



QlikView Enterprise Solutions

QlikView 11 Version Control possibilities

- Team Foundation Server
- Tortoise SVN (SUBVersion)

Setup your demo environment

Version: 1.0
Date: 2012-04-02
Author(s) THP

"A best practice is a technique or methodology that, through experience and research, has proven to reliably lead to a desired result."

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Introduction

Revision control, also known as version control, source control or software configuration Management (SCM), is the management of changes to documents, programs, and other Information stored as computer files. It is most commonly used in software development, where a team of people may change the same files.

As the development team of a QlikView Application grows, the need for SCM grows as well. This document describes how to use QV11 together with the Microsoft Team Foundation Server and the popular Open Source version control system SVN with the SVN-client TortoiseSVN. It will describe typical developer/multideveloper scenarios and how one can take advantages out of SCM in these situations.

To simplify work with SCM QV10 introduced the feature QlikView Project Files. This new Feature is described in the Qlikview Developer Reference Manual in section "8.1 QlikView Project Files" on page 59. See screenshot.

8.1 QlikView Project Files

It is possible to save a QlikView document into several files, that can be used for versioning. Each file defines a property of the document, a sheet, an object, the script etc.

Each time the document is opened and an object or a setting is changed, these changes are saved to the different files, making it easy to follow the changes made in the document. This way you can also see who made a change and to which part of the document.

To create these project files you must create a folder next to the qvw file with the same name as the QlikView document and add `-prj`, e.g. the project folder for a document called Finance.qvw should be Finance-prj.

Note No data from the document will be saved in the project files.

The file `QlikView.txt` contains a list of all the objects part of the QlikView document. The different sheets and objects in the list are named after their object ID. The files `DocProperties.xml`, `AllProperties.xml`, `DocInternals.xml` and `TopLayout.xml` all contain property settings for the different parts of the document. `DocBinary.dat` contains user sensitive data, such as passwords.

Read more:

http://en.wikipedia.org/wiki/Revision_control

General Approach

In computer software engineering, revision control is any practice that tracks and provides control over changes to source code. Software developers sometimes use revision control software to maintain documentation and configuration files as well as source code.

As teams design, develop and deploy software, it is common for multiple versions of the same software to be deployed in different sites and for the software's developers to be working simultaneously on updates. Bugs or features of the software are often only present in certain versions (because of the fixing of some problems and the introduction of others as the program develops). Therefore, for the purposes of locating and fixing bugs, it is vitally important to be able to retrieve and run different versions of the software to determine in which version(s) the problem occurs. It may also be necessary to develop two versions of the software concurrently (for instance, where one version has bugs fixed, but no new features (branch), while the other version is where new features are worked on (trunk).

At the simplest level, developers could simply retain multiple copies of the different versions of the program, and label them appropriately. This simple approach has been used on many large software projects. While this method can work, it is inefficient as many near-identical copies of the program have to be maintained. This requires a lot of self-discipline on the part of developers, and often leads to mistakes. Consequently, systems to automate some or all of the revision control process have been developed.

Moreover, in software development, legal and business practice and other environments, it has become increasingly common for a single document or snippet of code to be edited by a team, the members of which may be geographically dispersed and may pursue different and even contrary interests. Sophisticated revision control that tracks and accounts for ownership of changes to documents and code may be extremely helpful or even necessary in such situations.

Revision control may also track changes to configuration files, such as those typically stored in `/etc` or `/usr/local/etc` on Unix systems. This gives system administrators another way to easily track changes made and a way to roll back to earlier versions should the need arise.

Source-management models

Traditional revision control systems use a centralized model where all the revision control functions take place on a shared server. If two developers try to change the same file at the same time, without some method of managing access the developers may end up overwriting each other's work. Centralized revision control systems solve this problem in one of two different "source management models": file locking and version merging.

Atomic operations

Computer scientists speak of atomic operations if the system is left in a consistent state even if the operation is interrupted. The commit operation is usually the most critical in this sense. Commits are operations that tell the revision control system you want to make a group of changes final and available to all users. Not all revision control systems have atomic commits; notably, the widely-used CVS lacks this feature.

File locking

The simplest method of preventing "concurrent access" problems involves locking files so that only one developer at a time has write access to the central "repository" copies of those files. Once one developer "checks out" a file, others can read that file, but no one

else may change that file until that developer "checks in" the updated version (or cancels the checkout).

File locking has both merits and drawbacks. It can provide some protection against difficult merge conflicts when a user is making radical changes to many sections of a large file (or group of files). However, if the files are left exclusively locked for too long, other developers may be tempted to bypass the revision control software and change the files locally, leading to more serious problems.

Version merging

Most version control systems allow multiple developers to edit the same file at the same time. The first developer to "check in" changes to the central repository always succeeds. The system may provide facilities to merge further changes into the central repository, and preserve the changes from the first developer when other developers check in.

Merging two files can be a very delicate operation, and usually possible only if the data structure is simple, as in text files. The result of a merger of two image files might not result in an image file at all. The second developer checking in code will need to take care with the merge, to make sure that the changes are compatible and that the merge operation does not introduce its own logic errors within the files. These problems limit the availability of automatic or semi-automatic merge operations mainly to simple text based documents, unless a specific merge plugin is available for the file types.

The concept of a reserved edit can provide an optional means to explicitly lock a file for exclusive write access, even when a merging capability exists.

Baselines, labels and tags

Most revision control tools will use only one of these similar terms (baseline, label, tag) to refer to the action of identifying a snapshot ("label the project") or the record of the snapshot ("try it with baseline X"). Typically only one of the terms baseline, label, or tag is used in documentation or discussion they can be considered synonyms.

In most projects some snapshots are more significant than others, such as those used to indicate published releases, branches, or milestones.

When both the term baseline and either of label or tag are used together in the same context, label and tag usually refer to the mechanism within the tool of identifying or making the record of the snapshot, and baseline indicates the increased significance of any given label or tag.

Most formal discussion of configuration management uses the term baseline.

Prerequisites

Specific Prerequisites for the following configuration

- Active Directory already configured (Possible to install without an AD)
- Microsoft .Net 4
- Microsoft® SQL Server® 2008 Express (useful but not required because the Team foundation Server Setup includes a SQL Server Express installation)
 - <http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22973>

Microsoft SQL Server 2008 Express with Tools is a free, easy-to-use version of the SQL Server Express data platform that includes the graphical management tool: SQL Server Management Studio (SSMS) Express. SQL Server 2008 Express provides rich features, data protection, and fast performance. It is ideal for small server applications and local data stores.

Free to download, free to deploy, and free to redistribute as an embedded part of an application, SQL Server 2008 Express with Tools is the fast and easy way to develop and manage data-driven applications.

For more information about SQL Server 2008 Express with Tools, including other versions and downloadable components now available, see Microsoft SQL Server Express.

For information about the different editions of SQL Server 2008, see the [Editions page](#).

System requirements:

Supported operating systems: Windows Server 2003 Service Pack 2, Windows Server 2008, Windows Vista, Windows Vista Service Pack 1, Windows XP Service Pack 2, Windows XP Service Pack 3

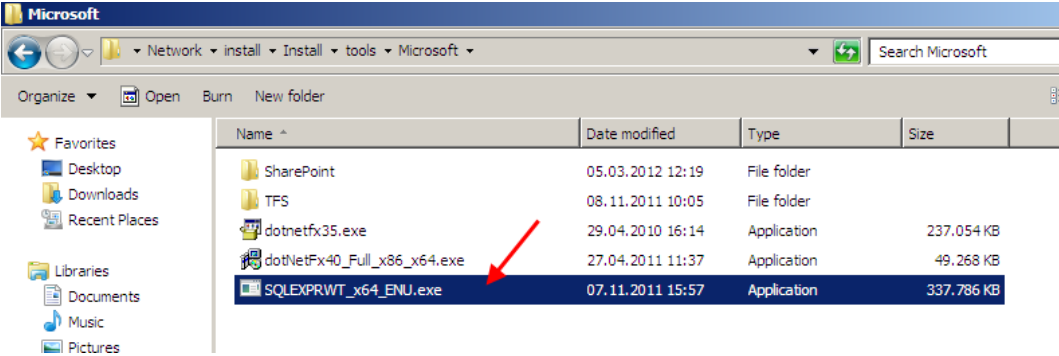
- 32-Bit Systems: Computer with Intel or compatible 1GHz or faster processor (2 GHz or faster is recommended. Only a single processor is supported)
- 64-Bit Systems: 1.4 GHz or higher processor (2 GHz or faster is recommended. Only a single processor is supported)
- Minimum of 512 MB of RAM (1 GB or more is recommended)
- 1 GB of free hard disk space

Team Foundation Server & QlikView

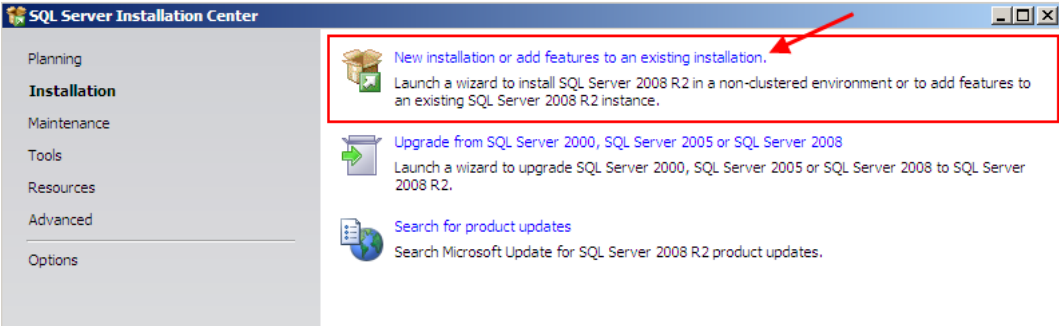
How to setup your environment

SQL Server Setup

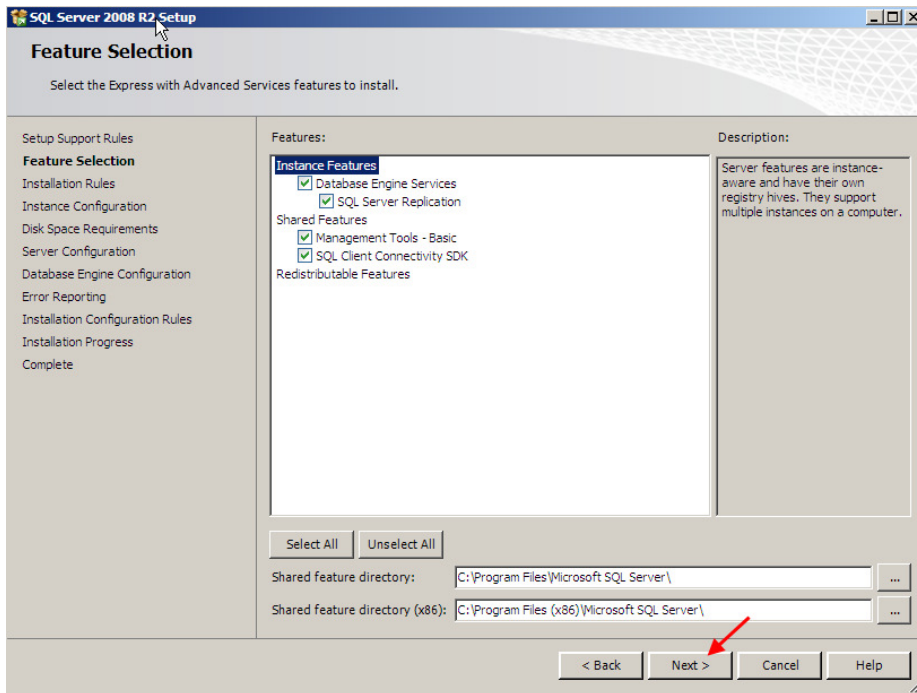
1. Start the SQL Server setup

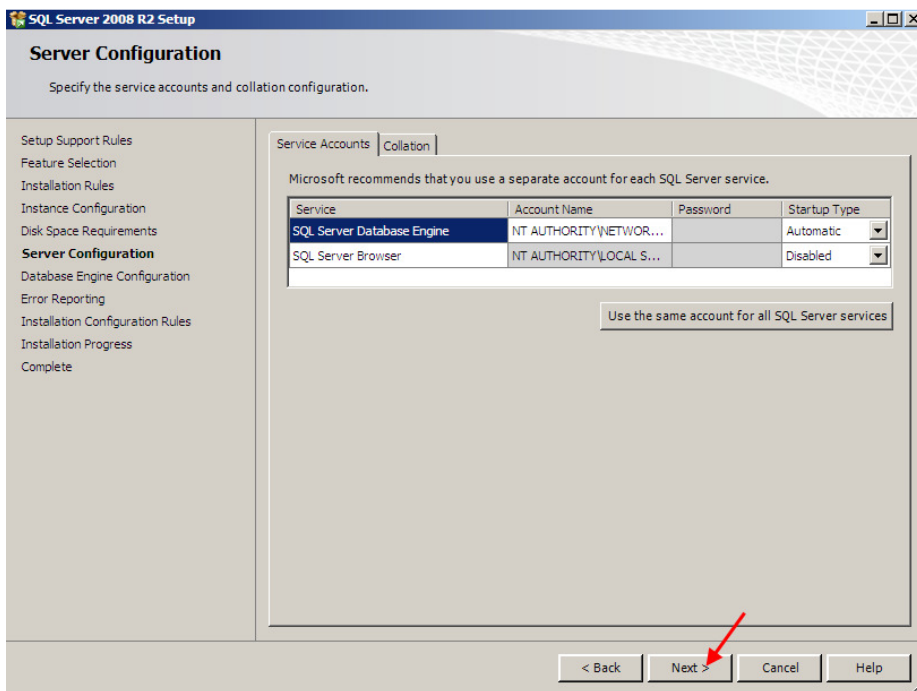
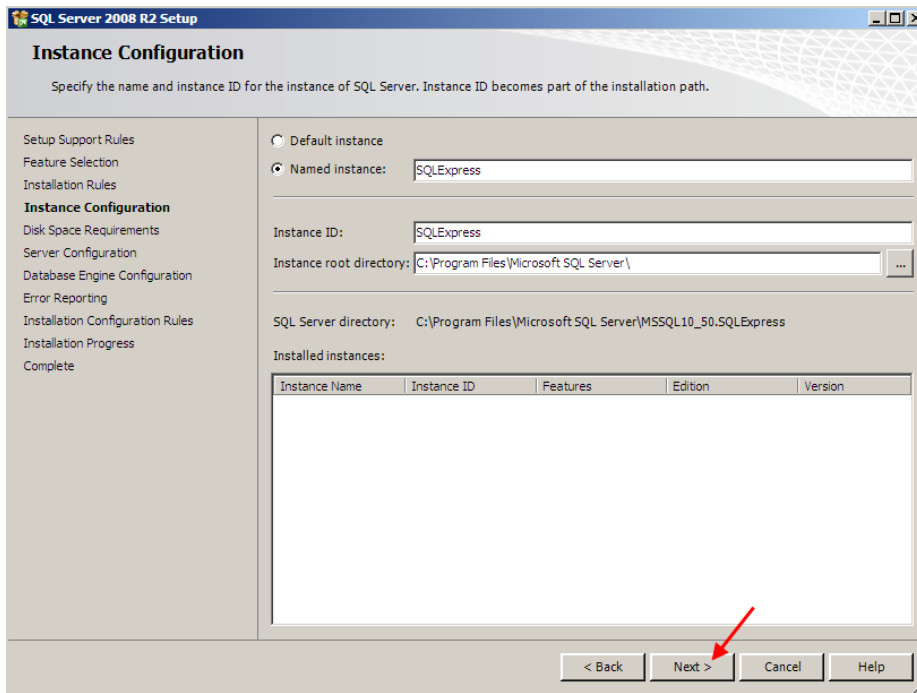


