

*Rational DOORS Microsoft Team
Foundation Server Add On
Installation and Administration Guide
Release 3.0.1*

Before using this information, be sure to read the general information under the "Notices" chapter on page 41.

This edition applies to **Rational DOORS Microsoft Team Foundation Server Add On, VERSION 3.0.1**, and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this manual

Welcome to IBM[®] Rational[®] DOORS[®] Microsoft Team Foundation Server Add On.

Rational DOORS Microsoft Team Foundation Server Add On allows you to transfer task information from the Team Foundation Server to the Rational DOORS repository. The application consists of additions to both Microsoft Visual Studio with Team Explorer and Rational DOORS.

The add on relies on a combination of embedded controls and new item types. To set these up, you need to add new type information to the Team Foundation Server database forms and type definitions.

The following is a quick synopsis of the steps required to configure and install.

1. How to install the add on on a client machine.
2. Download and install PowerTool 2012 so you will be able to use the Process Template Editor to perform steps 5 and 6.
3. Register the DoorsProxy definition in the TFS database.
4. For each TFS Project add the DOORS Link Panel control to the ‘Task’ workitem definition.
5. For each TFS Project add the DOORS TFS Scheduling Panel control to the ‘Task’ workitem definition.
6. For each TFS Project define a “Doors” project area and “Doors/Deleted” project area.

Each step is covered in more detail later in this document. Methods to configure multiple projects are also discussed.

Typographical conventions

The following typographical conventions are used in this manual:

Typeface or Symbol	Meaning
Bold	Important items, and items that you can select, including buttons and menus. For example: Click Yes to continue.
Courier	Commands, files, and directories; computer output. For example: Edit your <code>.properties</code> file.

Typeface or Symbol	Meaning
>	A menu choice. For example: Click File > Open . This means click the File menu, then click the Open command from it.

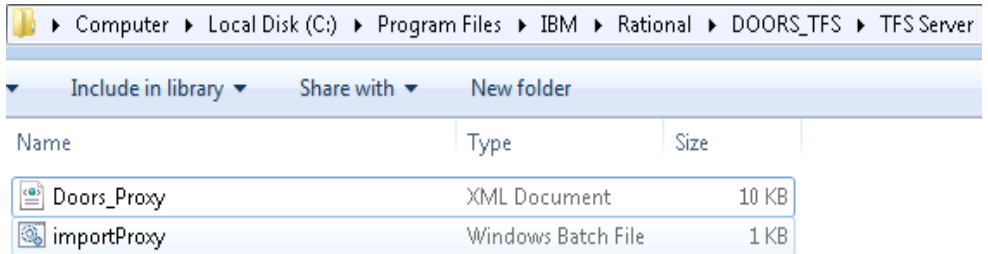
Related documentation

The following table describes where to find information in the documentation set:

For information on	See
How to use Rational DOORS	The Rational DOORS Information Center
What's new in Rational DOORS Microsoft Team Foundation Server Add On	The download document

1 **Configuring TFS Server and Projects**

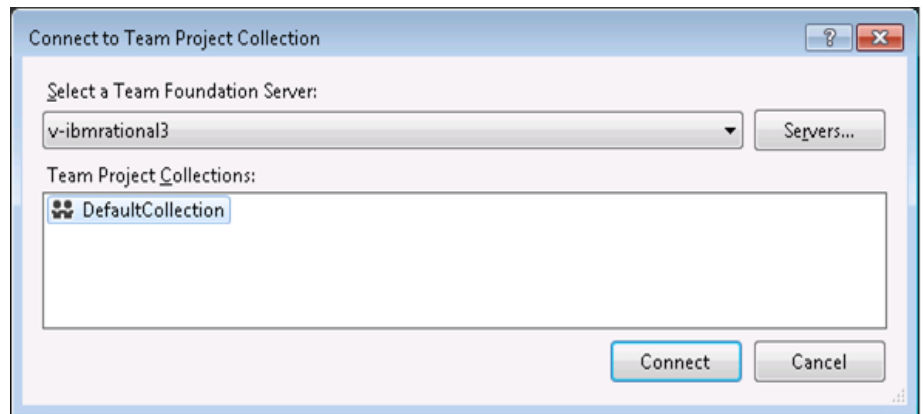
Before getting started you should locate the installed files on your client machine. Normally these files can be located in the following directory:



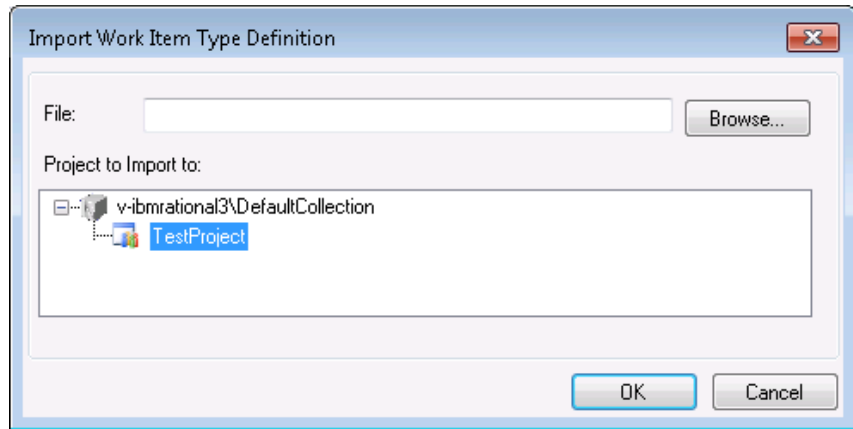
Registering the DoorsProxy definition

Using Process Editor Tool you can configure the server XML imports using the Microsoft Provided Power Tool 2012 – Process Template Editor.

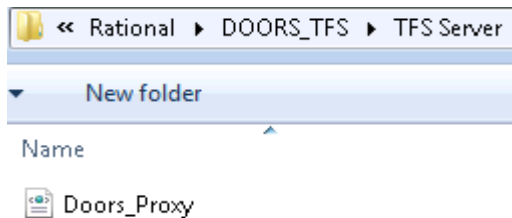
1. First download and install Power Tool 2012.
2. Start Visual Studio from one of the installed client machines. Click **Process Editor > Work Item Types > Import WIT**.
3. Login into the server using the **Servers** button.



4. Select **Collection** and choose the project from the list.

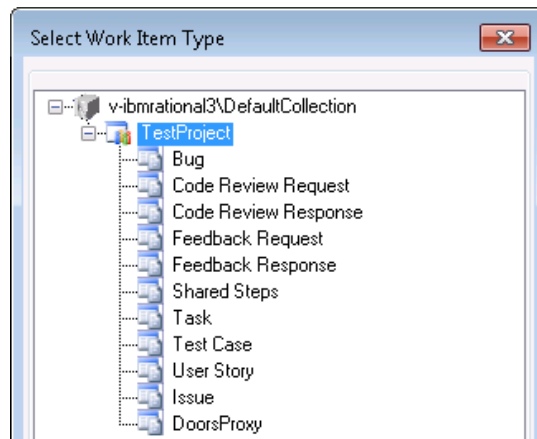


5. Use the Browser to select the Doors_Proxy.xml file found in the TFS Server folder installed on each client machine.



6. Select **OK** to import the file into the selected project. To verify if this operation completed successfully, select the same Process Editor option again and instead of “Import WIT” select “Open WIT From Server” and

select the project and expand. The DoorsProxy project is one of the WorkItem types.



Configuring multiple projects

You can use the provided “importProxy.bat” file to import the same xml file as in the previous procedure.

1. Edit the importProxy.bat file and change the parameters as follows:
 - Update <Collection Name> to your collection i.e. /collection:http://yourTFSServerName:8080/tfs/defaultcollection
 - Update <Project Name> to you project name i.e. /project:TestProject
2. Change the Doors_Proxy.xml path if you have installed Integration on other than default installation path.

