



Transformation Manager

Version 5.2

Tutorial 19 - Remotely Debugging Projects



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Tutorial 19

Remotely Debugging a Project

Transformation Manager enables you to remotely debug a project by attaching to a debug session. This lets you attach TM Designer to a users remote computer and debug a project they may be running in TM Migrator wherever they are in your organisation.

Prerequisites

Before starting this tutorial we recommend that you have completed the following tasks.

- 1) Transformation Manager has been installed.
- 2) An appropriate license has been installed.
- 3) The tutorial resources including data models, samples and source and target data stores have been downloaded and extracted to your Transformation Manager home directory.
- 4) You have completed tutorials 1, 2, 3, 4 and 6.
- 5) You should have completed one of the following tutorials, 5, 7, 8, 9, 11, 13 or 16.
- 6) You may have completed tutorial 14 or 15.

Information

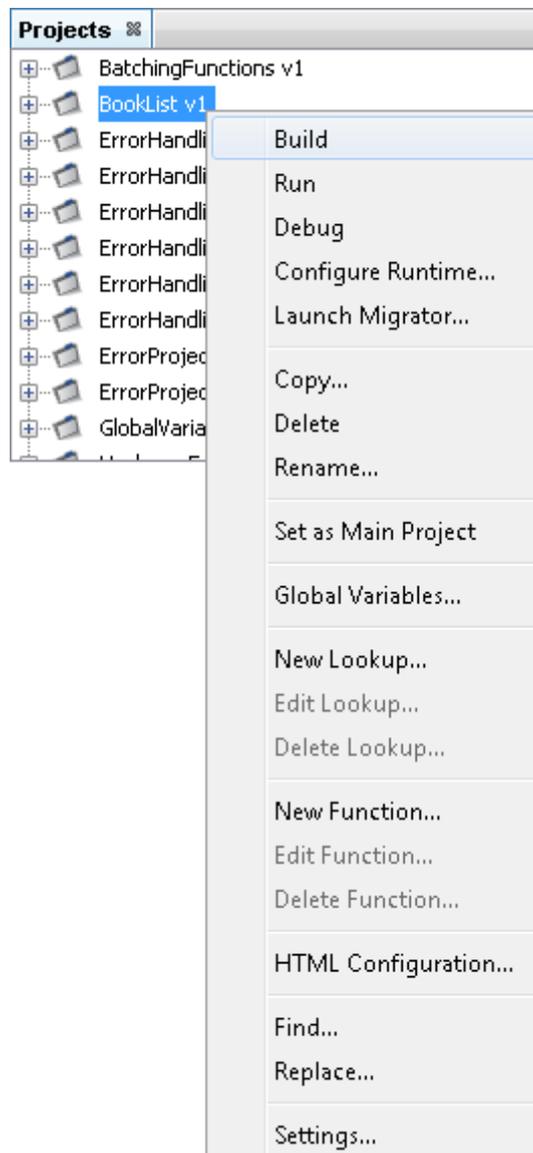
This tutorial will require a number of steps to demonstrate this and these are as follows. Firstly we must build our project using the setting to generate the debug information. Next we will turn on the option to allow debugging in TM Migrator and then set up our project ready to run. Then we will attach the debug process in TM Designer to the port that has been made available in TM Migrator. Lastly we will run the project in TM Migrator and debug the project in TM Designer.

We will use the **BookList v1** project that was created in tutorial 1.

