



# Select Survey .NET



## SelectSurvey.NET Install Guide

*This install guide has more detailed information and helpful points for hosted customers. See Appendix D of this document for common problems and solutions.*

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## Requirements Summary

The SelectSurvey.NET Server Software requires a dedicated server with the below basic requirements:

1. Dedicated Windows Server 2008 or later (Microsoft Internet Information Server IIS7 or later) with a minimum of 2 Gigabytes of RAM.
2. .NET Framework 4.6.1 must be installed on the server, this build targets 4.6.1 for the TLS 1.2 requirements. A .net 4.5 application pool is required (that targets 4.6.1). (See Appendix A for details)
3. Microsoft SQL 2008 (2012 recommended), MySQL or Oracle database is required.
4. SMTP services installed on web server (recommended) or access to external SMTP.

## Installation Checklist

The steps to install SelectSurveyNET are as follows:

- 1. [Download and Unzip files.](#)  
Copy "files to copy to IIS" to web server.
- 2. [Place files on Web Server and Configure Web Server.](#)  
Configure IIS root folder as an application to use .Net 4.6.1 Framework application pool.
- 3. [Configure your database.](#)  
Write down connection string for next step.
- 4. [Edit the WEB.CONFIG.](#)  
Enter your database connection string into the web.config. Edit other keys with your customized information. Enter **LICENSE KEY** in space provided or you will see free trial message. License key is generated in your customer account page on classapps.com on the product download page.
- 5. **Login to set Global Application Settings after logging in with the browser.**  
Adjust default settings in the "admin tools" > "application wide settings" with the

web browser.

## Detailed Instructions for above steps:

### Place Files on Web Server and configure IIS.

#### 1. **Download and Unzip files.**

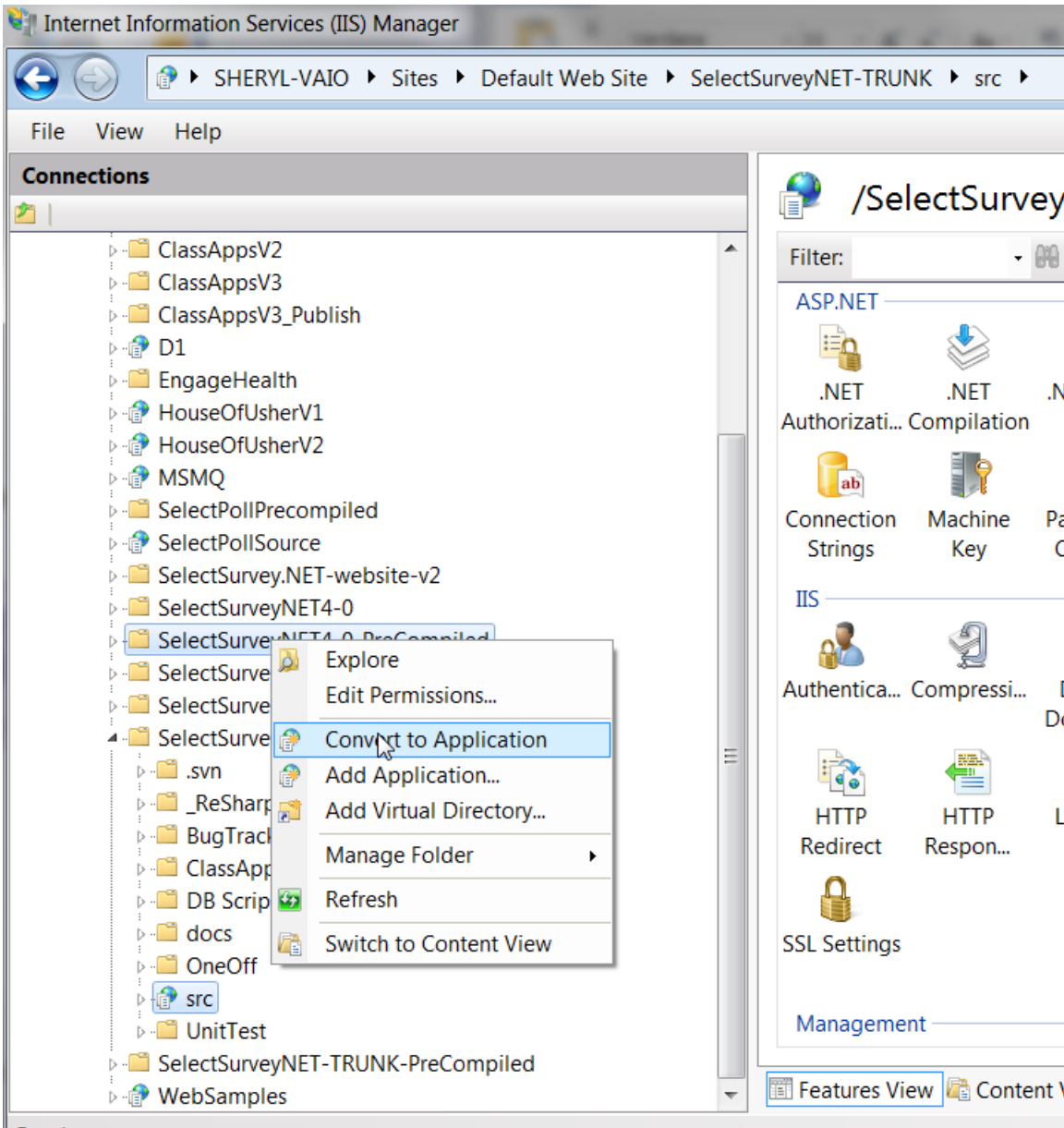
Unzip the files to a temporary directory. The zip file contains a folder of files to copy to the web server titled "**Files to copy to IIS**", and a folder containing the solution project file and source code titled "**Source Code**" for development and customizations.

#### 2. **Place files on Web Server and Configure Web Server.**

Copy the files inside the folder "Files to copy to IIS" to either your root web site folder or create a virtual directory in IIS that points to where you put the files, with whatever name you choose. Right click the folder in IIS 7 and click "convert to application". Select ".net 4.5 application pool".

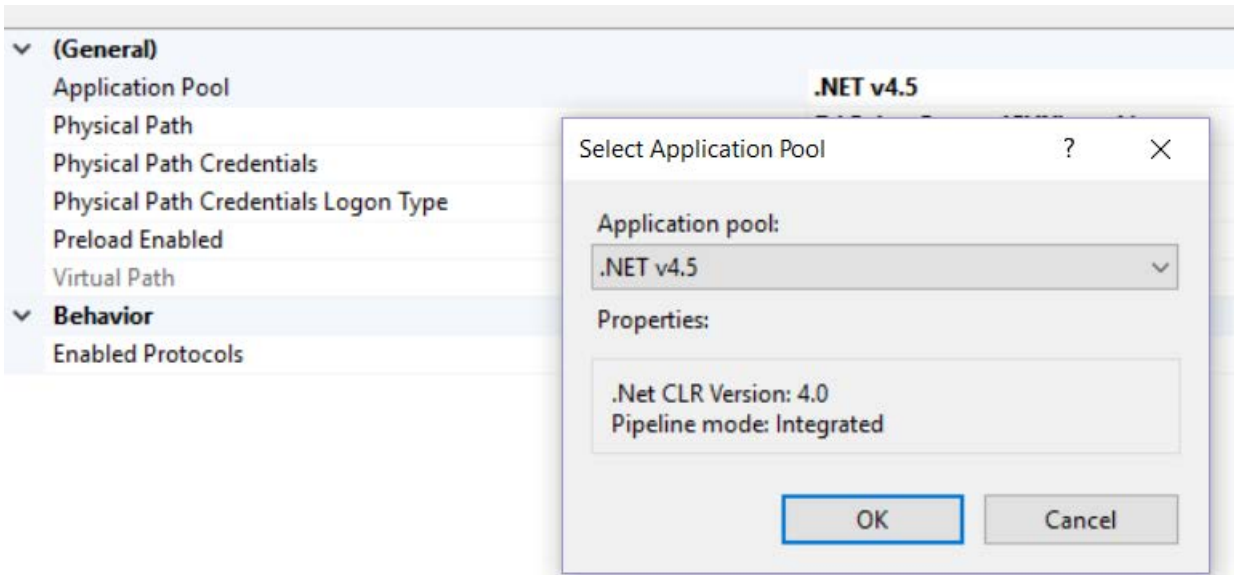
**SelectSurvey.NET uses Microsoft .net 4.5 Framework.**

**Note for Hosted Environment:** If your hosting provider does not allow you to configure a sub folder or virtual directory as an "application" you will have to put the application in the top or root folder of your web site or ask the hosting provider to configure the folder for you.



Convert the web folder to an application in IIS7

figure 1 (Internet Information Services (IIS) Manager 7)



Set Application Pool to .NET 4.6.1 in IIS7.

Also, make sure the Default.aspx page is set as the default document:

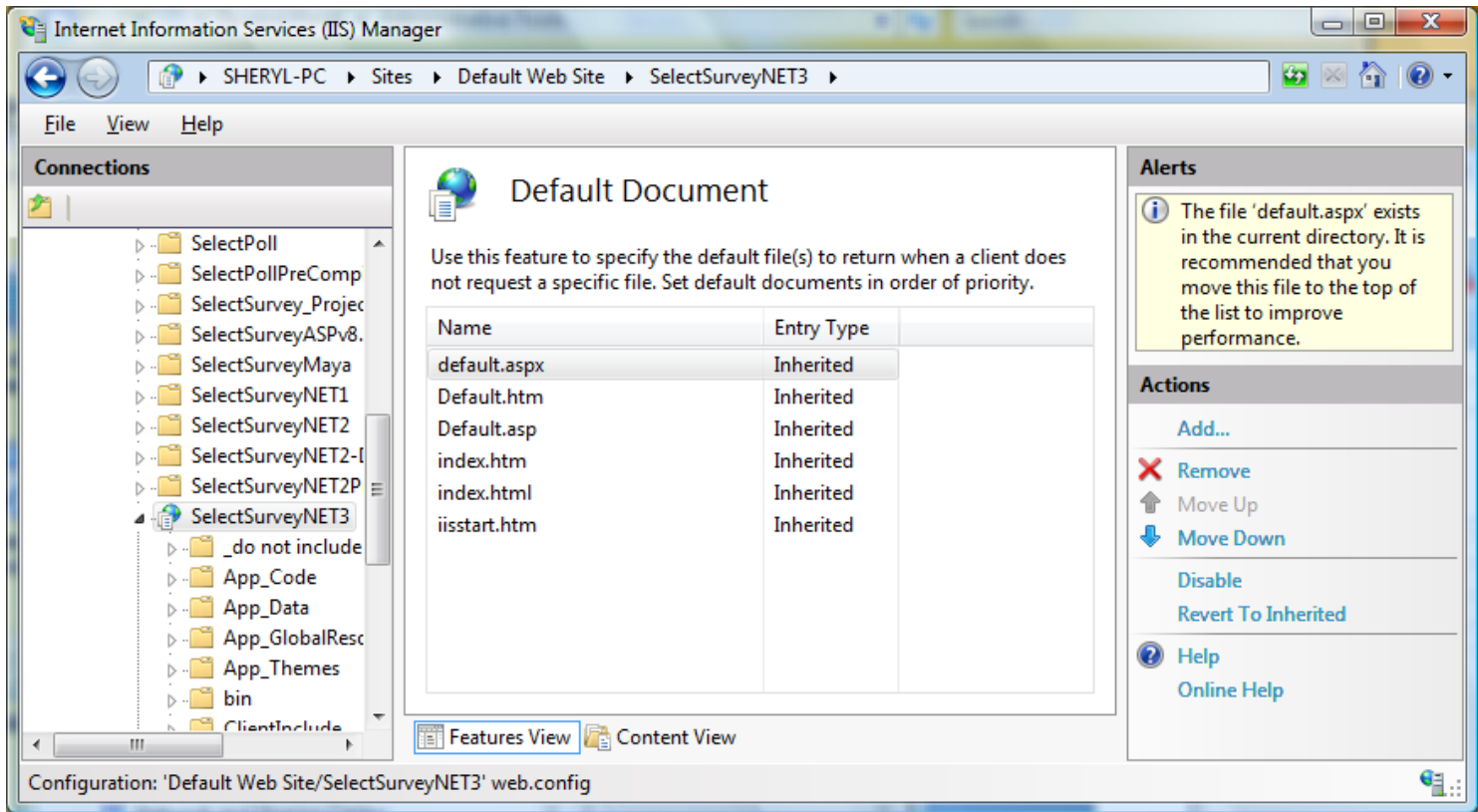


figure 2 (Internet Information Services (IIS) Manager 7)



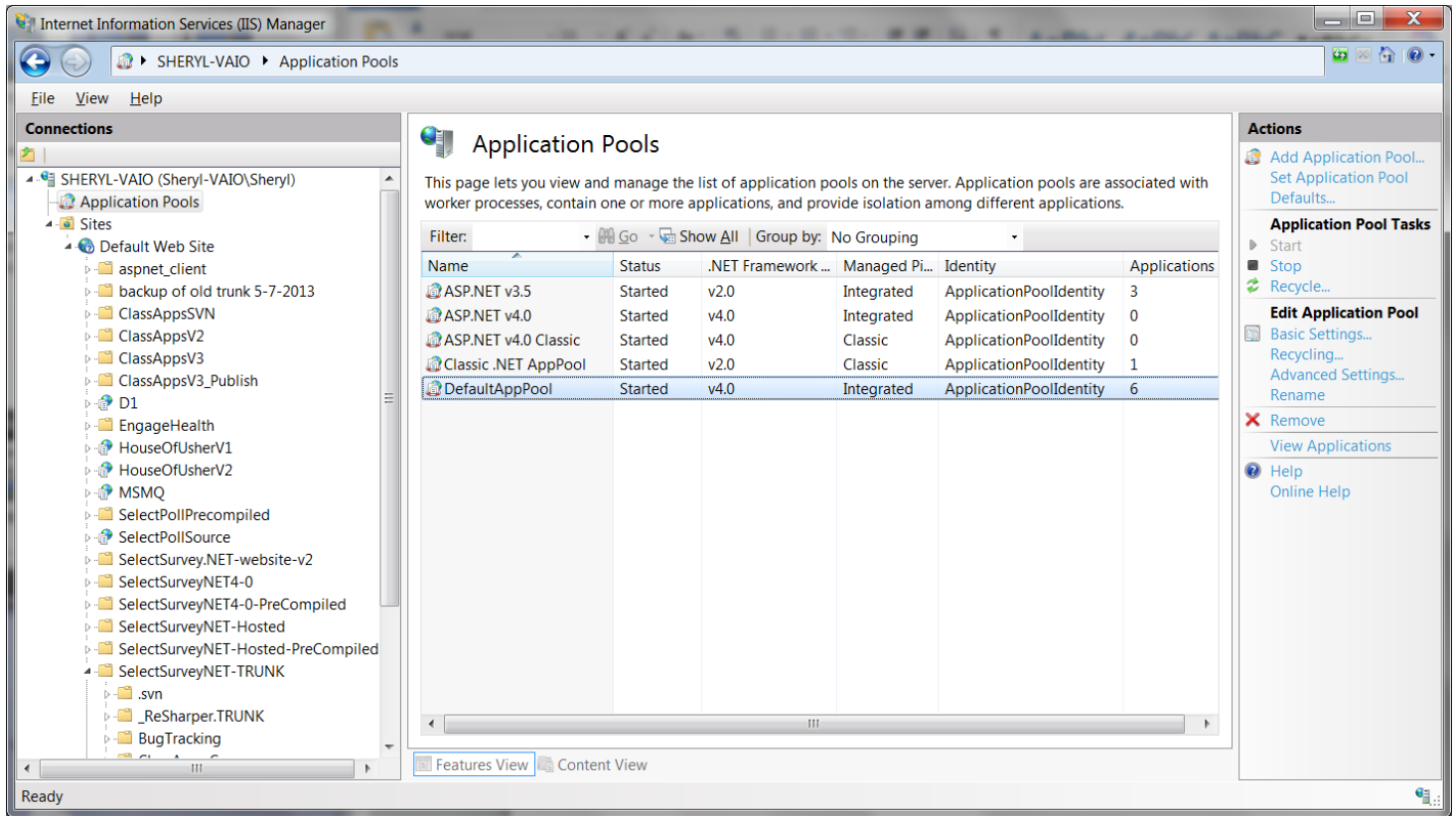
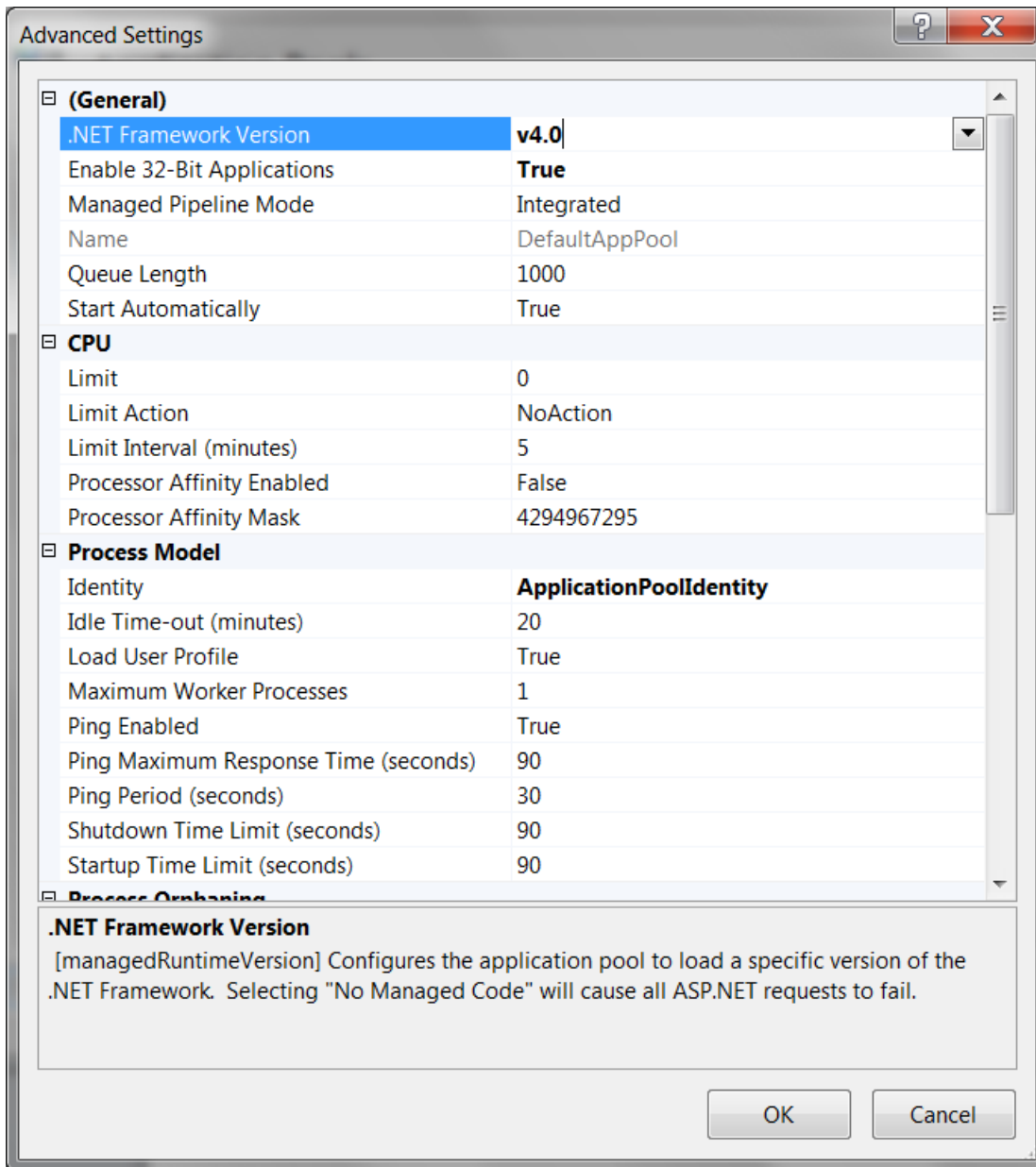


figure 3 (Internet Information Services (IIS) Manager 7)



IIS7 Application pool settings for 64 bit servers: Set Enable 32-bit applications = True.

## Configure the Database.

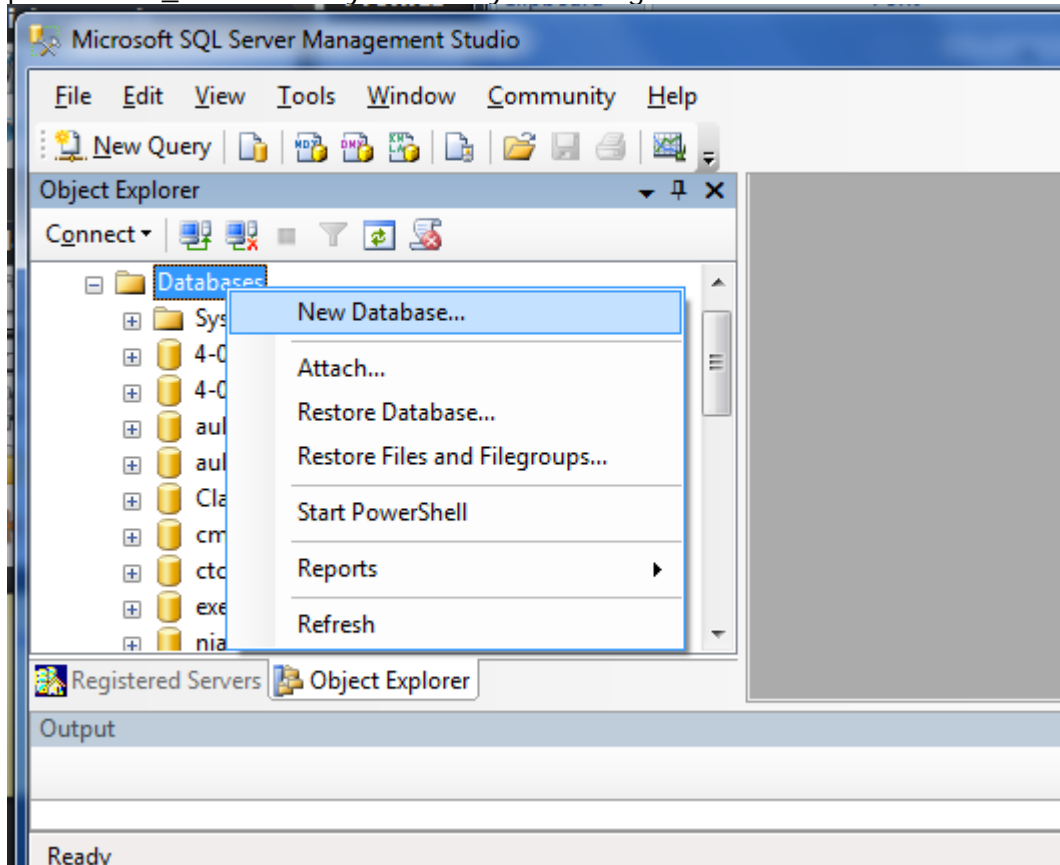
### 3. Configure your database.

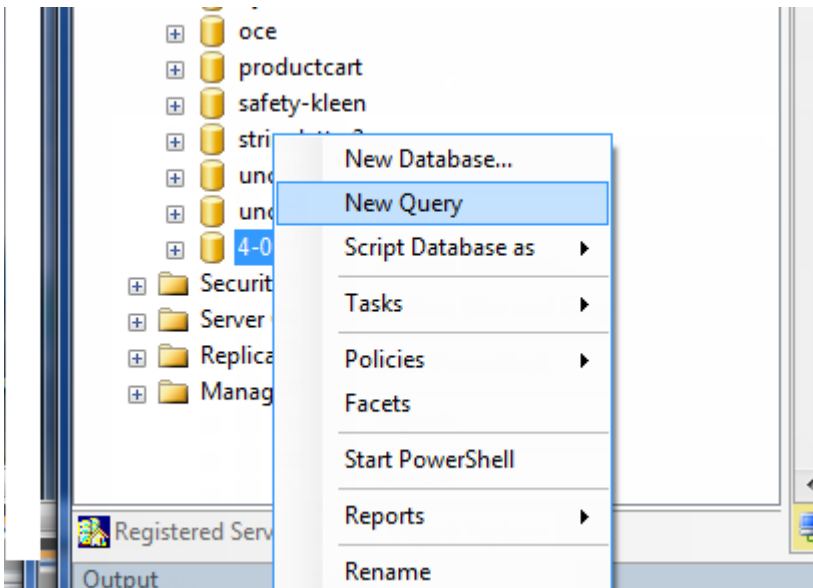
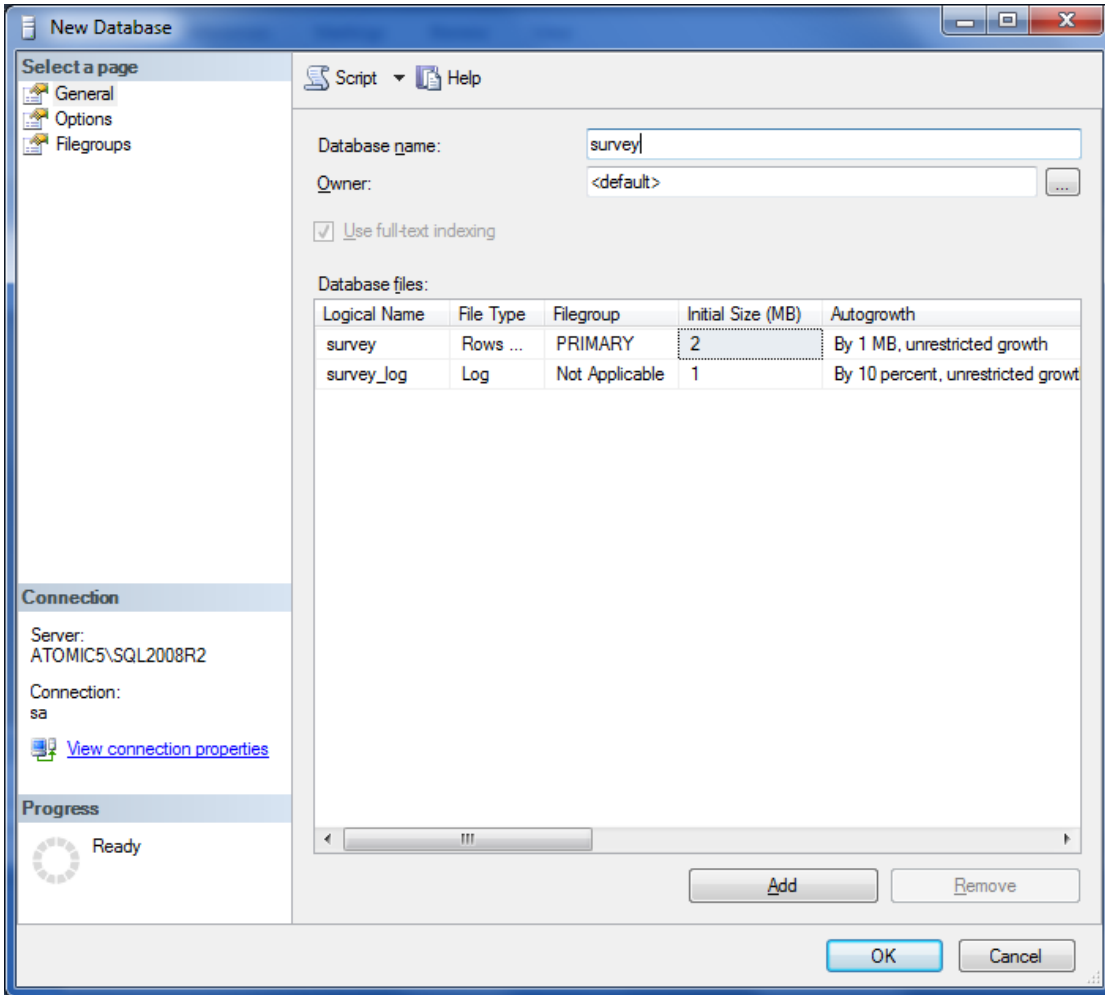
There are three required steps for each type of database. Please refer to the appropriate section, below. Use the page: "debugdatabaseconnection.aspx" which you can open in the browser where the survey app is installed to test your connection string below by pasting the "Value" from the key in the web.config into the textbox provided (without the quotes around it), then clicking the "test connection" and "test permissions" buttons to test. The red text below the test buttons will indicate whether your database

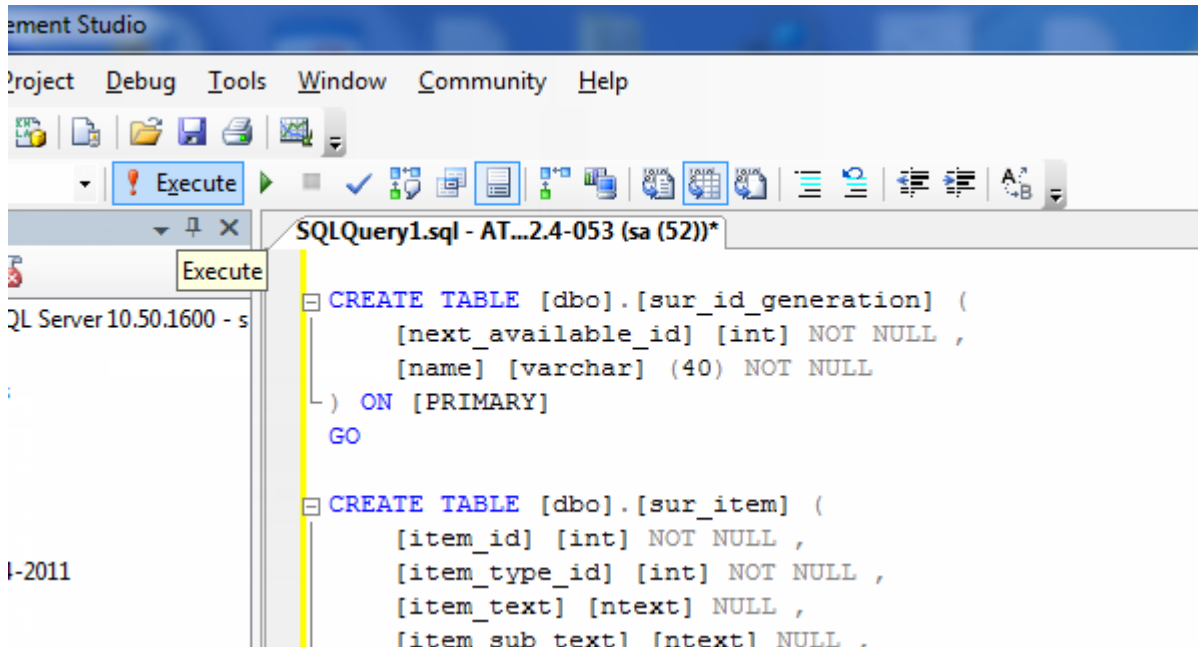
connection string is correct format or not. After you get a successful test, copy the value back into your web.config, then save your web.config.

*SQL Server 2005 or later required (2012 recommended)*

- a. At this point, you may want to optionally create a new database for the application. If you decide not to create a new database and to use an existing database instead, note that all table names have the prefix "SUR\_" so that they can easily be distinguished from other tables in the database.







- b. Load the tables into the database. The script for the tables is located in the file, "SelectSurveyNETTables.txt," which is located in the "SelectSurveyNET\Documentation\MSSQLScripts\MSSQL 2000 2005 and 2008\New Install " directory. The best way to load the tables is to open Microsoft Query Analyzer, open the file, "SelectSurveyNETTables.txt," from Query Analyzer, and execute.
- c. Load the required meta data into the database. The script for the meta-data is located in the file, "SelectSurveyNETData.sql," which is located in the "SelectSurveyNET\Documentation\MSSQLScripts\MSSQL 2000 2005 and 2008\New Install " directory. The best way to load the meta-data is to open the file, "SelectSurveyNETData.txt," from Microsoft Query Analyzer, and execute it.
- d. Update web.config:
 

```
<add key="SUR_DATABASE_TYPE" value="SQLServer" />
<add key="SURVEY_APP_DB_DRIVER" value="SqlClient" />
<add key="SURVEY_APP_ACTIVELY_CLOSE_CONNECTIONS" value="true" />
<add key="SURVEY_APP_CONNECTION"
value="Server=YourSQLServerNameOrIP;Database=SelectSurveyNET;Trusted_Connection=yes;"
/>
```

(use your connection string credentials, the above is an example only)

## MySQL

- a. Create a new Database.

