



Version 4.1

Installation and Configuration Guide

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1 Introduction

Welcome to Catch Limited's Enterprise Tester, a web-based test management solution, which provides a world-first integration with Enterprise Architect and JIRA, and other selected Defect Tracking systems. You can use Enterprise Tester to plan, manage and execute the quality assurance testing of software.

This installation and configuration guide provides guidance and reference material to help you with the set up of Enterprise Tester.

1.1 Enterprise Tester

Enterprise Tester is a fully integrated, web-based test management solution, which provides world-first integration with Enterprise Architect and JIRA. Utilizing a unique transformation framework which facilitates traceability from UML requirements to test cases and defects, Enterprise Tester enables your organization to improve test scripting and management process while reducing software defects, project costs and timeframes.

Developed in conjunction with global experts in software innovation, test integration, and model engineering, Enterprise Tester is a high-quality test management tool which can be purchased at a fraction of the cost of comparable solutions.

Reduce Cost

Enterprise Tester's integration with Enterprise Architect and JIRA or TFS provides your business with a fully integrated, end-to-end solution for only 10% of the cost of comparable solutions.

Save Time

Enterprise Tester supports the generation of test cases based on UML models, providing end-to-end traceability and automatic model updates from any party within the software development team. Simple to use features make the utilization of the tool extremely quick and efficient, while the storage and management of test scripts supports a more efficient test process, allowing you to increase productivity by at least 4% on each software project your business works on.

Increase Quality

Enterprise Tester facilitates ISO/CMMI compliant process implementation by providing industry standard processes and templates automatically. Integration with JIRA allows the recording and management of defects found during testing, these defects link to Enterprise Tester's script step record which can be traced back to the requirement being tested, giving full end-to-end visibility of defects and their associated requirements.

1.2 Key Features

- Integration with Enterprise Architect , JIRA and TFS
- Real-time retrieval of test cases, scenarios and script headers from UML models
- Management and organization of test cycles and execution sets
- Cycle based testing and recording of results
- Step-by-step script instruction and recording of associated results
- Storage, management and reusability of scripts
- Full end-to-end visibility of defects and associated requirements
- Versioning of all elements within the application
- Roll forward or rollback within historical copies
- Interconnectivity with external version control applications
- Baselines (snapshots) at a point in time for projects and packages
- Template structure for projects to provide reuse and minimize setup time

For further information about Enterprise Tester and associated products check out <http://www.enterprisetester.com/> or contact sales@catchlimited.com.

2 System Requirements

The following sections outline the system requirements.

2.1 Supported Operating Systems

Enterprise Tester is supported on the following operating systems:

- **Windows XP** memory 1 gigabytes minimum, 2 gigabytes recommended
- **Windows Vista** memory 2 gigabytes minimum, 3 gigabytes recommended
- **Windows 7** memory 2 gigabytes minimum, 3 gigabytes recommended
- **Windows Server 2003** memory 1 gigabytes minimum, 2 gigabytes recommended
- **Windows Server 2008** memory 2 gigabytes minimum, 3 gigabytes Recommended

Configurations using less memory than this may run but performance will be severely degraded.

While Windows XP/Vista/7 are supported we do not recommend these operating systems as a production platform.

2.2 Supported Browsers

The following browsers are compatible with Enterprise Tester:

- Chrome
- Safari
- Firefox
- Internet Explorer 8
- Internet Explorer 9

We recommend a minimum screen resolution of 1280x1024 for best use of Enterprise Tester.

2.3 Supported Databases

Enterprise Tester supports a number of different database servers which can be used with the product, these are:

- SQL Server
- SQL Server Express
- MySQL
- Oracle 10g / 11g
- PostgreSQL

2.4 Software Pre-requisites

The pre-requisites for installing Enterprise Tester are:

- IIS 5.1 or later installed (versions for XP, Windows Server 2003 and Server 2008)
- The .Net Framework 4 installed
- If you install IIS after the .Net Framework you will probably need to register ASP.Net for use with IIS

Note: IIS/Enterprise Tester uses Port 80. Other applications that default to Port 80 including but not limited to Skype and Collabnet's Subversion will prevent IIS/Enterprise Tester from working correctly. To prevent conflicts, please check your Port 80 connections and reconfigure all secondary application to use an alternative Port. See "Appendix 1 - Other Configurations" for details.

If you wish to install using a Port other than 80, please use the Zip File Installer. Instructions on how to use the installer are included with the Enterprise Tester download.

2.5 Additional Configuration

You may need to configure other components before Enterprise Tester will install or operate correctly. See "Appendix 1 - Other Configurations" before attempting to install or use Enterprise Tester

3 Application Installation

Download Enterprise Tester from <http://www.enterprisetester.com/>

3.1 Installation Steps Using the SQL Express Database

Ensure the pre-requisites have already been installed and the various components configured, you can then download and install the Enterprise Tester application.

1. Click on the download button and save the file.
2. Open the zip file and double click on the Windows Installer Package and select run.
3. Select 'Next' from the 1st screen displayed.
4. Accept the terms of the license and click 'Next'.
5. Select the installation directory and click 'Next'.
6. Then select 'Install'.
7. Click 'Finish' to close the installer.

For Windows 7 and Windows Server 2008 R2 Installations

After the installation of ET is completed, but before you start ET for the first time, a small change must be made to the application pool settings before the application will start cleanly.

To make the change:

1. Go to Start -> Control Panel -> Administrative Tools -> Internet Information Services (IIS) Manager
2. Expand the server node in the left hand side tree
3. Click on "Application Pools"
4. Right click on "DefaultAppPool" and select "Advanced Settings..."
5. Locate the "Process Model" section.
6. Change the "Identity" from "ApplicationPoolIdentity" to "NetworkService"
7. Click OK and OK again, to apply the changes.

You should now be able to start Enterprise Tester to complete installation successfully.

You can view Enterprise Tester by clicking 'Start -> New Programs -> Enterprise Tester -> Enterprise Tester'

Note: SQL Server Express Database is limited to a maximum database size of 10gb, and limited to up to 1gb of memory to be used by SQL Server and up to 1 CPU.

For larger installations such as 30 user and the 30+ user licenses, we recommend SQL Server 2008 R2 Database.

3.2 Installation Steps Using Another Database Server

You can use the MSI to install the Enterprise Tester application while targeting a database on another server. Before attempting to install Enterprise Tester for use with another database ensure that you follow the steps below.

3.2.1 Before Installing Enterprise Tester

1. Install the .Net Framework 4 on the server.
2. IIS 6 or 7 must be installed on the server.
3. Create an empty database on your SQL server.
4. Ensure that the user you intend Enterprise Tester to use when accessing the database has been given correct permissions to create and remove tables, columns, indexes, constraints etc.

Note: Do not run the setup.exe as this will install SQL Express Edition on the web server.

3.2.2 Installing Enterprise Tester Using the MSI

The following steps must be completed before you access the Enterprise Tester:

1. Install Enterprise Tester using the .msi file. This will create the required files for Enterprise Tester to run
2. Open the web.config file in notepad or a similar text editor.

By default this file is located:

c:\Program Files\Catch Limited\Enterprise Tester\Web\web.config

3. Locate the following section in the web config: <connectionStrings>
Change the connection string to point to the server that contains the database Enterprise Tester will use. See Section 3.2.4 Example Connection String.
4. Save the web.config file.
5. For Windows 7 & Windows Server 2008 R2 Installations see the next section.
6. Access the Enterprise Tester site via Start -> All Programs -> Enterprise Tester -> Enterprise Tester.

There will be a small delay as the application creates all the tables in the target database, before starting the First-Use Wizard which will guide you through adding a new organization, license etc. Once this has completed, you can access Enterprise Tester and complete the initial setup. If an error occurs upon starting due to an incorrect connection string, if you edit the web.config file it should then trigger the application to start again. Once restarted, refresh the page for the Enterprise Tester website, and have it attempt to create all the tables again. If the error occurred for another reason i.e. insufficient permissions, you will need to restart IIS / the default website, so you can attempt to run the installation process again.

3.2.3 For Windows 7 and Windows Server 2008 R2 Installations

After the installation of ET is completed, but before you start ET for the first time, a small change must be made to the application pool settings before the application will start cleanly.

To make the change:

1. Go to Start -> Control Panel -> Administrative Tools -> Internet Information Services (IIS) Manager
2. Expand the server node in the left hand side tree
3. Click on "Application Pools"
4. Right click on "DefaultAppPool" and select "Advanced Settings..."
5. Locate the "Process Model" section.
6. Change the "Identity" from "ApplicationPoolIdentity" to "NetworkService"
7. Click OK and OK again, to apply the changes.

You should now be able to start Enterprise Tester to complete installation successfully.

3.2.4 Example Connection String

The following shows a typical connection string for MS SQL server. If you want to configure Enterprise Tester to use a database called "**EnterpriseTesterProd**" on the SQL server with the host name "**SQLCORP01**", using the SQL login "**etapp**", and password "**pas\$w0rD1**" you would use the following connection string (without the line breaks):

```
<connectionStrings>
<add name="Default" connectionString="Data Source=SQLCORP01;
Initial Catalog=EnterpriseTesterProd;MultipleActiveResultSets=true;
User Id=etapp;
Password=pas$w0rD1;" />
</connectionStrings>
```

For further detail on SQL server connections string you can refer to: <http://www.connectionstrings.com/sql-server-2008#p1>

3.2.5 Database Engine Configuration

To change which database is being targeted, the web.config file must be edited, and at a minimum there are 3 options which must be changed to support each database engine - as per the table below:

Database Product	Migrator Provider	NHibernate Driver	NHibernate Dialect
MySQL	Migrator.Providers.MySql.MySqlDialect	NHibernate.Driver.MySqlDataDriver	EnterpriseTester.Core.Dialects.MySqlDialectEx, EnterpriseTester.Core
Oracle 10g/11g	Migrator.Providers.Oracle.OracleDialect	NHibernate.Driver.OracleDataClientDriver	NHibernate.Dialect.Oracle10gDialect
PostgreSQL	Migrator.Providers.PostgreSQL.PostgreSQL82Dialect	NHibernate.Driver.NpgsqlDriver	NHibernate.Dialect.PostgreSQL82Dialect
SQLServer 2005 (and above)	Migrator.Providers.SqlServer.SqlServer2005Dialect	NHibernate.Driver.SqlClientDriver	EnterpriseTester.Core.Dialects.MsSql2005DialectEx, EnterpriseTester.Core
SQLServer Express 2005 (and above)	Migrator.Providers.SqlServer.SqlServer2005Dialect	NHibernate.Driver.SqlClientDriver	EnterpriseTester.Core.Dialects.MsSql2005DialectEx, EnterpriseTester.Core

Each database also uses a slightly different connection string format - the <http://connectionstrings.com/> website provides useful details of each connection string format.

Database Product	Example Connection String
Oracle	User ID=SYSTEM;Password=password;Data Source=192.168.1.232:1521/orcl
PostgreSQL *	192.168.1.232;Port=5432;Database=etest;UserId=postgres;Password=Password123;Timeout=60;CommandTimeout=120;
SQL Server Express (user-attached database)	Data Source=.\SQLEXPRESS;AttachDbFilename=C:\Program Files (x86)\Catch Limited\Enterprise Tests\Data\EnterpriseTester.mdf;Initial Catalog=EnterpriseTester;Trusted_Connection=Yes;
SQL Server (Integrated Security)	Data Source=.\SQLEXPRESS;Initial Catalog=EnterpriseTester;Integrated Security=True;
SQL Server (SQL username/password)	Data Source=dbserver;Initial Catalog=EnterpriseTester;UserId=etuser;Password=etpass;

*Configuring application to use a PostgreSQL database.

Before beginning, make sure you have a version of PostgreSQL that supports a column type of "uuid" (normally version 8.3 and later) as this is required by Enterprise Tester.