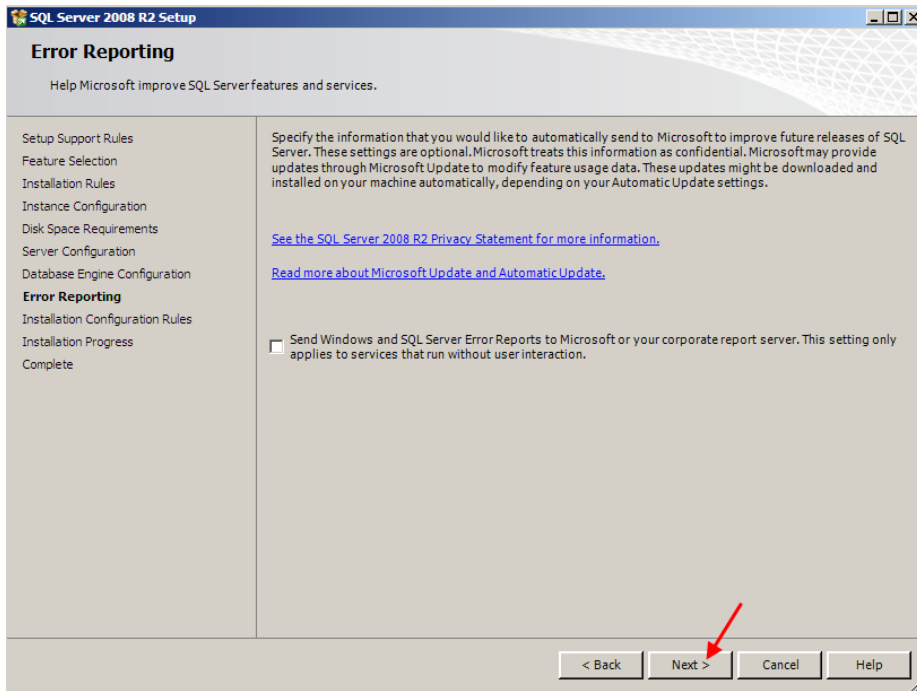
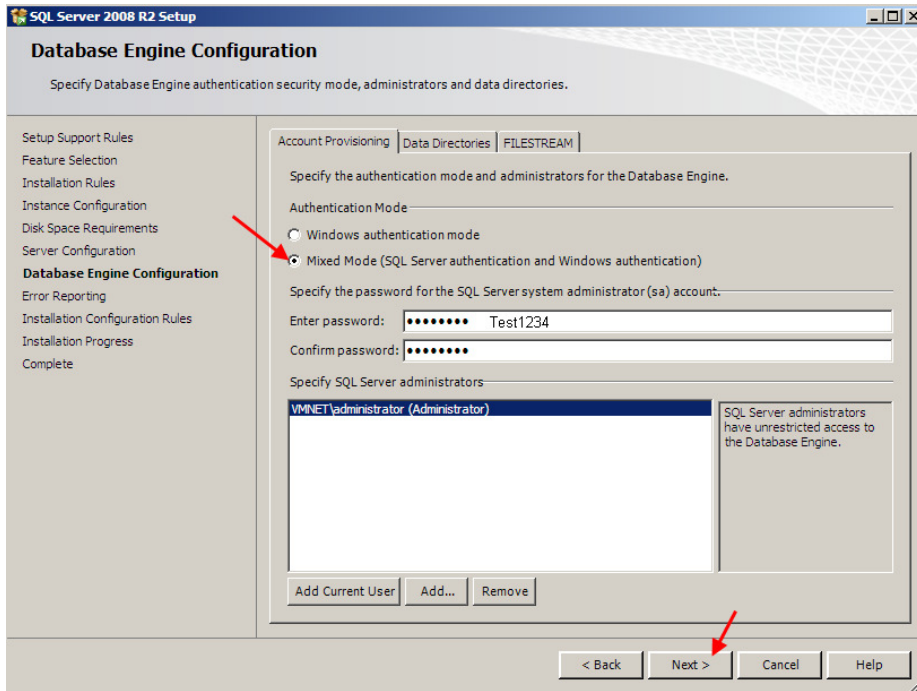
2. Select “New Installation”

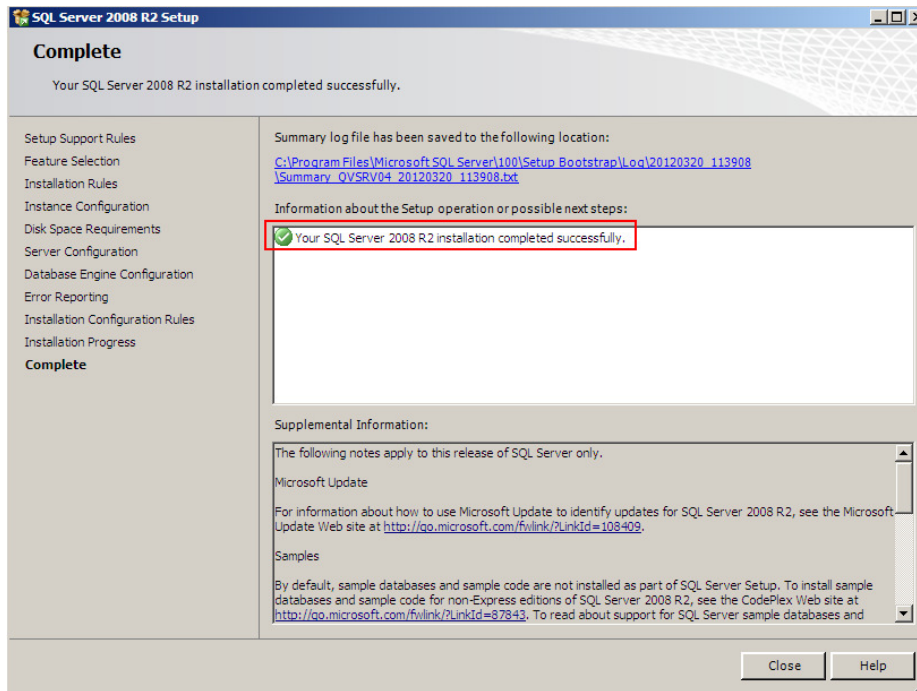


3. The SQL Server 2008 Setup



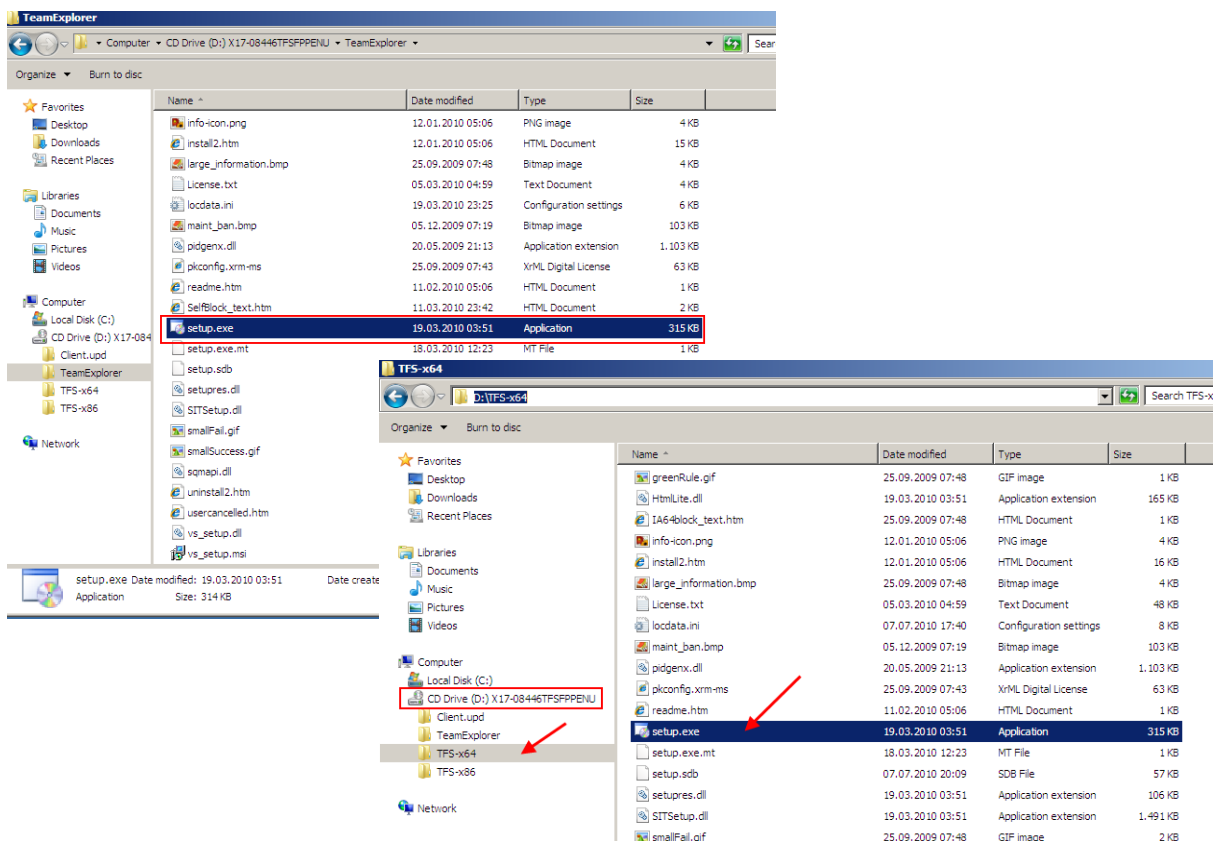






Team Explorer & Team Foundation Server 2010 Setup

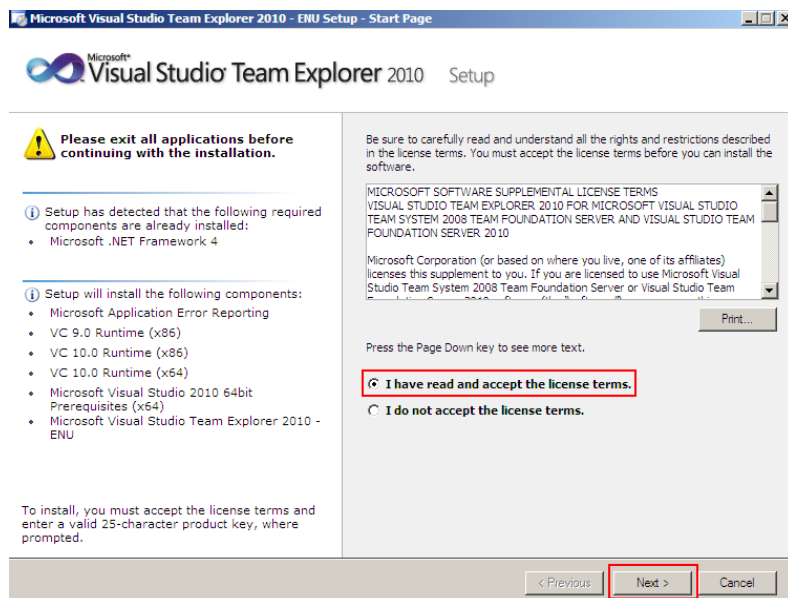
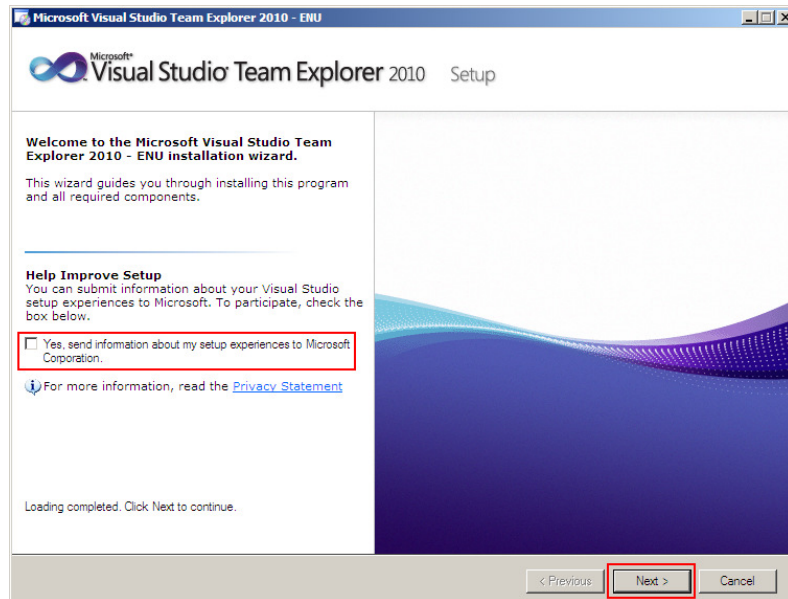
1. Download the TFS 2010 install package from the following Website.
<http://www.microsoft.com/download/en/details.aspx?id=15070>
2. Mount the ISO Image as your DVD Rom and start the setup

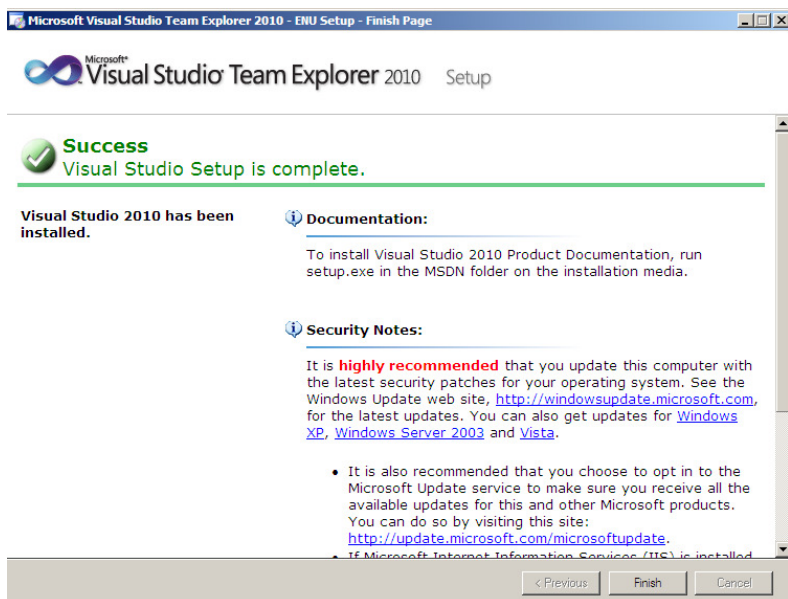
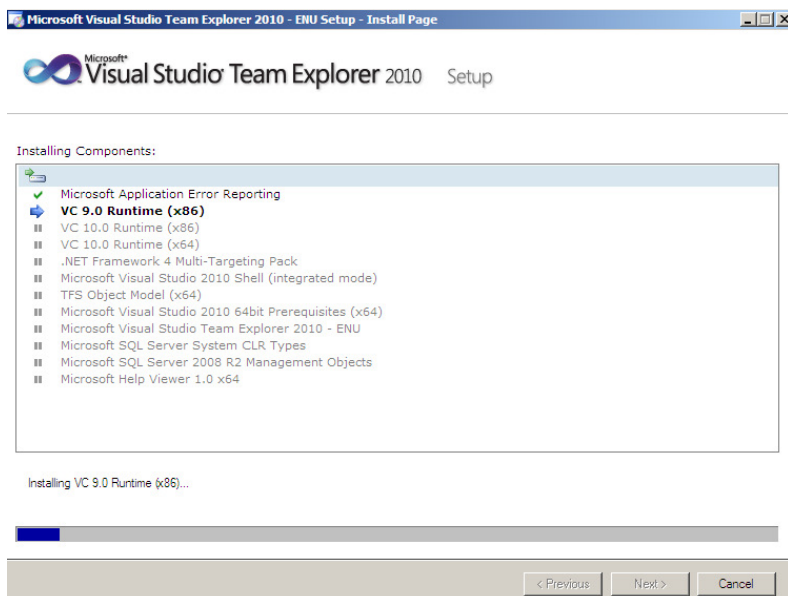
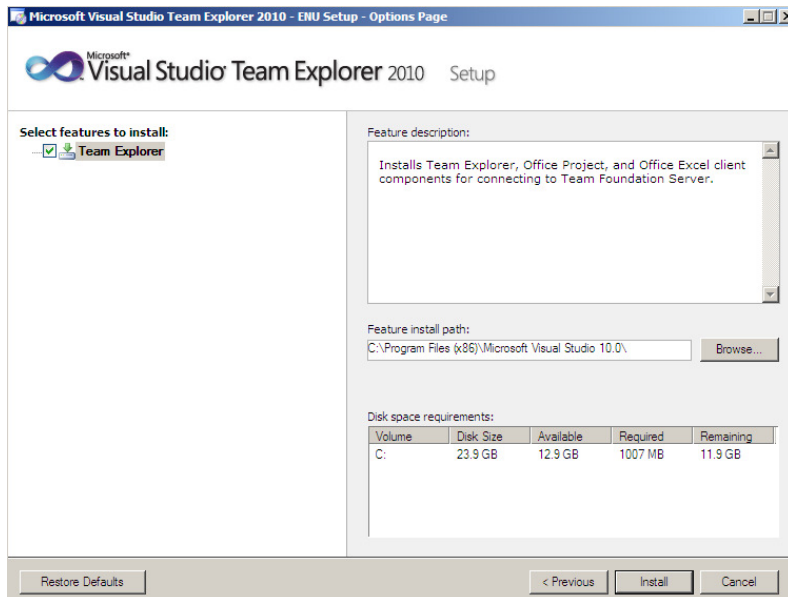


Install the Team Explorer first then the TFS.