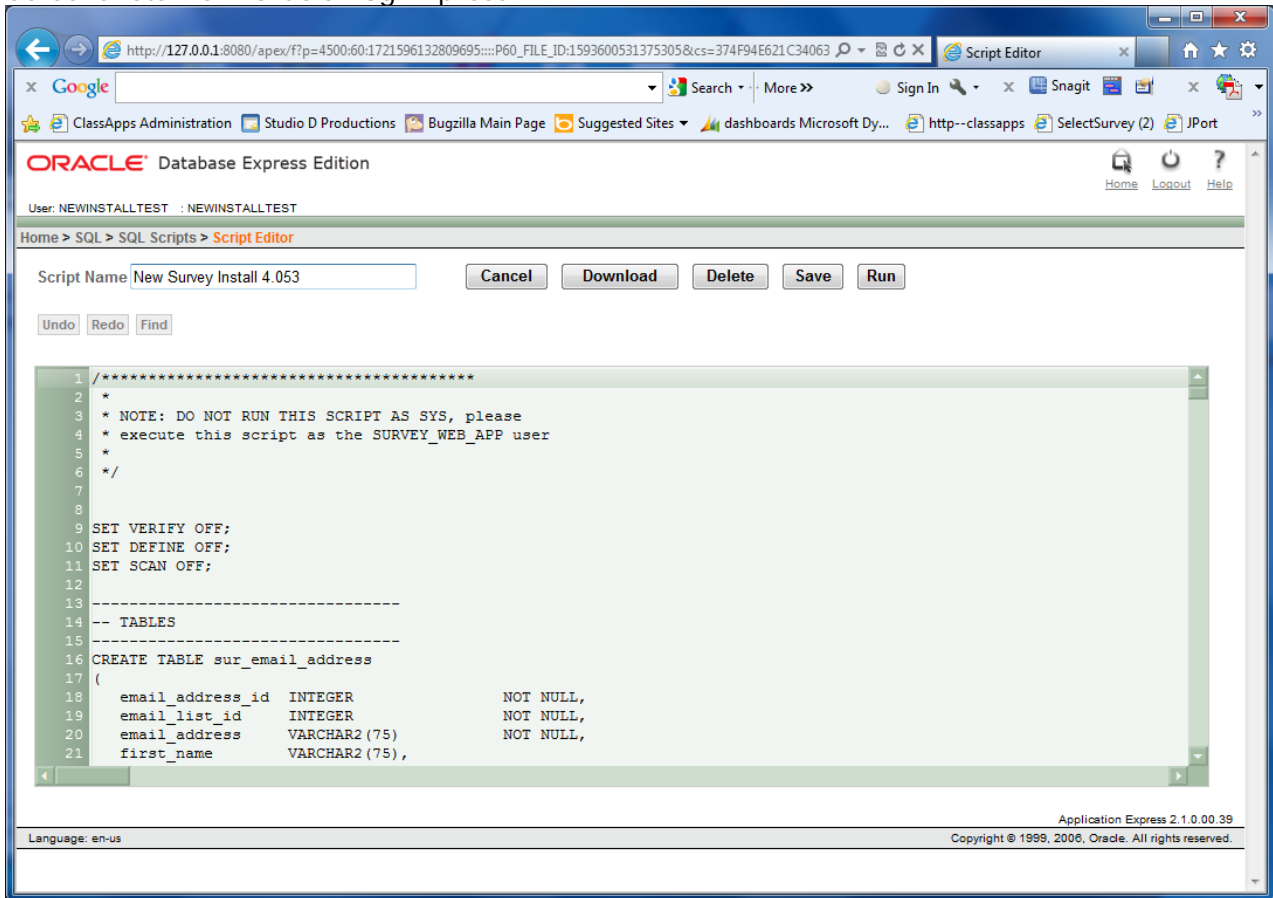
- b. Create a new User for your database.
- c. Assign your new user full rights on your new database.
- d. Run the sql script on your database to create the tables.
- e. Update web.config:

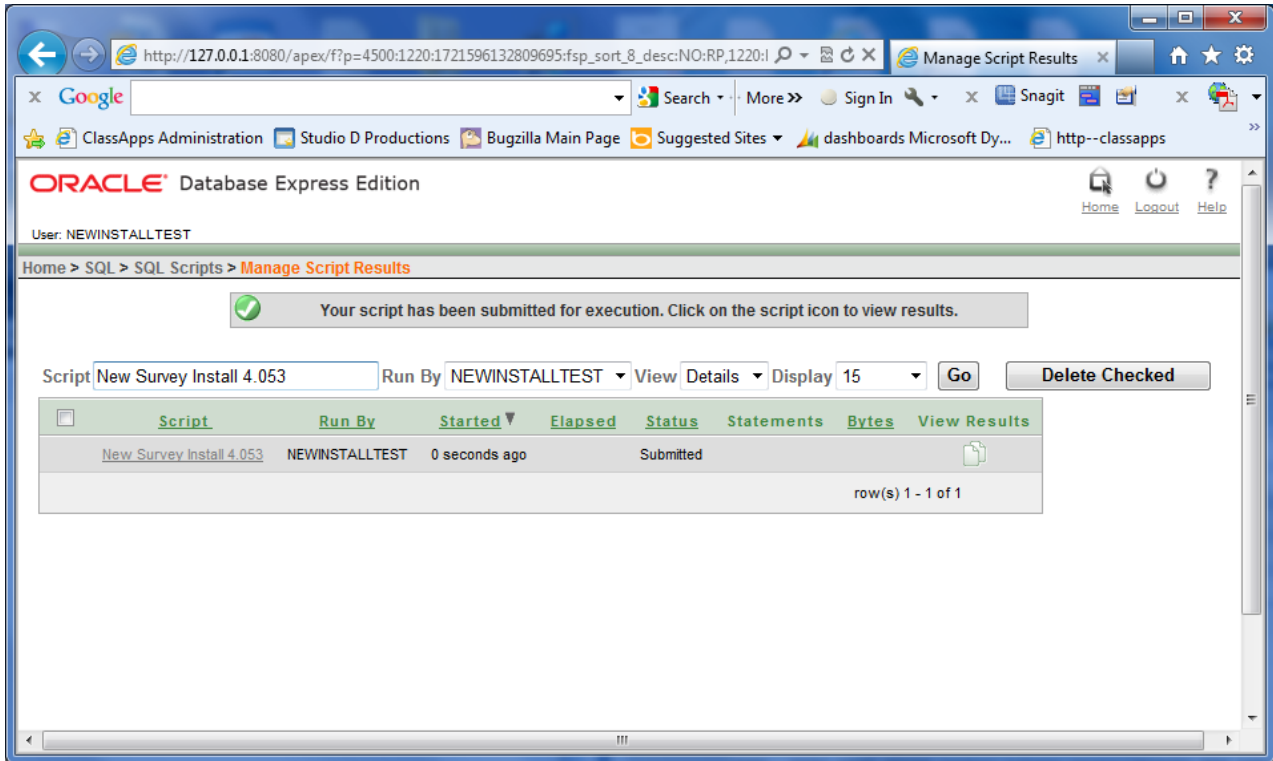
```
<add key="SUR_DATABASE_TYPE" value="MySQL" />
<add key="SURVEY_APP_DB_DRIVER" value="MySql" />
<add key="SURVEY_APP_ACTIVELY_CLOSE_CONNECTIONS" value="true" />
<add key="SURVEY_APP_CONNECTION"
value="database=neil;server=localhost;uid=neil;password=neil;pooling=false;" />
```

(use your connection string credentials, the above is an example only)

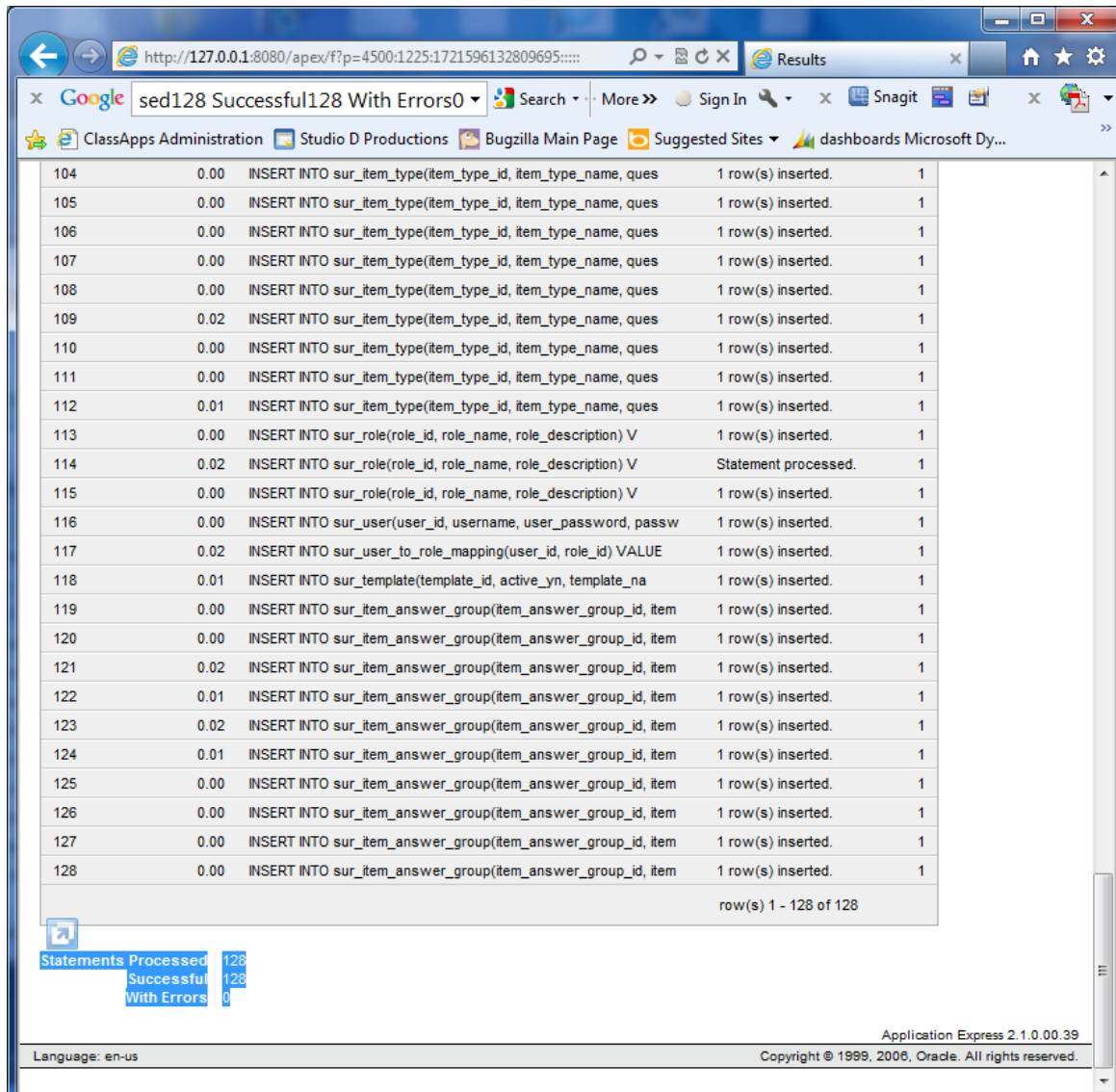
### Oracle

- a. Run scripts located in the "Documentation/Oracle Scripts" folder to create the tables and default data. Screenshots from Oracle 10g Express:





Number	Elapsed	Statement	Feedback	Rows
1	1.04	CREATE TABLE sur_email_address ( email_address_id INTE	Table created.	0
2	0.03	CREATE INDEX ix_sur_email_address_list ON sur_email_addr	Index created.	0
3	0.13	CREATE TABLE sur_email_list ( email_list_id INTEG	Table created.	0
4	0.03	CREATE TABLE sur_email_message ( email_message_id	Table created.	0
5	0.00	CREATE INDEX ix_email_message_list ON sur_email_message(	Index created.	0
6	0.02	CREATE TABLE sur_email_sent_history ( email_sent_histor	Table created.	0
7	0.00	CREATE INDEX ix_sur_email_history_message ON sur_email_s	Index created.	0
8	0.00	CREATE INDEX ix_email_sent_history_address ON sur_email_	Index created.	0
9	0.03	CREATE TABLE sur_hidden_field ( hidden_field_id	Table created.	0
10	0.02	CREATE INDEX ix_hidden_field_sur_id ON sur_hidden_field(	Index created.	0
11	0.01	CREATE TABLE sur_id_generation ( next_available_id INT	Table created.	0
12	0.03	CREATE TABLE sur_ip_address ( ip_address_id INTEGE	Table created.	0
13	0.13	CREATE TABLE sur_item ( item_id INTEG	Table created.	0
14	0.05	CREATE TABLE sur_item_answer ( answer_id INT	Table created.	0



Line	Time	Statement	Rows	Errors
104	0.00	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
105	0.00	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
106	0.00	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
107	0.00	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
108	0.00	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
109	0.02	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
110	0.00	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
111	0.00	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
112	0.01	INSERT INTO sur_item_type(item_type_id, item_type_name, ques	1 row(s) inserted.	1
113	0.00	INSERT INTO sur_role(role_id, role_name, role_description) V	1 row(s) inserted.	1
114	0.02	INSERT INTO sur_role(role_id, role_name, role_description) V	Statement processed.	1
115	0.00	INSERT INTO sur_role(role_id, role_name, role_description) V	1 row(s) inserted.	1
116	0.00	INSERT INTO sur_user(user_id, username, user_password, passw	1 row(s) inserted.	1
117	0.02	INSERT INTO sur_user_to_role_mapping(user_id, role_id) VALUE	1 row(s) inserted.	1
118	0.01	INSERT INTO sur_template(template_id, active_yn, template_na	1 row(s) inserted.	1
119	0.00	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
120	0.00	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
121	0.02	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
122	0.01	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
123	0.02	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
124	0.01	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
125	0.00	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
126	0.00	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
127	0.00	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
128	0.00	INSERT INTO sur_item_answer_group(item_answer_group_id, item	1 row(s) inserted.	1
			row(s) 1 - 128 of 128	

Statements Processed: 128  
 Successful: 128  
 With Errors: 0

Application Express 2.1.0.00.39  
 Copyright © 1999, 2006, Oracle. All rights reserved.  
 Language: en-us

- b. Use "Oracle" as the database type <add key="SUR\_DATABASE\_TYPE" value="Oracle"/>
- c. Update web.config:

```
<add key="SUR_DATABASE_TYPE" value="Oracle" />
<add key="SURVEY_APP_DB_DRIVER" value="OleDb" />
<add key="SURVEY_APP_ACTIVELY_CLOSE_CONNECTIONS" value="true" />
<add key="SURVEY_APP_CONNECTION" value="Provider=OraOLEDB.Oracle;Data
Source=127.0.0.1;User Id=survey_web_app;Password=survey_web_app;pooling=false;" />
```

(use your connection string credentials, the above is an example only)

- d. The driver Oracle 11g ODAC 11.1.0.7.20(or later) must be installed on the web server even if database is on another server. you can install it from <http://www.oracle.com/technology/software/tech/windows/odpnet/utilsoft.html>






- e. Set environment variable "TNS\_ADMIN" on web server to point to the oracle network configuration files.

Ensure your database connection string is correct before continuing (see screenshot below). Use the page: "debugdatabaseconnection.aspx" which you can open in the browser where the survey app is installed to test your connection string below by pasting the "Value" from the key in the web.config into the textbox provided (without the quotes around it), then clicking the "test connection" and "test permissions" buttons to test. The red text below the test buttons will indicate whether your database connection string is correct format or not. After you get a successful test, copy the value back into your web.config, then save your web.config.





SelectSurvey.NET

**Debug Database Connection**

This page allows you to test your database connection string during the installation process.

[Page Help](#)

**Go to Survey List**

### Debug Database Connection

#### Admin Configuration

##### Admin Database Connection Debug Page

This page is for administrators to test database connection settings. All inner exception errors will show in red text below form. Please refer to install manual for more information in configuring database.

**GENERAL:** Possible causes for database connection problems:

- 1) typo in web.config connection string
- 2) make sure in web.config that "SUR\_DATABASE\_TYPE" value matches database you are using.
- 3) make sure datetime settings in web.config are correct (go to datetime debug page to test).

**SQL SERVER:**

A) SQL Server is 2005 and has wrong "provider" example connection string for sql server2005: "Provider=SQLNCLI;Server=127.0.0.1;Database=dbname;UID=username;PWD=P@ssw0rd;"

B) if SQL Server was set to windows authentication only login mode connection string will need to include: Integrated Security=SSPI

C) Make sure you have the database driver you are specifying installed on your server.

D) Microsoft reference for setting permissions: <http://support.microsoft.com/kb/247931/en-us>

**MS ACCESS:**

A) Make sure folder and database file have write permissions by ASP.NET account

B) You might need to restart iis for new permissions to take affect

C) Give "Network Service" machine account Modify permissions on the database folder in Windows Server 2003.

**MySQL:**

A) Make sure the MySQL.Data.dll in the application bin folder is compiled to work in medium trust.

B) Use a connection string for the native MySQL .net connector driver per the example in the web.config

C) Activate the Cherry City OLEDB driver (required). [Go to MySQL Activation Page](#)

Enter connection string (not encrypted):

Encrypted Connection string:

Decrypted Connection string:

Click below button to test connection string from above:

Testing Results Message:

Successful insert, update and delete performed.

Copy web.config connection string into box provided to test.

Results of test show here:

**Note:** if you are using iis 7 or greater, you can use the built in “Application Settings” tool in the Internet Information Services Manager (see figure A and B below) instead of manually editing the web.config, alternatively you can manually edit the web.config per the instructions for iis 6 or earlier below:

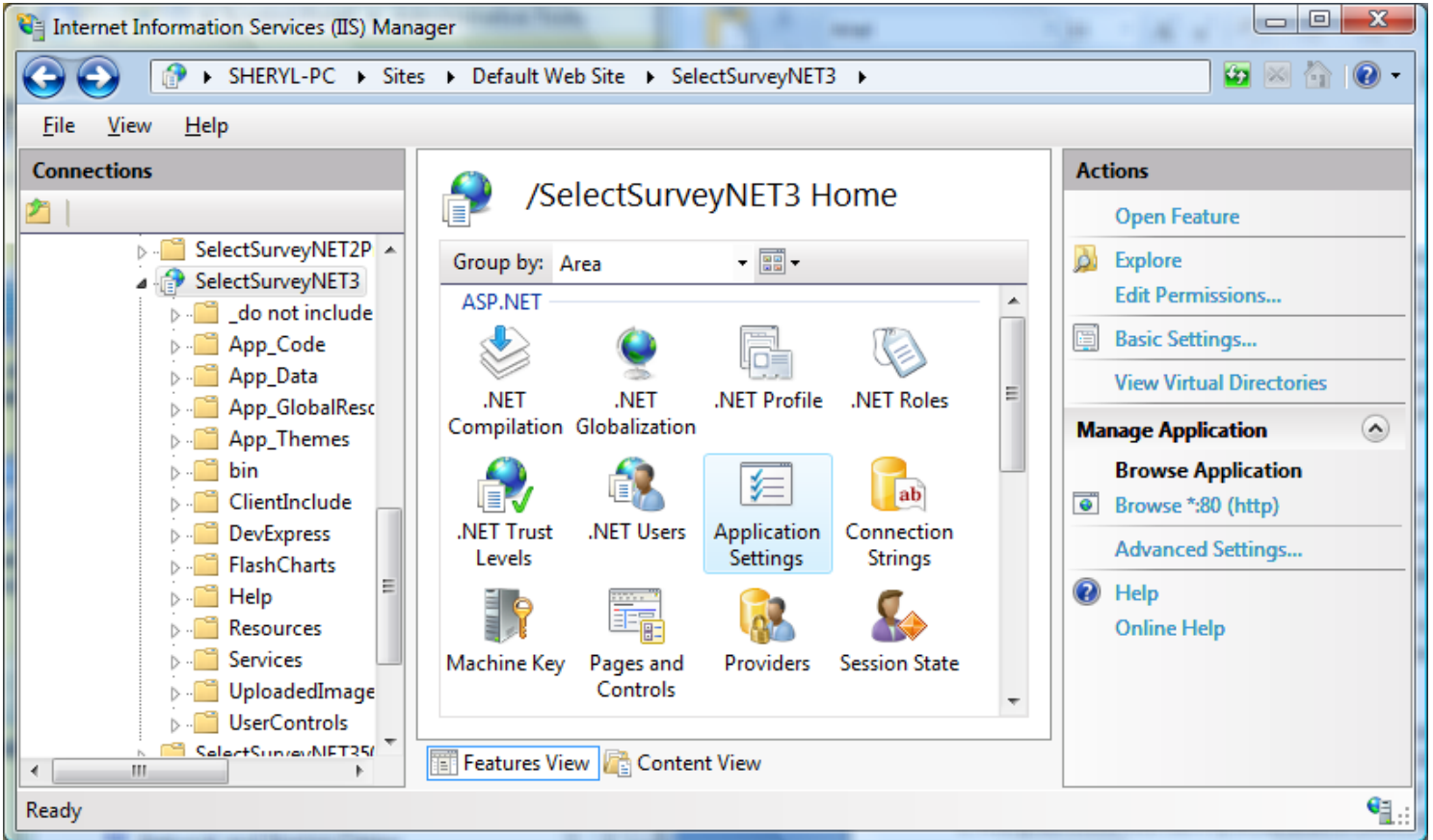


Figure A (Internet Information Services (IIS) Manager 7)

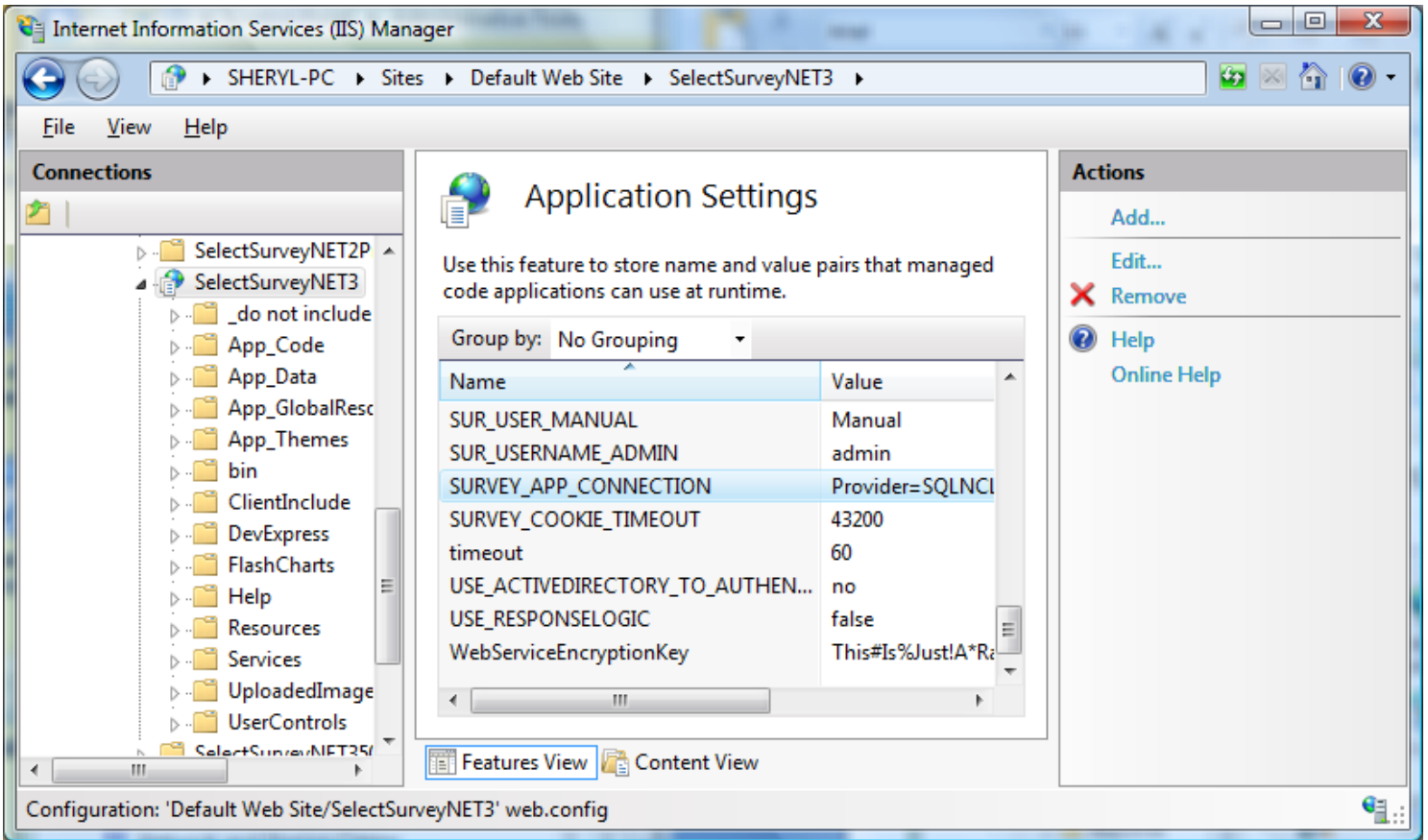


Figure B (Internet Information Services (IIS) Manager 7)

## Edit WEB.CONFIG file for SMTP.

- Edit the WEB.CONFIG file (required) with textpad or notepad to set email parameters.**  
Also in the file, "Web.config," there are several constants under the heading "EMAIL CONFIG VARIABLES". SelectSurveyNET utilizes the System.Web.Mail namespace included in the .NET Framework for sending email. Read the comments in the web.config for how to set these values. The below email constants can be set in the Web.config file:

```

<mailSettings>
  <smtp>
    <!-- host should be "smtp.yourisp.com", some isp have different
port, check with them, update your username and pass below -->
    <!-- defaultCredentials="true" remove if error or timeout -->
    <network host="127.0.0.1" port="25" userName="username"
password="password" defaultCredentials="true" />
  </smtp>
</mailSettings>

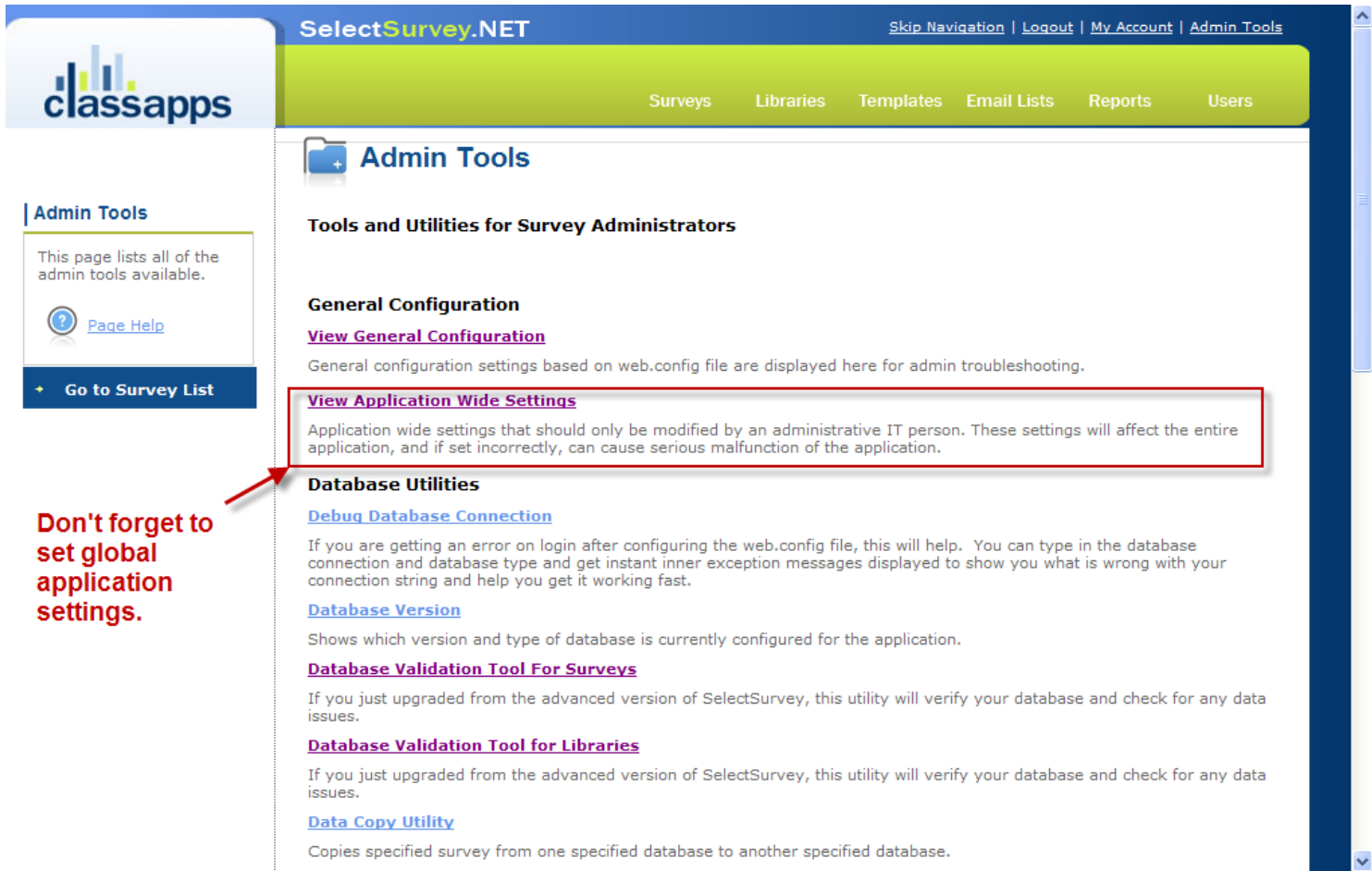
```

## Edit WEB.CONFIG set LICENSE KEY and remaining keys.

- 5. Edit the WEB.CONFIG to add in license key settings.** Set values for all other web.config settings, which would include license keys for any add-ons you purchased. To obtain the license key for different add-ons or products, login to your customer account page on classapps.com and click "purchased products" which is where your license keys are listed. Some products require you to click a button "generate" to generate a license key based on your production URL which you type in on the customer account page. If you are seeing a "15 day trial" message then you have not properly generated a license key, or your customer ID is not in the database correctly.  
REQUIRED: Customer ID must be in application wide settings page or you will see a "15 day trial" message despite having a valid key. The customer ID is checked against the key and is required.
- 6. Open the page in the browser "DebugDatabaseConnection.aspx" and test the database connection string.** Copy the database connection string from the web.config file: "SURVEY\_APP\_CONNECTION" into the textbox provided. Click "test connection" and "test permissions" to ensure your database settings are correct before continuing.

## Configure Application Wide Settings

- 7. Login to the application with a browser to set other global application settings to test configuration using "admin/admin" as username and password.** By default, the application has a single user entered in the SUR\_USER table. The username for this default user is "admin" and the password is also "admin." This account has been granted full administrative rights to the entire application, and should not be deleted. Use this username/password to log into the application the first time. Once logged in as "admin," or if logged in as any account with "admin" level permissions, you can create other user accounts.  
Use this login to make the global application settings below. Click the "admin tools" white text link in the upper right corner of the application to get to the page in the below screenshot. Click "View Application Wide Settings", on this page you can view and edit those settings. (Note: These settings were previously in the web.config in earlier versions of the application and have since been moved into the database for easier management.)



**Admin Tools**

This page lists all of the admin tools available.

[Page Help](#)

[Go to Survey List](#)

**Admin Tools**

**Tools and Utilities for Survey Administrators**

**General Configuration**

[View General Configuration](#)

General configuration settings based on web.config file are displayed here for admin troubleshooting.

[View Application Wide Settings](#)

Application wide settings that should only be modified by an administrative IT person. These settings will affect the entire application, and if set incorrectly, can cause serious malfunction of the application.

**Database Utilities**

[Debug Database Connection](#)

If you are getting an error on login after configuring the web.config file, this will help. You can type in the database connection and database type and get instant inner exception messages displayed to show you what is wrong with your connection string and help you get it working fast.

[Database Version](#)

Shows which version and type of database is currently configured for the application.

[Database Validation Tool For Surveys](#)

If you just upgraded from the advanced version of SelectSurvey, this utility will verify your database and check for any data issues.

[Database Validation Tool for Libraries](#)

If you just upgraded from the advanced version of SelectSurvey, this utility will verify your database and check for any data issues.

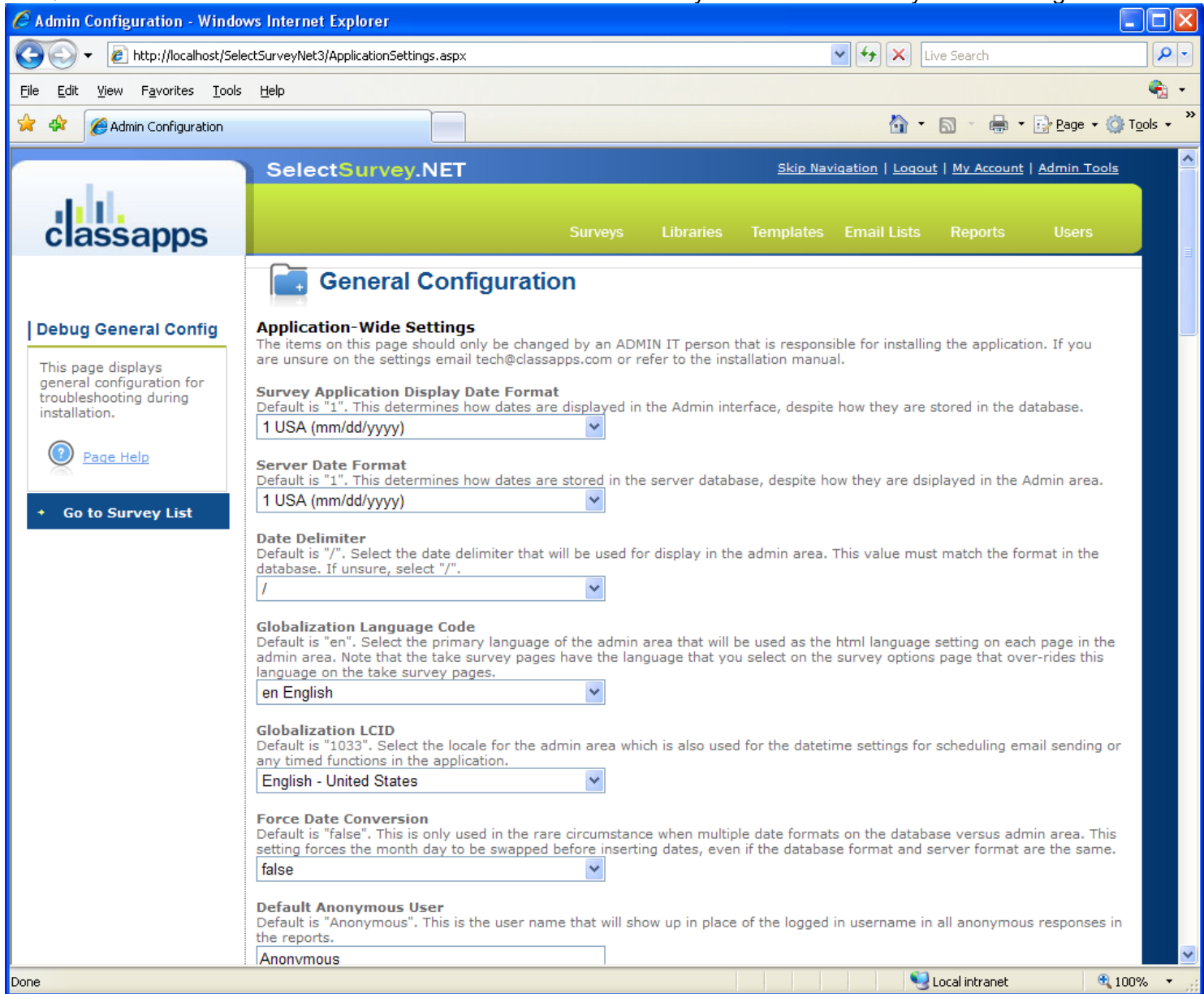
[Data Copy Utility](#)

Copies specified survey from one specified database to another specified database.

