

**Tutorial on  
Concurrent Version System  
based on  
CVS NT and Tortoise CVS**

**Ver. 1.0**

**Prepared by Marcin Rogawski, Ekawat Homsirikamol and Dr. Kris Gaj**

**The Current Version of the tutorial was tested using the following tools:**

**Server CVS:**

- CVS NT ver. 2.5.04.3236

**Client CVS:**

- Tortoise CVS ver. 1.11.3

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# 1. CVS Server

## 1.1. Download

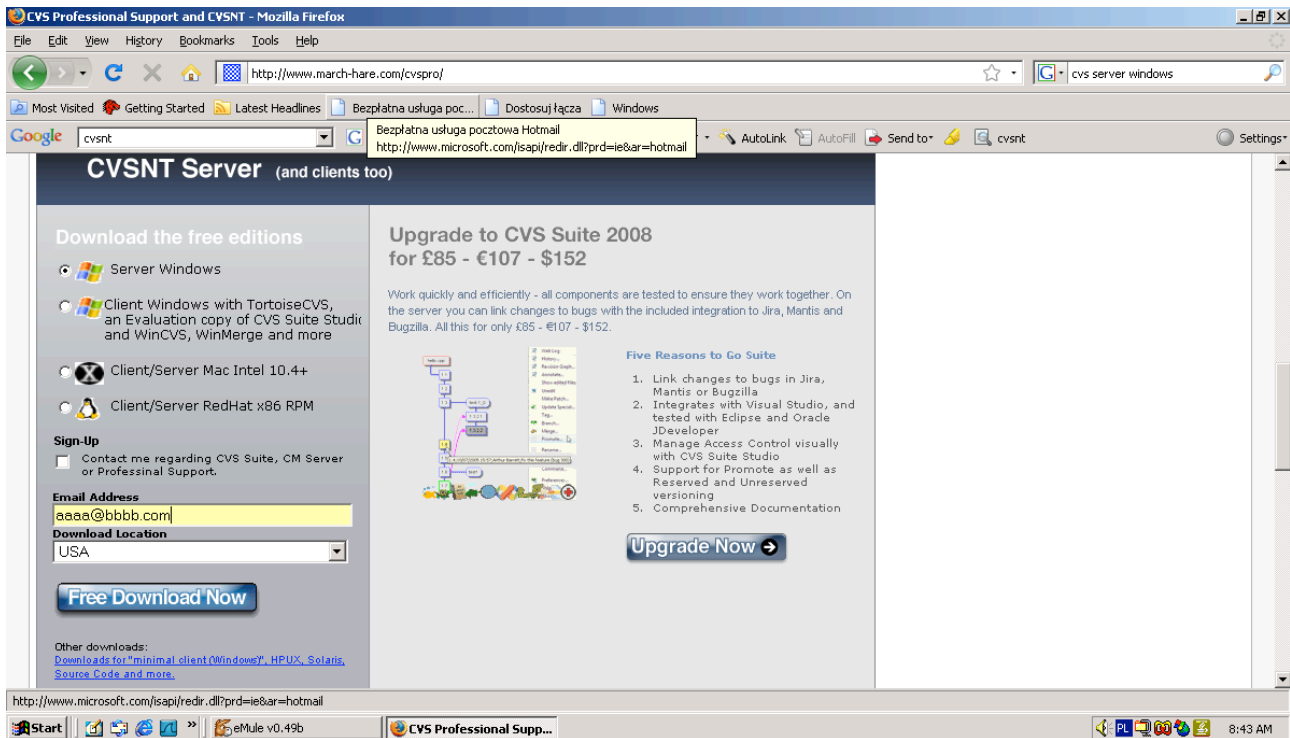
To download CVS NT Server type into your browser url:

<http://www.cvsnt.org/>

you will be redirected to the webpage:

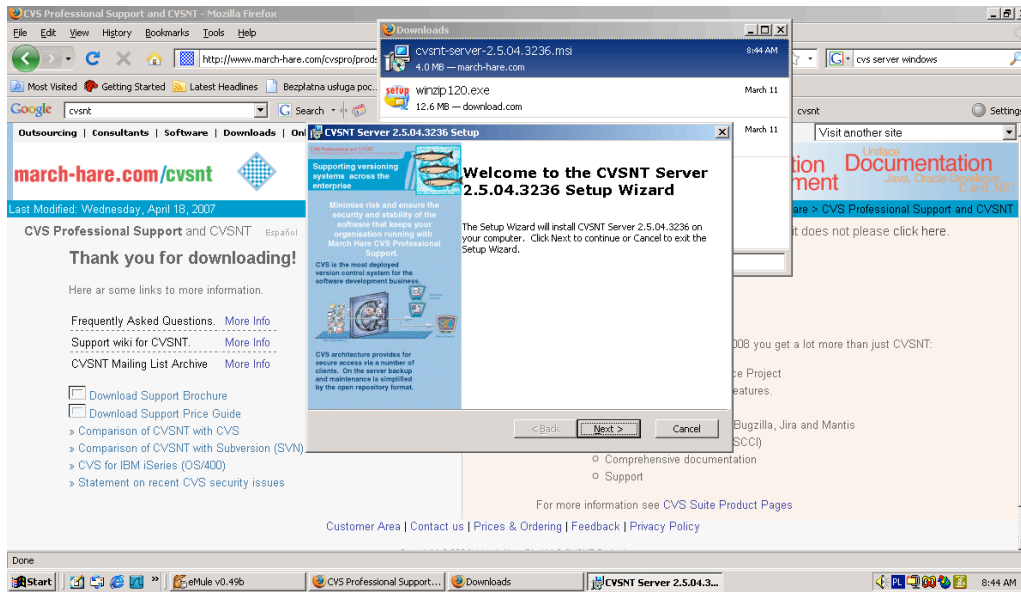
<http://www.march-hare.com/cvspro/>

Choose Server Windows, type your email address and finally change download location to USA. Click on “Free Download Now” button. Download of CVS NT Server should be started.

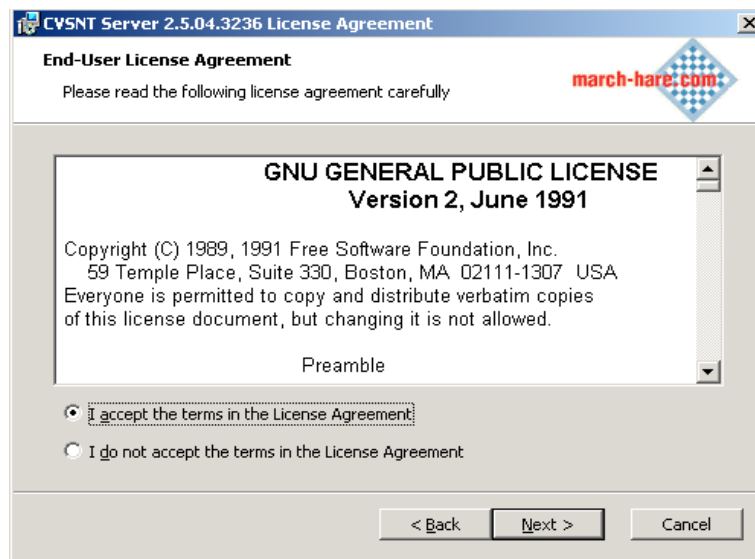


## 1.2. Installation

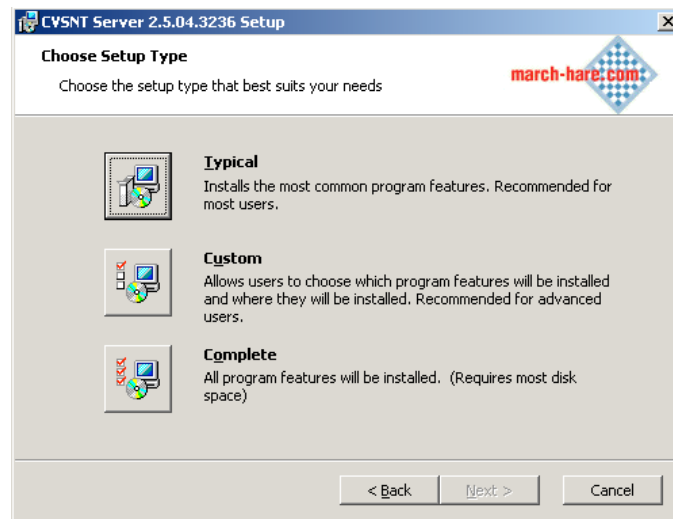
Start installation process by double-click on icon of downloaded file. Click **next** to make next step of installation.



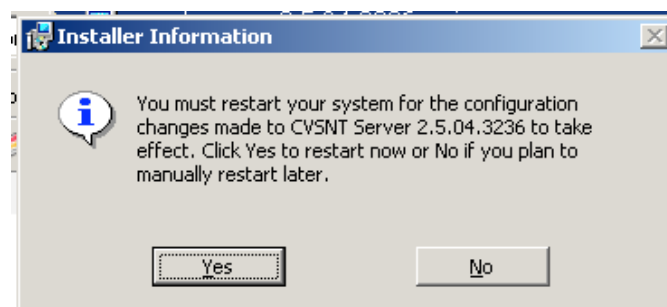
Accept the terms in the License Agreement and then click **next**.



