Installing the ASP.NET VETtrak APIs onto IIS 5 or 6

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1 Installing the VETtrak APIs onto IIS 5 or 6

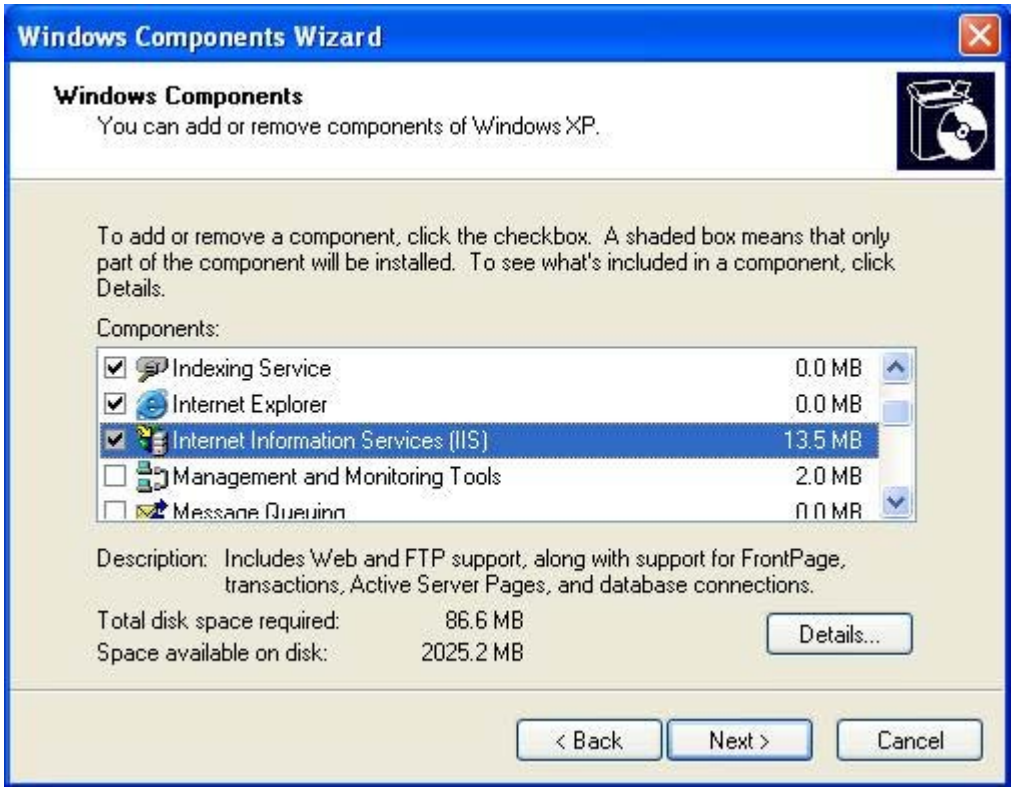
This document describes how to install ASP.NET VETtrak APIs onto a Microsoft Internet Information Services 5.1 (on Windows XP) or 6 (on Windows Server 2003) server, and how to configure it to run.

1.1 Step 1- Install/Check IIS 5 or 6

Ensure that the .NET Framework version 3.5, .NET Framework version 2.0 with at least Service Pack 2, and Internet Information Services (IIS) 5.1 or 6 is installed on the server machine.

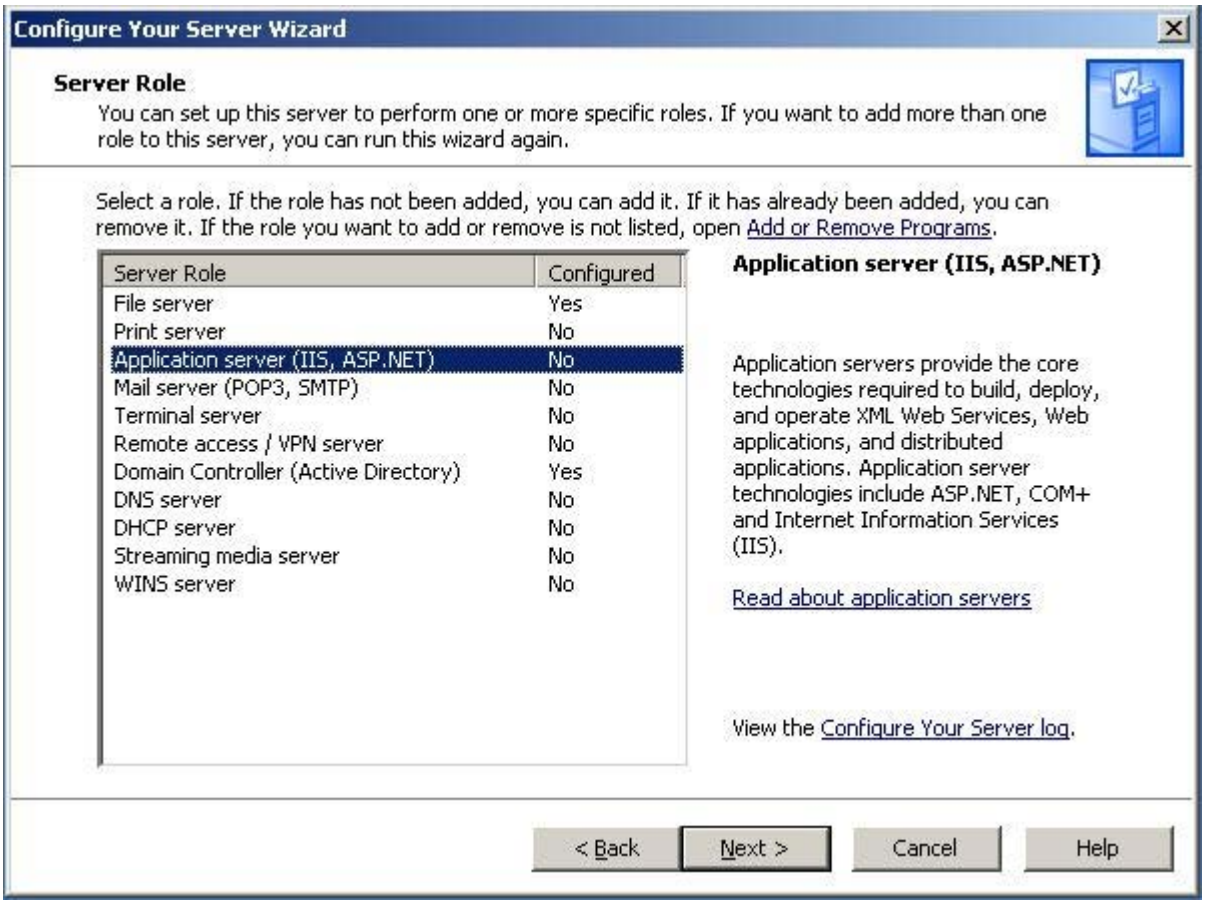
Windows XP

In Windows XP, IIS 5.1 can be installed or the installation checked by going to ***Start*** --> ***Control Panel*** --> ***Add or Remove Programs*** --> ***Add/Remove Windows Components***, and selecting to install ***Internet Information Services (IIS)***:

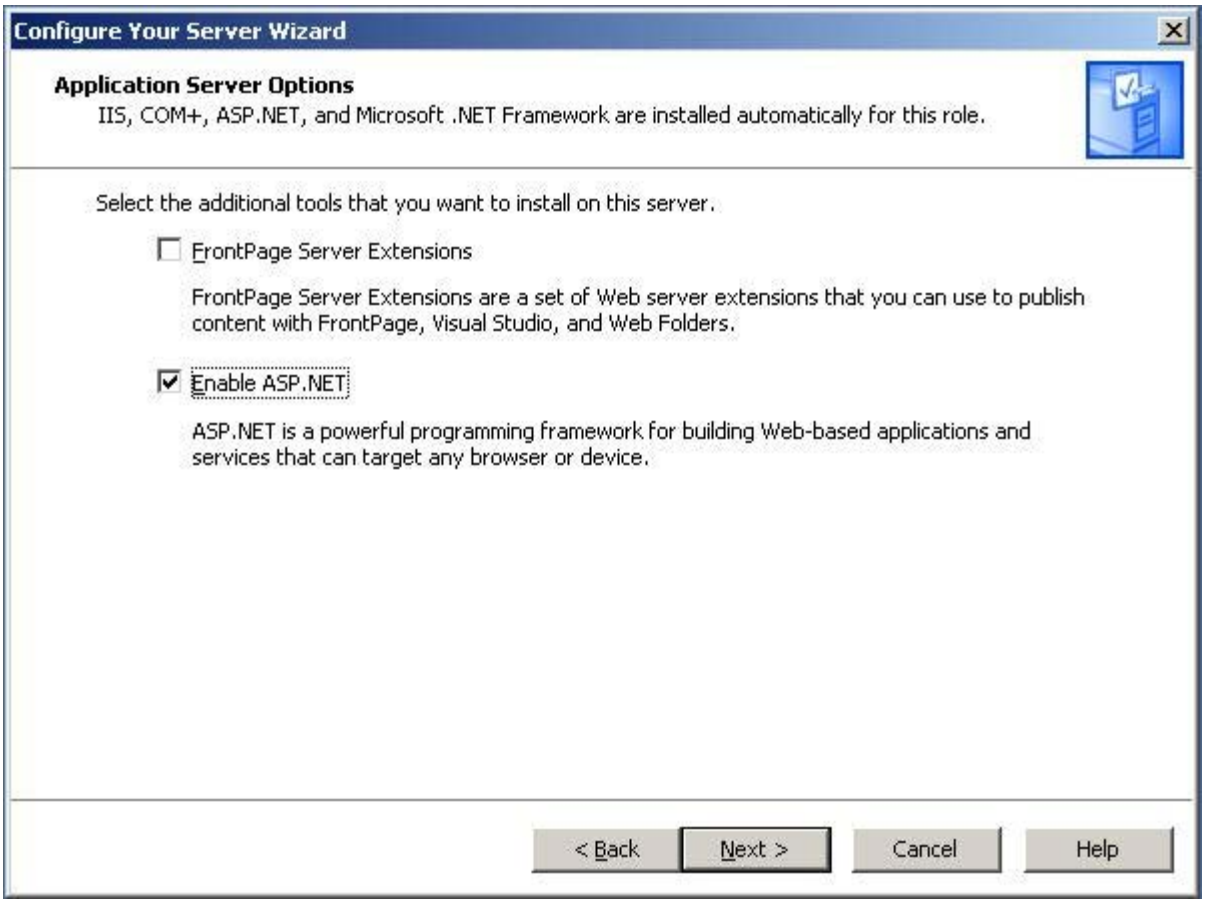


Windows Server 2003

In Windows Server 2003, IIS 6 can be installed or the installation checked by going to ***Start*** --> ***Control Panel*** --> ***Administrative Tools*** --> ***Manage Your Server***, and adding the ***Application Server*** role if it is not already configured.



Ensure that you select to enable ASP.NET when installing the Application server role.



1.2 Step 2 - Set Up and Configure VETtrak ASP.NET API

In order for the API to run, a valid registration key for the VETtrak API must be entered into the VETtrak database using the VETtrak software, in ***File > Preferences > Registration Keys***.

Obtain the VETtrak ASP.NET API ZIP file from VETtrak support. This can be downloaded from the Downloads page in the Support Centre.

Before unzipping the ZIP file, right-click it and go to ***Properties***. If there is an ***Unblock*** button on the ***General*** tab, saying that the file has come from the internet, click the U***nblock*** button followed by ***OK***.

Extract the contents of the VETtrakAPI folder from within the VETtrak ASP.NET API ZIP file to a new folder on the web server. It may be placed in a folder in the web root if desired, which by default is C:\inetpub\wwwroot.

Configure the API by editing the web.config file. This is an XML file that can be opened in a text editor. Find the `<connectionStrings>` element. Within this is an `<add>` element containing details of how to connect to the >database. The `<add>` element must contain the following three attributes:

- The `name` attribute must be "`VETtrakDatabase`".
- The `providerName` attribute must be set to "`FirebirdSql.Data.FirebirdClient`" if using a Firebird database, or "`System.Data.SqlClient`" if using a SQL Server database.
- The `connectionString` attribute is a standard connection string that defines the database server, database filename (for Firebird) or database name (for SQL server), and the database username and password. Examples follow.

The contents of the `connectionString` should be the same as VETtrak uses to connect to the database – view these in VETtrak by going to ***File > Preferences > Database connection***.

Note that, once the VETtrak API application is set up in IIS, the connection string can be easily changed using the Connection Strings icon in the application in IIS Manager – however, the `providerName` can only be changed by editing the web.config file directly.

Firebird

If using a Firebird database, the add element and connection string should be in the format:

```
<add name="VETtrakDatabase" providerName="FirebirdSql.Data.FirebirdClient"
connectionString="User=<databaseUser>;Password=<databasePassword>;
Database=<pathAndFilenameOfDatabaseFileOnServer>;
DataSource=<serverNameOrIP>;Dialect=3;"/>
```

For example:

```
<add name="VETtrakDatabase" providerName="FirebirdSql.Data.FirebirdClient"
connectionString="User=SYSDBA;Password=masterkey;Database=C:\Program Files
\VETtrak\Data\VETtrak.gdb;DataSource=192.168.0.40;Dialect=3;"/>
```

The components of the `connectionString` are:

- `User` – the Firebird username to connect to the database (not the username used to log into VETtrak). This is almost always "SYSDBA"
- `Password` – the Firebird password to connect to the database (not the password used to log into VETtrak). This is almost always "masterkey"
- `Database` – the full file path on the server to the database file (usually called VETtrak.gdb)
- `Datasource` – the IP address or resolvable name of the server that is running Firebird and on which the database file is located
- `Dialect` – leave this as "3"

SQL Server with SQL server authentication

If using a SQL Server database, with SQL server authentication, the add element and connection string should be in the format:

```
<add name="VETtrakDatabase" providerName="System.Data.SqlClient"
connectionString="Data Source=<serverNameOrIP>\<instanceName>;Initial
```

```
Catalog=<databaseName>;User Id=<databaseUser>;
Password=<databasePassword>;"/>
```