Oracle Database Configuration Notes when using Windows Server 2008r2

Enterprise Tester comes complete with Oracle 11 ODP.Net 32bit drivers.

If you are using Windows Server 2008r2, a 64bit application pool (Windows Server 2008r2 is 64bit) within IIS will prevent the Oracle drivers from loading. From the IIS Manager, you will need to enable the 32 Bit Applications. To do this:

- Go to Control Panel -> Administrative Tools -> Internet Information Services (IIS) Manager.
- On the left hand side select Application Pools.
- Click on the Application Pool being used by Enterprise Tester (this will normally be "DefaultAppPool" or "EnterpriseTester").
- Select on the right-hand side "Actions" panel "Advanced Settings...".
- In the general section of "Advanced Settings" change "Enable 32-Bit Applications" from "False" to "True".

If that does not work, or if you wish to keep using a 64bit application pool, your other options may be to download the 64-bit version of the Oracle data Access Components (including ODP.Net, which Enterprise Tester uses) from here:

<http://www.oracle.com/technetwork/database/windows/downloads/index-090165.html>

And then copying these files from the Xcopy zip file:

```
\ODAC112021Xcopy_x64\odp.net20\odp.net\bin\2.x\Oracle.DataAccess.dll  
\ODAC112021Xcopy_x64\odp.net20\bin\OraOps11w.dll  
\ODAC112021Xcopy_x64\instantclient_11_2\oci.dll  
\ODAC112021Xcopy_x64\instantclient_11_2\oraociicus11.dll
```

And place them into your Enterprise Tester installation bin folder:

```
c:\Program Files (x86)\Catch Limited\Enterprise Tester\Web\bin\
```

Alternatively you can delete the Oracle.DataAccess.dll file from the Enterprise Tester installation bin folder, and then register the ODP.Net driver in the GAC (Global Assembly Cache).

To do so you can unzip the xcopy file into a folder, then run the following command:

```
install.bat odp.net2 c:\oracle odac
```

(see the readme.txt in the root of the ODP.Net xcopy zip file for further details).

3.3 Initial Configuration

Before you can use the application you will need to create an organization and administrative user. You will be prompted to create the organization and user the first time that you launch the application.

Step 1 of 3

You will be requested to supply the organization details for the installation.

The screenshot shows the 'Add Organisation' step of the installation wizard. At the top, there is a yellow banner with a green checkmark icon and the text: 'Welcome to the installation wizard, before you can begin using Enterprise Tester you must complete a few basic setup tasks. Step 1 of 3: Please enter the details of the organisation that will use Enterprise Tester and click save to proceed to step 2.' Below this banner, the form is titled 'Add Organisation' and contains the following fields: 'Name *' with the value 'XYZ Limited', 'Industry Type' with the value 'XYZ Type', 'Short Description' with the value 'XYZ Limited short description', and 'Long Description' with the value 'XYZ Limited long description'. A 'Save' button is located at the bottom right of the form.

Supply the name of your organization and other optional information and click on 'Save'.

Step 2 of 3

You will now be requested to supply the default Administrative user for the installation.

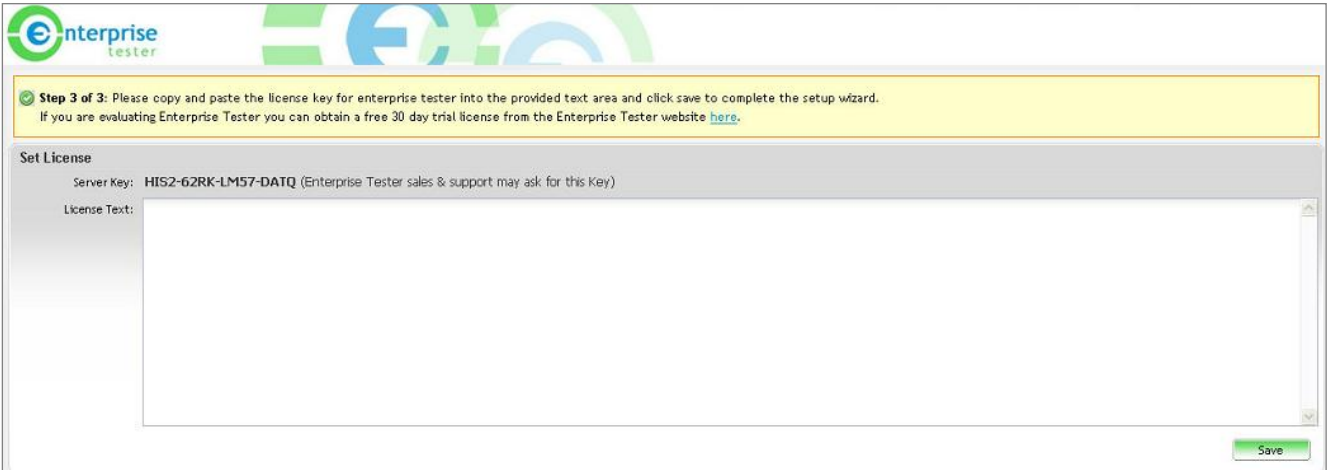
The screenshot shows the 'Add Administrative User' step of the installation wizard. At the top, there is a yellow banner with a green checkmark icon and the text: 'Step 2 of 3: Please provide the details for the administrative user, this will be the user account you use to access Enterprise Tester with for the first time. Once all details are entered click save to proceed to step 3.' Below this banner, the form is titled 'Add Administrative User' and contains the following fields: 'Username *' with the value 'Administrator', 'First Name' with the value 'John', 'Last Name' with the value 'Smith', 'Email *' with the value 'john.smith@xyz.co.nz', 'Phone' with the value '012345 67890', 'Password *' with masked characters, and 'Confirm Password *' with masked characters. A 'Save' button is located at the bottom right of the form.

Supply the Name, Email and Password for the administrative user and click on 'Save'.

Note: You will need to use this Account/Password to log onto the system.

Step 3 of 3


You will now be required to supply the License Text for the installation.



To do this copy the server key as listed on the screen and click on the link to the Enterprise Tester web site. You will then have access to the License Generator.



Click on Generate License. You will be requested to supply the Server Key (as previously copied), paste this into the License Generator form and click on the button to generate the license.



Home Product Information Demos Purchase News & Press Partners Contact Us

Licenses


	Product	Generated	Server Key	Expires
1	Enterprise Tester - Trial	2008-12-16	HIS2-62RK-LM57-DATQ	

```

H4sIAAAAAAEAO29B2AcSZY1Ji9tynt/SvVK1+B0oQiAYBMk2JBAEOzBiM3m
kuwdaUcjKasqgcp1VmVdZhZAzO2dvPfee++999577733judTif33/8/XGZk
AWz2zkrayZ4hgKrIH9+fB8/Ik6q5XRd1/my/arJ6+az+7/wdD17mrK5Zzv3
7u7s3t3b2XmY7uw84v/9wufFNF82+e+VX382fTDZ2893Hmzfm+YPtvene9n2
JH/w6faD2d4sz853Hpwf3DPt31yv8s/e1EVM/sIvsmLZ5stsOc03dfRF9q5Y
rBdf1hfZsmiytqiWzWe75uOXdfXT+bTFJ36Lz06ydpPn7ezX0gtZutp+yJb
5J+dUof1qi4Ij7yhX3/hy3U9nWdNzr3v7t3dfYDeD9Ld/Uf3Pn10/9Nf+Dqv
L/Mao/z22eu97U/3Xv1e28+/uP9g+nxm5/4hU1xsczadZ1/dtJ+9er30j84
e3FycbXz6dP803tf/KJfH7/+qQuzu69b152vvqJqxc/eW//p3+63J383199
8mby+rvff6d7/z0L/rBq68WP7V7/badfnrv4f1efvX2u8+/e3W+f/r6wfmn
737qwU89fLO6//LbFy9eFZ83s6++/VPnB9/96WV27wch79a/T7nO7tww33/
91n/ooNfdHq9/O63j+c//fucTXZez2dfPNk/2T1YvChezL6af/ETv/fL32fy
8P0r/bOLH/9/ABp0FRbpAQAA
  
```

The above block of text is your license, select the entire block of text and copy and paste it into the apply license textbox of the product and click Save to install it.

Once the License Text is displayed copy this from the License Generator into the Enterprise Tester License Text field and click on 'Save'.



Step 3 of 3: Please copy and paste the license key for enterprise tester into the provided text area and click save to complete the setup wizard.
If you are evaluating Enterprise Tester you can obtain a free 30 day trial license from the Enterprise Tester website [here](#).

Set License

Server Key: **HIS2-62RK-LM57-DATQ** (Enterprise Tester sales & support may ask for this Key)

License Text:

```

H4sIAAAAAAEAO29B2AcSZY09tynt/SvVK1+B0oQiAYBMk2JBAEOzBiM3m
kuwdaUcjKasqgcp1VmVdZhZAzO2dvPfee++999577733judTf33/8/XGZk
AWz2zkrayZ4hgKrIH9+fB8/Ik6q5XRd1/my/arJ6+az+7/wdD17mrK5Zzv3
7u7s3t3b2XmY7uw84v/9wufFNF82+e+VX382fTDZ2893Hmzfm+YPtvene9n2
JH/w6faD2d4sz853Hpwf3DPt31yv8s/e1EVM/sIvsmLZ5stsOc03dfRF9q5Y
rBdf1hfZsmiytqiWzWe75uOXdfXT+bTFJ36Lz06ydpPn7ezX0gtZutp+yJb
5J+dUof1qi4Ij7yhX3/hy3U9nWdNzr3v7t3dfYDeD9Ld/Uf3Pn10/9Nf+Dqv
L/Mao/z22eu97U/3Xv1e28+/uP9g+nxm5/4hU1xsczadZ1/dtJ+9er30j84
e3FycbXz6dP803tf/KJfH7/+qQuzu69b152vvqJqxc/eW//p3+63J383199
8mby+rvff6d7/z0L/rBq68WP7V7/badfnrv4f1efvX2u8+/e3W+f/r6wfmn
737qwU89fLO6//LbFy9eFZ83s6++/VPnB9/96WV27wch79a/T7nO7tww33/
91n/ooNfdHq9/O63j+c//fucTXZez2dfPNk/2T1YvChezL6af/ETv/fL32fy
8P0r/bOLH/9/ABp0FRbpAQAA
  
```

Save

You will have now licensed the installation and you are ready to logon to Enterprise Tester.

4 Authentication Configuration

Enterprise Tester supports plug-in-based authentication. This allows for authentication against alternative user/password stores, authentication against multiple sources of user information (to support scenarios where some users may be in Active Directory) and support for single sign-on scenarios (currently Atlassian's Crowd ONLY). **Note: users will still need to be created in Enterprise Tester to match the users in AD or Crowd using the same username and password.**

4.1 Supported Methods

Out of the box, the following authentication methods are supported:

- **Crowd** used for authenticating against an Atlassian Crowd server
- **Enterprise Tester Database** used for authenticating against the local list of user names and passwords
- **LDAP Source** used for authenticating against LDAP sources other than Active Directory
- **Machine Source** used for authenticating against Active Directory, local machine sources or an AD LDS file - this leverages the PrincipalContext class of the .Net Framework

4.2 Adding Methods

Authentication is managed via a single screen which you can get to via the 'Admin' tab, by right clicking on the configuration node and selecting 'Configure Authentication'.

- To add a method, click the 'Add' button then enter a name for the connection (Note: Currently editing of the connection name after creation is not supported) and select the method type.
- Once you click 'OK', the list of methods will refresh to include the new method.
- After creation the method is disabled, you must first configure the method, and then enable it, before it will be used.

4.3 Configuring Methods

4.3.1 Crowd

Identifying the Application

To use Crowd with Enterprise Tester you must configure a new application in Crowd, which will represent Enterprise Tester - see the Crowd user manual for details. Once the Crowd application has been added via the Crowd console you should see it in the list of applications (by clicking the 'Applications' tab):

The screenshot shows the 'Application Browser' interface in the Crowd console. It includes a search bar, a table of applications, and navigation tabs. The 'enterprisetester' application is highlighted.