The final form should look something like this:

```
" C:\Program Files\Microsoft Visual Studio 11.0\Common7\IDE
\witadmin.exe" importwitd /collection: http://
yourTFSServerName:8080/tfs/defaultcollection /p:TestProject /
f:"C:\Program Files\IBM\Rational\DOORS_TFS\TFS
Server\Doors_Proxy.xml" >message.txt
```

3. Run the bat file. Messages will be saved in the message.txt file.
4. You can repeat this process changing the Collection Name and Project Name each time or repeat the command in bat file changing the Collection Name and Project Name on each line.

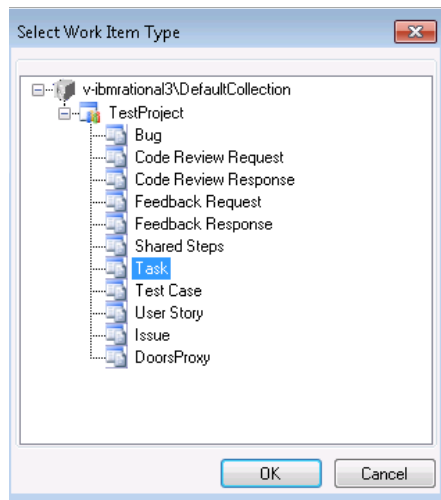
Add Embedded Integration Controls

To make the new DOORS controls to display on workitem forms you must modify the definition for each workitem type in your project.

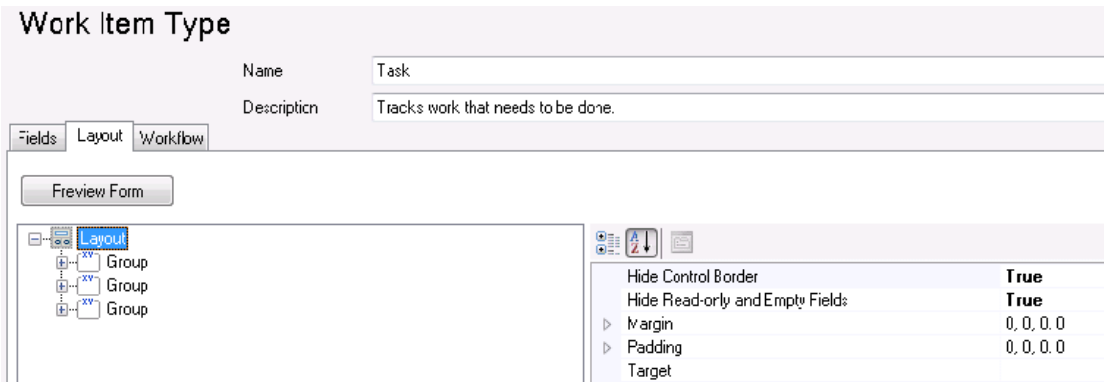
Add DOORS Link Tab Control

To make the DOORS Link Tab Control display on WorkItem forms, modify the definition for each workitem type in your project.

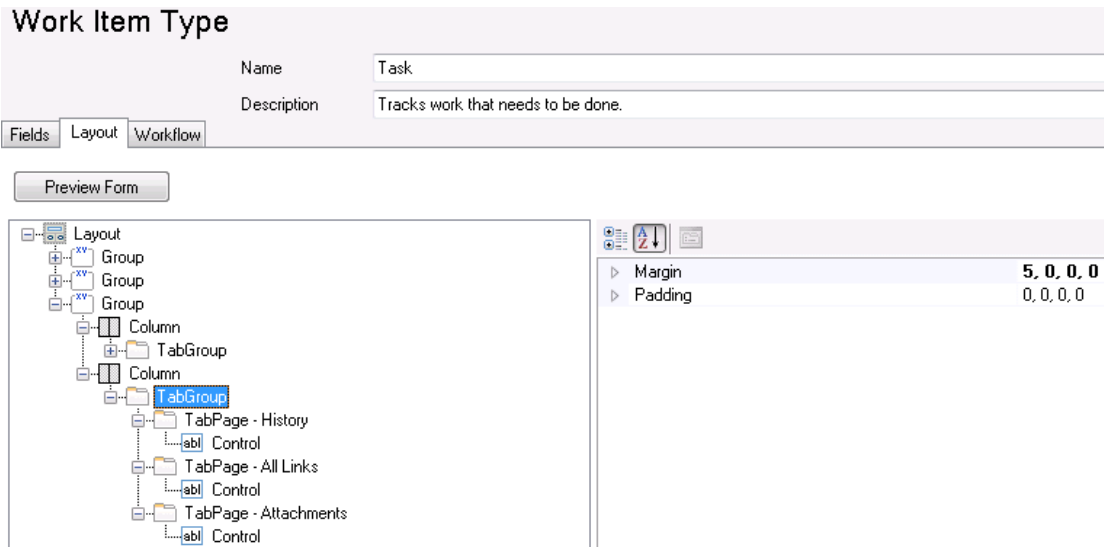
1. On the server, click **Process Editor > Work Item Types > Open WIT from File**.
2. Select and expand the TFS Project you want to configure. A list of all of the available Work Item Types is displayed.



3. Select the Task Work Item Type, and then select the **Layout** tab to display the form layout editor.



4. Expand the Third 'Group' section and select the first 'TabGroup' of the same group.



5. Right-click **TabGroup** > New Tab Page.

6. Name the new page “DOORS Link” and move it to where you want it to appear relative to the existing tab pages.

Work Item Type

Name	Task
Description	Tracks work that needs to be done.

Fields | **Layout** | Workflow

Preview Form

Label	DOORS Links
Margin	0, 0, 0, 0
Padding	0, 0, 0, 0

7. Under the **New DOORS Link** tab page add a New Control, set the **Label** to **DOORS Links**, and set **Type** to **WitTabControl**.

Fields | **Layout** | Workflow

Preview Form

Attributes	String[] Array
Control Font Size	
Control Settings	CustomControlOptionsType
Dock	None
Empty Text	
Field Name	
Label	DOORS Links
Label Font Size	
Label Hyperlink	
Label Position	Left
Margin	0, 0, 0, 0
Minimum Size	0, 0
Name	
Padding	0, 0, 0, 0
Read Only	False
Type	WitTabControl

8. Click **Save**.

Add DOORS TFS Scheduling Tab Control:

To make the DOORS TFS Scheduling Tab Control display on WorkItem forms, modify the definition for each workitem type in your project.

1. Follow step 1 to step 5 in “Add DOORS Link Tab Control” on page 6.
2. Name the new page “DOORS TFS Scheduling” and move it to where you want it to appear relative to the existing tab pages.
3. Under the **New DOORS TFS Scheduling** tab page add a New Control, set the **Label** to **DOORS TFS Scheduling**, and set **Type** to **SchedulerControl**.
4. Click **Save**.

This completes the configuration of the Task Work Item Type. If you want to have the DOORS TFS integration controls display on other work item forms (Requirement, Issue, Bug, Change Request etc) repeat the process for each workitem type.