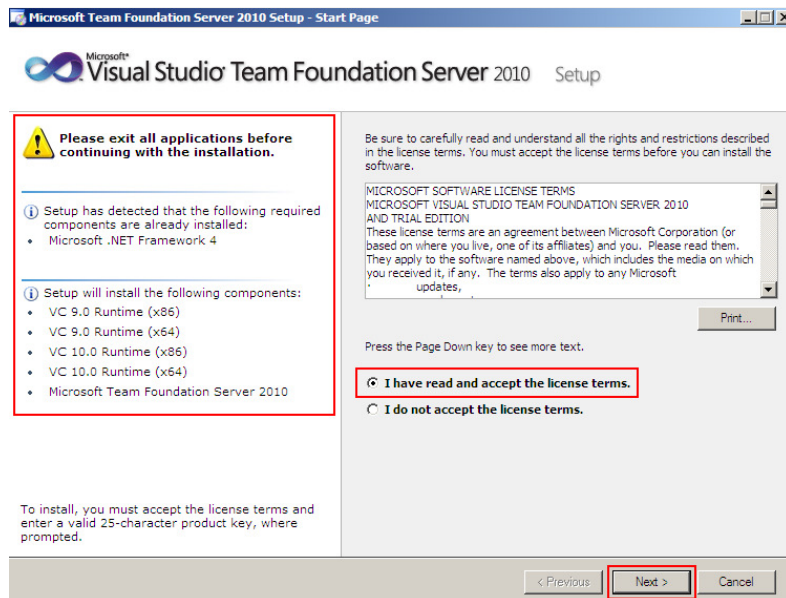
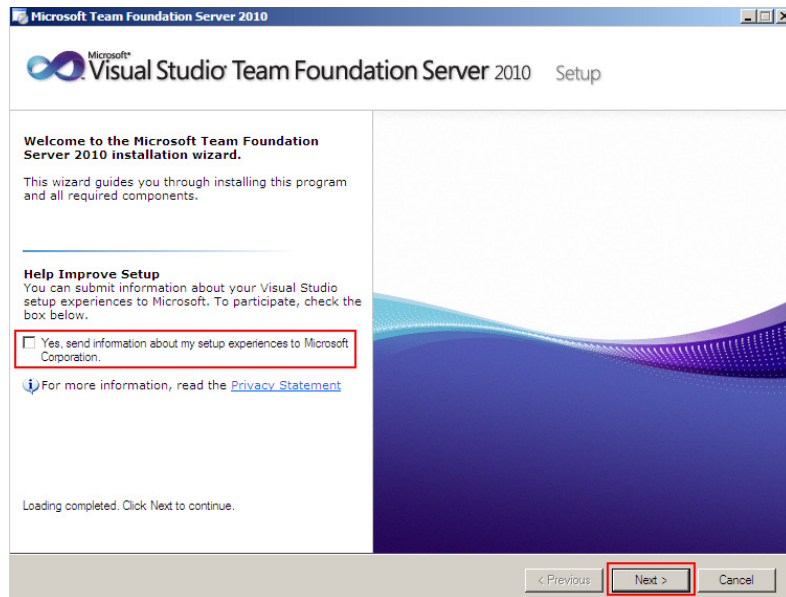
3. The Team Explorer & TFS Setup

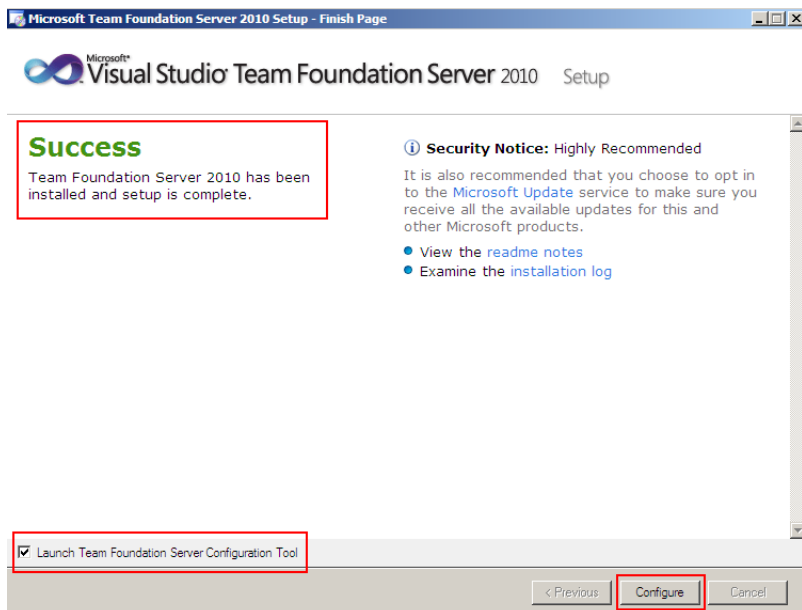
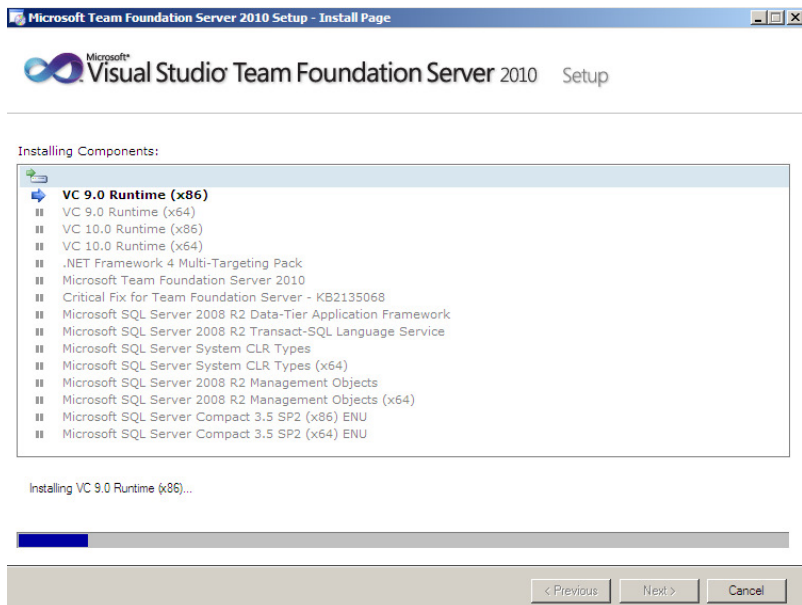
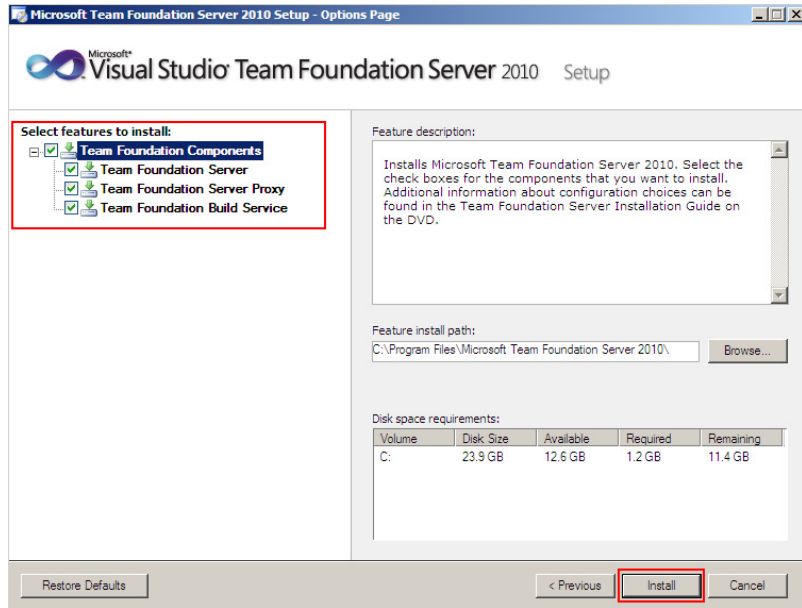
The Team Explorer 2010



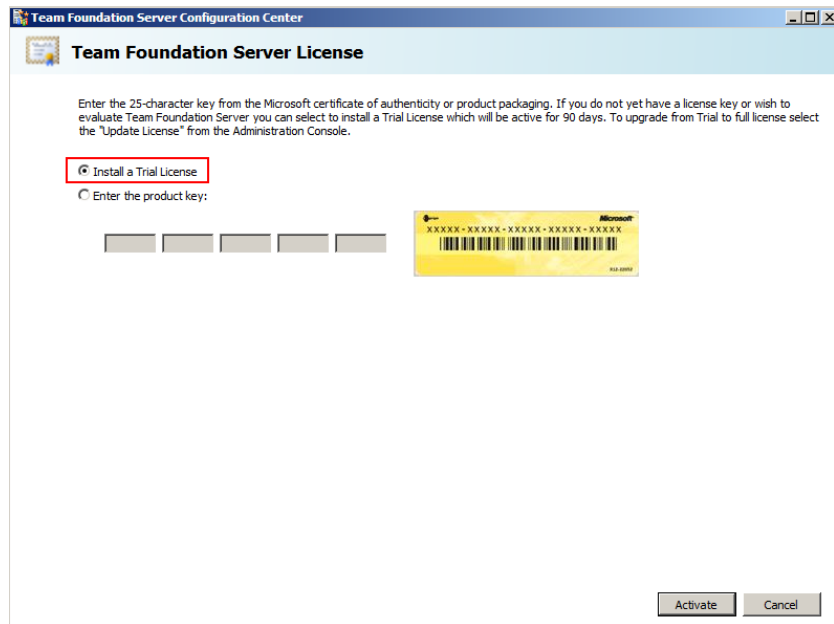


The TFS 2010



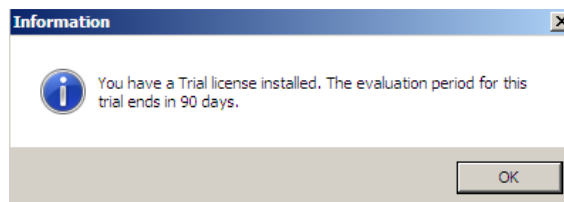


4. The TFS Configuration

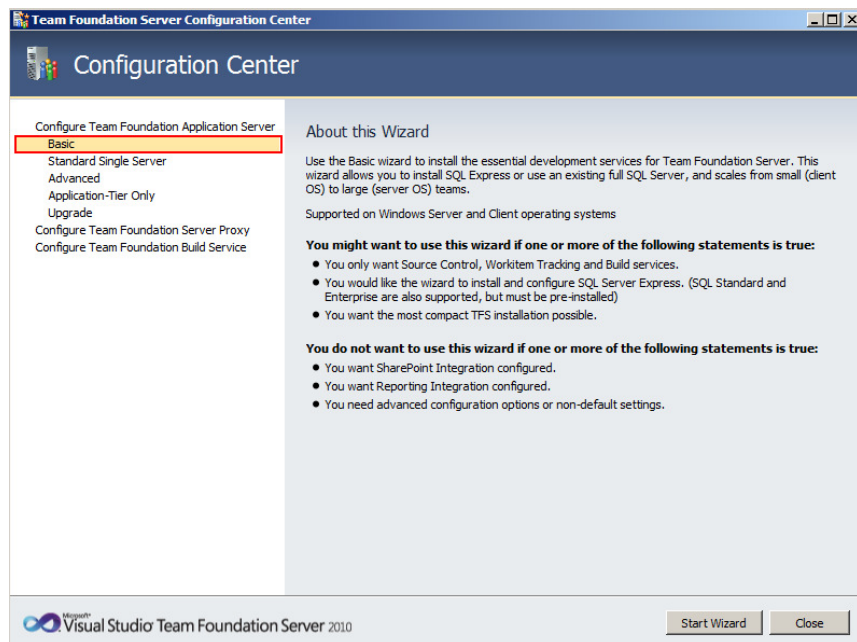


In case you don't have a license, please select "Install a Trial License"

Your TFS 2010 Trial license is valid for 90 days:



The TFS 2010 as a Basic Setup



Team Foundation Server Basic Configuration

Basic Configuration Wizard

Welcome

SQL Server Instance

Review

Readiness Checks

Configure

Complete

Welcome to the Basic Configuration Wizard

Before continuing with configuration, please review a list of important changes since the product was released. [Click here](#)

You have installed new Team Foundation Server components and need to configure them for operation. This wizard configures your Team Foundation Server environment using the default settings.

Help Improve Setup

You can submit information about your Team Foundation Server configuration and administration experiences to Microsoft. To participate, click the box below.

Yes, send information about my setup and administration experiences to Microsoft Corporation.

[i](#) For more information, click [Privacy Statement](#).

Microsoft Visual Studio Team Foundation Server 2010

Previous Next Review Cancel

Team Foundation Server Basic Configuration

Basic Configuration Wizard

Welcome

SQL Server Instance

Review

Readiness Checks

Configure

Complete

Select a SQL Server Instance for your Team Foundation Databases

- Install SQL Server Express
If you select this option a new instance of Microsoft SQL Server Express will be installed and your configuration and team project collection databases will be stored in it.
- Use an existing SQL Server Instance
Select this option if you have an existing SQL Server that you would like to use for your configuration and team project databases (SQL Server Express will not be installed).

Microsoft Visual Studio Team Foundation Server 2010

Previous Next Review Cancel

Team Foundation Server Basic Configuration

Basic Configuration Wizard

Welcome
SQL Server Instance

Review
Readiness Checks
Configure
Complete

Confirm the Configuration Settings Before Proceeding

Review each of the selected configuration settings and click next to begin readiness checks.

Configuration Database

Install SQL Express	True
SQL Instance	QVSRV04\SqExpress
Configuration Database	Tfs_Configuration

Application Tier

Service Account	NT Authority\NetworkService
Site URL	http://qvsrv04:8080/tfs
Web Site	Team Foundation Server
Port	8080
Creating New Web Site	True
Virtual Directory	tfs
Authentication	NTLM

Team Project Collection

Project Collection Action	Create New
SQL Instance	QVSRV04\SqExpress
New Project Collection Name	DefaultCollection
Description	

Visual Studio Team Foundation Server 2010

Previous Next Verify Cancel

Team Foundation Server Basic Configuration

Basic Configuration Wizard

Welcome
SQL Server Instance

Review
Readiness Checks
Configure
Complete

Readiness Checks Validate that Your System is Ready to Configure

Readiness checks passed with warnings.

⚠ System Checks	Warning
✔ SQL Express	Passed
✔ Application Tier	Passed
✔ Project Collection	Passed

[Click here to rerun Readiness Checks.](#)

Detailed Results: [Open Log](#)

Warning [System Checks] TF255465: Your system does not have the recommended amount of system memory available: 2048 MB. While Team Foundation Server can operate with less than this amount of memory, the performance will be degraded. Upgrade your system memory to at least the recommended minimum for optimal performance.