Choose Complete installation and then click **next**.

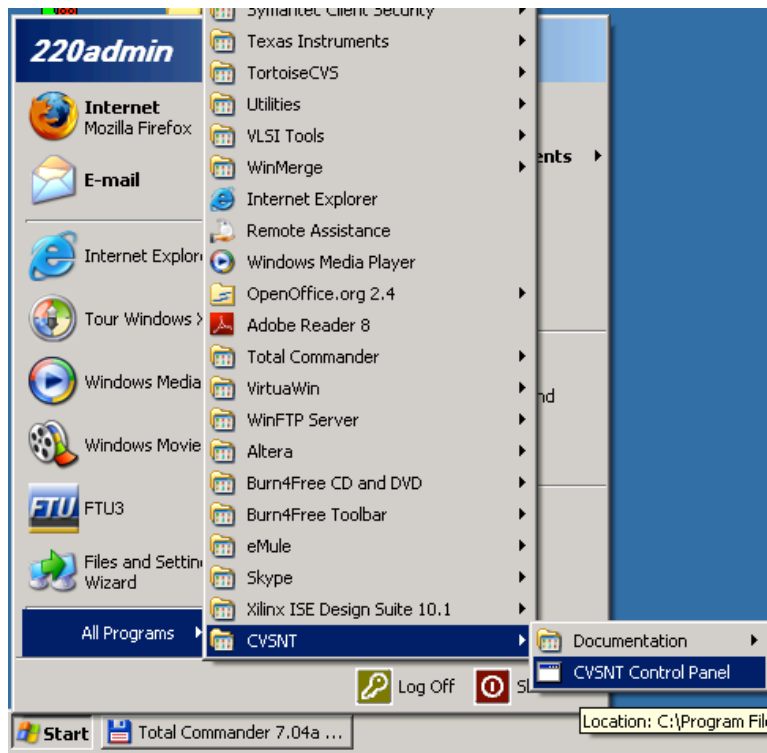


After installation you will be asked about restarting your system. Click **yes**.

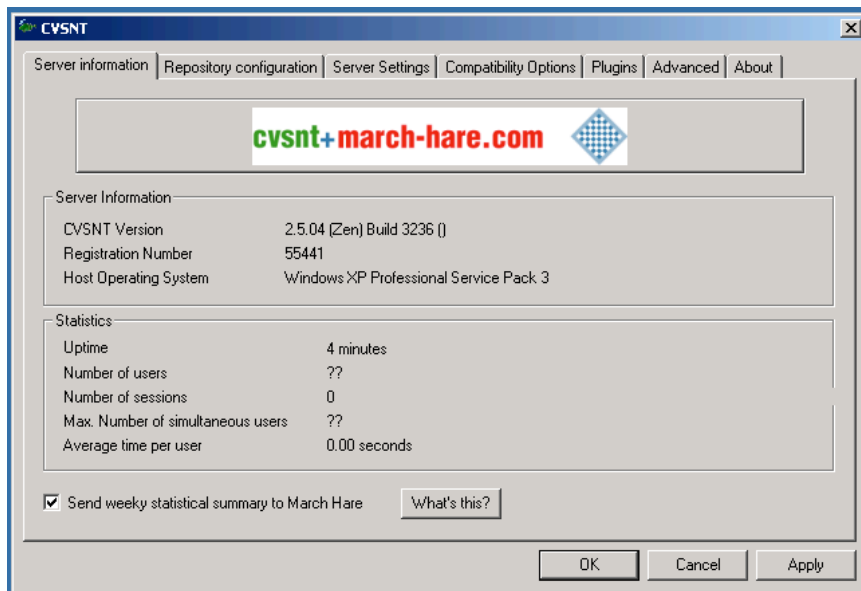


### 1.3. Configuration

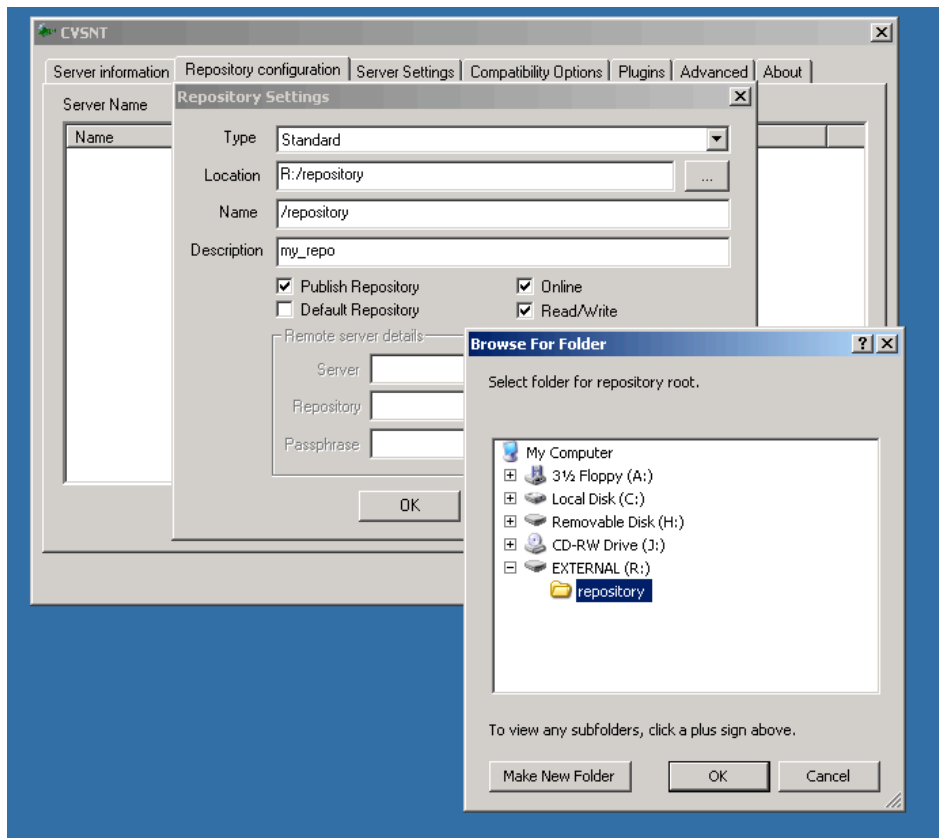
Click Start- All Programs-CVSNT-CVSNT Control Panel to Configure CVS Server.



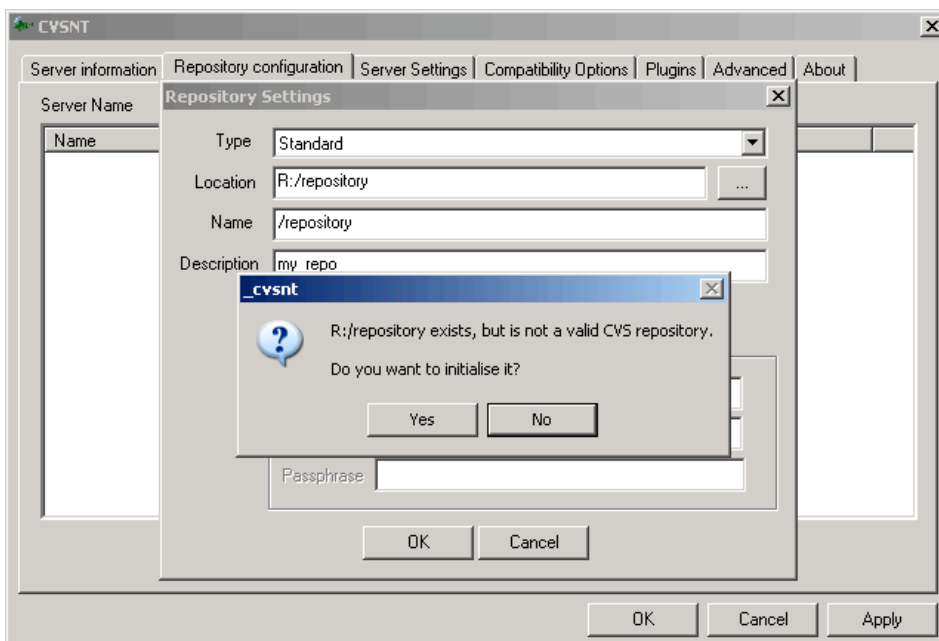
You should be able to see this window below. For basic configuration you should prepare Repository Configuration and Server Settings.



