



## Configure Toad for Oracle with Microsoft Team Foundation Server

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## Overview and Prerequisites

This step-by-step tutorial will help you set up a Microsoft Team Foundation Server (TFS) client in Toad for Oracle.

Microsoft Team Foundation Server enables development teams to collaborate on large distributed projects. Features include Project Management, Work Item Tracking, Build Automation, Reporting, and Version Control. Toad provides a built-in integration with the Version Control module of TFS.

Information is presented in three sections:

- Section 1 - Set up Team Foundation Server Project using Microsoft Visual Studio 2010
- Section 2 – Using Team Foundation Server with Team Coding
- Section 3 – Using Team Foundation Server with Version Control System (VCS) Integration

Prerequisites: This tutorial assumes that you already have access to an installed instance of TFS and have been granted the necessary access rights. TFS is a sophisticated system, with complicated options. For the most part, we will configure using the default settings.

Once we have set up a TFS project, we will demonstrate using TFS with Toad.

First we will do a quick comparison of Team Coding and VCS Integration.

### **Choose Your Source Control Feature: Team Coding (Server Side) or VCS Integration**

Toad provides two options for using Source Control. This can sometimes cause confusion as to which feature to use.

- Team Coding controls database objects which contain source code, such as procedures, functions, and triggers. Team Coding controls access to objects by locking a record in the database.

You can use Team Coding alone or in conjunction with a VCS. If you use a VCS, Toad interfaces directly with the VCS to provide version history for database objects and files. The VCS option also enables you to manage changes to files, in addition to database objects.

- VCS Integration is a separate system that enables Toad to interface with a VCS to manage the changes to files.

This table shows the main differences between the two functions.

	<b>Team Coding</b>	<b>VCS Integration</b>
<b>Key Features</b>	<ul style="list-style-type: none"> <li>• Controls compiled database objects <u>and</u> source files.</li> <li>• VCS is optional.</li> <li>• Optionally uses Code Collections to control objects and files.</li> <li>• Requires Server Side Objects</li> <li>• The Team Coding Administrator determines which objects and / or source files to control.</li> <li>• Uses Team Coding Viewer</li> <li>• Uses Team Coding VCS Browser</li> </ul>	<ul style="list-style-type: none"> <li>• Controls source files only</li> <li>• Requires a 3<sup>rd</sup> party VCS</li> <li>• No server side objects</li> <li>• User decides which files to control</li> <li>• Uses Source Control VCS Browser</li> </ul>
<b>Configuration</b>	<ul style="list-style-type: none"> <li>• The main configuration is done in Team Coding Configuration</li> <li>• Code Collections are managed in the Code Collections Dialog.</li> <li>• Global settings (for all users) are stored in the database.</li> <li>• Some user options are stored locally using Toad Options – Source Control – Team Coding</li> </ul>	<ul style="list-style-type: none"> <li>• All options are stored locally. Use Toad Options – Source Control to configure.</li> </ul>
<b>Where items are controlled in Toad</b>	<ul style="list-style-type: none"> <li>• Editor</li> <li>• Schema Browser</li> <li>• Project Manager</li> <li>• Team Coding Viewer</li> <li>• Team Coding VCS Browser</li> </ul>	<ul style="list-style-type: none"> <li>• Editor</li> <li>• Project Manager</li> <li>• Source Control VCS Browser</li> </ul>

Setting up Team Foundation Server (Section 1) is the same process for Team Coding and VCS Integration. We will look at setting up and using both systems in Toad. First we will look at installing and configuring Team Coding.

## Section 1 - Set up a Team Foundation Server Project using Microsoft Visual Studio 2010.

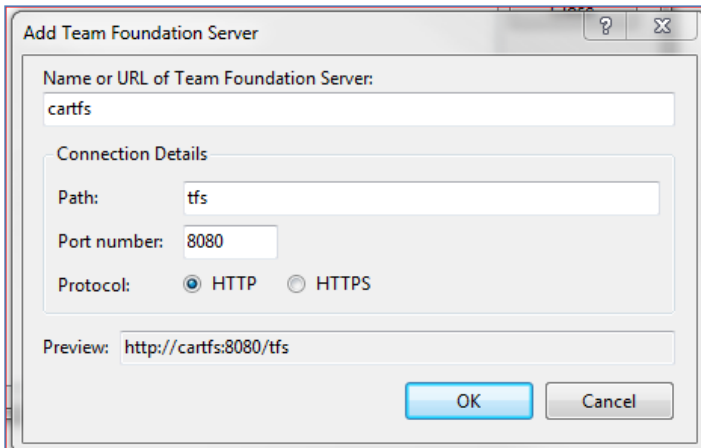
Typically the TFS Administrator will set up new projects and all you need to do is to select the project you wish to use for Team Coding.

**If you already have a project set up in TFS you can skip this section.**

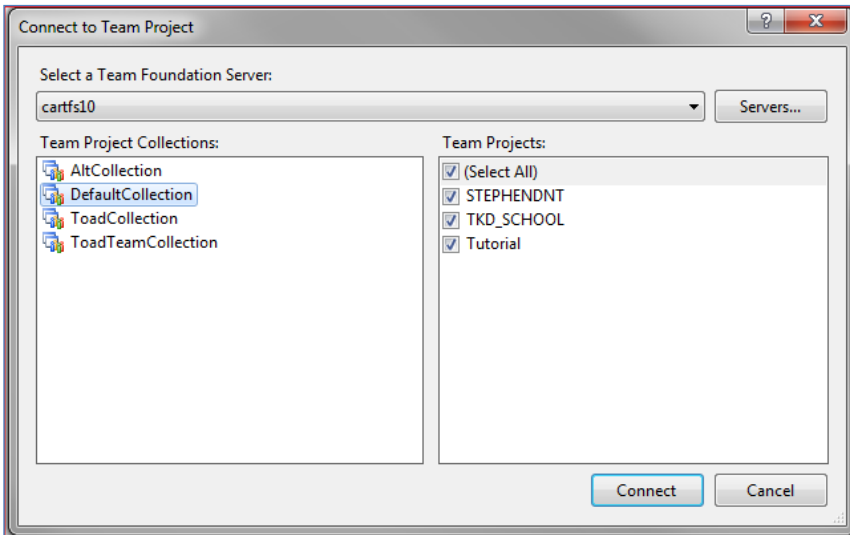
To use Team Coding with TFS, we must first create a TFS project to store source and to keep track of change history. To do this you will need a copy of Microsoft Visual Studio or Microsoft Team Explorer. Menu options will vary based upon the version and configuration you are using. We will assume this is a fresh Visual Studio installation.

Open Visual Studio and follow the following steps.

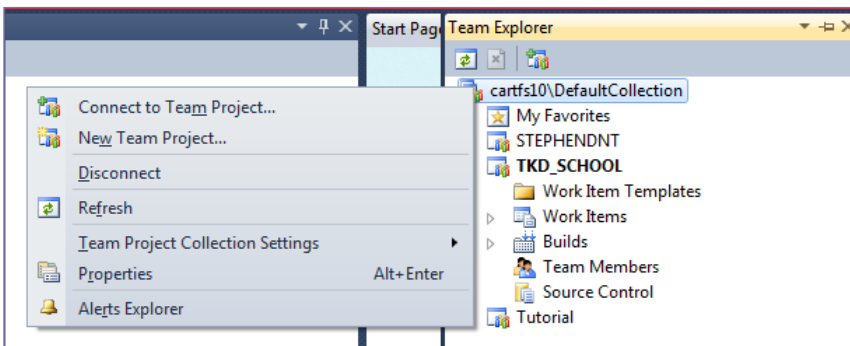
1. *If you already have previously connected to TFS you can skip this step.* From the Visual Studio menu select **Team – Connect to Team Foundation Server ...**
2. If the server is listed in the dropdown, select it; otherwise click the **Servers ...** button to add to the list. The Add Team Foundation Server dialog will look like this.
  - Enter the server name. Typically the default selections are fine for the remaining selections.