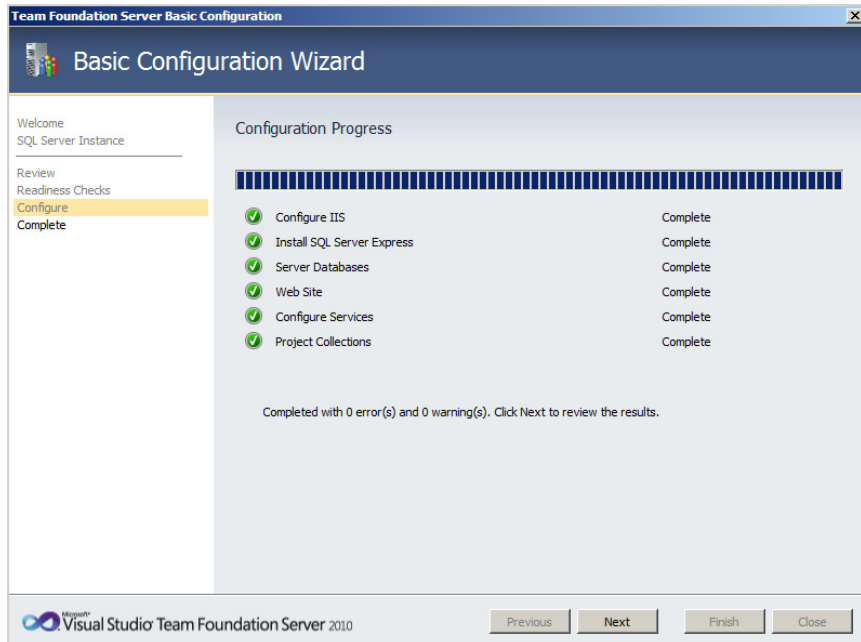
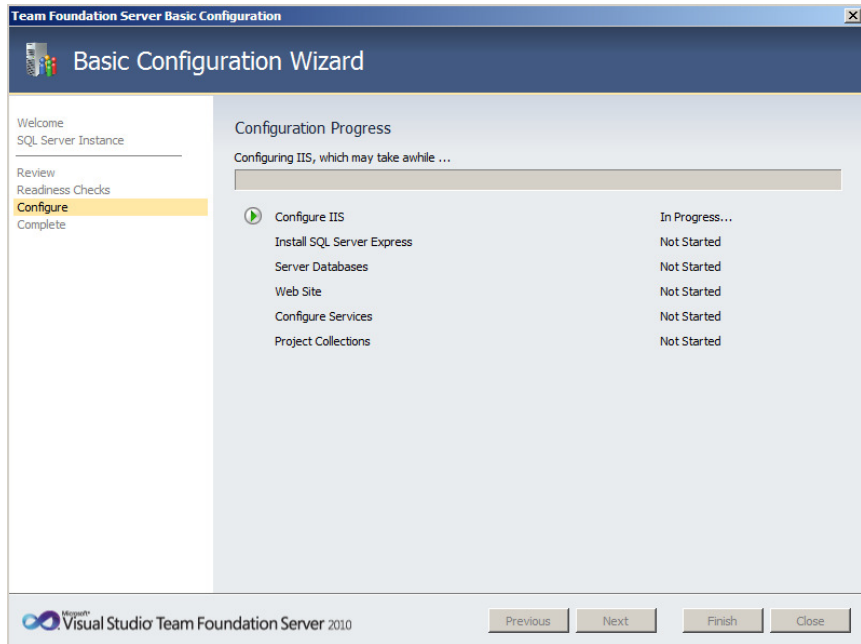
Information [System Checks] TF255142: Windows Firewall is not enabled. If you enable Windows Firewall after configuring Team Foundation Server, you must add exceptions for ports used by Team Foundation Server to Windows Firewall.

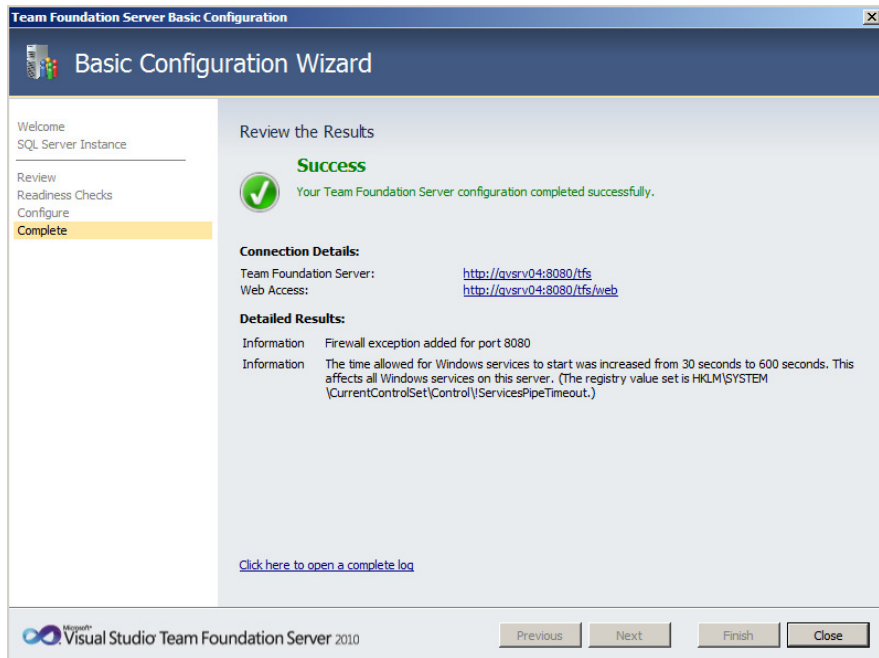
Information [Application Tier] Service will be installed for you: IIS

Information [Application Tier] Windows Authentication has not been configured in Internet Information Services (IIS). If you continue, it will be configured for you.

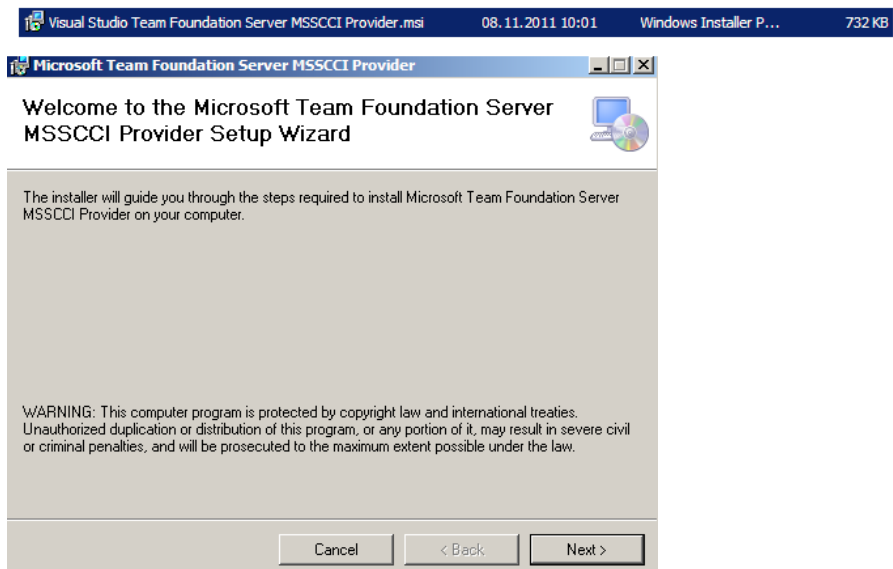
Visual Studio Team Foundation Server 2010

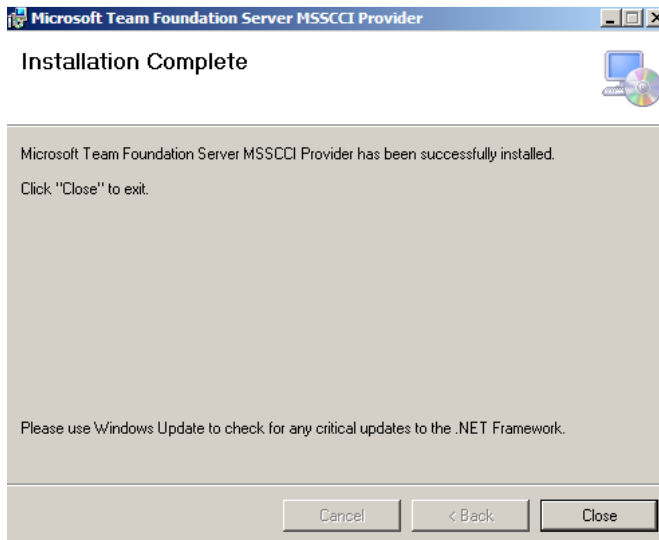
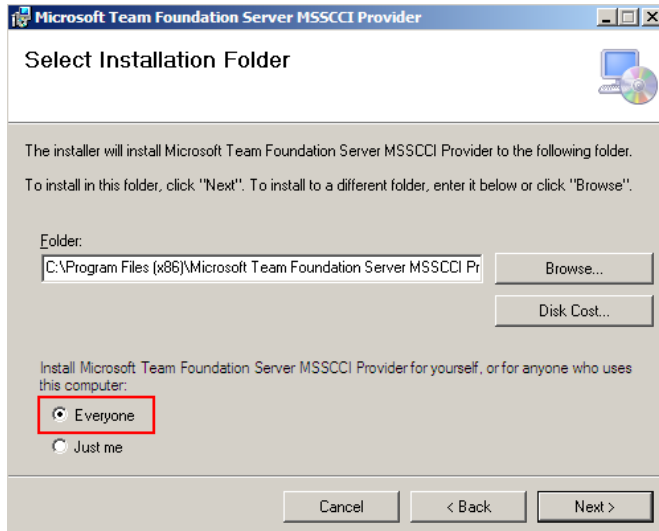
Previous Next Configure Cancel



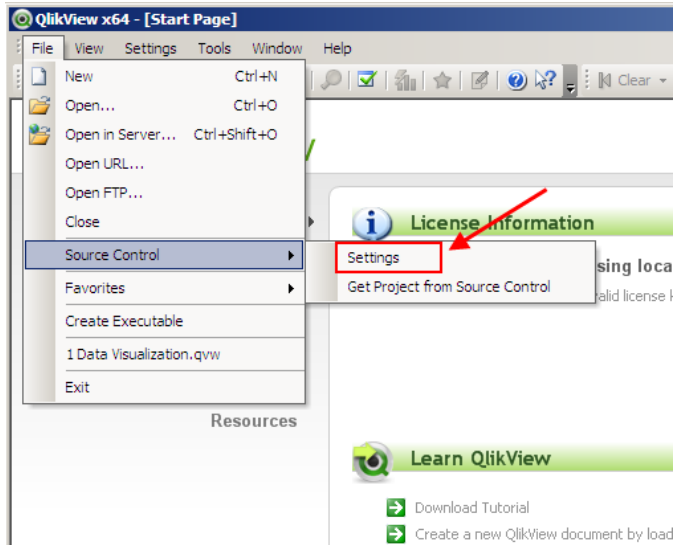


After you have installed your TFS successfully, go ahead with the MSSCCI TFS Provider. You will find this MSI package in the same ZIP file as this document.

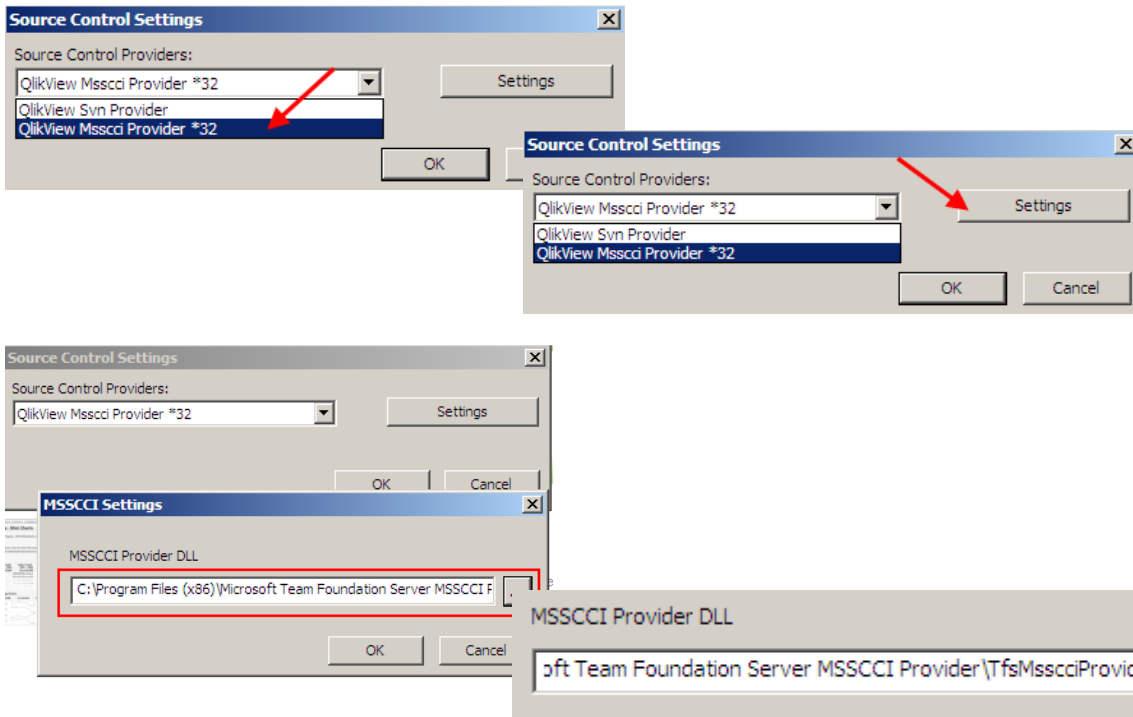




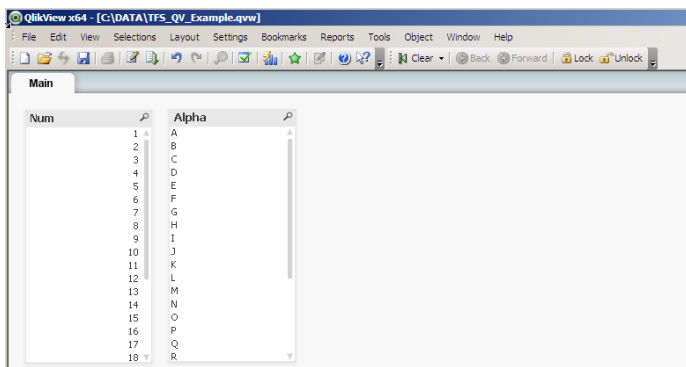
How to configure QlikView to use your Team Foundation Server