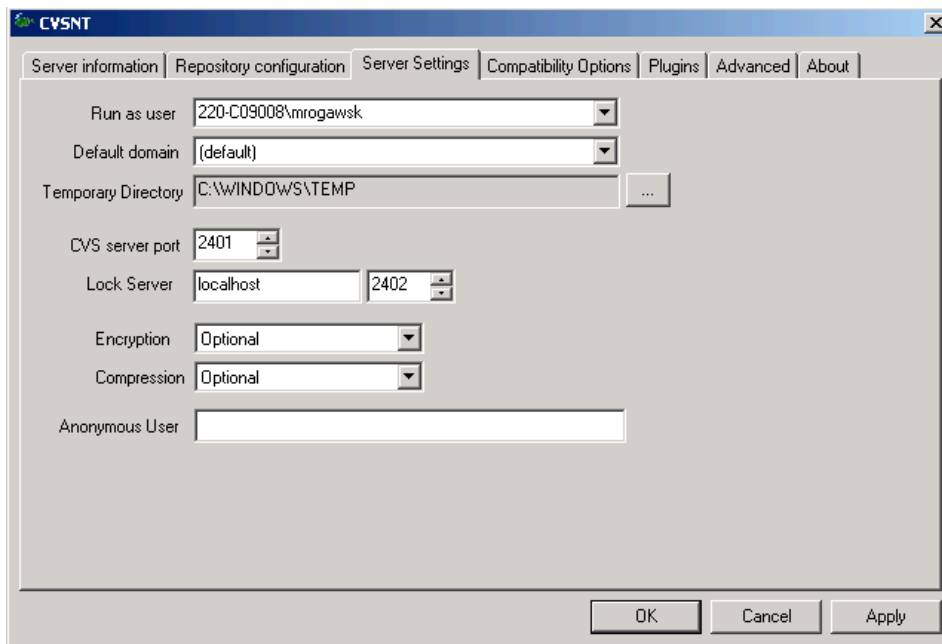
For repository location choose – directory on your external drive.



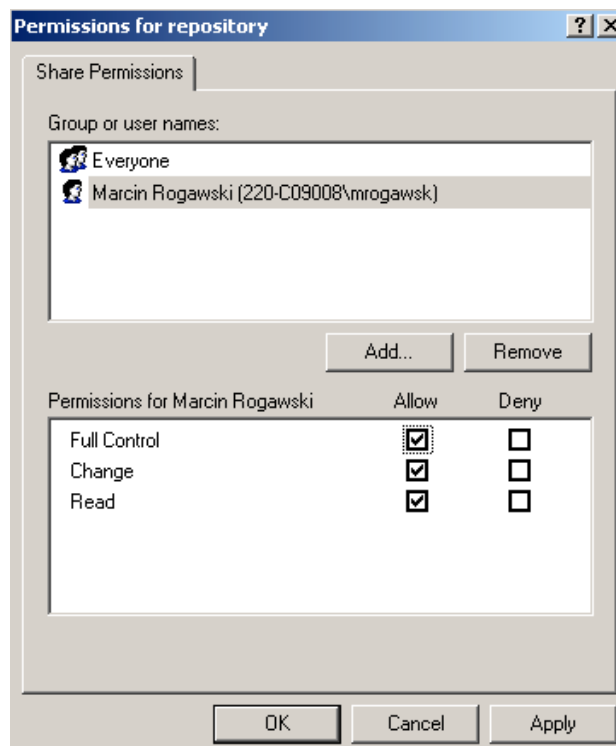
When you click **ok** you will be asked about initialization of your CVS repository directory. Click **yes**.



Sever Settings: for security reasons it is good idea to create a user with restricted privileges. Choose this user as a default user for running CVS server.



Give full control permissions for repository directory for a user who runs CVS server.



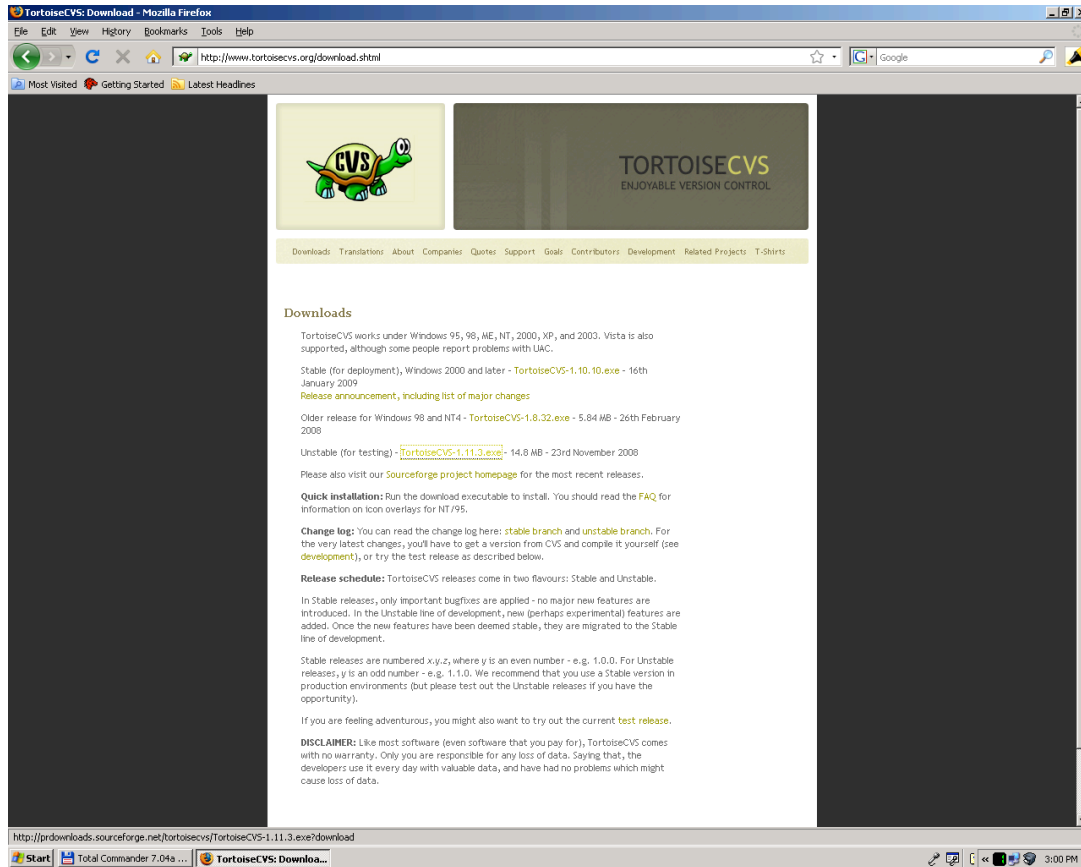
## 2. CVS Client

### 2.1. Download

To download CVS Client type into your browser url:

<http://www.tortoisecvs.org/download.shtml>

Download version of 1.11.3 and start installation process.

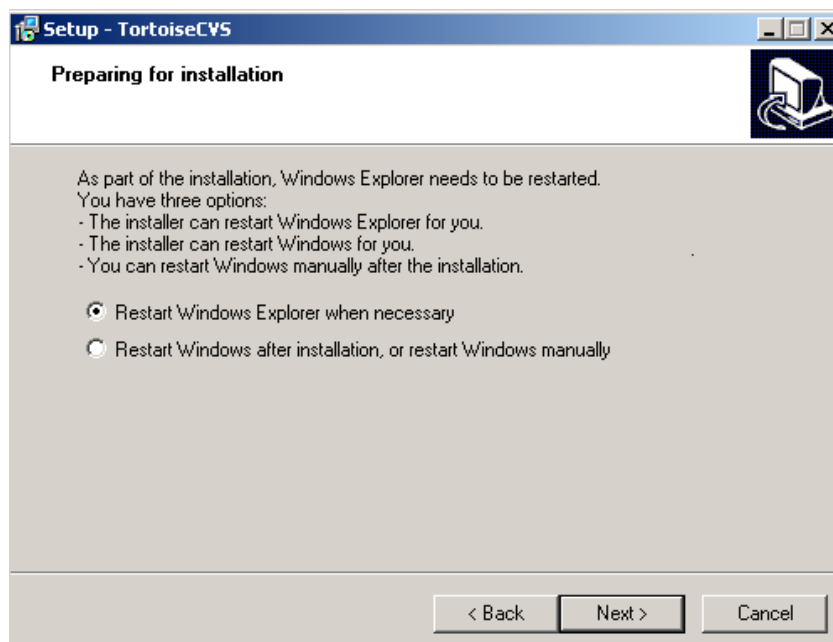


## 2.2. Installation

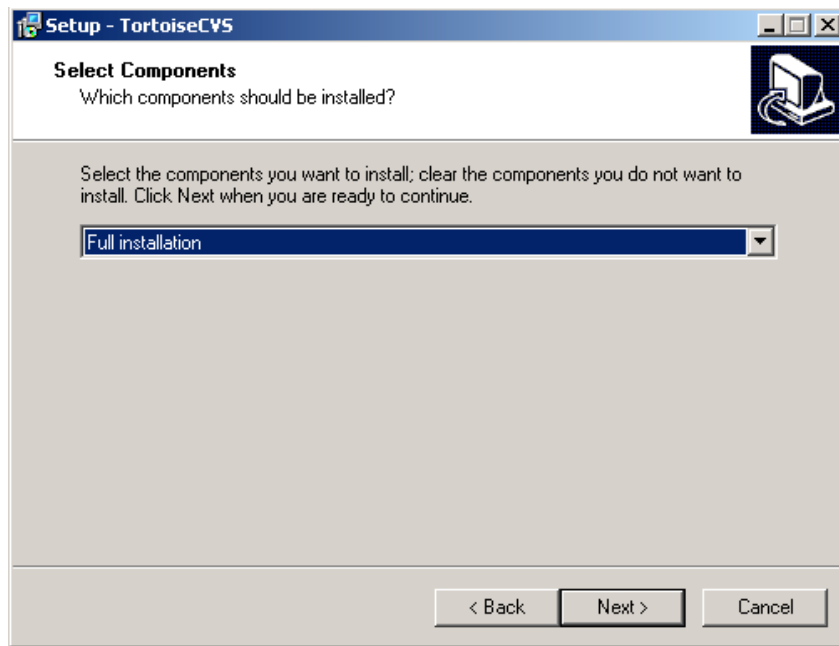
Double click on icon of downloaded cvs client file. When first window appear click on **next**.