**Don't forget to set global application settings.**

8. **Edit and Save global application settings in the admin tools “View Application Wide Settings” page.** Follow the information on that page above each field for a description of what that setting is for.

REQUIRED: CUSTOMER ID must be in the customer ID field or you will see a “15 day trial” message.



## Configure Permissions for File upload and JS on Server.

9. **Additional web server configuration.** If you are installing the application on Windows 2003, you must make the following change:
  - a) By default, Windows 2003 locks down most file extensions, except for certain types of files. This is different than previous versions of Microsoft operating systems. The survey application contains a number of JavaScript routines, all of which are in a file with a .js extension. To enable the .js file type,

you simply edit the MIME types either at the Global IIS level or the individual site or virtual directory level. Add the .js as an application/x-javascript type, and everything should work fine. If your application is hosted with an ISP, simply ask them to enable files with a .js extension, and they will readily understand the request and how to respond to it.

10. **Configure server for file upload.** Configure for maximum file upload if you are using the “file upload” feature of the “presentation image” question type which allows survey creators to upload images to the “UploadedImages” folder on the web server to be referenced in their surveys. Follow the below steps for setting permissions on the UploadedImages folder and configuring the web.config to set the file size limitations.

**Set permissions on the folder:** In order for the survey creator to upload an image from their local workstation to the web server, the UploadedImages folder must have proper write permissions. You can also change the location of this folder by setting the web.config parameter:

```
<!-- IMAGE UPLOAD FOLDER FOR SURVEY TEMPLATES AND EMAIL MESSAGES FOR IMAGE UPLOAD FROM
HTML RICH TEXT BOX
      this folder must have correct permissions to allow image upload.
      reference article:
http://aspalliance.com/336\_Upload\_Files\_Using\_AspNet\_Impersonation\_and UNC\_Share.all -->
      <add key="IMAGE_UPLOAD_FOLDER" value="~/UploadedImages" />
```

First, right-click on the folder where the ASP.NET files should be uploaded and select Properties from the provided menu. The Properties dialog for the selected folder opens. Click the Security tab to make sure the ASP.NET Machine Account is included in the list and has the proper permissions to write to disk. If it is enabled, you see something similar to what is presented in Figure 2.



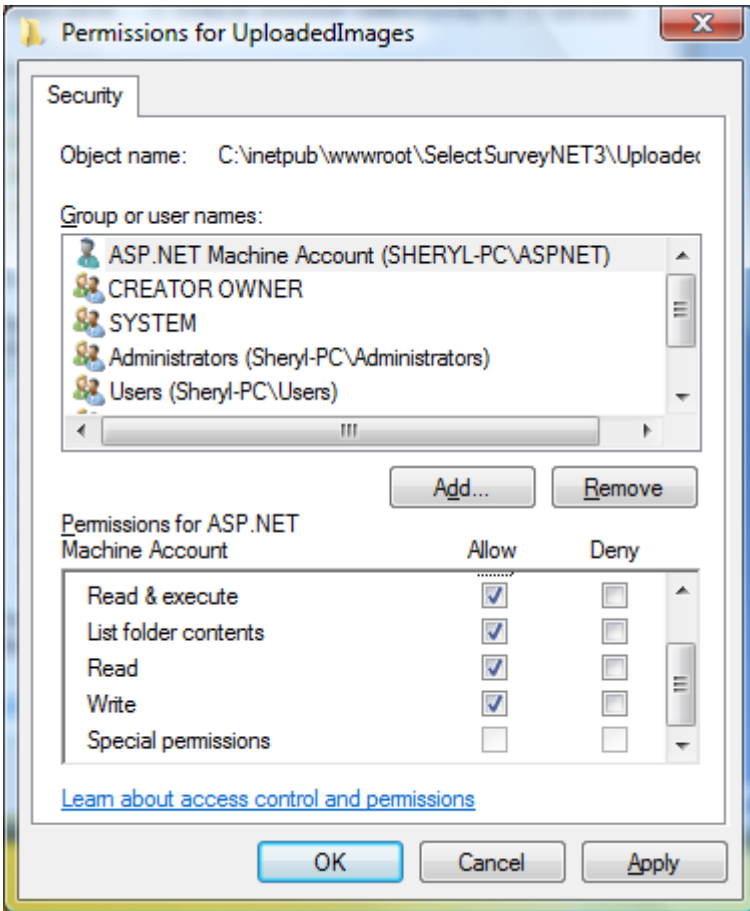


Figure 2 (IIS 7)

If you don't see the ASP.NET Machine Account in the list of users allowed to access the folder, add ASP.NET by clicking the Add button and entering ASPNET (without the period) in the text area provided (see Figure 3).

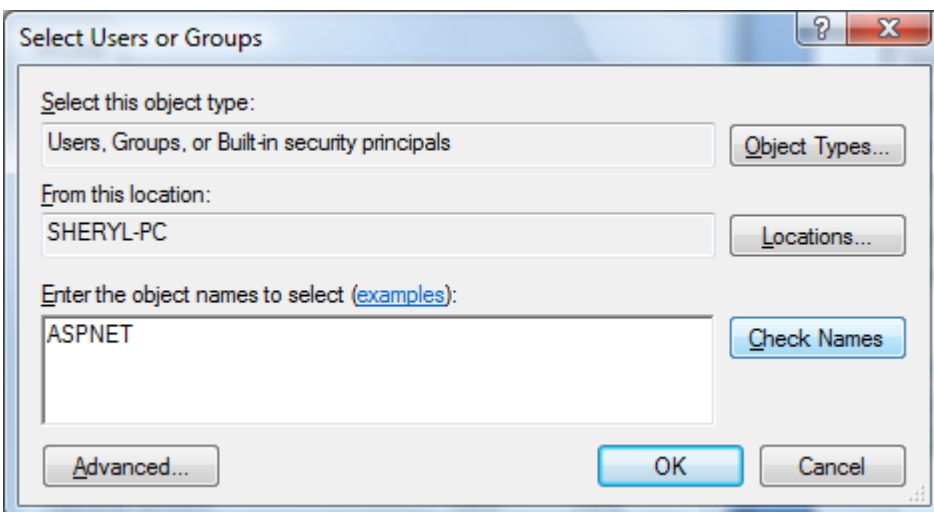


Figure 3 (IIS 7)



Click OK, and you can then click the appropriate check boxes to provide the permissions needed for your application.

**Set maximum file size in admin tools “application wide settings”:** Login as admin into the survey application with the browser. Click “admin tools”. Click “View Application wide settings”. Maximum file size setting is on this page along with all the other application wide settings.

#### **Set file size limitation in the Web.Config file:**

Note that any size of 4MB requires the below setting in web.config to also be changed since ASP.NET default file upload limit is 4MB. Set the `maxRequestLength` to the KB size limit you desire (20000 is approx 20MB). If you are setting to a large value, you must also raise the `executionTimeout` setting, which is in seconds, or it will timeout before the file is uploaded, causing an error on the server.

```
<httpRuntime executionTimeout="90" maxRequestLength="20000"
useFullyQualifiedRedirectUrl="false" requestLengthDiskThreshold="8192"/>
```

If you continue to get an error on uploading files over 4MB after changing the above setting, then you may need to also update the `machine.config` and `web.config.comments` file in the folder:

*C:\WINDOWS\Microsoft.NET\Framework\v3.5.50727\CONFIG*

## Support

Go online to <http://www.classapps.com/support.asp> to the support page, where you can fill out a support ticket and find contact information.



## Appendix A: Application Pooling

**Platform:** IIS6.0 with Windows Server 2003

**Symptoms:** Session timeout and session loss even when user is active.

**Cause:** Microsoft introduced several new features into Windows 2003/IIS6 web server that affect how sessions and application pools are handled. Most web hosting companies host multiple websites in the same application pool. When resources are maxed out for an application pool IIS 6 starts to recycle these sites causing application variables to be lost for those recycled sites.

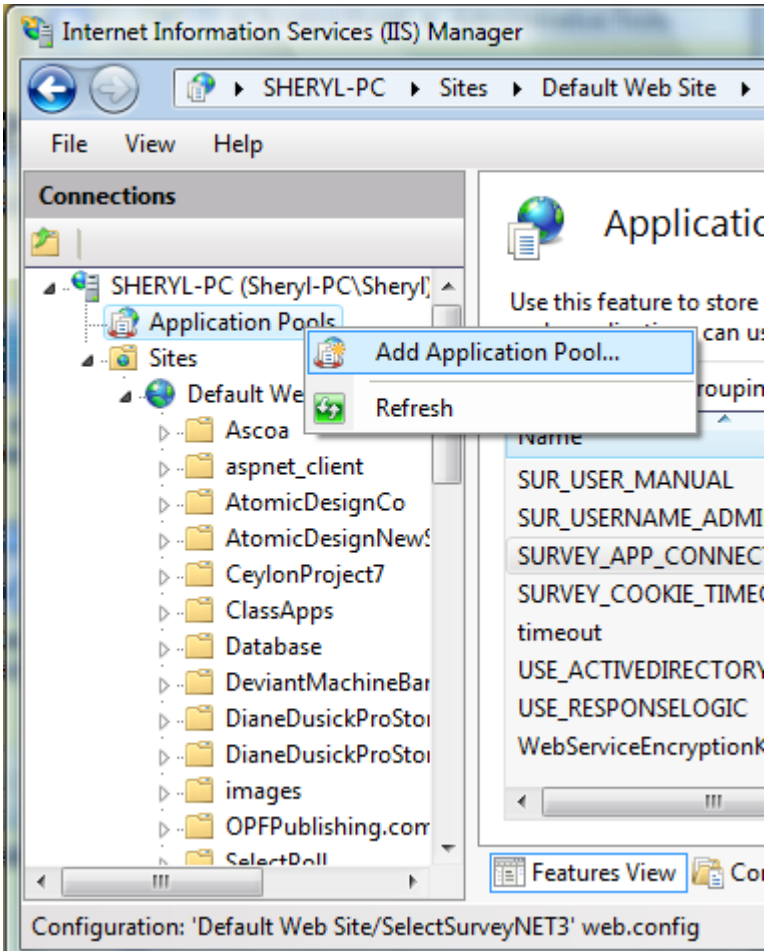
**Solution:**

If you are experiencing application/session loss symptoms then we would recommend asking your web hosting company to place you in your own application pool with all recycling options disabled and the recycle worker process set to recycle only once during the day at a set time.

Below are the instructions to do this:

**Step 1:**

Add new application pool for Select Survey Application.

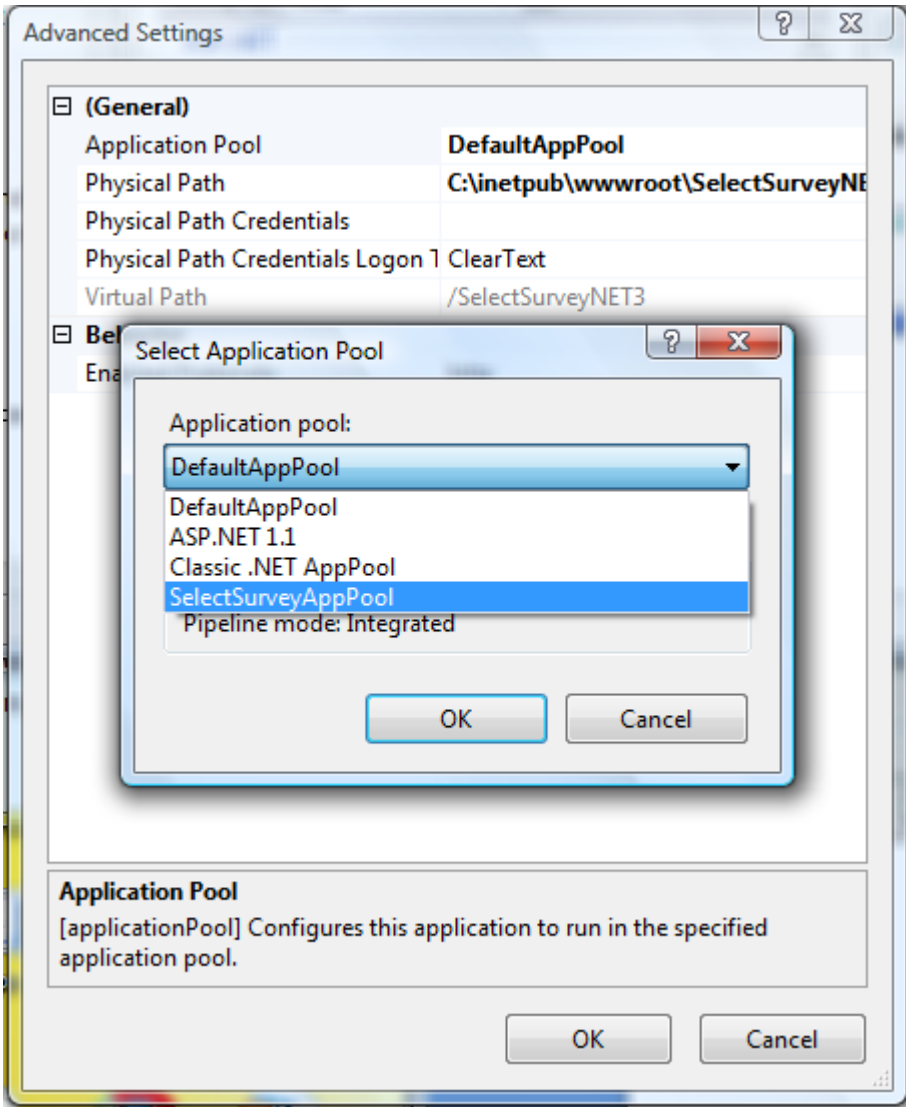


(IIS 7)

**Step 2:**

Choose your own application pool in the web site properties.

Done.



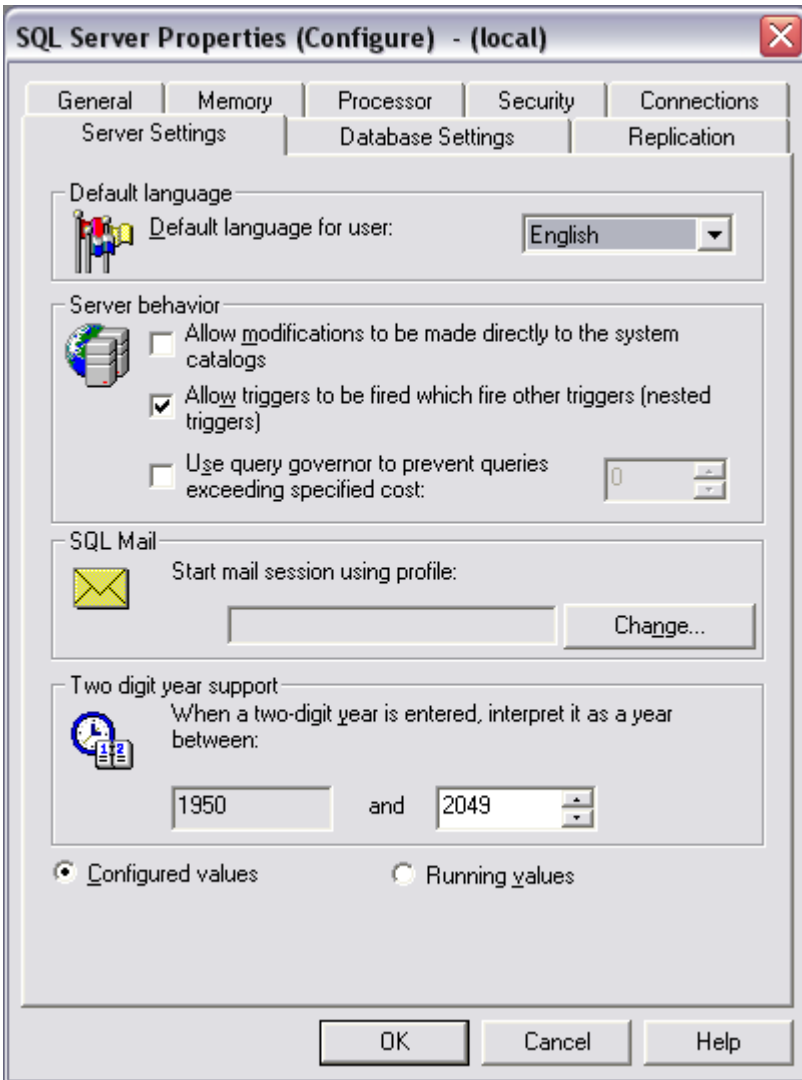
(IIS 7)

## Appendix B: Notes for different culture/globalization settings

The provided application wide settings date format settings allow you to run the application even if your web server is a different language than your database server.

Click “admin tools” then “application wide settings”.

How to tell what language SQL is running under: Right click on the (local) SQL Server icon in enterprise manager and click “properties”. You will see a dialog box pop up similar to the below screenshot:



The default language here is how you determine how to set the “SERVER\_DATE\_FORMAT” value in the admin tools application wide settings. The above screenshot shows the server as value=“1” for the web.config.

If you need to work beyond the settings provided in the application, please note there are other settings in the machine.config when you install the .net framework and notes for these settings are below:

In order to display different languages and formatting for different parts of the world, there is a section in the machine.config on the web server as well as in the web.config file which contain settings for this.

1. Machine.config may be found on the web server in a directory similar to the following:  
C:\WINDOWS\Microsoft.NET\Framework\v3.5\CONFIG\machine.config

search for the section "globalization Attributes" in the machine.config file that looks like the below and set the values for your country (they should be set as default when the framework is installed to your locale):

globalization Attributes:

requestEncoding="[Encoding value]" - Encoding to use for request

responseEncoding="[Encoding value]" - Encoding to use for response

fileEncoding="[Encoding value]" - Encoding to use for files

culture="[Culture]" - default Thread.CurrentCulture

uiCulture="[Culture]" - default Thread.CurrentUICulture

2. Web.config may be found in the web site root folder for SelectSurveyNET, edit the web.config to match your country language and culture:

```
<!--set culture to match datetime format you want for example "en-GB" is English Great Britain format -->  
<globalization requestEncoding="utf-8" responseEncoding="utf-8" culture="en-GB" />
```

## Appendix C: Integrating with Active Directory and other Login Integration Add-Ons

This application has extra pages coded to work with active directory integration.

There are three modes for Active Directory:

- **NTLM Passthrough:** Application picks up logon\_user identity from IE browser and the login screen is bypassed.
- **Active Directory Login:** Application shows the login page and user enters their network login as their survey login.
- **ADFS:** Active Directory Federated Claims based authentication.
- **COMBO:** SSO Single Sign On combined with NTLM Passthrough (Checks SSO, then NTLM)

There are also alternate login types available:

- **Google Federated Login:** Google openid owin based login authentication.
- **Office 365 Login:** Open ID OWIN based login authentication.

## ADFS – Active Directory Federated Login Integration

Below are the steps for enabling ADFS:

- 1) Make the below changes to the web.config. You can search for the text below – in some cases the text will be commented out (in green) and you will have to uncomment it as shown below. The yellow highlighted areas are where you would put your claims STS URL/information.
  - a. Change "no" to "yes" on "USE\_ADFS\_LOGIN"
  - b. Add STS url to "ADFS\_FEDERATION\_ISSUER"
  - c. Comment out `<location path="Public">` Uncomment `<location path="FederationMetadata">`
  - d. Uncomment `<authentication mode="None" />`
  - e. Add thumbprint and STS name  
to `<add thumbprint="1234567890ABCDEFGHIJKLMNPOQRSTUVWXYZ1234" name="YourSTSName" />`
  - f. TEST

```

<!--
*****
      ADFS ActiveDirectory Federated Login Claims Based Login Integration
*****
-->
<!-- values are "yes" or "no" -->
<add key="USE_ADFS_LOGIN" value="yes"/>

<!-- value should be the URL of your STS -->
      <add key="ADFS_FEDERATION_ISSUER" value="http://EmbeddedSts"/>

<!--setting to turn on display of debug info on the login page to assist with setting up AD integration
(TURN THIS OFF WHEN YOU ARE DONE!)-->
<!--valid values are "on" and "off" when "on" error stack trace and line # info will display on
bottom of AD login page when "off" no info will display. -->
      <add key="AD_DEBUG_MODE" value="off"/>

<!-- for AD FS -->
<!-- <location path="Public"> -->
  <!-- end of AD FS-->
    <location path="FederationMetadata">

<!-- for AD FS -->
  <authentication mode="None" />
  <!-- end for AD FS-->

```



```

<!-- start for AD FS WIF -->
<system.identityModel>
  <identityConfiguration>
    <audienceUri>
      <add value="http://localhost:28503/" />
    </audienceUri>
    <issuerNameRegistry type="System.IdentityModel.Tokens.ConfigurationBasedIssuerNameRegistry,
System.IdentityModel, Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089">
      <trustedIssuers>
        <add thumbprint="1234567890ABCDEFHGHIJKLMNOPQRSTUVWXYZ1234" name="YourSTSName" />
      </trustedIssuers>
    </issuerNameRegistry>
    <certificateValidation certificateValidationMode="None" />
  </identityConfiguration>
</system.identityModel>
<system.identityModel.services>
  <federationConfiguration>
    <cookieHandler requireSsl="false" />
    <wsFederation passiveRedirectEnabled="true" issuer="http://localhost:13922/wsFederationSTS/Issue"
realm="http://localhost:28503/" reply="http://localhost:28503/" requireHttps="false" />
  </federationConfiguration>
</system.identityModel.services>
<!-- END for AD FS WIF-->

```

2) Test. That is the only thing you have to do. Note that if you cannot login, that you can turn on debug mode temporarily by changing the below web.config value, then open browser and try again.

```

<!--setting to turn on display of debug info on the login page to assist with setting up AD
integration (TURN THIS OFF WHEN YOU ARE DONE!-->
<!--valid values are "on" and "off" when "on" error stack trace and line # info will display on
bottom of AD login page when "off" no info will display. -->
<add key="AD_DEBUG_MODE" value="on"/>

```

## How to setup ADFS with SSO

### Prerequisites

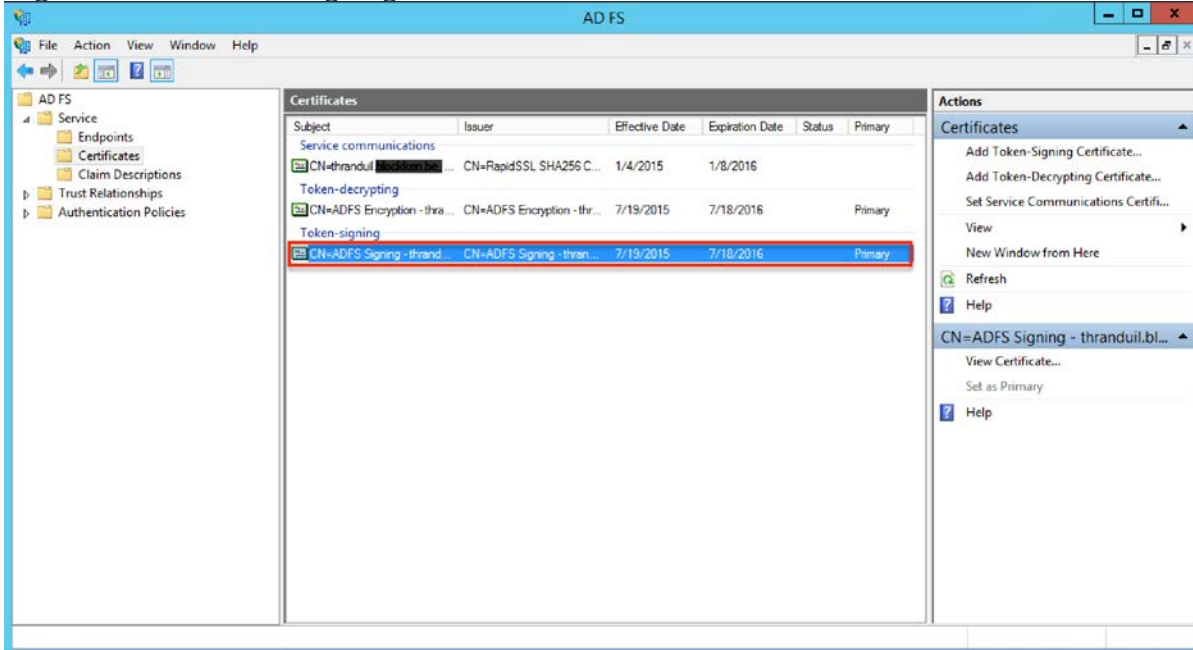
- The ADFS role should be installed and configured correctly. If you are unsure about this, please contact your network's system administrator to assist you.
- The following steps require administrator access to the ADFS server. If you do not have this access, you can provide this guide to your system administrator to perform the necessary steps.
- All users must have an email address added to their Active Directory account.

### Steps to Complete

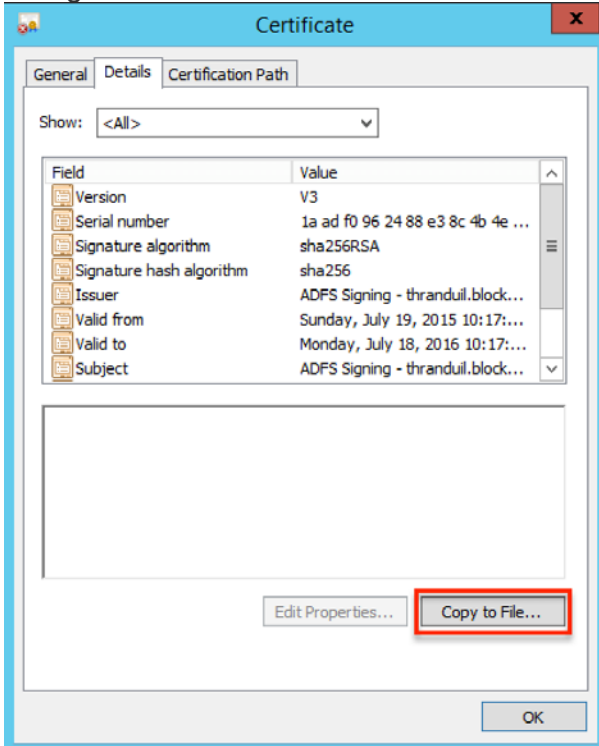
#### Exporting the Token-Signing Certificate

Use the following steps to export the token signing certificate.

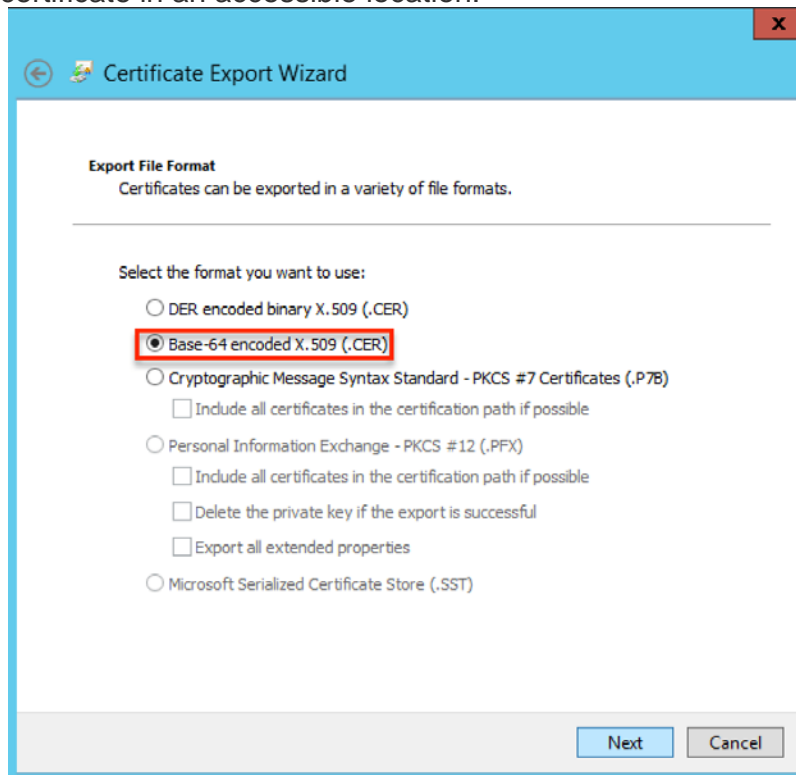
1. Open the ADFS Management console on the ADFS server.
2. In the tree view on the left, navigate to Service > Certificates.
3. Right-click the Token-signing certificate and chose "View Certificate".



4. Navigate to the Details tab and click the "Copy to File" button.



5. In the wizard, select "Base-64 encoded X.509 (.CER)" as the format and follow the wizard to store the certificate in an accessible location.

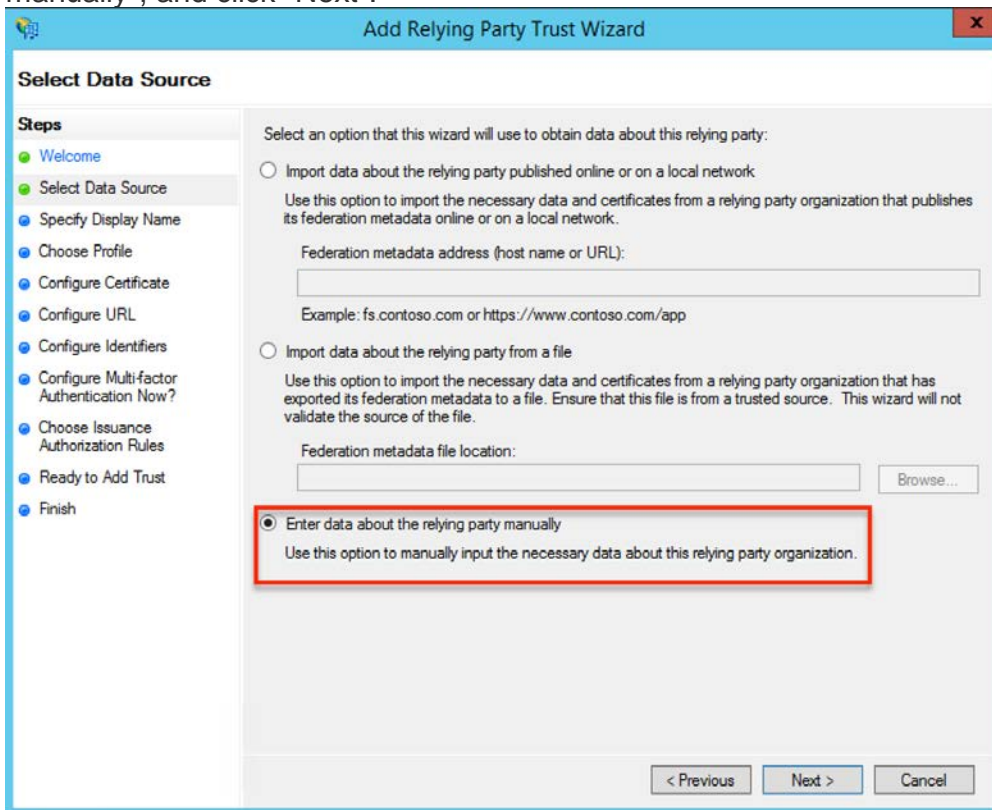


## Configuring a New ADFS Trust Relationship

Use the following steps to configure a new trust relationship between SelectSurvey.NET and ADFS. This allows for communication between the two services.

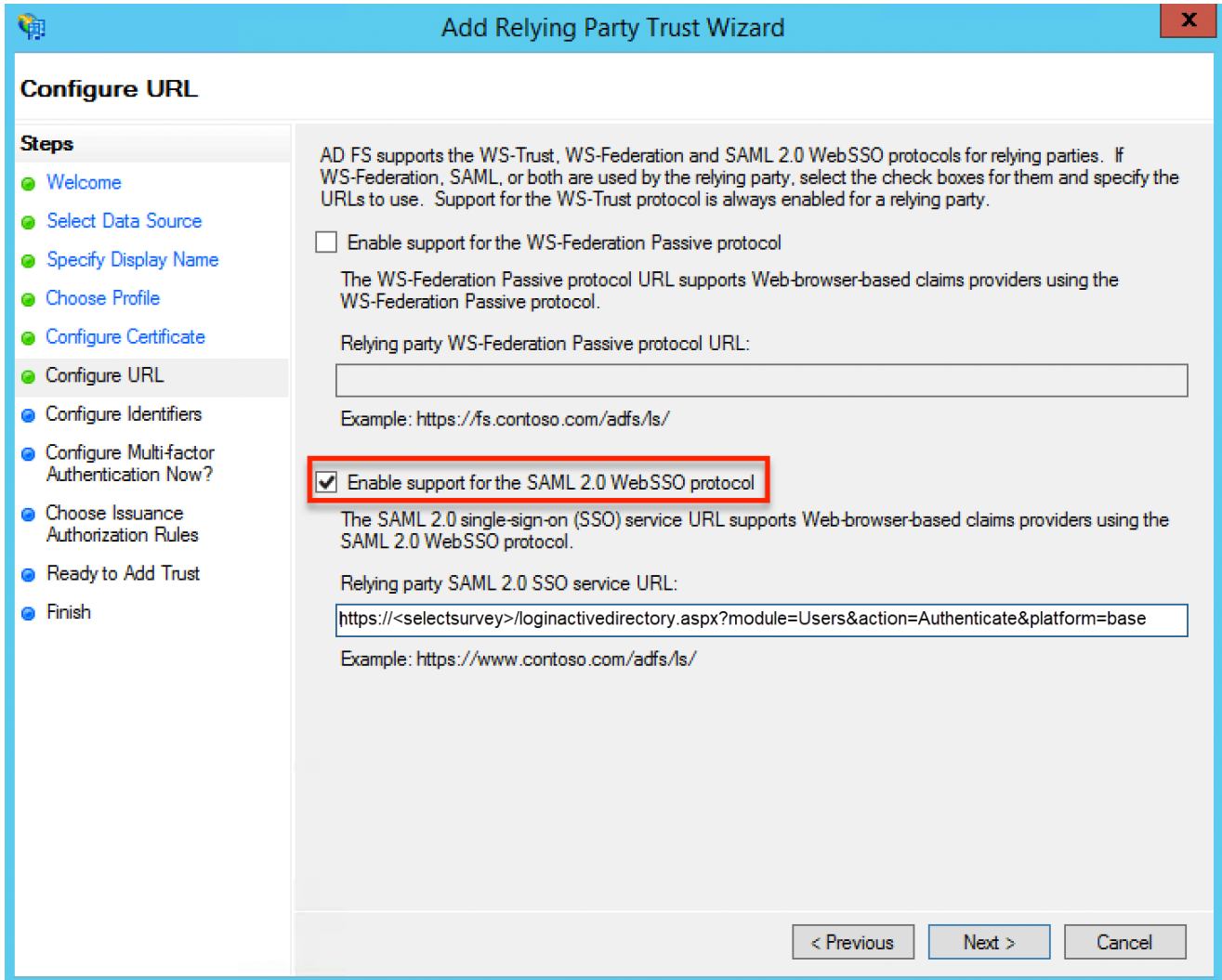
1. In the ADFS Management console, navigate to Trust Relationships > Relying Party Trusts in the tree view.
2. Right-click on "Relying Party Trusts" and chose "Add Relying Party Trust".
3. A wizard will appear. Click "Start" to continue to the next screen.