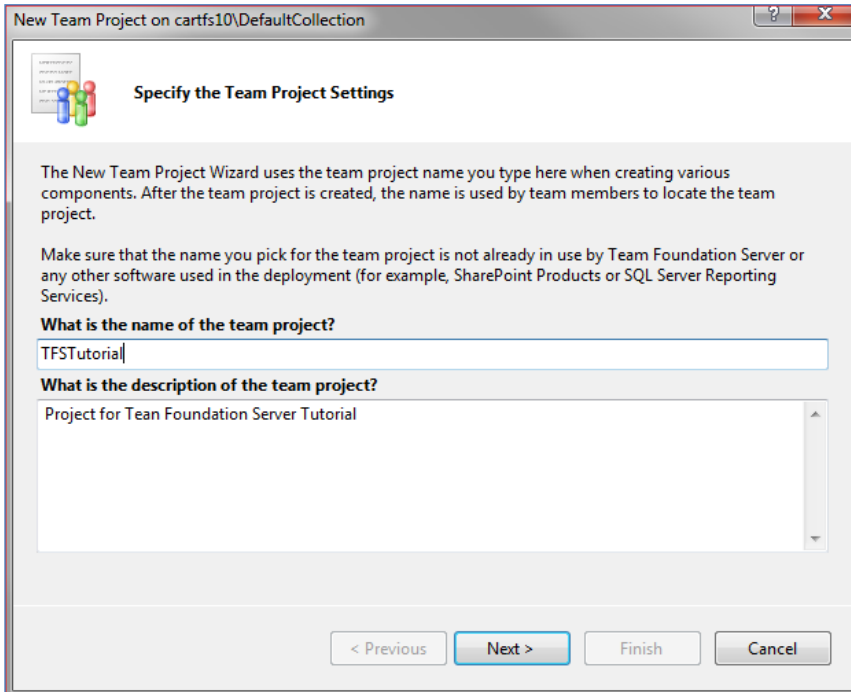
3. TFS allows you to connect to different collections. Select your default collection. (A **collection** is synonymous with a **repository** – it is a group of projects). You will see a list of the projects in the collection.
  - Click **Connect**.



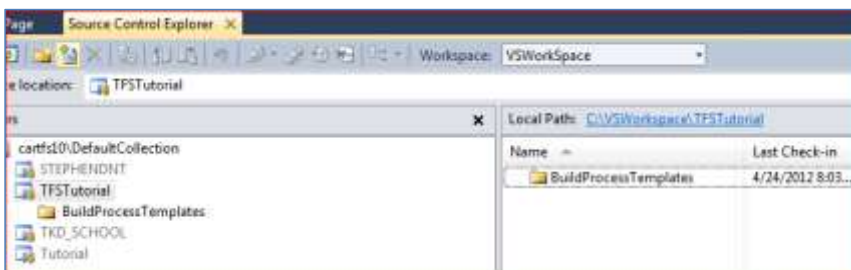
4. In the Team Explorer panel, right-click **DefaultCollection** and then click **New Team Project ...** .



5. Complete New Team Project wizard, selecting default options. We are calling our project TFSTutorial. TFS will create all the components for the Team Project.



6. You can now open the Source Control Explorer in Visual Studio. The explorer allows you to create and modify workspaces, and to add, check in and check out items. We will do all of these from Toad.



## Section 2 - Using Team Foundation Server with Team Coding

Take these five steps, described in detail on the following pages, to set up Team Coding for use with TFS.

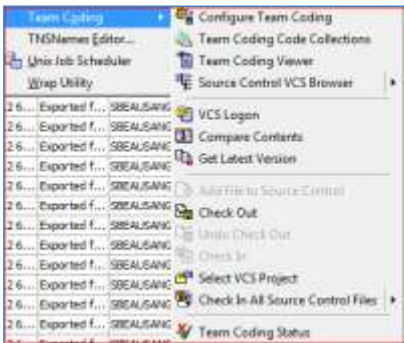
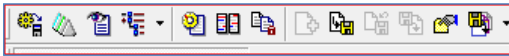
1. Install Team Coding server-side objects.
2. Configure Team Coding options.
3. Configure the TFS Client for use with Team Coding.
4. Create a TFS client workspace.
5. Set up Code Collections for objects or files that you wish to control.

First it is probably a good idea to take a quick look at the Team Coding Menu and Toolbar options.

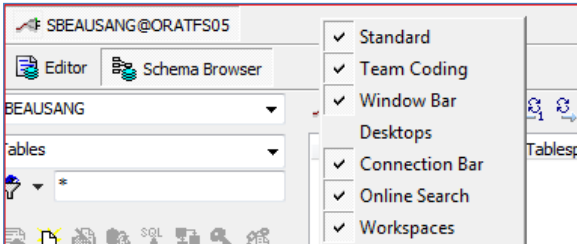
### Team Coding Toolbar and Menu

Team Coding can be accessed from the Team Coding Toolbar on the main Toad window, or from **Utilities - Team Coding**. (If the Team Coding Toolbar is not visible when you open Toad, right-click in the main Toad toolbar and check the option.)

The toolbar is also replicated on the Team Coding Viewer window.



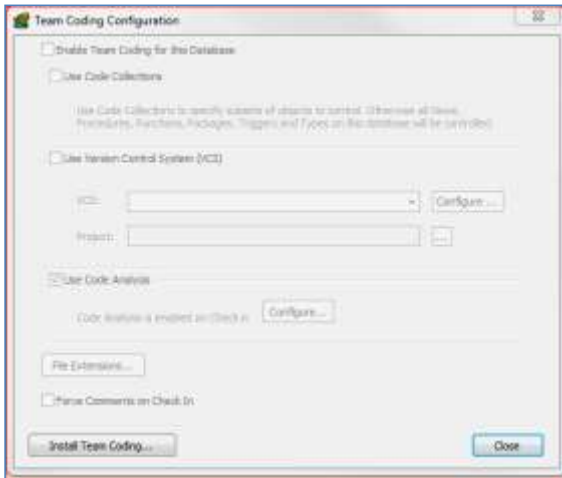
We will refer to menu items, but you can also use the Toolbar to accomplish each task.





## Installing Team Coding

- Connect to the Database which you wish to control with Team Coding.
- If Team Coding is not installed on this database, you will need to install the Team Coding Server Side Objects. This requires that your logon has DBA privileges.
  - From the main form, select **Utilities – Team Coding – Configure Team Coding**.
  - Select **Install Team Coding** and follow the steps in the install wizard.



- Team Coding must be installed in a publicly accessible schema. This will install the Team Coding Server Side Objects in the database. We are using the Toad Schema. If the Toad schema does not exist you will be prompted to create it.