Name	Description	Action
crowd	Crowd Console	View
crowd-openid-server	CrowdID OpenID Provider	View
demo	Crowd Demo Application	View
enterprisetester	Enterprise Tester	View
google-apps	Google Applications Connector	View

In this case, our application name is the lower case 'enterprisetester' and this is the value that should be used for the application name in the configuration screen.

Configuring the Method

The Crowd authentication method has the following configuration screen:

- The first parameter "Crowd Server" is the URL of the Crowd web service, this is normally the address of the Crowd server, with /services/SecurityServer address appended to the end.
- The second parameter is the name of the application being authenticated against, as configured in Crowd [above].
- The last parameter is the password configured for the application.

4.3.2 Enterprise Tester Database

This method does not require configuration.

Note: Currently the database method cannot be removed or disabled.

4.3.3 LDAP Source

The LDAP method can be used to authenticate against various LDAP directories, currently it has been tested against Active Directory and OpenLDAP for Linux. The LDAP source is configured via the following screen:

Similarities to JIRA LDAP Configuration

Most of the parameters correspond to those parameters used in JIRA for configuring LDAP configuration. Key differences are:

- In JIRA, the LDAP server is specified as ldap://servername:port. In Enterprise Tester the server name and port are specified in separate fields.

- The authentication type can be configured via the UI in Enterprise Tester - when authenticating against Active Directory, then Negotiate is the recommended method. For servers like OpenLDAP etc. you will generally need to use the 'Basic' authentication type.
- The protocol version can be configured via a drop down - in most cases this can be left as 'version 3' - 'version 2' is only required in some cases where the server can't support version 3 of the protocol.
- StartTLS encryption can be selected.

Here (for the purposes of contrast) is the equivalent JIRA LDAP configuration screen:

The screenshot shows the JIRA LDAP configuration interface. The browser address bar displays the URL: `http://jira4test.devdefined.com/secure/admin/jira/LDAPConfigurer!default.jspa`. The page title is "Configure LDAP authentication". The main content area contains the following fields and instructions:

- LDAP Host:** `ldap://localhost:389` (URL of the server running LDAP, eg. `ldap://localhost`)
- BaseDN:** `ou=Users,dc=example,dc=com` (Name of the root node in LDAP from which to search for users, eg. `cn=users,dc=example,dc=com`)
- Bind DN:** (If we need to authenticate to search for users, log in as this user (leave blank for anonymous search). Eg. `cn=jira,cn=users,dc=example,dc=com`)
- Bind Password:** (If we need to authenticate to search for users, use this password (leave blank for anonymous search).)
- Search Attribute:** `uid` (The attribute in LDAP holding the user's login name. Eg. 'uid' or 'sAMAccountName' (for ActiveDirectory))
- Sample user to authenticate:** `alex` (Start typing to get a list of possible matches. A sample user to attempt to authenticate against LDAP.)
- Sample user's password:** (The sample user's LDAP password.)

Buttons for "Submit" and "Cancel" are located at the bottom right of the form.

4.3.4 Machine Source

The machine source is a flexible method supporting authenticating users against the following three sources of user information:

- Active Directory
- Local Machine Users i.e. if the machine is not a member of a domain. This is also great for testing some authentication scenarios.
- AD LDS (Active Directory Lightweight Directory Services) - see [here](http://technet.microsoft.com/en-us/library/cc755080%28WS.10%29.aspx) (<http://technet.microsoft.com/en-us/library/cc755080%28WS.10%29.aspx>) for more details.

The machine source only works with Active Directory, and not other LDAP directories. Because of this fact it's also a great deal easier to configure - if you wish to authenticate against the same domain as the server belongs to then no configuration is required what so ever!

The machine source configuration screen looks like this:

The screenshot shows a dialog box titled "Configure authentication method". It contains the following fields and options:

- Type:** A dropdown menu currently showing "Active Directory Domain".
- Name:** An empty text input field.
- Container:** An empty text input field.
- Username:** An empty text input field.
- Password:** An empty text input field.
- Binding Type:** A dropdown menu currently showing "Simple Bind".
- Sealing:** An unchecked checkbox.
- Secure Socket Layer:** An unchecked checkbox.
- Server Bind:** An unchecked checkbox.
- Signing:** An unchecked checkbox.

At the bottom right of the dialog, there are two buttons: "Save" and "Cancel".

Type Parameter

- If authenticating against Active Directory, then just select 'Active Directory Domain' from the drop down.
- If authenticating against the local machine, then just select 'Local Machine Users' from the drop down, if you wish to authenticate against another computers local users, then enter the name of the local machine in the 'Name' text box.
- If authenticating against an AD LDS source, then just select 'Active Directory LDS Store' from the drop down and then enter the name and port of the AD LDS server in the 'Name' text box.

Container Parameter

The container parameter is the 'root' context for resolving users.

All queries are performed under this root for Active Directory or AD LDS sources, therefore this can (optionally) be configured as the distinguished name of a container object. For 'Local Machine Users' this parameter should be left empty.

Username and Password

If left blank the current user credentials are used. In most cases this will be the user associated to the application pool for Enterprise Tester website in IIS and by default this is normally 'Network Service' on windows server 2003/2008 machines.

If that user does not have permissions you will need to instead provide the username/password of a user that has Active Directory query permissions assigned.

Note: A special 'AD view' account may be available for this purpose.

Binding Type

Two binding types are supported:

- **Negotiate** - The client is authenticated by using either Kerberos or NTLM. When the user name and password are not provided, the Account Management API binds to the object by using the security context of the calling thread, which is either the security context of the user account under which the application is running or of the client user account that the calling thread represents.
- **Simple Bind** - The client is authenticated by using the Basic authentication.

Caution: Communications may be sent over the Internet in clear text if the SecureSocketLayer option is not specified!

Options

Most options will default to the correct values if left unselected, however you may need to check some options in special cases - here is what each of them do:

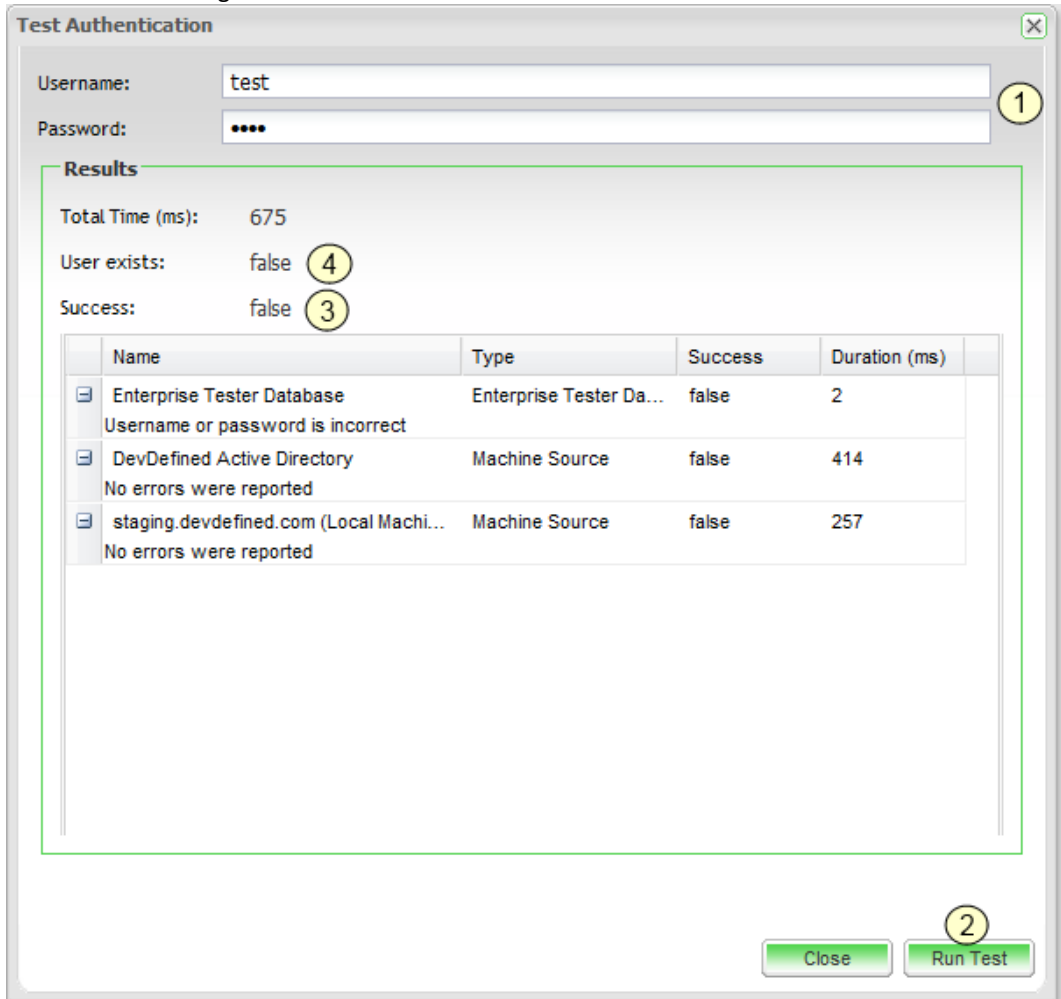
Name	Description
Secure Socket Layer	The channel is encrypted by using the Secure Sockets Layer (SSL) - Active Directory requires that the Certificate Services be installed to support SSL.
Signing	The integrity of the data is verified - this flag can only be used with the Negotiate context option and is not available with the simple bind option.
Sealing	The data is encrypted by using Kerberos - this flag can only be used with the Negotiate context option and is not available with the simple bind option.
Server Bind	Specify this flag when you use the domain context type if the application is binding to a specific server name.

4.4 Diagnosing Authentication

Diagnosing authentication issues can be difficult - there are a number of possible issues that can occur:

- Incorrectly configured authentication method
- Authentication methods are disabled
- Servers etc. that methods rely on cannot be contacted
- Username does not exist
- Username exists in directory, but does not exist in Enterprise Tester
- Password is incorrect

On the authentication methods toolbar is a button on the right hand side called 'Test Authentication', if you click it you will see the following screen:



- Here you can enter a username and password (1), then click "Run Test" (2) which will then attempt to authenticate the user against all enabled authentication methods.
- Overall success is reported via two fields "Success" (3) and "User Exists" (4) - both these must be true for the user to be able to log into Enterprise Tester successfully.
- By clicking the plus "+" next to a row you can see any details i.e. if an exception was thrown while attempting to authenticate the user.

4.5 Connecting To Enterprise Architect

One of the most powerful features of Enterprise Tester is its ability to connect to Enterprise Architect repositories, to import and synchronize requirements and use cases. This simplifies the process of creating test scripts.

Many organizations use a single shared repository, which can connect to other repositories, and is managed at an organizational level.

Actual links between project requirements and test cases are then created in the projects and use these EA connections. As part of the set up for a connection you need to configure the mapping of pick list values and this can be done at the connection level while saves you time as you will not need to configure it for individual links.

Enterprise Tester currently supports connections to the following repositories:

- Oracle
- SQL Server
- EAP files
- PostgreSQL
- MySQL

You can have as many connections as you require within your organization.

4.5.1 Default Accounts

Enterprise Tester directly connects to the EA Repository (database), so the account Enterprise Tester runs under must be given appropriate permissions, here is the list of default accounts per operating system /IIS version:

IIS Version / Operation System	Default Account
IIS5.1 - Windows XP	ASPNET
IIS 6 - Windows Server 2003	NetworkService
IIS 7 - Windows Vista/ Windows Server 2008	NetworkService
IIS 7.5 - Windows Server 2008r2 / Windows 7	NetworkService or the AppPoolIdentity (normally IIS APPPOOL\DefaultAppPool - see here for more details : http://learn.iis.net/page.aspx/624/application-pool-identities/) From V4.1, Network Service will always be the default account in IIS 7.5.