Create New Area Paths in Projects

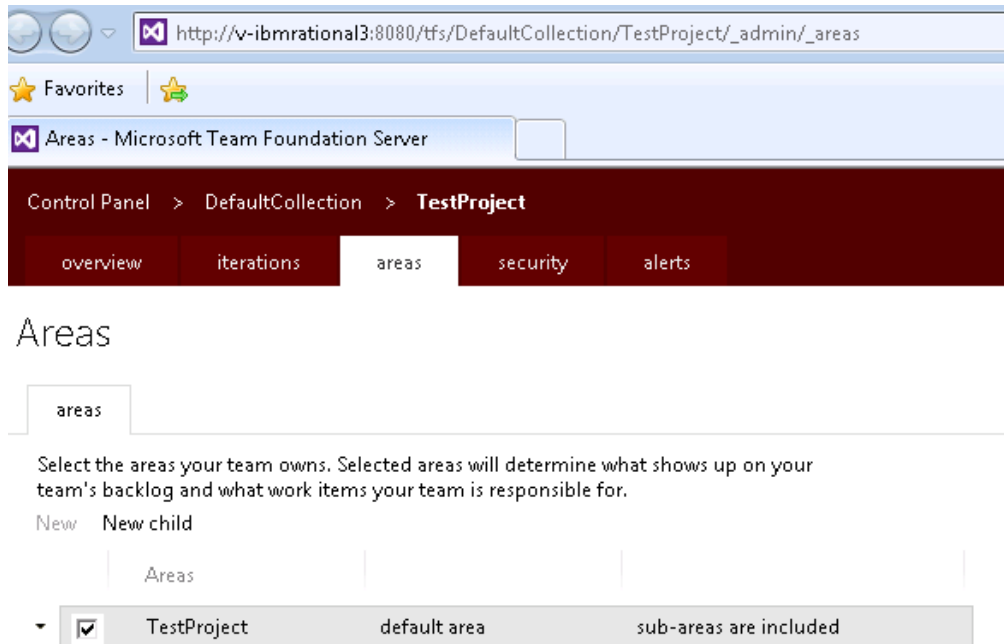
Area Paths are necessary to manage the new Doors Proxy items used to store imported DOORS Data. The DoorsProxy type itself can be used to filter out these items from user’s queries. The Doors area path can be used to further limit user access to this data. Finally when a Doors Link is deleted using the integration - the Deleted Proxy item is moved to the Deleted area path. Due to the nature of Team System and Sarbanes Oxley compliance workItems are never physically removed from the database, a work around is to move them to an area path with limited access.

Open the TFS Project as a Project Admin user and create two new area paths “Doors” and “Doors/Deleted”.

To create new area paths:

1. Open the TFS Project as a Project Admin, and click the **Home** icon.
The Team Explorer window is displayed.
2. Click **Settings** and then **Work Item Areas**.

A page opens in your default browser.

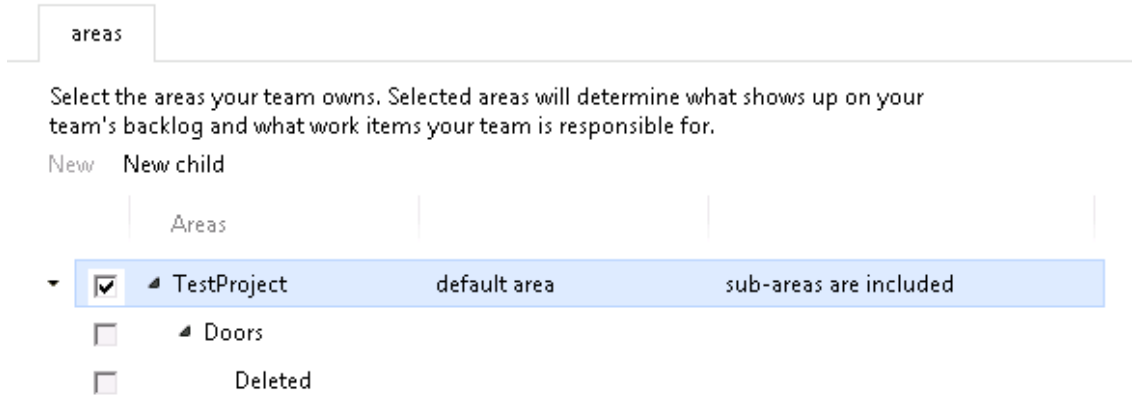


Note If the browser does not open, follow the procedure in “Workaround for Creating ‘Area Path’” on page 11.

3. Click **New Child**, type **Doors** in **Area Name**, and click **Save and Close**.
4. Select the Doors area that you have just created, right-click **New Child**, type **Deleted** in **Area Name**, and click **Save and Close**.

The area hierarchy now looks like this:

Areas



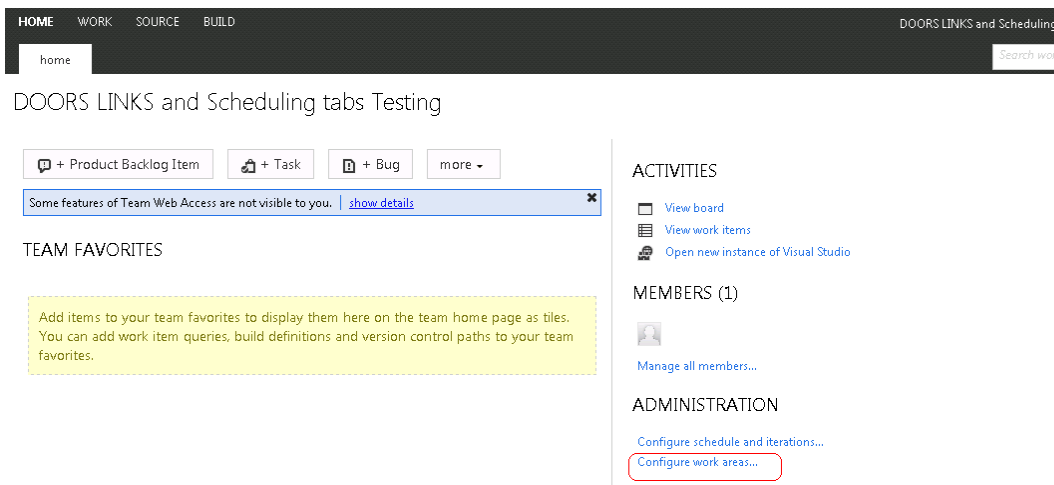
This completes the configuration for path areas for a Team Project. Repeat these steps for each project that will use the integration.

Workaround for Creating 'Area Path'

If you click **Work Item Areas** and the browser does not open, use the following steps to create the Area Path:

1. Open the browser.
2. Enter the URL of the Team Foundation Server with collection name. If necessary, enter security credentials.
3. In the Visual Studio web site that is displayed, click **Browse All**. A list of the projects in the collection are displayed.

4. Select the project where you want to create the Area Path and click **Navigate**.



5. Click **Configure work area**.
6. Restart at step 3 on page 10.

2 **Client Installation of DOORS TFS 3.0.1 Integration on Windows Platform**

This chapter describes how to install and set up DOORS TFS on a machine that does not have an earlier version of the integration installed.

Prerequisites

- DOORS 9.3 or higher client installed
- Full Visual Studio 2012 with Team Explorer 2012 Installed
- Team Foundation Server 2012 installed
- Power Tool 2012
- At installation time only:
 - Access to create/write in folder "\Documents and Settings\All Users\Application Data\Microsoft\MSEnvShared\Addins or access to create folder if it does not already exist. This folder is located on the same drive as your Visual Studio installation.
 - Access to create/write in folder: "C:\Documents and Settings\All Users\Application Data\Microsoft\Team Foundation\Work Item Tracking\Custom Controls\11.0" or access to create folder if it does not already exist. This folder is located on the same drive as your Visual Studio installation.
 - Access to create/write in folder "Program Files/Rational /". This folder is on the same drive as your DOORS installation.

Note Use the Visual Studio 2012 Full Version that includes Team Explorer 2012 whereas Explicit Installation of Team Explorer 2012 might not work. Install Visual Studio 2012 from scratch on clean machine. Do not upgrade from Visual Studio 2010 to Visual Studio 2012.

Upgrading DOORS TFS

To upgrade, please use the following order:

1. Uninstall **DOORS TFS Addin 3.0**.
2. Uninstall **Power Tool 2010**.

3. Uninstall **VS2010**.
4. Install **VS 2012**.
5. Install **Power Tool 2012**.
6. Install **DOORS TFS Addin 3.0.1**.
7. Restart **OS**.

After performing above procedure, use one of the following options to launch Visual studio for first time.

- Open the Visual Studio Command prompt: **Start > All Programs > Microsoft Visual Studio 2012 > Visual Studio Tools > VS2012 X86 Native tools command prompt**, and run the following command:
devenv/ResetAddin
- Run TFS_DOORS_Migration.exe from following default path
C:\Program Files\IBM\Rational\DOORS_TFS\Migration

After completing the upgrade, open Visual Studio 2012.

Note If you are upgrading from TFS server 2010 to 2012, it's mandatory to run TFS_DOORS_Migration.exe before using any functionality of DOORS TFS V3.0.1

Installing the DOORS TFS Integration:

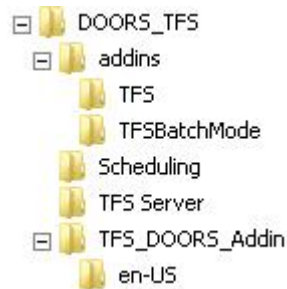
1. Execute the 'DOORS TFS' installer
2. Select the “C:/Program Files/IBM/Rational/” target directory where DOORS is currently installed. i.e. “C:/Program Files/IBM/”.
3. Proceed with installation wizard.

Post Installation Check List

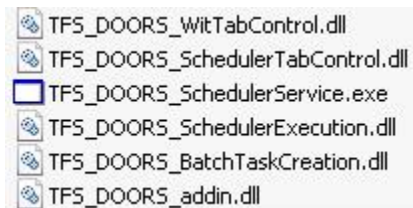
If the integration fails to show up on the Studio Tools menu or it does not execute, review the below check list to possibly identify installer errors that could be the cause of the problem.

- Verify the “TFS_DOORS_addin.Addin” file was added to the directory: “C:\Documents and Settings\All Users\Application Data\Microsoft\MSEnvShared\Addins”
- Verify the folder ‘DOORS_TFS’ was added to the directory: “C:\Program Files\IBM\Rational\”

- Verify the file ‘TFSDOORSStartup.inc’ was added to the DOORS directory:
\\Program Files\Rational\DOORS\ [DOORS
Version]\lib\dxl\startupFiles
- Verify the folder ‘TFS’ was added to the directory: C:\Program
Files\Rational\IBM\DOORS_TFS\addins\
- Verify file ‘TFS_DOORS_addin.AddIn’ exists: “C:\Documents and
Settings\All Users\Application Data\Microsoft\MSEnvShared\Addins\”
- Verify file ‘WitTabControl.wicc’ exists: “C:\Documents and Settings\All
Users\Application Data\Microsoft\Team Foundation\Work Item
Tracking\Custom Controls\11.0\”
- Verify file ‘SchedulerContol.wicc’ exists: “C:\Documents and Settings\All
Users\Application Data\Microsoft\Team Foundation\Work Item
Tracking\Custom Controls\11.0\”
- Verify that these folders are created after the installation:



- Below are the more important files to verify – many other dependency
library files are included in the install. Verify files exist: “C:\Program
Files\IBM\Rational\DOORS_TFS\TFS_DOORS_Addin.



- Verify the below files are created after the install. Location Folder: “C:\Program Files\IBM\Rational\DOORS_TFS\addins\TFS”.

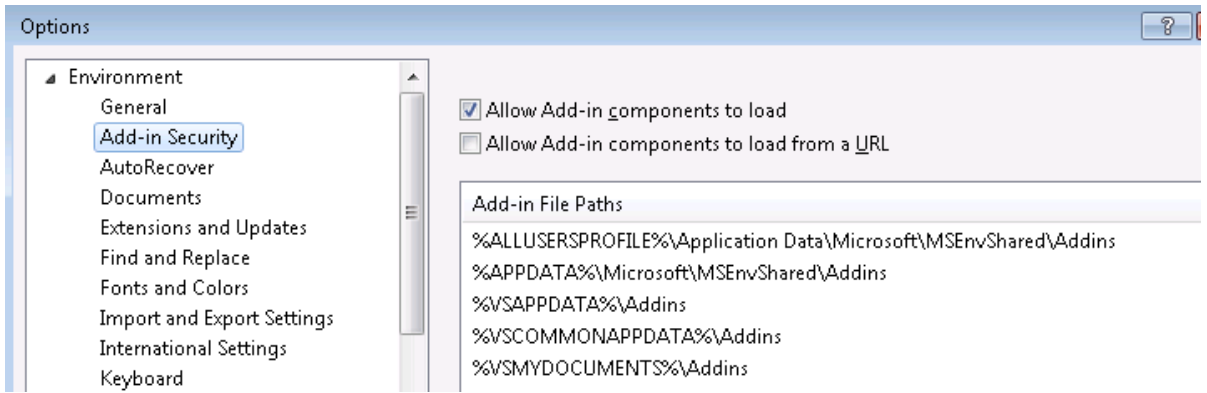
Includes	3/22/2013 12:50 PM	File folder	
About.dxl	1/24/2013 12:24 PM	DXL File	1 KB
ClearTFSSuspectLinkforallObjects.dxl	1/24/2013 12:24 PM	DXL File	1 KB
ClearTFSSuspectLinkforCurrentObject.dxl	1/24/2013 12:24 PM	DXL File	1 KB
ConfigureCurrentModule.dxl	1/24/2013 12:24 PM	DXL File	1 KB
CreateConfigurationModule.dxl	1/24/2013 12:24 PM	DXL File	1 KB
DragDropTrigger.dxl	1/24/2013 12:24 PM	DXL File	1 KB
GenerateTFSTasks.dxl	1/24/2013 12:24 PM	DXL File	1 KB
TFS	1/24/2013 12:24 PM	Help file	1 KB
TFS.idx	1/24/2013 12:24 PM	IDX File	1 KB

- Verify the below files are created after the install. Location Folder: “C:\Program Files\IBM\Rational\DOORS_TFS\addins\TFS\Includes”

About	1/24/2013 12:24 PM	Include File	2 KB
ClearTFSSuspectLinkforallObjects	1/24/2013 12:24 PM	Include File	2 KB
ClearTFSSuspectLinkforCurrentObject	1/24/2013 12:24 PM	Include File	2 KB
ConfigureCurrentModule	1/24/2013 12:24 PM	Include File	4 KB
CreateConfigurationModule	1/24/2013 12:24 PM	Include File	6 KB
DragDropTrigger	1/24/2013 12:24 PM	Include File	2 KB
GenerateTFSTasks	1/24/2013 12:24 PM	Include File	6 KB
TFSDOORSStartup	1/24/2013 12:24 PM	Include File	46 KB

- Start Visual Studio and verify the following:
 - Go to the Tools menu and select ‘options...’
 - Check the “show All Settings” option in the bottom left of the window.
 - Select ‘Add-in/Macros Security option as shown in the figure below.
 - Verify you have an entry
%ALLUSERSPROFILE%\ApplicationData\Microsoft\MSEnvShared
\Addins

- e. If not - manually add it to the Add-in File Paths and then restart Visual Studio



If the integration still fails to show in the forms or from the Tools menu, please contact support.

3

DOORS Configuration Module

After client installation and TFS Server and Project configuration is completed, the integration can operate normally without further configuration of the DOORS environment. If the integration is executed and links are created the default configuration is used and the initiating operation continues normally.

To specify other default settings or define additional Attributes to be imported and exported, a TFS DOORS CONFIGURATION module is required. Using the configuration module you can specify which link type to use when creating links between DOORS and TFS items, define and map what data to import and store in both applications, define which DOORS attributes to retrieve for viewing on the “Real Time Data” display found on Edit Link Dialog.

The DOORS configuration module settings will apply to all DOORS modules with in the same folder and sub folders, similar to the DOORS inheritance method for access rights. This allows the ability to group common types of DOORS modules into a folder and have unique TFS integration settings for that group. At run time the integration searches first in the current Folder/Project for a Configuration module, then searches through all ancestor folders/Projects stopping at the first one it finds. If one is not found, the initiating operation continues in the integration, but a warning will be provided to the user indicating that no DOORS configuration could be found.

The configuration module is composed of 3 Sections:

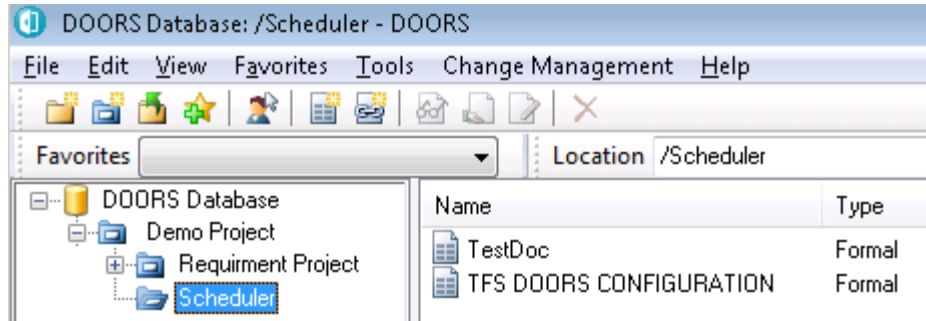
- 1. TFS To DOORS:** This section is used to map which TFS workitem attributes to import and store on the DOORS Object’s External Link attribute.
- 2. DOORS To TFS:** This section is used to map additional DOORS Object attributes to export and store in TFS using the DoorsProxy item. Each workitem link to DOORS creates a new DoorsProxy item. This item is similar to the ‘DOORS Surrogate’ object sometimes used in older DOORS integrations.
- 3. TFS Link Display Info:** This section allows the ability to easily define additional DOORS Object attributes to be accessed in ‘Real Time’ when a TFS user is viewing a workitem to DOORS link using the new DOORS Link Editor dialog. These attributes are not stored in TFS and can only be scene from the Edit Link Editor. When viewing, the Edit Link Editor attempts to access DOORS and retrieve the current attribute data and display it using a dynamic grid list.

Create Configuration Module

To generate a configuration module:

1. Open any DOORS module in the current folder where you want the configuration module to apply.
2. From the module tool bar, click **TFS > Create Configuration Module**.

A configuration module is created and opened for edit.



Note To Allow multiple Configurations in same DOORS project. The current design allows you to place this module in the same project as the requirement modules that the mappings apply too. You may also create multiple configuration modules. These may be placed in the DOORS local container in the nearest “ancestor” container. The tool will then search backwards through all ancestry containers until the first Configuration module is found.

Adding Attribute and Field mappings

TFS To DOORS

Section 1 of the configuration module -TFS To DOORS contains attribute mappings for the data you want to import from a TFS work item and store in

DOORS. This data will be stored on the External Link of the DOORS Object as a LINK attribute.

ID	DOORS Attribute	Maps To	TFS Attribute	TFS Link Display Info Label
TFS1	1 TFS To DOORS Use this section (1..x) to define which Work Item Fields to copy from TFS and Store in DOORS	<---		
TFS2	1.1	TFS Description	<---	Title
TFS3	1.2	TFS WorkItem ID	<---	ID
TFS4	1.3	TFS WorkItem Revision	<---	Rev
TFS14	1.4	TFS state	<---	State

1. Open the configuration module in EDIT mode.
2. Select the Object “TFS To DOORS” and create a new child object below.
3. Select the new object just created, and click in the “DOORS Attribute” column. Enter in the name of the DOORS attribute you want to use to store the imported data. This attribute will be created in the DOORS module when a link to a TFS workitem is created, Synchronize is executed, or if the **TFS > Configure Module For Synch** option is executed.

For ease of use, prefix the name with “TFS” as a mandated naming standard for Rational DOORS integrations. This mandate is to insure unique attribute names that will not conflict with other integrations. The attributes “Description” and “Title” are reserved names and apply to the External link “Description” and “Name” system attributes

4. Click in the TFS Attribute column. Enter in the name of the TFS workItem attribute to be imported. A list of work item attributes available can be viewed by using the Visual Studio TFS query results dialog Column setup menu option after running any TFS query.

DOORS To TFS

Section 2 of the TFS DOORS CONFIGURATION module can be used to define additional DOORS Object Attribute data (in addition to the Default attributes) to be exported to TFS and stored in a TFS DoorsProxy workitem. This provides the same data per link capability as External Link Attributes in DOORS.

Caution Simply adding in new attribute mapping data as done in Section 1 WILL NOT cause the integration to import and store attributes as a new attribute of the DoorsProxy work item. As stated in section 1, the TFS attribute data

must be an existing attribute of the TFS workitem. Integration uses a NEW workitem type (DoorsProxy) to store imported data. The DoorsProxy type definition must be modified to define attributes/fields to store the NEW attributes you wish to import. (See registering DoorsProxy definition for more information).

The screenshot shows a software application window titled "TFS DOORS CONFIGURATION" with a menu bar (File, Edit, View, Insert, Link, Analysis, Table, Tools, Discussions, User, TFS, Change Management, Help) and a toolbar. Below the toolbar is a "View" section with "Main" selected. The main area contains a table with the following data:

ID	DOORS Attribute	Maps To	TFS Attribute	TFS Link Display Info Label
TFSS	2 DOORS To TFS Use this section (2.x) to define which DOORS Object attributes to copy from DOORS and Store in TFS. NOTE: This only Applies to Workitem links which are of type DOORS Link. DOORS Link - links have a standard set of attributes and are not configurable. Additional attributes can be mapped using the same instructions as in Section ONE (1 TFS To DOORS) *** Other link types (Not DOORS Link Type) if used only supports ONE (1) link attribute 'Comment'	---		
TFSS	2.1	Object Heading	Comment	
TFSS	2.2	Object Text	Description	

A standard Set of Attribute data is always imported into TFS from DOORS. These standard attributes are:

- Object URL:
- Module Name
- Object ID
- Object Text
- Object Short Text
- Last Modified On
- Last Modified By

They are stored using a new workitem type called 'DoorsProxy' which is created for each workitem to DOORS link.

The standard attributes are mapped as seen below:

The screenshot shows a web browser window with the following content:

- Browser tabs: DoorsProxy 3, AllTask [Results]*, Start Page
- Browser address bar: doors://v-ibm52:36677/?version=2&prodID=0&urn=urn:telelogic::1-5062b3db673434a8-O-17-000004a0
- Page title: DoorsProxy 3
- Navigation bar: Save Work Item, Refresh, Back, Forward, Home, Print
- Table of attributes:

URL:	doors://v-ibm52:36677/?version=2&prodID=0&urn=urn:telelogic::1-5062b3db673434a8-O-17-000004a0
Object Id:	17
Module:	first Module
Object Text:	Selected.....
Short Text:	
Last Modified By:	suraj
Last Modified On:	Monday, February 25, 2013
Last Run On:	2/25/2013 8:34:34 PM
Suspect Flag:	
Source ID:	2
Source URL:	vstfs:///WorkItemTracking/WorkItem/2
State:	Active
Reason:	New
Area Path:	TestProject
Last Run Status:	Success
Time Spent At DOORS:	99.95% (00:00:01:90)
Time Spent At TFS:	0.05% (00:00:00:00)
Field 1:	
Field 2:	
Field 3:	
Field 4:	

Configure Link Display Info

Section 3 - is used to define the DOORS Object Attributes you want to display in the Edit Link Editor: Real Time Report View tab panel.

The screenshot shows the 'TFS DOORS CONFIGURATION' application window. The main content area displays a table for configuring link display information. The table has five columns: ID, DOORS Attribute, Maps To, TFS Attribute, and TFS Link Display Info Label. The first row is a header for section 3, followed by rows 3.1 through 3.6, each mapping a DOORS attribute to a TFS attribute.

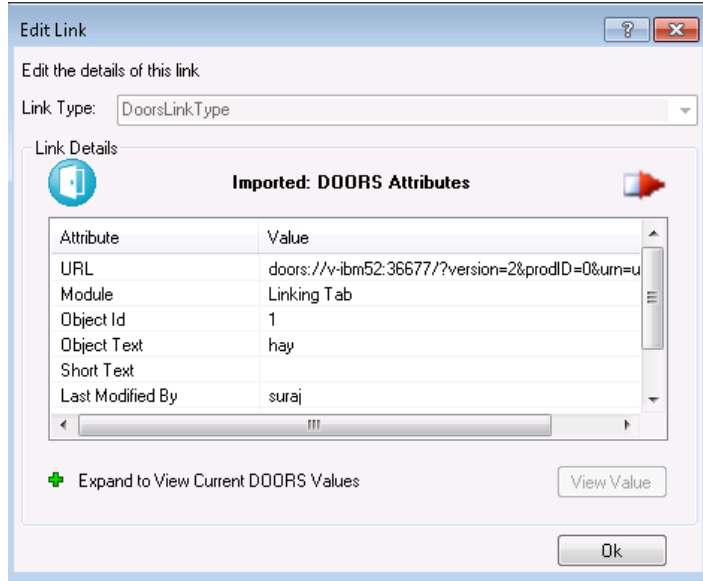
ID	DOORS Attribute	Maps To	TFS Attribute	TFS Link Display Info Label
TFS7	3 TFS Link Display Info Use this section (3.x) to define which DOORS Object attributes to retrieve (in real time) and display in the TFS DOORS addin window when a link item is selected. These attribute names are the same names you would see if creating a new DOORS column. To insert a blank line just create an empty (blank) object.			
TFS8	3.1	Module Name		Module:
TFS9	3.2	Object Identifier		Req ID:
TFS10	3.3			
TFS11	3.4	Object Heading and Object Text		
TFS12	3.5	Created On		Created:
TFS13	3.6	Last Modified On		Last Modified:

Edit Link dialog is accessible from DOORS Link tab control of workitem. You need to select a link and click on Edit button.

The screenshot shows the 'DOORS Links' dialog box. It features a table with columns for ID, Type, Title, Description, Comments, Last Run Status, Last Run On, Time Spent At DOO..., and Time Spent At TFS. The first row is selected. To the right of the table is a vertical stack of buttons: Navigate, Attributes, Synchronize, Delete, Cancel, Edit (circled in red), and Copy in New Task.

ID	Type	Title	Descripti...	Comme...	Last Run Status	Last Run On	Time Spent At DOO...	Time Spent At TFS
0	DoorsL...	ID: 10 ...	canhed111	vstfs:///...	Success	3/4/2013 6:44:41 PM	36.27% (00:00:06:22)	63.73% (00:00:10:93)

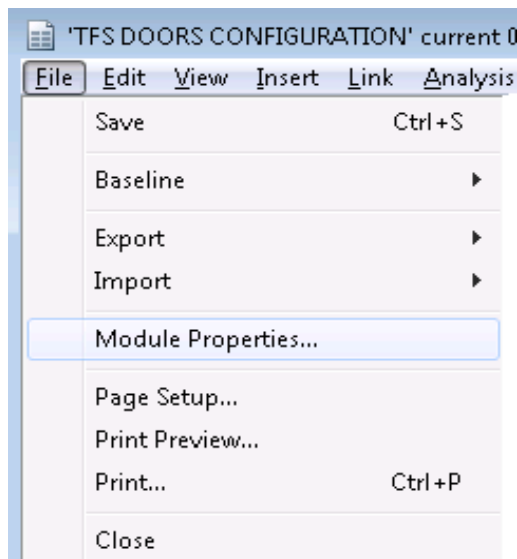
It will open the Edit Link dialog.



To display Object Heading and Object Text similar to the DOORS main column enter 'Object Heading and Object Text' as the 'DOORS Attribute' value in configuration module.

Default Work Item Link Type

The integration defaults to the new 'DoorsLinkType' when a new configuration module is created or if no configuration module is found.



TFS DOORS CONFIGURATION Properties - DOORS

General Access History Linksets Statistics Discussions Discussions Access List

Name: TFS DOORS CONFIGURATION

Description:

Type: Formal

URL: doors://v-ibm52:36677/?version=2&p

Name	Description	Value
Created By	System Attribute	suraj
Created On	System Attribute	Tuesday, February 26, 2013
Last Modified By	System Attribute	suraj
Last Modified On	System Attribute	Tuesday, February 26, 2013
Prefix	System Attribute	TFS
TFS Link Type Name		DoorsLinkType

Running without a TFS CONFIGURATION module

Integration can operate with no existing Configuration Module at DOORS side. When a module is linked or synched without configuration the software searches the local folder and then all ancestor folders to locate a TFS CONFIGURATION module. If no configuration module is found then integration will show following message:

Link Creation:

"Link is/are not created because Configuration Module is not available.Create Configuration Module then try Create Link operation again."

Task Creation:

"Task and Link are not created because Configuration Module is not available.Create Configuration Module then try Create Task operation again."

Synchronization:

Synchronization will not complete and it will log the message to log file.

4

Configure DOORS Requirements Module

Before you create links it is best to configure your requirements module using the “Configure Module for TFS Synch” option. Configuration of a module attempts to create any user defined attributes identified in Section 1 of the nearest TFS DOORS CONFIGURATION module. The software will automatically attempt to create the attributes it needs at run time, but it is best to pre-configure each module to minimize the possibility of errors due to a user’s access to create new object level attributes.

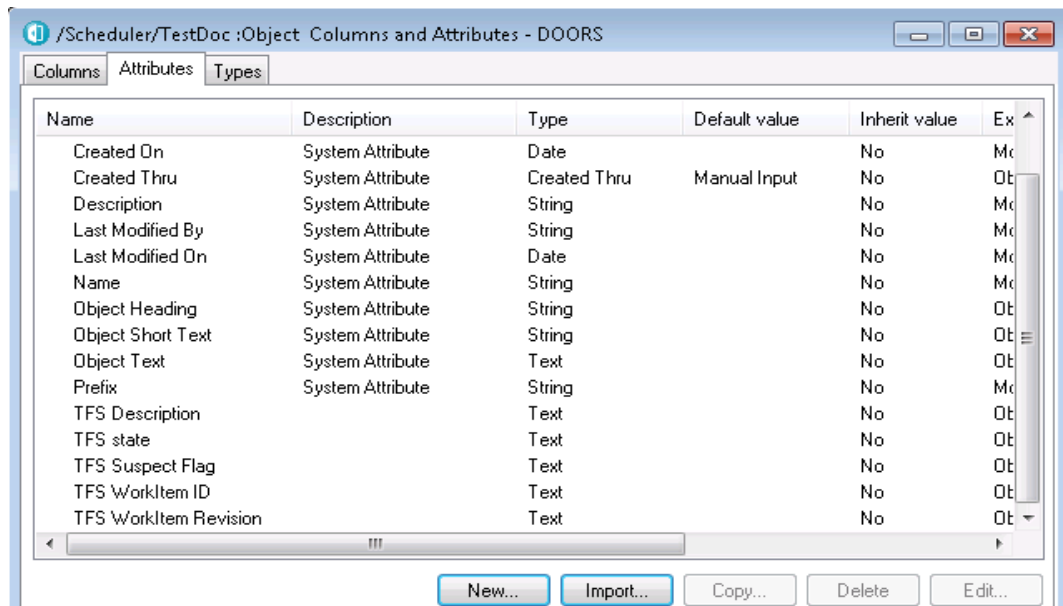
To configure the Rational DOORS requirement module:

1. Open the module and click **TFS > Configure Module For TFS Synch**.

A window is displayed listing all the attributes identified in the configuration module that apply to the current module.

2. Click **Confirm**.

The configured attributes will be created in the Module as Object level attributes. Imported TFS data will actually be stored on the Objects External Link, but in DOORS external links inherit the same attributes as the Object they belong to.



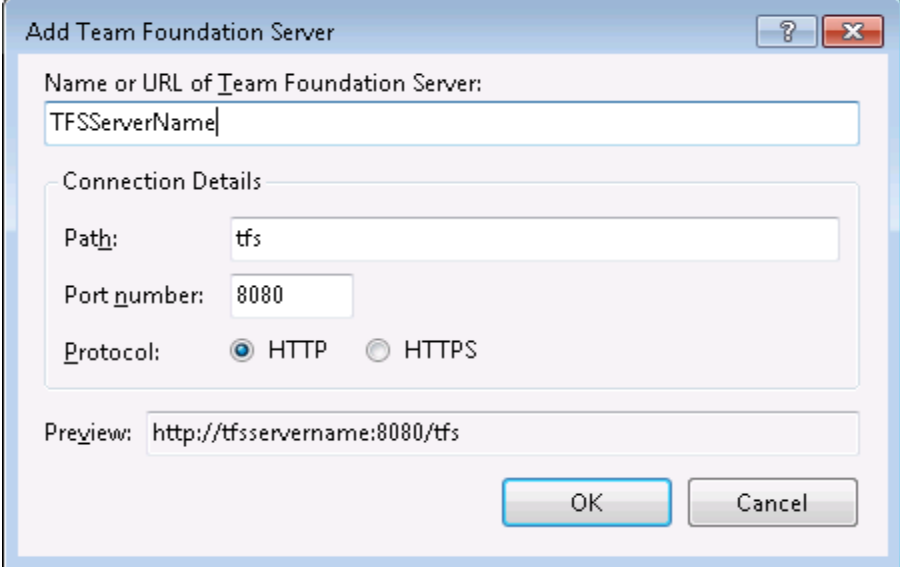
Note Consider prefixing the attribute name that you choose with “TFS” as a mandated naming standard for DOORS integrations. This mandate is to insure unique attribute names that will not conflict with other integrations. The attributes “Description” and “Title” are reserved names and apply to the External link “Description” and “Name” system attribute.

5

Connect to TFS Server From Visual Studio

We can connect to Team Foundation Server from Visual Studio with the help of Team Explorer.

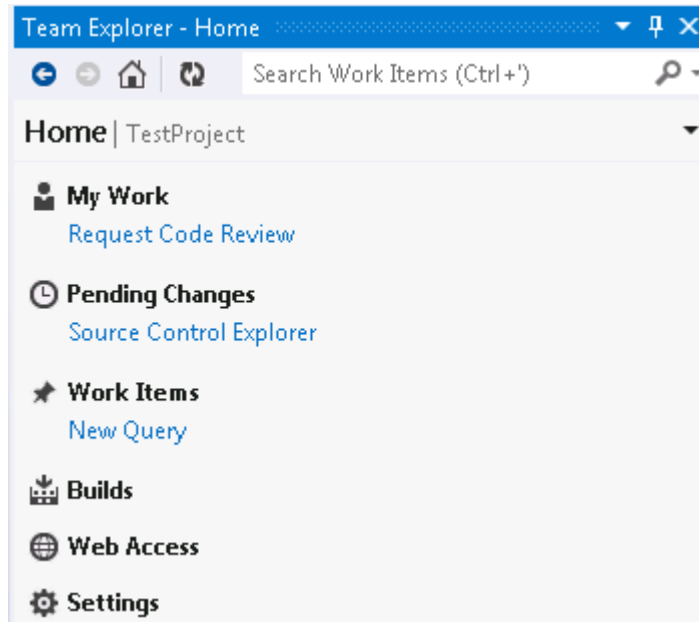
1. Start Microsoft Visual Studio 2012.
2. Click **Team > Connect to Team Foundation Server**.
3. Click **Servers**, and then **Add**.
4. Enter the TFS Server Name and the port number.



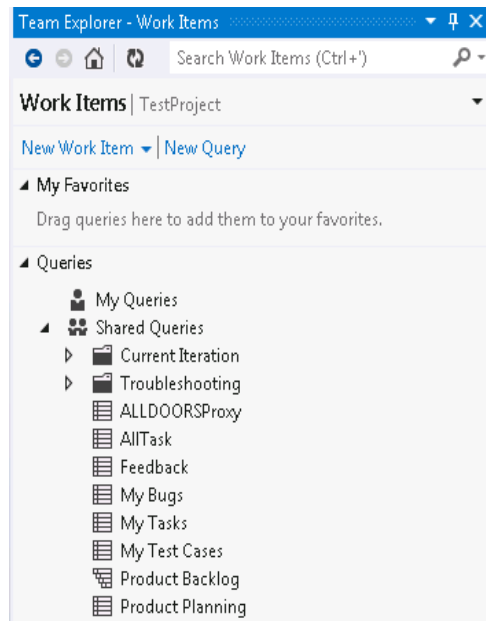
The screenshot shows the 'Add Team Foundation Server' dialog box. The title bar includes a help icon and a close button. The main area contains a text box for the server name, a 'Connection Details' section with fields for path, port number, and protocol, and a preview field. The 'OK' and 'Cancel' buttons are at the bottom right.

5. Click **OK**, and then **Close**.
6. Select the **Team Project Collection** in the left-hand pane and the **Team Project** in the right-hand pane, and then click **Connect**.

You are connected to the Team Project, and the **Team Explorer** is opened.



7. Click **Work Items**.



6

Logging and setting the proxy

Log File

The integration also generates a log file each time it is executed. The log file will be placed in the directory path specified by the environmental settings in the %ALLUSERSPROFILE% environment variable standard on most windows platforms. Normally the path is similar to the example below:

```
C:\Documents and Settings\All Users\Application
Data\IBM\DOORS_TFS\Log\TraceListener.log
```

DOORS Proxy Item

1292 [X] AllTask [Results]* Start Page	
Save Work Item [Icons]	
DoorsProxy 1292	
URL:	doors://v-ibm52:36677/?version=2&prodID=0&urn=urn:telelogic::1-5062b3db673434a8-O-2-00000ad2
Object Id:	2
Module:	hay
Object Text:	
Short Text:	
Last Modified By:	
Last Modified On:	Wednesday, March 13, 2013
Last Run On:	3/13/2013 12:45:34 PM
Suspect Flag:	
Source ID:	1284
Source URL:	vstfs:///WorkItemTracking/WorkItem/1284
State:	Active
Reason:	New
Area Path:	TestProject\Doors
Last Run Status:	Success
Time Spent At DOORS:	99.99% (00:00:09:04)
Time Spent At TFS:	0.01% (00:00:00:00)

In order to support the extended “Link Attributes” for links of ‘DoorsLinkType’, a proxy/surrogate workitem object is used as recommended by Microsoft. A new WorkItem type is defined (DoorsProxy) in integration and will live in the same WorkItem DB Table. This design requires less configuration and more Reporting capability. Normally new external link types require a NEW SQL DB to be created to house the external proxy items.

To help isolate these proxy items from the normal Workitems, the proxy objects live in different area paths. The first area path is called “Doors” and is a sub area under the main Project area. The second area path is called “Doors\Deleted” and is a sub area under ‘Doors’. When a Link to DOORS is created a new Proxy object is created and placed into the “Doors” area. At this time the only way to filter these objects out of the “All Workitems” Query is to modify the query to not accept items of type “DoorsProxy” or not accept “Blocked” items or filter for “areaPath” != @Project “/Doors”

The second area “Doors\Deleted” is used when a DOORS link is deleted USING ONE OF THE DOORS INTEGRATION DELETE OPTIONS. Normal link delete will delete the workitem link but it does not modify the DoorsProxy item and it will remain ACTIVE until an Admin cleanup is performed. If the link is deleted using the integration, the DoorsProxy object will be changed to a new STATE of ‘Deleted’ and will be moved into the ‘Doors\Deleted’ areaPath. This area path if configured as instructed later should have security settings so that ‘contributors’ do not have certain access rights. These restricted rights will automatically filter the DELETED items from any future queries.

