

10. Build/Deploy Process

Build Process:

Setup for LINUX/UNIX (Recommended):

1. To install CMake on LINUX/UNIX use following commands in terminal (press Ctrl+Alt+T to open terminal).
 - `cd $HOME`
 - `wget http://www.cmake.org/files/v2.8/cmake-2.8.12.2.tar.gz`
 - `tar xzf cmake-2.8.12.2.tar.gz`
 - `cd cmake-2.8.12.2`
 - `./configure --prefix=$HOME`
 - `Make`
 - `Make install`
2. Now go to google and search for QT offline .run file (Qt 4.8.5 or higher), make sure that qmake (type `install sudo apt-get install qmake` in terminal to install it) & QT creator are also installed.
3. Now follow the commands to setup VTK (make sure you have good internet connection while doing this setup process).
 - `mkdir $HOME/<folder name>.`
 - `cd $HOME/<folder name>.`
 - `git clone git://vtk.org/VTK.git.`
 - VTK (folder is created and all the source files are downloaded).
 - `mkdir build.`
 - `cd build.`
 - Use command `cmake-gui` (install if not installed).
 - Open CMake-gui.
 - Set source code PATH to the created VTK folder.
 - And for build PATH locate build folder.
 - Click configure button select specify the generator for the project as unix makefile and also select use default native compilers then click on finish.
 - After configuration is done you need to enable QT by clicking on the check boxes.
Select the following check boxes.
 - `BUILD_EXAMPLES` (optional).
 - `BUILD_TESTING`.
 - `Module_vtkGUISupportQt`.
 - `Module_vtkGUISupportQtOpenGL`.
 - `Module_vtkRenderingQt`.
 - `Module_vtkTestingCore`.
 - `Module_vtkTestingRendering`.
 - `Module_vtkViewsQt`.
 - `VTK_Group_Qt`.
 - Now configure again.
 - Click Generate.
4. Now goto build folder in terminal and type the following commands.
 - `Make`
 - `Make -j4`
 - `Make install.`
5. Now try some examples from the vtk wiki website to check VTK and QT are properly installed.

Setup for windows:

Install visual studio 12(recommended) software.

1. Go to QT website, download the QT offline installer (Qt 4.8.5 recommended for vs12) with respect to visual studio which is installed on to the system.
2. Now goto VTK website.
3. Go to downloads and download the latest release of VTK zip file.(VTK 6.2.0 recommended for vs12)
4. Extract the zip file.
5. Now create a new folder in c: drive named as VTK.
6. In the created VTK folder again create two new folder named as src (for source code) and build.
7. Now copy the extracted folder files (go into the extracted folder) in to src folder.
8. Now go to CMake website and download the CMake installer (make sure that you have uninstalled the previous versions if present).
9. Now install the CMake, while installing CMake make sure that after you click on I Agree, select *Add CMake to the system PATH*(for all users/current user).
10. Now open CMake in windows. In the source code give the file path of src folder and for the build give build folder which is created in c: drive.
11. Click configure button select specify the generator for the project as visual studio 12 and also select use default native compilers then click on finish.
12. After configuration is done you need to enable QT by clicking on the check boxes.
Select the following check boxes.
 - BUILD_EXAMPLES(optional).
 - BUILD_TESTING.
 - Module_vtkGUISupportQt.
 - Module_vtkGUISupportQtOpenGL.
 - Module_vtkRenderingQt.
 - Module_vtkTestingCore.
 - Module_vtkTestingRendering.
 - Module_vtkViewsQt.
 - VTK_Group_Qt.
13. Now configure again.
14. Click generate.
15. Now go into build folder search for VTK.sln and open it(which is used for build).
16. Change the debug mode to release mode. Now go to build menu click on build ALL_BUILD(this will take a minimum of 30 minutes and it's better if you disable your anti-virus software). After this process, you will find the number of builds which are successful.
17. Set the PATH of QT,VTK bin and CMake in environment variables(more like it will be like this if you setup path C:\Program Files (x86)\CMake; C:\vtk\build\bin\Debug; C:\Qt\4.8.5\bin; C:\vtk\build; C:\Qt\Qt5.5.1\5.5\msvc2012\bin;).
18. Now try some examples from the VTK wiki website to check VTK and QT are properly installed.

Note:

It is recommended to install QT before installing VTK using CMake.