- On the Select Data Source screen, choose the last option, "Enter data about the relying party manually", and click "Next".



- Enter a display name that will allow you to identify the newly configured trust relationship (e.g. "SelectSurvey " or "SelectSurvey - Production" if you are planning on adding multiple SelectSurvey.NET instances). Click "Next".
- In the profile selection, leave "AD FS profile" selected. This profile has support for SAML 2.0 as required by SelectSurvey. Click "Next".
- Optionally, configure a token encryption certificate. For the purpose of this guide, we will skip this step and click "Next".
- To configure the SelectSurvey endpoint, select "Enable support for SAML 2.0 WebSSO protocol" and enter the following URL in the field:

```
https://<SelectSurvey.NET
url>/LoginActiveDirectory.aspx?module=Users&action=Authenticate&platform=b
ase
```



**Note:** It is important that your instance is protected by SSL and your web server listens on HTTPS. This is required by ADFS, and the wizard will not allow you to continue if this requirement is not met.

Click "Next" to display the Configure Identifiers page. SelectSurvey.NET will use "php-saml" by default. However, you will need to configure a unique identifier if you are planning to add multiple SelectSurvey.NET instances with an individual trust

## Google Federated Login Integration

### Google Apps Federated Login Single Sign-On Service Overview

SelectSurvey.NET provides optional Google Apps Single Sign-On using Google Apps Federated Login Service.



For the Enterprise and the organization that use Google Apps, the Google Apps OpenID API enables a Universal Single Sign-on service that is integrated with **SelectSurvey.NET** survey software.

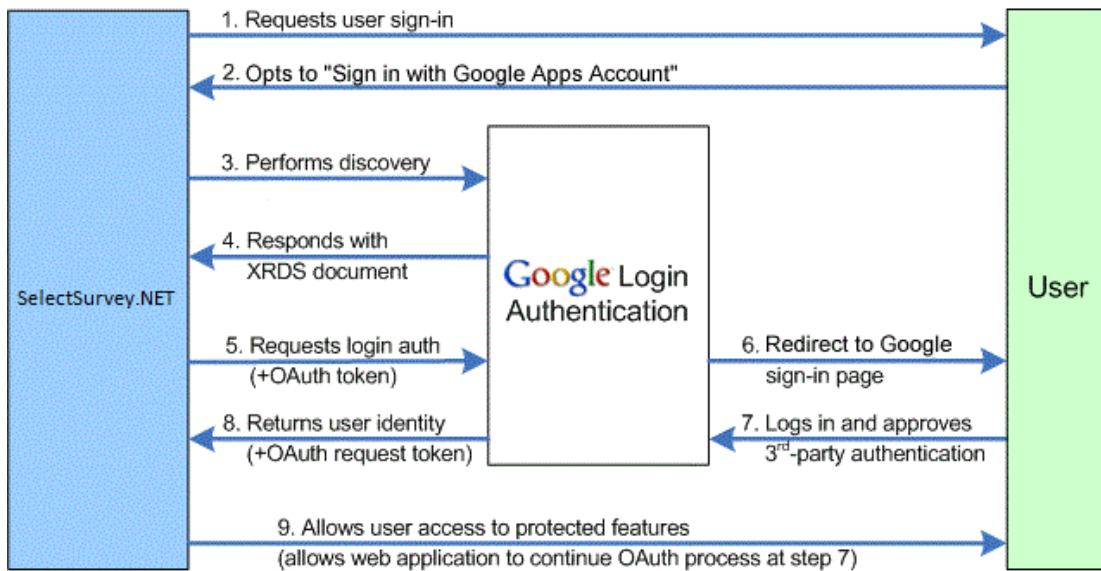
**Note:** The Federated Login Service is disabled by default for Google Apps for Business and Education. The domain admin can enable it from the Control Panel at <http://www.google.com/a/cpanel/<your-domain>/SetupIidp>.

Google Apps offers an OpenID API that allows end users to securely sign in to **SelectSurvey.NET** using their Google Apps user account. The [OpenID](http://openid.net) (<http://openid.net>) standard frees users from having to set up separate login accounts for different web sites--and conversely, frees web site developers from the task of managing login information and security measures. OpenID achieves this goal by providing a framework in which users can establish an account with an OpenID provider, such as a Google Apps hosted domain, and use that account to sign into any web site that accepts OpenIDs.

Google Apps API supports the OpenID 2.0 Directed Identity protocol, allowing any hosted domain to provide authentication support as an OpenID provider. On request from **SelectSurvey.NET**, Google authenticates users who are signing in with an existing Google Apps account, and returns to **SelectSurvey.NET** an identifier that the site can use to recognize the user. This identifier is consistent, enabling **SelectSurvey.NET** to recognize the user across multiple sessions.

## Interaction Sequence

OpenID login authentication for web applications involves a sequence of interactions between **SelectSurvey.NET**, the Google Apps hosted domain, Google domain, Google's login authentication service, and the end user. The diagram and sequence below describe the process as recommended by Google. For simplicity, the diagram covers the flow in which discovery is done on the Google domain.



This image illustrates the following steps.

1. SelectSurvey.NET asks the end user to log in by offering a set of log-in options, including Google Apps accounts.
2. The user selects to sign in using a Google Apps account.
3. SelectSurvey.NET performs discovery as [defined in the documentation](#) to find location of the XRDS document.
4. Google returns an XRDS document, which contains the Google Apps (hosted) domain endpoint address.
5. SelectSurvey.NET sends a login authentication request (optionally with OAuth parameters) to the provided endpoint address.
6. This action redirects the user to a Google Apps account Federated Login page.
7. The user signs into their Google Apps account. Google Apps then displays a confirmation page and asks the user to confirm or reject a set of authentication requests by the web application.

**Note:** In some circumstances the login step or the approval step (or both) may be skipped dependent upon SelectSurvey.NET survey options for survey response types that are set to be anonymous.

8. If the user approves the authentication, Google returns the user to SelectSurvey.NET, and supplies a persistent, opaque identifier that the application can use to recognize the user.
9. SelectSurvey.NET uses the Google-supplied identifier to recognize the user and allow access to SelectSurvey.NET features and data.



## Setup Step 1: Obtaining a Google Token

### 1. Register with Google to Obtain your Token.

SelectSurvey.NET Server Software that is installed on a client's own Domain must be registered with Google and have its own domain token registration. SelectSurvey.NET hosted service already has a token registration with Google because it is hosted on the **SelectSurvey.NET** domain, which has been approved for this.

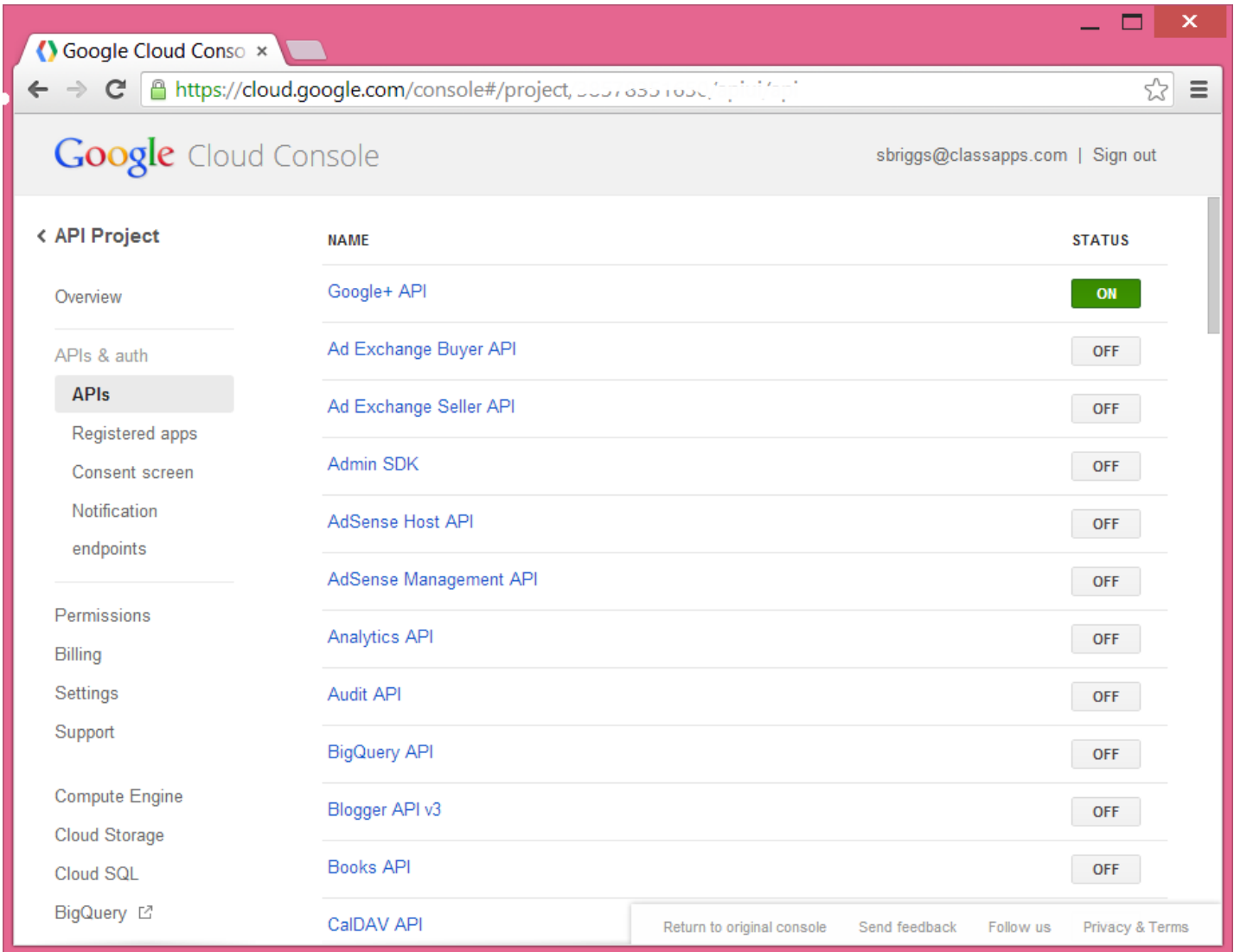
All applications that access a Google API must be registered through the [Google Cloud Console](https://cloud.google.com/console) (<https://cloud.google.com/console>). The result of this registration process is a set of values (such as a client ID and client secret) that are known to both Google and **SelectSurvey.NET**.

*Please refer to the directions from GOOGLE, because they can change this process at any time at their discretion. Below are the general directions for the process at the date of this writing 11-12-2013.*

#### 1. Select API's you need access to.

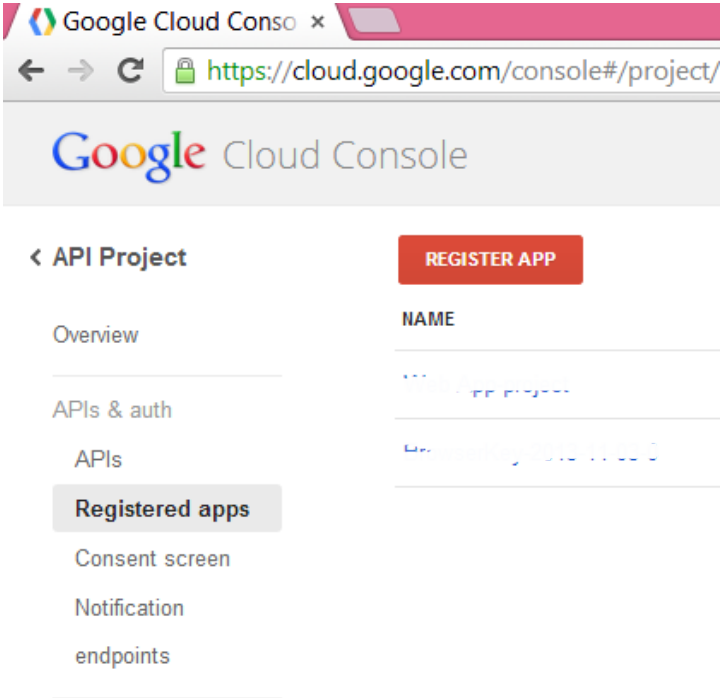
Select **"GOOGLE + API"** as shown in the screenshot below, so that it shows status "ON". This is the only API you need access to for SelectSurvey.NET to utilize the Google Apps Login feature. All other API status will show "OFF".



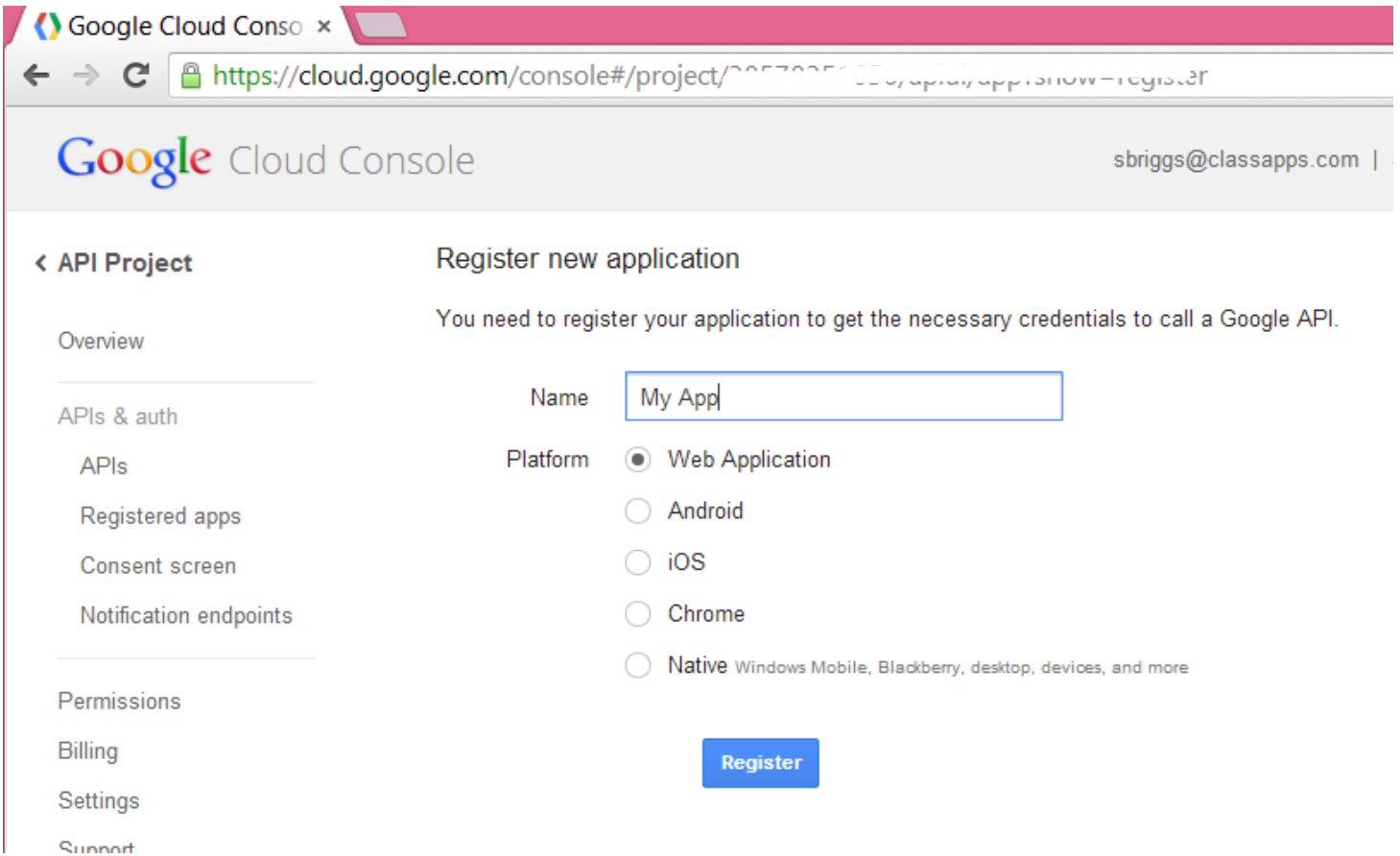


## 2. Register the Web App.

After logging in to the `cloud.google.com/console`, click "REGISTER APP" it is a red button at the top of the screen as shown in the screenshot below:



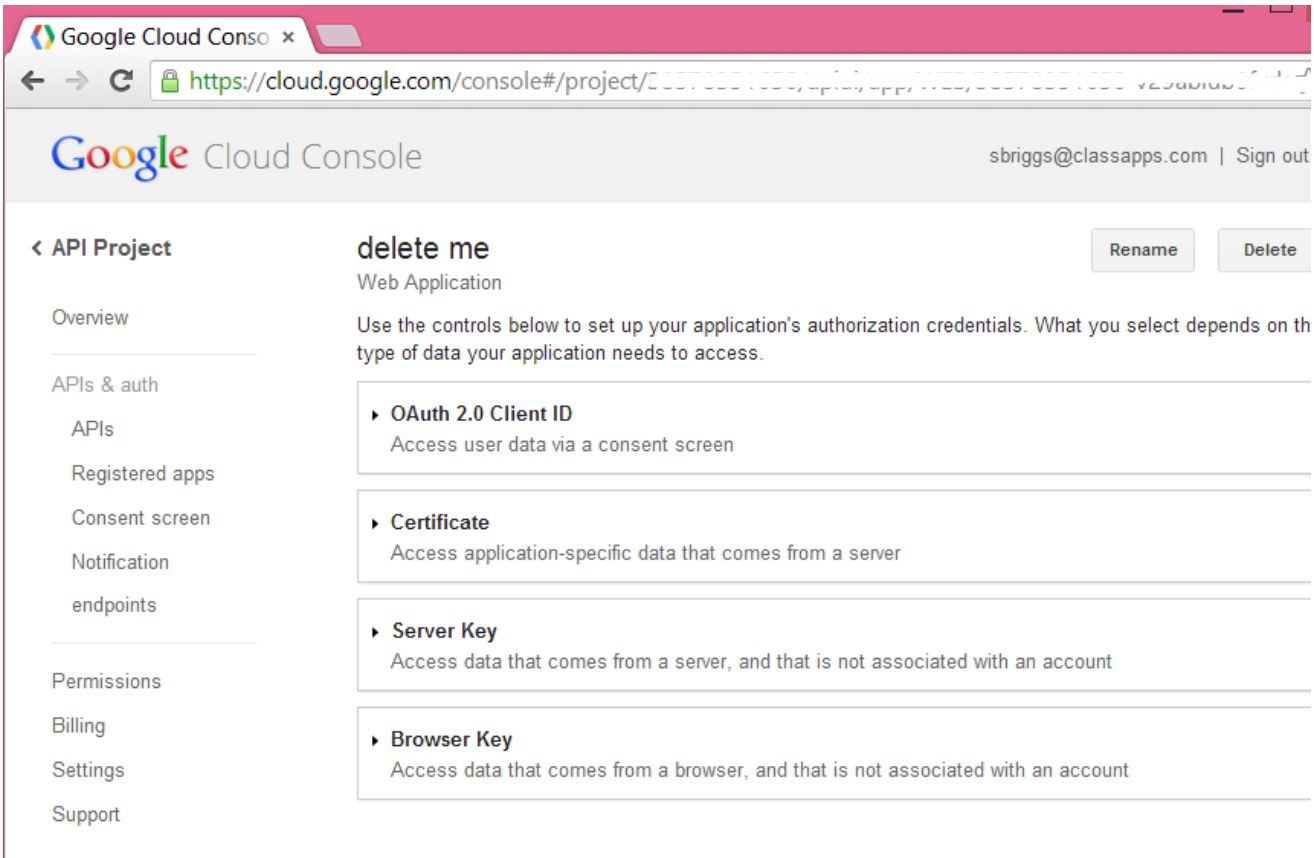
Then fill in the form with whatever name you want, and select "Web Application" as the Platform as shown in the screenshot below.



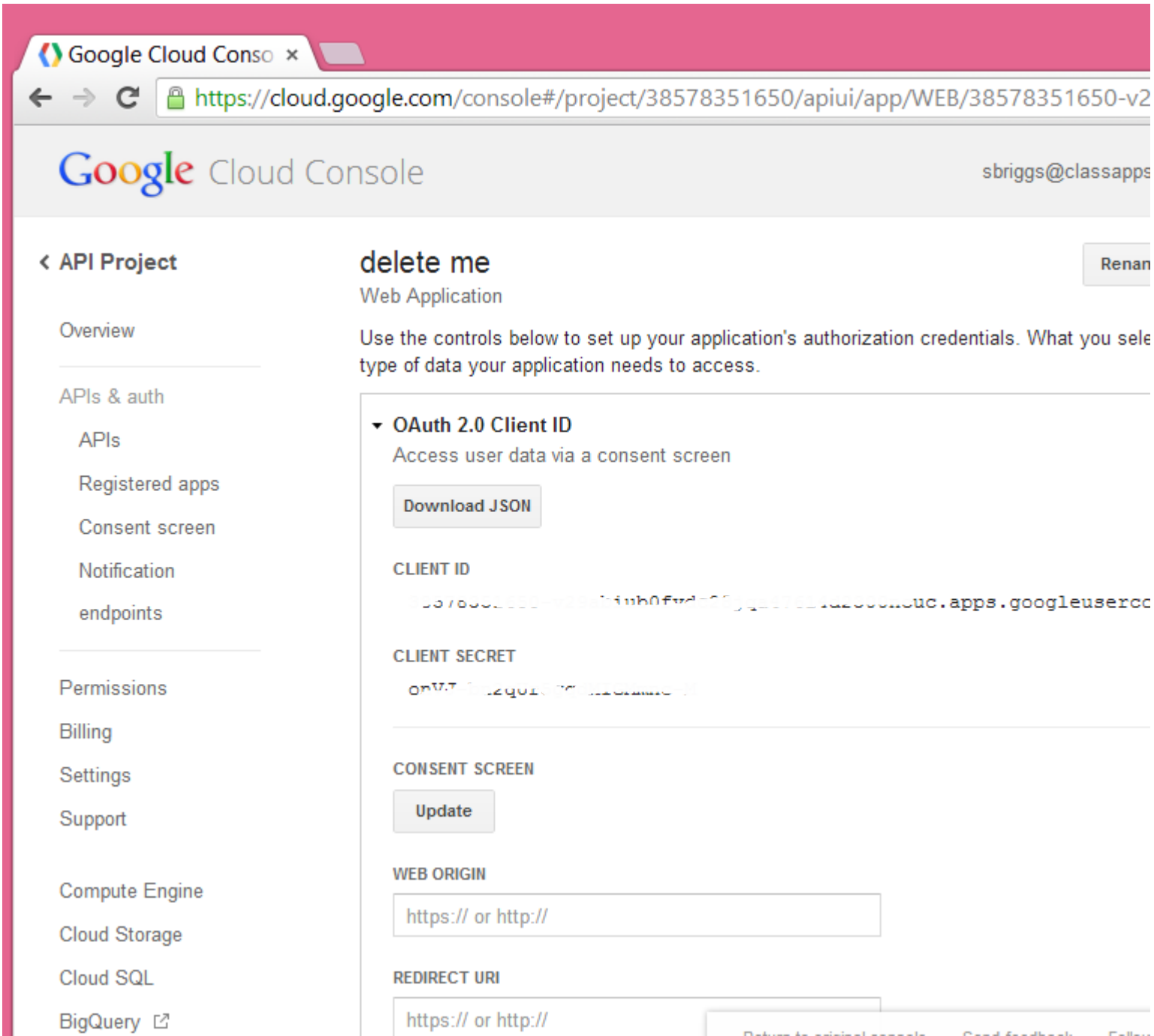
The screenshot shows the Google Cloud Console interface for registering a new application. The browser address bar displays the URL: `https://cloud.google.com/console#/project/22572251229/api/appl/show-register`. The page title is "Register new application". A message states: "You need to register your application to get the necessary credentials to call a Google API." The "Name" field contains "My App". The "Platform" section has radio buttons for "Web Application" (selected), "Android", "iOS", "Chrome", and "Native" (with a subtext: "Windows Mobile, Blackberry, desktop, devices, and more"). A blue "Register" button is located at the bottom right of the form. On the left, a navigation menu includes: Overview, APIs & auth (with sub-items: APIs, Registered apps, Consent screen, Notification endpoints), Permissions, Billing, Settings, and Support. The user's email address, `sbriggs@classapps.com`, is visible in the top right corner.

Click "Register".

You will then see the below screen where you will click OAUTH2.0 Client ID.



Click OAUTH2.0 Client ID on screen above. Then in screenshot below, copy the values of “CLIENT ID” and “CLIENT SECRET” into the SelectSurvey.NET Web.config as described in “Setup Step 2” of this manual.



The screenshot shows the Google Cloud Console interface for configuring an OAuth 2.0 Client ID for a web application. The browser address bar shows the URL: `https://cloud.google.com/console#/project/38578351650/apiui/app/WEB/38578351650-v2`. The page title is "delete me" and it is identified as a "Web Application".

The left sidebar shows navigation options: Overview, APIs & auth (selected), Permissions, Billing, Settings, Support, Compute Engine, Cloud Storage, Cloud SQL, and BigQuery.

The main content area is titled "delete me" and includes a "Renan" button. Below the title is a description: "Use the controls below to set up your application's authorization credentials. What you select type of data your application needs to access."

The configuration section is titled "OAuth 2.0 Client ID" and includes the following fields and controls:

- Access user data via a consent screen**: A button labeled "Download JSON".
- CLIENT ID**: A text input field containing a long alphanumeric string.
- CLIENT SECRET**: A text input field containing a long alphanumeric string.
- CONSENT SCREEN**: A button labeled "Update".
- WEB ORIGIN**: A text input field containing `https:// or http://`.
- REDIRECT URI**: A text input field containing `https:// or http://`.

### 3. Enter Web Origin and Redirect URI

Type in the fields "WEB ORIGIN" and "REDIRECT URI" the below, then click "GENERATE".

WEB ORIGIN:

<http://yourdomain.com> (this would be your domain where the survey application is installed).

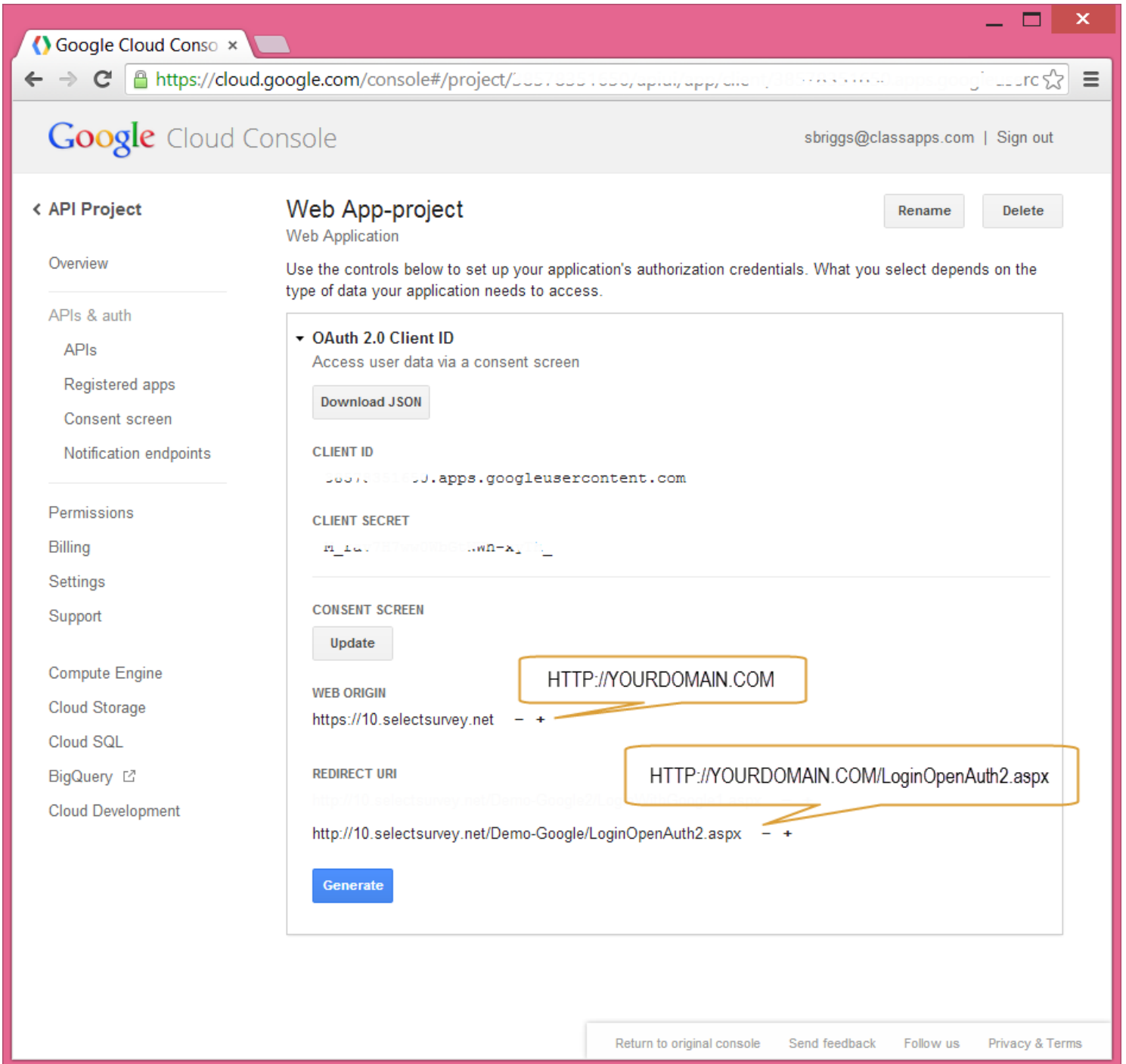
REDIRECT URI:



<http://yourdomain.com/LoginOpenAuth2.aspx> (this would be your domain where the survey application is installed and should contain "LoginOpenAuth2.aspx" which is the survey page that handles the google login callbacks. This URL must be correct or the login will not work. If you have your survey application in a sub folder it would be like this:

<http://yourdomain.com/surveyfolder/LoginOpenAuth2.aspx>

Click the "GENERATE" Blue button.  
You are done with the Google Registration.



Google Cloud Console

sbriggs@classapps.com | Sign out

### Web App-project

Web Application

Use the controls below to set up your application's authorization credentials. What you select depends on the type of data your application needs to access.

**OAuth 2.0 Client ID**  
Access user data via a consent screen

[Download JSON](#)

**CLIENT ID**  
6637c381000.apps.googleusercontent.com

**CLIENT SECRET**  
m\_1d...f82wed830c...wn-x...

**CONSENT SCREEN**  
[Update](#)

**WEB ORIGIN**  
https://10.selectsurvey.net - + **HTTP://YOURDOMAIN.COM**

**REDIRECT URI**  
http://10.selectsurvey.net/Demo-Google23...  
http://10.selectsurvey.net/Demo-Google/LoginOpenAuth2.aspx - + **HTTP://YOURDOMAIN.COM/LoginOpenAuth2.aspx**

[Generate](#)

[Return to original console](#) [Send feedback](#) [Follow us](#) [Privacy & Terms](#)

## Setup Step 2: Adding Google Token to SelectSurvey.NET web.config

2. Put your Google Token in your SelectSurvey.NET WEB.CONFIG file.



It is a requirement by Google for domains that access the Google API for Google Apps Federated Login to obtain a token from Google with their domain in it. This domain will need to match the settings in the web.config of SelectSurvey.NET as shown below. After registering with Google (To register with Google go here: <https://accounts.google.com/ServiceLogin?service=devconsole&passive=1209600&continue=https://code.google.com/apis/console/&followup=https://code.google.com/apis/console/>), you copy the token values from your Google account to the SelectSurvey.NET web.config. SelectSurvey.NET Server Software has a web.config file with placeholders for the google tokens as shown below.

These tags will be found inside the <appSettings> section as below:

```
<!-- replace the x's and YOUR-DOMAIN with your own values -->
  <add key="google_clientId" value="xxxxxxx.apps.googleusercontent.com" />

  <add key="google_clientEmail" value="xxxxxxxxx@developer.gserviceaccount.com" />

  <add key="google_clientSecret" value="xxxxxxxxxxxx" />

  <!--change the url value to where the application is installed. Example:
http://10.selectsurvey.net/Demo-Google/LoginOpenAuth2.aspx -->
  <add key="google_RedirectUrl" value="http://YOUR-DOMAIN.com/LoginOpenAuth2.aspx" />

  <!-- change the value to where the application is installed. Example: http://10.selectsurvey.net/Demo-
Google -->
  <add key="google_JavaScriptOrigin" value="http://YOUR-DOMAIN.com" />
```

Edit the web.config in notepad or text editor to change the value="x" to the values you were assigned by Google.