4.5.2 Database Connections

Database repository connections (Oracle, SQLServer, MySQL, & PostgreSQL) will generally "just work" when using an embedded username/password in the connection string.

If you wish to use a connection string that uses integrated authentication, then in that case the user the Enterprise Tester we application runs under i.e. NetworkService, must be given permission to read/write data to the target database.

4.5.2.1 SQL Server

For SQL Server - see this article:

<http://msdn.microsoft.com/en-us/library/ff647402.aspx>

In the SQL Server section, the article details how to setup access to either a local or remote SQL server database using integration authentication with the NetworkService etc. account.

4.5.2.2 Oracle

For Oracle, you can use a "trusted connection" by specifying the OSAuthent=1 parameter in the connection string, see here for examples of connection strings:

<http://connectionstringexamples.com/staticpages/index.php?page=20080710090445267>

Add access for an external identified user to Oracle is out of scope for this documentation, but a basic guide can be found here:

<http://www.databasedesign-resource.com/users-in-oracle.html>

4.5.2.3 PostgreSQL

Support for trusted connections are provided by using the "Integrated Security=true" connection string, for connection string examples see here (the Npgsql section):

<http://www.connectionstrings.com/postgre-sql>

Details of authentication methods for PostgreSQL is documented here:

<http://www.postgresql.org/docs/8.3/static/auth-methods.html>

4.5.2.4 MySQL

Support for trusted connections may not be provided for MySQL when connecting from .Net.

Examples of connection strings can be found here:

<http://www.connectionstrings.com/mysql>

See the "MySQL Connector/Net" section for details.

4.5.3 Secured Repositories

When using the "Catch API" plug-in, the database tables containing Element information are accessed directly, the secured repository security model is by-passed - so there is no need to provide a username/password - however if one is supplied then it will just be ignored.

4.5.4 Creating EA Connections

From the 'Edit Organisation' screen, you can set up your Enterprise Architect connection.

Click on 'Manage EA Connections' to open the EA Connections screen. If connections have already been configured, they will be listed here.

EA Connections					
Connection Name	Connection Type	Connection String	Reader User Name	Enabled	Number Of Links
EA Interface	EAPFile	C:\Documents and Settings\All...		true	2

Click on 'New' from the tool bar to bring up the 'Add Connection' dialog box.

Enter the Connection Details:

- **Connection Name** a name for the connection so you can identify it
- **Connection Type** select from the drop down list
- **Connection String** the connection string details are dependent on the connection type (see details below)

4.5.4.1 Oracle Connections

This is the connection string required to access the Oracle database:

```
DBType=3;Connect=Provider=OraOLEDB.Oracle.1;Password=password;Persist Security Info=True;User
ID=SYSTEM;Data Source=ORA11TST
```

You can copy this from the EA connect dialog of an existing connection that has been set up in Enterprise Architect.

4.5.4.2 SQL Server Connections

This is the connection string required to access the SQL database:

```
DBType=1;Connect=Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security Info=False;Initial
Catalog=EaTestRepository;Data Source=HPQC90TEST
```

You can copy this from the EA connect dialog of an existing connection that has been set up in Enterprise Architect.

4.5.4.3 EAP File Connections

The file path to the required EAP file e.g. C:\Testfiles\Demo.EAP. This pathway must be on the host and not your local drive or on a network drive that is accessible by the server Enterprise Tester is installed on.

Enterprise Tester will then test the connection and if successful it will save it.

4.5.5 EA and Enterprise Tester Field Mappings

Once the EA connection is saved the administrator will need to set up the field mapping before you can import or synchronize between EA and Enterprise Tester.

There are two sets of mapping to be configured:

- Enterprise Architect to Enterprise Tester
- Enterprise Tester to Enterprise Architect

To do this:

1. Click on Configure Connection - the Map Fields screen will display

The screenshot shows a 'Map fields' dialog box with the title 'Enterprise Architect fields -> Enterprise Tester fields'. It contains three main sections for mapping fields:

- Priority:** Enterprise Architect fields 'High', 'Low', and 'Medium' are mapped to Enterprise Tester fields 'High', 'Low', and 'Medium' respectively.
- Script Status:** Enterprise Architect fields 'Approved', 'Implemented', 'Mandatory', 'Proposed', and 'Validated' are mapped to Enterprise Tester fields 'InProgress', 'Complete', 'WaitingOnReview', 'WaitingOnReview', and 'InProgress' respectively.
- Requirement Status:** Enterprise Architect fields 'Approved', 'Implemented', 'Mandatory', 'Proposed', and 'Validated' are mapped to Enterprise Tester fields 'Approved', 'Implemented', 'Mandatory', 'Proposed', and 'Validated' respectively.

At the bottom, there are additional mappings for 'High' and 'Low' Enterprise Architect fields to 'High' and 'Low' Enterprise Tester fields.

- 2. Select the mappings for each value. Matching values will automatically be mapped.
- 3. Click on 'Save' - connection is ready to be used

Note: See further sections on how to synchronize data from Enterprise Architect

4.6 Connecting to Defect Trackers

The ability to interface with multiple defect tracking applications is another key feature of the tool. This interface allows incidents created in Enterprise Tester to be automatically created in the defect tracking system. It also allows any updates to synchronize between the two systems in both directions.

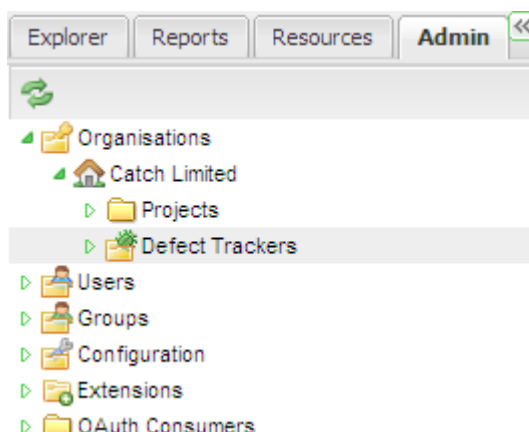
Enterprise Tester interfaces with Atlassian's JIRA and Microsoft Team Foundation Server (TFS) for defect management.

Incidents created in Enterprise Tester are allocated a unique ID which becomes automatically associated to the ID of the issue that is created in JIRA or TFS. Enterprise Tester displays both the Enterprise Tester incident ID and the JIRA or TFS issue ID. A link to the associated issue in JIRA or TFS is also available on the incident recorded in Enterprise Tester.

4.6.1 Add Defect Tracker Connection

To add a connection to a defect tracking system

1. Open the 'Admin' tab of the tree view.



2. Click on Organizations and expand your Organization. Right click on 'Defect Trackers' and select 'Add Tracker'.

Tracker Details

Type:

Name:

Url:

UserName:

Password:

Enabled?:

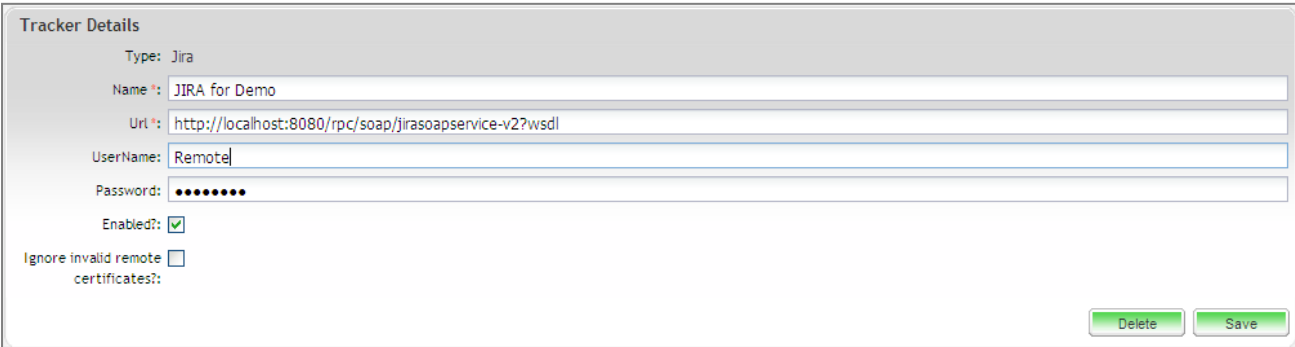
Ignore invalid remote certificates?:

Enter the Defect Tracker Details:

- **Type** Select the tracker type from the list of supported trackers
- **Name** Enter a name for the tracker that will identify it within Enterprise Architect
- **URL** Enter the URL path for the defect tracker. The URL should take the following forms:
 JIRA: <http://<servername>/rpc/soap/jirasoapervice-v2?wsdl>
 e.g. <http://localhost:8080/rpc/soap/jirasoapervice-v2?wsdl>
 TFS: <http://<ServerURL>/<Project Collection>>
 e.g. <http://tfs2010server.com:8080/tfs/Project ET>
- **UserName** Enter a gateway* username for the defect tracker
- **Password** Enter the password for the gateway username
- **Enabled?** Check this box to enable the connection to the defect tracker
- **Ignore Remote** Check this box to ignore invalid remote certificates

*If possible, the Gateway Account should be set up as an administration account in JIRA/TFS. This will allow creation, and update of incidents across all projects and will hold sufficient privileges to support enhanced functionality when further integration features are implemented.

When you have completed all the details click on 'Save'.



The screenshot shows a 'Tracker Details' configuration window. It contains the following fields and options:

- Type: Jira
- Name *: JIRA for Demo
- Url *: http://localhost:8080/rpc/soap/jirasoapservice-v2?wsdl
- UserName: Remotel
- Password: (masked with 8 dots)
- Enabled:
- Ignore invalid remote certificates?:

At the bottom right, there are two buttons: 'Delete' and 'Save'.

Enterprise Tester will test the tracker and will save all details if the connection works.

Note: Enterprise Tester comes complete with the JIRA and TFS interface modules and can be configured immediately.

The next step is to set up your Enterprise Tester project configuration to your JIRA project. Please refer to the [Administration Guide Section for more information](#).

5 General Configuration

In the configuration section of the Admin Tab you can view and update the license details, view current user sessions and set the default time outs for Enterprise Tester.

5.1 Default Timeouts

Enterprise Tester allows you to have as many users as you want but limits the number of users that can connect to the server at the same time (called a session) to the number of licenses that you have.

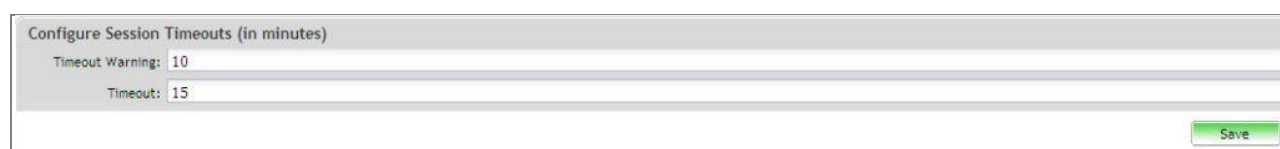
To prevent licenses from being locked by users that have logged on and then stopped using Enterprise Tester, time outs are used to disconnect inactive user. There is a warning time out where the user can select to keep the session going and a time out where the user session is terminated.

The values for this can be set in the default timeout screen.

To set the default timeouts:

1. Select the Admin Tab of the tree view and expand it out to show Configuration
2. Right click on the Configuration folder and select Configure timeouts.

The Configure Session Timeouts screen will display.



3. Enter the timeout warning - this is time at which the warning message will be displayed and the user can select to keep the session going.
4. Enter the time out - this is time at which when the user will have to log back in to start a new session.

