieve this. However, I am now only sending modified chunks in 256x256 rects to the client. The block size can be adjusted.
- Please find the Constants.h file that stores all the constant variables on the server side.
- For a bigger application, I would compartmentalize the code on the server side into multiple classes. Although, it is getting big already.