

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)**:

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ponents of Windows XP.	
ent, click the checkbox. A sha installed. To see what's incluc	
	0.0 MB 🔼
	0.0 MB 📄
ervices (IIS)	13.5 MB
nitoring Tools	2.0 MB
0.8	0.0 MB 🞽
and FTP support, along with sup stive Server Pages, and databa	
	oonents of Windows XP. Int, click the checkbox. A sha installed. To see what's includ ervices (IIS) nitoring Tools nd FTP support, along with su

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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.

Select a role. If the role has not been add remove it. If the role you want to add or r		
Server Role File server Print server Application server (IIS, ASP.NET) Mail server (POP3, SMTP) Terminal server Remote access / VPN server Domain Controller (Active Directory) DNS server DHCP server Streaming media server WINS server	Configured Yes No No No Yes No No No No No No	Application servers provide the core technologies required to build, deploy and operate XML Web Services, Web applications, and distributed applications. Application server technologies include ASP.NET, COM+ and Internet Information Services (IIS). <u>Read about application servers</u> View the <u>Configure Your Server log</u> .

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

nfigure Your Server Wizard	×
Application Server Options IIS, COM+, ASP.NET, and Microsoft .NET Framework are installed automatically for this role	
Select the additional tools that you want to install on this server.	
ErontPage Server Extensions	
FrontPage Server Extensions are a set of Web server extensions that you can us content with FrontPage, Visual Studio, and Web Folders.	e to publish
Enable ASP.NET	
ASP.NET is a powerful programming framework for building Web-based application services that can target any browser or device.	ns and
< <u>B</u> ack <u>N</u> ext > Cancel	Help

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 <u>connectionString</u> 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*.

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🐚 Internet Information !	Services (IIS) N	1anager				_ 🗆 🗵
🔰 Eile <u>A</u> ction <u>V</u> iew Y	<u>W</u> indow <u>H</u> elp					_8×
⇔ → € 💽 😭	3 🗟 😰 🛓	2 ▶ ■	11			
internet Information Serv	/ices	Description		State	Status	
DAMESDC2 (local com		🐎 Default Ap	pPool	Running		
🗄 🍌 DefaultAppl	<u>N</u> ew	•	Application Pool	1		
🖃 🤪 Web Sites	All Tas <u>k</u> s	•	Application Pool (f	rom file)		
Web Service Ex	<u>V</u> iew New <u>W</u> indow fr	om Here				
	Refresh Export List					
	Properties					
	Help					
Create 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

Application pool ID:	VETtrakAPIPool	
Application pool set	tings	
• Use default set	ttings for new application pool	
C Use existing ap	oplication pool as template	
Application poo	ol name: DefaultAppPool	

This will add the Application Pool to the IIS Manager:

🗊 File Action Yiew Window Hel ← → € 📧 🗙 🚰 🔮 🖽				
lnternet Information Services	Description	State	Status	
🗄 🚽 JAMESDC2 (local computer)	DefaultAppPool	Running		
Application Pools Application Pools	VETtrakAPIPool	Running		

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 <u>Step 5</u>.





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".

Virtual Directory Creation Wizard	×
Virtual Directory Alias Specify a short name, or alias, for this virtual directory.	Cando de la
Type the alias you want to use to gain access to this Web virtual directory. Us same naming conventions that you would for naming a directory. Alias: VETtrakAPI	e the
< <u>B</u> ack <u>N</u> ext >	Cancel

Click Next.

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.

tual Directory Creation Wizard		
Web Site Content Directory Where is the content you want to publis	h on the Web site?	Caller .
Enter the path to the directory that cont	ains the content for this W	/eb site.
<u>P</u> ath:		
C:\VETtrakAPI		Browse
	< Back N	ext > Cancel

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

Virtual Directory Creation Wizard	×
Virtual Directory Access Permissions Set the access permissions for this virtual directory.	
Allow the following permissions:	
▽ <u>Bead</u>	
Run <u>s</u> cripts (such as ASP)	
<u>Execute</u> (such as ISAPI applications or CGI)	
☐ <u>W</u> rite	
Browse	
To complete the wizard, click Next .	
- Pask Na	t> Cancel
< <u>B</u> ack <u>N</u> ex	

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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.

Thernet Information Services (IIS)	Manager		
Sile Action View Window Help			_ & ×
	? 显 ▶ ■ Ⅱ		
Internet Information Services JAMESDC2 (local computer) Application Pools Web Sites Default Web Site Web Service Extensions	Name bin DatabaseMapping.xml VT_API.asmx Web.config	Path	Status

Click Finish.

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.

	10 M	
HTTP Heade	rs Custom Errors	ASP.NET
Virtual Directo	ry Documents	Directory Security
The content for t	his resource should come from: • A directory located on this compute • A share located on another compu • A redirection to a URL	
		100
Lo <u>c</u> al path: Scrip <u>t</u> source Read Write	c:\VETtrakAPI access VettrakAPI Index this re	Br <u>o</u> wse
Scrip <u>t</u> source Read Write Directory <u>b</u> row Application setting	access I♥ Log visits I♥ Index this re vising	esource
 Script source <u>R</u>ead <u>W</u>rite <u>Directory brow</u> 	access 🔽 Log visits V Index this re	
Scrip <u>t</u> source Read Write Directory <u>b</u> row Application setting	access I♥ Log visits I♥ Index this re vising	esource Remove
Scrip <u>t</u> source Read Write Directory <u>brow</u> Application settine Application na <u>m</u> e:	vsing VETtrakAPI <default site="" web="">\VETtr</default>	esource

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.

Virtual Directory	Documents	Directory Security						
HTTP Headers	Custom Errors	ASP.NET						
ASP.n.	ot l							
ASP.NET version:	2.0.50727	-						
18-14 14-	/VETtrakAPI							
Virtual path:								
File location:	c:\VETtrakAPI\web	c:\VETtrakAPI\web.config						
File creation date:	Date not available	Date not available.						
	Date not available.							
File last modified:								
File last modified:	<u>E</u> c	dit Configuration						

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:

Image: Second Secon	3
VT_API	-
The following operations are supported. For a formal definition, please review the Service Description.	4
API Handshake Checks the connection to the API	
AddClient Creates a new client with the specified surname and given name	
AddClientAfterCheck Checks whether a client with the specified surname, given name and date of birth exists, and adds it if it doesn't exist	
AddClientEvent Adds a new client event	
AddClientWebEnrolment Enrols a client with the specified details into a new web enrolment linked to the specified occurrence ID	
AddClientWebReservation Reserves a client with the specified details into the specified occurrence ID	
AddClientWebWaitlist Adds a client to a waitlist for a programme	
AddContactToEmployer Attaches an existing client as a new contact for an employer	
AddEmployerEvent Adds a new employer event	
AddEmployerWebEnrolment Enrols an employer with the specified details into a new web enrolment linked to the specified occurrence ID. Employees could then be added to this web enrolment	
AddEmployerWebReservation Reserves an employer with the specified details into the specified occurrence ID. Employees could then be added to this web reservation	
AddLMSClientEnrolmentToOccurrence Enrols the client with the specified code into the LMS-enabled occurrence with the specified ID	
AddLooseWebEmployer Creates a 'Loose' employer with the specified details for further use	-

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

	- 0 X
$\bigcirc \bigcirc \bigcirc \land \land$	命余態
	00 12 00
xml version="1.0" encoding="UTF-8"?	
<wsdl:definitions <="" td="" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"><td></td></wsdl:definitions>	
targetNamespace="http://www.ozsoft.com.au/VETtrak/api/complete"	
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/" xmlns:http="http://schemas.xmlsoap.org/wsdl/http/	0
xmlns:tm="http://microsoft.com/wsdl/mime/textMatching/" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/	
xmlns:tns="http://www.ozsoft.com.au/VETtrak/api/complete" xmlns:mime="http://schemas.xmlsoap.org/wsdl/min	
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/" xmlns:s="http://www.w3.org/2001/XMLSchema">	
- <wsdl:types></wsdl:types>	
- <s:schema <="" elementformdefault="qualified" p="" targetnamespace="http://www.ozsoft.com.au/VETtrak/api/complete"></s:schema>	">
 <s:element name="GetWaitlistProgrammeTypes"></s:element> 	
- <s:complextype></s:complextype>	
- <s:sequence></s:sequence>	
<s:element maxoccurs="1" minoccurs="0" name="token" type="s:string"></s:element>	
 <s:element name="GetWaitlistProgrammeTypesResponse"></s:element> 	
- <s:complextype></s:complextype>	
- <s:sequence></s:sequence>	
<s:element <="" maxoccurs="1" name="GetWaitlistProgrammeTypesResult" td="" type="tns:TAuthPrgtList"><td></td></s:element>	
minOccurs="0"/>	
- <s:complextype name="TAuthPrgtList"></s:complextype>	
- <s:complexcontent mixed="false"></s:complexcontent>	
- <s:extension base="tns:ReferenceListBaseOfTPrgt"></s:extension>	
- <s:sequence></s:sequence>	
<pre><s:element maxoccurs="1" minoccurs="0" name="PrgtList" type="tns:ArrayOfTPrgt"></s:element></pre>	
- <s:complextype abstract="true" name="ReferenceListBaseOfTPrgt"></s:complextype>	
- <s:sequence> <s:element maxoccurs="1" minoccurs="0" name="Auth" type="tns:TAuthenticate"></s:element></s:sequence>	
<pre></pre>	
"	4