Choose one of the option for restarting Windows Explorer.



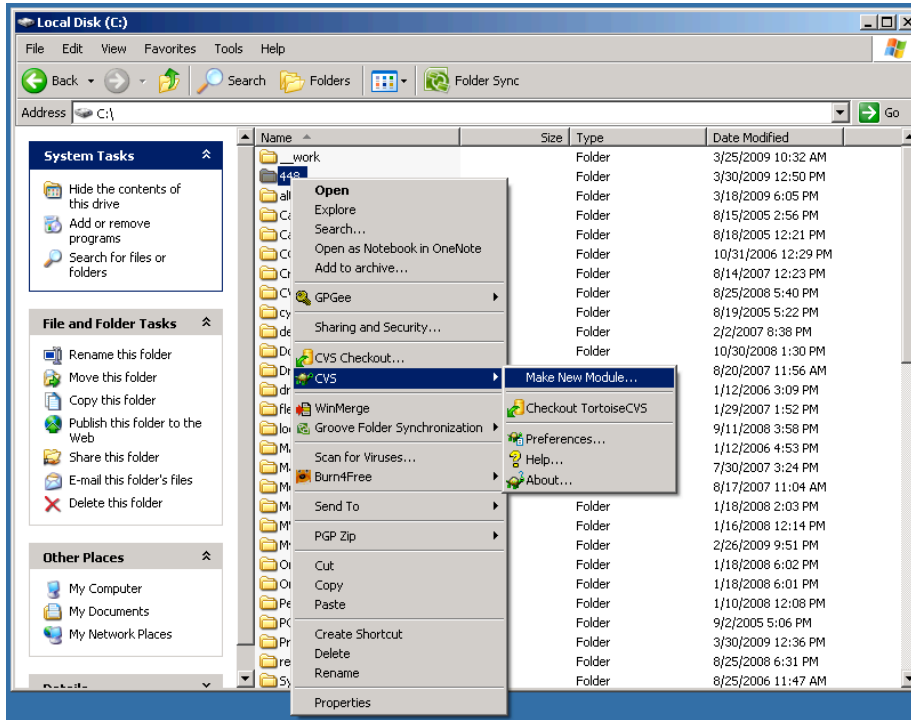
Choose Full Installation option.



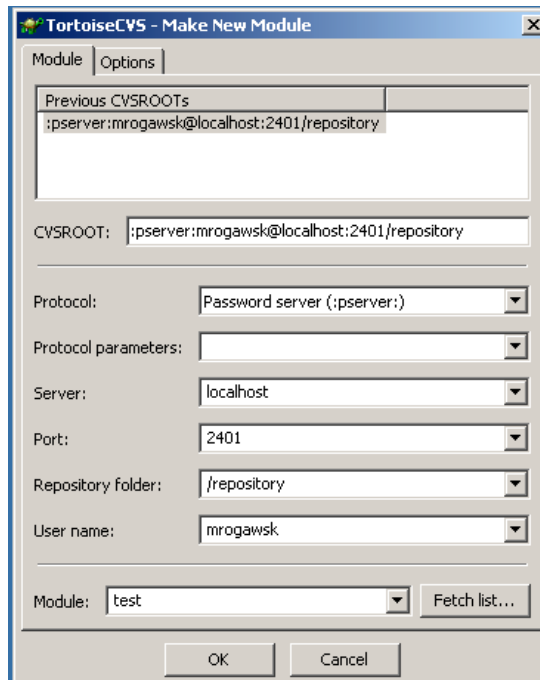
### 3. CVS – basic operations

#### 3.1. Check-in

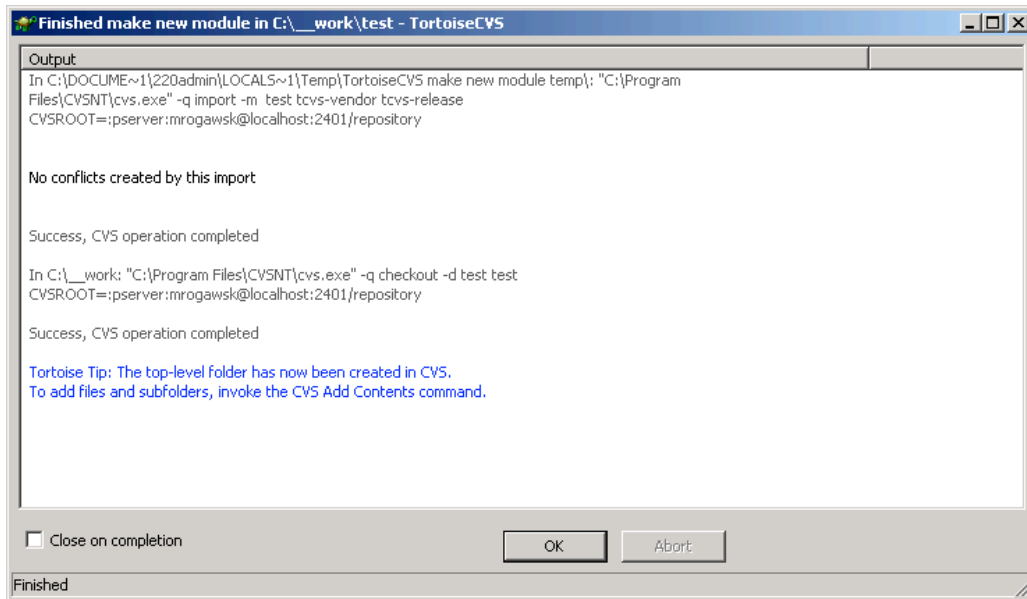
To check-in new project into CVS Server right-click on the name of the directory. Pop up menu should appear. Choose CVS option and then Make New Module.



Specify connection protocol, server name, repository folder, user name, port and click **ok**.

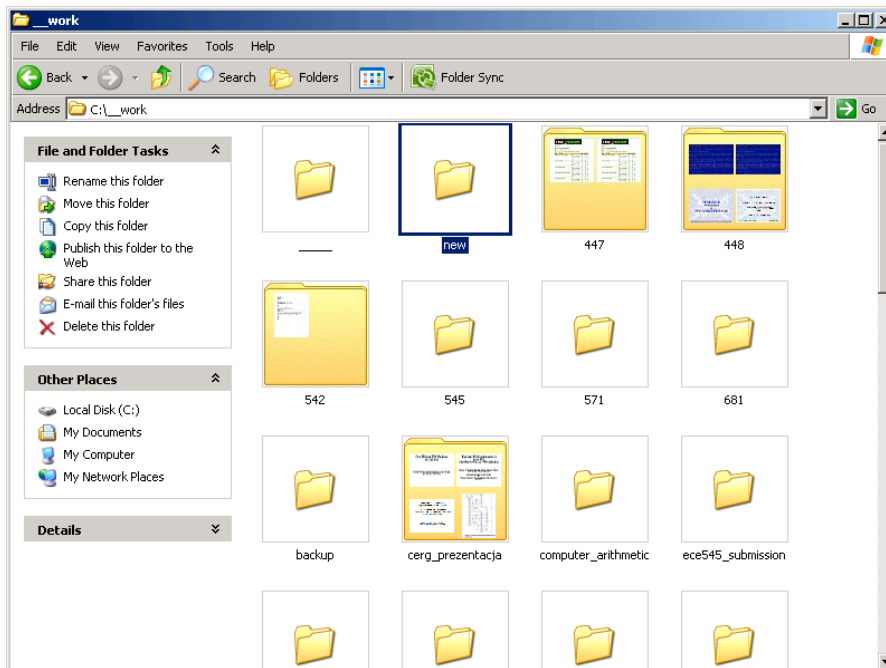


You should be able to see window with success information.