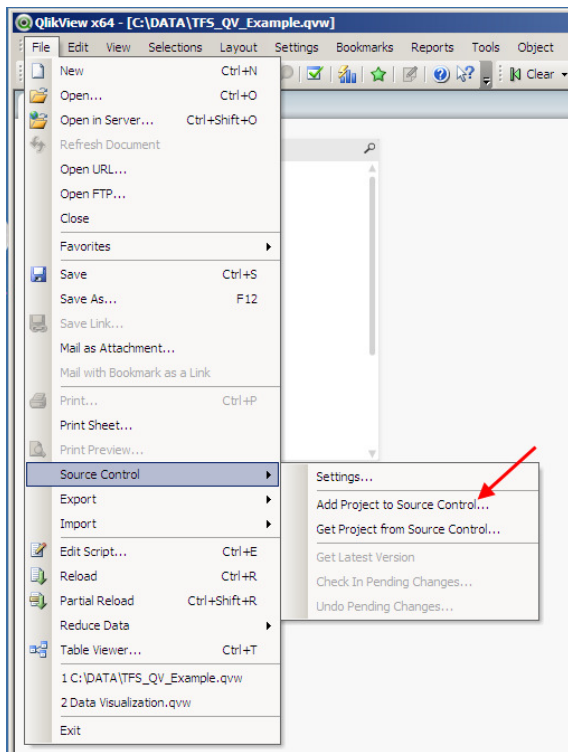
Select your Provider. Let's use the TFS



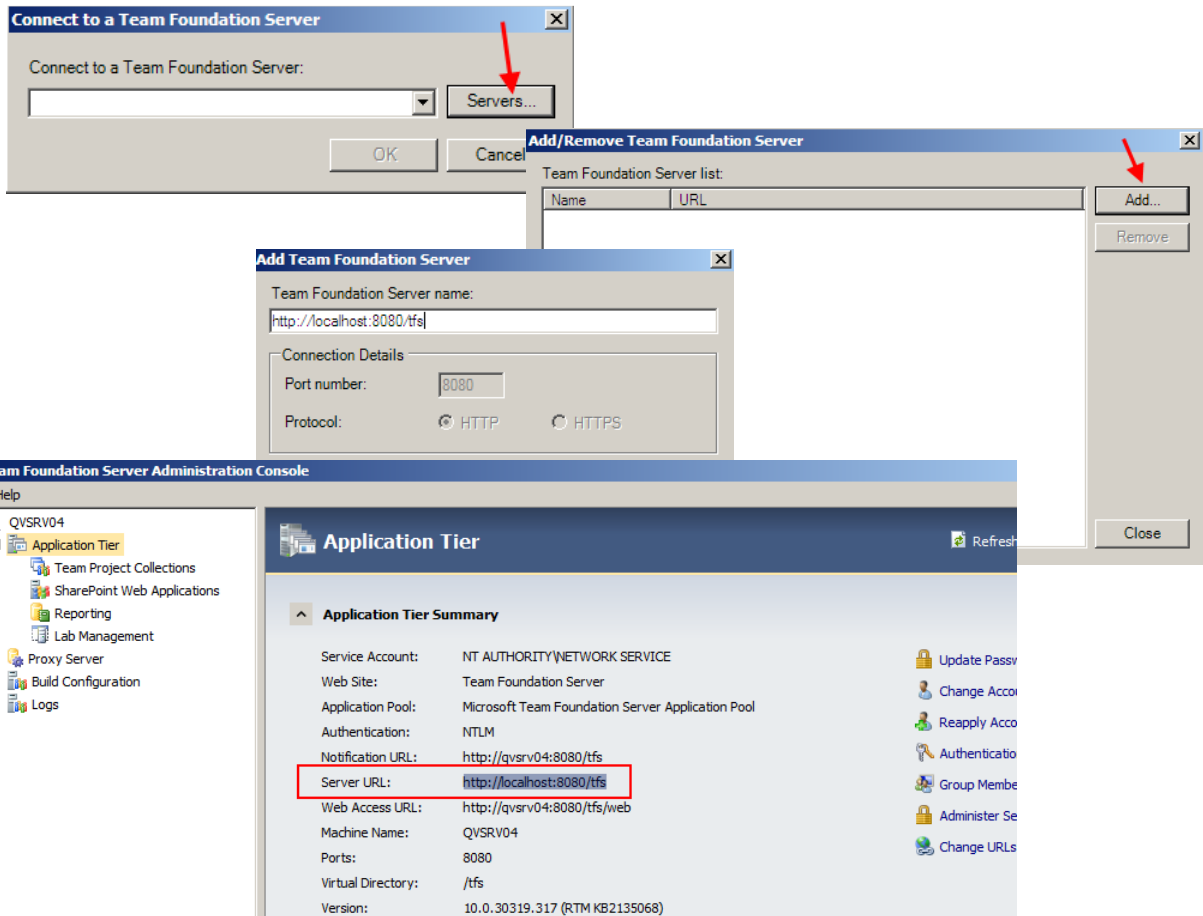
Now create a QVW application like this easy example. But any other QVW is possible to use of course as well.



Add your Project to Source Control which is in the first example your TFS 2010 environment:

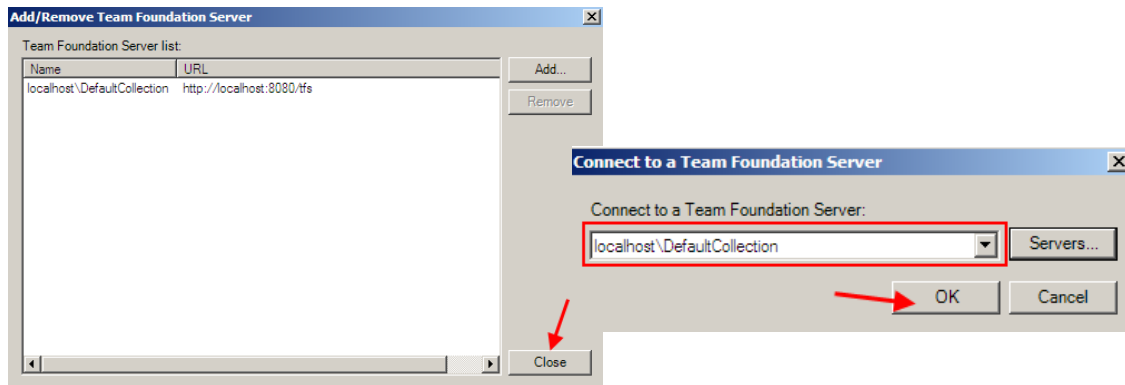


If it is your first Project please add your TFS first

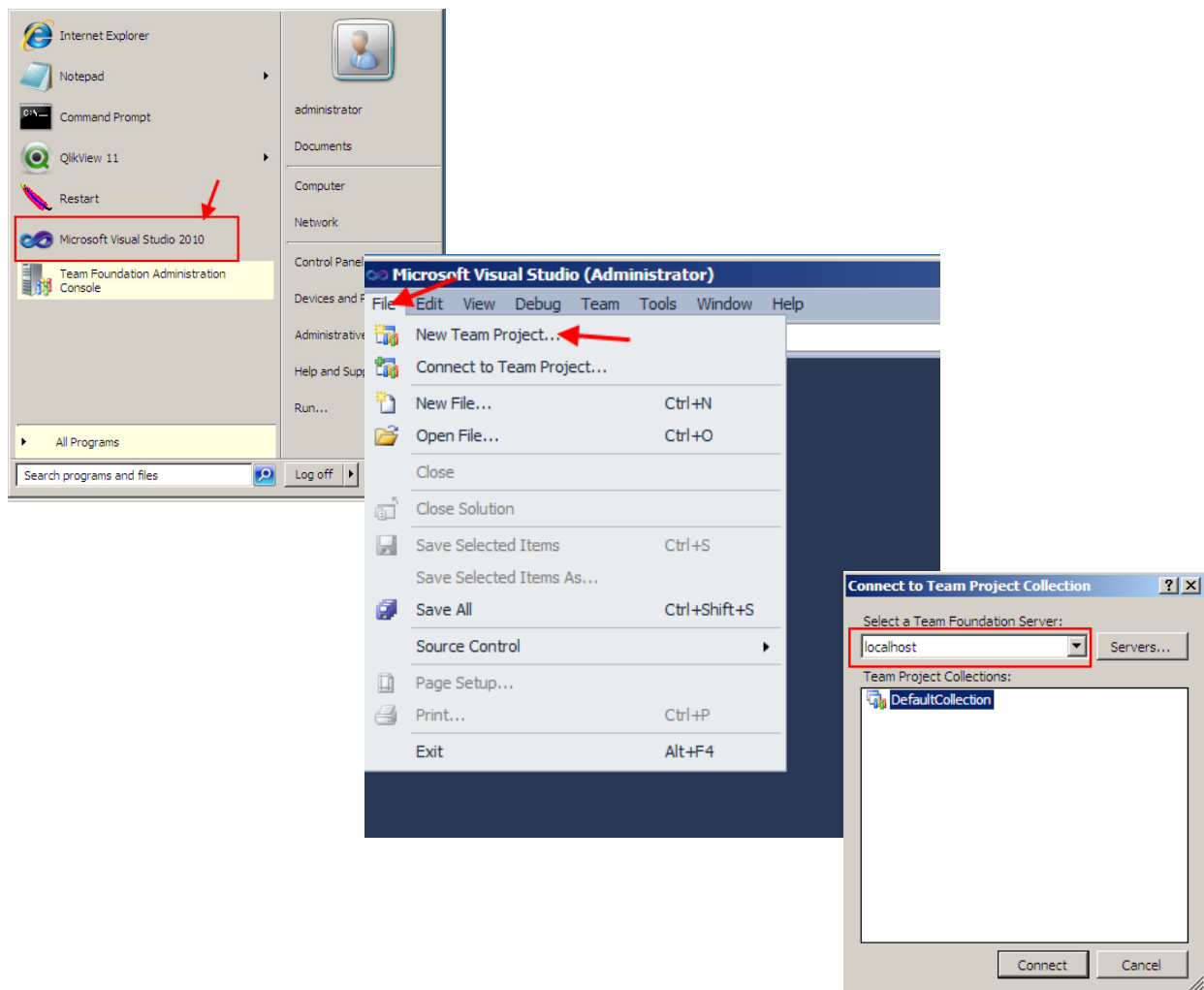


Use your TFS settings as in your TFS Administration Console above.

Your QlikView context Menu should now look like this:



Start your Visual Studio 2010





Specify the Team Project Settings

The New Team Project Wizard uses the team project name you type here when creating various components. After the team project is created, the name is used by team members to locate the team project.

Make sure that the name you pick for the team project is not already in use by Team Foundation Server or any other software used in the deployment (for example, SharePoint Products or SQL Server Reporting Services).

What is the name of the team project?

TFS QlikView Example

What is the description of the team project?

Empty text area for description.

< Previous Next > Finish Cancel



Select a Process Template

The process template defines key aspects of how the team project is managed. The process template may include work item types, work products, reports, queries, and process guidance for your team project.

Which process template should be used to create the team project?

MSF for Agile Software Development v5.0

This template allows you to organize and track the progress and health of a small- to medium-sized Agile project.



[Download additional Process Templates online](#)

Find Microsoft Visual Studio Certified Process Templates.

< Previous Next > Finish Cancel



Specify Source Control Settings

Create an empty source control folder

\$/TFS QlikView Example

Create a new source control branch

Branch from:

< Previous

Next >

Finish

Cancel



Team Project Creation Status

Status: **Work item link types created**

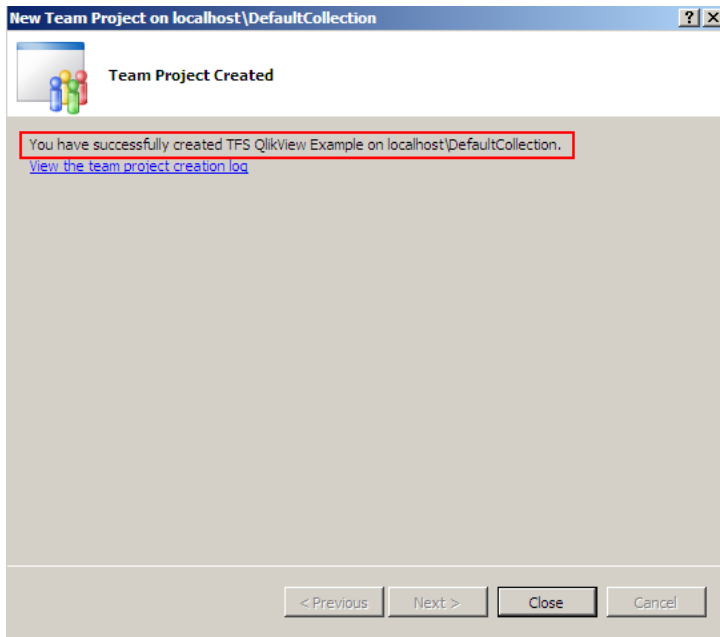
The Team Project Wizard is now creating your new team project. This may take several minutes.