For example:

```
<add name="VETtrakDatabase" providerName="System.Data.SqlClient"
connectionString="Data Source=192.168.0.40\SQLEXPRESS;Initial
Catalog=VETtrak;User Id=sa;Password=sa;"/>
```

The components of the `connectionString` are:

- `Datasource` – the IP address or resolvable name of the server that is running SQL Server, followed by a backslash and then the name of the SQL Server instance that contains the VETtrak database
- `Initial Catalog` – the name of the VETtrak database on that server and instance
- `User Id` – the SQL Server username to connect to the database (not the username used to log into VETtrak)
- `Password` – the SQL Server password to connect to the database (not the password used to log into VETtrak)

SQL Server with Windows authentication

If using a SQL Server database, with Windows authentication, the add element and connection string should be in the format:

```
<add name="VETtrakDatabase" providerName="System.Data.SqlClient"
connectionString="Data Source=<serverNameOrIP>\<instanceName>;Initial
Catalog=<databaseName>;Integrated Security=true"/>
```

For example:

```
<add name="VETtrakDatabase" providerName="System.Data.SqlClient"
connectionString="Data Source=192.168.0.40\SQLEXPRESS;Initial
Catalog=VETtrak;Integrated Security=true"/>
```

The components of the `connectionString` are:

- `Datasource` – the IP address or resolvable name of the server that is running SQL Server, followed by a backslash and then the name of the SQL Server instance that contains the VETtrak database
- `Initial Catalog` – the name of the VETtrak database on that server and instance
- `Integrated Security` – leave this as "true" to use Windows Authentication

For Windows Authentication to work, the account set for the application pool identity (in the application pool's advanced settings) must have access to the VETtrak SQL Server database.

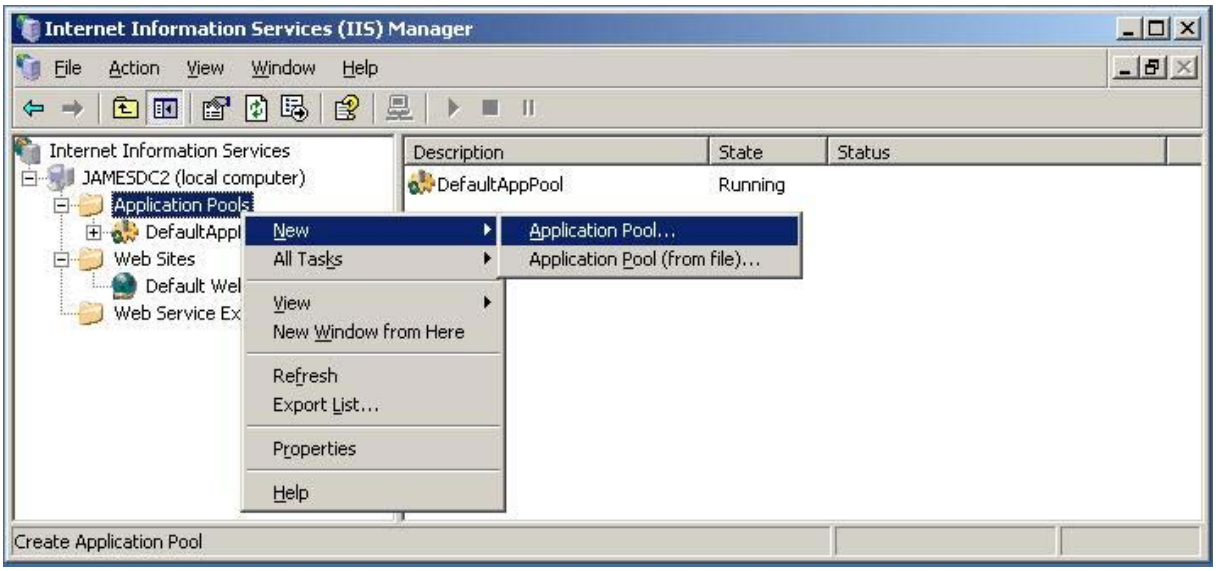
1.3 Step 3 - Add an Application Pool

Open the IIS Manager from ***Control Panel*** --> ***Administrative Tools*** --> ***Internet Information Services (IIS) Manager***.

The rest of this step only applies to IIS 6. If you are using IIS 5.1 on Windows XP, skip to Step 4.

It is recommended that the APIs be set up as an Application running within its own Application Pool. This isolates the process and allows the APIs to be managed independently of other IIS applications running on the server.

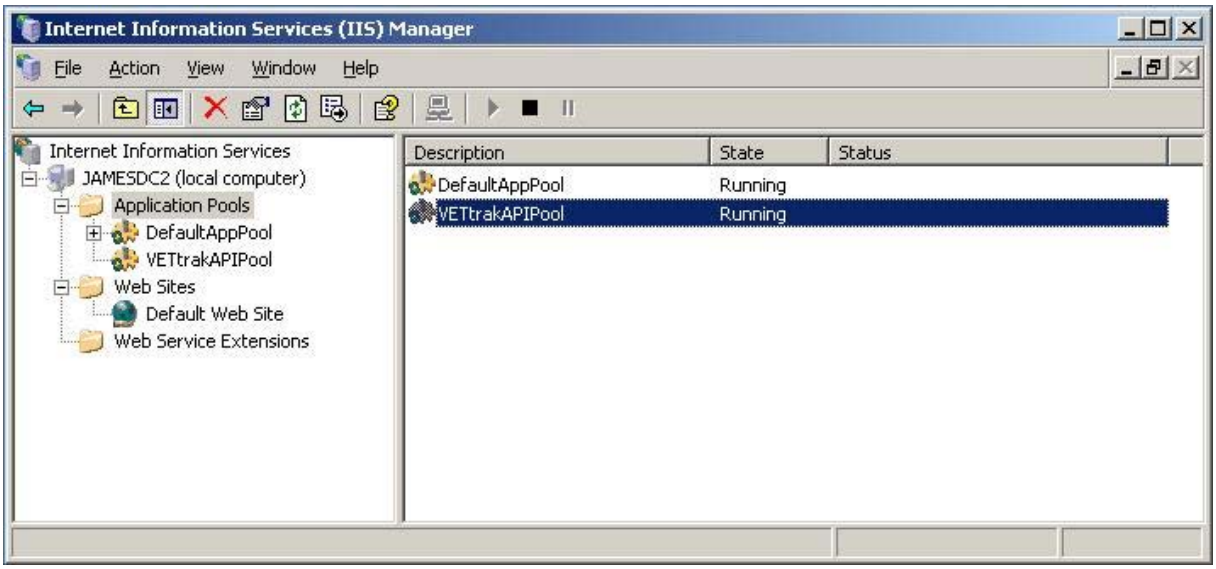
To do this, in the IIS Manager, right-click on ***Application Pools*** in the tree in the left panel, and select ***New*** --> ***Application Pool***.