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

C → Mathematical Application (Note: Application of the service	6 🕁 😳
VT_API	
Click <u>here</u> for a complete list of operations.	
DB_Handshake	
Checks the connection to the VETtrak database via the API	
Test	E
To test the operation using the HTTP POST protocol, click the 'Invoke' button.	
Invoke	
SOAP 1.1	
The following is a sample SOAP 1.1 request and response. The placeholders shown need to be replaced with actual values.	
POST /JamesAPI/VT_API.asmx HTTP/1.1 Host: localhost	
Content-Type: text/xml; charset=utf-8	
Content-Length: length SOAPAction: "http://www.ozsoft.com.au/VETtrak/api/complete/DB Handshake"	
SUAPACTION: "http://www.ozsoft.com.au/vitrak/api/complete/ub_nandsnake"	
xml version="1.0" encoding="utf-8"?	
<pre><soap:envelope td="" xmlns:xsd="http://www.w3.org/200 <soap:Bodv></pre></td><td>1/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlr<=""></soap:envelope></pre>	
<db_handshake xmlns="http://www.ozsoft.com.au/VETtrak/api/complete"></db_handshake>	
HTTP/1.1 200 OK	
Content-Type: text/xml; charset=utf-8	
Content-Length: length	
xml version="1.0" encoding="utf-8"?	
<pre><soap:envelope td="" xmlns:xsd="http://www.w3.org/200 <soap:Body></pre></td><td>1/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlr<=""></soap:envelope></pre>	
<pre><db handshakeresponse="" xmlns="http://www.ozsoft.com.au/VETtrak/api/complete"></db></pre>	-

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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.

VETtrak API Test H	arness	1000	-								X
Connection Server address (eg. http://192.168.1.1/VETtrakAPI/VT_API.asmx)					GetPaymentTypes: Retrieved 5 payment types						
http://localhost/VETtrakAPI/VT_API.asmx Init OK						10:58:08	ione: Det	ieved 21 location			
Usemame Passw	ord		Token			Gerrocar	ions. neu	lieveu 21 location	5		
vettrak trakker Authenticate \$-78)8."7),)36\$982<2								Details: Retrieved			
Retrieved Data Start I	Date Retriev	ved Data En	d Date					ntracts, 1 awards,			
1/01/1900 [31/12/	/2100									
Web Enrol Client	Staff Empl	loyer LMS	Occurrenc	e Qua	ification	Reference	uery Dat	a SMS			
Client Code 00525		Retrieve C	lient				Giv	ven Test	Sumame	Person	
Find Create De	atails AVETN	MISS Enrol	Iments Co	ontracts	Awards	Classes/Atter	ndance	Units/Results E	Events Staff	Invoices 1	Fasks
Title Given n	ame	Sumar	me		Other n	ame		Gender	⊂ Update add	itional data —	
Mr Test		Perso	n					M -			
Date of Birth	Email				Emerge	ency Contact I	Name				
22/02/1981		nere.com			Mr Blog	jgs					
Mobile phone H	ome phone	Work phon	e Faxp	phone	Emerge	ency Phone		Address Type			
0400112233 0	366554433	03112233	44		03998	87766		Normal -			
-Residential addre	SS			Pos	tal address						
Address				Add	ress						
25 There St				31	Here St						
City Postcode State City						Postcod	e State				
Rouse Hill	21	155 N	sw 👻	Ro	use Hill		2155	NSW -			
Employer Identifier	Position		Commer	nced	Last	assessed	Terr	minated			
35	35 Operations Manager				-	24/10/2012	-	24/10/2012 🔫			
Visa Number Visa Type			Visa Exp	iry	Pass	port number	Sala	ary			
		•	24/1	0/2012	•		0				-
								Update]	Build XMI	L
Usemame	Password										
ahmd1	3S3vxX		Undate	useman	ne/passwo	rd l				Update	

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