The reason for not just ‘deleting’ the proxy object from the database is because the TFS process does not allow any workitem deletions physically from the database. The reason is documented as to support Sarbanes Oxley compliance - which restricts deletion of data for any reason through the interface or API. However, since TFS is hosted on SQL server, a Server Admin could clean up records in the WorkItem Table and bypass the TFS Server layer. Only do this to remove DoorsProxy objects that are in a State of Deleted or have no link to an existing WorkItem.

Link Attribute Change History

DESCRIPTION	HISTORY	LINKS
History:		
<div style="border: 1px solid #ccc; padding: 5px;"> <div style="display: flex; align-items: center; border-bottom: 1px solid #ccc;"> <div style="border: 1px solid #ccc; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid #ccc; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin-left: 10px;"> B / I / U </div> </div> <div style="padding: 5px;">Type your comment here.</div> </div>		
DISCUSSION ONLY ALL CHANGES		
<p>Jonh Martin changed Time Spent At TFS from '0' to '7.27% (00:00:00:15)' and made 3 other changes. 4 hours ago (show all changes)</p> <p>Jonh Martin changed Object Text from '' to 'hay' and made 1 other change. 4 hours ago (show all changes)</p> <p>Jonh Martin changed URL and made 4 other changes. 4 hours ago (show all changes)</p> <p>Jonh Martin created the DoorsProxy. 4 hours ago (show all changes)</p>		

One of the added benefits of the DoorsProxy item is that an automatic change History is kept by the system.

DESCRIPTION	HISTORY	LINKS																								
History:																										
<div style="border: 1px solid #ccc; padding: 5px;"> <div style="display: flex; align-items: center; border-bottom: 1px solid #ccc;"> <div style="border: 1px solid #ccc; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid #ccc; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin-left: 10px;"> B / I / U </div> </div> </div>																										
<p>Jonh Martin changed Time Spent At TFS from '0' to '7.27% (00:00:00:15)' and made 3 other changes. 4 hours ago (hide all changes)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>New Value</th> <th>Old Value</th> </tr> </thead> <tbody> <tr> <td>Time Spent At TFS</td> <td>7.27% (00:00:00:15)</td> <td>0</td> </tr> <tr> <td>Time Spent At DOORS</td> <td>92.73% (00:00:01:95)</td> <td>0</td> </tr> <tr> <td>Last Run Status</td> <td>Success</td> <td>Not Run</td> </tr> <tr> <td>Last Run On</td> <td colspan="2">3/13/2013 9:32:59 AM</td> </tr> </tbody> </table> <p>Jonh Martin changed Object Text from '' to 'hay' and made 1 other change. 4 hours ago (hide all changes)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>New Value</th> <th>Old Value</th> </tr> </thead> <tbody> <tr> <td>Object Text</td> <td>hay</td> <td></td> </tr> <tr> <td>Description</td> <td>hay</td> <td></td> </tr> </tbody> </table>				New Value	Old Value	Time Spent At TFS	7.27% (00:00:00:15)	0	Time Spent At DOORS	92.73% (00:00:01:95)	0	Last Run Status	Success	Not Run	Last Run On	3/13/2013 9:32:59 AM			New Value	Old Value	Object Text	hay		Description	hay	
	New Value	Old Value																								
Time Spent At TFS	7.27% (00:00:00:15)	0																								
Time Spent At DOORS	92.73% (00:00:01:95)	0																								
Last Run Status	Success	Not Run																								
Last Run On	3/13/2013 9:32:59 AM																									
	New Value	Old Value																								
Object Text	hay																									
Description	hay																									

7

Contacting support

This chapter contains the following topics:

- Contacting IBM Rational Software Support
- Prerequisites
- Submitting problems
- Other information

Contacting IBM Rational Software Support

If the self-help resources have not provided a resolution to your problem, you can contact IBM Rational Software Support for assistance in resolving product issues.

Note If you are a heritage Telelogic customer, you can go to <http://support.telelogic.com/toolbar> and download the IBM Rational Telelogic Software Support browser toolbar. This toolbar helps simplify the transition to the IBM Rational Telelogic product online resources. Also, a single reference site for all IBM Rational Telelogic support resources is located at <http://www.ibm.com/software/rational/support/telelogic/>

Prerequisites

To submit your problem to IBM Rational Software Support, you must have an active Passport Advantage® software maintenance agreement. Passport Advantage is the IBM comprehensive software licensing and software maintenance (product upgrades and technical support) offering. You can enroll online in Passport Advantage from <http://www.ibm.com/software/lotus/passportadvantage/howtoenroll.html>.

- To learn more about Passport Advantage, visit the Passport Advantage FAQs at http://www.ibm.com/software/lotus/passportadvantage/brochures_faqs_quickguides.html.
- For further assistance, contact your IBM representative.

To submit your problem online (from the IBM website) to IBM Rational Software Support, you must additionally:

- Be a registered user on the IBM Rational Software Support website. For details about registering, go to <http://www.ibm.com/software/support/>.
- Be listed as an authorized caller in the service request tool.

Submitting problems

To submit your problem to IBM Rational Software Support:

1. Determine the business impact of your problem. When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem that you are reporting.

Use the following table to determine the severity level.

Severity	Description
1	The problem has a <i>critical</i> business impact: You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.
2	This problem has a <i>significant</i> business impact: The program is usable, but it is severely limited.
3	The problem has <i>some</i> business impact: The program is usable, but less significant features (not critical to operations) are unavailable.
4	The problem has <i>minimal</i> business impact: The problem causes little impact on operations or a reasonable circumvention to the problem was implemented.

2. Describe your problem and gather background information. When describing a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Rational Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:
 - What software versions were you running when the problem occurred?
To determine the exact product name and version, use the option applicable to you:

- Start the IBM Installation Manager and click **File > View Installed Packages**. Expand a package group and select a package to see the package name and version number.
 - Start your product, and click **Help > About** to see the offering name and version number.
 - What is your operating system and version number (including any service packs or patches)?
 - Do you have logs, traces, and messages that are related to the problem symptoms?
 - Can you recreate the problem? If so, what steps do you perform to recreate the problem?
 - Did you make any changes to the system? For example, did you make changes to the hardware, operating system, networking software, or other system components?
 - Are you currently using a workaround for the problem? If so, be prepared to describe the workaround when you report the problem.
3. Submit your problem to IBM Rational Software Support. You can submit your problem to IBM Rational Software Support in the following ways:
- **Online:** Go to the IBM Rational Software Support website at <https://www.ibm.com/software/rational/support/> and in the Rational support task navigator, click **Open Service Request**. Select the electronic problem reporting tool, and open a Problem Management Record (PMR), describing the problem accurately in your own words.

For more information about opening a service request, go to <http://www.ibm.com/software/support/help.html>.

You can also open an online service request using the IBM Support Assistant. For more information, go to <http://www.ibm.com/software/support/isa/faq.html>.
 - **By phone:** For the phone number to call in your country or region, go to the IBM directory of worldwide contacts at <http://www.ibm.com/planetwide/> and click the name of your country or geographic region.
 - **Through your IBM Representative:** If you cannot access IBM Rational Software Support online or by phone, contact your IBM Representative. If necessary, your IBM Representative can open a service request for you. You can find complete contact information for each country at <http://www.ibm.com/planetwide/>.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Rational Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Rational Software Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM Rational Software Support website daily, so that other users who experience the same problem can benefit from the same resolution.

Other information

For Rational software product news, events, and other information, visit the IBM Rational Software website on <http://www.ibm.com/software/rational/>.

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