< Previous

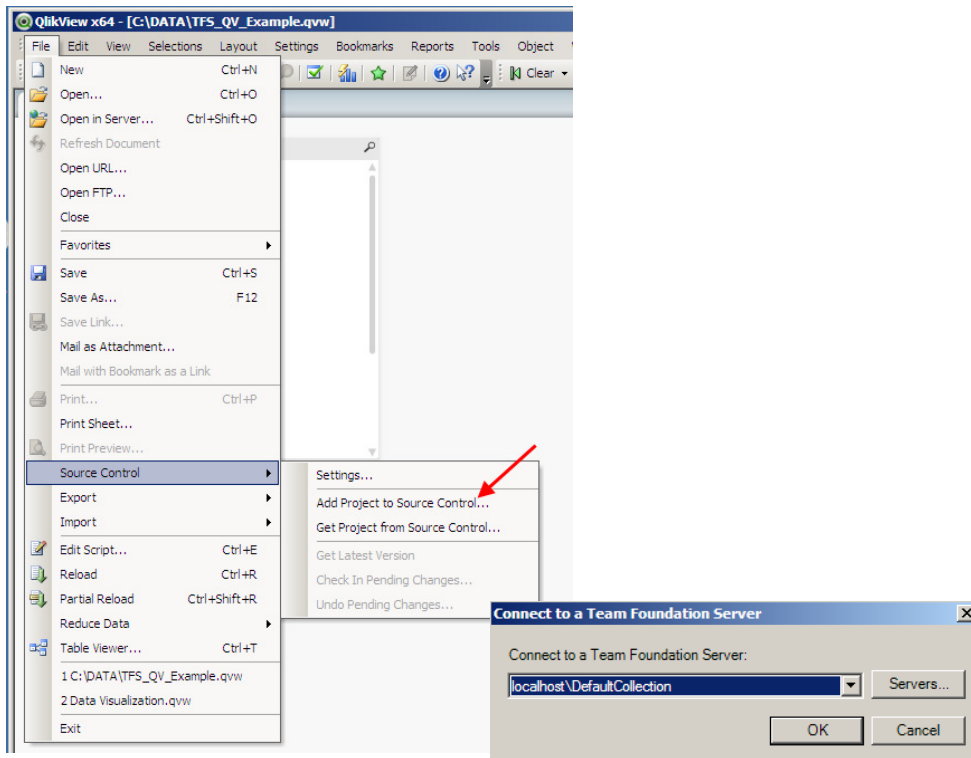
Next >

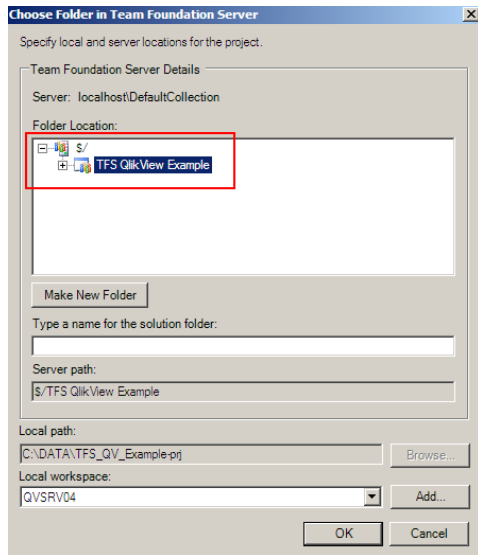
Finish

Cancel

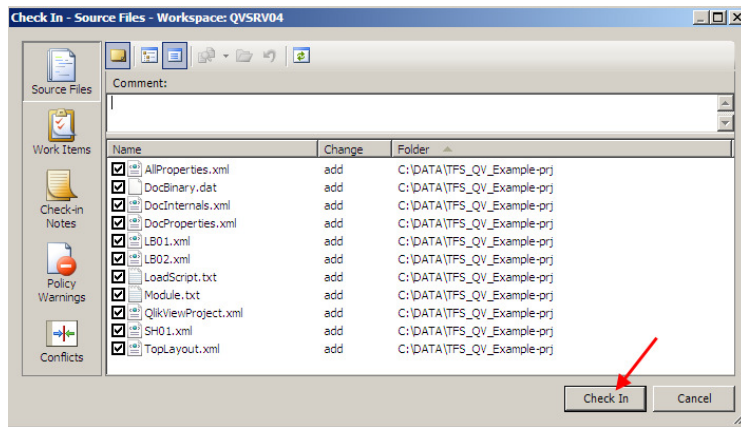


Go back to QlikView

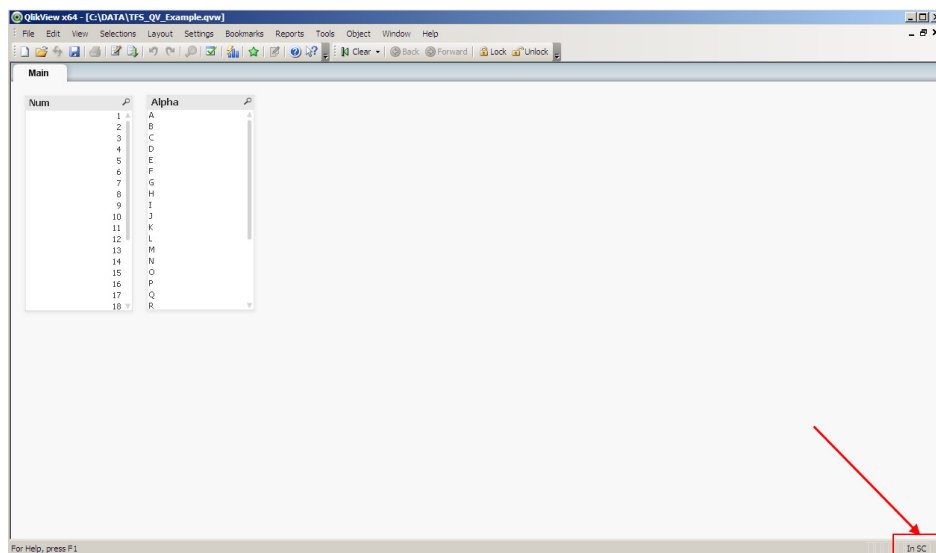




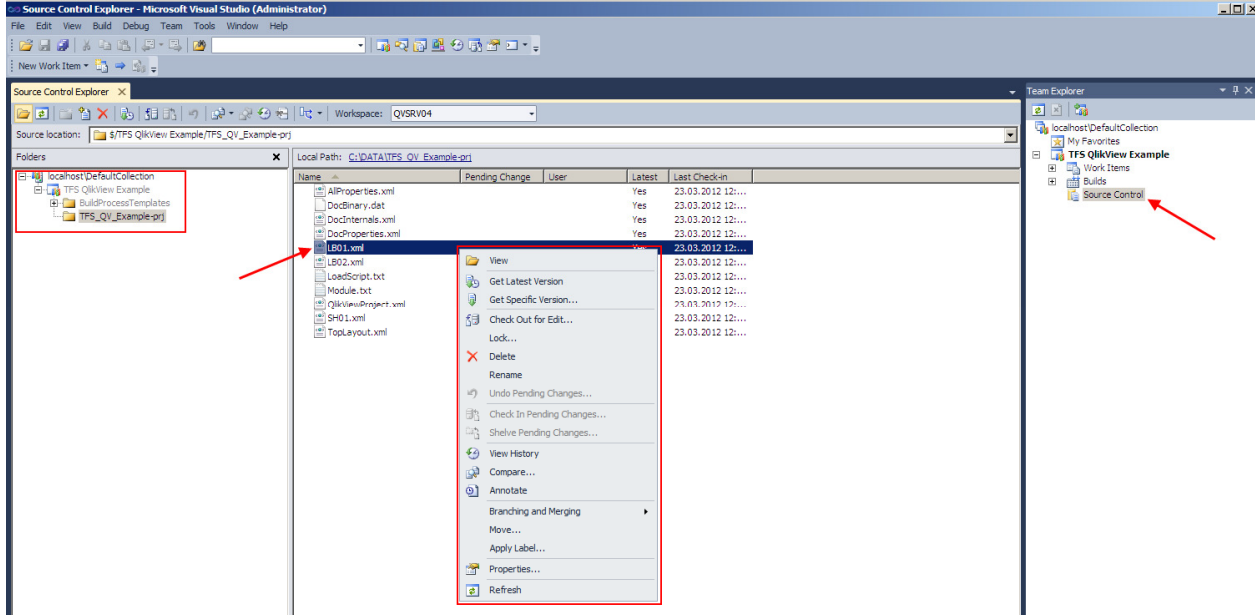
Now you should be able to check in your QVW Project for the first time.



Now you can see that your QV Project is under Source control

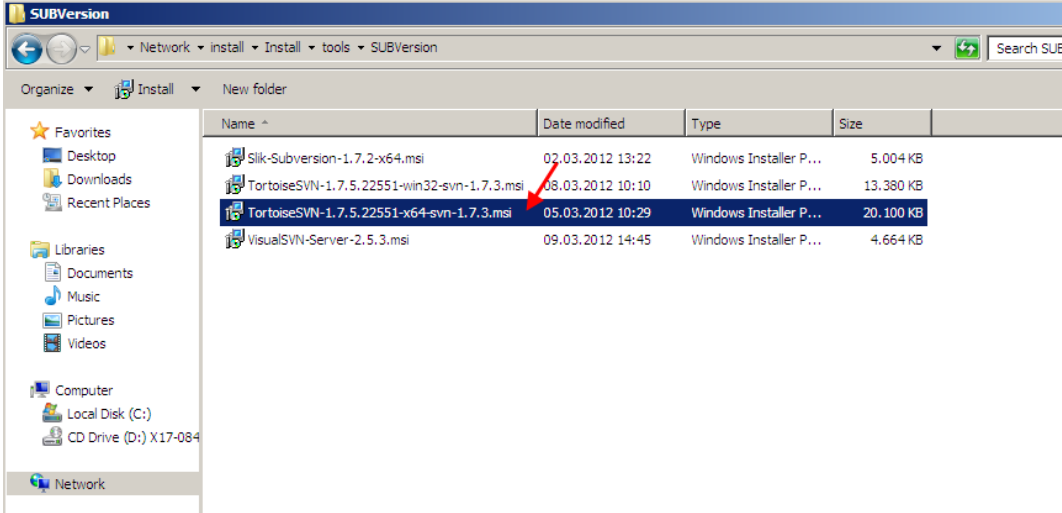


And you can use your TFS environment for different options like comparing different version, locking files to prevent another user to check in a change while you are working with it etc.

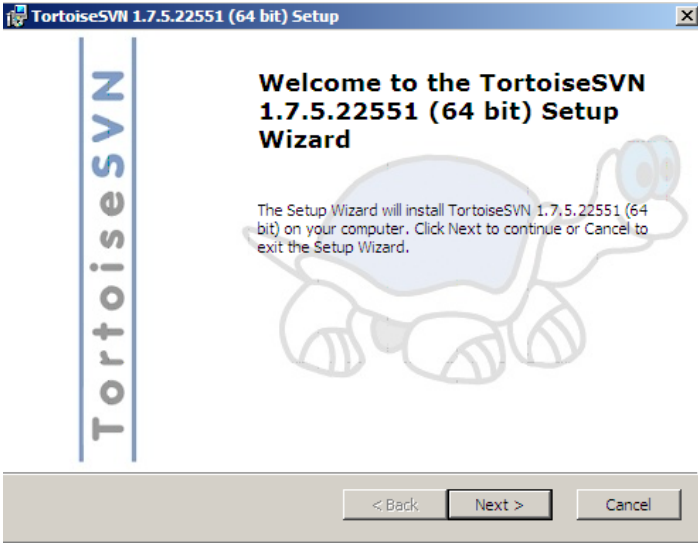


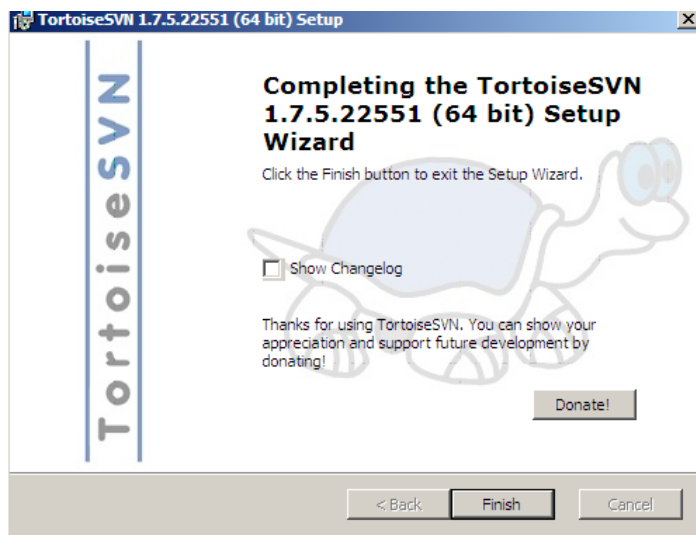
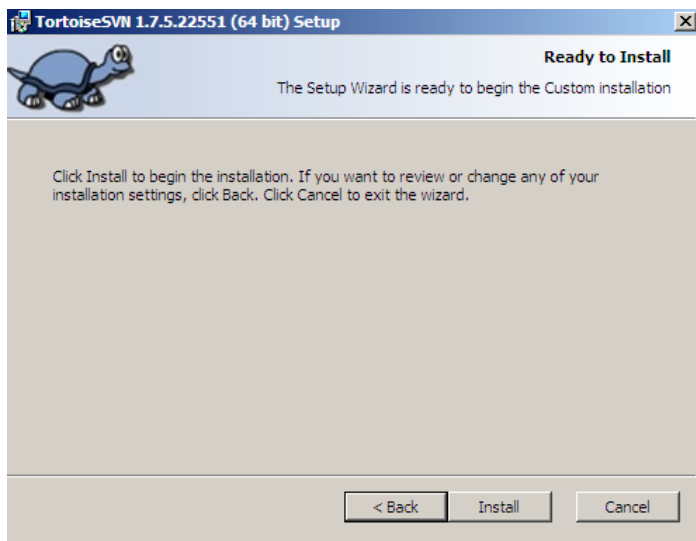
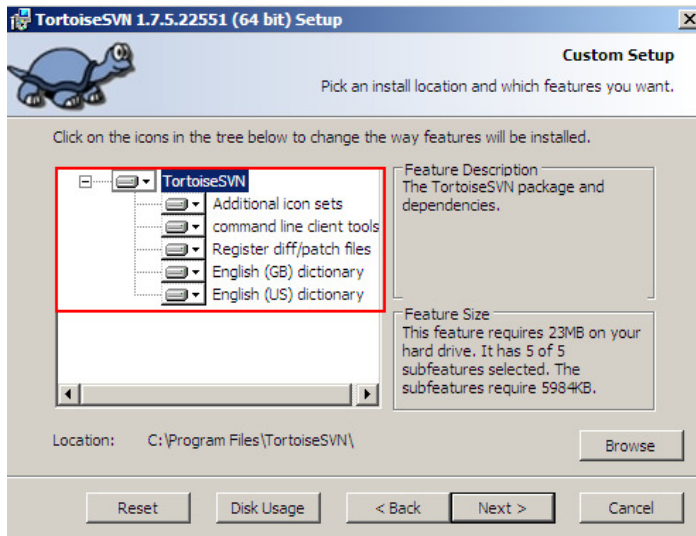
TortoiseSVN & Visual SVN Server Installation with QlikView 11

Start to install the TortoiseSVN

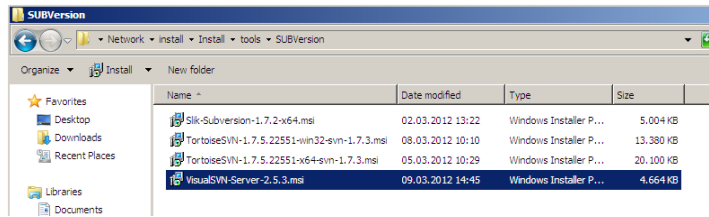


Download the 32 & 64bit files here <http://tortoisesvn.net/downloads.html>

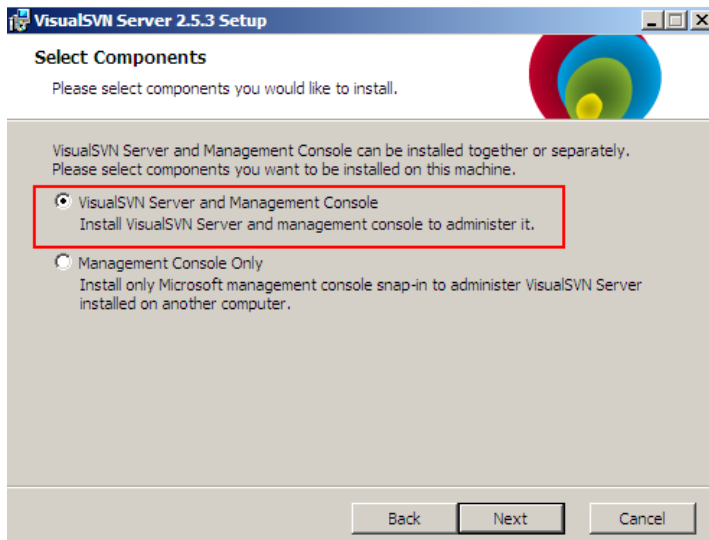
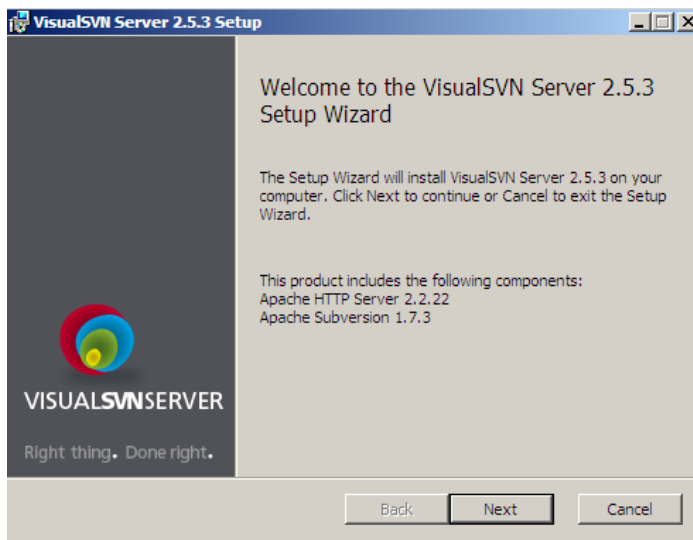


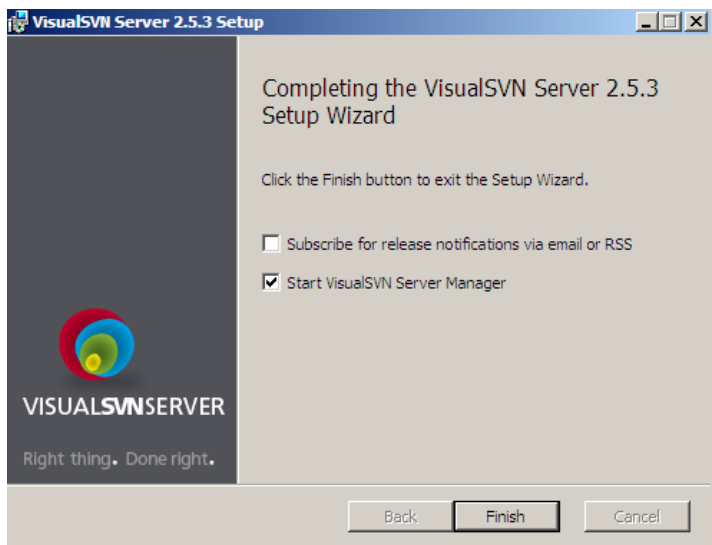
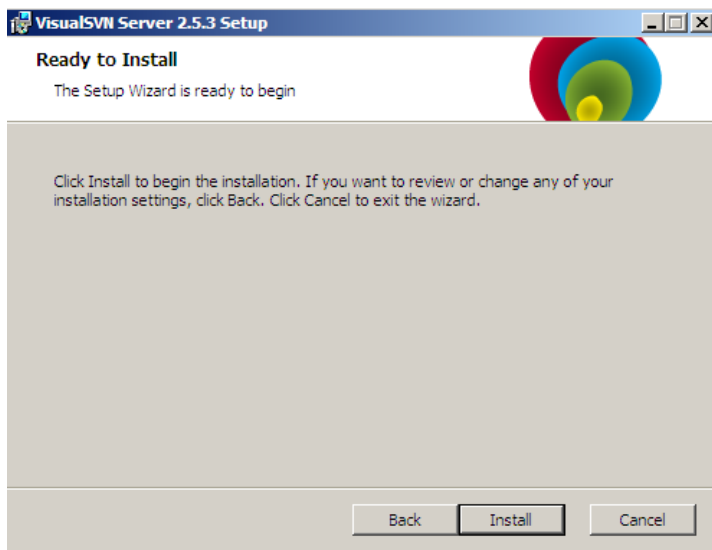
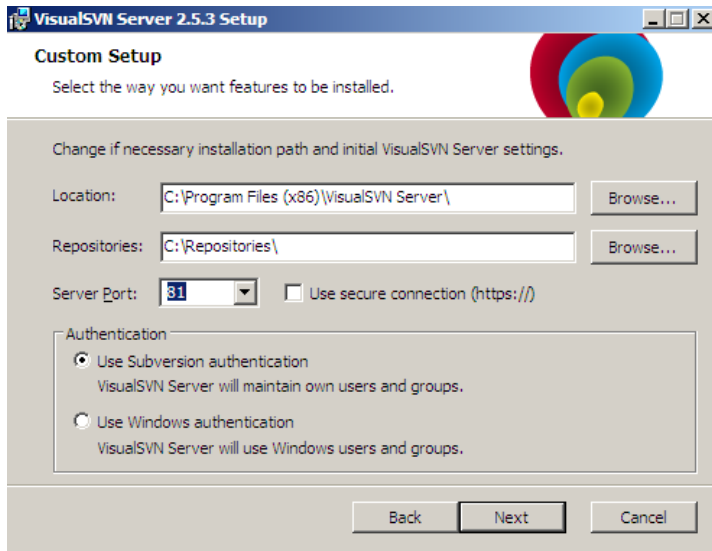