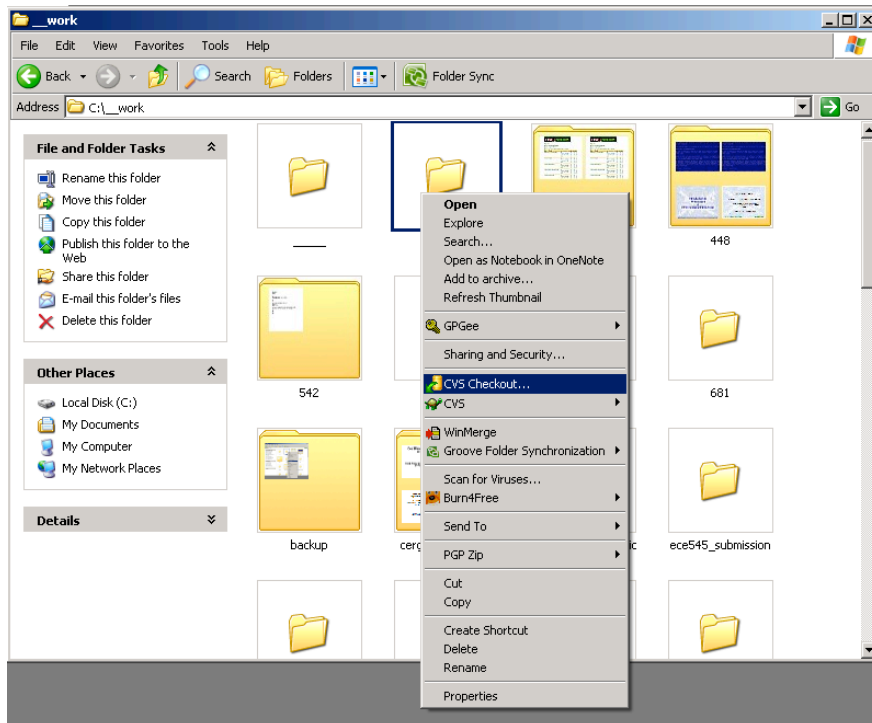


### 3.2. Check-out

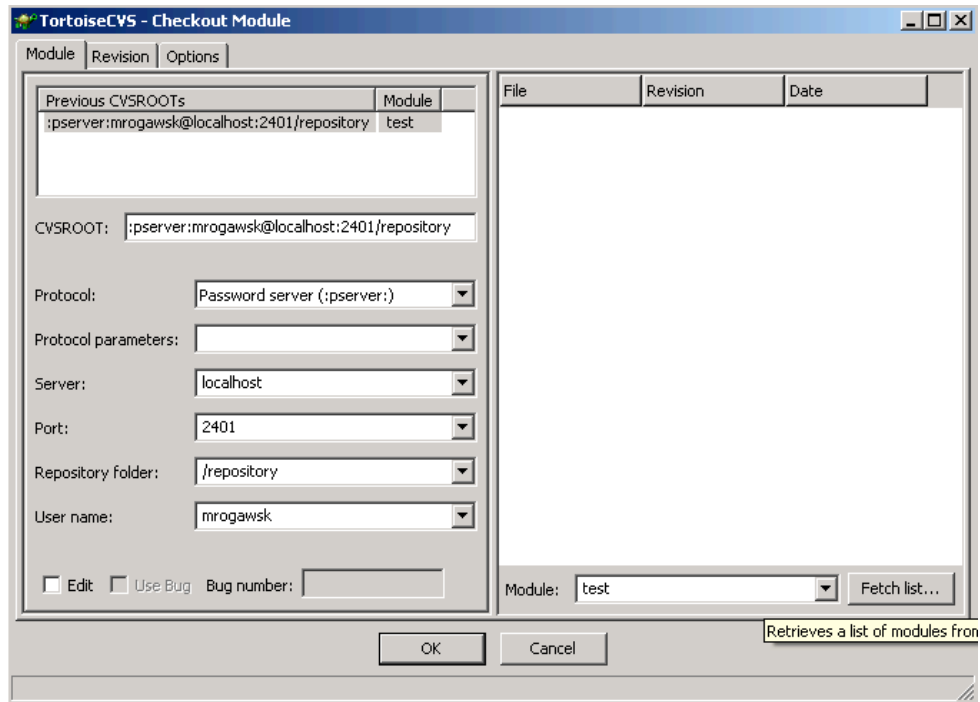
The Check-out operation is for initial download of existing repository. Choose the directory for check-out.



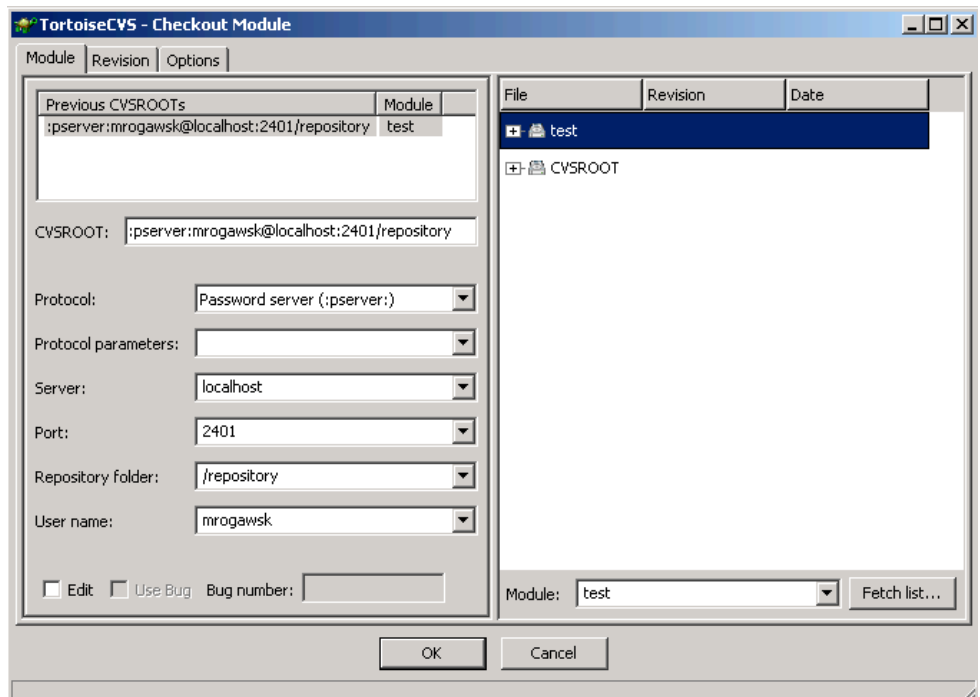
Do right-click on the directory. On the popup menu choose CVS Check-out.



Specify type of the protocol, address of the server, port number, repository directory, name of the user for connection establishment. Click on the **fetch list** to chose directory with project to check-out.

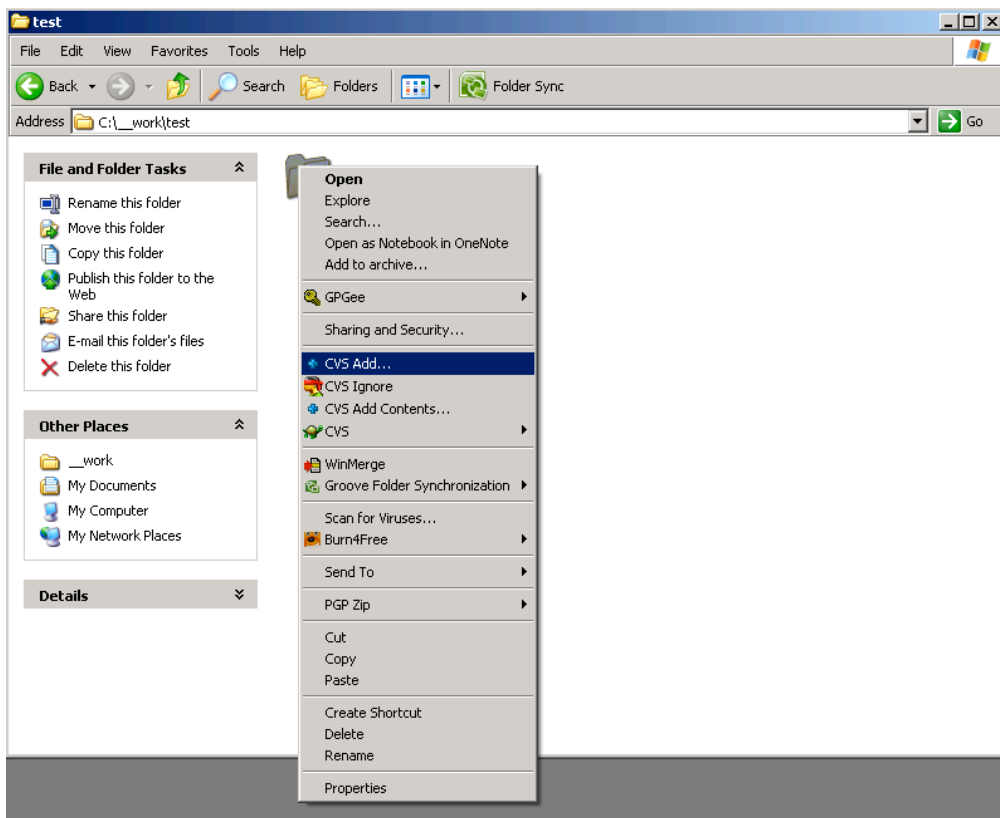
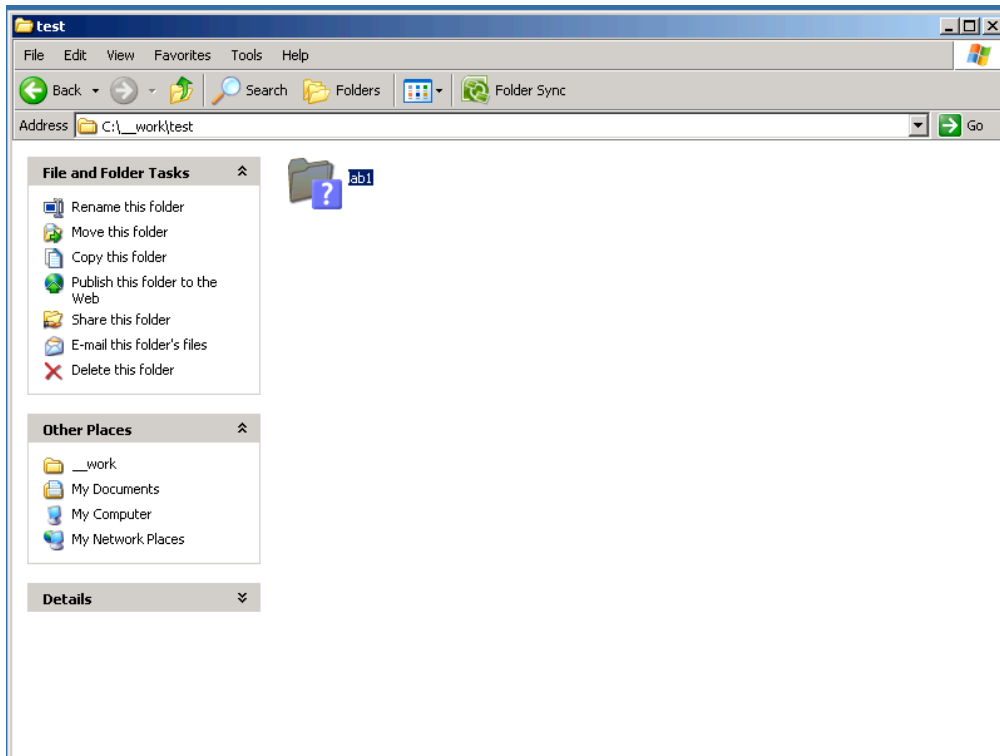


