



Changing Version Control to Visual Studio

How to change the version control software from Sourcetree to the inherent system on Visual Studio

 Difficulty **Hard**

 Duration **1 hour(s)**

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Comments

Introduction

In March 2022 the password policy of the system behind SourceTree / Bitbucket and Atlassian changed - link. This meant all machine would need a complex password login change for the SourceTree program used for version control of the PLC code.

This was not straight-forward to resolve, so the decision was made to change the version control system to the one that is packaged with the Visual Studio system by default. This is a better method anyway, but it needs the "TcXaeShell" installed.



...The TcXaeShell is simply a newer version of Visual Studio that includes Source control, rebadged for TwinCAT3

Step 1 - Take a backup of the current build project

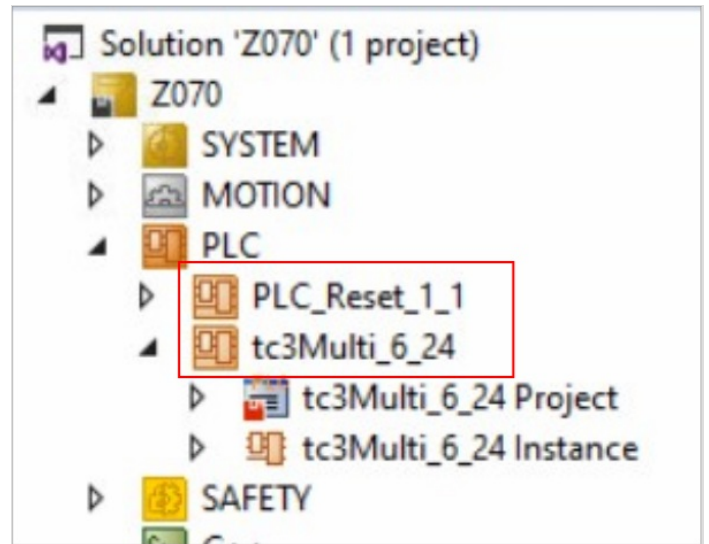
Archiving a TwinCAT Project

Step 2 - Ensure the PLC Project Names are Compatible

Check the PLC Projects are called


tc3Multi
PLC_Reset

If they have a number after them (as in picture, they will need to be renamed first



Step 3 - Backup the Mappings information

Creating Backup of TwinCAT Mapping

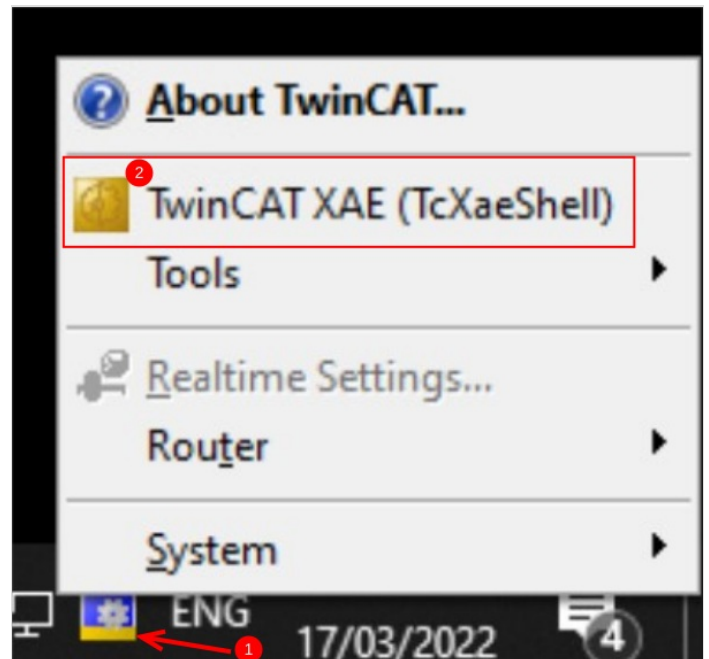
 ...This is really, really important to do