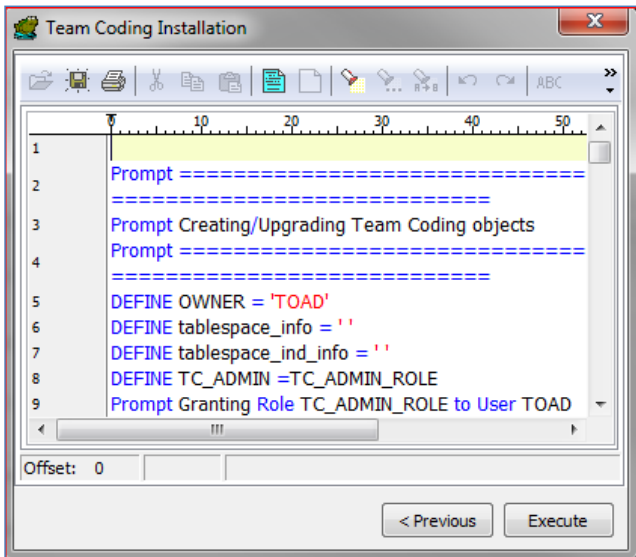


- Select an Administrator Role for Team Coding. The default value is TC\_ADMIN\_ROLE. The installing user is granted the TC\_ADMIN\_ROLE by default. You may also assign this role to other users.

TC Admin has the following additional privileges:

- Configure Team Coding
- Create Code Collections
- Freeze Objects
- Uninstall Team Coding

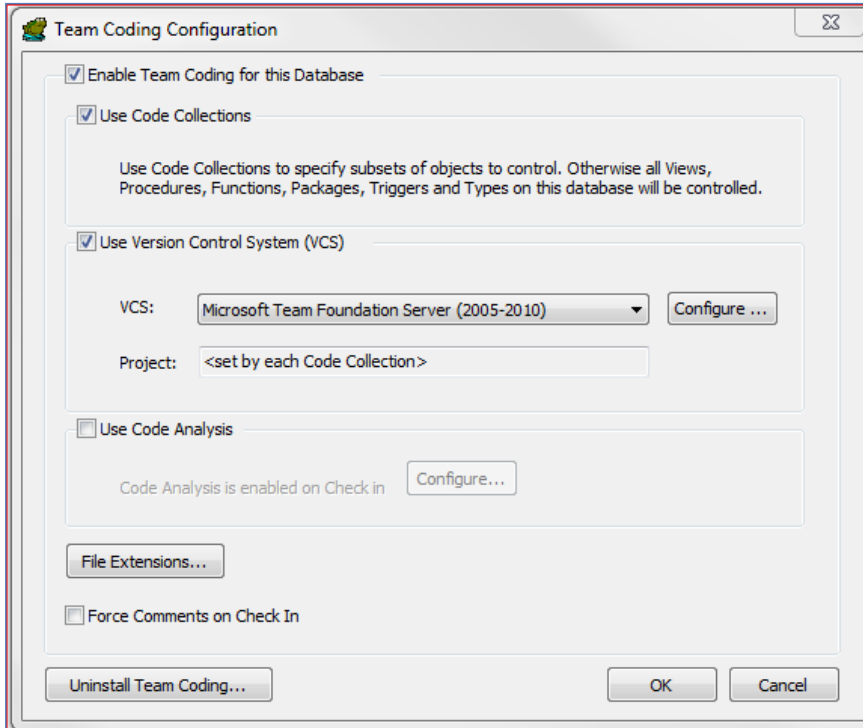
You can execute the install script or save it for future installation.



Once the Team Coding objects are installed you are ready to configure Team Coding. The configuration window should refresh with Team Coding enabled.

## Configure Team Coding

You can configure Team Coding to determine how you wish to control objects in Toad. This window is a typical configuration.



We are selecting the following main options:

**Use Code Collections** – This option allows us to specify which objects we wish to control. If this option is turned off, all objects are controlled by default.

**Use Version Control** – Team Coding uses a VCS to maintain version history for controlled objects. We have selected 'Microsoft Team Foundation Server (2005-2010)' from the VCS dropdown.

You may also use Code Analysis to validate Team Coding objects before check in. This is a separate topic and covered in Toad help.

Team Coding needs to know where the Team Foundation Server repository is located. To do this we must configure the TFS client.

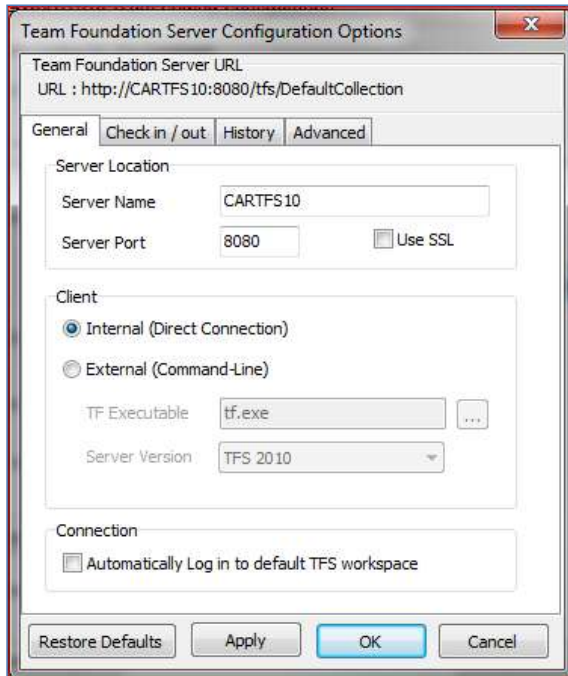
Select **Configure...** next to the VCS dropdown.

**Note:** When you click **OK** to save the configuration for the first time, you will be asked if you want to create **Code Collections**. We will cover this later in this document. First we will discuss configuring the TFS client.

## Configure Team Foundation Server client for use with Team Coding

**IMPORTANT:** To configure TFS for Team Coding, you must use the 'Configure ...' option from the Team Coding Configuration dialog. Do not use the configuration in Toad Options – Source Control. That is for VCS Integration.

- Select **Configure** from the Team Coding Configuration Window (Version Control System) to open the Team Foundation Server Configuration Options dialog.



- Enter the Server Name where TFS is installed and server port (default: 8080).
- Select a client.  
Toad has two options for a TFS client. The internal client uses direct web service calls to TFS and does not require any local TFS client files. It is also faster than the external client. The external client uses TF.exe which is typically distributed with MS Visual Studio or MS Team Explorer and requires the .Net framework installed. For most cases we recommend that you select the internal client.

If you decide to select the external client, you will need to know the version of TFS that is running on the server and the location of TF.exe. It is usually in the install directory for Visual Studio or Team Explorer. On my desktop it is here:

C:\Program Files (x86)\Microsoft Visual Studio 10.0\Common7\IDE\TF.exe

- **Connection**  
In this example, we have not checked the option to **Automatically Log in to default TFS workspace**. It is good to leave this off initially, if you are setting up Team Coding and want to test your configuration. Once everything is configured correctly, you can check this box if you do not wish to get a login window every time you connect to the server.

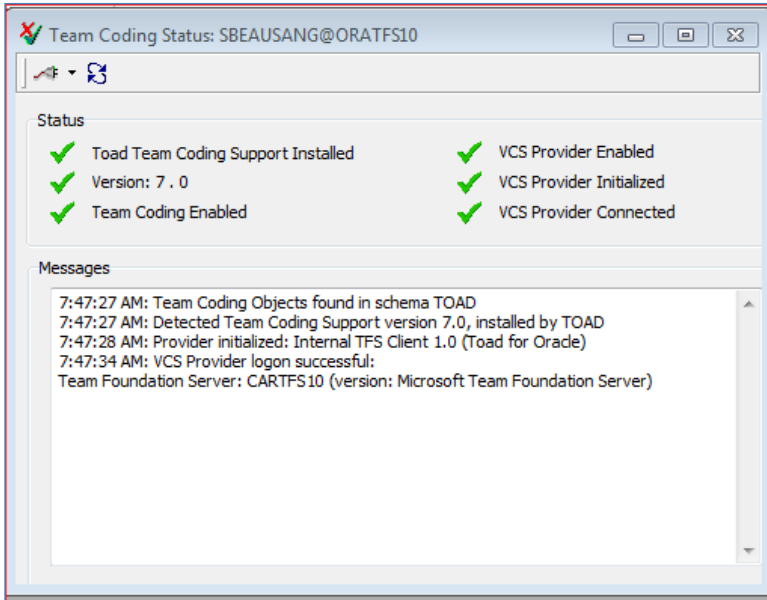
This window also has several advanced options which can typically be ignored.

- Click **OK** to save the TFS configuration.

If the user is a Team Coding Admin user, the configuration is stored in the database, and users are prompted to download changes the next time they log in to the database

#### Checking status

You can check the Team Coding Status at any time **Utilities – Team Coding – Team Coding Status**. This window lets you see the status of the Team Coding install and any session messages.



## Log on to Team Foundation Server for First Time – Create TFS Workspace

The first time you log on to TFS from Toad, you will be asked to select or create a workspace.

A TFS workspace is where you keep the files and folders that you check out of the repository. It is basically a series of folder mappings on your workstation.

TFS keeps track of all workspaces on the server. You can have multiple workspaces; however we strongly recommend that you keep a single workspace to manage all of your Team Coding projects within Toad.

TFS uses four elements to track a workspace:

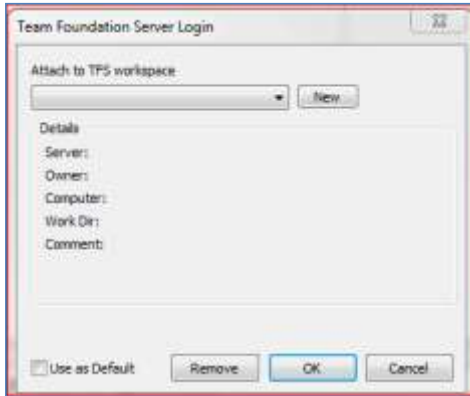
TFS tracks by...	Purpose
Workspace name	The first three help to identify a unique workspace.
Windows user name	
Client computer name	
Client Folder mappings (the local directories where your local copy resides)	Client folder mappings identify the folder where your client copy of files is stored. There are several things to be aware of when setting up workspaces, some of which can get complicated.

You are free to use any name for your workspace that you like. It is a good idea to have a consistent naming convention. For example you could have the workspace name and working directory match the TFS project name.

**Note:** Team Coding allows you to create many workspaces for the same project. This means you could have multiple revisions and pending changes for the project stored locally. For simplicity sake, we strongly recommend against this practice.

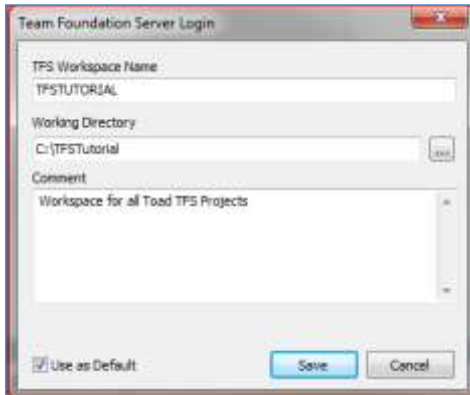
Toad only permits a single Work Directory (client folder mapping) for a workspace, whereas TFS allows multiple mappings. This can cause some issues if Visual Studio was used to set up a client Workspace with multiple folder mappings.

We will use Toad's Team Foundation Server Login to create a client workspace. Each TFS project will treat the Work Directory as the root folder, and will create a separate sub-directory named for the project.



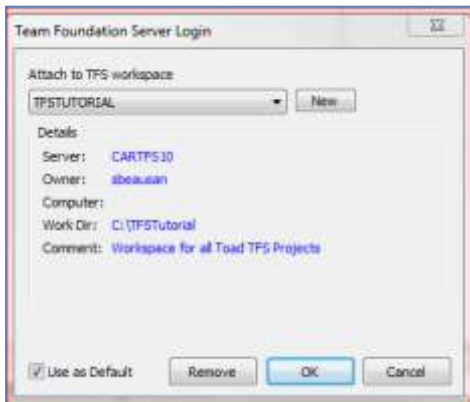
If you have not already created a workspace, click **New** to add a workspace.

Once you have created your workspace click **OK**.



The login dialog will now be populated with your workspace information.

Click **Save**.



Click **OK** to login to TFS.

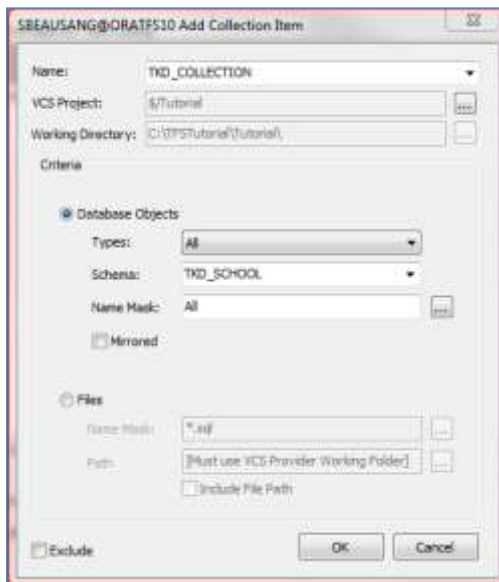
## Set Up Code Collections to control Team Coding Objects

If you checked **Use Code Collections**, you will also be prompted to set up Code Collections the first time you save configuration.

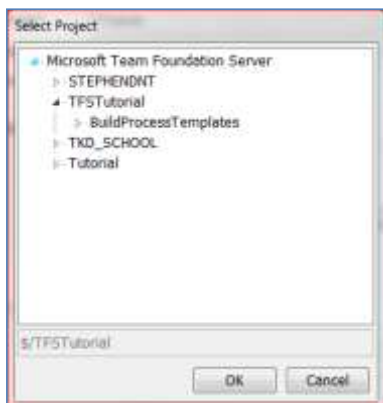
Code Collections enable the Team Coding Administrator to configure which objects are controlled by Team Coding. You can also access this window from **Utilities – Team Coding – Team Coding Code Collections**. You need TC\_ADMIN privileges to edit code collections.

We are going to set up code collections to control all Team Coding objects in the TKD\_SCHOOL schema and local source files that start with 'TKD'.

**Note: we are using Team Coding to control database objects and some source files.**



1. Open the Code Collections dialog and click **Add...** to create a new Code Collection Item. First we will set up the item to control the Database Objects in the TKD\_SCHOOL schema.
2. Enter a name for the code collection. We are going to use the same name TKD\_COLLECTION for all code collection items. Each Code Collection in Toad maps to a single source control project.
3. Click **VCS Project...** to select the TFS project that will be used. We are selecting TFSTutorial.
4. Select Database objects, TDK\_SCHOOL schema, and the default **All** for the name mask.
5. Click **OK**.



For TFS, the working directory is defined by the logged on workspace.

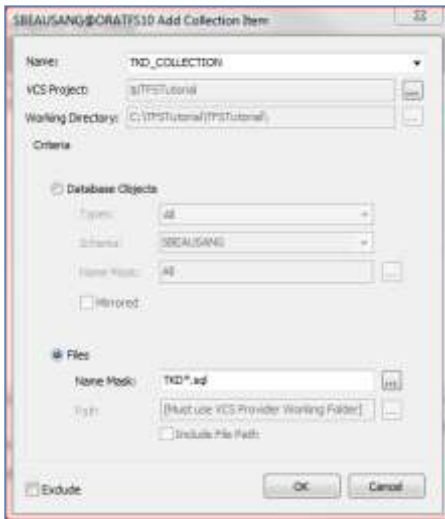
This will control all supported objects in the TDK\_SCHOOL schema.



## Set up Code Collections to control source files

You can also use Team Coding to control source files. This requires that you are using a VCS, and that Code Collections are enabled.

1. Open the Code Collections dialog and click **Add...** to create a new Code Collection Item.
2. Create a new collection by entering a unique collection name, or add an item to an existing collection by selecting from the name dropdown. We are going to select the existing TKD\_SCHOOL collection.
3. Click **Files** to control source files and enter the mask of the file names you wish to control. This will control all files on the user's desktop which match the 'TKD\*.sql' mask.

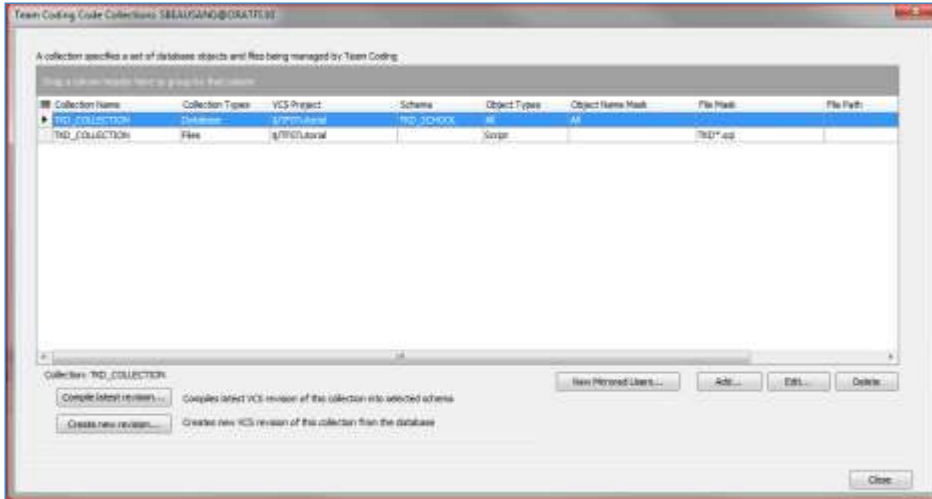


The selected objects are now controlled by Team Coding for all users who log on to the ORATFS10 database.

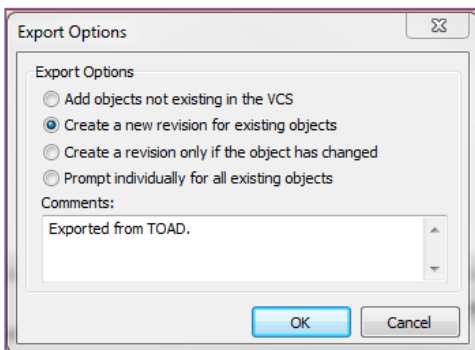
## Populating the Team Coding tables for the first time - create a new revision for Team Coding Objects

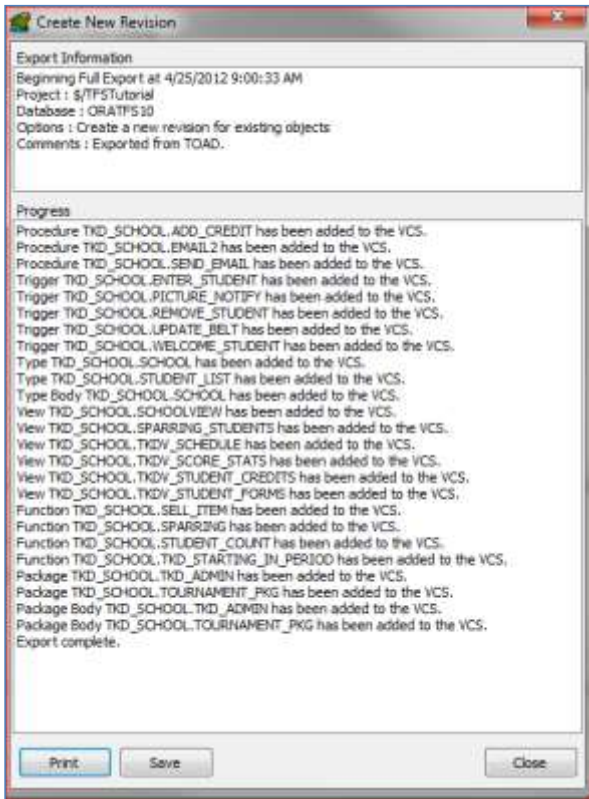
Typically, Objects are added to the Team Coding Viewer and to the source control repository when they are checked out for the first time. For example, you can right-click a procedure in the Schema Browser and check out a procedure that is in the TDK\_SCHOOL schema.

The TC\_ADMIN can also create a complete revision for controlled objects. This will populate all controlled objects in the Team Coding viewer, and create a new revision in the TFS repository for the object source.



1. Select the collection item you wish to update and click **Create New Revision**.
2. In the Create New Revision dialog, select or deselect objects you wish to include and click **OK**.
3. There are several export options. Typically, I create a new revision for existing objects. Add a comment and click **OK**.





A record will be added to the Team Coding tables for each controlled object, and a new revision will be added to the TFS repository for the source for each object.

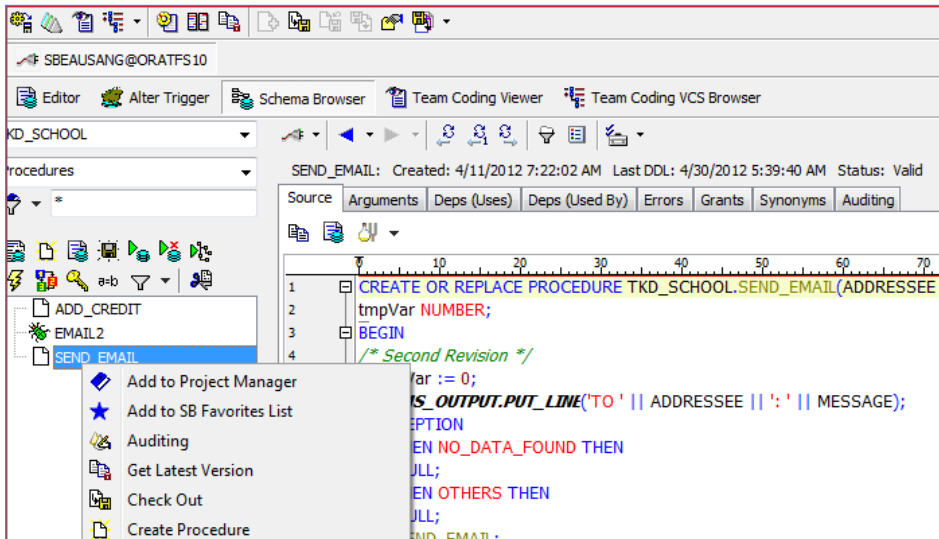
## Using Team Coding in Toad

There are a number of ways that you can access Team Coding objects in Toad. These include:

- Schema Browser
- Editor
- Team Coding Viewer
- Team Coding Source Control Browser

### Using Team Coding with the Schema Browser

The easiest way to see Team Coding in action is to use it in the Schema Browser.



1. From the Schema Browser, right-click an object that is controlled by Team Coding. If it is available to edit, the Check Out and Get Latest menu options are visible.

You can also tell if an object is available by the status on the Team Coding Toolbar. In this case the Check Out and Get Latest buttons are enabled.