Mark directory for check-out and click **ok**.

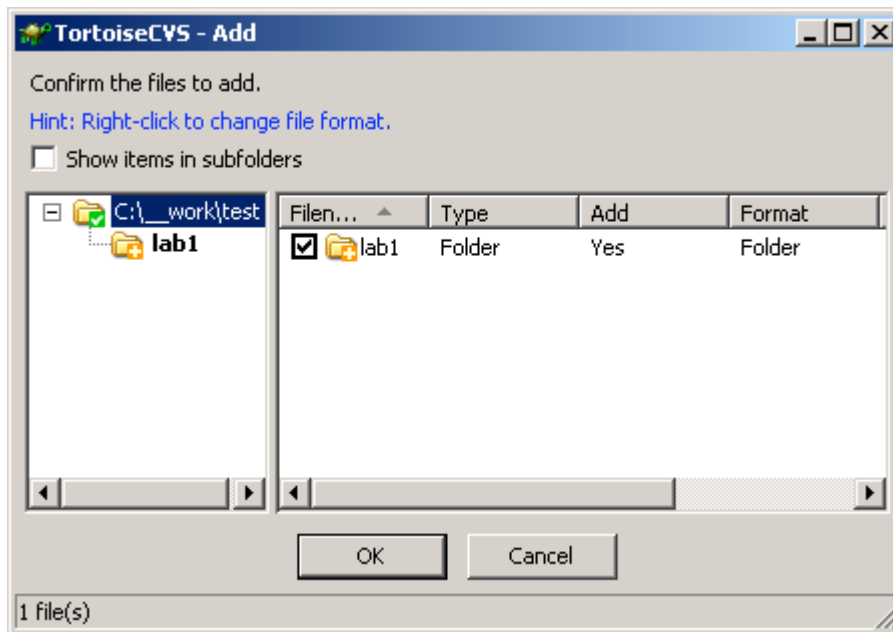


### 3.3. Add/Add Content

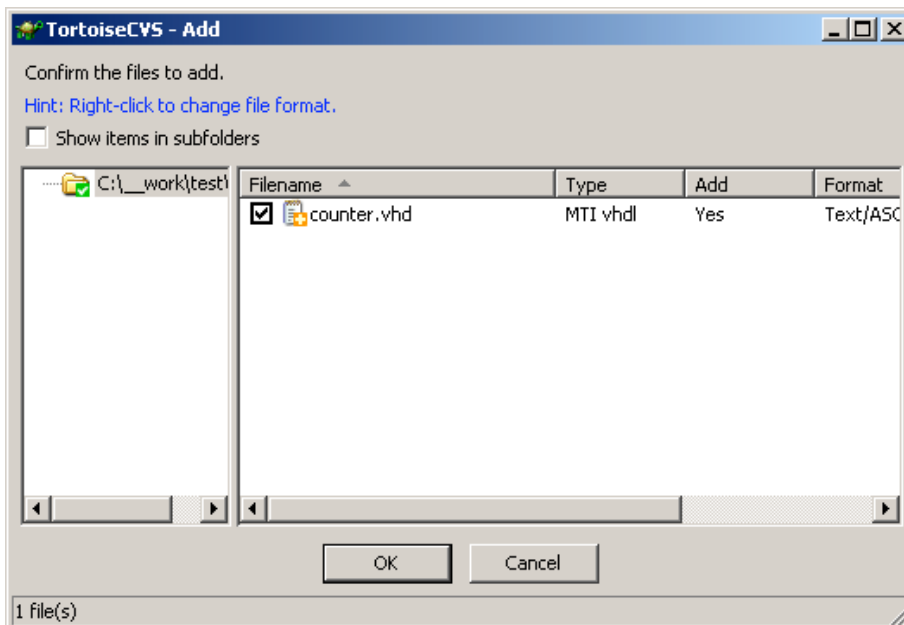
The white question mark on the blue background within the icon of the folder in the local repository indicated that folder is not under revision control. To add it – right click and choose CVS-Add from the popup menu.



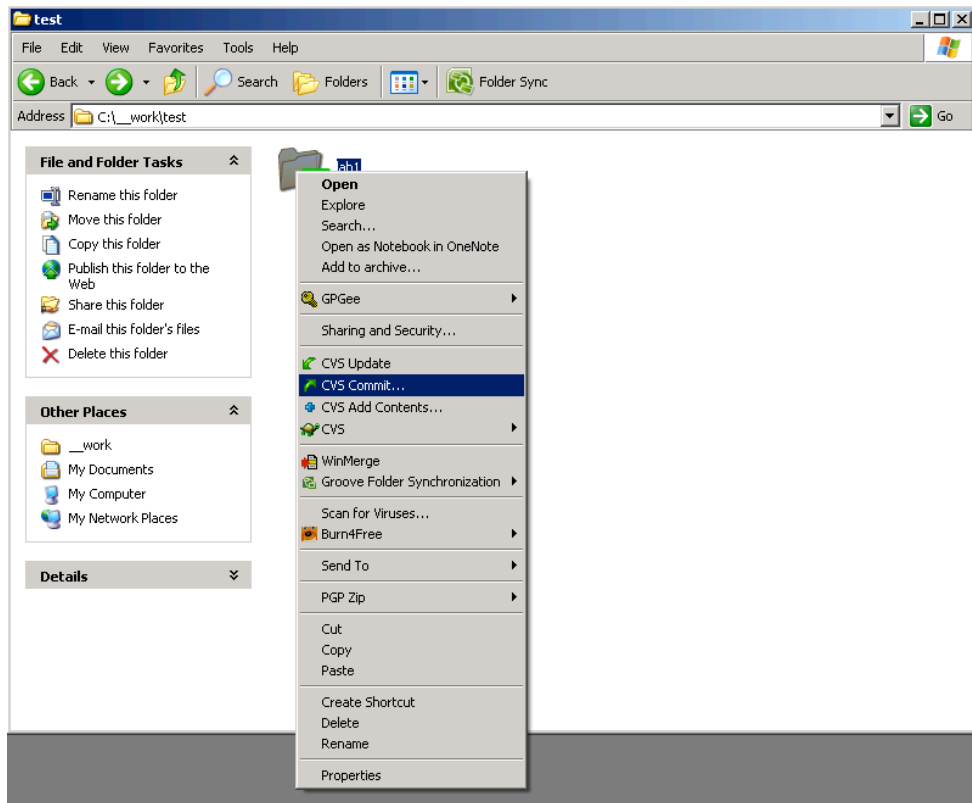
Click **ok** and folder will be under revision control in local repository.