In the ***Add New Application Pool*** window, enter the following, and click ***OK***:

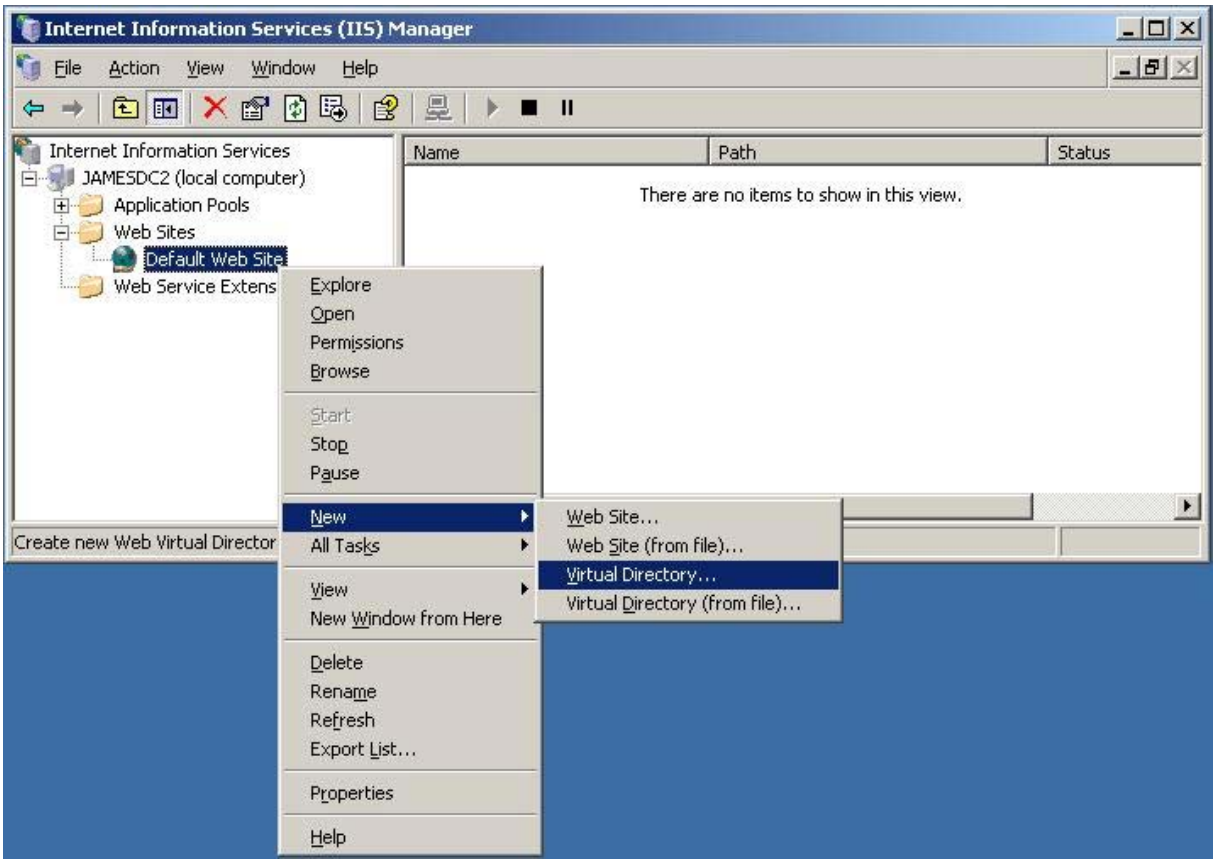
- **Name:** VETtrakAPIPool
- **Application pool settings:** Use default settings for new application pool

This will add the Application Pool to the IIS Manager:



1.4 Step 4 - Add Virtual Directory

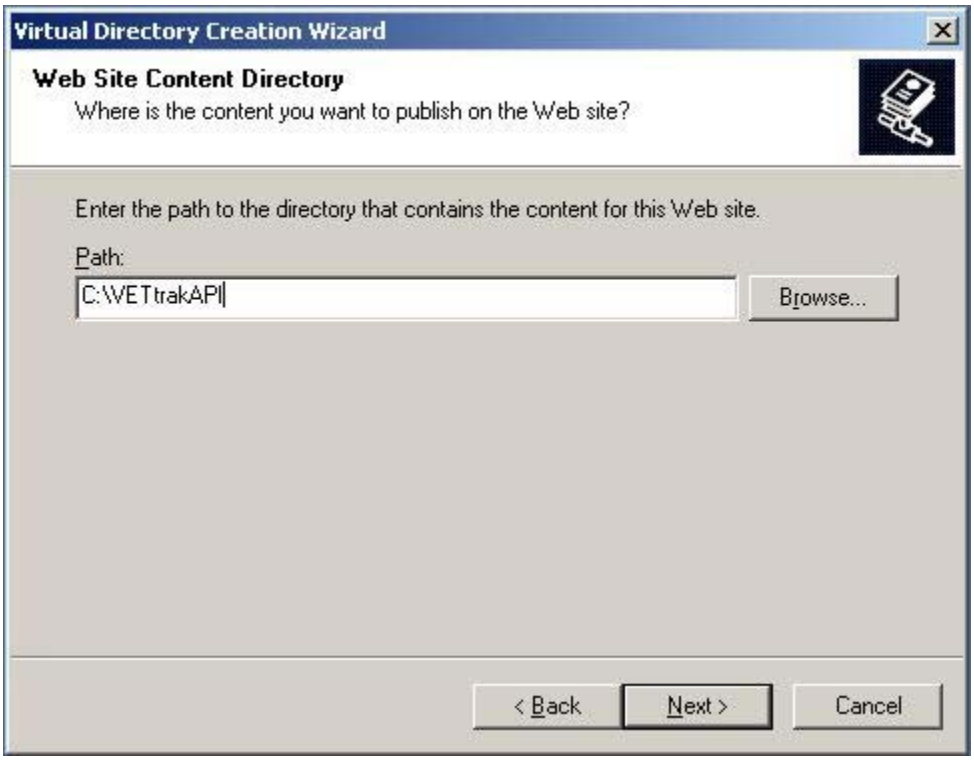
In the left tree panel, under ***Web Sites***, find the web site to add the VETtrak APIs to, such as the ***Default Web Site*** (a new web site may be created first if desired). Right-click on this web site and select ***New*** --> ***Virtual Directory***. Note that if the VETtrak APIs were copied to a folder under the web root, it will already appear as a folder under the web site (you may need to refresh in order to see it) – in this case, instead of adding a virtual directory, it will need to be changed to an application – skip to Step 5.



Click ***Next***.

Enter a name (alias) and click ***Next***. This is what the URL to the APIs will be. This can be whatever you want. For the purposes of this document, we will use “VETtrakAPI”.

Click ***Browse*** to find and select the folder into which the VETtrak ASP.NET API ZIP was extracted. For the purposes of this document, a path of "C:\VETtrakAPI" is used.



Tick the ***Read*** and ***Run scripts*** permission checkboxes and click ***Next***.

Click ***Finish***.

The virtual directory will appear under your web site. If it is already set up as an application, it will appear with a cog icon in IIS 6, or an open box icon in IIS 5.1. If it is not an application, it will appear with a folder icon (we will change it to an application in the next step). When the virtual directory is selected, ensure you can see the asmx file(s) for the API(s) you have, the web.config file and the bin folder containing the DLLs.