2. Click **Check Out**.  
The Team Coding object is 'Locked' in the Team Coding table, and the latest version of the source code is downloaded to the TFS working directory. You can now edit the object.

3. Double click the object name (SEND\_EMAIL) to open the source in the editor.
  - Make some modifications.
  - Click the compile button to compile and save the object.

```

1 CREATE OR REPLACE PROCEDURE TKD_SCHOOL.SEND_EMAIL(ADDRESSEE IN VARCHAR2, MESSAGE IN VARCHAR2) IS
2   tmpVar NUMBER;
3 BEGIN
4   /* Make some modifications in this revision */
5   tmpVar := 0;
6   DBMS_OUTPUT.PUT_LINE('TO ' || ADDRESSEE || ' ' || MESSAGE);
7 EXCEPTION
8   WHEN NO_DATA_FOUND THEN
9     NULL;
10  WHEN OTHERS THEN
11    NULL;
12 END SEND_EMAIL;
13 /

```

4. You can now click the 'Check in' button from the Team Coding Toolbar or right-click the object in the Schema Browser to check in your changes.

You may need to click the refresh button in the Schema Browser to view your changes in the Schema Browser window.

```

1 CREATE OR REPLACE PROCEDURE TKD_SCHOOL.SEND_EMAIL(ADDRESSEE IN VARCHAR2, MESSAGE IN VARCHAR2) IS
2   tmpVar NUMBER;
3 BEGIN
4   /* Third Revision */
5   tmpVar := 0;
6   DBMS_OUTPUT.PUT_LINE('TO ' || ADDRESSEE || ' ' || MESSAGE);
7 EXCEPTION
8   WHEN NO_DATA_FOUND THEN
9     NULL;
10  WHEN OTHERS THEN
11    NULL;
12 END SEND_EMAIL;
13 /

```

## Using Team Coding from the Editor

Team Coding can also be used to control source files. The Editor uses the same Team Coding Toolbar buttons as the Schema Browser.

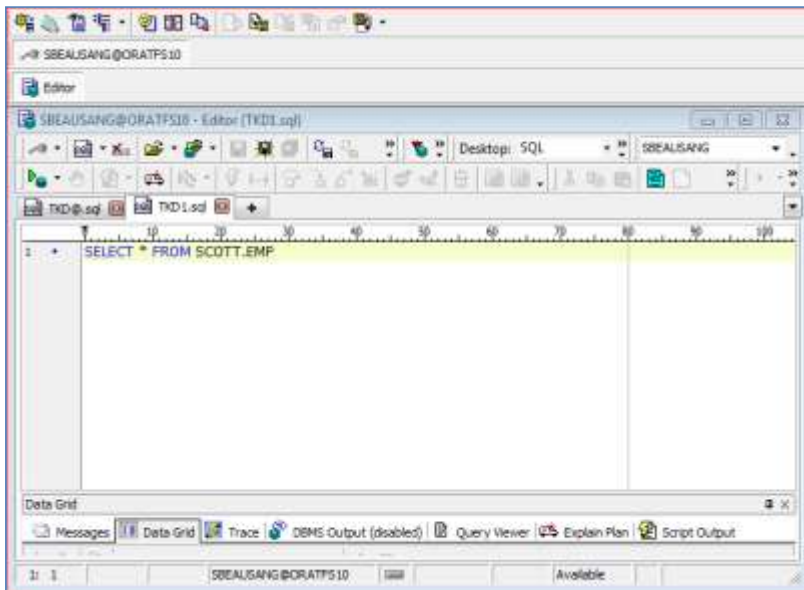
You can easily tell the Team Coding status of objects in the Editor by viewing the status text in the status bar. The Team Coding status's are:

- 'Uncontrolled' – Team Coding does not control the object in the Editor.
- 'Available' – The object is controlled by Team Coding and available for check out.
- 'Checked Out' – The object is checked out by the current user, and locked for editing by other users.
- 'Locked' – The object has been checked out by another user and is locked for editing.
- 'Frozen' – The object is 'Frozen' by Team Coding Admin. All edits are prohibited to all users.
- 'Disabled' - The object is disabled by Team Coding. This happens when objects are controlled by - Team Coding, but Team Coding is disabled. This is usually due to some kind of setup issues with Team Coding, typically the VCS is not installed and configured correctly.

**Comment [d1]:** Stephen, I don't understand the difference here.

Maybe LOCKED can mean NOT checked out, but locked anyway

1. Open the Editor to create a new file.



2. Save the file using the mask that you set up in Code Collections. For example TKD\_1.sql.  
Team Coding will recognize that the file is controlled. The file is now marked as 'Read Only' in the editor. The 'Check out' button becomes enabled in the Team Coding toolbar. The status bar shows the Team Coding status. In this case the status bar shows 'Available'.
3. Check out the current object/file using the check out button on the Team Coding toolbar.
4. If you did not save the file in the TFS working directory, you will be prompted to do so. Select **OK**. The 'Check in' button becomes enabled in the Team Coding Toolbar. You can now edit the file to make some changes.



5. Make some changes to the file in the editor and save.
6. Click the 'Check in' button to check in the modified file as a new revision to the TFS project. You can also view the file entry in the Team Coding Viewer and the Team Coding VCS Browser.

### Team Coding Viewer

The Team Coding Viewer is only available with Team Coding enabled.

From the Toad menu select **Utilities – Team Coding – Team Coding Viewer**.

The Team Coding Viewer lets you view and work with any objects or files that have been added to the Team Coding table. Typically, this includes objects that have previously been checked out for edit, or have been added using 'Create new revision' from Code Collections.

**Note:** It is possible that controlled objects are not in this list if they are controlled by Code Collections but not added to the Team Coding table yet.

The screenshot shows the Toad Team Coding Viewer interface. The main window displays a table of database objects. A context menu is open over the 'SEND\_EMAIL' object, showing various actions available to the user.

File/Object Information							
Type	Owner	Name	Status	Time Stamp	Comment	Oracle User	OS User
p()	TKD_SCH...	EMAIL2	Available	4/25/2012 6...	Exported f...	SBEAUSANG	PROD\SBEAUSAN
p()	TKD_SCH...	ADD_CREDIT	Check...	4/25/2012 6...		SBEAUSANG	PROD\SBEAUSAN
p()	TKD_SCH...	SEND_EMAIL	Available	4/25/2012 6...	Exported f...	SBEAUSANG	PROD\SBEAUSAN
Trigger	TKD_SCH...	ENTER_STUDENT	Get Latest Version			AUSANG	PROD\SBEAUSAN
Trigger	TKD_SCH...	PICTURE_NOTIFY	Check In			AUSANG	PROD\SBEAUSAN
Trigger	TKD_SCH...	REMOVE_STUDENT	Check Out			AUSANG	PROD\SBEAUSAN
Trigger	TKD_SCH...	UPDATE_BELT	Undo Check Out			AUSANG	PROD\SBEAUSAN
Trigger	TKD_SCH...	WELCOME_STUDENT	Break Team Coding Lock			AUSANG	PROD\SBEAUSAN
Type	TKD_SCH...	SCHOOL	Freeze			AUSANG	PROD\SBEAUSAN
Type	TKD_SCH...	STUDENT_LIST	UnFreeze			AUSANG	PROD\SBEAUSAN
Type...	TKD_SCH...	SCHOOL	Open			AUSANG	PROD\SBEAUSAN
View	TKD_SCH...	SCHOOLVIEW	Delete			AUSANG	PROD\SBEAUSAN
View	TKD_SCH...	SPARRING_STUDENTS	Refresh	F5		AUSANG	PROD\SBEAUSAN
View	TKD_SCH...	TKDV_SCHEDULE	View Details			AUSANG	PROD\SBEAUSAN
View	TKD_SCH...	TKDV_SCORE_STATS	Run Code Analysis			AUSANG	PROD\SBEAUSAN
View	TKD_SCH...	TKDV_STUDENT_CR...	Code Analysis Details...			AUSANG	PROD\SBEAUSAN
View	TKD_SCH...	TKDV_STUDENT_FO...	Send to Code Analysis			AUSANG	PROD\SBEAUSAN
Func...	TKD_SCH...	SELL_ITEM				AUSANG	PROD\SBEAUSAN
Func...	TKD_SCH...	SPARRING				AUSANG	PROD\SBEAUSAN
Func...	TKD_SCH...	STUDENT_COUNT				AUSANG	PROD\SBEAUSAN