You will also be required to set two other settings in the same web.config with the license key, and the switch to turn on or off Google Apps login integration:

```
<!-- License Key for Google Apps/Open ID Integration Add-On -->
  <add key="GOOGLE_APPS_LOGIN_LICENSE_KEY" value="paste in license key from purchase"/>

<!-- set to "yes" or "no" whether you want to use Google Apps/Open ID Integration-->
  <add key="USE_GOOGLE_APPS_LOGIN" value="yes"/>

<!-- set to your domain for google apps so no other google domain users can authenticate. Example:
"yourdomain.com" If left empty, ANYONE with a google login can login.-->
  <add key="GOOGLE_APPS_DOMAIN" value="yourdomain.com"/>
```







The license key is emailed and also displayed on your customer account product downloads page on classapps.com. You would copy the license key into the value=" [paste in license key from purchase](#)" above.

If you want all google users with a login (all domains) to be able to take surveys, then leave the "GOOGLE\_APPS\_DOMAIN" value="". If you leave the value empty, all domains can login. In most cases you want to restrict login to your own domain for Google Apps.

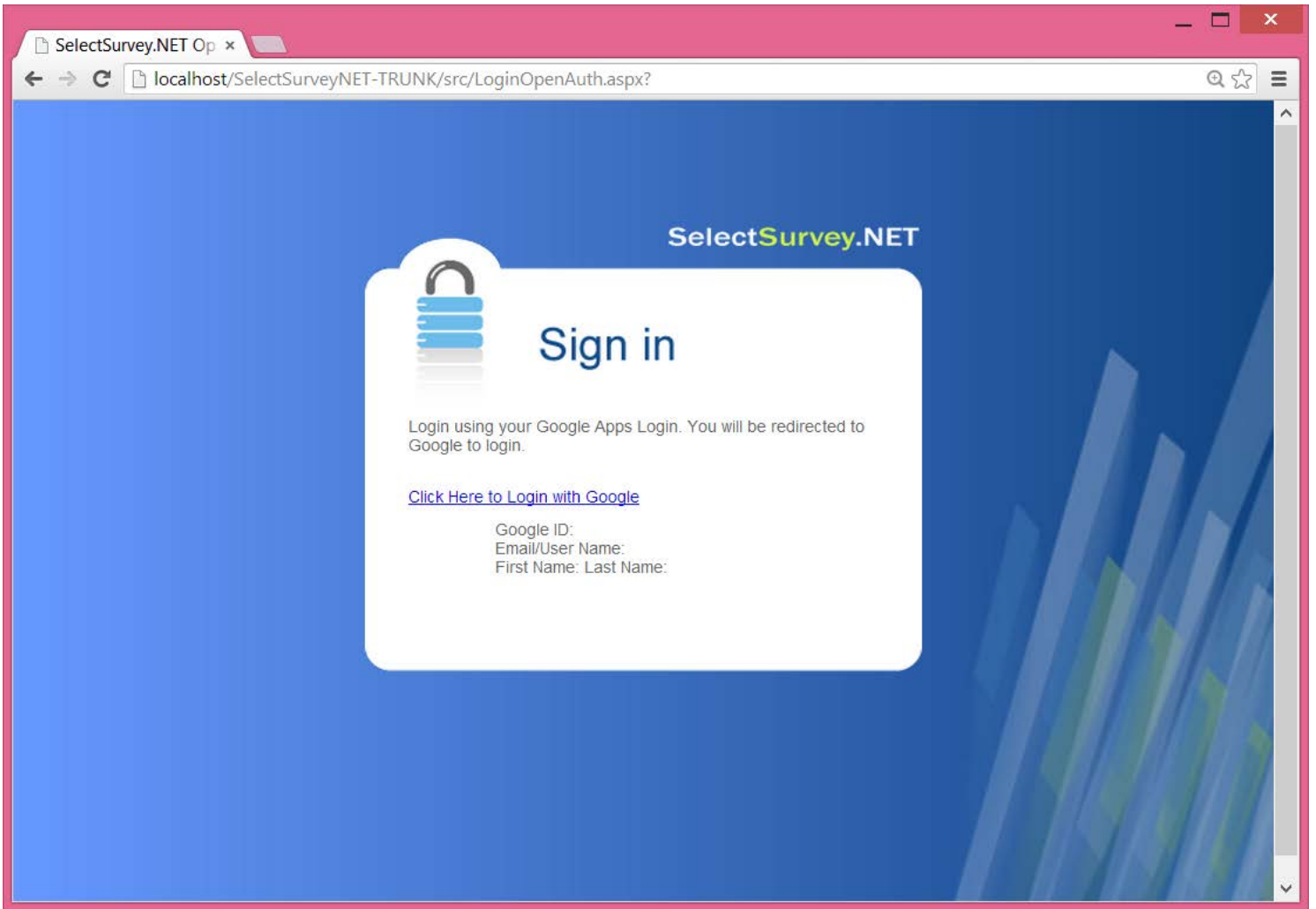
### **Setup Step 3: Enable Federated Login Service in Google Apps Account**

#### **3. The Federated Login Service is disabled by default for Google Apps.**

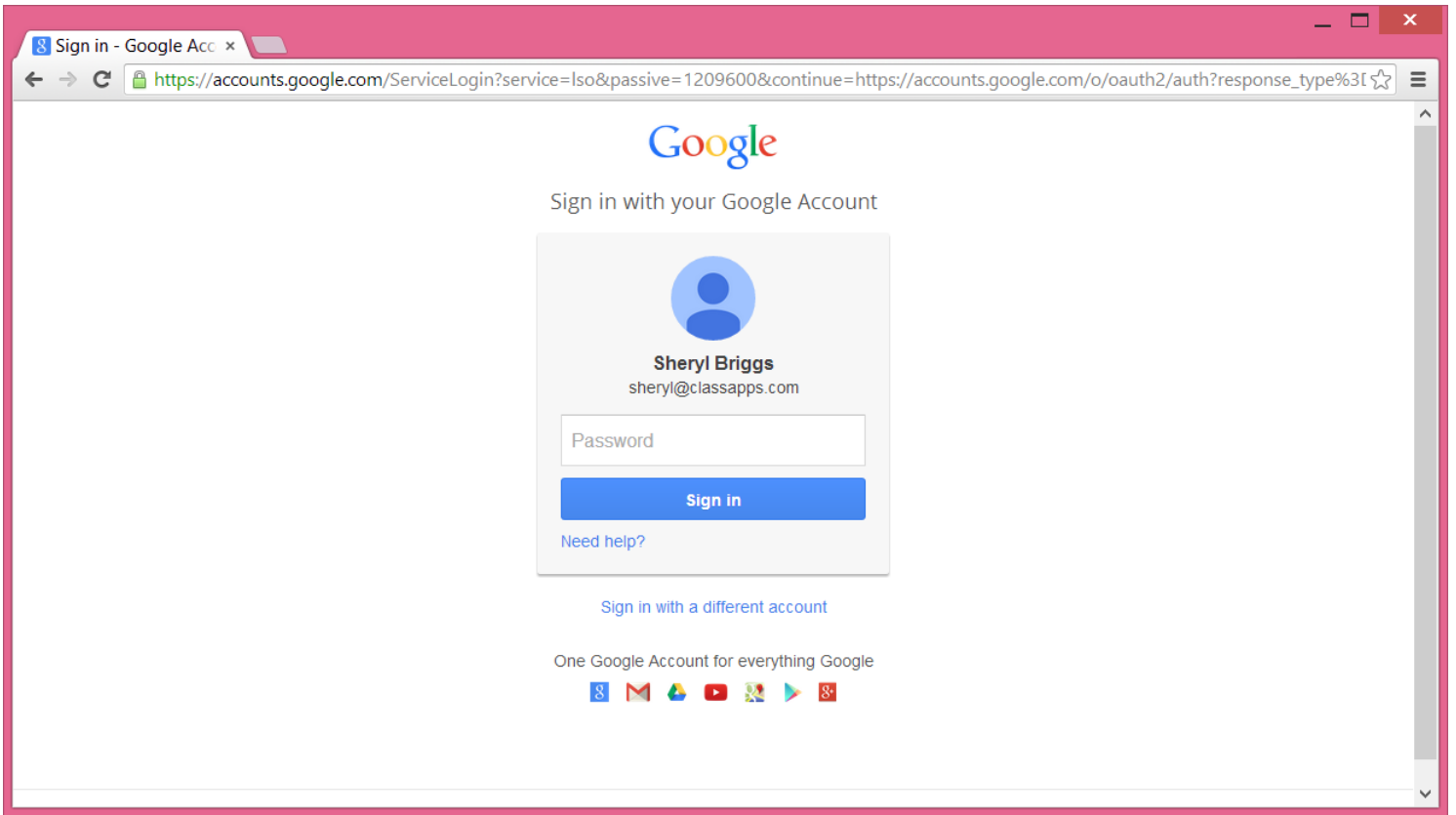
The domain admin with Google Apps can enable Federated Login Service from the Google Apps Control Panel at <http://www.google.com/a/cpanel/<your-domain>/SetupLdp>.

### **Step 4: Login with Google Apps Account and set Admin account**

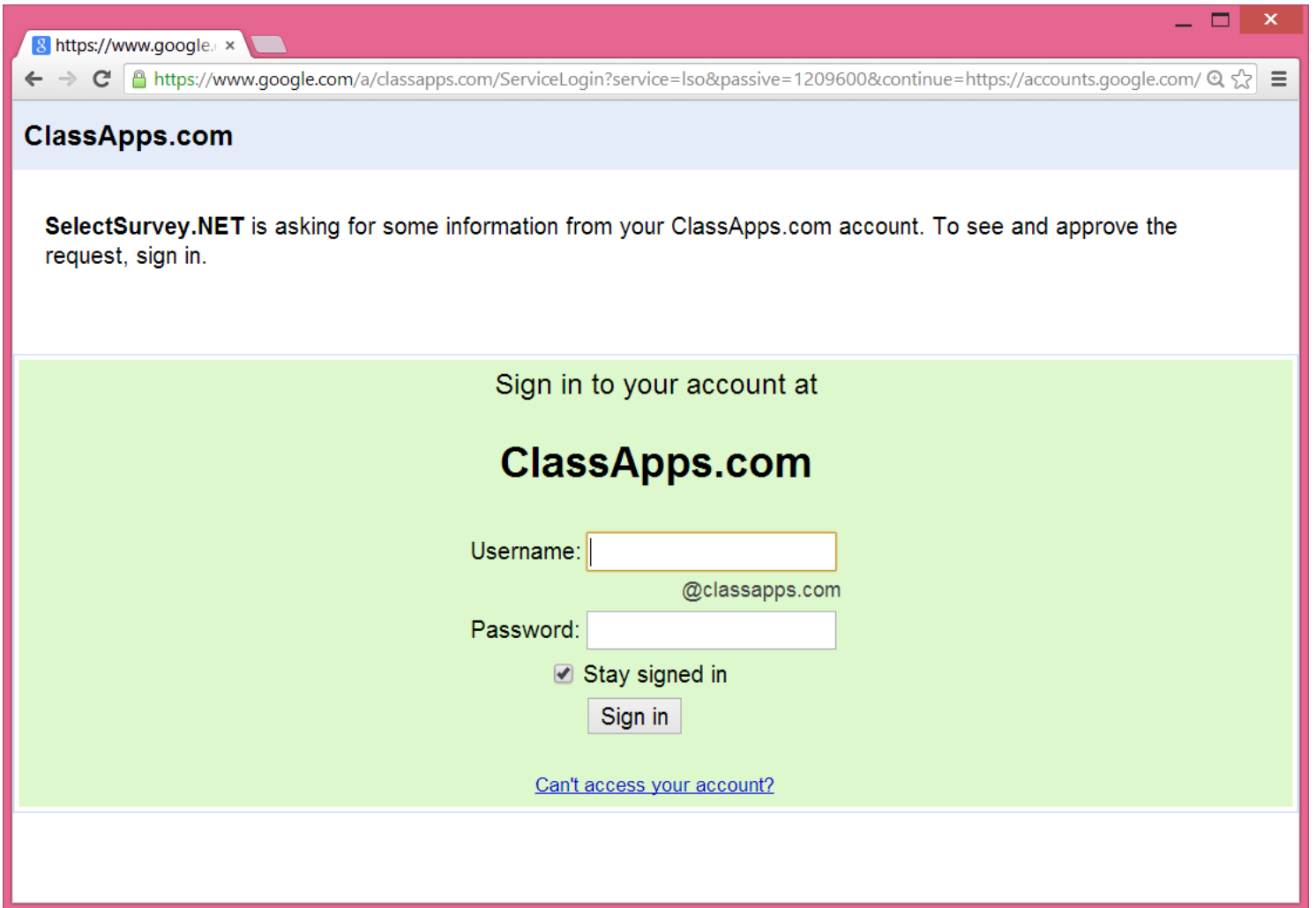
The first time any user logs in they are inserted into the sur\_user table with the lowest role level (for taking surveys). If the user already exists in the survey database, it uses the existing user account. After installing the survey software, you will need at least one admin user. Login with the Google Apps account that you want to set as the survey admin account. In the database find that user ID that was created with that username in the sur\_user table. The sur\_user.username should be the same as the Google Apps username. Open the Survey SQL database and find the row in the sur\_user\_to\_role\_mapping table that has that user\_id and update the role from role "1" to role "3" so that user will be set as the survey admin. Now logout and back in with the new admin user. You will be able to set other users that are automatically synched to admin or create role as well, by clicking "Users" then "Edit", then selecting the user role from the drop down box in the survey interface.



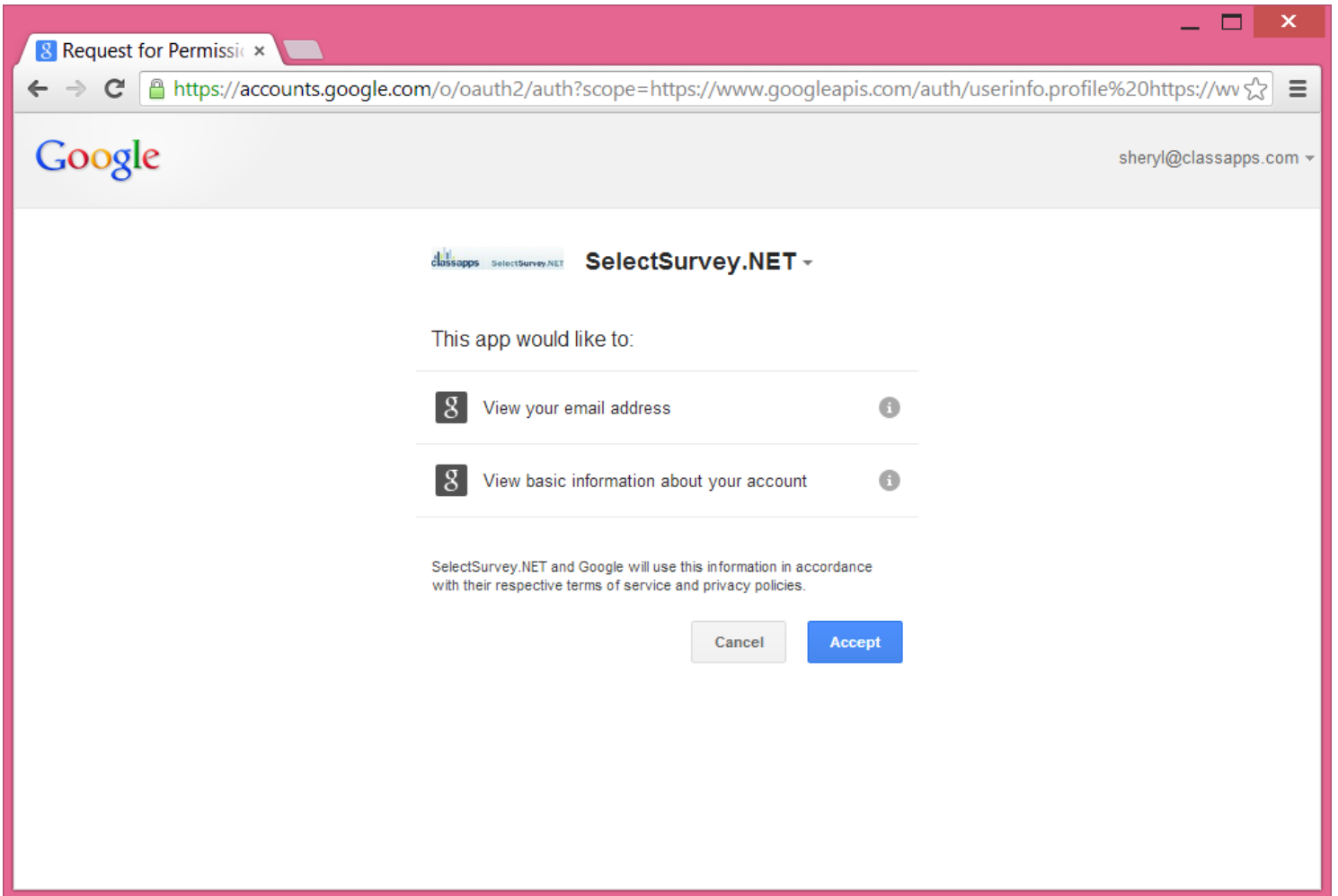
If no domain has been entered into the web.config you will see the general google login as below:



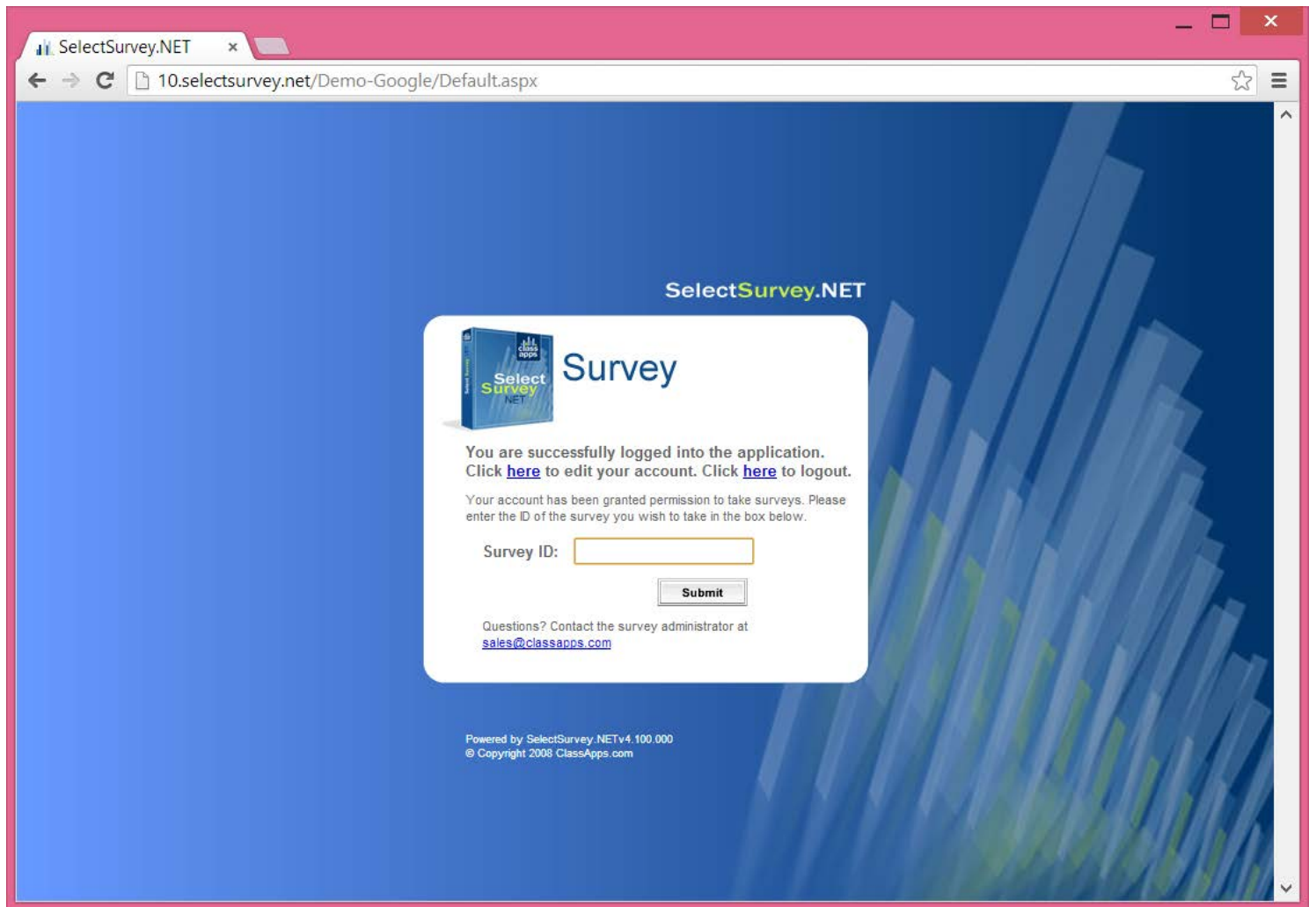
If you have specified a domain in the web.config you will see the login for that domain as below:



The user will be asked for permission to share their login and name with the application, the user needs to click "Accept" on the screen below:



If the user has never logged in before, they are logged in as user role=1, or "user" role, so that they can only take surveys, or edit their account as below:



### Reference Documentation:

Reference documentation from google is located here:

[https://developers.google.com/google-apps/sso/openid\\_reference\\_implementation](https://developers.google.com/google-apps/sso/openid_reference_implementation)

[OpenID](http://openid.net) (<http://openid.net>)

## Standard Active Directory Login Integration with Login box

Each time a user logs in with their network Active Directory login, their data is imported or updated into the survey application (nothing is every updated in Active Directory), therefore it is synched at every login (survey roles and survey related info is maintained through the synchs) and no import of data is necessary. No Active Directory passwords are stored in the survey application or its database. If no Active Directory data exists for survey required fields such as email address, an administrator must fill those in within the survey application in the user edit page. These values will not be over-written by the synch if they remain empty in Active Directory.

The following pages are different or only used for active directory integration:

- Web.config
- LoginActiveDirectory.aspx/cs
- Other pages may be disabled or coded to behave differently:
  - forgot my password (disabled)
  - user edit
  - user add
  - user registration (disabled)
  - user buttons in the app
  - edit my account

### Step 1:

**Login to admin tools with non AD login (default admin/admin) click “admin tools”.**

**Click “Application wide settings”**

**Select “yes” from the drop down box next to “Use ActiveDirectory for login”**

**Click “Save”**

**Logout and delete cookies so that the next time you login it will use your AD login.**

**Edit the web.config to contain your active directory settings.**

```
<!--
*****
      Google Apps Federation Single Sign on Authentication
*****
-->

<!-- replace the x's and YOUR-DOMAIN with your own values -->
<add key="google_clientId" value="xxxxxxx.apps.googleusercontent.com" />
<add key="google_clientEmail" value="xxxxxxx@developer.gserviceaccount.com" />
<add key="google_clientSecret" value="xxxxxxx" />
```

```

<!--change the url value to where the application is installed. Example:
http://yourdomain.com/selectsurvey/LoginOpenAuth2.aspx -->
<add key="google_RedirectUrl" value="http://yourdomain.com/selectsurvey/LoginOpenAuth2.aspx" />

<!-- change the value to where the application is installed. Example:
http://yourdomain.com/selectsurvey-->
<add key="google_JavaScriptOrigin" value="http://yourdomain.com/selectsurvey" />

<!-- License Key for Google Apps/Open ID Integration Add-On (you can find this in your customer
account or email receipt) -->
<add key="GOOGLE_APPS_LOGIN_LICENSE_KEY" value=""/>

<!-- set to "yes" or "no" whether you want to use Google Apps/Open ID Integration-->
<add key="USE_GOOGLE_APPS_LOGIN" value="no"/>

<!-- set to your domain for google apps so no other google domain users can authenticate. Example:
"yourdomain.com" If left empty, ANYONE with a google login can login.-->
<add key="GOOGLE_APPS_DOMAIN" value=""/>

<!-- the below setting is the user role that is assigned to all users that are automatically created
via AD or Google login-->
<!-- valid values are "1" for user or "2" for create role or "3" for admin role with the default being
1 (user role) -->
<add key="DEFAULT_USER_ROLE_FOR_LOGIN_SYNCH" value="1"/>

<!--
*****
Owin/IdentityServer3/OpenID Connect/Social Authentication
*****
-->
<!-- replace the x's and YOURDOMAIN with your own values -->
<!-- set to "yes" or "no" whether you want to use identityserver3 with azure AD ID Integration,
which uses openauth2-->
<add key="USE_OPENID_APPS_LOGIN" value="no"/>

<add key="openid_clientId" value=""/>

<add key="openid_clientSecret" value=""/>

<add key="openid_metaDataAddress" value=""/>

<add key="openid_RedirectUri" value="http://localhost:49754/" />

<!--
*****
AD FS ActiveDirectory Federated Login Claims Based Login Integration
*****
-->
<add key="USE_ADFS_LOGIN" value="no"/>

<!--
*****
LDAP Authentication
*****
-->

```



```
<!--ACTIVE DIRECTORY SETTINGS (CASE SENSITIVE!) UPDATED in v4.069.004 PLEASE CHECK VALUES-->

<!-- the below setting is for using the old AD code versus the new AD code that uses the new .net
AD classes -->
<!-- default is "no" -->
<add key="USE_OLD_AD_CODE" value="no"/>

<!--Prepopulate domain text box on login page? yes/no -->
<add key="POPULATE_DOMAIN_TXTBOX" value="yes" />

<!-- disable domain text box-->
<add key="DISABLE_DOMAIN_TXTBOX" value="no" />

<!--Domain = "test.com"; -->
<!--For multiple domains in drop down box, separate with a semicolon:
domain.com;domain2.com;domain3.com -->
<add key="Domain" value="test.com" />

<!--if using NEW: Default Root OU = "DC=test,DC=com" -->
<!--if using OLD: Default Root OU = "LDAP://test.com" -->
<add key="ADPath" value="DC=localhost" />

<!--Service User -->
<add key="ADUser" value="administrator" />

<!--Service User Password -->
<add key="ADPassword" value="123" />

<!--if using NEW: Default OU = "DC=test,DC=com" (no longer used in NEW)-->
<!--if using OLD: Default OU = "OU=DeveloperDepartment," -->
<add key="ADUsersPath" value="" />

<!-- (only used in NEW) -->
<!-- list of group name restrictions separated by comma (leave empty for no user group
restrictions): Test Users, Administrators-->
<add key="ADUserGroupRestriction" value="" />

<!--the below allows login with UPN. acceptable values are yes/no default is no-->
<!--setting to yes will hide domain text box and you must use domain email address for login -->
<add key="USE_AD_UPN_LOGIN" value="no" />

<!--setting to turn on display of debug info on the login page to assist with setting up AD
integration (TURN THIS OFF WHEN YOU ARE DONE!-->
<!--valid values are "on" and "off" when "on" error stack trace and line # info will display on
bottom of AD login page when "off" no info will display. -->
<add key="AD_DEBUG_MODE" value="off"/>

<!--If NTLM passthrough is activated the identity will be picked up by the browser (IE only) and
the user will never see the login page. They will be automatically logged in with their network identity
username in which all their survey activity will be stored. -->
<!-- valid values are "yes" and "no" -->
<add key="USE_NTLM_PASSTHROUGH_AUTHENTICATION" value="no"/>

<!-- required for NTLM passthrough to work otherwise regular AD login will show -->
<add key="FORCE_NTLM_PASSTHROUGH_AUTHENTICATION" value="no"/>
```

```

    <!-- first checks SSO service (checks for ServerVariables["HTTP_SM_USER"]), then NTLM (checks for
    ServerVariables["LOGON_USER"] internal uses NTLM auth for above AD network-->
    <!-- possible values "yes" or "no"-->
    <add key="SSO_EXTERNAL_NTLM_INTERNAL_PASSTHROUGH_AUTHENTICATION" value="no"/>

    <!-- the below setting is the user role that is assigned to all users that are automatically
    created via AD login-->
    <!-- valid values are "1" for user or "2" for create role or "3" for admin role with the default
    being 1 (user role) -->
    <add key="DEFAULT_USER_ROLE_FOR_LOGIN_SYNCH" value="1"/>

<!--END OF ACTIVE DIRECTORY SETTINGS -->
<!--
*****
-->

```

### Config settings for both at bottom of web.config:

By default the web.config is set to use regular forms authentication and the various login types are handled via code. In order to switch authentication type from regular forms authentication (survey login page handled) to Active Directory/NTLM you uncomment the Active Directory section, and comment out the non Active Directory authentication section.

Below is the default web.config authentication section set for Non Active Directory:

```

<!--NON ACTIVE DIRECTORY: -->
    <authentication mode="Forms">
        <forms name=".ASPXAUTH" protection="All" timeout="240" loginUrl="Login.aspx"
slidingExpiration="true"/>
    </authentication>

    <!--ACTIVE DIRECTORY: -->

        <!--<authentication mode="Forms"><forms name=".ASPXAUTH" timeout="240"
loginUrl="LoginActiveDirectory.aspx" path="/" slidingExpiration="true" /></authentication-->

    <!--END OF ACTIVE DIRECTORY -->

```

Below is the default web.config authentication section set for Active Directory:

```

<!--NON ACTIVE DIRECTORY: -->
<!-- <authentication mode="Forms">
    <forms name=".ASPXAUTH" protection="All" timeout="240" loginUrl="Login.aspx"
slidingExpiration="true"/>
</authentication> -->

```

```
<!--ACTIVE DIRECTORY: -->
```

```
<authentication mode="Forms"><forms name=".ASPXAUTH" timeout="240"
loginUrl="LoginActiveDirectory.aspx" path="/" slidingExpiration="true" /></authentication>
```

#### Non Active Directory Setting:

- Regular Forms Authentication using survey logins,
- Google federated login
- Middleware or Identity Server 3 login
- CAS login
- Automated 3<sup>rd</sup> party login
- Social Login (facebook, linked in, google, etc.)
- Azure

#### Active Directory Setting:

- Active Directory domain login using survey login page with domain drop down
- Active Directory NTLM/pass through login which authenticates to an Active Directory domain
- Azure Active Directory.

### Step 2:

**Add one admin user to your database.**

**Make sure nulls are allowed in the sur\_user.password field.**

Open the sur\_user table and add a row with the AD username and AD password for the admin user. Then open sur\_user\_to\_role\_mapping table and add role 3 for that user. (use the existing admin user that is already in both of these tables as an example but do not delete the admin user that is there) This is because the first time users login to the survey application with AD authentication, if the user is not already in the database, they will be set at the lowest permission level in the survey app which is “user” role, which they can only take surveys, not create them. So you need to set the one admin role so you can login with that to modify users that need admin or create roles later.

Open the sur\_user table and make sure the “password” column allows null.

If this is not set you will get the error: Error:Field 'sur\_user.user\_password' cannot be a zero-length string when you attempt to login with AD.