Step 4 - Ensure TcXAEShell is installed

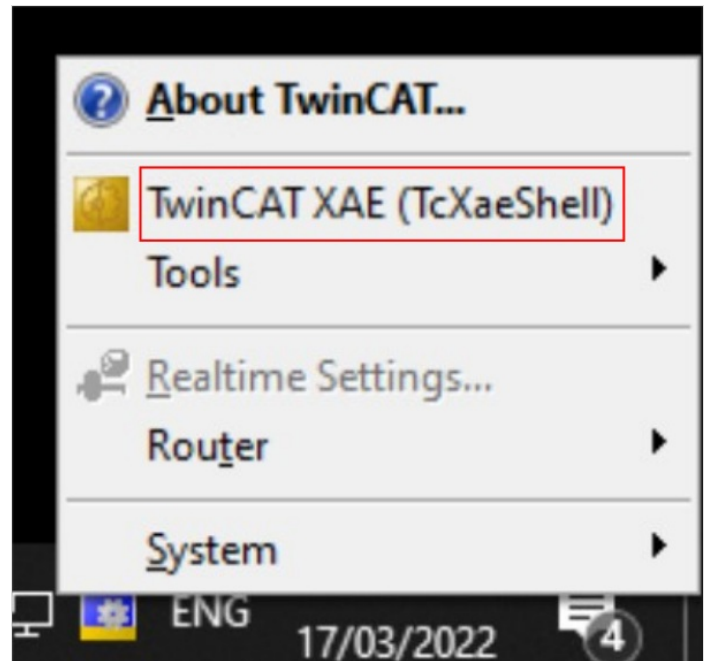
1. Right click on TwinCAT service in the task bar
2. If TcXaeShell is installed you will see the gold Icon with the cog inside

There is a Visual Studio icon here instead, you will need to install TcXaeShell.

Procedure is here



Step 5 - Open TwinCAT Shell

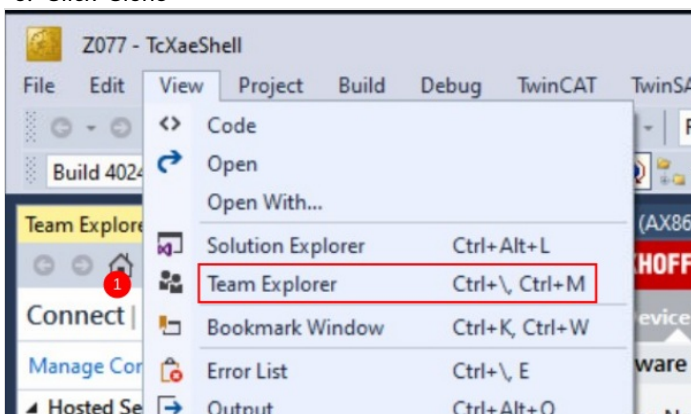


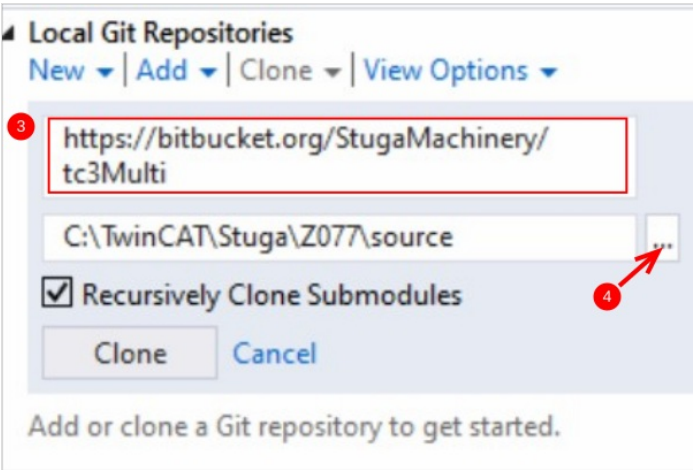
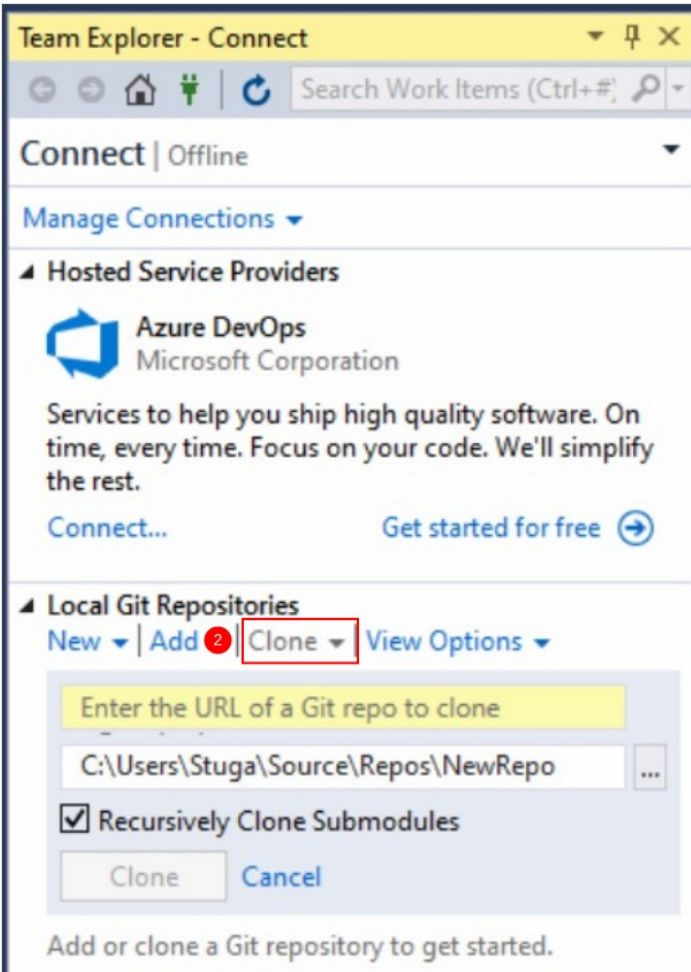
Step 6 - Open the Machine Solution File