From the Toobar at the top of the window, or by right-clicking on a record, the following options are available (subject to the status of the object in the database or the users permissions):

**Check in** – This will lock the object in the Team Coding table and enable the user to edit. A copy of the object source is checked out by TFS and downloaded to the working directory. The file name is a combination of the schema name, the object name, and the extension for that type of object. For example, in the display, the source file would have the name TKD\_SCHOOL.SEND\_EMAIL.PRC.

**Check out** - The reverse of Check in. The object is unlocked in the Team Coding table and available for other users to edit. Changes to the object are saved and updated as a revision in the TFS project.

**Undo Check out** – Unlocks and object, but does not update any changes.

**Break Team Coding Lock** – Unlocks another user's lock on an object (Team Coding Admin only).

**Freeze / Unfreeze** – Freeze and object for all users, and prevent any changes (Team Coding Admin only).

**Open** – Open the object in the default editor.

**Delete** – Delete the object record from the Team Coding Table. Note: this does not delete the actual object.

If you have Code Analysis integration you can also perform some Code Analysis functions from this window. For clarity, this is not covered here, but is covered in Toad help.



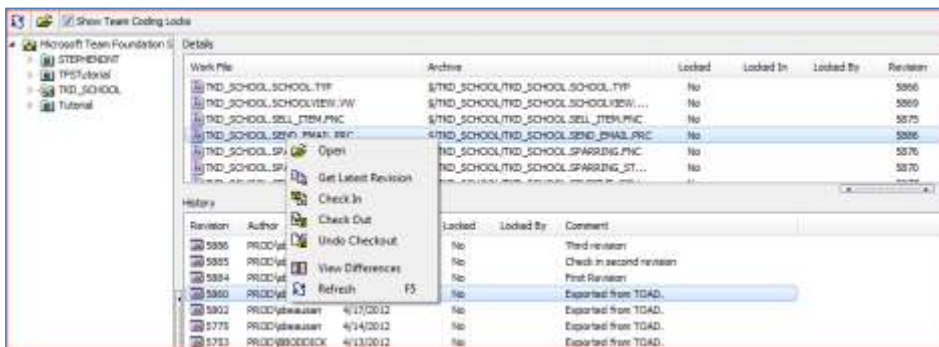
## Team Coding Source Control Browser

The Team Coding Source Control Browser provides an alternate view of objects controlled in Team Coding. This Source Control Browser allows you to browse the TFS projects from within Toad and to check in and check out Objects.

The VCS Browser has the advantage of showing *all* TFS projects and items. The disadvantage is that many of these items may not be associated with your Team Coding project. Objects are displayed as the file name that is used by the VCS. For example, SEND\_EMAIL is displayed as TKD\_SCHOOL.SEND\_EMAIL.PRC.

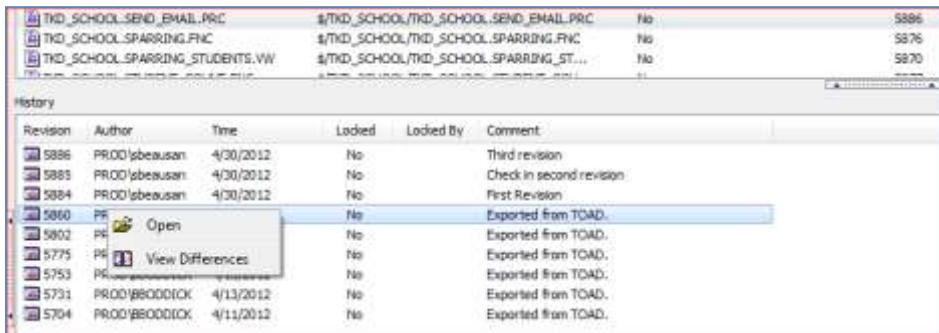
The Team Coding Source Control Browser is only available with Team Coding. VCS integration also offers a similar browser, which is independent of Team Coding.

To open the browser, select **Utilities – Team Coding – Team Coding VCS Browser**.



In addition to standard check in and check out functions, the VCS browser shows revision history, which you can use to view the different revisions of an object and compare contents with the current revision.

To do this, right-click the revision and click **Open** to view contents or compare differences between revisions.



Team Coding also has a 'Check in All Team Coding Objects' function, which is triggered automatically when you end a session, or can be called from the Team Coding Menu or Toolbar.



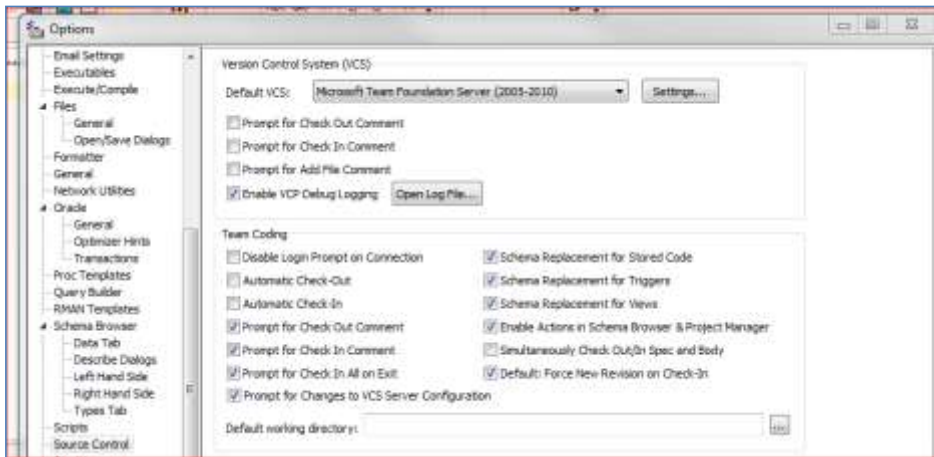
### Section 3 - Using Team Foundation Server with Version Control System (VCS) Integration

Toad's VCS Integration gives you the ability to use a third-party VCS to manage source files. It is independent of Team Coding and does not require any Server Side Objects. You use VCS Integration when you wish to control source files that are not database dependent.

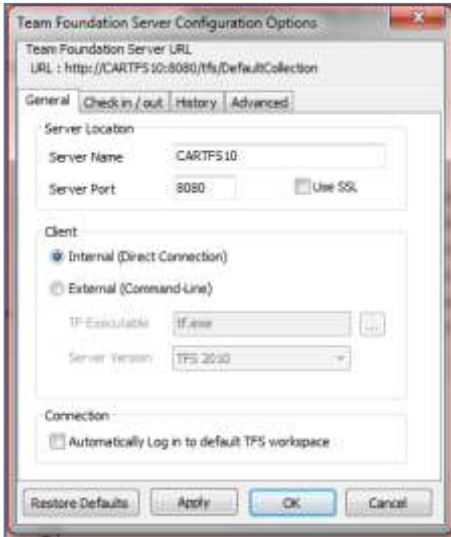
VCS Integration can be used in conjunction with Team Coding, but this is not generally recommended. If you do use VCS Integration in this manner, Toad imposes a caveat. VCS Integration is disabled if the user is logged on to a database that is controlled by Team Coding and has at least one file type Code Collection item. In this case, the Team Coding rules are enforced and VCS Integration is ignored.