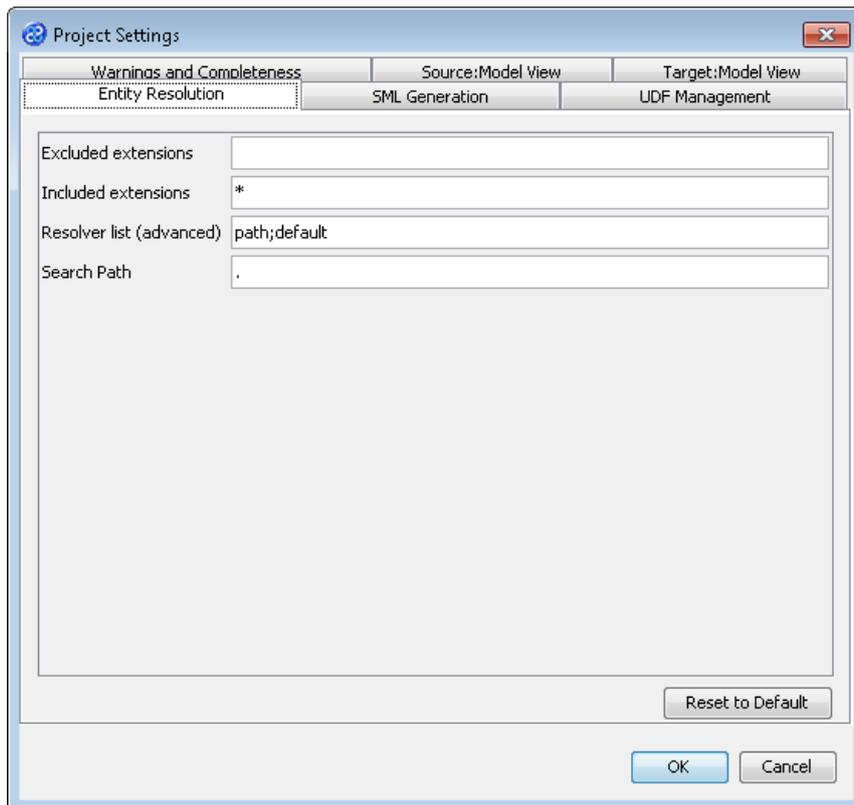
Exercise 1 - Set the Generate for Debug Project Setting

The first step in this tutorial is to set the **Generate for Debug** project setting tick box to ticked.

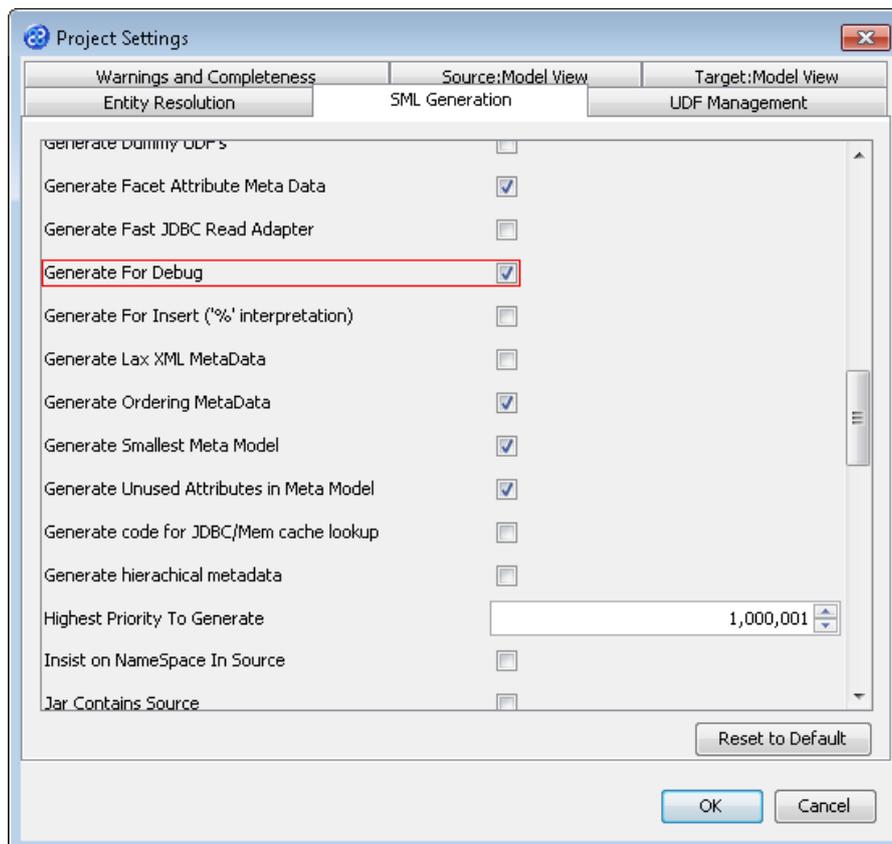
- 1) Place your mouse cursor over the name of the **BookList v1** project in the **Projects** pane of TM Designer and display the context menu.



- 2) Click the **Settings...** option to open the **Project Settings** window.



- 3) Click the **SML Generation** tab and scroll down to the value called **Generate For Debug** and place a tick in the tick box.

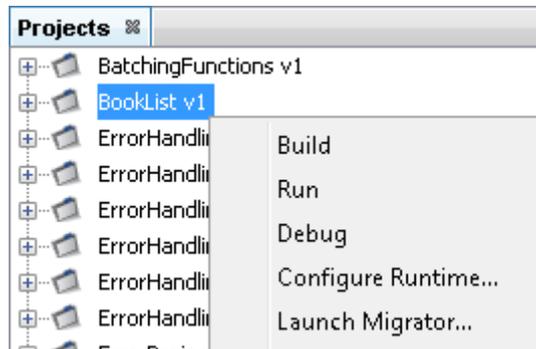


- 4) Click the button to save that change.

Exercise 2 - Build the Project

Building a project is a simple but necessary task for producing the program that will be used to execute the project. This exercise shows you how to do this for your project.

- 1) Move your mouse pointer so that it is over the title of the project you are working on and use the right mouse or secondary mouse button to display the pop-up menu.



- 2) Click once on the **Build** option from the menu.
- 3) The **Output** pane will open and show you if there are any errors in your transform code. In this exercise you should not have any error messages and you should see a message stating **Build successful..**



Exercise 3 - Launch the Project

Now let's Run our transformation project ready to remotely debug.

- 1) Click once on the **Run** menu bar option in TM Designer.
- 2) Click once on the **Launch Migrator BookList v1...** option from the sub-menu. TM Designer will now open TM Migrator so that you can test your transform.
- 3) Go to the **url** field of the **Source** pane. You will now need to provide the details of where to go to get the source data. View the list of options and select the option called **jdbc:derby:<YOUR_NAME>**. Now replace the <YOUR_NAME> part of the list item, including the angle brackets, with the directory where the Derby database is stored. This should be in the following location:

[TMHOME]\Tutorials\Source_and_Target\Tutorial_1_Basics\Source\Books.

The **url** entry should look similar to the one below.

`jdbc:derby:C:\Users\uc\TM\Tutorials\Source_and_Target\Tutorial_1_Basics\Source\Books.`

- Go to the Driver field of the Source pane and display the list of options available. Select the option called **org.apache.derby.jdbc.EmbeddedDriver**. The Source pane should look similar to the image below. **user** and **password** are not required.

user	<input type="text"/>
password	<input type="text"/>
url	jdbc:derby:C:\Users\uc\TM\Tutorials\Source_and_Target\Tutorial_1_Basics\Source\Books ▼
driver	org.apache.derby.jdbc.EmbeddedDriver ▼
sqlinit	<input type="text"/>

- Go to the **url_BookList** field of the **Target** pane. In this field we will specify where our new file will go and give it a name. Enter into the field **[TMHOME]\Tutorials\Source_and_Target\Tutorial_1_Basics\Target\BookListOutput.csv**, you can use the button to select the directory but remember to add the file name to the end of the directory. Our example will create a file called BookListOutput.csv in the in the following directory.

[TMHOME]\Tutorials\Source_and_Target\Tutorial_1_Basics\Target\

- The Target pane should look similar to the image below.

url_BookList	C:\Users\uc\TM\Tutorials\Source_and_Target\Tutorial_1_Basics\Target\BookListC	Browse...
DirectoryName	<input type="text"/>	Browse...
DirFileExtension	<input type="text"/>	
EarlyFlushing	N	

- You must tab out of the **url_BookList** field of the **Target** pane once the target location is set.



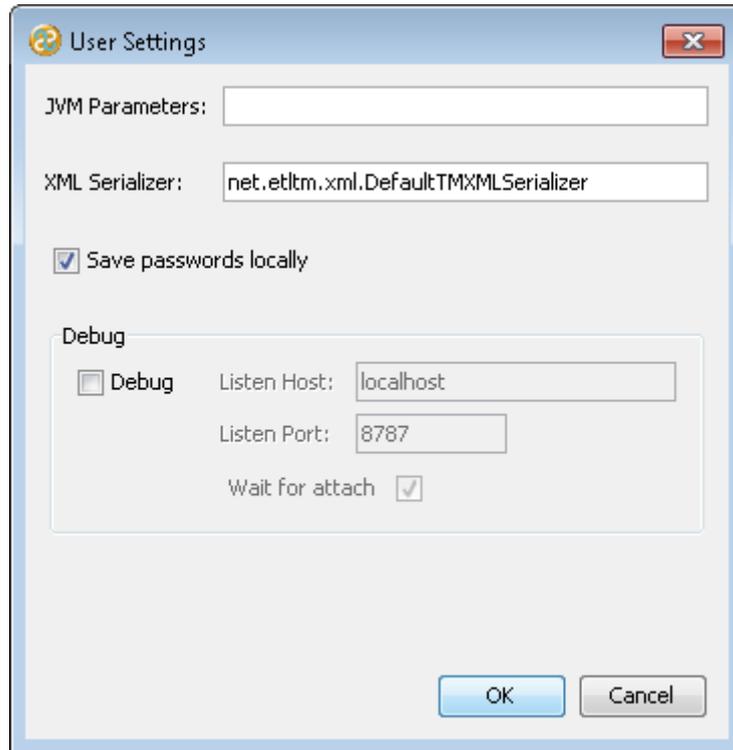
It is important that you tab out of or click elsewhere on this window as this sets the source or target location for the run process. If this does not happen then you may get an error.

- Now we are ready to set up the remote debug mode before we run the project.

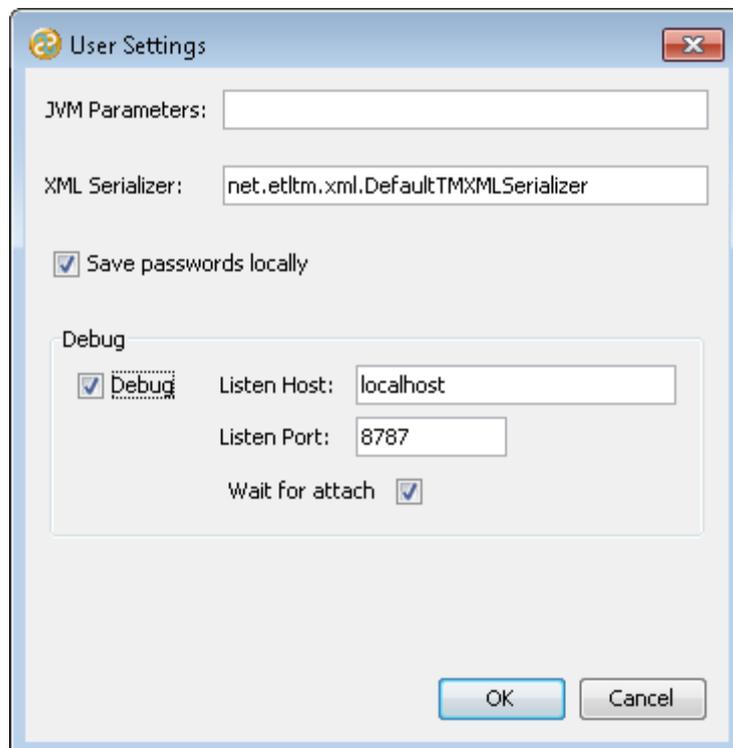
Exercise 4 - Set Up TM Migrator for a Remote Debug Session

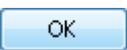
This exercise will prepare TM Migrator to run in remote debugging mode. This must be set up before attempting run and remotely connect to TM Migrator from TM Designer.