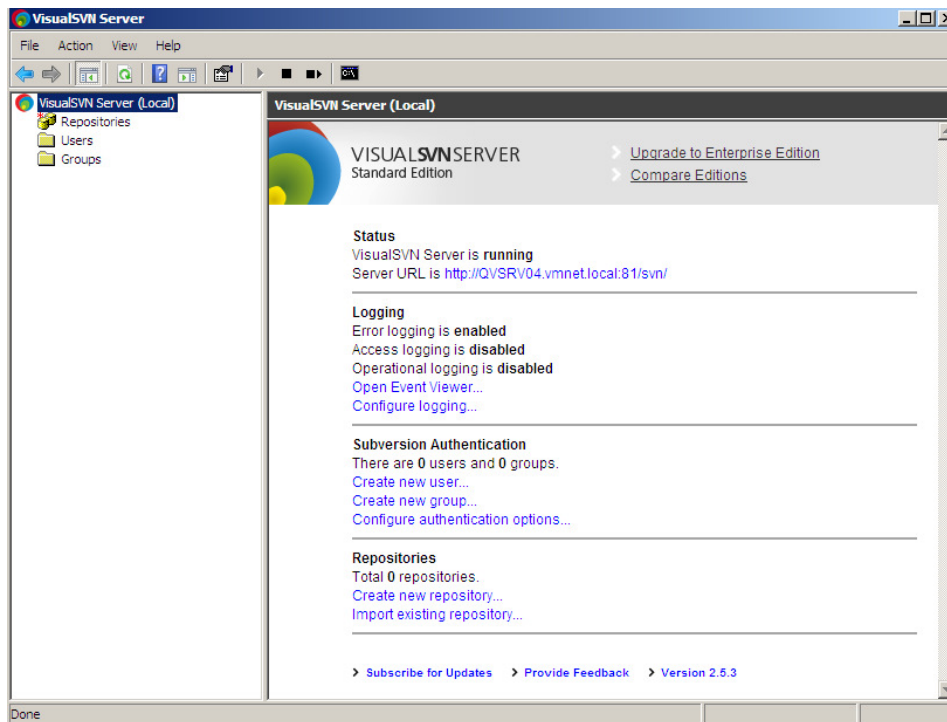
Start to install VisualSVN Server



Download the 32 & 64bit files here <http://www.visualsvn.com/server/download/>

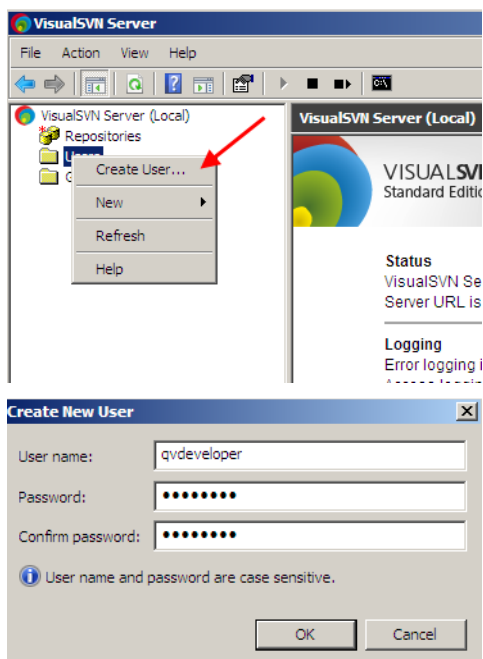




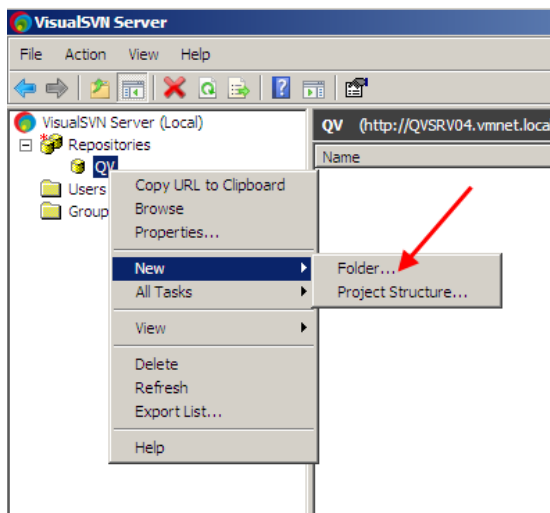
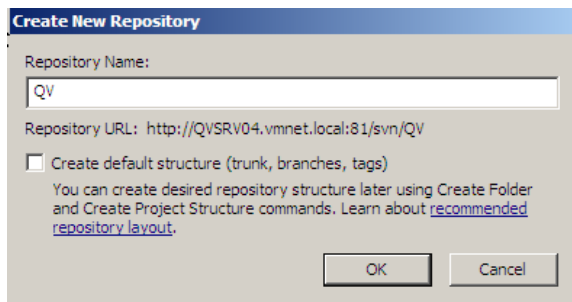
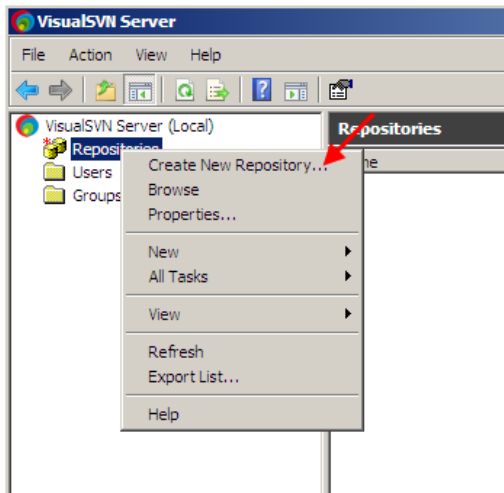


VisualSVN Server Configuration

Create a User

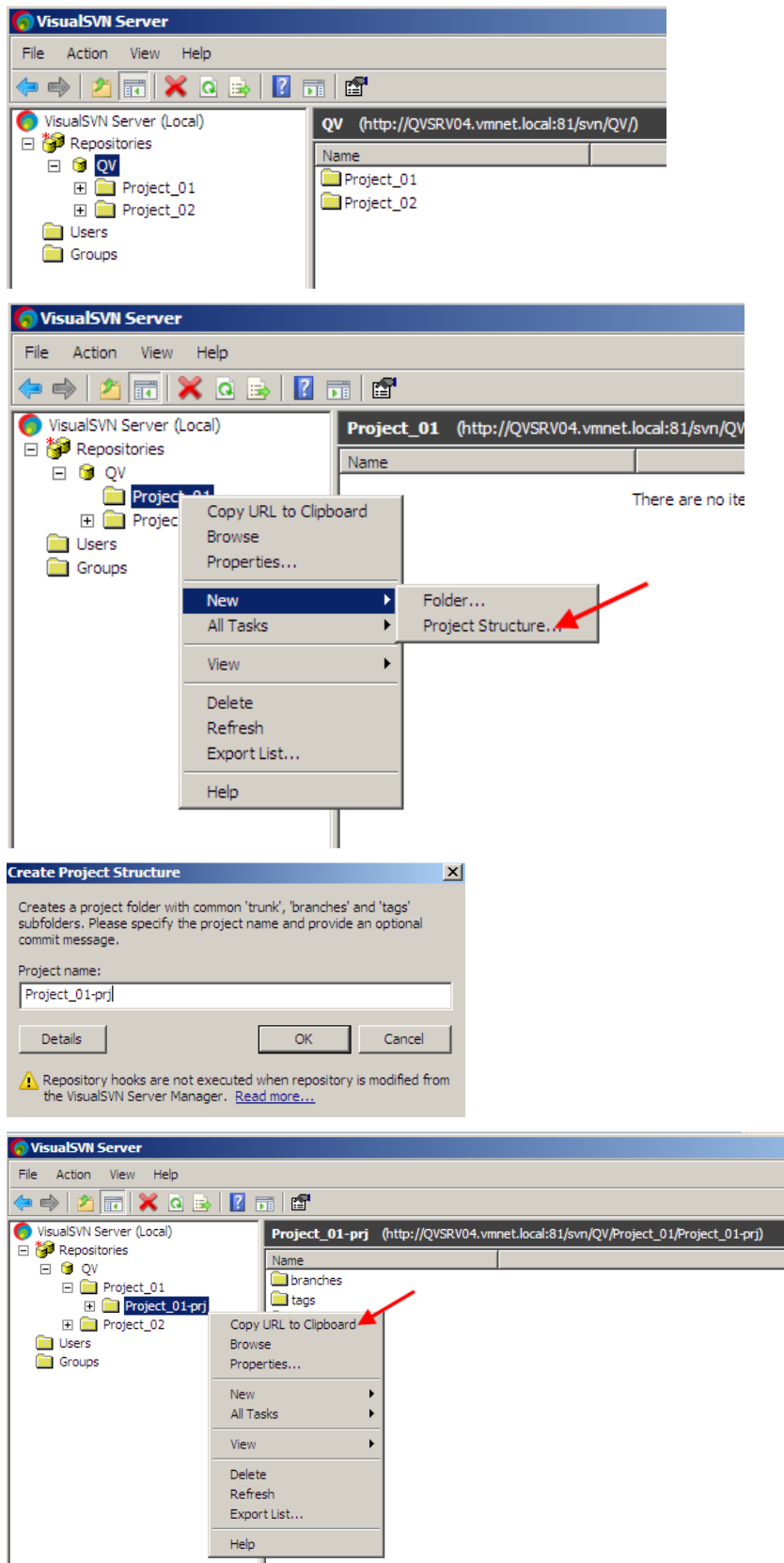


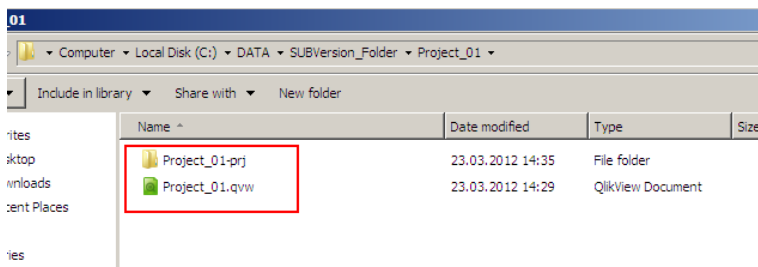
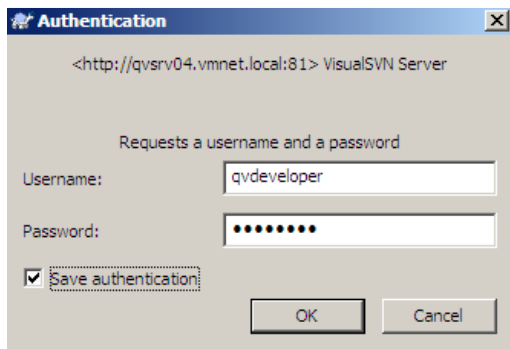
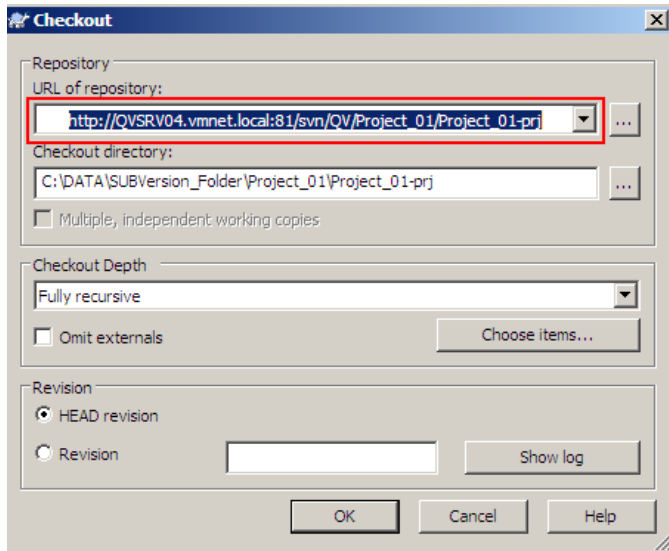
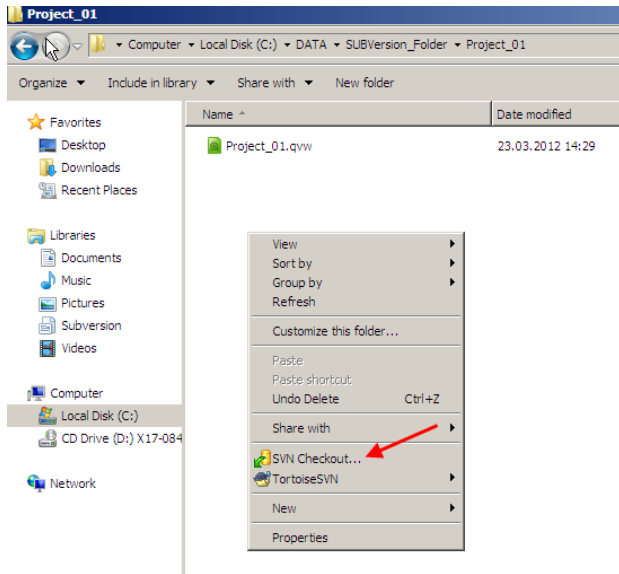
PW: Test1234