This section will cover how to set up and use VCS Integration with Team Foundation Server.

1. Set up a Team Foundation Server (TFS) Project using Microsoft Visual Studio. Please see Section 1 for details.
2. In Toad, open Options – Source Control



3. Select Microsoft Team Foundation Server (2005-2010) from the Default VCS dropdown.
4. Click the **Settings..** button to configure the TFS client. This is covered in detail in Section 2. The most important thing to remember is that Source Control configures the VCS in Options – Source Control and Team Coding configures the VCS from the Team Coding Configuration window.

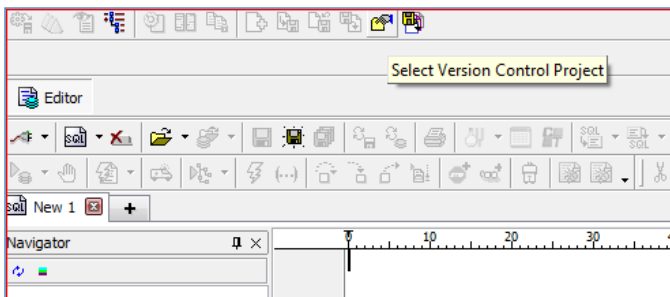


VCS Integration is now configured and ready to use.

### Using Version Control System (VCS) Integration

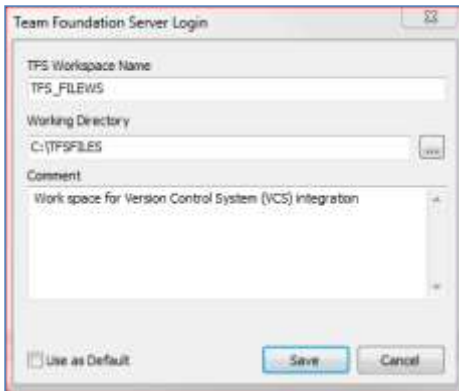
Toad's VCS Integration allows you to check in / check out source files from the Editor or the Project Manager. This section shows some of the features of VCS integration using the Editor. You can use the Team Coding toolbar to perform functions or right-click in the editor and select the 'Source Control' sub menu.

1. Open the Editor.
2. From the toolbar, click the 'Select Version Control Project' button. This will log on to a source control project.

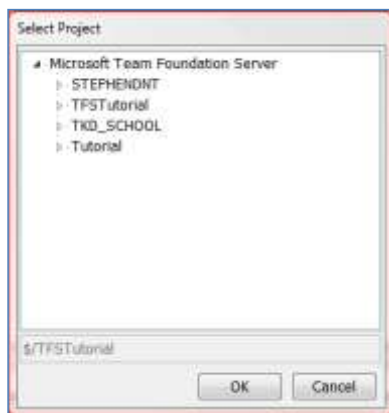


3. The Team Foundation Server Login window will open. You can select a workspace or create a new workspace here.

**Note:** If you are also using Team Coding with TFS, it might be a good idea to use a different workspace for VCS integration. See Section 2 for more details on workspaces.



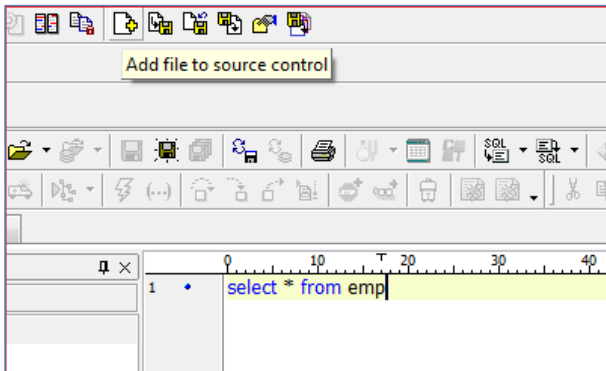
4. Select the project from the Select Project window.



The Source Control buttons are now enabled in the toolbar.

If the Working Directory does not exist, Toad will prompt you to create it. This will be the directory where your source files are saved.

5. Type in the editor to create a new file and save using 'Save as'.
6. To add the file to source control, click the 'Add file to source control' button. If the file does not already exist in the VCS Project, you will see a success message in the output window.



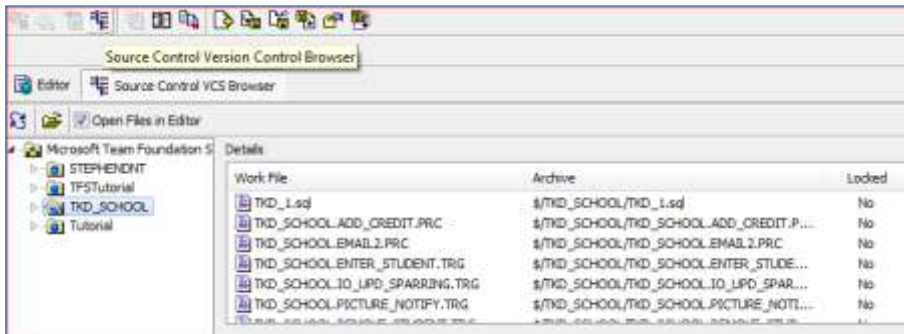
### Edit a VCS-controlled File

1. Open the file in the Editor.
2. Click the 'Check Out current Object/File' button in the Toolbar. If the file is controlled in the VCS you will see a success message in the output window, otherwise you will see an error message.
3. You can now make changes to the file. When you are finished, save the file, and click 'Check in' to check in your changes.

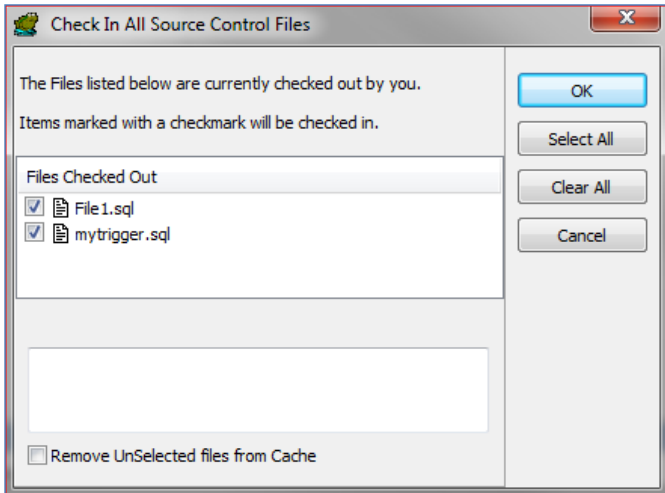
VCS Integration also has 'Get Latest', 'Undo Checkout' and 'Compare Contents' functions.

Like Team Coding, VCS Integration also has a Source Control Browser which allows you browse source control projects, perform check out functions, and to open files in the Editor.

To use this function select the 'Source Control Version Control Browser' from the Toolbar.



VCS Integration also has a 'Check in All Source Control Files' function on the Toolbar. This will display all of the files that you have checked out and allow you to check them in.



For more function-specific instructions and product-update news, please visit [ToadWorld.com](http://ToadWorld.com).