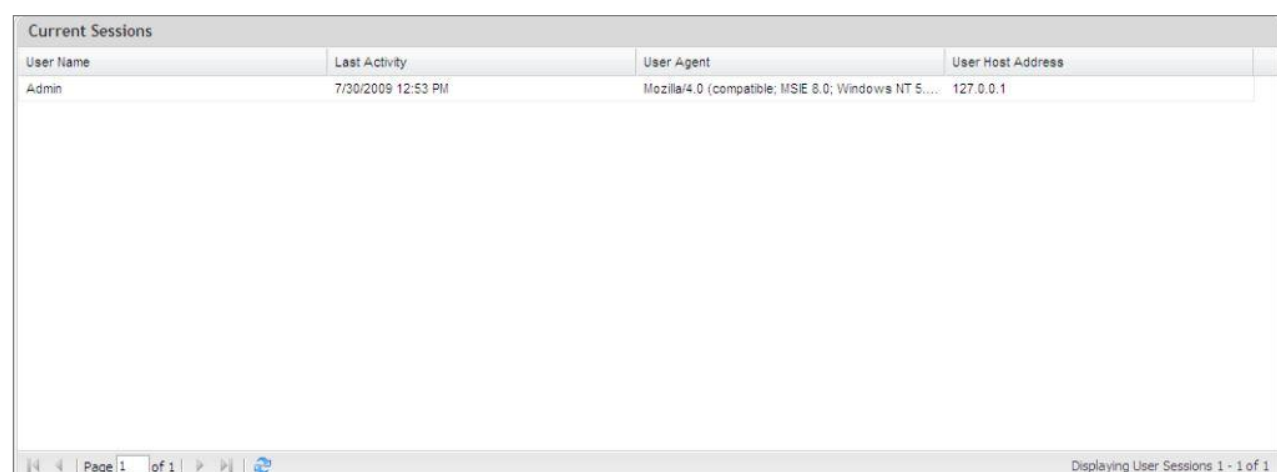
5.2 View Sessions

This allows you to see who is currently connected to the Enterprise Tester server.

To View User Sessions:

1. Select the Admin tab of the tree view and expand it out to show configuration
2. Right click on the Configuration folder and select View Sessions

The details of the current users will be displayed



User Name	Last Activity	User Agent	User Host Address
Admin	7/30/2009 12:53 PM	Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5...	127.0.0.1

5.3 View License Details

You can also view and update the license details for Enterprise Tester

To View License Details:

1. Select the Admin Tab of the tree view and expand it out to show Configuration

- 2. Right click on the Configuration folder and select View/Manage License

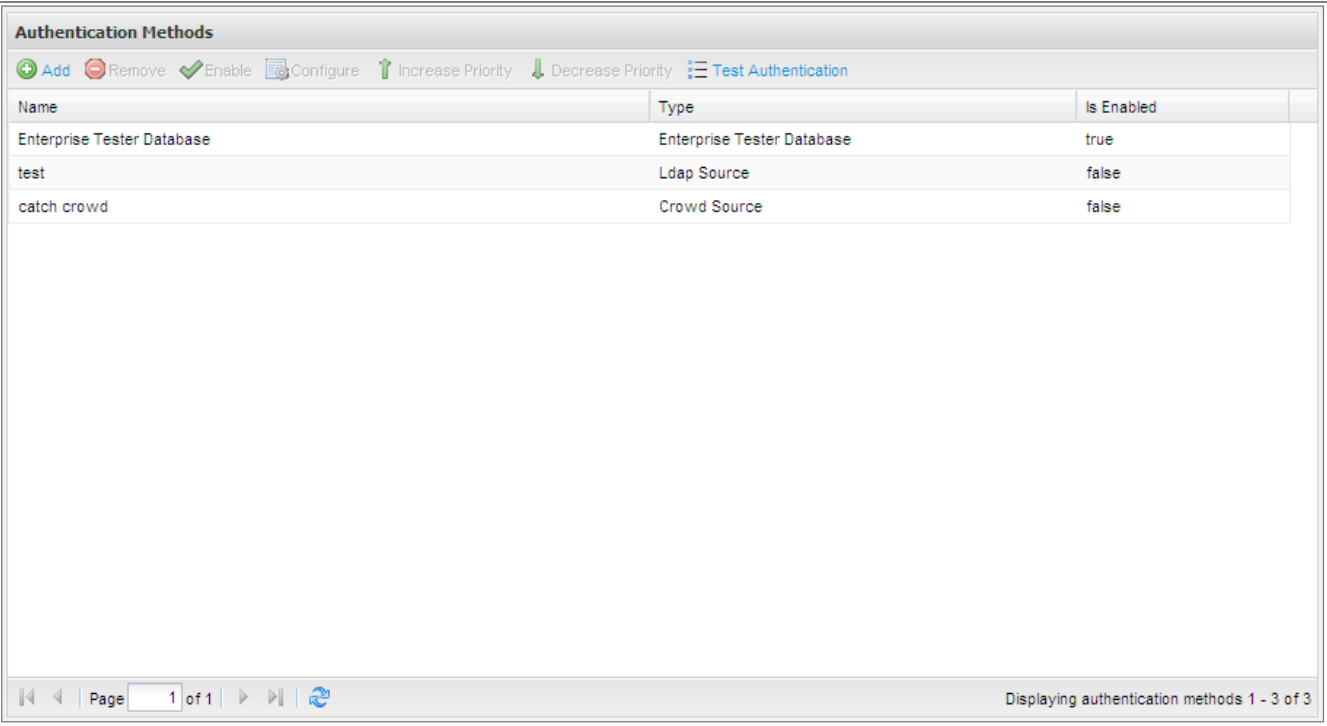
The license details will be show:



If you need to add a new license (renewal, upgrade, or when moving Enterprise Tester to a new server) to update the details:

- 1. Copy the new License Text - this will be supplied by Catch.
- 2. Click on the 'Save' button.

5.4 Manage Authentication



5.5 Managing Extensions

Enterprise Tester has an open architecture that provides users with the ability to add extensions that are supplied by Catch or other 3rd parties; they come as Plug-ins.

5.5.1 Plug-Ins

Plug-ins are used to extend the functionality of Enterprise Tester in different ways. Plug-ins provide a package of functionality including new features, menu items, or a group of modules.

To manage the Plug-ins:

1. Select the admin Tab of the tree view and expand it out to show Extensions.
2. Double click on the Plug-ins icon under the extensions folder.

The plug-in Screen will appear:

Manage Plugins

Core Functionality
Description: Core services required by the Enterprise Tester Application
Plugin: Core Functionality
Vendor: [Catch Limited](#)
Plugin Version: 1.4.0.499
Current State: Enabled

Defect Tracking Plugin
Description: Provides support for integrating defect trackers into the Enterprise Tester Application
Plugin: Defect Tracking Plugin
Vendor: [Catch Limited](#)
Plugin Version: 1.4.0.499
Current State: Enabled

Enterprise Architect Plugin
Description: Provides support for synchronizing information in Enterprise Architect with Enterprise Tester
Plugin: Enterprise Architect Plugin
Vendor: [Catch Limited](#)
Plugin Version: 1.4.0.499
Current State: Enabled

Jira Integration
Description: Provides support for integrating with the Atlassian Jira software.
Plugin: Jira Integration
Vendor: [Catch Limited](#)

Some Plug-ins that are not essential can be disabled or enabled on this screen.

To enable or disable a plug-in:

1. Select the relevant button
2. Click on 'Save'

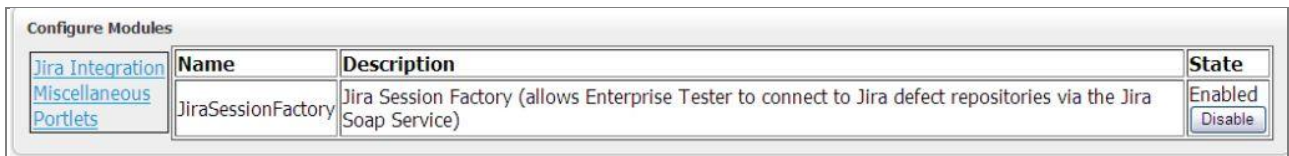
5.5.2 Plug-In Modules

Plug-ins may contain modules. A module represents a single service or piece of functionality used by Enterprise Tester that allows finer control over the functionality provided.

To manage the Modules:

1. Select the Admin tab of the tree view and expand it out to show Extensions.
2. Double click on the Modules icon under the extensions folder.

The Module Screen will appear:



Configure Modules			
	Name	Description	State
Jira Integration	JiraSessionFactory	Jira Session Factory (allows Enterprise Tester to connect to Jira defect repositories via the Jira Soap Service)	Enabled
Miscellaneous			<input type="button" value="Disable"/>
Portlets			

You can then Enable or Disable modules as required.

6 Appendix 1: Other Configuration Details

Before you install the application you may need to configure the components installed on the server. This section covers these configurations.

6.1 .Net Framework 4

The Test Management System requires version 4 of the .Net Framework to be installed, the easiest way to identify if you have the .Net Framework 4 installed is to attempt the installation. If you see are message displayed:

"You do not have the .Net Framework 4 installed, please visit <http://www.microsoft.com/downloads/> to download and install it."

You must install the 4 framework.

When installing the .Net Framework 4 you have two options - either installing from a "web download" (a small download, which will then install only the components you require) or you can download a "redistributable" which is a large file containing all the files necessary for the .Net Framework 4 to be installed on any machine.

If you plan on installing the Framework on more than one machine within your organization it is suggested that you use the redistributable, to avoid multiple downloads.

The web downloader can be downloaded from:
<http://www.microsoft.com/downloads/details.aspx?FamilyID=333325FD-AE52-4E35-B531-508D977D32A6>
It is approximately 3mb in size.

The redistributable can be downloaded from:
<http://download.microsoft.com/download/6/0/f/60fc5854-3cb8-4892-b6db-bd4f42510f28/dotnetfx35.exe>
It is approximately 200mb in size.

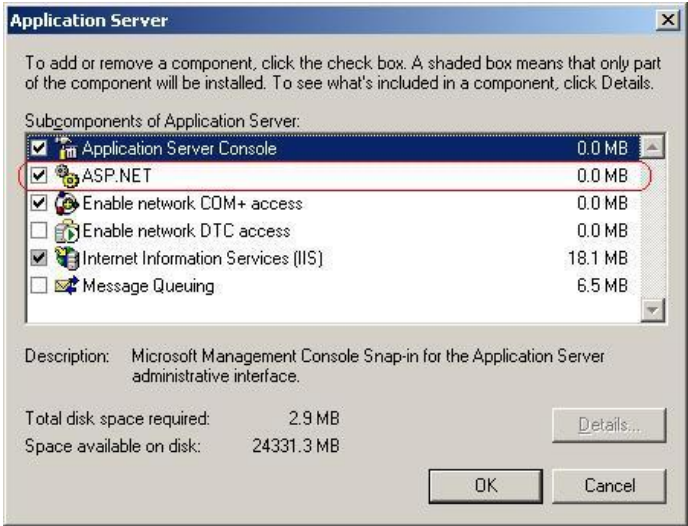
6.2 Configuring IIS

Before installing Enterprise Tester, Internet Information Services and ASP.Net must be installed and configured.

6.2.1 Windows Server 2003

Verify ASP.Net Is Installed

From the Control Panel -> Add / Remove Programs, click "Add / Remove Windows Components". Highlight the "Application Server" listing, and click "Details..."

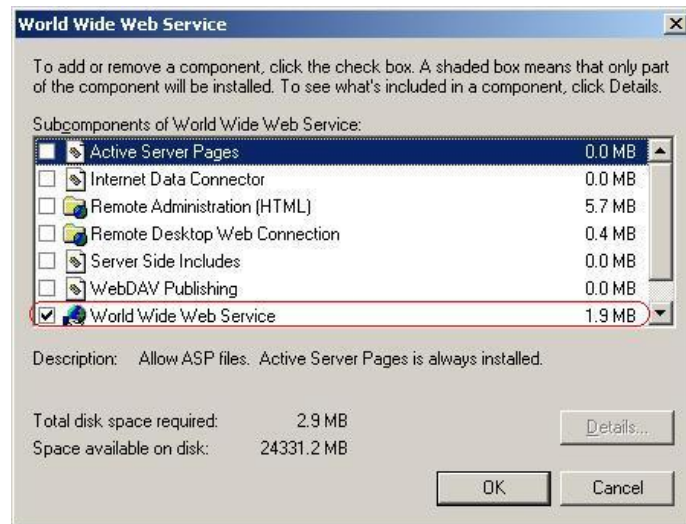


Check that "ASP.NET" is installed.