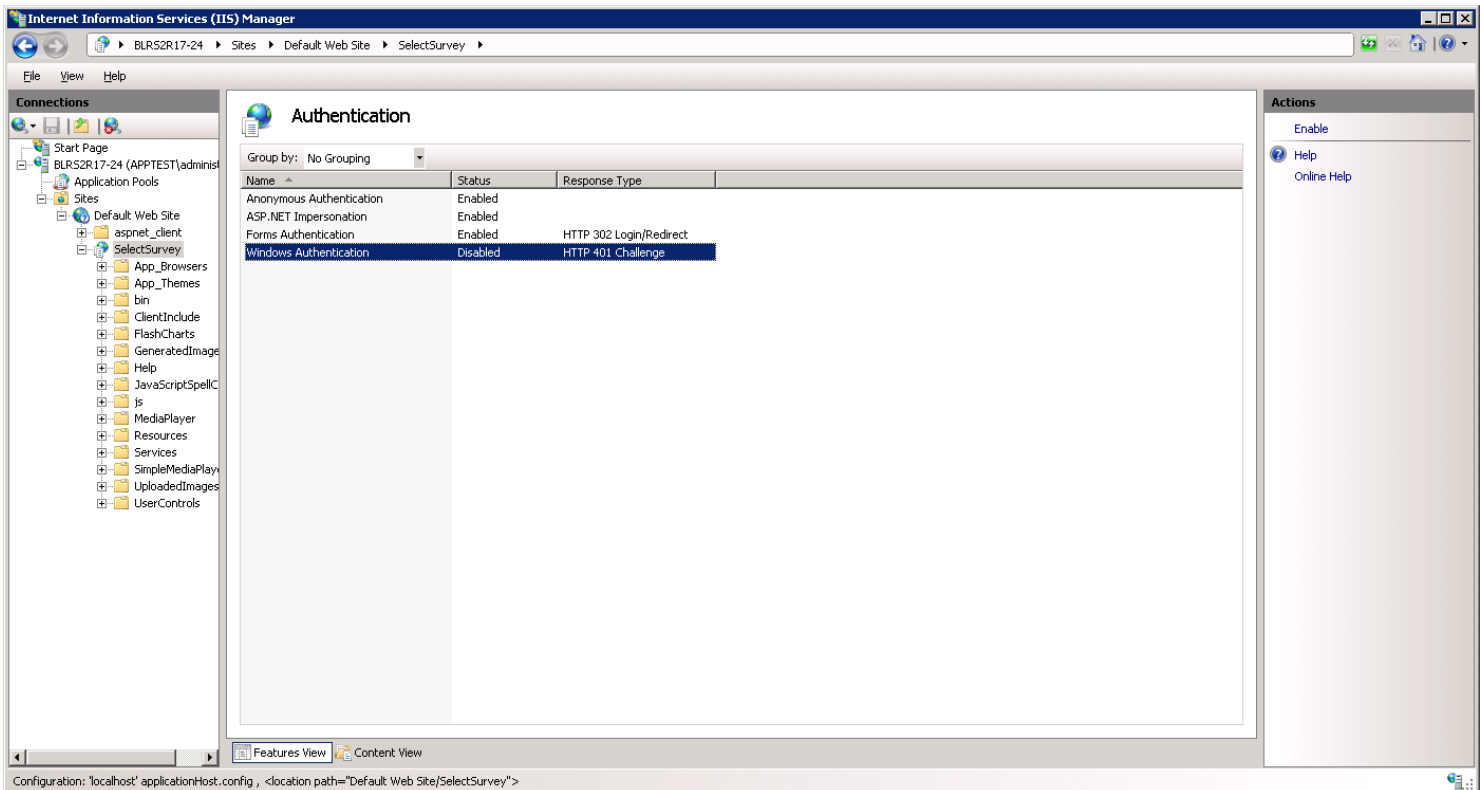
### Step 3 IIS 6:

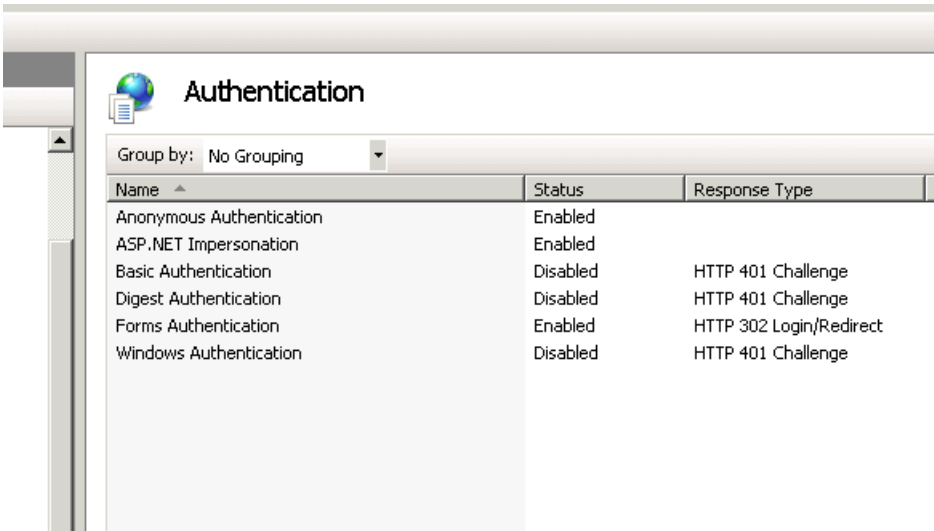
## Configure AD permissions on web folder in IIS 7 (or higher):

### Authentication tab in IIS 7:

For Regular AD integration where it will display a login box the IIS 7 settings should look exactly like this screenshot:

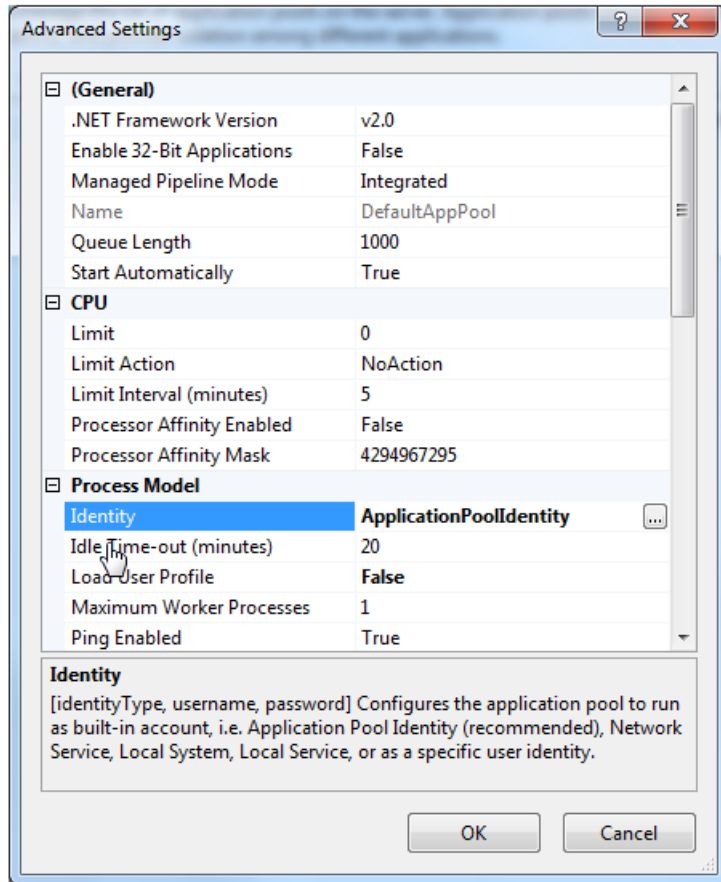
- Anonymous is Enabled
- ASP.NET Impersonation is Enabled
- Forms Authentication is Enabled
- Windows Authentication is Disabled





IIS authentication screen should look exactly like this (unless you are using NTLM in which anonymous needs to be disabled):

If you cannot find the option for windows authentication in IIS, see below “Install Windows Authentication” sections.

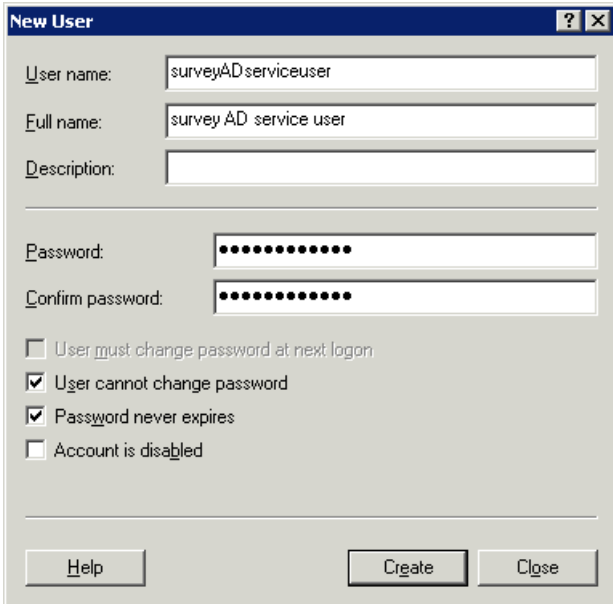


- Select the "Identity" list item and click the ellipsis (the button with the three dots).

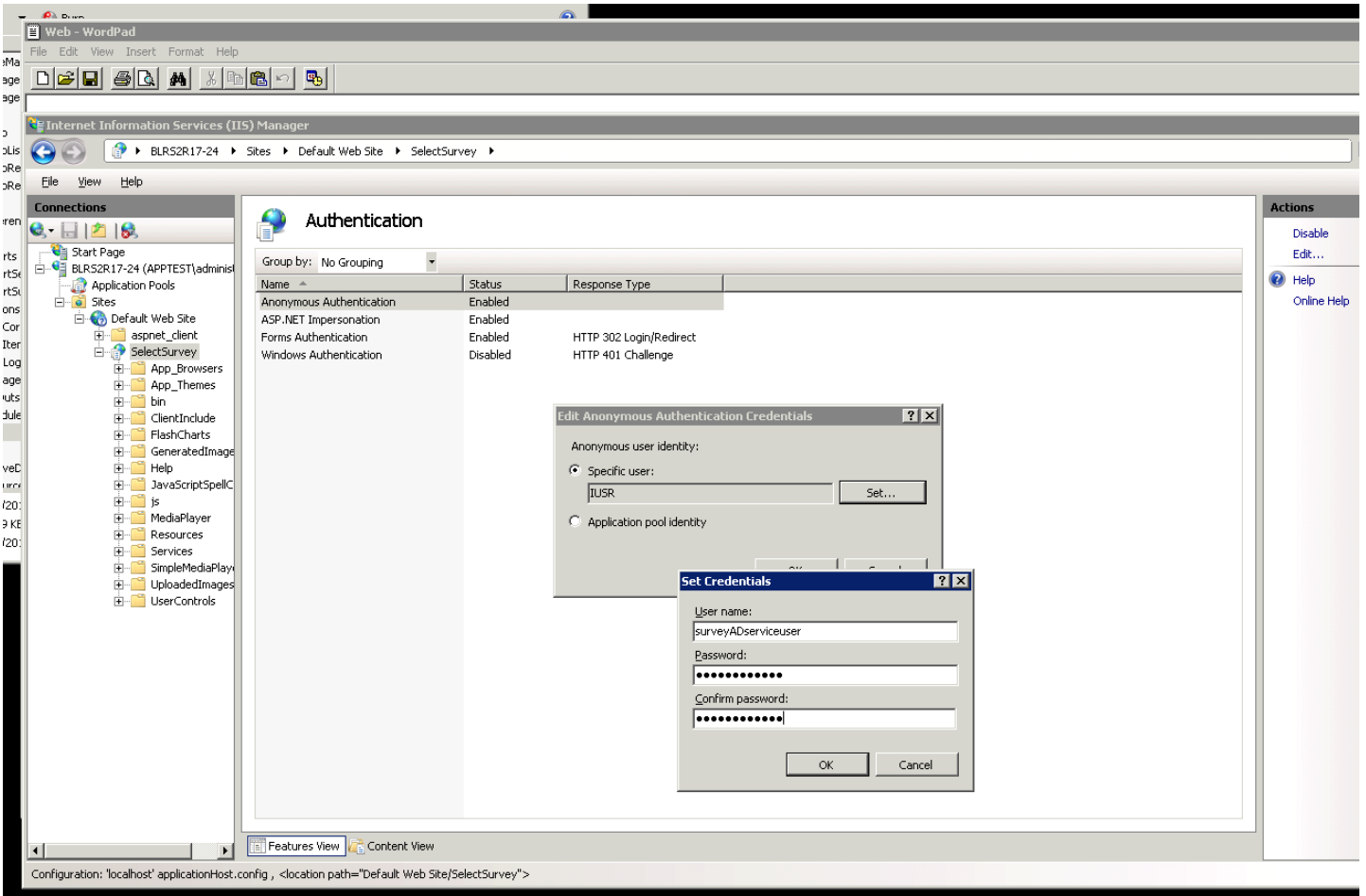
Set the Process Model Identity to ApplicationPoolIdentity instead of Network Service.

### Create an AD service user account:

When authenticating to single or multiple domains, create a user in all domains with the same username and password and also on the local IIS machine with the same username and password. In IIS set this user as the "anonymous IIS" user account.

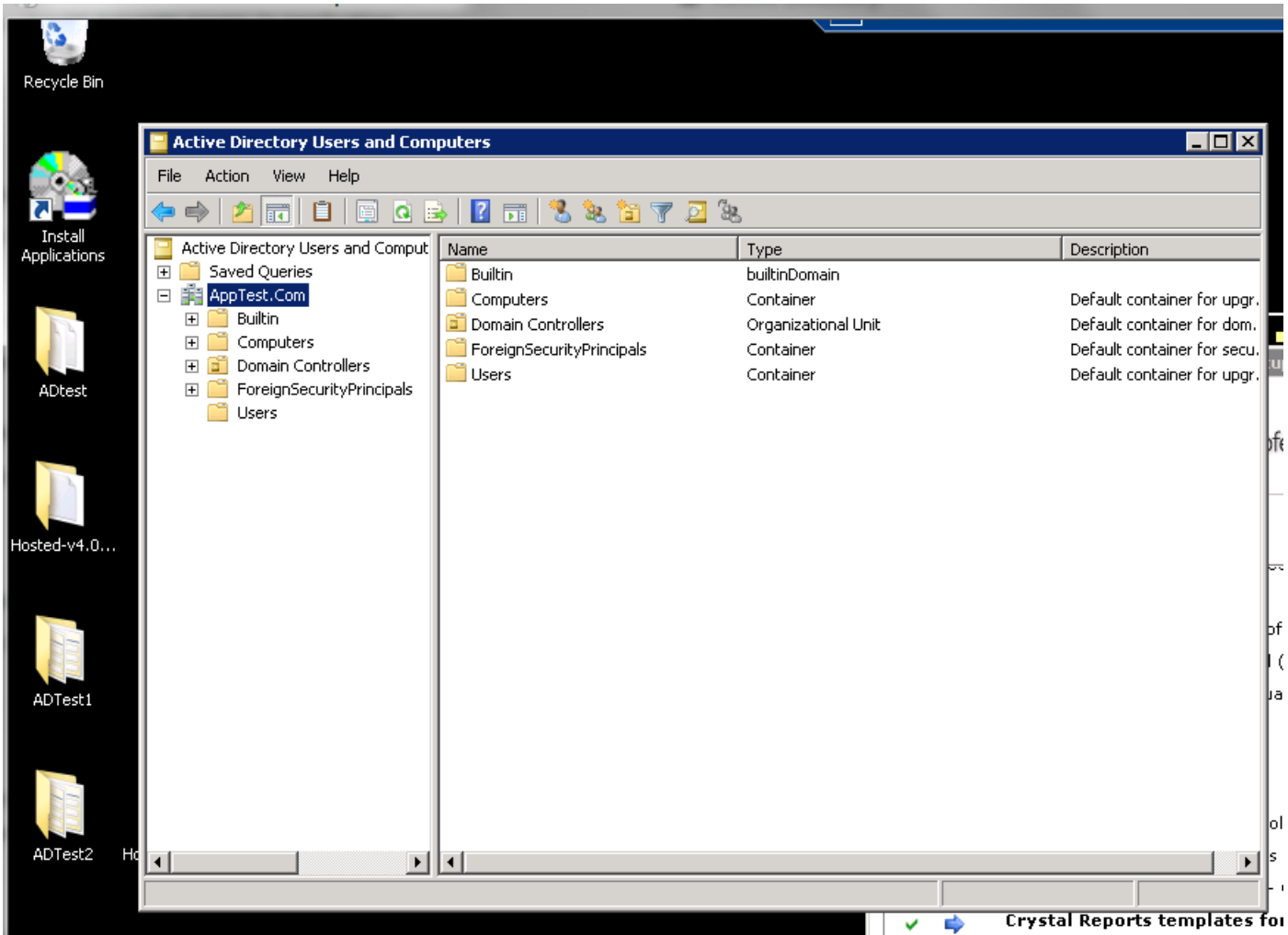
A screenshot of a Windows-style dialog box titled "New User". The dialog has a title bar with a question mark and a close button. It contains several input fields and checkboxes. The "User name:" field contains "surveyADserviceuser". The "Full name:" field contains "survey AD service user". The "Description:" field is empty. The "Password:" and "Confirm password:" fields are filled with ten black dots each. Below these fields are four checkboxes: "User must change password at next logon" (unchecked), "User cannot change password" (checked), "Password never expires" (checked), and "Account is disabled" (unchecked). At the bottom of the dialog are three buttons: "Help", "Create", and "Close".

In IIS set this user as the "anonymous IIS" user account.

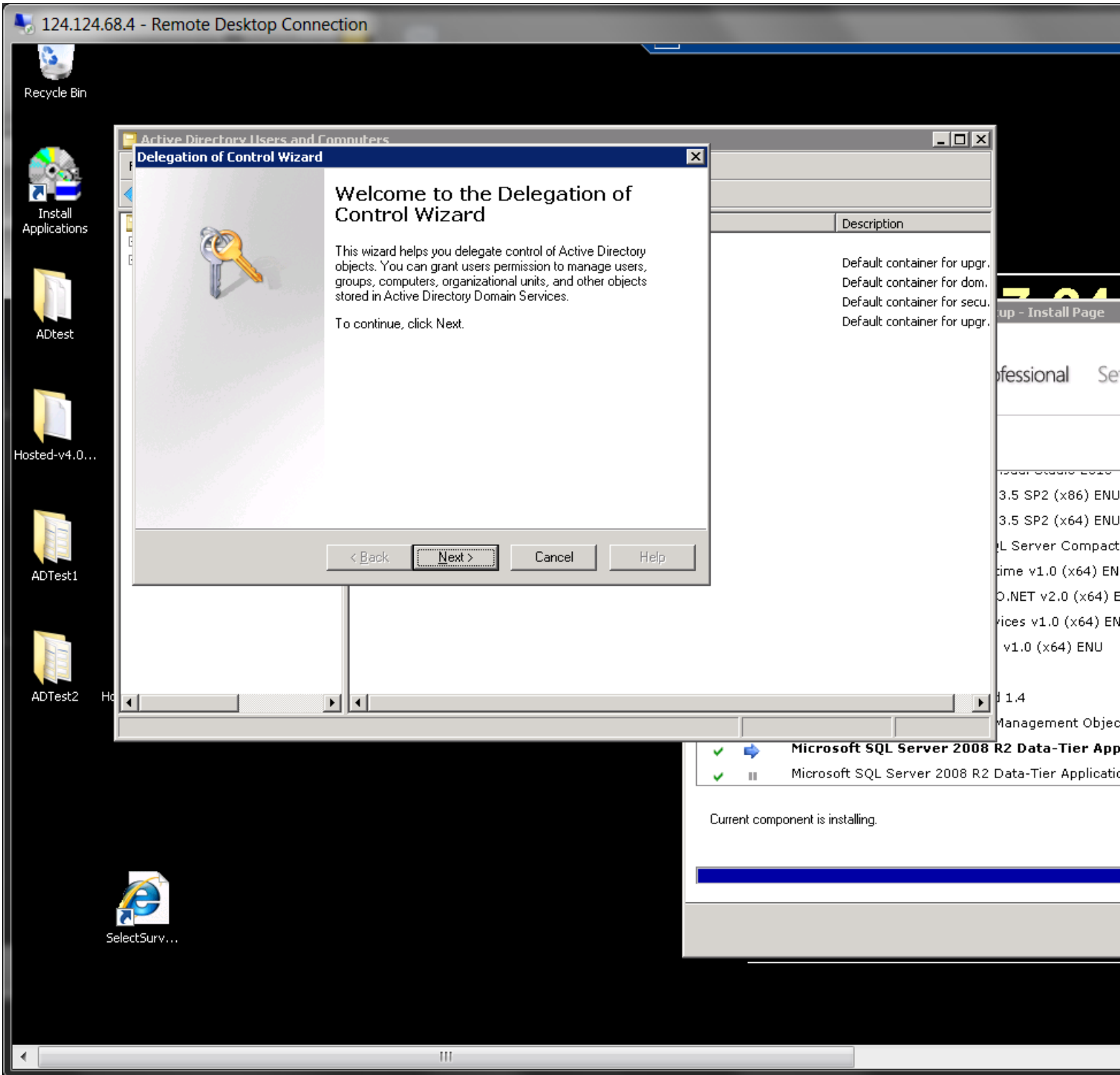


Delegate this user to “read all user info” in AD.





124.124.68.4 - Remote Desktop Connection



Active Directory Users and Computers  
Delegation of Control Wizard

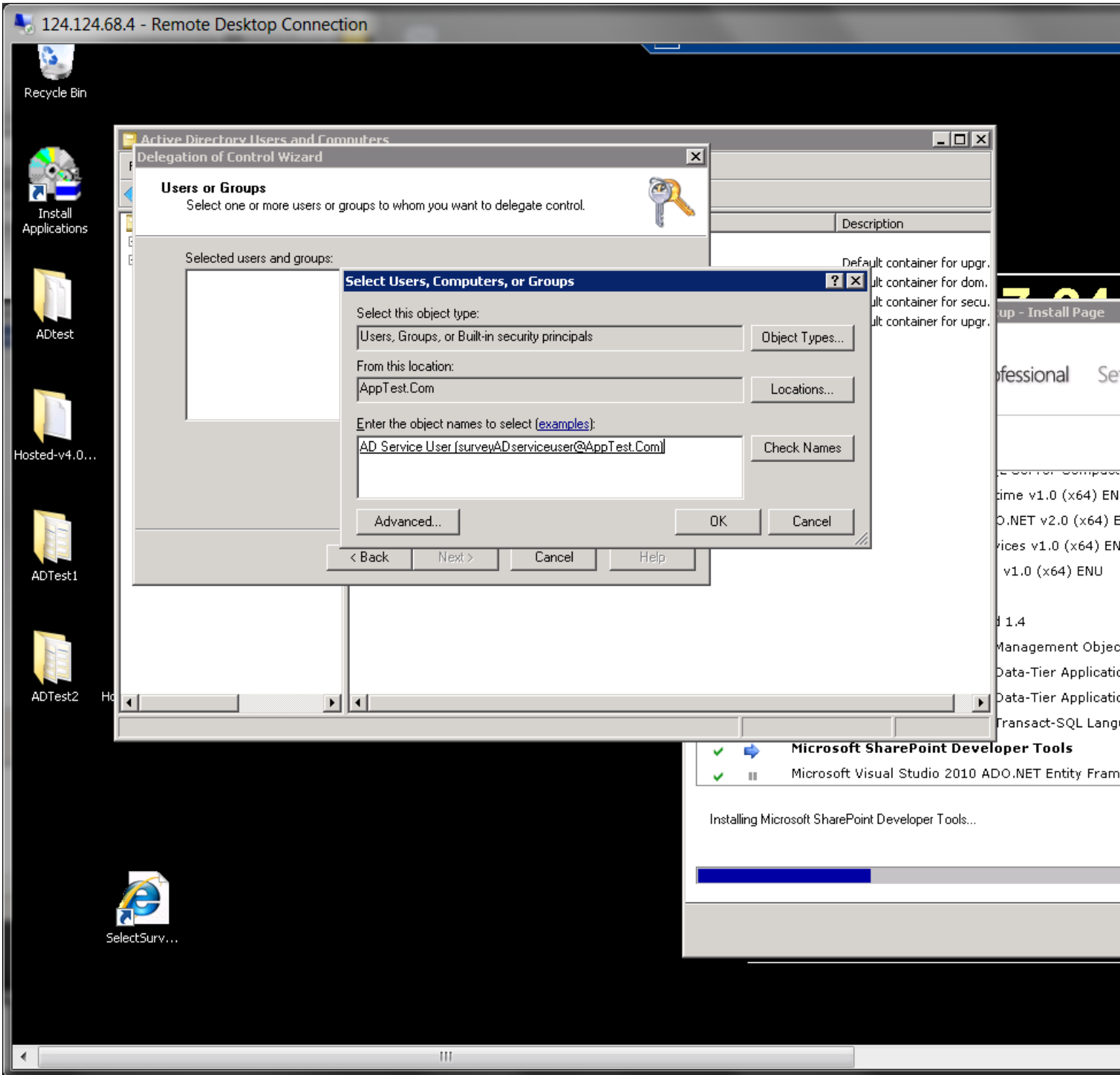
### Welcome to the Delegation of Control Wizard

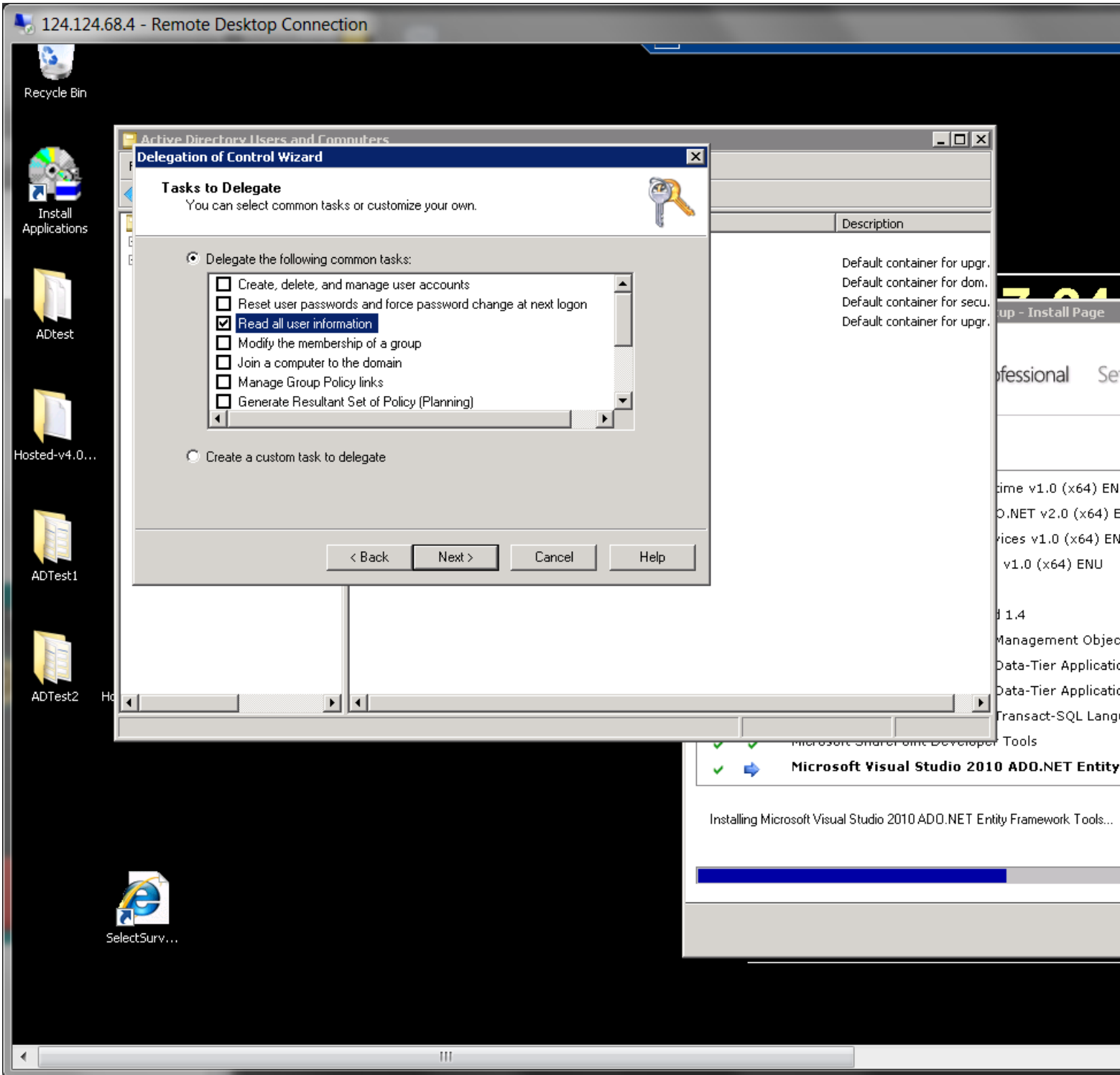
This wizard helps you delegate control of Active Directory objects. You can grant users permission to manage users, groups, computers, organizational units, and other objects stored in Active Directory Domain Services.

To continue, click Next.

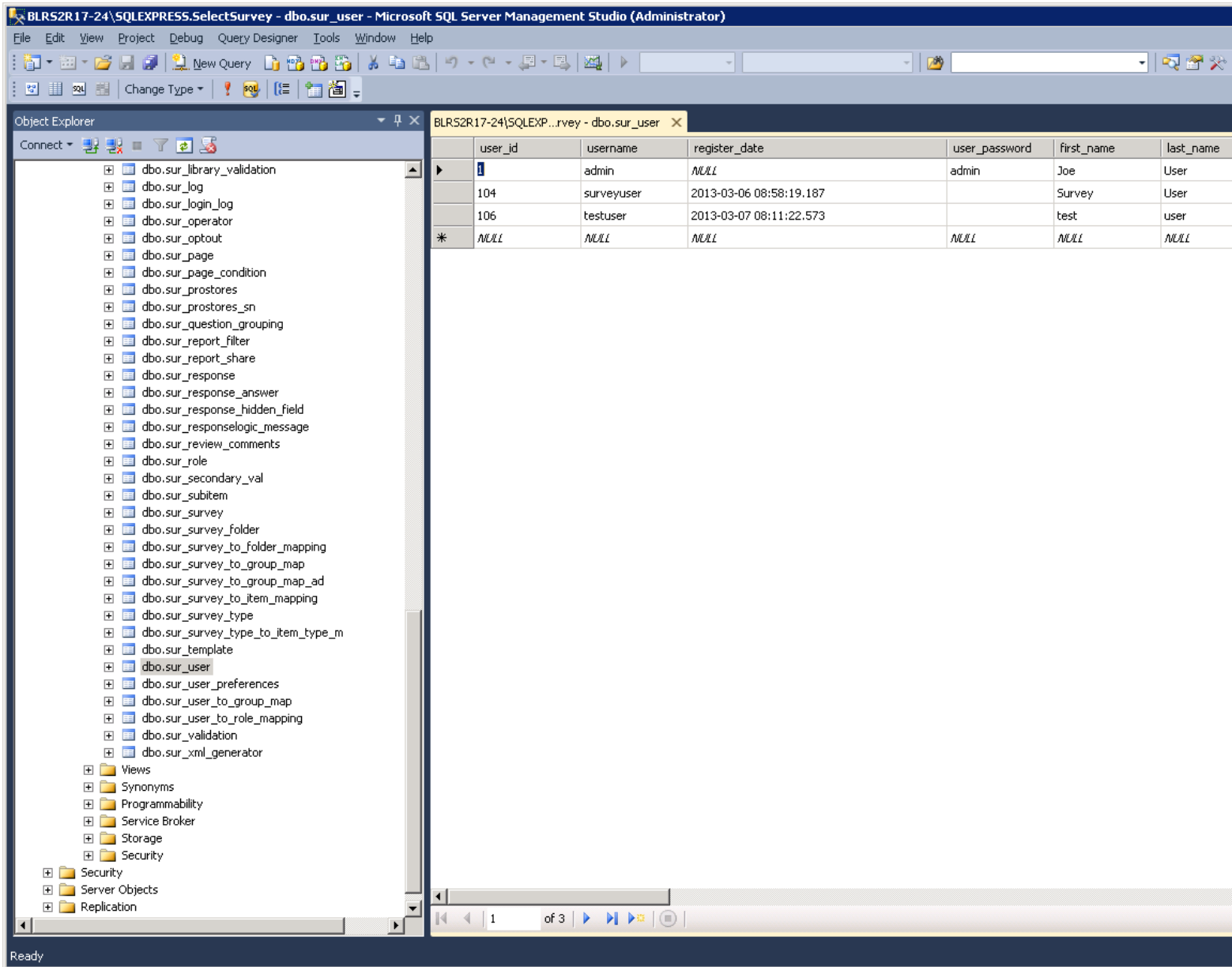
< Back   **Next >**   Cancel   Help

Microsoft SQL Server 2008 R2 Data-Tier Application  
 Microsoft SQL Server 2008 R2 Data-Tier Application  
 Current component is installing.





Now all domains users properties synch in SelectSurvey.NET when logging in from any trusted domain.



### How the Active Directory Integration behaves:

When user logs in, their active directory info is automatically added to the sur\_user table as the lowest role user (can take surveys).



This means there is no import necessary and nothing else required to synch the data between Active Directory and the survey app.

Each time the user logs in, the data is synched from the Active Directory data to the survey tables except for survey specific properties like survey role.

When survey role (user/create/admin) is edited in the survey app this will stay until edited from within the survey app.

User edit/delete in survey app does not edit or delete user in Active Directory.

## How to enable NTLM for IIS 7:

When NTLM is enabled, users will not see the AD login page, but will be directed either into a survey or into the survey list page depending on their user role.

Make sure you do not use debug mode with the force NTLM passthrough authentication setting, as this would cause an infinite loop of redirects.

### 1. Set the NTLM specific settings in the web.config:

```
<!--If NTLM passthrough is activated the identity will be picked up by the browser (IE only) and the user will never see the login page. They will be automatically logged in with their network identity username in which all their survey activity will be stored. -->
```

```
<!-- valid values are "yes" and "no" -->
```

```
<add key="USE_NTLM_PASSTHROUGH_AUTHENTICATION" value="yes"/>
```

```
<!-- required for NTLM passthrough to work otherwise regular AD login will show -->
```

```
<add key="FORCE_NTLM_PASSTHROUGH_AUTHENTICATION" value="yes"/>
```

(lower portion below:)

```
<authorization>
```

```
    <allow users="*" />
```

```
</authorization>
```

```
<!--NTLM Integrated Windows Authentication -->
```

```
<identity impersonate="false" />
```

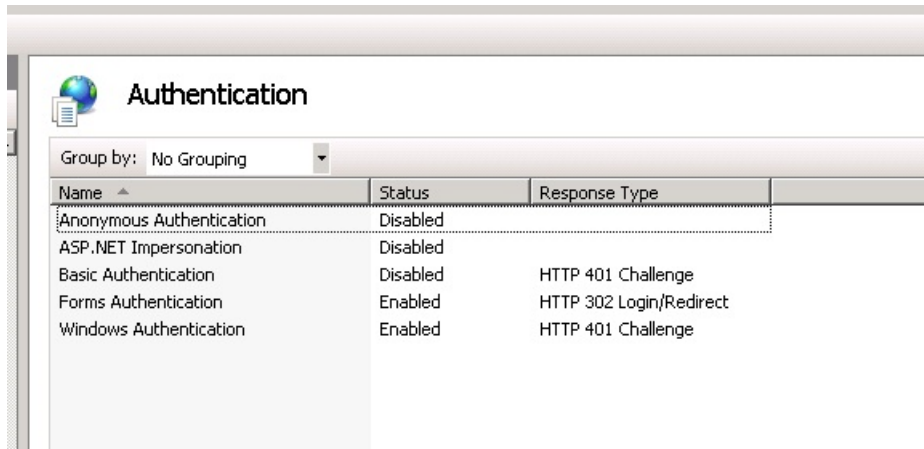
```
<authentication mode="Windows">
```



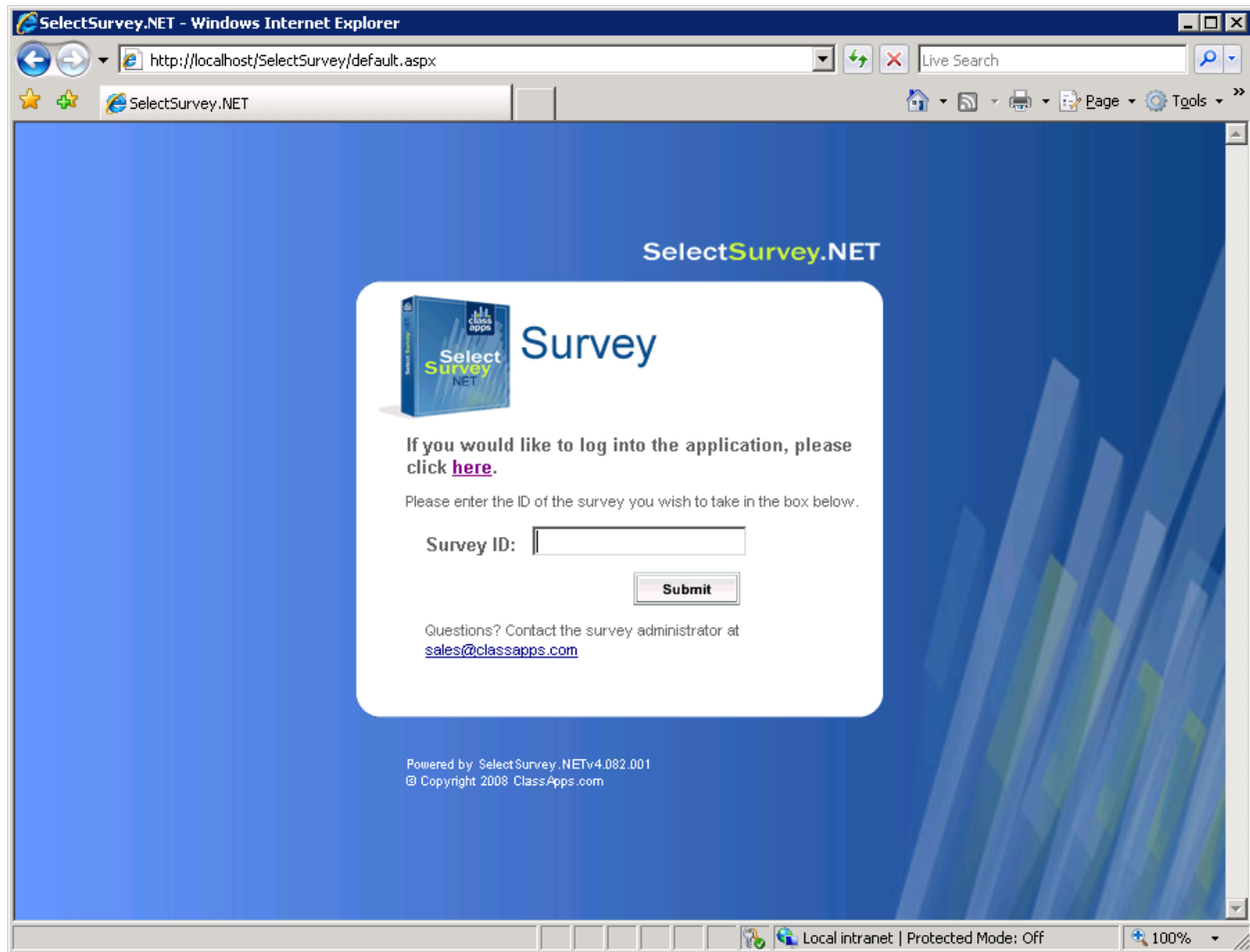
## 2. Set the Authentication in IIS:

NTLM requires that anonymous authentication be disabled in IIS, and windows authentication must be enabled with application user passthrough authentication set in IIS.