1.5 Step 5 - Configure Application

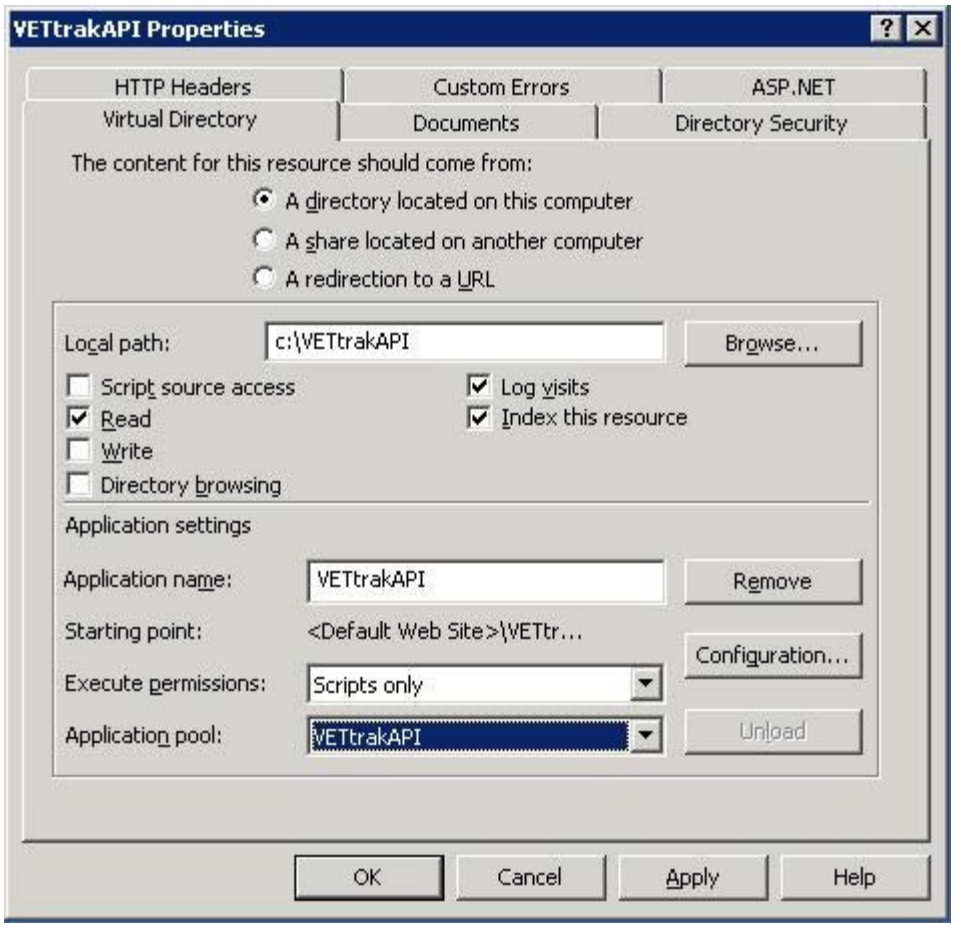
Right-click the virtual directory or application in the left tree (VETtrakAPI in our example) and select ***Properties***.

Check the ***Application settings*** section of the ***Virtual Directory*** tab. If it is not yet an application, there will be a ***Create*** button (instead of the ***Remove*** button), and the ***Configuration*** button will be disabled. If this is the case, click the ***Create*** button to create the application.

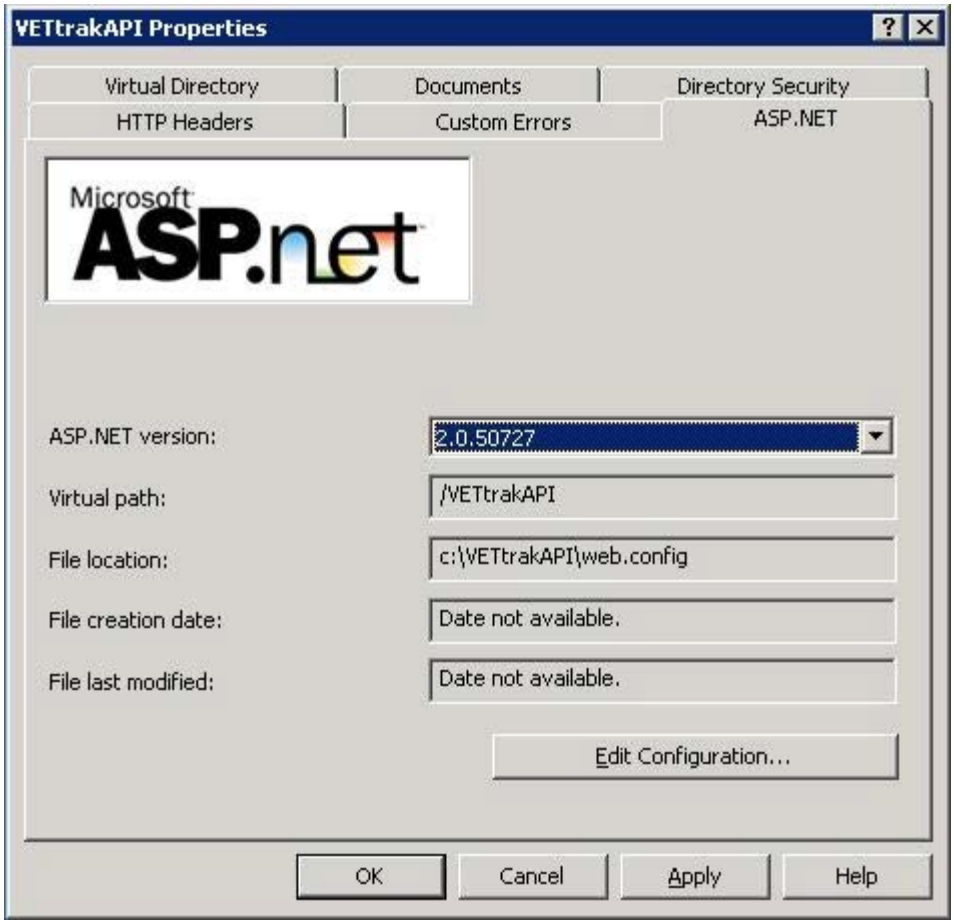
Ensure the ***Execute permissions*** drop-down is set to ***Scripts only***.

In IIS 6, select the ***VETtrakAPI*** application pool in the ***Application pool*** drop-down.

In IIS 5.1, select the ***Medium (Pooled)*** option in the ***Application Protection*** drop-down.



Click the ***ASP.NET*** tab. Ensure that the ASP.NET version is set to a version starting with 2. The ***Edit Configuration*** button allows you to edit some things in the web.config file through a user interface, such as the connection string and application settings.

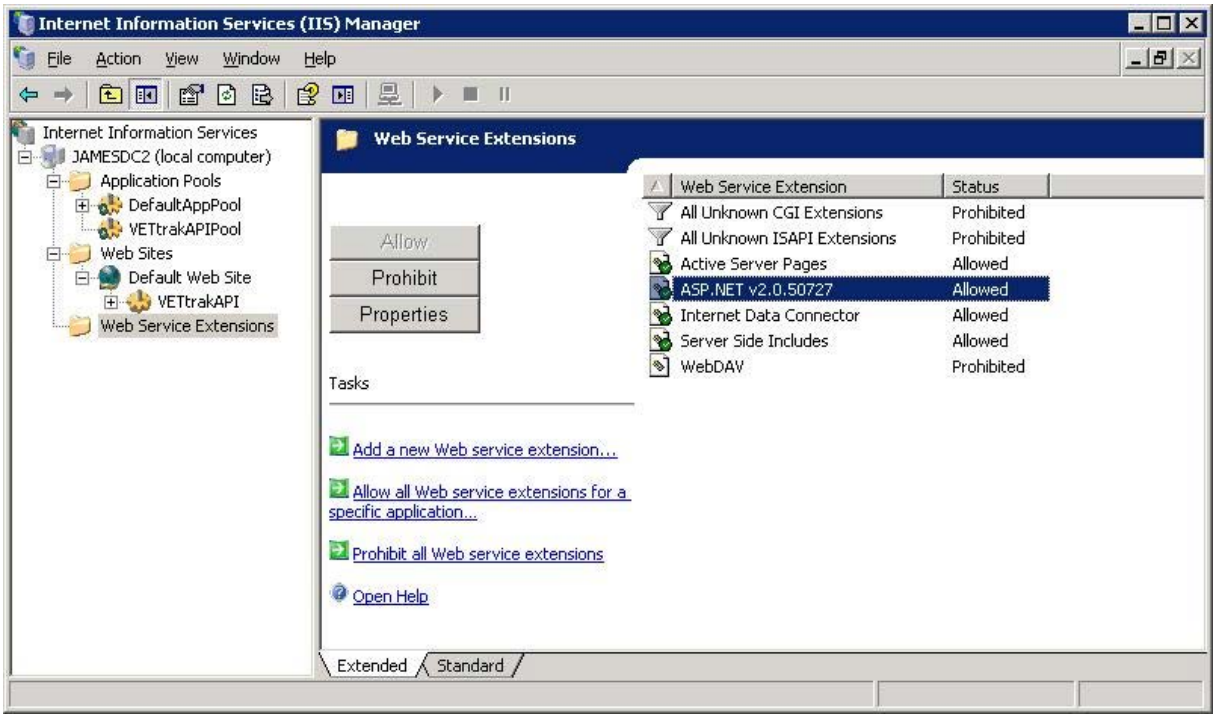


Click ***OK*** to save changes.

1.6 Step 6 - Allow ASP.NET to Run

This step only applies if you are using IIS 6. Skip this step if you are using IIS 5.

Click the ***Web Service Extensions*** folder near the bottom of the left pane in IIS Manager. An entry starting with ***ASP.NET v2.0*** should appear in the right pane. If the Status of this entry is ***Prohibited***, select the ASP.NET v2.0 extension and click the ***Allow*** button to allow it to run.



1.7 Step 7 - Test that the VETtrak API is Accessible

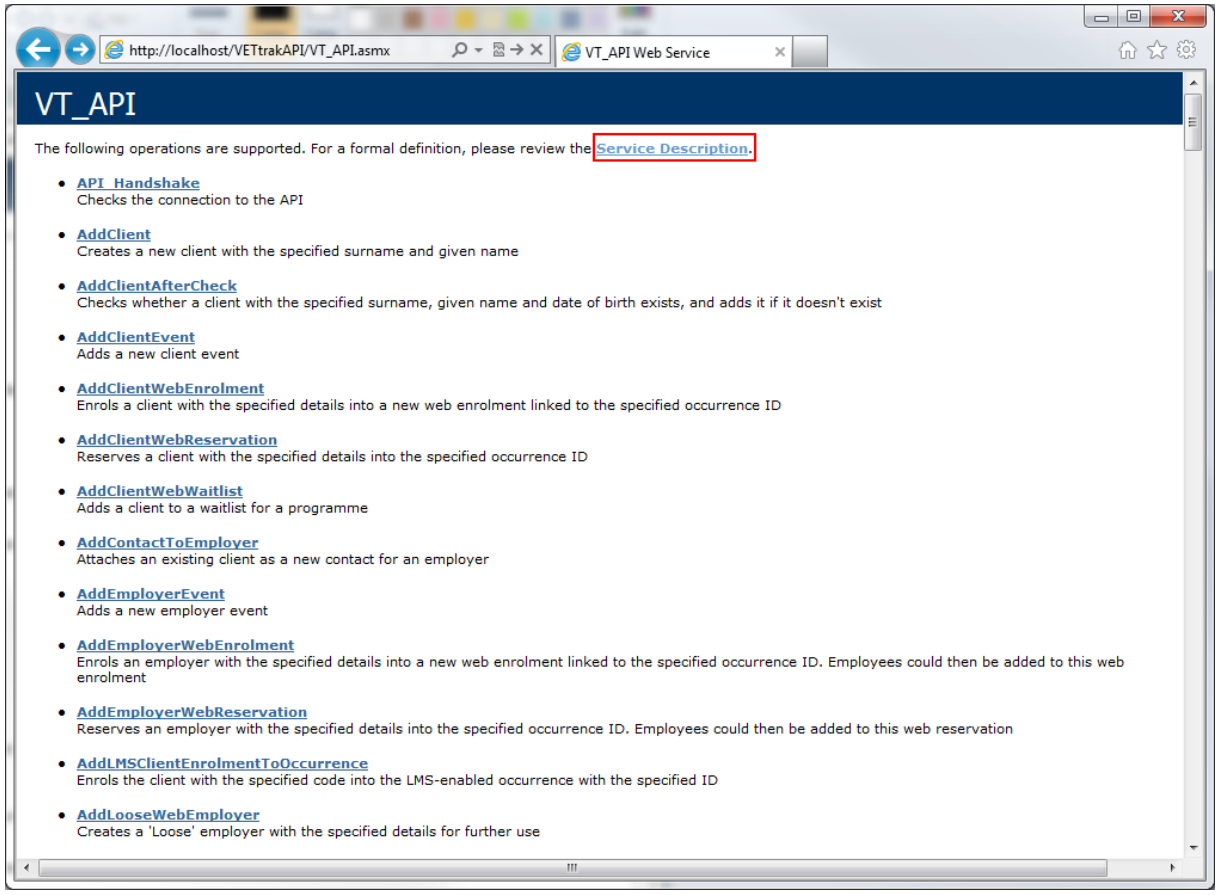
To test that the API is accessible, open an Internet Explorer browser, and enter the URL for the API:

http://host_name/application_name/VT_API.asmx

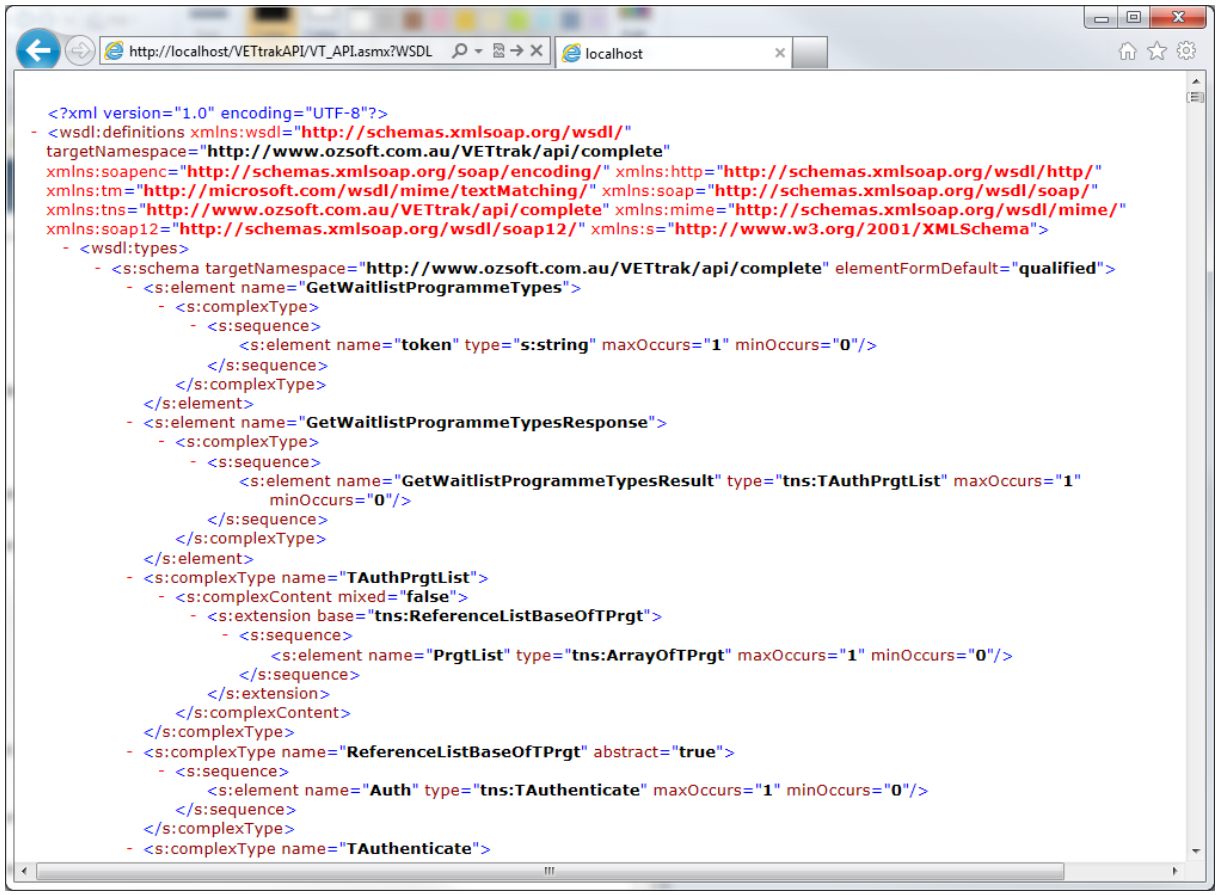
eg. For the example used in this document, the URL for the API will be:

http://localhost/VETtrakAPI/VT_API.asmx

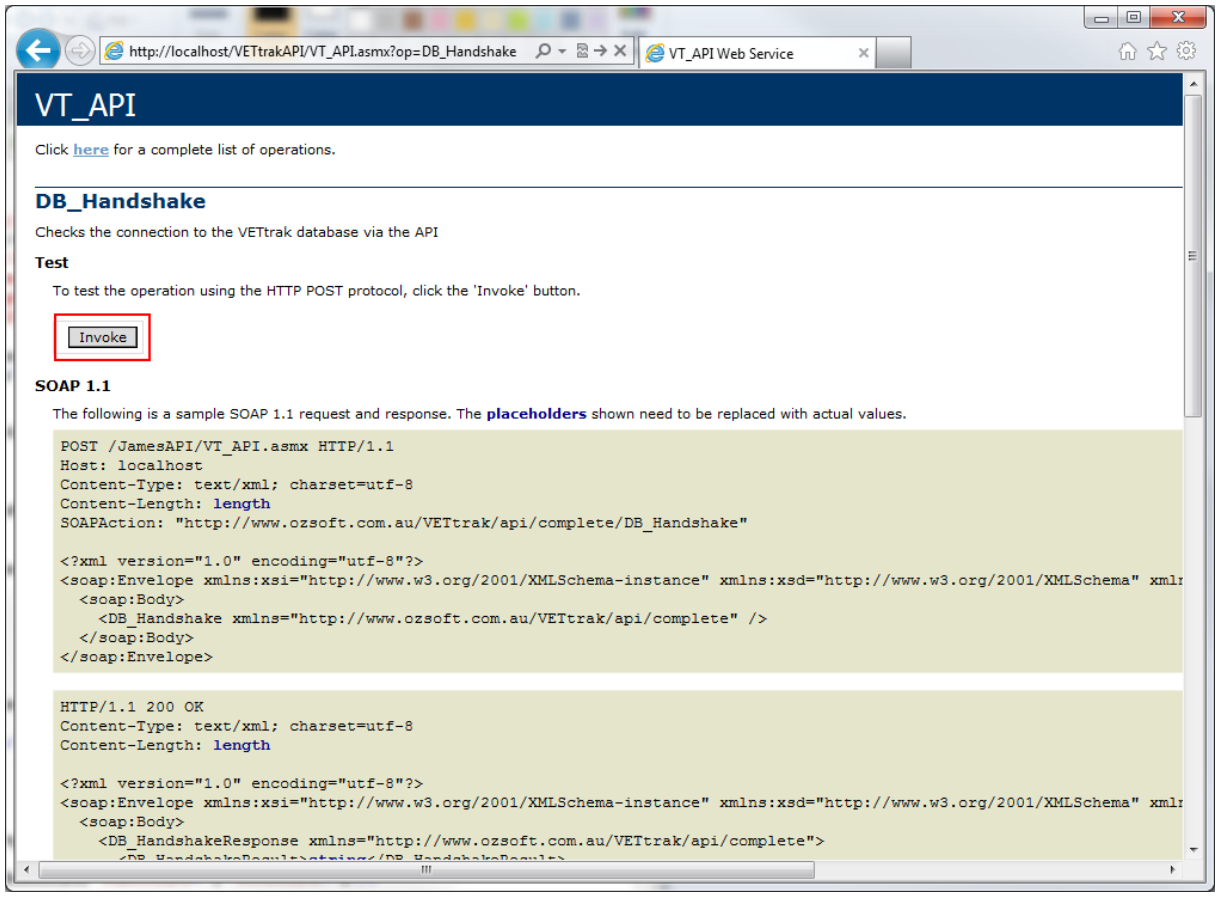
If everything is set up correctly, a service information page should appear, like the following:



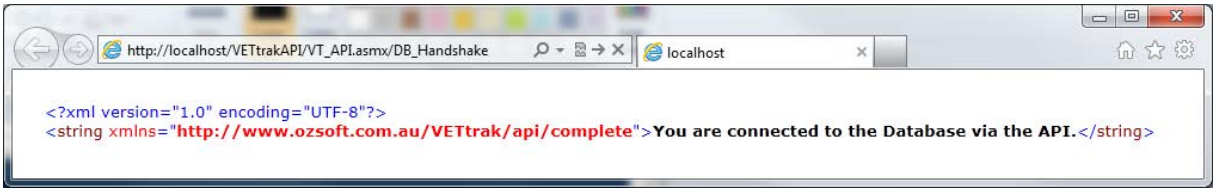
Click on the ***Service Description*** link to view the web service definition XML (WSDL):