Verify IIS Is Installed

Staying within the "Add / Remove Windows Components" and "Application Server", scroll to "Internet Information Services".

Highlight this item, and click "Details...". Highlight, "World Wide Web Service" and then click "Details..."



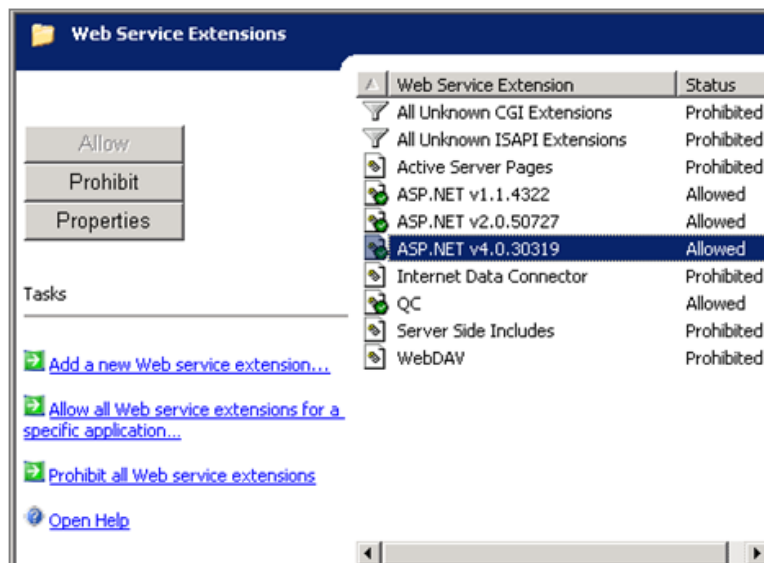
Check that "World Wide Web Service" is installed.

Verify IIS Configuration

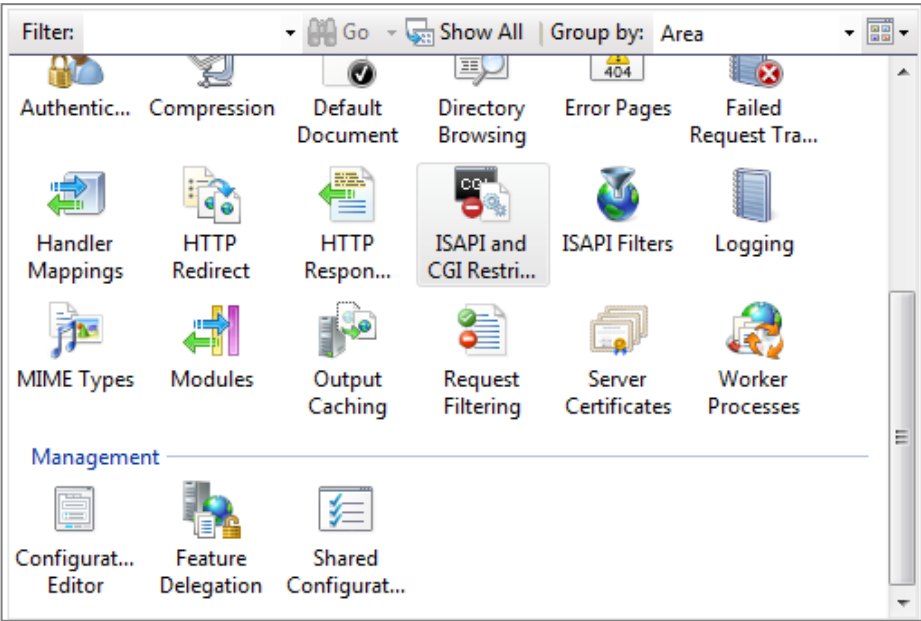
Once you have verified steps 1 and 2, you must make sure IIS is configured to allow ASP.Net pages to be processed.

Start up the IIS Manager (Click Start -> Run and type %windir%\system32\inetsrv\iis.msc. click OK). Expand the server, and highlight "Web Service Extensions".

For XP and Windows 2003r2:



For Vista, Windows 7, Windows 2008 r2:



ISAPI and CGI Restrictions

Use this feature to specify the ISAPI and CGI extensions that can run on the Web server.

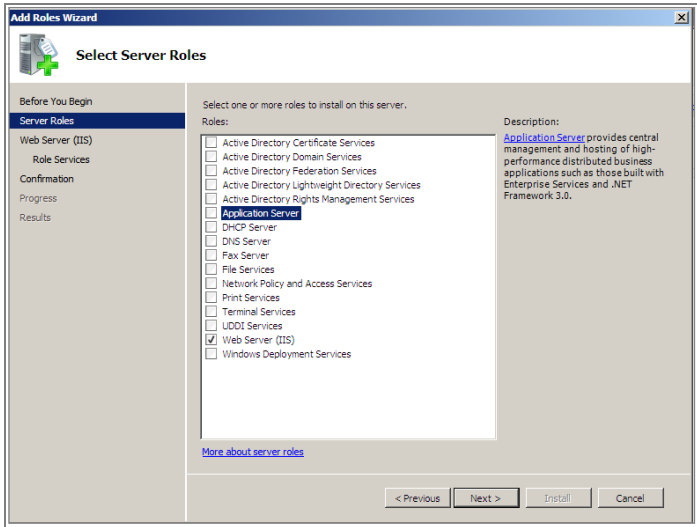
Group by: No Grouping

Description	Restriction	Path
ASP.NET v2.0.50727	Allowed	%windir%\Microsoft.NET\Framework64\v2.0.50727\aspnet_isapi.dll
ASP.NET v2.0.50727	Allowed	%windir%\Microsoft.NET\Framework\v2.0.50727\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	C:\Windows\Microsoft.NET\Framework64\v4.0.30319\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	C:\Windows\Microsoft.NET\Framework\v4.0.30319\aspnet_isapi.dll

Check that ASP.Net is allowed.

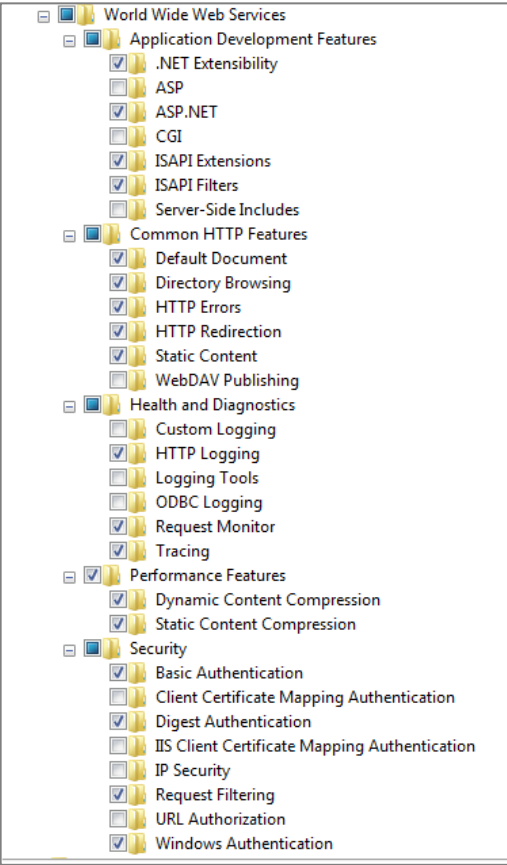
Windows Server 2008

1. Click start -> Server Manage
 - Click roles
 - Click Add Roles
 - Click Web Server (IIS)

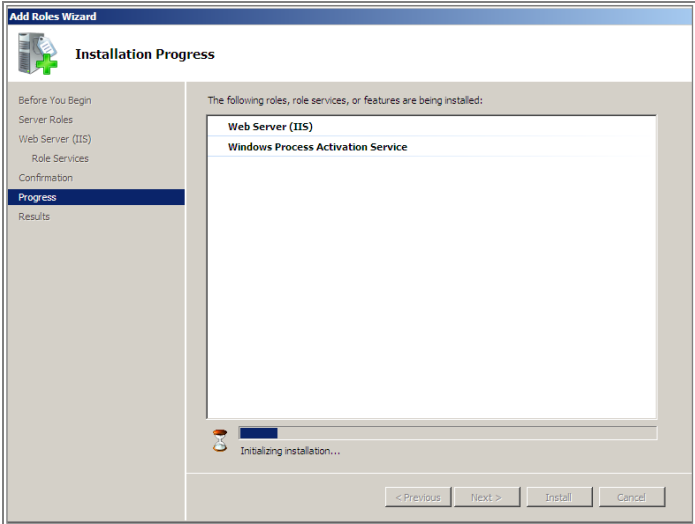


- Click on 'Next'.
- If prompted for Add features required for Web Server (IIS) then click "Add required features".

- Click 'Role Services'.
2. Enable the services as shown in the following two screen shots.



3. Once complete click 'Next', installation will proceed - once the progress bar is complete IIS has been installed correctly.



4. Close the dialog and proceed with executing the installation for Enterprise Tester to install the other prerequisites.

6.2.2 Windows 7/Vista

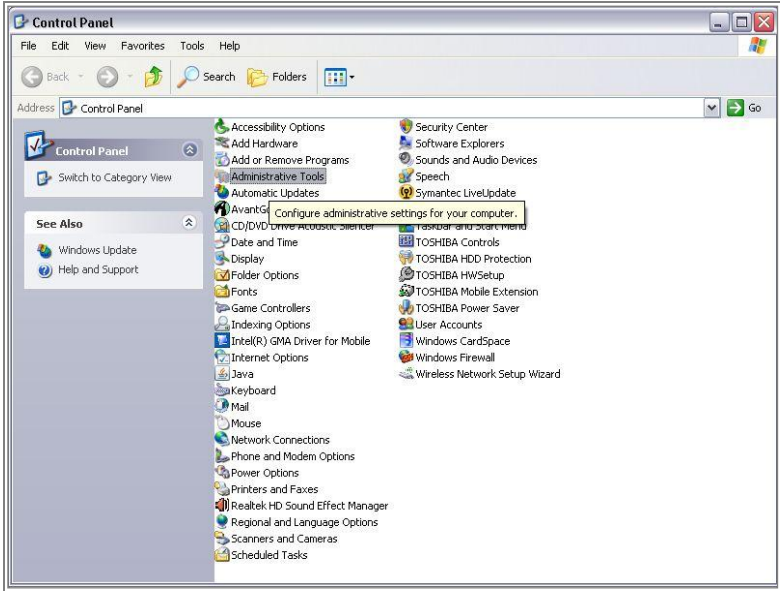
Configuring IIS on Windows 7 or Vista is similar the configuration for Windows Server 2008. Note that there is no server management console.