NTLM authentication should match the below screenshot exactly:

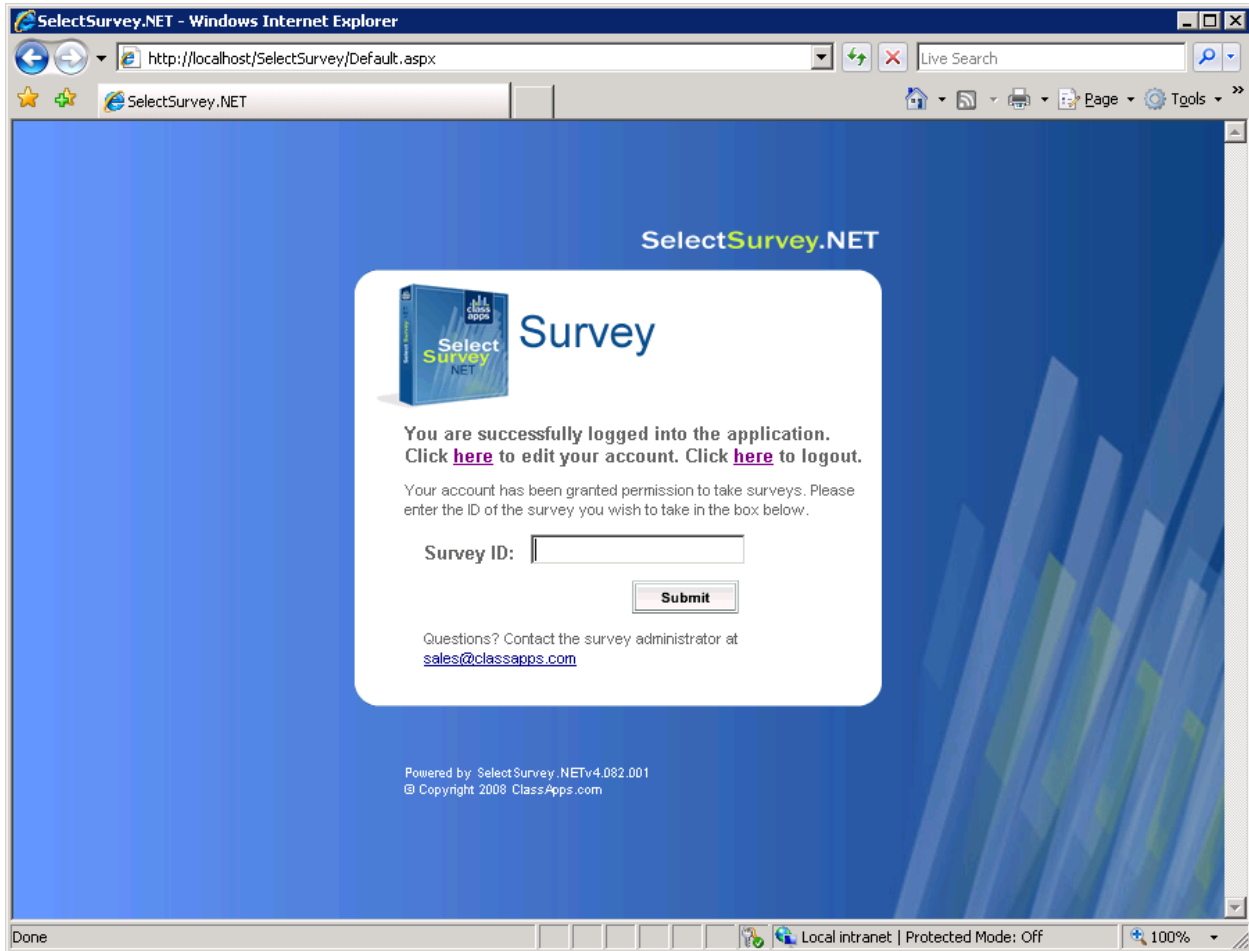


When clicking to login the user is redirected straight into the survey or into the survey list page depending on permissions.



Or if the user is user role 1, then they can only take surveys or logout.





The default installation of IIS 7 does not include the Windows authentication role service. To use Windows authentication on IIS, you must install the role service, disable Anonymous authentication for your Web site or application, and then enable Windows authentication for the site or application.

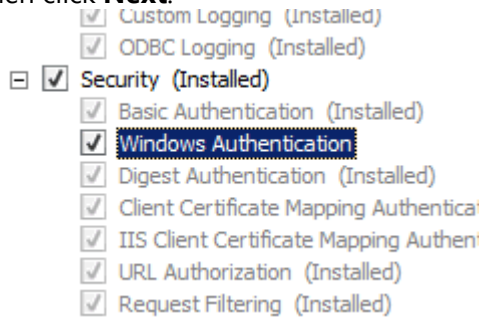
**Note:** After you install the role service, IIS 7 commits the following configuration settings to the ApplicationHost.config file.

```
<windowsAuthentication enabled="false" />
```

## Windows Server 2008 or Windows Server 2008 R2 Install Windows Authentication

1. On the taskbar, click **Start**, point to **Administrative Tools**, and then click **Server Manager**.

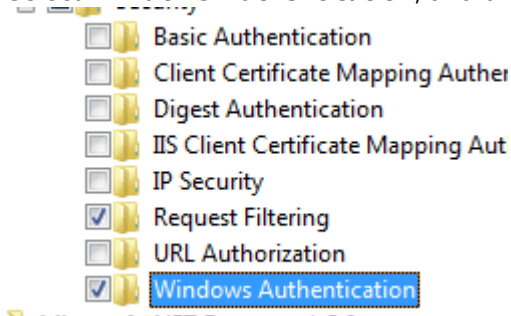
2. In the **Server Manager** hierarchy pane, expand **Roles**, and then click **Web Server (IIS)**.
3. In the **Web Server (IIS)** pane, scroll to the **Role Services** section, and then click **Add Role Services**.
4. On the **Select Role Services** page of the **Add Role Services Wizard**, select **Windows Authentication**, and then click **Next**.



5. On the **Confirm Installation Selections** page, click **Install**.
6. On the **Results** page, click **Close**.

## Windows Vista or Windows Install Windows Authentication

1. On the taskbar, click **Start**, and then click **Control Panel**.
2. In **Control Panel**, click **Programs and Features**, and then click **Turn Windows Features on or off**.
3. Expand **Internet Information Services**, then **World Wide Web Services**, then **Security**.
4. Select **Windows Authentication**, and then click **OK**.

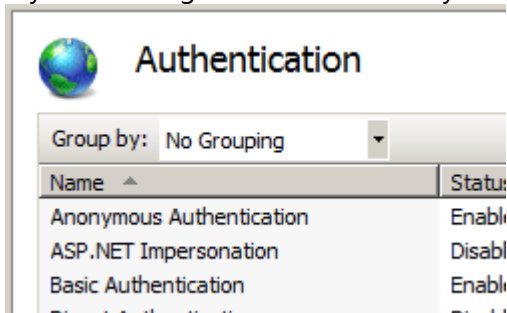


## How to enable Windows authentication in IIS 7

1. Open **Internet Information Services (IIS) Manager**:
  - If you are using Windows Server 2008 or Windows Server 2008 R2:
    - On the taskbar, click **Start**, point to **Administrative Tools**, and then click **Internet Information Services (IIS) Manager**.

- If you are using Windows Vista or Windows 7:
  - On the taskbar, click **Start**, and then click **Control Panel**.
  - Double-click **Administrative Tools**, and then double-click **Internet Information Services (IIS) Manager**.
- 2. In the **Connections** pane, expand the server name, expand **Sites**, and then the site, application, or Web service for which you want to enable Windows authentication.
- 3. Scroll to the **Security** section in the **Home** pane, and then double-click **Authentication**.
- 4. In the **Authentication** pane, select **Windows Authentication**, and then click **Enable** in the **Actions** pane.

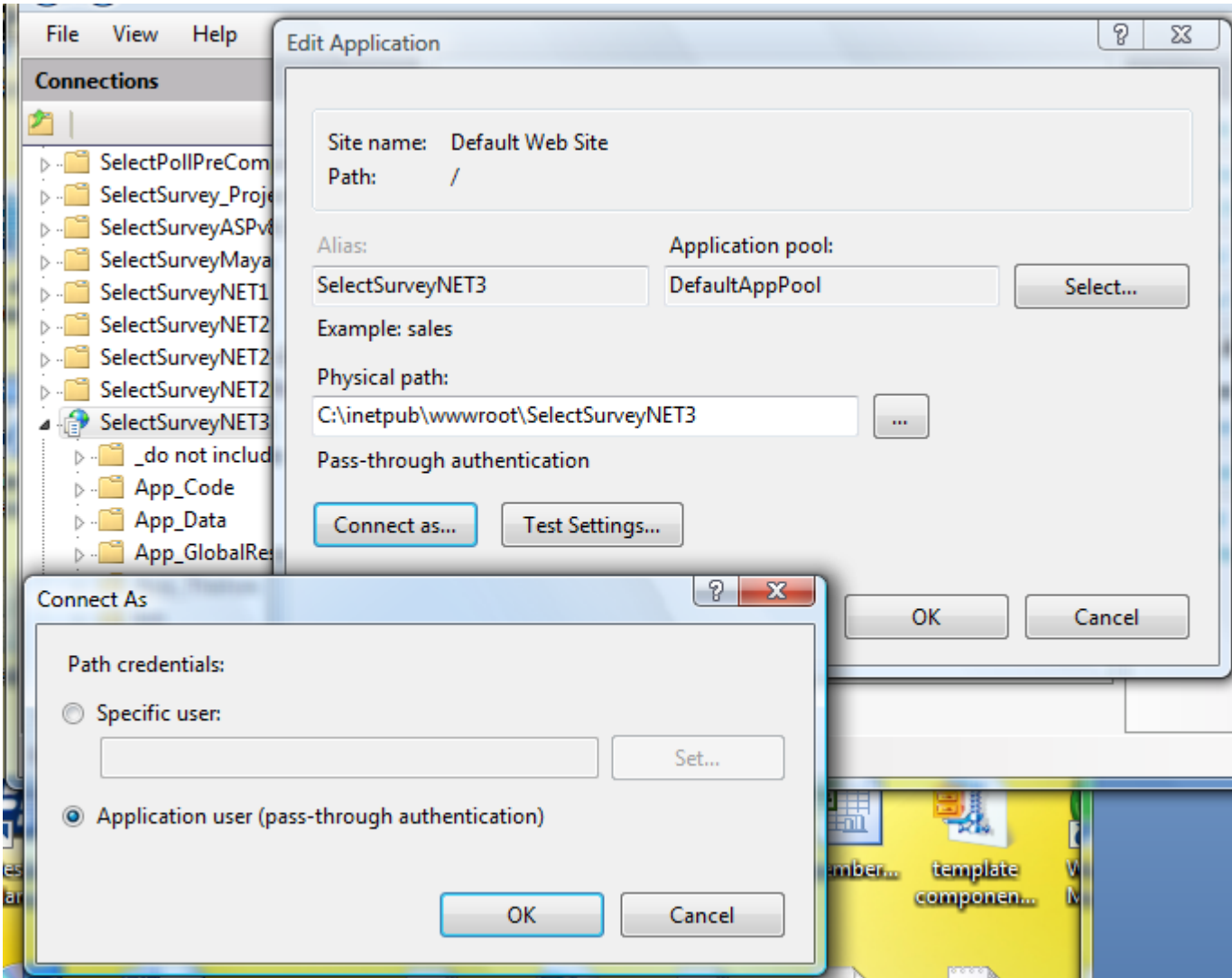
If you are using NTLM disable anonymous authentication, otherwise leave it enabled.



## How to enable NTLM:

Disable anonymous authentication in IIS7 authentication screen for this web site.

Enable pass through authentication in IIS7 for this web site (see screenshot below).



(IIS 7)

**Step 4:**

**Test.**

**How the Active Directory Integration behaves:**

When user logs in, their active directory info is automatically added to the sur\_user table as the lowest role user (can take surveys).

This means there is no import necessary and nothing else required to synch the data between Active Directory and the survey app.

Each time the user logs in, the data is synched from the Active Directory data to the survey tables except for survey specific properties like survey role.

When survey role (user/create/admin) is edited in the survey app this will stay until edited from within the survey app.

User edit/delete in survey app does not edit or delete user in Active Directory.

## Browser NTLM Configuration: IE Browser

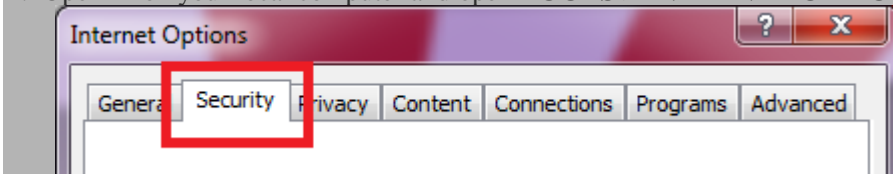
### IE:

- 1) from IE browser select Tools menu, choose "Internet Options"
- 2) click the security tab
- 3) select the local intranet icon
- 4) click the "Sites" button
- 5) click the "Advanced " button
- 6) add your selectsurvey installation URL to the local intranet zone.
- 7) click the add button then click ok.

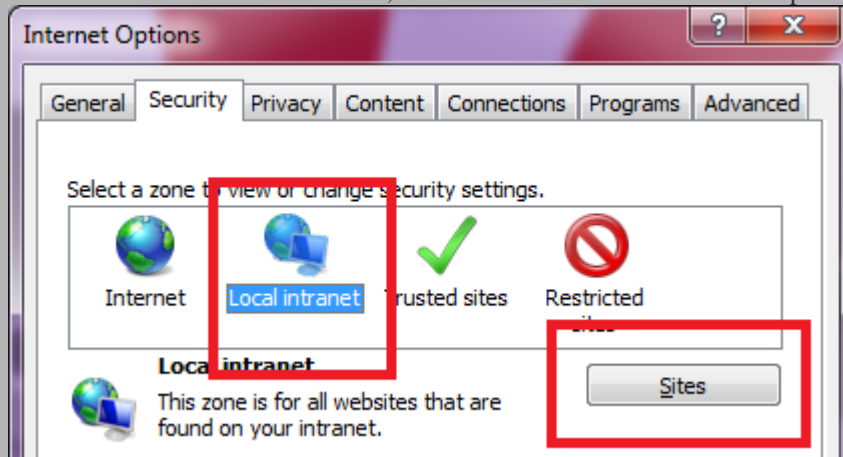
## Internet Explorer Local Machine Trusted Sites Setup

So you may not have a domain, with an Active Directory Server to do your bidding. Don't worry though, as this is just as easy to setup on your local machine. If you're on a domain, you'll need to complete the following on your active directory server before skipping to the next section anyway.

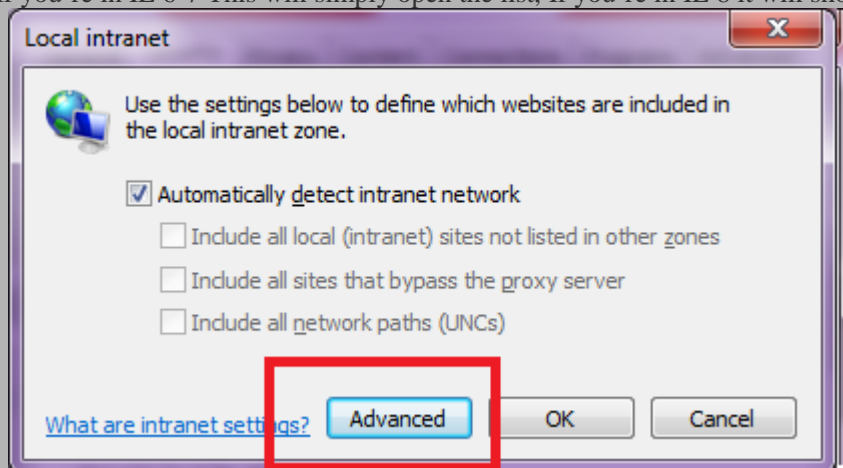
1. Open IE on your local computer and open **TOOLS > INTERNET OPTIONS**, then choose the Security tab up the top.



2. Click on the ‘**Local Intranet**’ icon, and then click the **Sites** button to open the list of Trusted Sites for the Intranet zone.

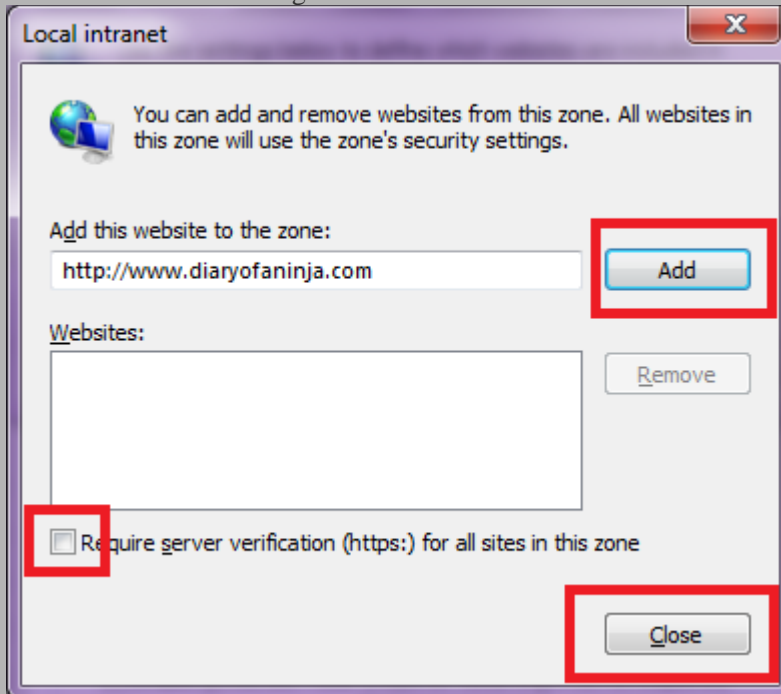


3. If you're in IE 6-7 This will simply open the list, If you're in IE 8 it will show the window below. Click **Advanced**.

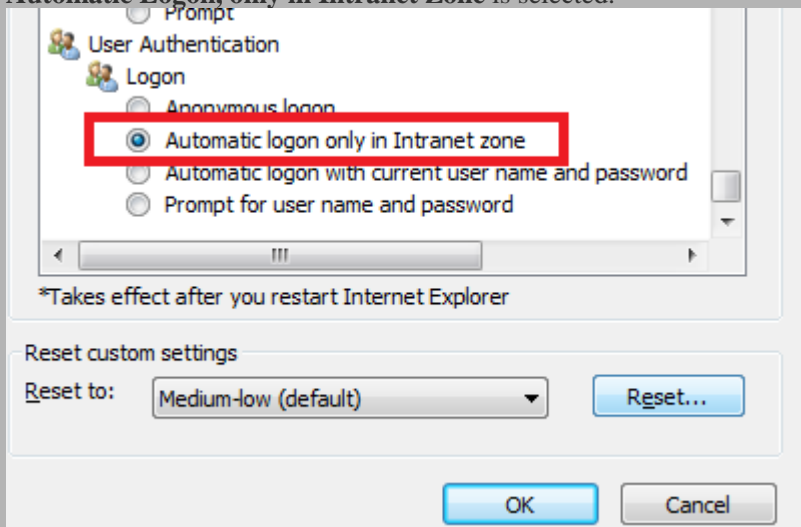


4. If your site ASP.Net, SharePoint or TFS site is not on an HTTPS connection (*I'm assuming it isn't*) un-tick the box marked “**Require secure connection**”, and then enter your site’s address in the box. Then click **Add**. Do this for every site you

want to have automatic sign-on for and then click close



5. Now back at the main settings screen, make sure the intranet zone is still selected and click the **custom level** button. On the next screen scroll right to the bottom and make sure that under **User Authentication > Logon**, that the option **Automatic Logon, only in Intranet Zone** is selected.



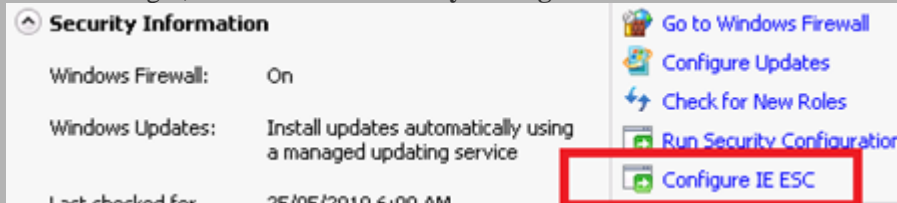
6. Close by clicking OK, and you're done!

## Internet Explorer Domain Group Policy Trusted Sites Setup

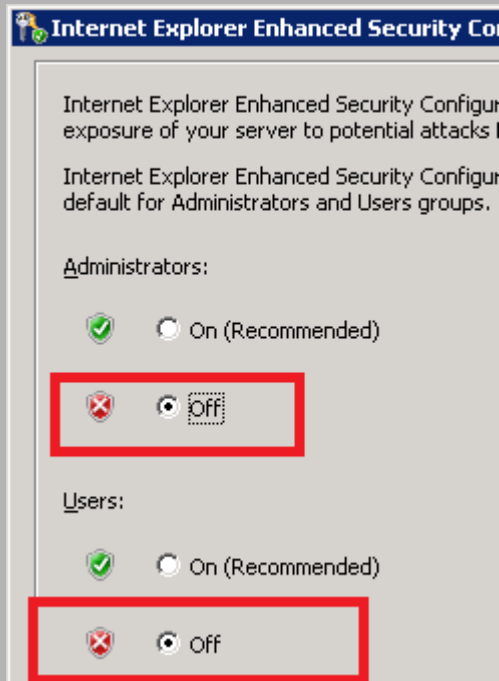
If you're on a domain, and want to allow all your users to have automatic sign-on, Group Policy is your friend. If you don't you're already done.

1. Login to your Active Directory Domain Controller, using a domain admin account, and perform the steps listed above to setup the local Internet Explorer settings on the server. You will want to repeat the following for two separate policies. One with Enhanced Security Configuration turned on, and one with it turned off, so that you can support workstations with both configuration.

2. To turn off Internet Explorer Enhanced Security Configuration on a Windows 2008 server do the following. Open up Server manager, scroll down to **Security Configuration** and click the link that says **Configure IE ESC**

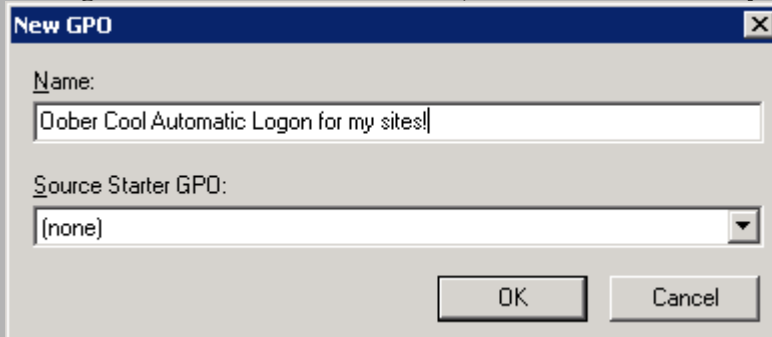


3. Turn it off for **Administrators** and close the window

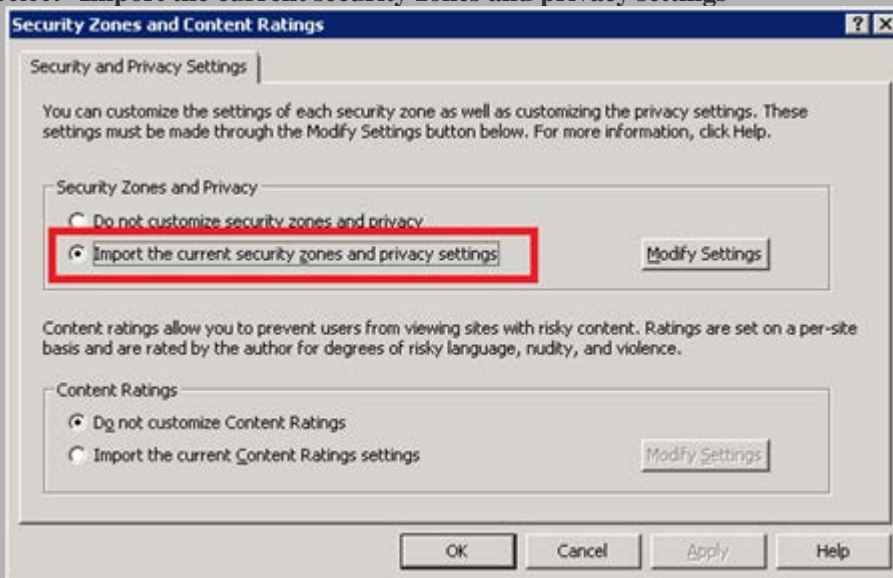




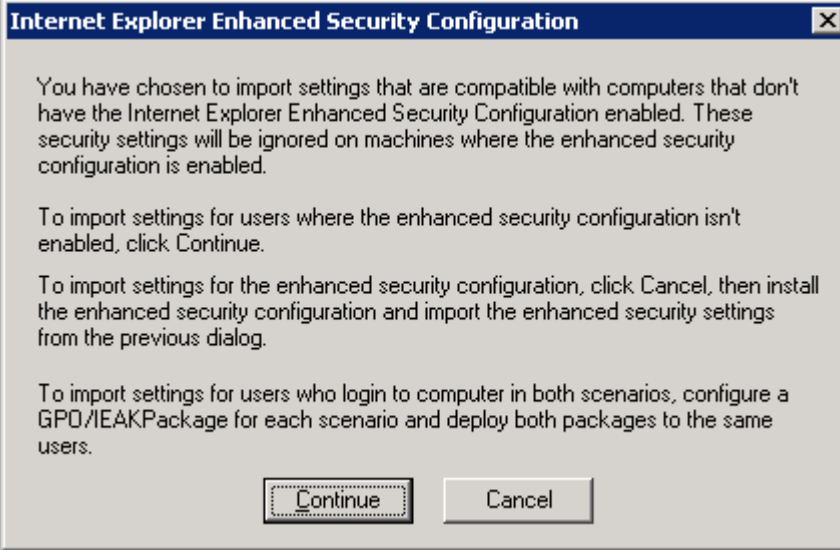
4. Open up **Group Policy Management**
5. Right-click your domain name (or whichever OU contains the users you wish to apply this to), and create a new Policy by clicking “**Create a GPO in this domain, and link it here**”. Give your new policy a name (preferably better than mine)



6. Right click on your newly created policy and select **Edit**
7. Open down to **User Configuration > Policies > Windows Settings > Internet Explorer Maintenance > Security > Security Zones and Content Ratings**
8. Select “**Import the current security zones and privacy settings**”



9. When you select this option you will probably receive a warning about ‘Internet Explorer Enhanced Security Configuration’.



This is why we disabled the enhanced configuration in step 3, so that this policy will apply to workstations without Enhanced security turned on. Click **Continue**.

10. Close all open windows.

The changes will take time to replicate through your AD topology, depending on your setup. You may see the changes take effect within 15 mins to an hour. If you have a Multi-site AD setup it may take a day or two.

## Browser NTLM Configuration: Firefox Browser

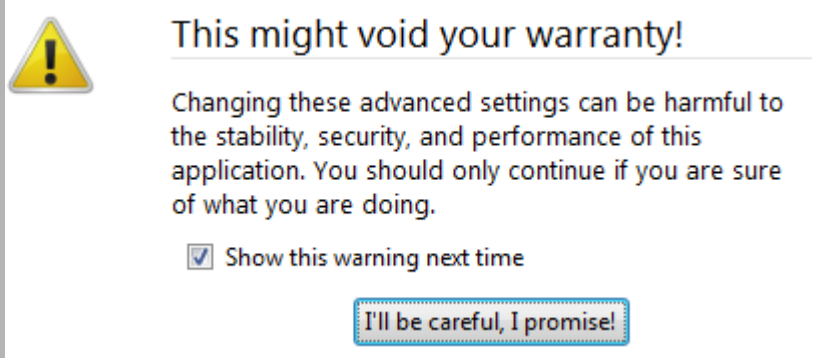
### Firefox:

About > Config

network.automatic-ntlm-auth.trusted-urls Value: SurveyServername

1. Open FireFox and type **about:config** in the address bar. Click **I'll be careful, I promise!** to the warning and you'll open

the FireFox advanced configuration page.

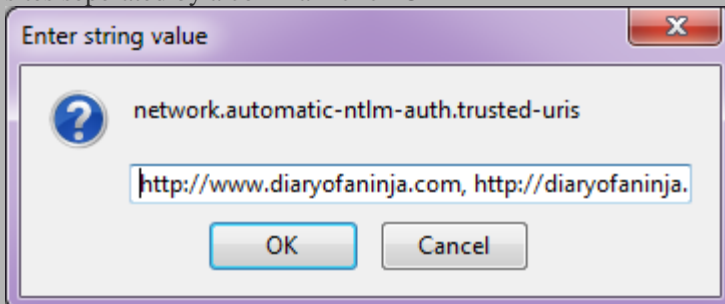


2. Search for **ntlm** by typing it into the filter box.
3. Select the option **network.ntlm.send-lm-response** and double click it to toggle it to **on**

Filter:

Preference Name	Status	Type	Value
network.auth.force-generic-ntlm	default	boolean	false
network.automatic-ntlm-auth.allow-proxies	default	boolean	true
network.automatic-ntlm-auth.trusted-uris	default	string	
network.ntlm.send-lm-response	default	boolean	false

4. Next double click the item marked **network.automatic-ntlm-auth.trusted-uris** in the next box enter each URL of your sites seperated by a comma – click OK



5. Close the tab and you're done!

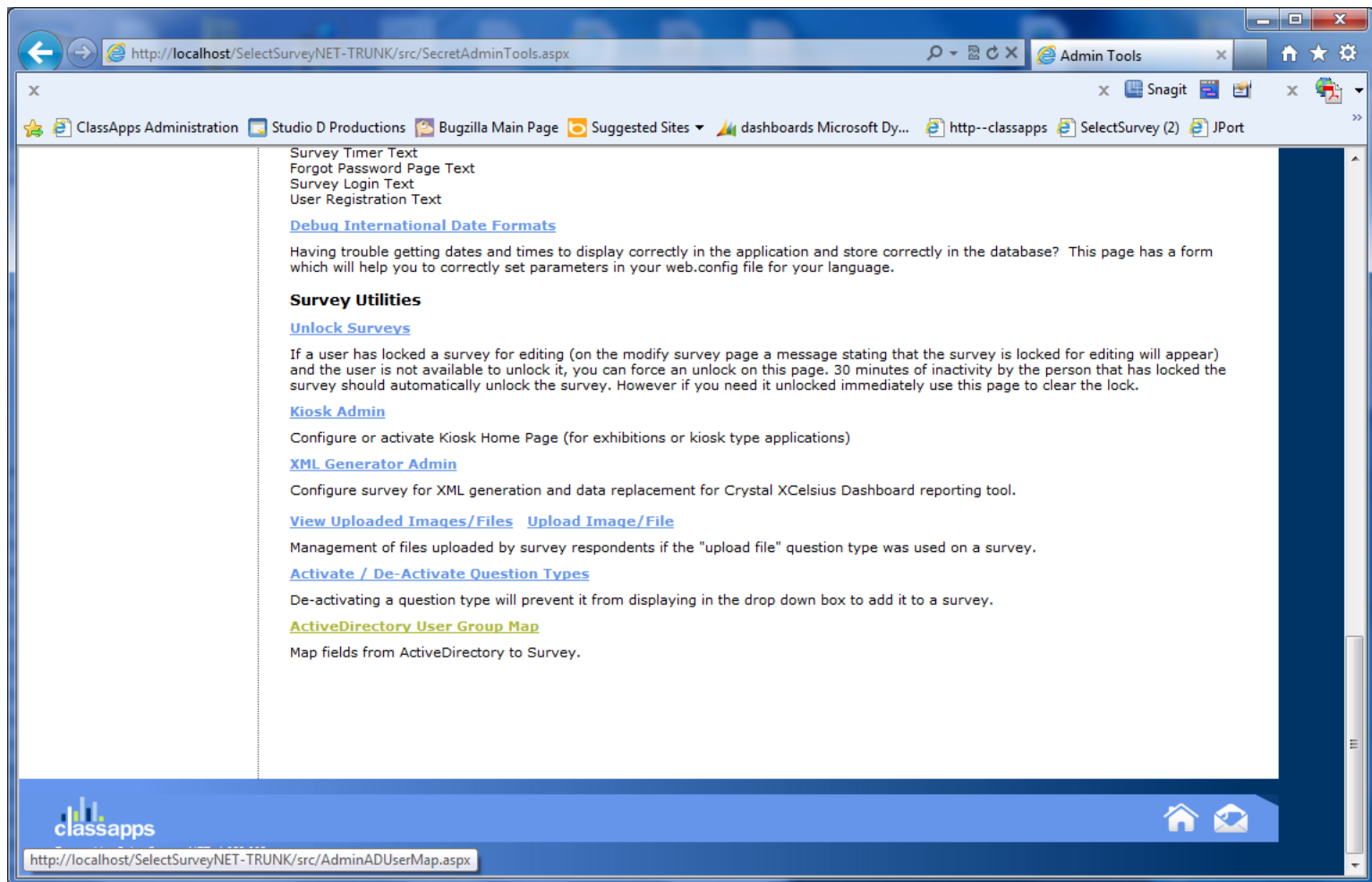
## Firefox Domain Group Policy Trusted Sites Setup

Firefox is Mozilla's beast, and therefore what they say and do goes in the world of FireFox. Sadly this means that there is no clear cut way to setup group policy's for FireFox.

Click the link to go to the selectsurvey login.aspx page and the page will never show you will automatically be logged in and forwarded to the survey list page, or if a user, to the survey.

## Mapping AD User Fields to SUR\_USER Survey User Fields

SelectSurvey.NET has a built in capability of mapping custom fields from AD to the Survey User. To access this feature, login as admin user, then click "Admin Tools", "ActiveDirectory User Map". See the screenshots below for an idea of the fields that you can map between AD and Survey.



**ActiveDirectory User Property Mapping**

This page allows activating or de-activating question types from being added to a survey.

 [Page Help](#)

[Go to Survey List](#)

**ActiveDirectory User Property Mapping**

This page is for administrators to map AD properties to survey user fields. When mapping is set, the AD properties will overwrite the survey user properties when synched upon every login.

Enter the proper AD property for each survey user field. CASE SENSITIVE! Then click save at bottom of page.

Survey User Field	ActiveDirectory User Property
Username (sur_user.username)	SAMAccountName (Default AD setting)
Username (sur_user.username)	userPrincipalName (Default AD setting if 1st returns null)
Username (sur_user.username)	HttpContext.Current.User.Identity.Name (Default NTLM setting)
Username (sur_user.username)	Request.ServerVariables["LOGON_USER"] (Default NTLM setting if 1st returns null)
Register Date (sur_user.register_date)	n/a (User registration feature is not used with AD)
User Password (sur_user.password)	n/a (User password is not stored with AD integration)
Password Hint (sur_user.password_hint)	n/a (Password hint is not used with AD integration)
First Name (sur_user.first_name)	<input type="text" value="givenName"/> search.PropertiesToLoad.Add("givenName")
Last Name (sur_user.last_name)	<input type="text" value="sn"/> search.PropertiesToLoad.Add("sn")
Email Address (sur_user.email_address)	<input type="text" value="mail"/> search.PropertiesToLoad.Add("mail")
Current Position (sur_user.current_position)	<input type="text" value="Title"/>
Company (sur_user.company)	<input type="text" value="company"/> search.PropertiesToLoad.Add("company")
Location (sur_user.location)	<input type="text" value="StreetAddress"/> search.PropertiesToLoad.Add("StreetAddress")
Custom Data 1 (sur_user.custom_data_1)	<input type="text"/>
Custom Data 2 (sur_user.custom_data_2)	<input type="text"/>
Custom Data 3 (sur_user.custom_data_3)	<input type="text"/>
Active YN (sur_user.active_yn)	n/a (Not used with AD integration)
User Title (sur_user.user_title)	<input type="text"/>
Company Head (sur_user.company_head)	<input type="text"/>
Department (sur_user.department)	<input type="text" value="department"/> search.PropertiesToLoad.Add("department")
Address 1 (sur_user.address_1)	<input type="text" value="StreetAddress"/> search.PropertiesToLoad.Add("StreetAddress")
Address 2 (sur_user.address_2)	<input type="text"/>
Zip Code (sur_user.zip_code)	<input type="text" value="postalCode"/> search.PropertiesToLoad.Add("postalCode")
City (sur_user.city)	<input type="text"/>
State (sur_user.state)	<input type="text" value="st"/> search.PropertiesToLoad.Add("st")
Country (sur_user.country)	<input type="text"/>
Business Phone 1 (sur_user.business_phone_1)	<input type="text" value="telephoneNumber"/> search.PropertiesToLoad.Add("telephoneNumber")
Business Phone 2 (sur_user.business_phone_2)	<input type="text"/>
Business Fax (sur_user.business_fax)	<input type="text"/>
Mobile Phone (sur_user.mobile_phone)	<input type="text" value="mobile"/> search.PropertiesToLoad.Add("mobile")
Active Until (sur_user.active_until)	n/a (not used by AD integration)
Force Password Change (sur_user.force_password_change)	n/a (not used by AD integration)

Other Available Properties:  
 search.PropertiesToLoad.Add("manager")  
 search.PropertiesToLoad.Add("homephone")  
 search.PropertiesToLoad.Add("url")

List of all properties in your domain:

## Appendix D: Common Errors/Solutions

Below are some common errors and how to resolve them.

There is a variable in web.config "Show admin tools" yes/no. When this is set to yes, a tool icon will display in the upper right corner of application when logged in as admin user. Click the tool icon, then there is a variety of admin tools to help with install and configuration.

**Error:** Ambiguous match found.

**Solution:** You are using the wrong version of the .net framework, right click the web site folder in iis and check on the .net framework tab to make sure it is pointing to the correct version 3.5 of the .net framework.

**Error:** Database error.

**Solution:** Go to debugdatabaseconnection.aspx in the application and paste in your connection string, the error will tell you how to fix it. If you are using SQL 2005 Express, by default it does not allow remote connections (see SQL express help on how to configure). If the app is running on a domain controller you will not be able to use integrated security SSPI in your SQL connection string, you will have to use the sql login in the connection string. Again use the debugdatabaseconnection.aspx for testing. If you are using integrated security SSPI, the asp.net account (or account it logs in with ) must have permissions to the sql server.

**Error:** Object reference not set to an instance of an object.trace: at  
SelectSurveyNET.SurveyListPage.Page\_Load

**Solution 1:** Make sure you have upgraded your database to add new columns. See releasenotes.txt in the upgrade zip file, check all database changes from version you were using, to new version.

**Solution 2:** If you are running the application on a sharepoint server, you need to add variables to the web.config so that login authentication will retain user.context.

Sharepoint variables: (add to system.web section in web.config.)

```
<trust level="Full" originUrl="" />

<httpHandlers>

    <add verb="*" path="*.aspx" type="System.Web.UI.PageHandlerFactory, System.Web,
Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a" />

</httpHandlers>

<httpModules>
```

```
<add name="Session" type="System.Web.SessionState.SessionStateModule" />
<add name="FormsAuthentication" type="System.Web.Security.FormsAuthenticationModule" />
<add name="PassportAuthentication"
type="System.Web.Security.PassportAuthenticationModule" />
<add name="UrlAuthorization" type="System.Web.Security.UrlAuthorizationModule" />
<add name="FileAuthorization" type="System.Web.Security.FileAuthorizationModule" />
</httpModules>
<pages enableSessionState="true" enableViewState="true" enableViewStateMac="true"
validateRequest="false" />
```

## Appendix E: Preferred Hosting Providers

Hosting provider must allow control panel ability to add asp.net application folder. If they don't, then you will most likely have to create a support ticket to wait for them to add it for you.

The below hosting providers have asp.net permissions and asp.net application folders that you can configure through the control panel: (this is not a complete list)

Intermedia.net

Godaddy.com

## Appendix F: Windows Sharepoint Services

Hosting the survey application on a server that has Microsoft Sharepoint Services installed will require some tweaking for security to work.

Sharepoint security will over-ride security to the Survey application (or any other 3<sup>rd</sup> party application) without following the below steps:

(The below is an excerpt from <http://support.microsoft.com/kb/828810>)

### **Add Sharepoint information to Select Survey web.config:**

You'll have to both add an excluded path and clear out the HTTP handlers in

web.config. In your web.config file, add these directives immediately after

```
<system.web>.
```

#### Example 1: (default)

```
<!--SHAREPOINT START:  DEFAULT SHAREPOINT ADDITIONS -->
<trust level="Full" originUrl="" />
<httpHandlers>
<add verb="*" path="*.aspx" type="System.Web.UI.PageHandlerFactory, System.Web,
Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a" />
</httpHandlers>

<pages enableSessionState="true" enableViewState="true" enableViewStateMac="true"
validateRequest="false" />
<!--SHAREPOINT END -->
```

Here is another example of a more complicated sharepoint addition to the survey web.config (add directly under system.web section in web.config):

#### Example 2: (complex)

```
<!--SHAREPOINT START -->
<trust level="Full" originUrl="" />
  <httpHandlers>
    <add verb="*" path="*.aspx" type="System.Web.UI.PageHandlerFactory, System.Web,
Version=1.0.5000.0, Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a" />
  </httpHandlers>
  <httpModules>
    <add name="Session" type="System.Web.SessionState.SessionStateModule" />
    <add name="FormsAuthentication" type="System.Web.Security.FormsAuthenticationModule" />
    <add name="PassportAuthentication"
type="System.Web.Security.PassportAuthenticationModule" />
    <add name="UrlAuthorization" type="System.Web.Security.UrlAuthorizationModule" />
```



```
<add name="FileAuthorization" type="System.Web.Security.FileAuthorizationModule"/>

</httpModules>

<pages enableSessionState="true" enableViewState="true" enableViewStateMac="true"
validateRequest="false"/>

<!--SHAREPOINT END -->
```

You can also find more information on google groups and the Microsoft support site.

## Appendix G: Web Farm Configuration

SelectSurvey.NET can be configured for web farms or web gardens by following the instructions below to make a simple change to the web.config file. ASP.NET session state lets you share session data user-specific state values across all machines in your Web farm. Now a user can hit different servers in the web farm over multiple requests and still have full access to her session.

The default setting for session state in the SelectSurvey.NET web.config is “inProc” session state because its performance is faster than all the different types of session states. For SelectSurvey.NET to run without session errors on a web farm or web garden scenario, the session state must be changed from “inProc” to “StateServer” in the web.config as described below:

To configure an ASP.NET application to use **StateServer** mode, in the application's Web.config file do the following:

- Set the **mode** attribute of the [sessionState](#) element to **StateServer**.
- Set the **stateConnectionString** attribute to **tcpip=serverName:42424**.

The following example shows a configuration setting for **StateServer** mode where session state is stored on a remote computer named `SampleStateServer`:

```
<configuration>
  <system.web>
    <sessionState mode="StateServer"
      stateConnectionString="tcpip=SampleStateServer:42424"
      cookieless="false"
      timeout="20"/>
  </system.web>
</configuration>
```

Read the items below concerning proper setup of the servers on the webfarm.

## StateServer

- - In a web farm, make sure you have the same <machineKey> in all your web servers. See [KB 313091](#) on how to do it.
- - Also, make sure your objects are serializable. See [KB 312112](#) for details.
- - For session state to be maintained across different web servers in the web farm, the Application Path of the website (For example \LM\W3SVC\2) in the IIS Metabase should be identical in all the web servers in the web farm. See [KB 325056](#) for details

-----  
Additional information on Microsoft.com:

More information can be found here: <http://www.eggheadcafe.com/articles/20021016.asp>

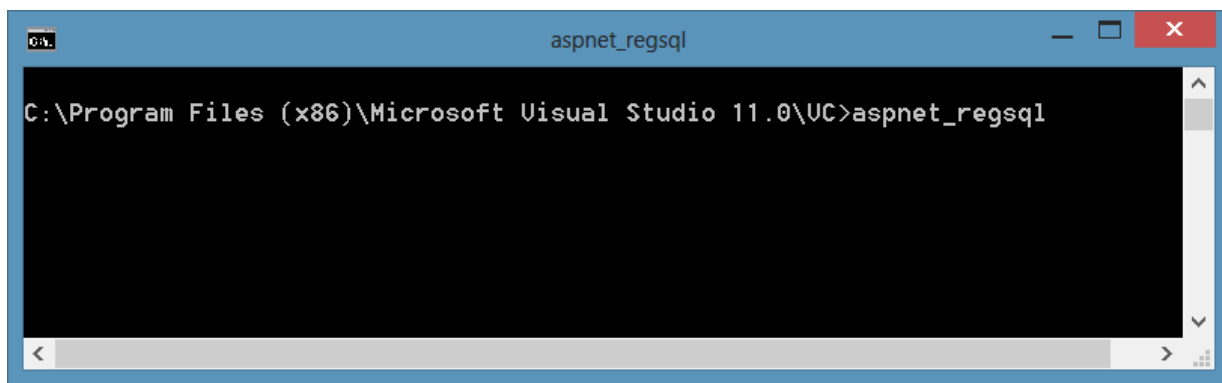
**Web-Farm Session State** ASP.NET session state lets you share session data user-specific state values across all machines in your Web farm. Now a user can hit different servers in the web farm over multiple requests and still have full access to her session.

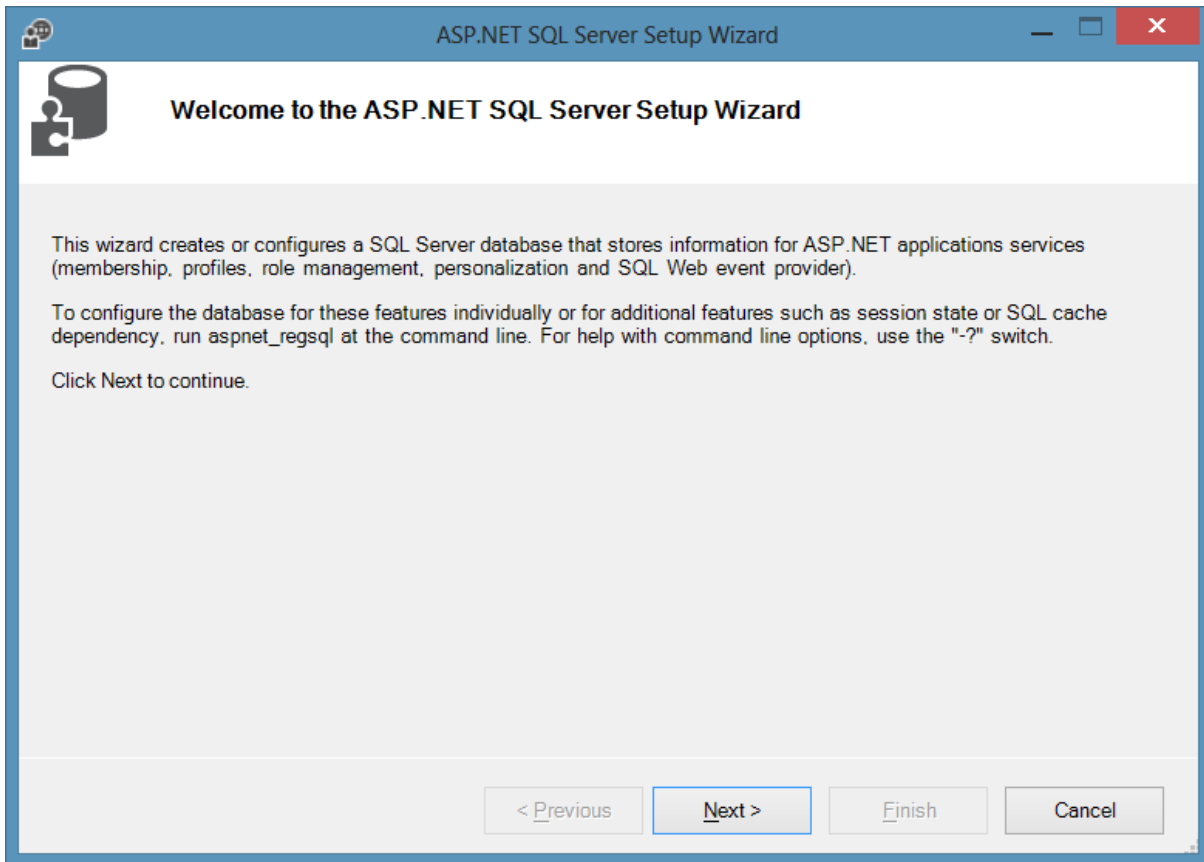
<http://msdn2.microsoft.com/en-us/library/ms178586.aspx>

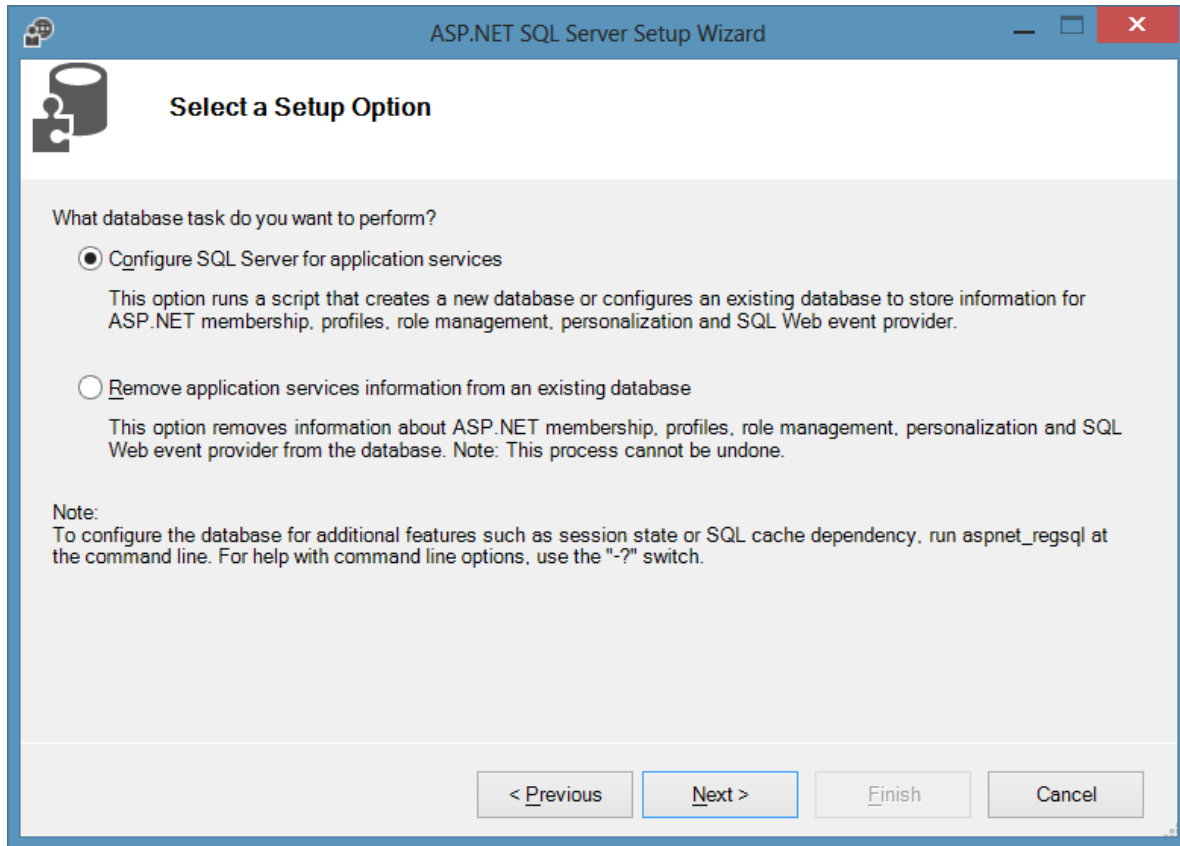
## SQLServer Session store

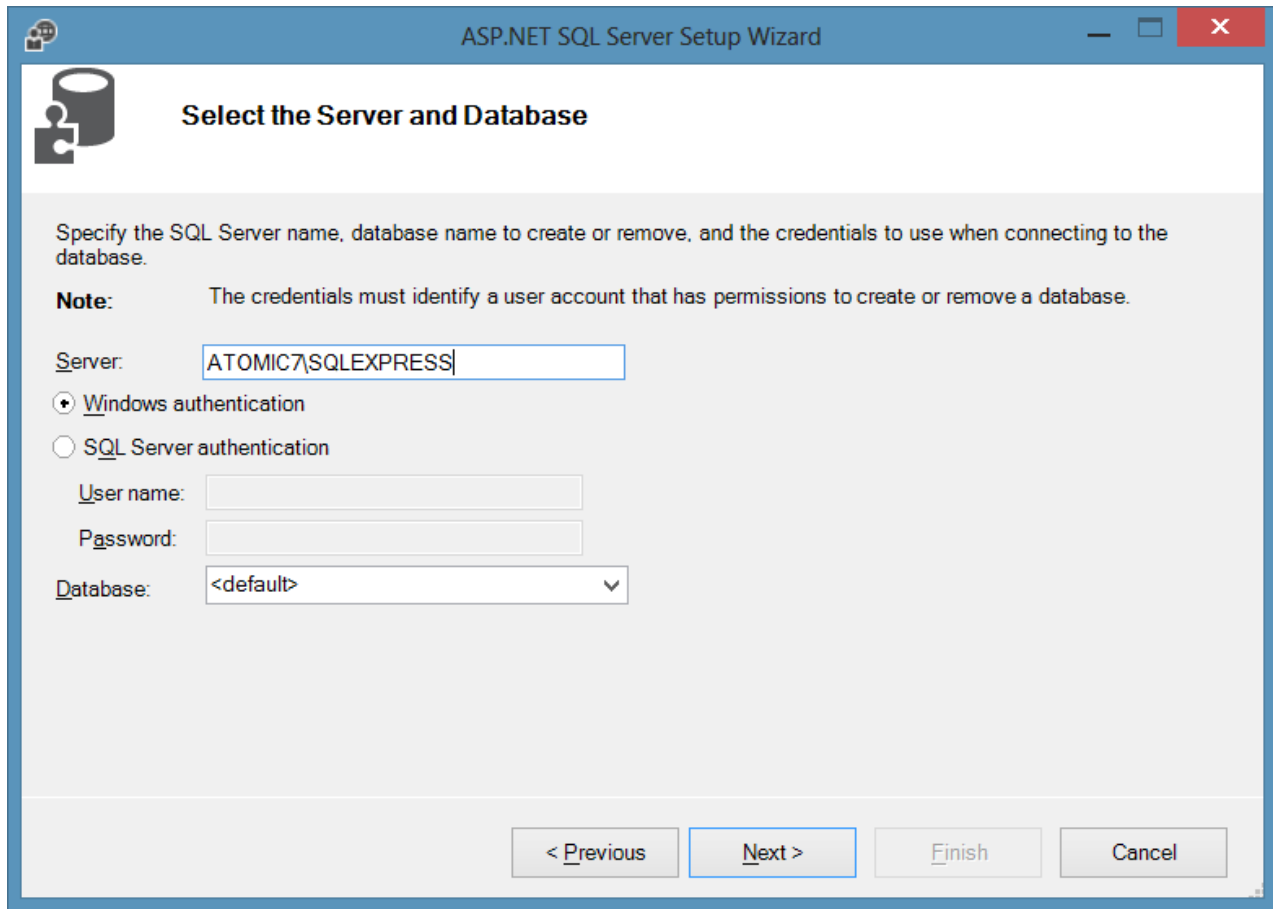
To enable storage of session state in SQL Server, update the web.config, and configure the SQL Server database to store the session state.

- 1) Update the web.config by changing the “mode” from “InProc” to “SQLServer”: `<sessionState mode="SQLServer" stateConnectionString="tcpip=127.0.0.1:42424" sqlConnectionString="data source=127.0.0.1;Trusted_Connection=yes" cookieless="false" timeout="20"/>`
- 2) Open the visual studio command prompt and type in “aspnet\_regsql” to open the wizard for configured SQL to store session data:

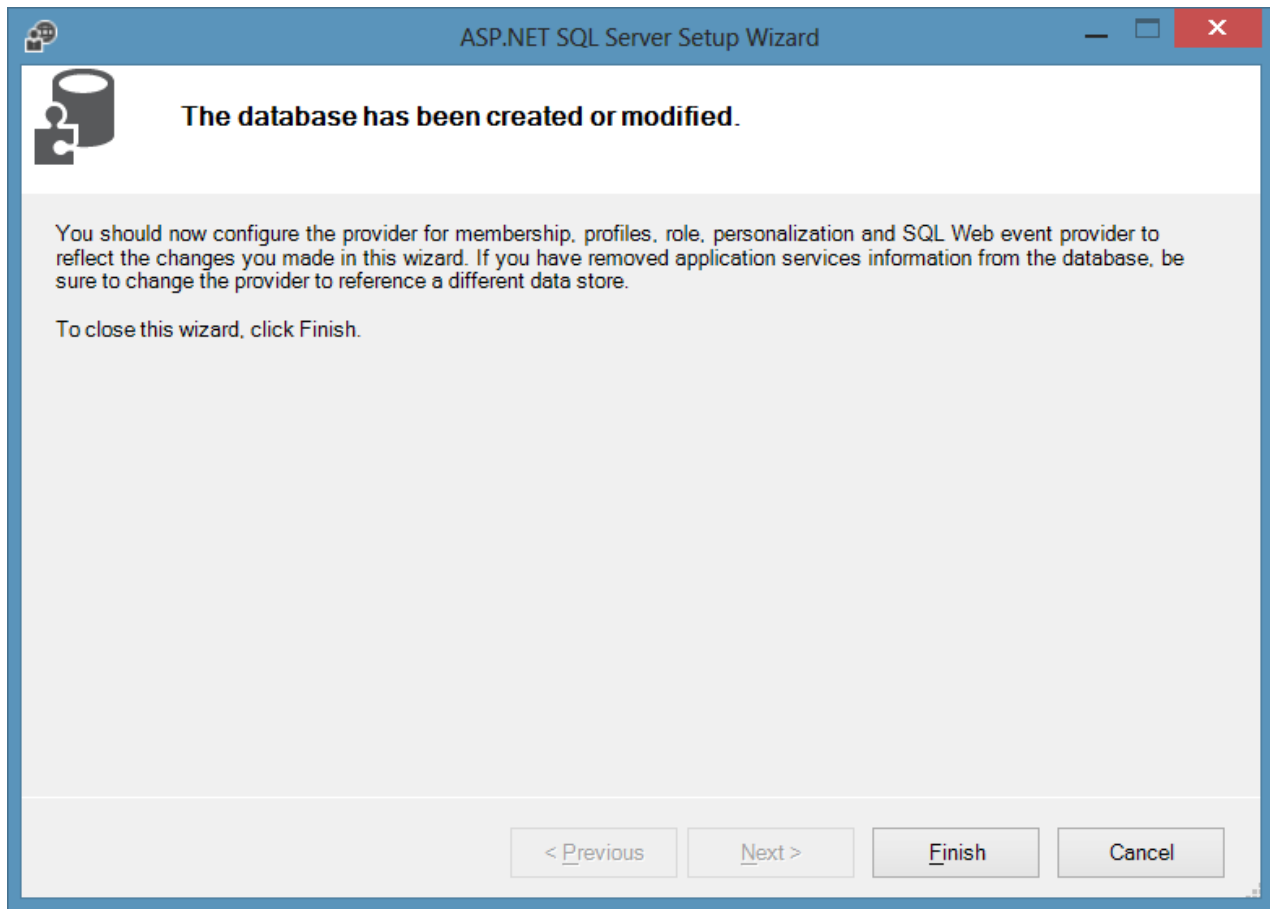








A new database called “aspnetdb” will be created on the SQL server.



Developer reference: <http://www.codeproject.com/Articles/416137/Understanding-Session-Management-Techniques-in-ASP>

## Appendix H: Single Sign on with SQL Membership Provider

SelectSurvey.NET provides integration with Single Sign on using MS SQL Membership Provider as an optional feature. Below are instructions for configuring the Single Sign on feature.

When the membership provider is activated, the application authenticates to the membership provider database, and then tries to find the user with the same “username” in the sur\_user table in the survey database. If it finds it, the user is redirected into the survey list page.

The user enters their username and password into the survey login.aspx page, it authenticates to your membership provider database, then looks in the survey database for the matching user and redirects them into the survey list page (depending on the user’s role level).

The users in the survey database still need to synch with whatever single sign on you are using. You can either write a custom provider to do the synching or you can modify the source code of the survey application to add in the synching upon login if membership provider is used on the login.aspx.cs page the same way we wrote the

synching for the AD/NTLM page LoginActiveDirectory.aspx.cs. Source code must be purchased to make this edit in the survey application side. If the synching happens from your custom provider, it can create the user directly in the database upon authentication.

- 1) Edit the web.config file section below:

<!-- If you are using the survey app in a single sign on environment, enter the details of the membership provider in the <membership> node further down in this file. -->

```
<add key="UseMembershipProvider" value="no" />
```

- 2) Edit the web.config section as follows: Include a <membership> configuration in the <system.web> section as shown:

```
<membership defaultProvider="SqlMembershipProvider">
```

```
<providers>
```

```
<add name="SqlMembershipProvider"
```

```
type="System.Web.Security.SqlMembershipProvider" connectionStringName="ASPNETDB"
requiresUniqueEmail="true" maxInvalidPasswordAttempts="25" minRequiredPasswordLength="4"
minRequiredNonalphanumericCharacters="0" requiresQuestionAndAnswer="false"
applicationName="/SelectSurveyNET"/>
```

```
</providers>
```

```
</membership>
```

- 3) Configure a <connectionString> element with the name "ASPNETDB".

That is the connection string to the authentication database. It is required in addition to the connection string to the SelectSurvey.NET database. Below is a condensed version of what the web.config file should look like:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<configuration>
```

```
<connectionStrings>
```

```
<add name="ASPNETDB" connectionString="Data
Source=xxx.xxx.xxx.xxx;Initial
Catalog=xxxxxx;UID=xxxxxxx;Password=xxxxxx"
providerName="System.Data.SqlClient" />
```

```
</connectionStrings>
```

```
<appSettings>
```

--all your app settings go in here. along with your existing SelectSurveyNET connection string

```
<add key="UseMembershipProvider" value="yes" />
```

```
<add key="SURVEY_APP_DB_DRIVER" value="OleDb" />
```

```
<add key="SURVEY_APP_CONNECTION" value="Provider=SQLNCLI;Data
Source=xxx.xxx.xxx.xxx;Initial
Catalog=SelectSurveyNET;UID=xxxxxx;Password=xxxxxx" />
```

-- other settings...

```
</appSettings>
```

```
<system.web>
```

```
<membership defaultProvider="SqlMembershipProvider">
```

```
    <providers>
```

```
        <add name="SqlMembershipProvider"
type="System.Web.Security.SqlMembershipProvider" connectionStringName="ASPNETDB"
requiresUniqueEmail="true" maxInvalidPasswordAttempts="25" minRequiredPasswordLength="4"
minRequiredNonalphanumericCharacters="0" requiresQuestionAndAnswer="false"
applicationName="/SelectSurveyNET"/>
```

```
    </providers>
```

```
</membership>
```

```
</system.web>
```



## Appendix I: Minimizing File Upload Feature Vulnerability

The "Respondent File Upload" feature and all features that allow uploading of images or files pose a potential risk for malicious files to be uploaded.

### How to Allow File Upload while minimizing risk:

- Make sure you are using the latest version of SelectSurvey.NET v4.077.012 or later OR you have disabled the file upload question type AND removed write permissions on the "UploadedImages" folder.
- Make sure you have antivirus installed and running on the web server and that it is scanning the UploadedImages folder, or the folder you have specified for the "Respondent File Upload" question type.
- Make sure the folder specified for respondent file uploads is isolated and permissions on that folder are limited only to that folder.
- Train survey designers to specify file restrictions when adding the "Respondent File Upload" question type on a survey (the edit item page has checkboxes to restrict files to specific types)
- Make sure the web.config that only allows static files in the UploadedFiles folder (or whatever folder you have specified in admin tools>application wide settings for this) is there (can be copied from v4.077.012 or later from UploadedImages folder)
- Remove any files from the UploadedImages folder that are not static. That includes .html, .htm, .asp, .aspx, etc.
- Make sure you run windows updates on the web server
- Follow Microsoft Security Recommended Best Practices
- Make sure you are doing daily backups of files and databases on the server.

### How to Disable file uploading and eliminate risk:

Remove folder and file permissions on the file upload folder designated in Admin Tools > Application Wide Settings. By default this is the "UploadedImages" folder on the web server right beneath the survey web folder itself.

### How to Disable the "Respondent File Upload" Question Type:

To disable the ability for survey designers and administrators from adding the "Respondent File Upload" question type to a survey, login as an admin user, click "Admin Tools" > "Activate/De-Activate Question Types". Select the "Respondent File Upload" question type from the drop down list and click the arrow to move it to the disabled list of questions. If you are disabling file upload, you should also disable the question type, so that it does not show up as an option in the application.