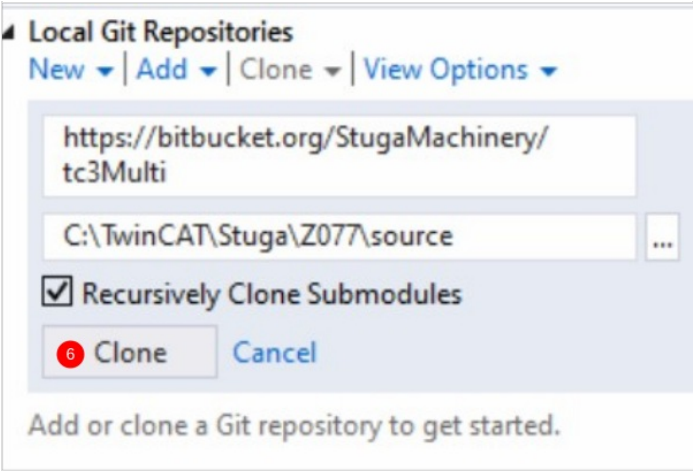
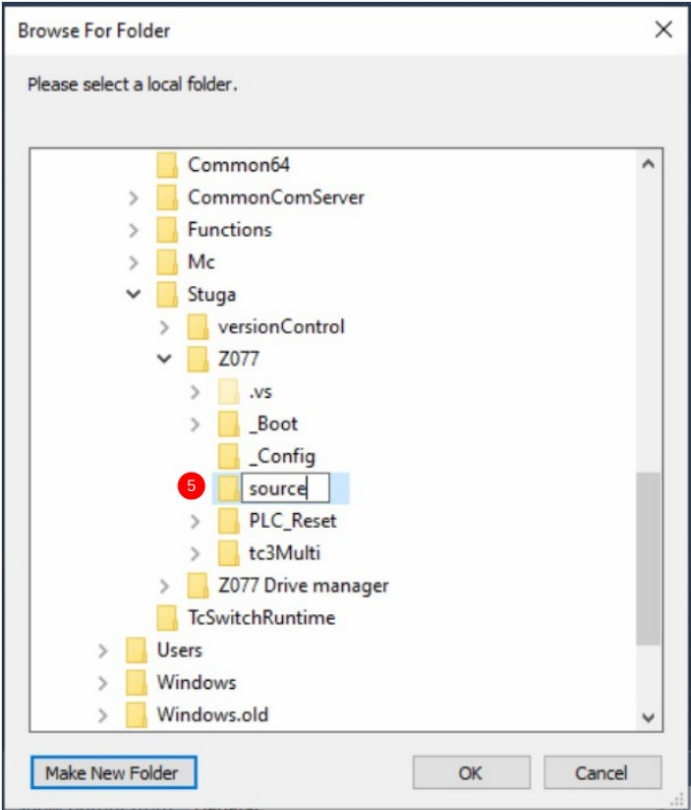


Step 7 - Clone the Repository

1. Open Team Explorer
2. Clone a new Git Repository
3. URL to clone: <https://bitbucket.org/StugaMachinery/tc3Multi>
4. Click on the destination setup
5. Create a new folder under the machine build folder called "source"
6. Click 'Clone'








Step 8 - Enter Git Credentials (if required)

Atlassian Username is StugaMachinery

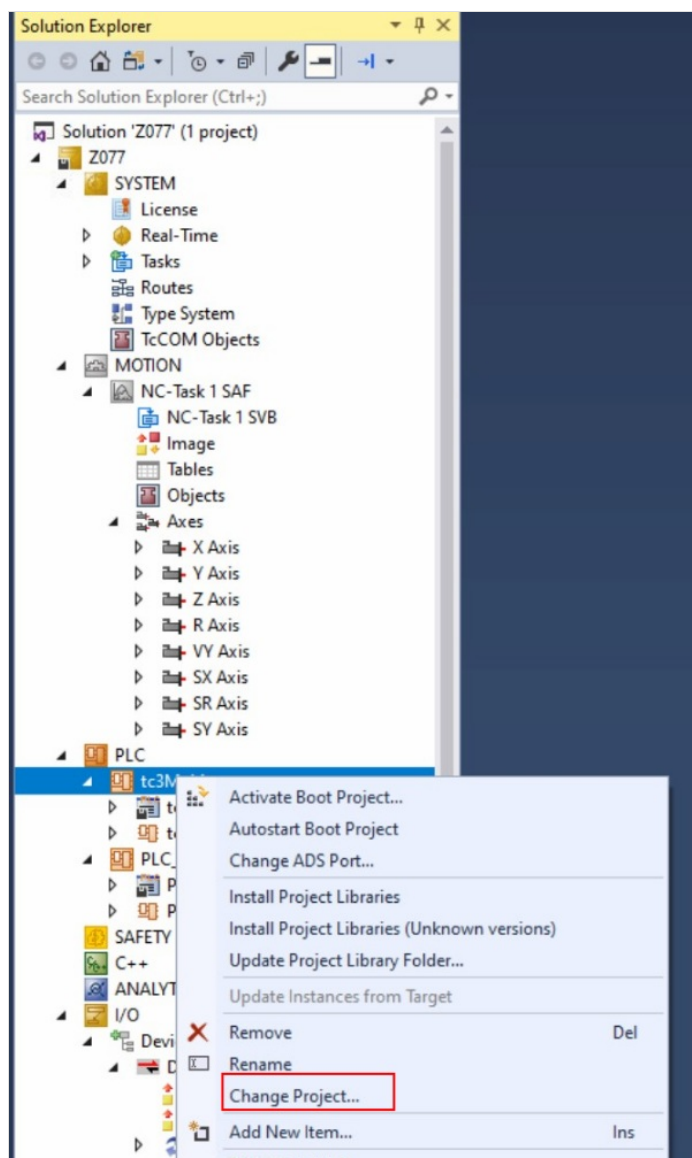
Password is stored in the file

G:\IT Department\SourceTree BitBucket App Password.txt

 ...Sometimes, the password credentials are already stored and the password entry is not necessary

Step 9 - Move The PLC_Reset and tc3Multi Project

1. Right click the PLC_Reset Project
2. Select Change Project
3. Navigate to the repository you have created in Step 6
c:\TwinCAT\Stuga\BuildNo\source\PLC_Reset\PLC_Reset.plcproj
4. Repeat for the tc3Multi project