You can find more information on configuring IIS here:
http://www.ironspeed.com/designer/6.0.0/webhelp/Part_VI/Configuring_IIS_on_Microsoft_Vista.htm

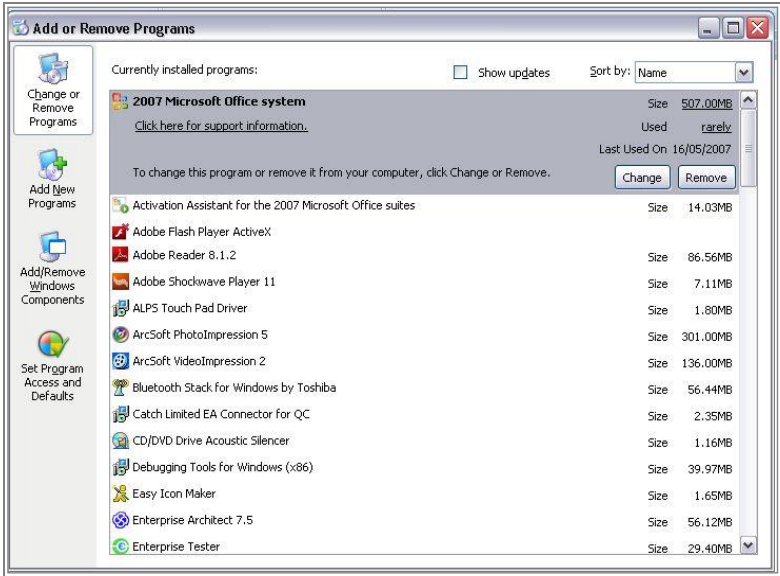
6.2.3 Windows XP

You need to have administrator access to the machine to install IIS on XP.

1. Select Start -> Control Panel.



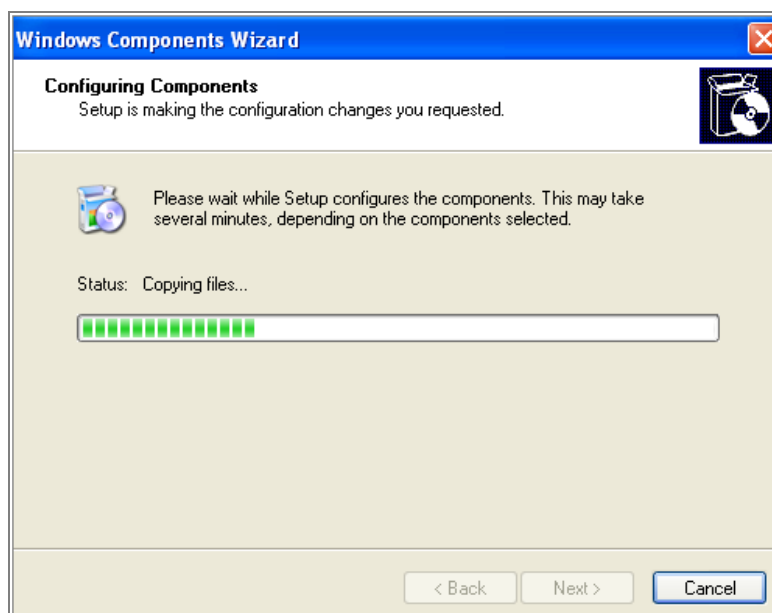
2. Select Add or Remove Programs.



3. Select Add Windows Components



4. Select Internet Information Services (IIS) - the service will now be installed for you.
5. You may be prompted to insert the installation disk, do so if prompted.



Once the installer completes IIS is ready to be used.

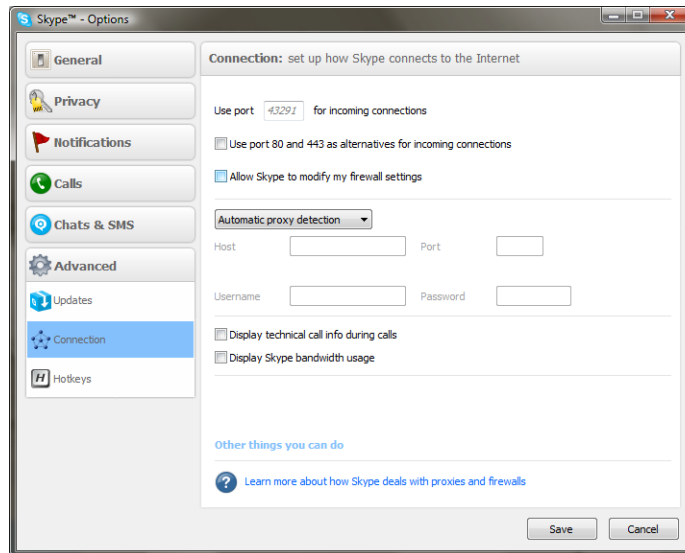
6.2.4 Resolving Port 80 Conflict Issues

Skype and some other applications, by default, use ports which are required by the IIS default website. To evaluate the Test Management System on a computer with Skype or other application installed that is using port 80; you must first alter the configuration to not use this default port.

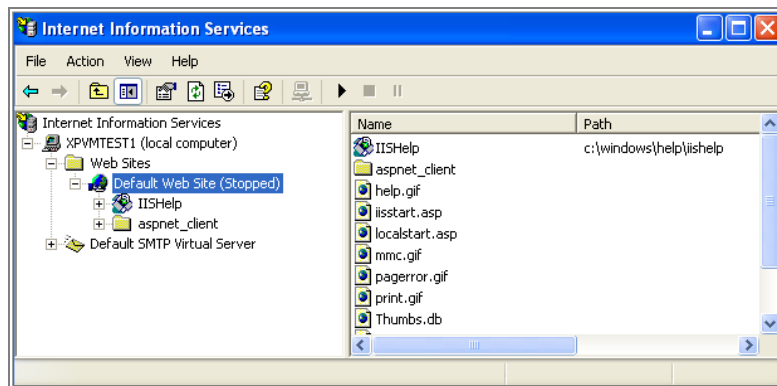
Please Note: If you wish to use a port other than port 80, please use the Zip File Installer that is included with the Enterprise Tester download. Instructions on how to manually set up the IIS virtual directory are included.

For instructions on reconfiguring Skype, see steps below, for all other applications refer to the manufacturer's instructions.

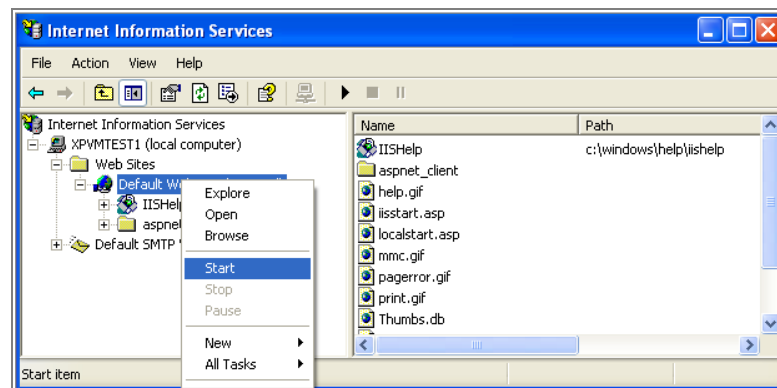
1. Click on the Skype Icon in the system tray to display the Skype Interface.
2. Select Tools -> Options, to display the options dialog.
3. Select Advanced -> Connection, to view the connection options, then locate the "Use port 80 and 443 as alternatives for incoming connections" check box and uncheck it.



4. Click 'Save', then close Skype completely and restart it.
5. If you have already installed IIS you may need to restart the Default website as well, you can do so by:
 - Start the IIS Manager Start -> Control Panel -> Administrative Tools -> Internet Information Services.
 - Expanding the "local computer" node.
 - Expanding the "websites" node .
 - Locate the "Default Web Site" node, it should have either have "Stopped" in the name or a red "error" icon to the left of the name.
 - Select 'Stop'.



- The server will stop.
- Click on Start.



6.3 Configuring JIRA

JIRA by default disables remote communication; this must be enabled to allow the JIRA plug-in in Enterprise Tester to communicate with your JIRA server.

6.3.1 Enabling RPC Calls

To enable remote soap calls follow these steps:

- Under plug-ins make sure the RPC JIRA plugin is enabled including the "System SOAP Services" module.
- Under "General Configuration" ensure "Accept remote API calls" is set to on (this can be enabled from the edit configuration link at the bottom of the page).

The link to the soap services wsdl would be:

For Professional or Enterprise JIRA installations: <http://<Server>/JIRA/rpc/soap/JIRAsoapservice-v2?wsdl>

For the Standalone JIRA versions on XP the link is: <http://localhost:8080/rpc/soap/JIRAsoapservice-v2?wsdl>

This should return an XML document, containing the wsdl for the soap service, if your JIRA server is incorrect configured it will display a warning page explaining that remote soap calls are currently disabled.

6.4 Installing TFS Client

When integrating with Microsoft Team Foundation Server, the TFS client must be installed on your Enterprise Tester Server. TFS 2010 server is distributed either as an ISO image (via an msdn or technet subscription) or on DVD. If you have an ISO file - you can either install a tool such as Virtual Clone Drive, to allow mounting the ISO image as a virtual drive, or alternatively if you are hosting Enterprise Tester in a virtual machine, your virtualization administrator should be able to mount the ISO image on the virtual machine for you.

The requirements are different depending on whether you are using a 32-bit or a 64-bit application for Enterprise Tester.

For **32-bit TFS Client**, more information on the installation process can be found here:

<http://blogs.msdn.com/b/jimlamb/archive/2010/04/06/installing-just-the-server-components-of-tfs-2010.aspx>

For **64-bit TFS Client**, please refer to the Mini Guide "Installing 64-bit TFS Client" on the Enterprise Tester website:

<http://www.enterprisetester.com/help/documentation>

6.5 Changing Enterprise Tester Web and Logging Configuration Settings

In rare instances it may be necessary to change some of Enterprise Testers web and logging configuration settings, such as switching error logging from WARN to DEBUG or changing the path separation character.

The following sections provide instructions on how to make basic changes to the Enterprise Tester Web and logging Config files.

Caution: changes to the web.config file can leave Enterprise Tester inoperable. We advise taking a backup of your web.config file and database prior to making changes.

Note: web.config / logging.config files can be located in the web subdirectory of the application installation path, which defaults to c:\Program Files\Catch Limited\Enterprise Tester\

6.5.1 Changing Error Logging from WARN to DEBUG

Enterprise Tester is configured to log only WARN (warning) messages by default to maximise system performance. However in the rare event that you encounter a serious error, you may be asked by our support team to provide a more detail log file. To do this, you will need to change the logging status in your instance of Enterprise Tester, from WARN to DEBUG.

Open the logging.config file (normally found in Program Files\Catch Limited\Enterprise Tester\Web folder) using notepad or text editor.

Scroll to the bottom and change the "Priority Value" from WARN to DEBUG as shown below

```
<root>
  <priority value="DEBUG" />
```

Save and close the file.

For the changes to the logging.config file to take effect you will need to Restart IIS or 'Recycle' the Application Pool in IIS that Enterprise Tester is using.

Alternatively you can "touch" the web.config file (which causes the application to be reloaded).

The process of touching the web.config or any file involves opening the file in a text editor and saving it without making any alterations to the contents of the file. This will update the time and date information of the file to reflect the time and date at which the file was saved.

When the web.config file is editing, the ASP.Net work process will detect the changes and cause the application (in this case Enterprise Tester) to restart, reloading all its configuration in the process.

Note: As mentioned above, setting the logging level to 'DEBUG' will impact on the performance of Enterprise Tester – once you have captured the diagnostic information requested by Catch Limited you should always restore this value back to 'WARN' to keep Enterprise Tester running at full speed (and avoid filling up your server with log files).

Log file location:

Log files by default are written to the Web\App_Data folder, in the installation folder – which can normally be found in C:\Program files\Catch Limited\Enterprise Tester\Web\App_data\ - the current days logs will be written to a file called "log.txt" and previous log files will be stored as "log.txtYYYY.MM.DD" where YYYY.MM.DD is the date at which the log was recorded.

6.6 Changing Path Separator Value

By default, the "/" is reserved for use as a path separator for package, requirement and script paths in imports and exports and cannot be used in Requirement, Script or Use Case names. Should you need to use the "/" extensively as part of your naming convention, the path separator can be changed in Enterprise Testers web.config file as follows.