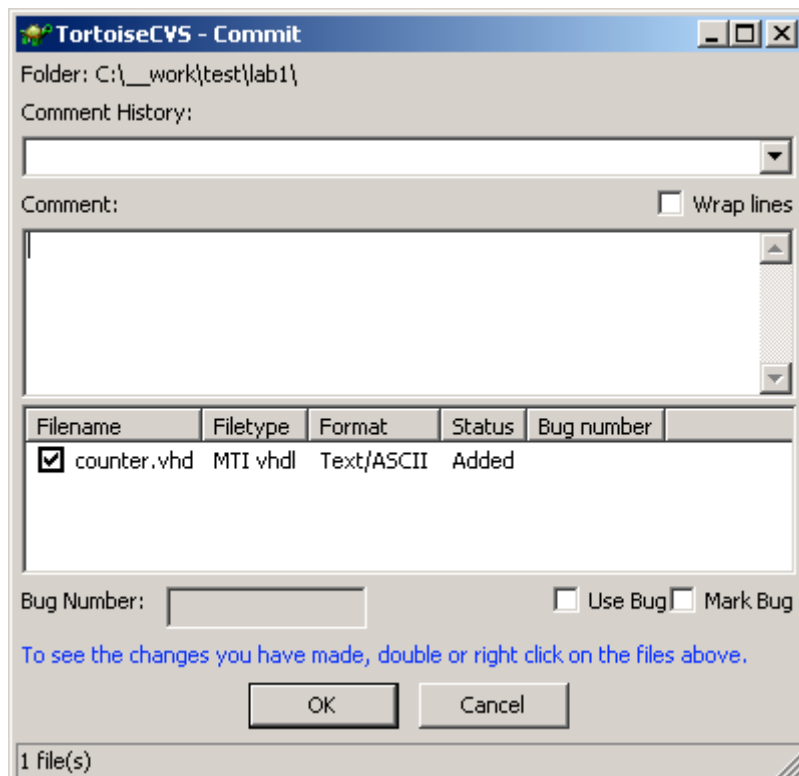
To add files to the local repository – right click and choose CVS and Add Content.



To add file/directory to the remote repository choose CVS commit from the popup menu.

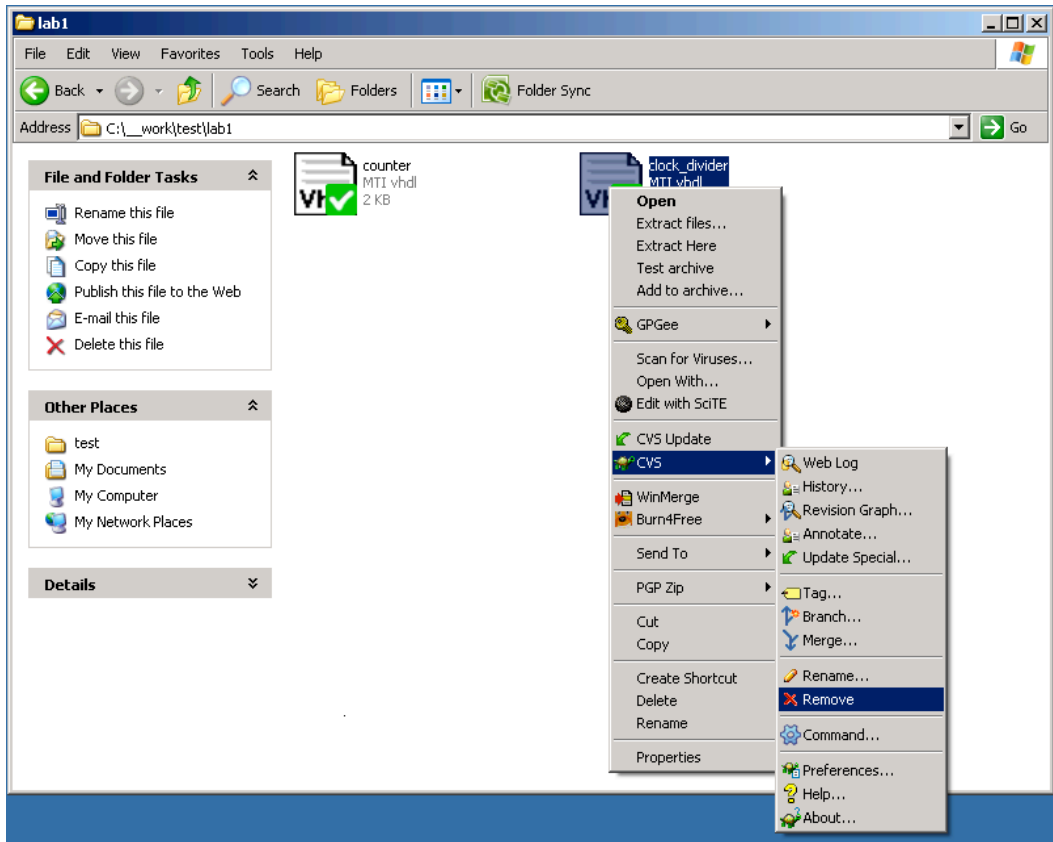


Put your comment to the changes into remote repository and click **ok**.

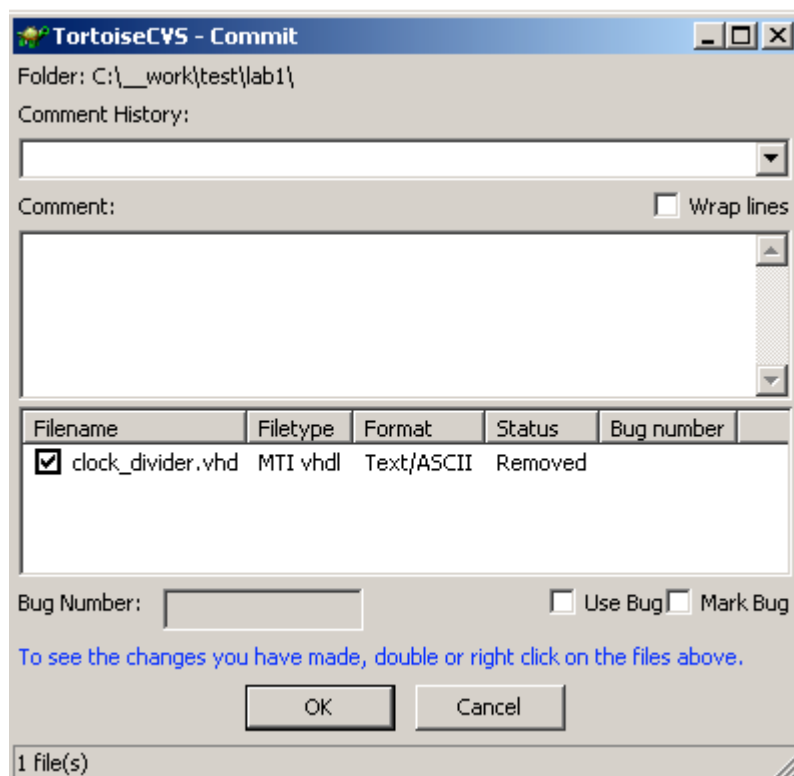


### 3.4. Remove

If we want to remove file from local repository we should choose right-click on file to remove, then choose CVS-> remove.

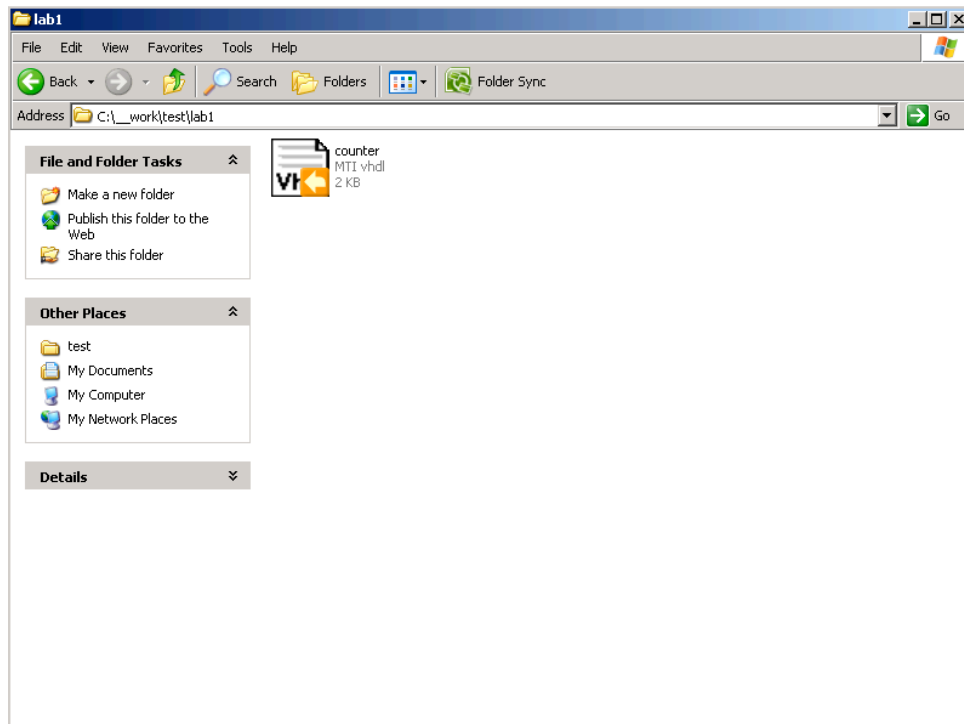


If we want to remove this file from remote repository as well we have to do commit of this removal.