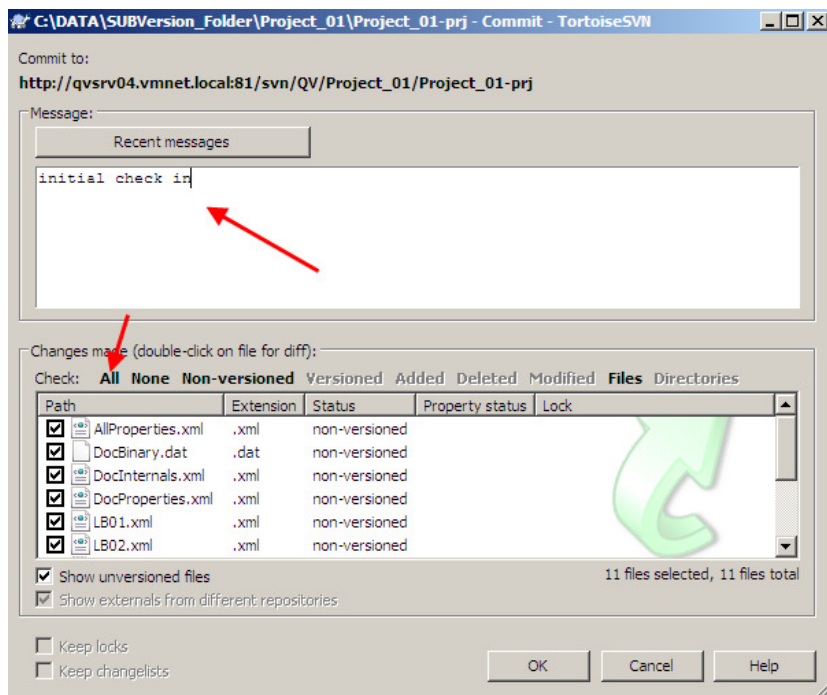
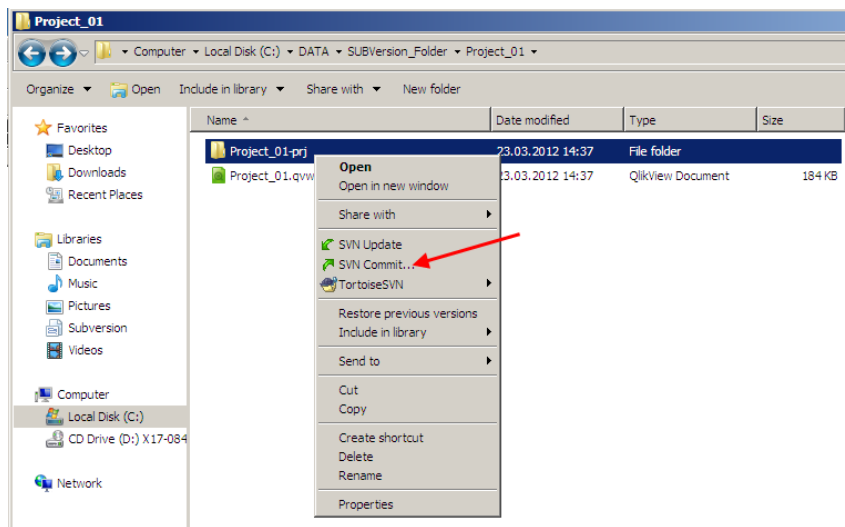
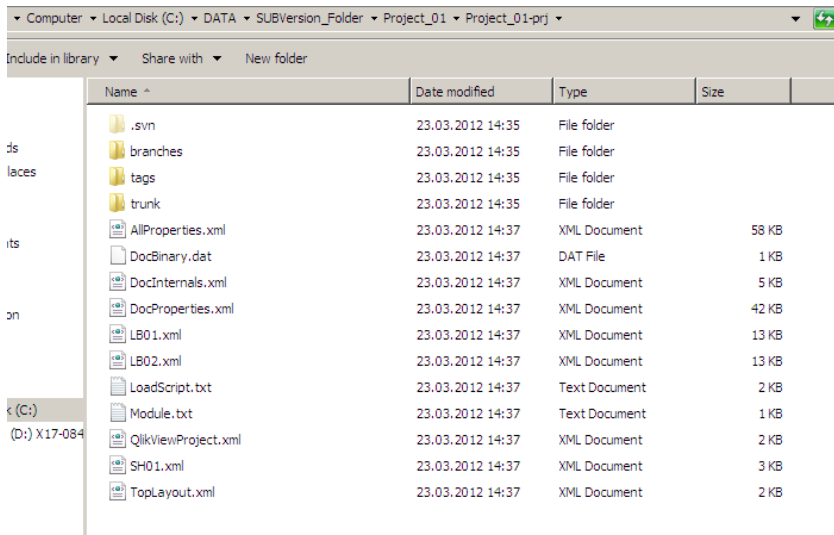
Create a Folder structure like your Source Documents Folder structure.

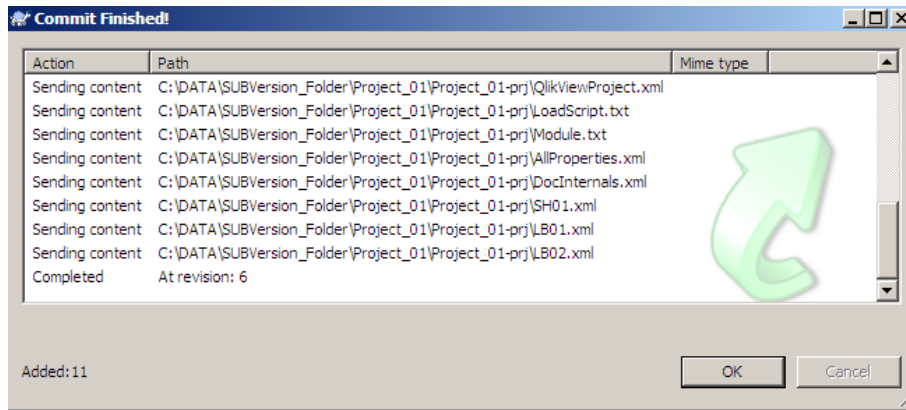
For Example like this:



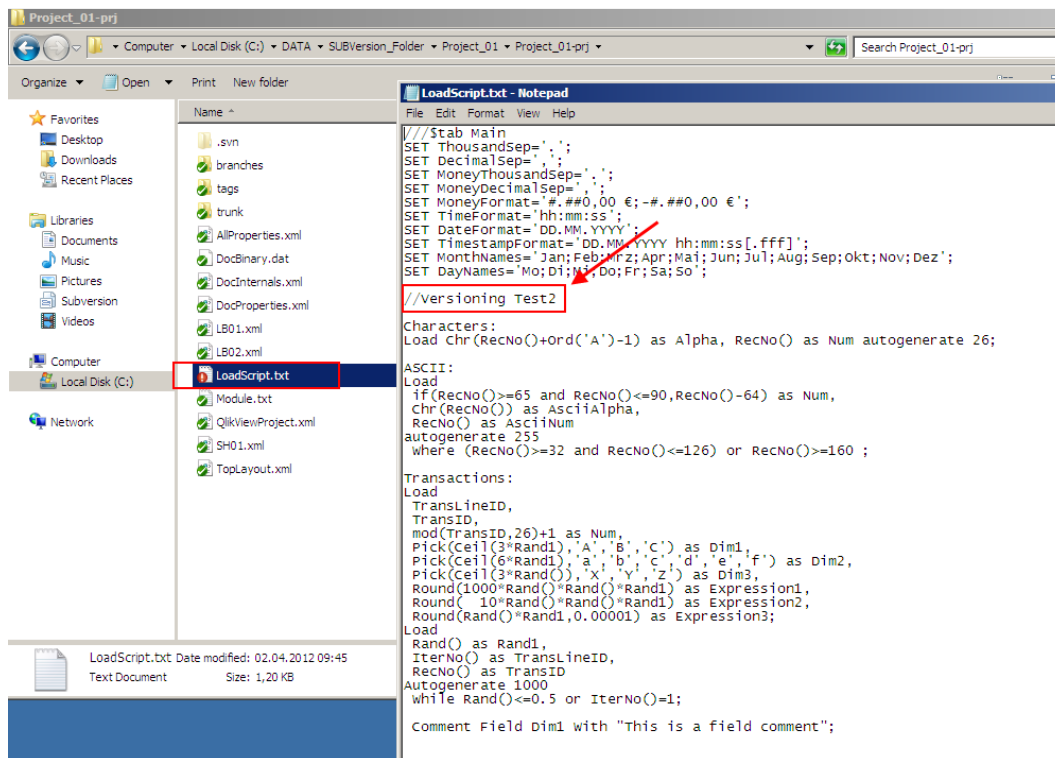


Open and save your QVW file once to get your XML structure exported

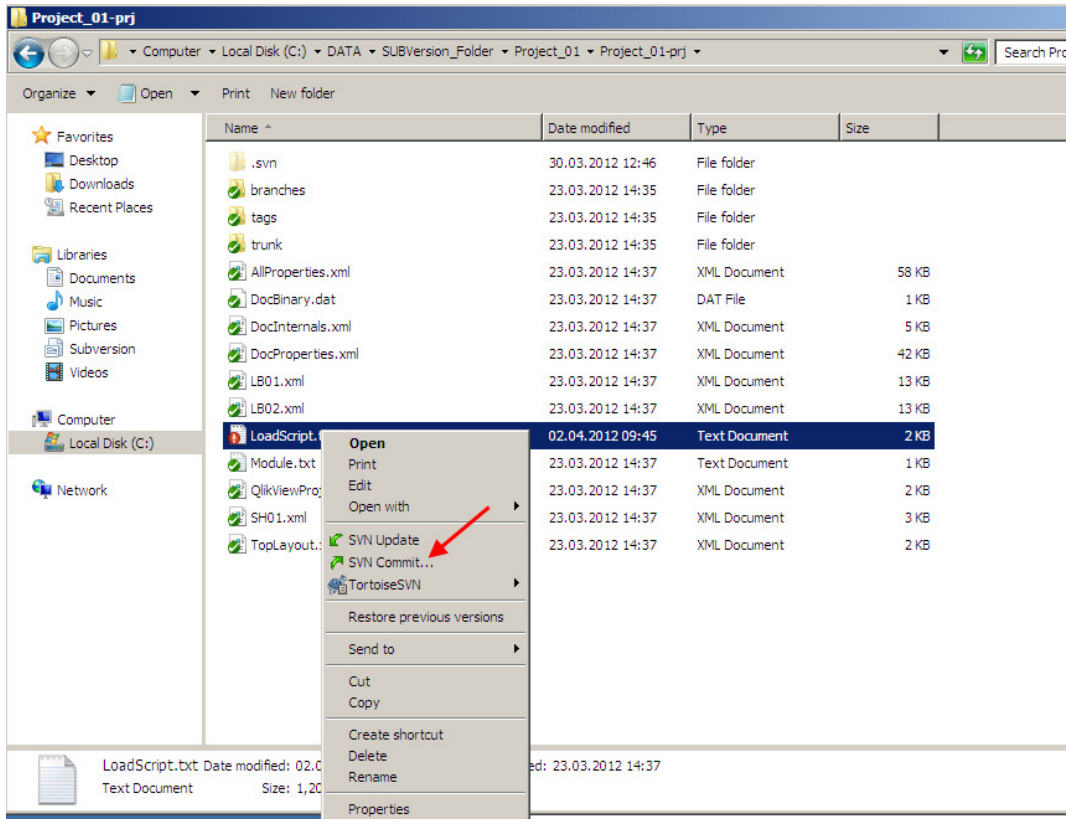




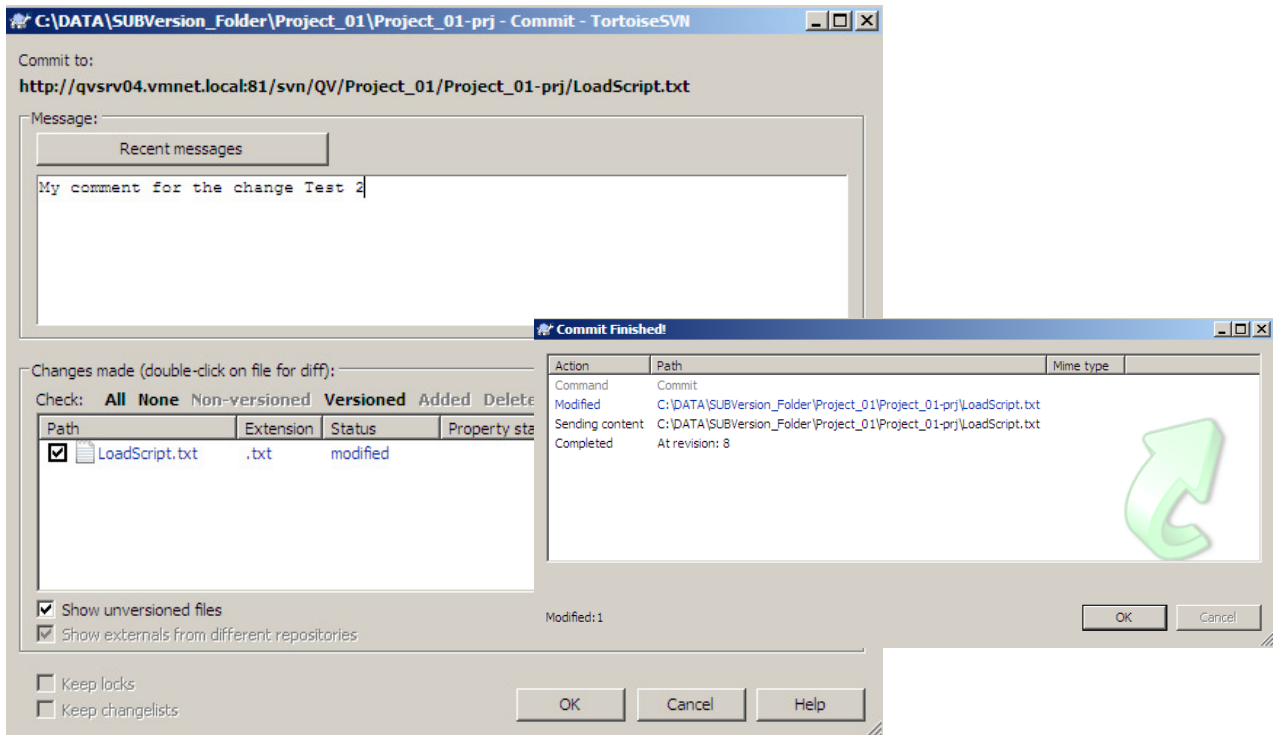
Reboot the Machine otherwise you won't see those green checks for every file which is in source control:



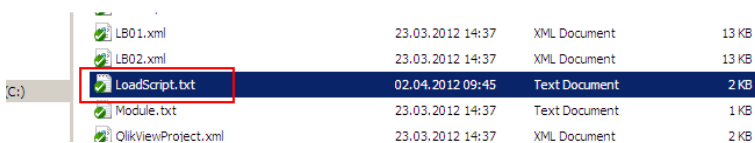
As a first Test edit the LoadScript.txt for example and save the file. You should have a red sign in front of your filename.



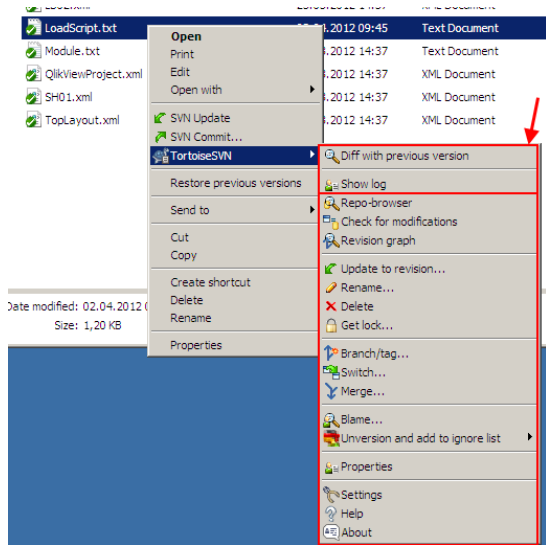
Commit your change



Your file is now again checked in with the latest content

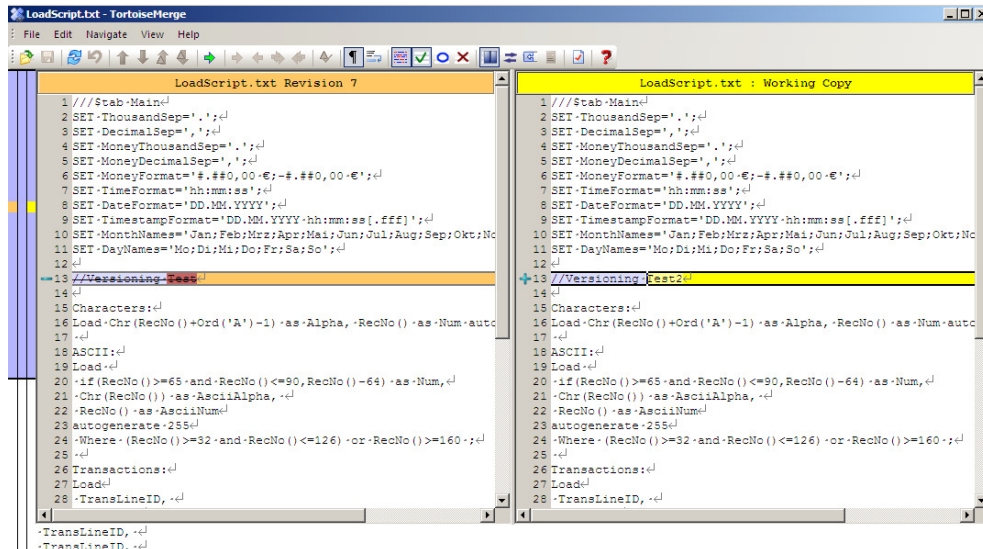


With Tortoise SVN there are now several options to use:



For example the selected two ones above:

Diff with previous version:



Or show the log:

