

Training Studio Flex Service Documentation

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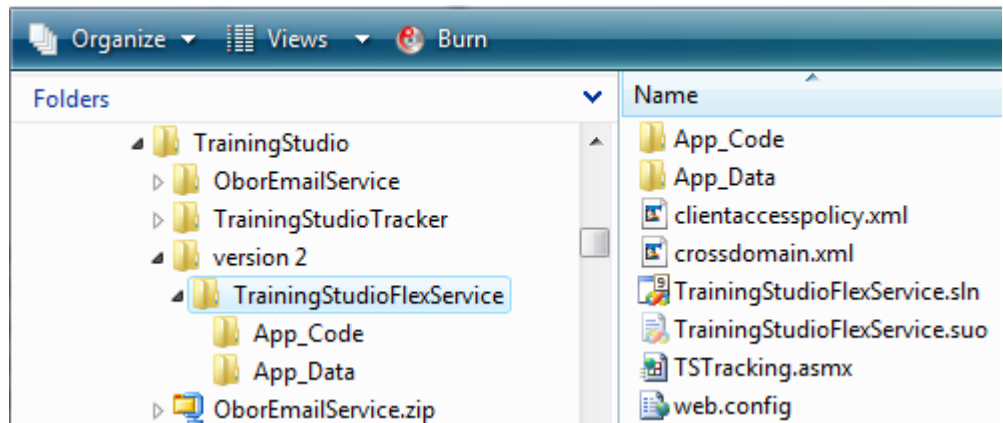
This document describes the Training Studio Flex Service configuration and implementation. Note that the use of this web service is optional. It is used to provide these pieces of Training Studio functionality:

- Email technical support.
- Save reviewer comments
- The ability to run the *Training Studio Tracker Administrator* to view, edit, and close comments.

Directory Structure

The layout of the web service directory structure is shown to the right. You would normally copy the entire

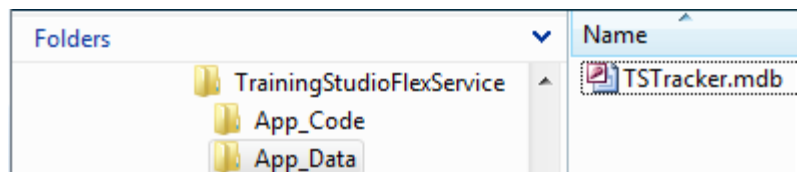
TrainingStudioFlexService directory structure to your web server and then configure it as described



in the next section. The *TSTracking.asmx* file is the actual web service referenced by the “support email” functionality, the *Comments.mxml* component within the training, and by the *Training Studio Tracker Administrator* application. The *TrainingStudioFlexService.sln* is a Visual Studio .NET 2008 solution file for editing the web service program. The *crossdomain.xml* and *clientaccesspolicy.xml* files are special XML file that allows client-side applications like Training Studio to access the service. You can give more restrictions if desired. See http://www.adobe.com/devnet/articles/crossdomain_policy_file_spec.html for information on *crossdomain.xml* and [http://msdn.microsoft.com/en-us/library/cc197955\(VS.95\).aspx](http://msdn.microsoft.com/en-us/library/cc197955(VS.95).aspx) for information on *clientaccesspolicy.xml*. The *web.config* file has a number of user-configurable settings as discussed later in this document.

Inside the *App_Code* directory is a code file that contains the programming of the web service. It should not be edited directly but rather should be maintained through editing the solution via Visual Studio .NET 2008.

The *App_Data* directory contains the *TSTracker.mdb* Access database as shown to the right. This database contains the list of categories to use as well as the actual comments, reviewers,

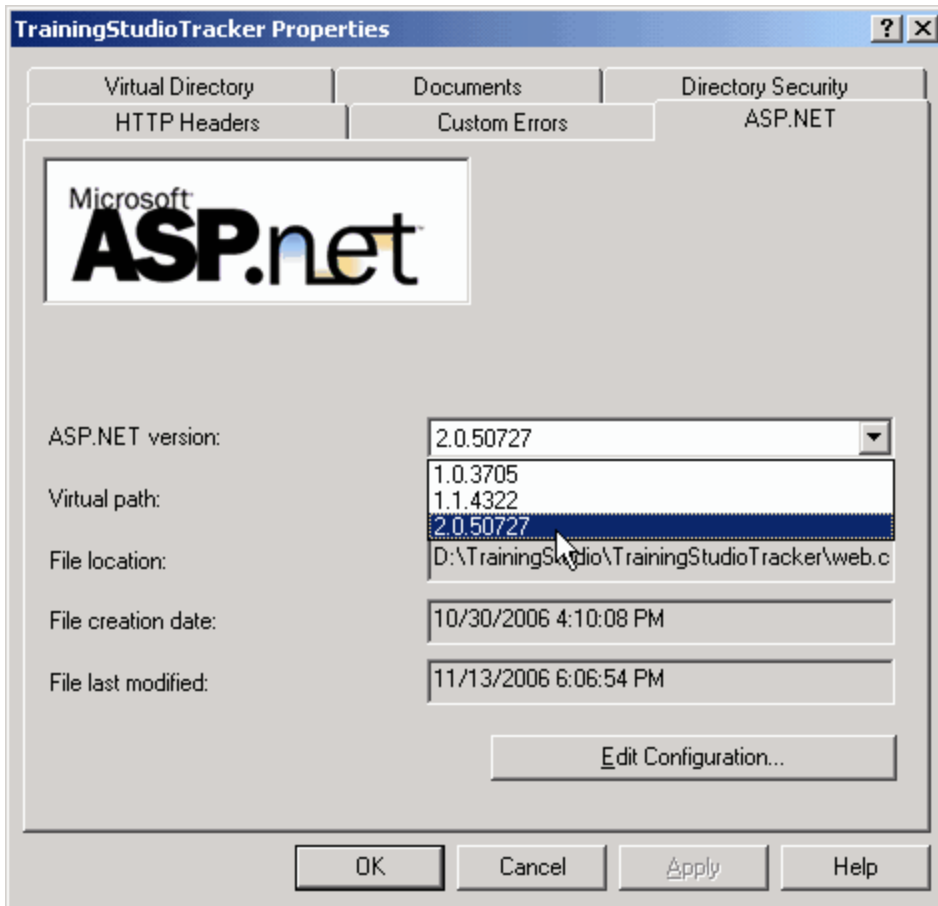


and administrators created via the *Comments* feature within the training and the *Training Studio Tracker Administrator* application. The editable tables of this database are covered later in this document.

Deploying the Web Service

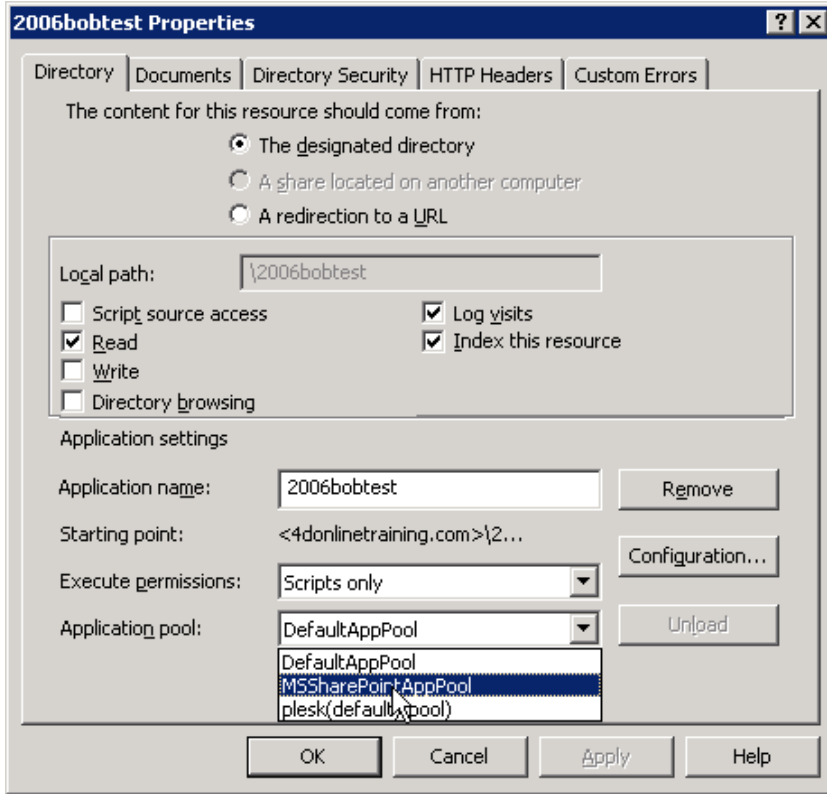
To begin working with the web service, you must put its directory structure on the web server and make it into an ASP.NET 2.0 virtual directory/application. If your local computer has Internet Information Services (IIS) and ASP.NET installed, you can do this locally for testing as well. If you have multiple versions of the .NET runtime on the web server, then you will be able to choose 2.0 from the ASP.NET

tab as shown below. Note that this screen capture is for a different virtual directory name – yours would be *TrainingStudioFlexService* but could be another virtual directory name. You might choose another name if you are hosting multiple web services on your site for different customers.

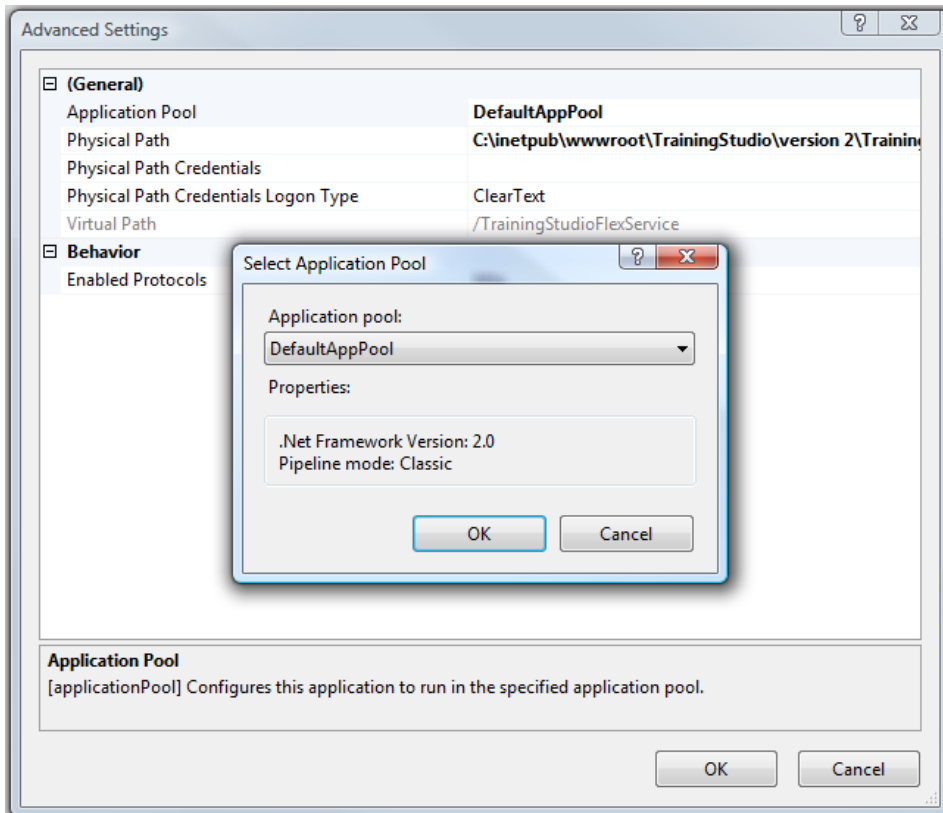


Note: If you are running IIS 6 or later, it is critical that you select an application pool that only has ASP.NET 2.0 applications in it.

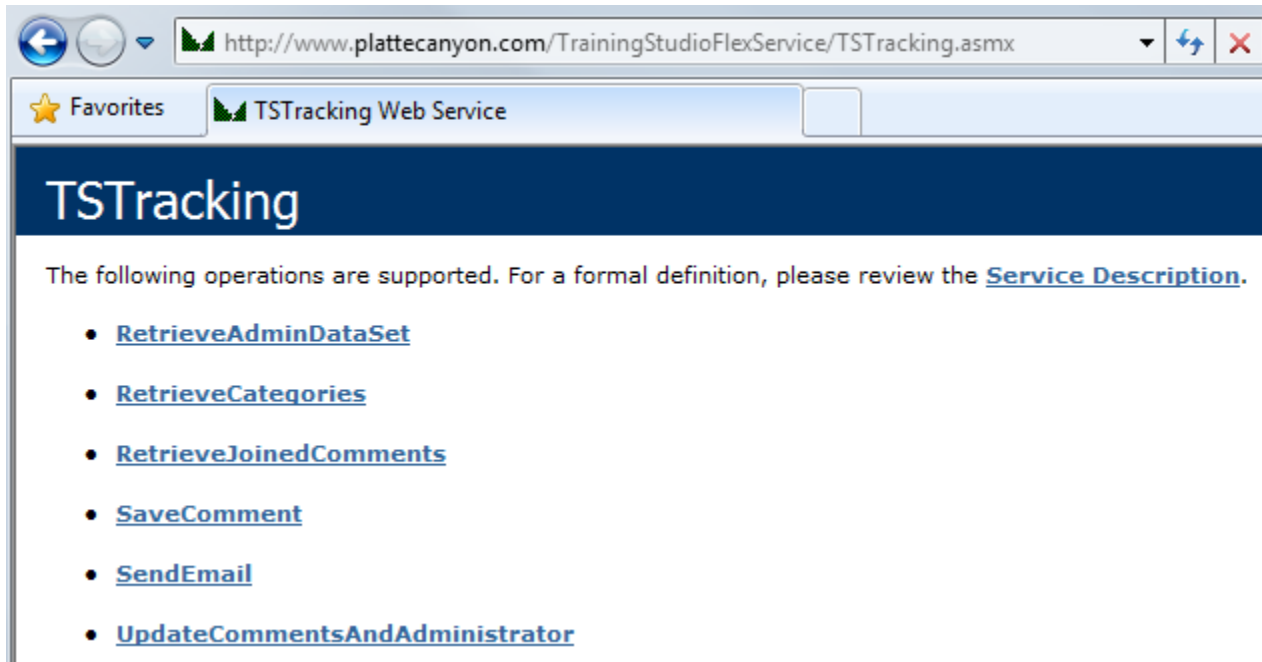
Mixing .NET 1.1 and 2.0 applications within the same pool can cause both the web service and the 1.1 application to fail. The setting for an application pool is shown below.



Or



You can tell if the web service is set up correctly if you can navigate to the *TSTracking.asmx* file and see a screen like the one below.



Note that this URL is the *WebServiceUrl* set in the *Training Structure* using the *Training Studio Content Editor*. It is also needed by the users of the *Training Studio Tracker Administrator* application. If you are prompted for any type of logon before reaching this screen, then neither the support email nor *Comments* functionality will work.

Due to security restrictions on the Flash player related to communicating with other domains, we recommend that you place the provided *crossdomain.xml* file on the web server containing the web service. Although primarily designed for Silverlight content, you might also include *clientaccesspolicy.xml* file in the same location. It normally needs to be set on the *root* of the web site. For example, we place it at <http://www.plattecanyon.com> rather than at <http://www.plattecanyon.com/TrainingStudioFlexService>. Here are the contents of these files:

crossdomain.xml

```
<?xml version="1.0"?>
<!DOCTYPE cross-domain-policy SYSTEM
"http://www.macromedia.com/xml/dtds/cross-domain-policy.dtd">
<cross-domain-policy>
    <site-control permitted-cross-domain-policies="all"/>
    <allow-access-from domain="*" />
    <allow-http-request-headers-from domain="*" headers="SOAPAction"
/>
</cross-domain-policy>
```

clientaccesspolicy.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<access-policy>
  <cross-domain-access>
    <policy>
      <allow-from http-request-headers="*">
        <domain uri="*" />
      </allow-from>
      <grant-to>
        <resource include-subpaths="true" path="/" />
      </grant-to>
    </policy>
  </cross-domain-access>
</access-policy>
```

These files allow communications from any domain. You can make these files more restrictive if desired. See http://www.adobe.com/devnet/articles/crossdomain_policy_file_spec.html for information on *crossdomain.xml* and [http://msdn.microsoft.com/en-us/library/cc197955\(VS.95\).aspx](http://msdn.microsoft.com/en-us/library/cc197955(VS.95).aspx) for information on *clientaccesspolicy.xml*.

Editing the web.config File

The web.config file located in the main directory of the web service has a number of user-configurable settings. These are all located in the *<appSettings>* area of the file. Each setting is described below. After editing the web.config (and keeping a backup copy of the original), you can replace the one on your web server.

1. **ReviewTrackingKey.** This key must match the key defined in TSCCommon.as file (*reviewKey* variable) within your Training Studio project. You may want to set up different web services (and matching *start.swf* files) for different customers or subject areas.

```
<add key="ReviewTrackingKey" value="1111111111" />
```

2. **AdminTrackingKey.** This key must match the key being sent by the *Training Studio Tracker Administrator* application as described later in this document. This key gives the Administrator the right to view the comments, make changes to their status, etc.

```
<add key="AdminTrackingKey" value="222222222" />
```

3. **SendEmailNotificationOfComment.** This setting controls whether the web service sends an email when it receives a comment. It can have a value of True or False.

```
<add key="SendEmailNotificationOfComment" value="True" />
```

4. **NotificationEmailAddress.** This is the email address(es) to which notification emails are sent. Separate multiple emails by a comma. This setting is only relevant if *SendEmailNotificationOfComment* is true.

```
<add key="NotificationEmailAddress" value="jrhodes@plattecanyon.com" />
```

5. **NotificationEmailMessage.** This is the body of the notification email message. There are placeholders for variable pieces of information as follows.

Placeholder	Value
{0}	Carriage Return Line Feed (e.g., a hard return)
{1}	Application title
{2}	Page number of the training that the comment refers to
{3}	First name of reviewer
{4}	Last name of reviewer
{5}	Organization of reviewer
{6}	Contact phone number of reviewer
{7}	Email address of reviewer
{8}	Description of the issue referenced in the comment
{9}	Steps to recreate the issue described in the comment

This setting is only relevant if *SendEmailNotificationOfComment* is true.

```
<add key="NotificationEmailMessage" value="Dear Administrator,{0}{0}There is a comment posted for application {1} from {3} {4} of {5}. The comment is on page {2}. The description is '{8}' and the recreation steps are '{9}'. {0}{0}Sincerely,{0}{0}The Training Studio Tracker Team" />
```

6. **NotificationEmailSubject.** This is the subject line of the notification email. This setting is only relevant if *SendEmailNotificationOfComment* is true.

```
<add key="NotificationEmailSubject" value="Enhanced Learning Tracker Information" />
```

7. **NotificationEmailReplyAddress.** This is the reply address of the notification email. This setting is only relevant if *SendEmailNotificationOfComment* is true.

```
<add key="NotificationEmailReplyAddress" value="support@plattecanyon.com" />
```

8. **SmtpServer.** This is the Simple Mail Transfer Protocol (SMTP) server for the notification email. This will be specific to your web server. If you are running the web service on your local computer for testing, you would put the machine name in for this setting. You can get the machine name via *My Computer – Properties*. Using the machine name or “(local)” works for some web servers as well. This setting is only relevant if *SendEmailNotificationOfComment* is true or if you are using the support email functionality.

```
<add key=" SmtplibServer" value="relay.yourmailserver.com" />
```

9. **EmailCredentialsUsername.** This is the optional username for your email credentials. On some systems, credentials are required in order for the mail server listed in *SmtplibServer* to allow emails from your application.

```
<add key=" EmailCredentialsUsername" value="youremail@yourserver.com" />
```

10. **EmailCredentialsPassword.** This is the optional password for your email credentials. On some systems, credentials are required in order for the mail server listed in *SmtplibServer* to allow emails from your application.

```
<add key=" EmailCredentialsPassword" value="xyz" />
```

11. **EmailCredentialsDomain.** This is the optional domain for computer name that verifies the other email credentials. It is often left blank. See <http://msdn.microsoft.com/en-us/library/system.net.networkcredential.domain.aspx> for more details.

```
<add key=" EmailCredentialsDomain" value="" />
```

12. **Label_UserName.** This is the label used to denote the “User” in emails. It is editable here for localization purposes.

```
<add key="Label_UserName" value="User: " />
```

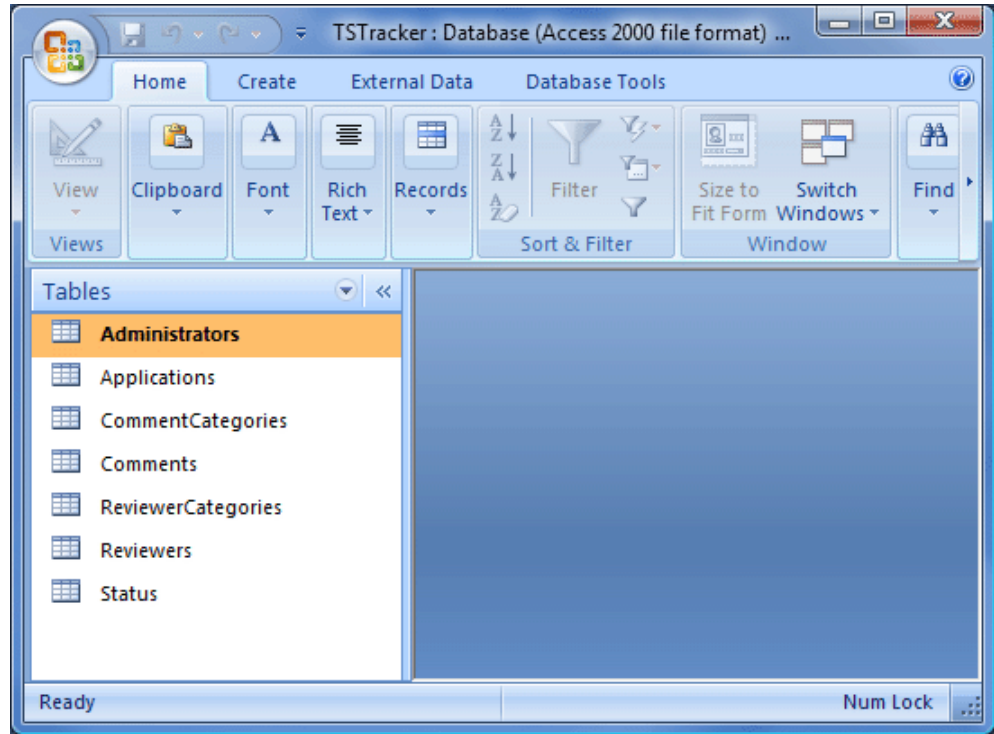
13. **Label_LessonName.** This is the label used to denote the “Lesson Name” in emails. It is editable here for localization purposes.

```
<add key="Label_LessonName" value="Lesson Name: " />
```

Editing the Tracking Database

As mentioned earlier in this document, all comments, reviewers, administrators, and status changes are stored in the *TSTracker.mdb* file located in the \App_Data directory. An Access database is used rather than a more powerful database like SQL Server since large numbers of simultaneous are not anticipated and many target end-user organizations may not have a SQL Server license. However, the web service may be edited to use other databases if desired. The tables within the database are shown to the right.

The *Administrators*, *Applications*, *Comments*, and *Reviewers* tables are intended to be populated and edited by the *Comments* and *Training Studio Tracker Administrator* applications. However, you may open the database directly to eliminate unneeded or obsolete information in them if desired. Note that you will typically need to download the database to your local machine before opening it in Access.



The *CommentCategories*, *ReviewerCategories*, and *Status* tables have no interface in other applications. If you want to change these, you will need to use Access. The *Comments* and *Training Studio Tracker Administrator* applications read these tables for the categories and will hence be automatically updated. You may rename categories and status elements but do not delete them if they have associated

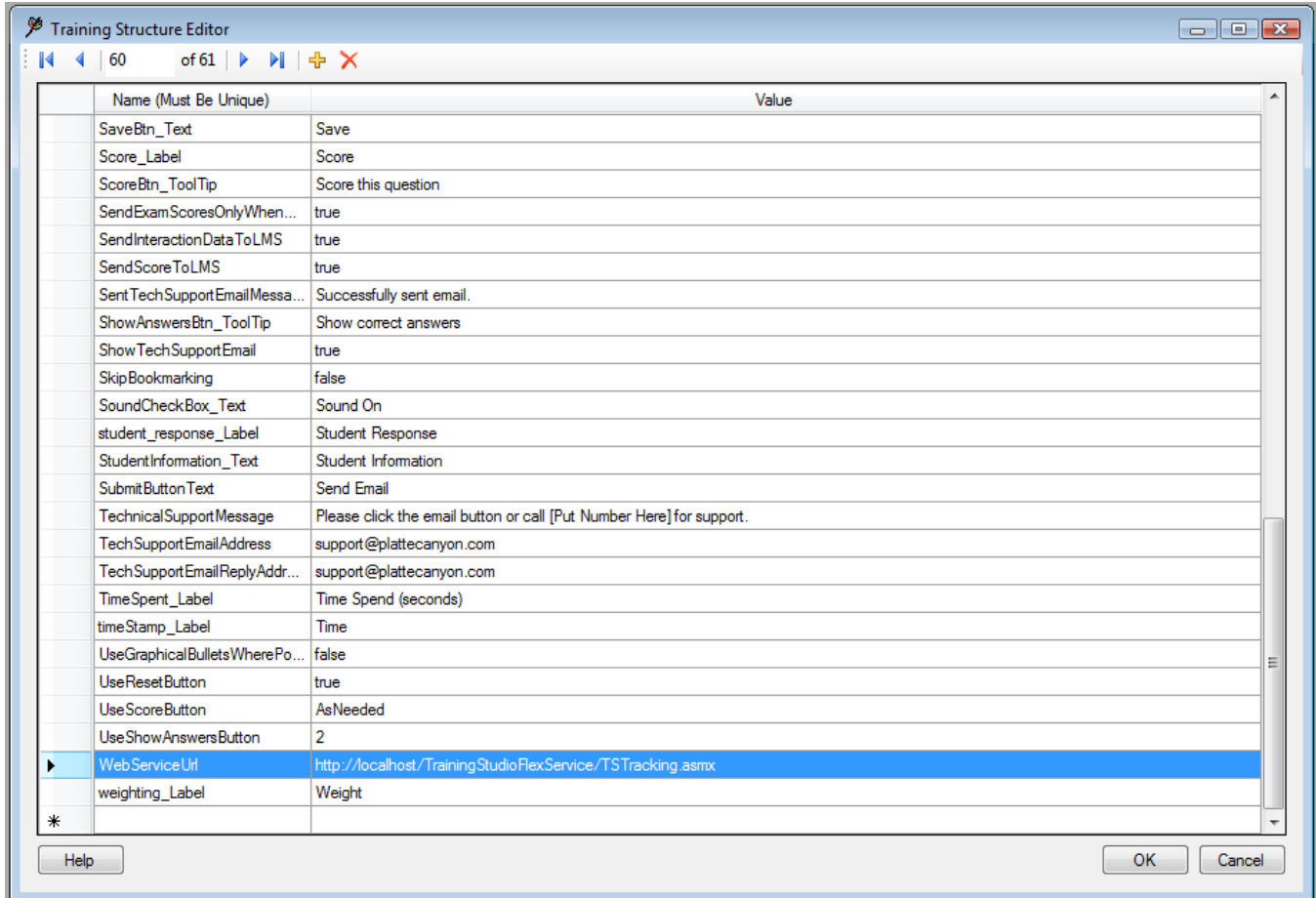
ReviewerCategoryId	ReviewerCategoryName
1	Subject Matter Expert
2	Student
3	Training Developer
4	Management
5	Instructor
7	Safety
*	(New)

StatusId	StatusName
1	Open
2	Closed
3	In Progress
4	Invalid
*	(New)

comments as that could cause errors. The layout of these tables is shown below and to the right.

Editing Comments Settings

The *Comments* component is written in Adobe Flex Builder 3. Before deploying lessons with *Comments* functionality, you will need to change the *WebServiceUrl* in the Training Structure Editor of the *Training Studio Content Editor* as shown below.



The updated structure then needs to be writing to the *TrainingStructure.xml* file and linked to by the *Training Studio Publisher*.

If desired, you may also change the *reviewKey* variable in *TSCCommon.as* within your Training Studio Base project to match the *web.config* file as described above.

If you want to turn off the ability to send comments, set the *reviewOn* variable in *TSCCommon.as* to false. Otherwise, users can initiate comments by pressing **Ctrl + Shift + M** when the lesson has the focus.

Configuring the *Training Studio Tracker Administrator* Application

The URL to the web service as well as the *AdminTrackingKey* is needed by users of the *Training Studio Tracker Administrator* application in order for it to communicate with the web service and update comments. The *Training Studio Tracker Administrator* Configuration screen is shown below:

Configuration Editor

Enter or edit the settings for the Training Studio - Administrator.

Administrator Information

First Name: Jeff

Last Name: Rhodes

Organization: Platte Canyon

Email Address: jrhodes@plattecanyon.com

Contact Number: (719) 548-1110 Ext ____

Web Service URL

http://www.plattecanyon.com/TrainingStudioFlexService/TSTracking.asmx

Web Service Access Key

11111111111111111111111111111111

Help Save Cancel

The user enters his or her contact information as well as the Web Service URL and Web Service Access Key (which must match the *AdminTrackingKey* defined in the *web.config* file). Once the user saves this information, it is restored each time he or she opens the *Training Studio Tracker Administrator* application.