- 1) Click on the **Tools** menu bar option and select the **User Settings...** option from the sub menu. The **User Settings** window will open.

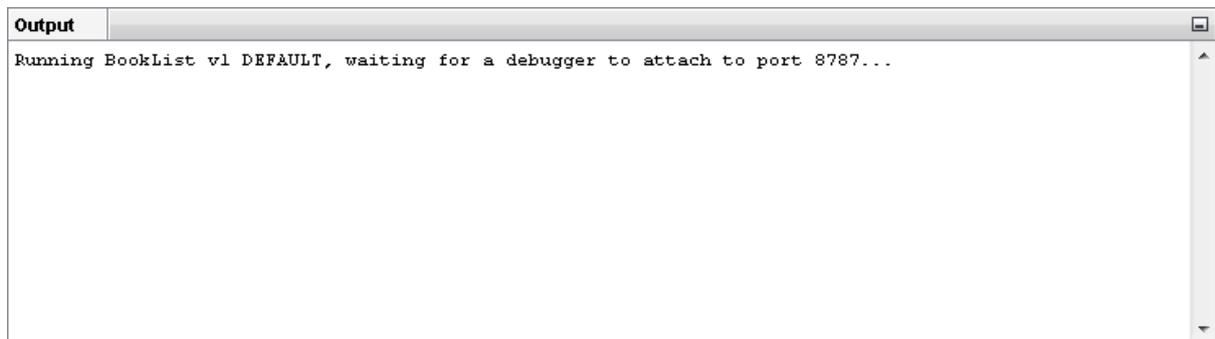


- 2) Click in the Debug tick box to place a tick in the tick box. The window should look like the one below. There will be no need to change the default settings.



- 3) Click on the  button to save your change. The window will close and return you to the TM Migrator interface. Now we can run the project.

- 4) Click once on the  button to start the transform process. Notice that the Output pane in TM Migrator will display a message that says waiting for a debugger to attach to port 8787 as shown in the image below.

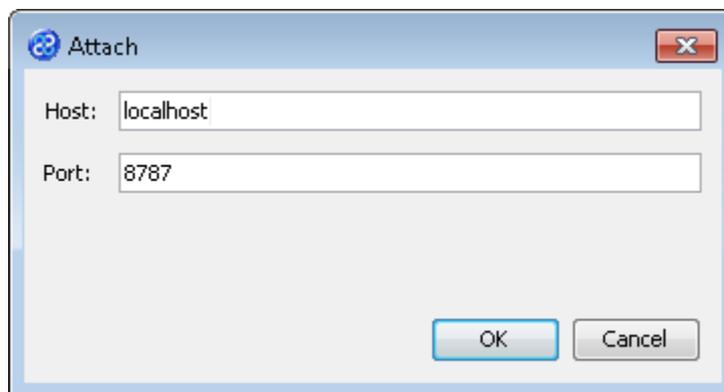


- 5) The project is now ready to be executed in debug mode from a remote computer. Now you will need to go to TM Designer.

Exercise 5 - Remotely Debug the Project

You should now be looking at TM Designer. We will now attach the debugger to the project running in TM Migrator.

- 1) Click once on the **Debug** menu bar option.
- 2) Click the **Attach Debugger...** option from the sub menu. This will open the **Attach** window. Notice that the port is set to 8787 which is the same as the port for TM Migrator and of course we are using the localhost since we are running the process on the same computer in this tutorial.



- 3) Click the  button to start remotely debugging the **BookList v1** project. TM Designer will start debugging the remotely running project and the interface will look like the image below. Notice however that the status bar tells you that you are **Debugging localhost 8,787**. At this point you can step through the debugging process like normal until the project is finished running.