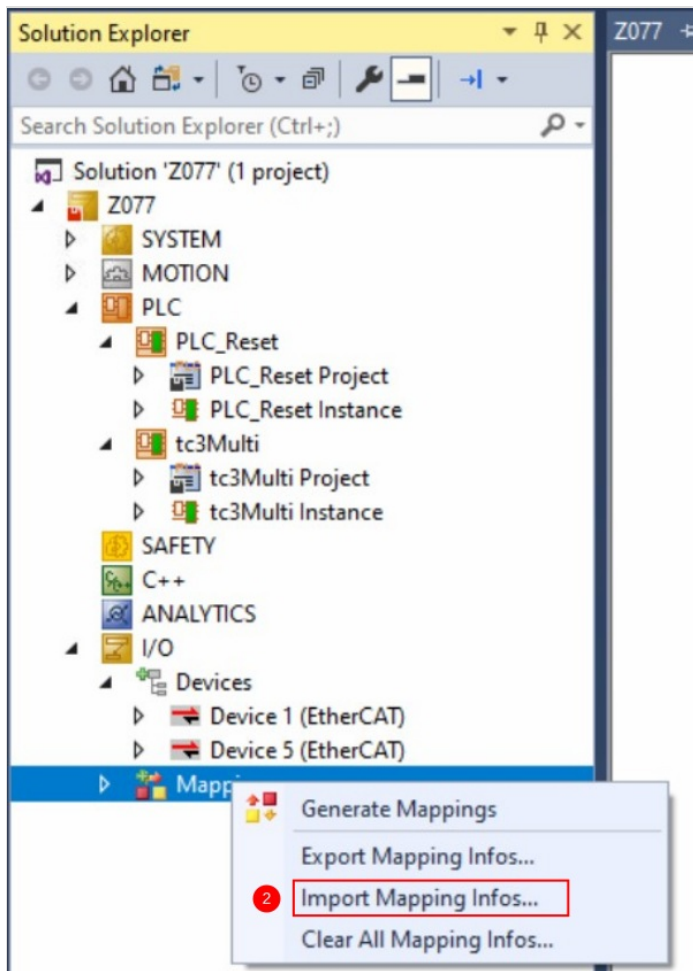
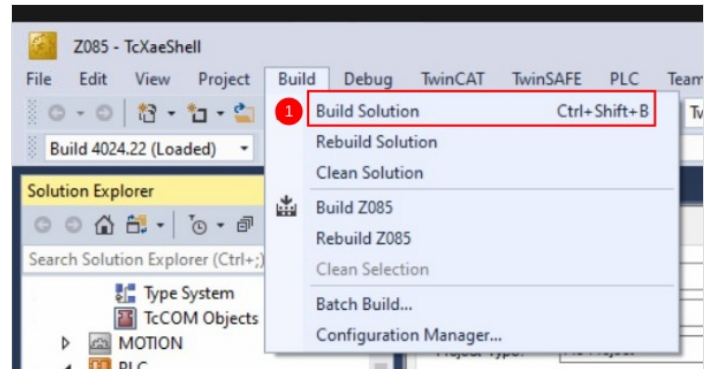
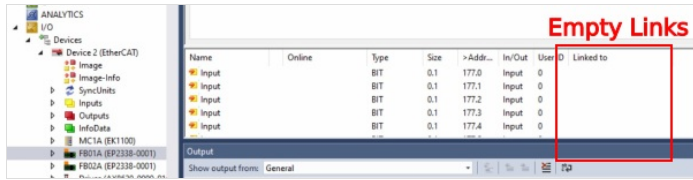


Step 10 - Check if the IO links have disappeared

If so, this is probably due to the PLC project having no "Instance":

1. Build the solution
2. Import the mappings file taken in step 2

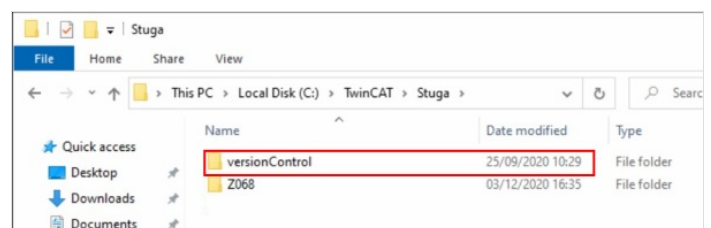
i ...The "Instance" is created when the PLC project is built. This has all the IO definitions in it (ie axes, outputArray, inputArray, etc) If it does not exist, the IO cannot be linked. Once built, you can then import the old links back in again