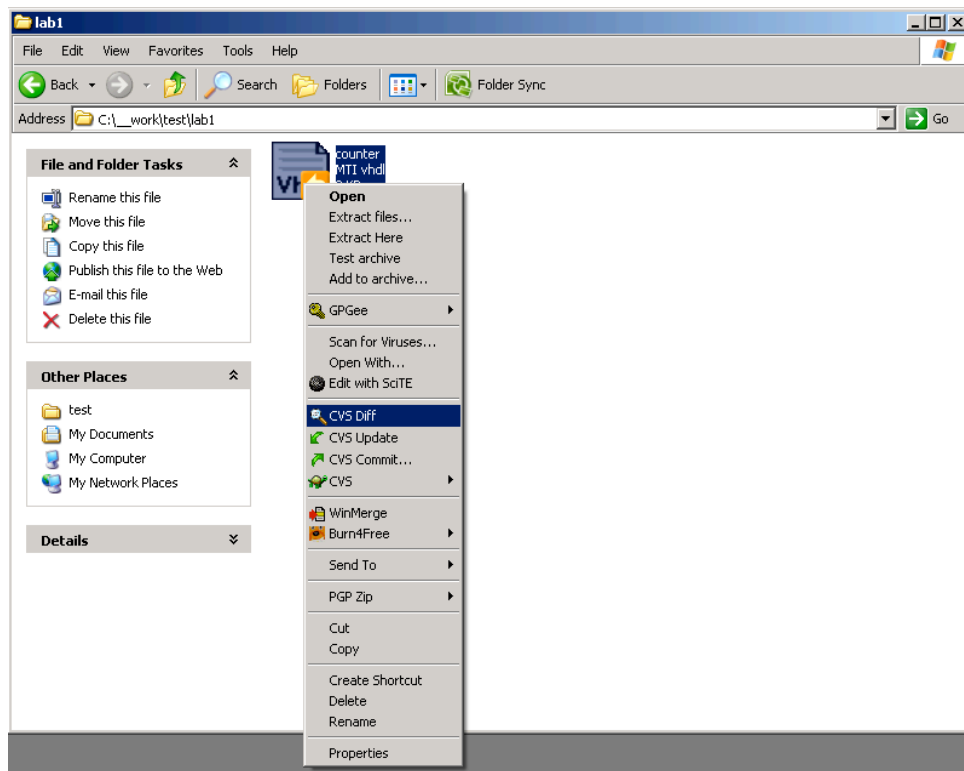


### 3.5. Diff

File in the directory was changed. The white arrow on the orange background indicate the difference between current content of the file vs. file content in local repository.



To see the difference between the file and the file in the local repository do right-click. Choose CVS Diff in the popup menu.

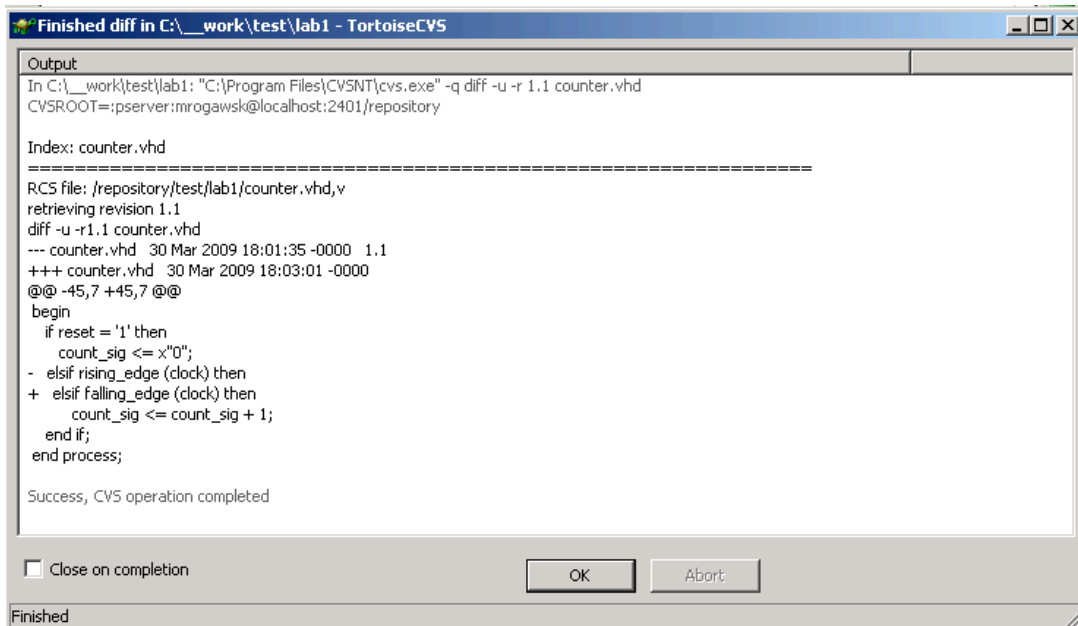


In the window you can see the difference:

“+” indicate that this line was added

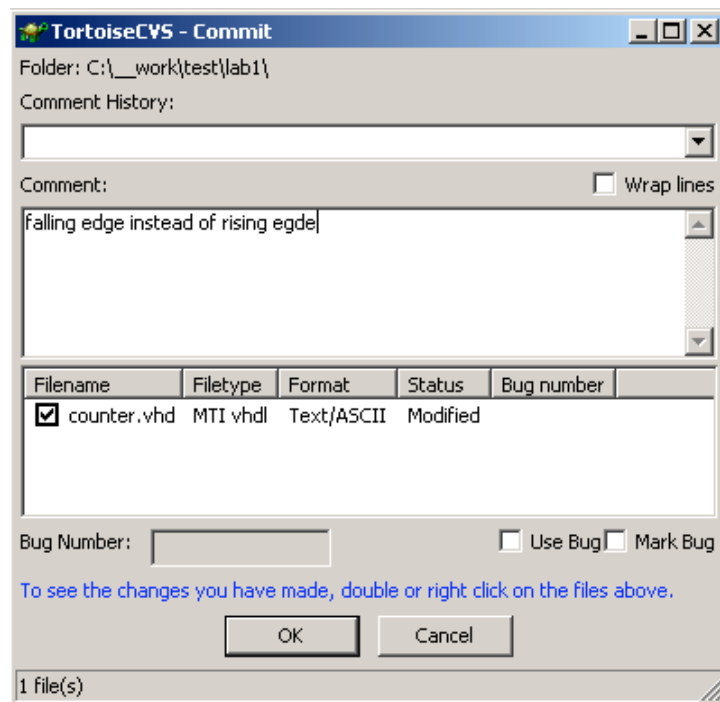
“-” indicate that this line was removed.

We can see that there was change: instead of rising edge there will be falling edge now.



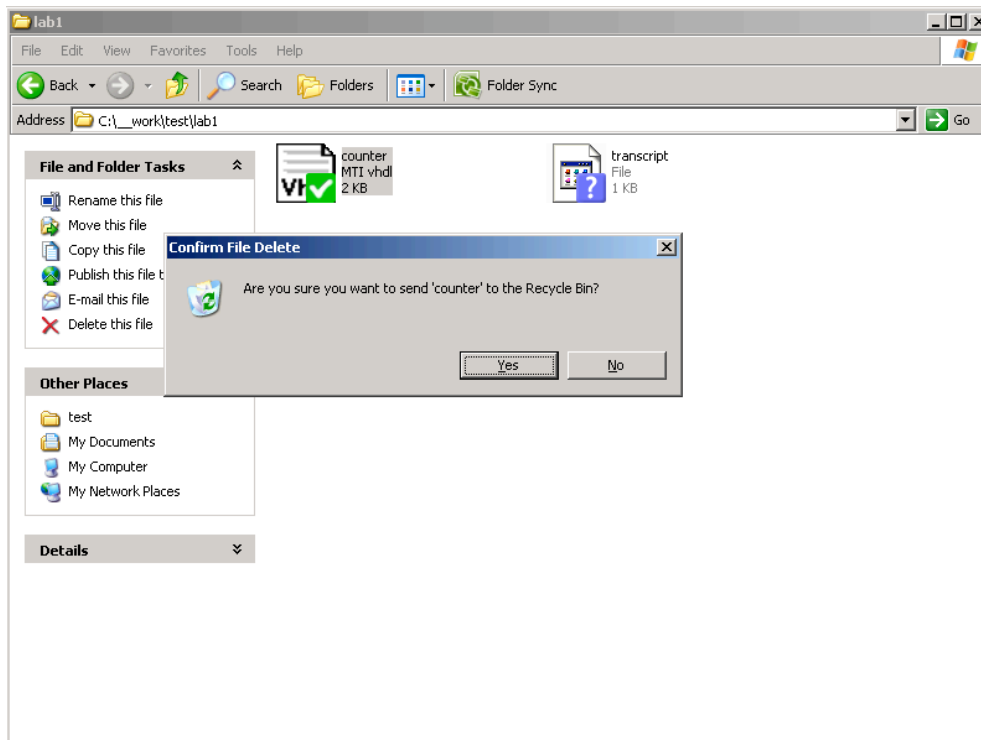
### 3.6 Commit

If we want to commit this change for both local and remote repository do right click. On popup menu choose: CVS-commit. Put the comment and click **ok** to do commit.



### 3.7. Update

If we lose file/directory or content of the file accidentally or by purpose we can revert changes by update operation. Delete one of the file which is already under version control.



Do right-click and choose CVS Update. The File deleted from the Local Repository can be restored by this operation from The Remote Repository.