To test the API's connectivity to the database, back on the ***Service Information*** page, click the ***DB_Handshake*** link in the list:



Then click the ***Invoke*** button (by default, this button will only appear when using a browser on the same machine the API is installed on, but this can be changed in the web.config file). The result should be an XML string with a success message:

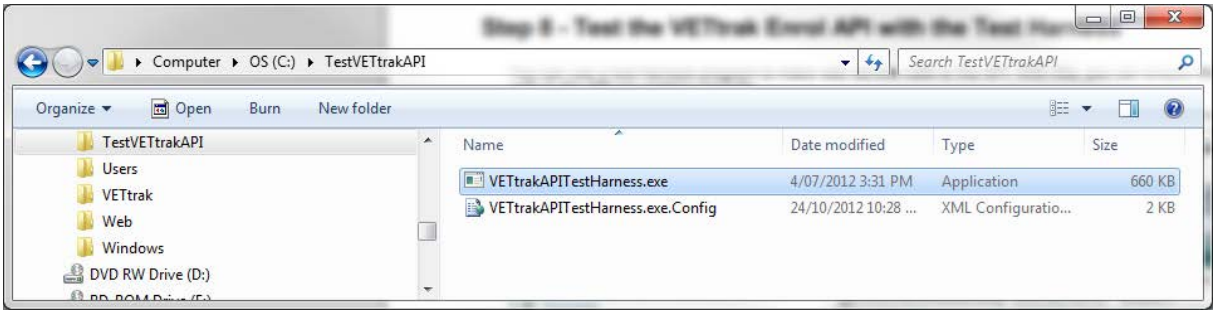


If the result is an error message, review the error and correct the connection string in the web.config file.

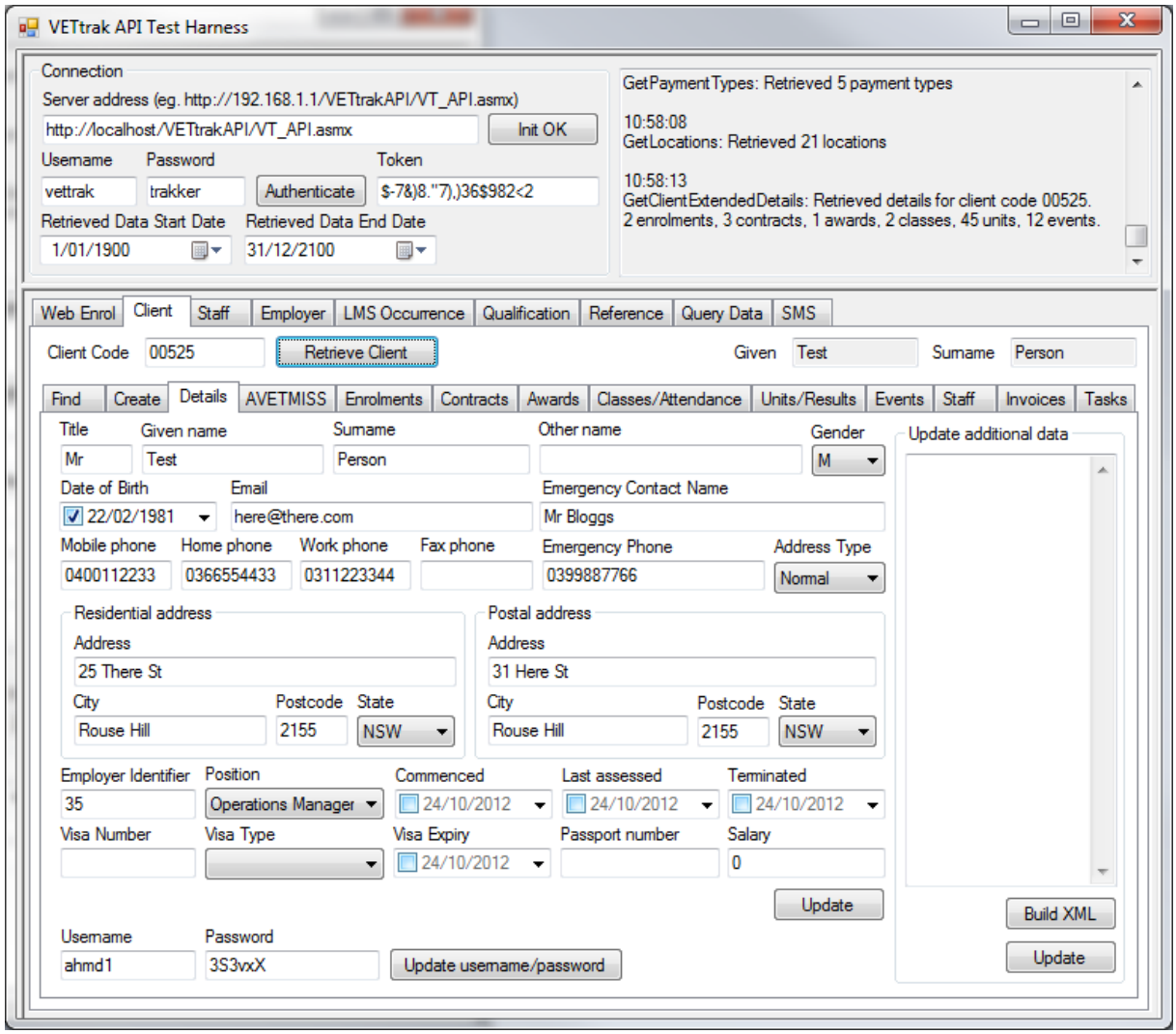
1.8 Step 8 - Test the VETtrak Enrol API with the Test Harness

You can use a test harness program to make web service calls to the API. With this, you can ensure that SOAP calls to the API are working correctly.

To use the VETtrak API test harness, copy the ***VETtrakAPITestHarness.exe*** and ***VETtrakAPITestHarness.exe***.config files from the VETtrakAPITestHarness folder in the VETtrak ASP.NET API ZIP file to a new folder (preferably on a different machine, which must have .NET Framework 3.5 installed).



Double-click the VETtrakAPITestHarness.exe to run it.



In the ***Server address*** field, enter the URL of the VT_API.asmx. If you are running the test harness on the same machine the API is installed on, this will be the same URL that was used in step 5. Click the ***Initialise*** button. If this is successful, the button will change to ***Init OK***.

Enter the Username and Password to access VETtrak (such as the default vettrak/trakker), and click the ***Authenticate*** button. If successful, a token appears.

The other tabs and buttons can then be used to test various functions in the API. This includes:

- The ***Web Enrol*** tab for online enrolments, including loading and viewing web programmes and occurrences, creating and updating clients and employer web enrolments, and recording payments
- The ***Client***, ***Staff*** and ***Employer*** tabs for portals functionality, including viewing various details of clients, staff members and employers, and updating some details
- The ***LMS Occurrence*** tab for LMS integration functionality, such as viewing and updating details of LMS published occurrences and enrolments