Step 11 - Delete the versionControl Folder

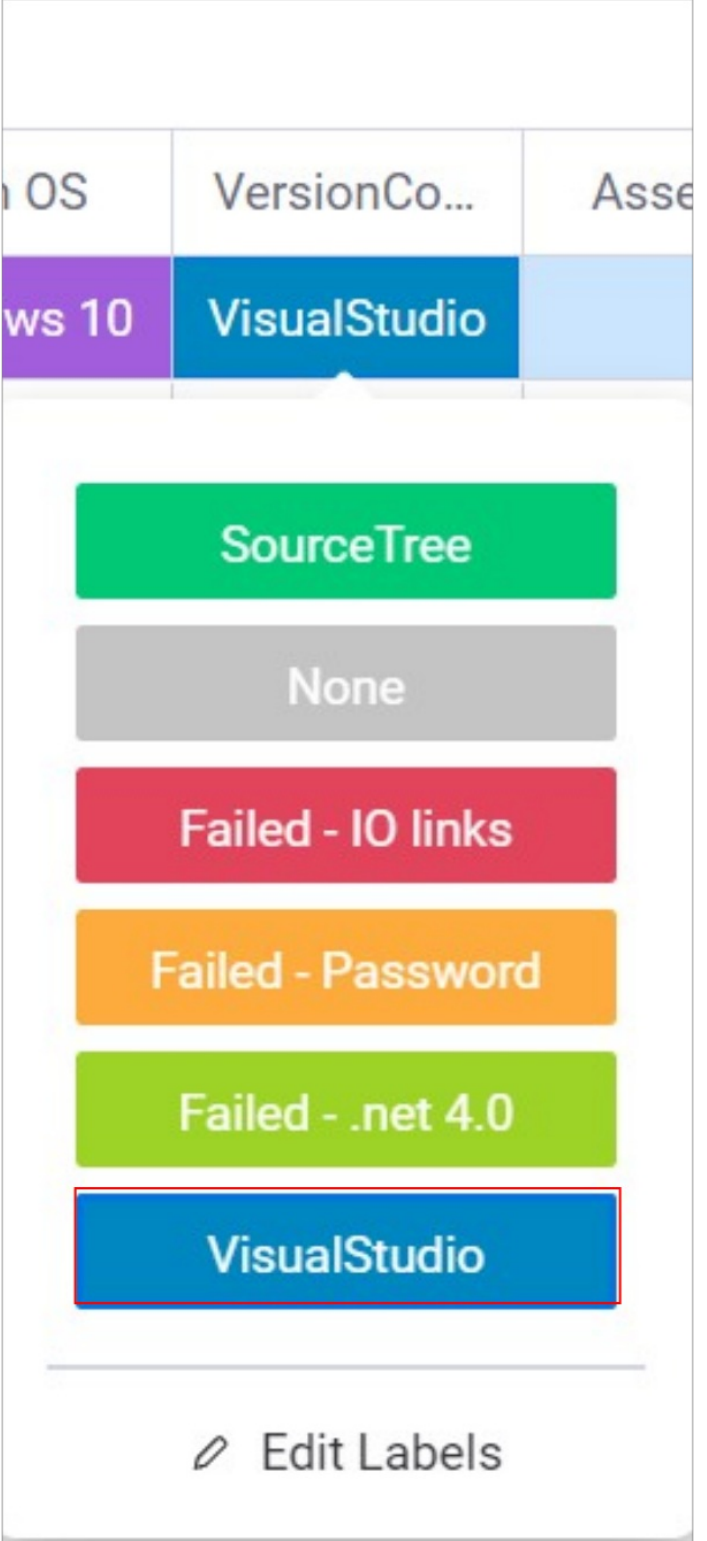
Delete the versionControl folder completely

i ...This prevents confusion in the future of where the project exists



Step 12 - Update Control Systems Log

Update the Version Control column on the board to "VisualStudio" to log the completion of this task



The screenshot shows a Kanban board with three columns: 'OS', 'VersionCo...', and 'Asse'. The 'VersionCo...' column is selected, and a dropdown menu is open. The dropdown menu contains the following options: 'SourceTree' (green), 'None' (grey), 'Failed - IO links' (red), 'Failed - Password' (orange), 'Failed - .net 4.0' (light green), and 'VisualStudio' (blue). The 'VisualStudio' option is highlighted with a red border. Below the dropdown menu is an 'Edit Labels' button with a pencil icon.

OS	VersionCo...	Asse
ws 10	VisualStudio	

- SourceTree
- None
- Failed - IO links
- Failed - Password
- Failed - .net 4.0
- VisualStudio

Edit Labels