Open the Web.Config file (usually located in c:\Program Files\Catch Limited\Enterprise Tester\web\) and find the following section near the top of the file.

```
<appSettings>
  <add key="migration.providerName" value="Migrator.Providers.SqlServer.SqlServer2005Dialect"/>
</appSettings>
```

Add a new line with the path separator of your choice after "value=" as shown in bold below. The following example will replace "/" as a path separator with the pipe character "|".

```
<appSettings>
  <add key="migration.providerName" value="Migrator.Providers.SqlServer.SqlServer2005Dialect"/>
  <add key="PathService.PackagePathSeparator" value="|" />
</appSettings>
```

6.7 Changing the Indexes Folder Location

By default the location of the Indexes folder will default to the "Data" folder of your installation. The indexes folder can grow up to 1 gigabyte in size, so if you don't have a lot of space free on your installation drive, or prefer to store data in a different location, you will need to update the web.config file to specify this location.

To change the location, locate the <appSettings>...</appSettings> section in the web.config file and add a new value "search.indexes.path" on the line after <appSettings> like so:

```
<appSettings>
  <add key="search.indexes.path" value="c:\savemy\indexes\" />
```

The "value" section of this entry needs to contain the absolute path of the folder where you want to have the indexes stored.

Note: Query performance is dependent on the speed of the disk where indexes are stored.

6.8 Storing Attachments in a File System

Enterprise Tester provides the option of storing attachments in a file system rather than in the Enterprise Tester database. By default Enterprise Tester will store attachments in the database, unless the user configures to do otherwise.

6.8.1 Configuration of Storage Method and Location – New Installation of Enterprise Tester

If you have just installed Enterprise Tester, and have yet to create any data, you can configure the location for storing attachment contents by editing the web.config file.

Open the web.config (normally found in C:\Program Files\Catch Limited\Enterprise Tester\Web\web.config) and locate the appSettings section, which will normally look something like this:

```
<appSettings>
  <add key="migration.providerName"
value="Migrator.Providers.SqlServer.SqlServer2005Dialect" />
</appSettings>
```

Now, if you wish to use In-database storage of attachments, you can leave the file as-is, however if you wish to use file-system based store, you need to add an additional value using the key "attachment.storage.method" with the value "FileSystemCas".

```
<appSettings>
  <add key="migration.providerName"
value="Migrator.Providers.SqlServer.SqlServer2005Dialect" />
  <add key="attachment.storage.method" value="FileSystemCas" />
</appSettings>
```

By default this will store attachments in the folder ../Data/Attachments/ (so normally c:\Program Files\Catch Limited\Enterprise Tester\Data\Attachments)

If however you wish store attachments in another location (i.e. if you have a lot of attachments and wish to store them on a NAS disk) you can set the path by adding another entry with the key "attachment.storage.path".

```
<appSettings>
  <add key="migration.providerName"
value="Migrator.Providers.SqlServer.SqlServer2005Dialect" />
  <add key="attachment.storage.method" value="FileSystemCas" />
  <add key="attachment.storage.path" value="f:\et-attachments\" />
</appSettings>
```

6.8.2 Setting Maximum File Sizes

To support the attachment of very large files change to the configuration of the application are also required. By default Enterprise Tester sets a limit of 64mb for requests. To support attaching larger files you will need to change this value.

In the web.config file, locate this section:

```
<system.web>
  <httpRuntime executionTimeout="18000" maxRequestLength="65535" />
```

The value "maxRequestLength" controls the maximum size of requests in kilobytes, changing this to value such as 1024000, will allow you to upload files up to 1gb in size.

6.8.3 Garbage Collection

Due the way the large attachment functionality is implemented, when you delete an attachment, the associated contents (if stored on say the file system) won't be immediately removed. Instead a periodic process occurs called "garbage collection" where any content no longer referenced by the database is then removed.

By default this process runs once every hour. The frequency can be configured by specifying an additional key "attachment.storage.garbagecollection.dwell":

```
<appSettings>
  <add key="migration.providerName"
value="Migrator.Providers.SqlServer.SqlServer2005Dialect" />
  <add key="attachment.storage.method" value="FileSystemCas" />
  <add key="attachment.storage.garbagecollection.dwell" value="5" />
</appSettings>
```

In the example above we have set "dwell" to 5 minutes. Attachments will be "cleaned up" every 5 minutes. Generally speaking, it is recommended that unless you are performing tests, this should be set to 30 minutes or higher.

In addition if you wish to disable garbage collection altogether, you can add the key "attachment.storage.garbagecollection.disable" with the value "true".

```
<appSettings>
  <add key="migration.providerName"
value="Migrator.Providers.SqlServer.SqlServer2005Dialect" />
  <add key="attachment.storage.method" value="FileSystemCas" />
  <add key="attachment.storage.garbagecollection.disable" value="false" />
</appSettings>
```

otherwise.

6.8.4 Changing Attachment Storage from Database to File System

Enterprise Tester provides a mechanism to allow existing customer to migrate between storing attachments in the file system or database. Before commencing, the Enterprise Tester website should be taken offline. The easiest way to do this is to stop IIS or stop the application pool Enterprise Tester belongs to.

6.8.4.1 Migrating from In-database to the file system

Important: Before commencing, it is strongly recommended that you back up your database and your web.config file

To store attachments in a location other than /Data/Attachments, you will need to add the "attachment.storage.path" setting to the web.config file (ensure the attachment storage method remains the same).

Next, start a command prompt, and change the Enterprise Tester bin folder:

```
cd c:\Program Files\Catch Limited\Enterprise Tester\Web\bin\
```

Now run the following executable:

```
AttachmentMigrator.exe
```

A message similar to the following should appear:

```
Enterprise Tester Attachment Migration Tool Version 1.0.0.0
```

```
Current Attachment Storage Configuration: FileSystemCas
```

```
This tool will migrate attachments to the new storage location: InDatabase
```

```
WARNING! This operation cannot be reversed, and if it fails, will leave your
database in a inconsistent state. Please ensure you have backed up the database
before proceeding.
```

```
To proceed type "yes" and press enter
```

As the message suggests, you should always backup both your database and web.config file prior to using this tool - as if it fails halfway through, it will leave your Enterprise Tester database in an inconsistent state.

When you are ready type "yes" and press enter.

You will then see progress displayed on screen, and eventually the migration will complete.

```
Initializing...
```

```
Initialization Complete.
```

```
Plugins Folder: c:\Program Files\Catch Limited\Enterprise Tester\Web\bin
```

```
Attachments Folder: c:\Program Files\Catch Limited\Enterprise
```

```
Tester\Data\Attachments\
```

```
Database Type: SqlServer
```

```
..... Processed 40/265 (15%)
..... Processed 80/265 (30%)
..... Processed 120/265 (45%)
..... Processed 160/265 (60%)
..... Processed 200/265 (75%)
..... Processed 240/265 (91%)
.....
```

```
Migration completed and web.config file updated, total time: 4.5294003s
```

Now restart IIS or the application pool, and your attachments will now be stored in the new location.

If you are migrating from file system to in-database storage, you will need to manually delete/archive the attachment files after the migration.

6.9 Setting Automatic Refresh Lookups

Enabling/Disabling Automatic Refresh Lookups at start up

By default, Enterprise Tester is automatically set to refresh lookups on startup of the application. In the web.config file, by default defecttracking.settings.populator.syncuncachedonstartup is set to **'true'**. This initially triggers a check for "uncached" projects. If "uncached" projects are found, a refresh lookups synchronisation is triggered at startup. To disable, set defecttracking.settings.populator.syncuncachedonstartup is set to **'false'**.

Enabling/Disabling Automatic Refresh Lookups when a new project link is created

By default, Enterprise Tester is automatically set to refresh lookups when a new project link is created under the Resources tab. In the web.config file, by default `externaldata.createlink.autorefreshlookups` is set to **'true'**. This triggers a refresh of all the cached custom/inbuilt field data when a project link is created. The refresh process will only work if the defect tracker is also enabled. To disable the automatic refresh lookup, change `externaldata.createlink.autorefreshlookups` to **'false'**.

6.10 Changing Server Key Generation Method

When upgrading from V3.X or prior to V4.X, the server key generation method will automatically update to this method. When upgrading from V3.x and prior or when making this change manually to a production system, please contact Catch Limited Support (support@catchlimited.com) to pre-arrange a time for a new license to be generated, this will minimise any outage period.

In versions prior to 4.0 we generated the server key used by Enterprise Tester from this information:

- Machine Name
- Processor Count
- Mac Addresses of permanent network interfaces
- Operating System Name
- Operating System Version

In virtualized environments the MAC addresses can often change, causing a new server key to be generated next time Enterprise Tester starts, displaying a message on screen to customers that their license is now invalid or expired.

A new server key generation method that generates a stable server key even if the MAC address changes over time, to use it you must add the following line to your web.config file:

```
<appSettings>
...
<add key="Licensing.ServerKey.GenerationMode" value="Stable" />
```

Once added, on the next start up, a new "stable" server key will be generated.

At this point you will need apply a new license text which can be provided by Catch Limited on request. Please provide your new server key.

6.11 EC2 Support

If you are using EC2, then by default windows instances will be allocated a new hostname every time they start up. This is in the form of "ip-XXXXXX" (where XXXXXX is a hexadecimal number), so even when using the stable server key generation mode this would require that a new license is entered every time Enterprise Tester starts up.

To remedy this, access the EC2 server via remote desktop, and then:

1. Click start -> EC2ConfigServer Settings
2. When the EC2ConfigServer settings dialog appears, uncheck the "Set Computer Name" checkbox.

Another recommendation is to assign the machine a more meaningful name, as this will be recorded in log files and can be used to determine which machine they were recorded on (i.e. development or production).

To give the server a more meaningful name:

1. Go to Start-> Control Panel -> System.
2. Clicking "Change settings"
3. Give the machine a unique name i.e. "ETPROD-COMPANYNAME".
4. Click OK, you will be prompted to restart.
5. Restart

Once restarted, access Enterprise Tester in a web browser, obtain the server key, request/generate a new valid license, and apply it.

You should now be able to start/stop the EC2 instance without having to enter a new server key every time.

6.12 Common Installation Issues

6.12.1 Page Not Found Error

Following installation, if you are receiving a page not found error it is likely to be an IIS6 configuration issue.

To check your configuration by following these steps:

1. Check ASP.Net v4.0 is enabled in IIS.
 - a. In Administrative Tools -> Internet Information Services (IIS) Manager, click on the "Web Service Extensions" node (on IIS7 and above, these settings can be found under "ISAPI and CGI restrictions").
 - b. Locate the Web Service extension "ASP.Net v4.0" and ensure its status is "Allowed" - if not - click on the service, then click the "Allow" button. If the ASP.NET v4.0 option is not in the list, you may not have the .Net Framework 4.0 installed – you can down load it from the Microsoft Website:

<http://www.microsoft.com/download/en/details.aspx?id=17851>
 - i. Download/install the .Net Framework.
Once downloaded you will need to enable ASP.Net in IIS (set this article here: <http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/9fc367dd-5830-4ba3-a3c9-f84aa08edffa.mspx?mfr=true>)
 - c. Restart IIS.
 - d. Retry accessing the Enterprise Tester website to see if the issue is resolved.

2. If the issue still persists, check the Enterprise Tester application extensions are correct
 - a. In Administrative Tools -> Internet Information Services (IIS) Manager, expand the Web Sites -> Default Web Site node.
 - b. Locate the "EnterpriseTester" application, right click and select "Properties" On the "Virtual Directory" tab, near the bottom, click the "Configuration..." button.
 - c. In the "Application Configuration" dialog, ensure there are two mappings listed, one for the extension ".aspx" and another for the extension ".rails" - both should be mapped to the executable "c:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_isapi.dll".

Also ensure there is a wildcard application map set up to the same path "c:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_isapi.dll"
 - d. For both the .rails and wildcard mappings the "Verify that file exists" checkbox must be unchecked.
 - e. Restart IIS once the change have been made and attempt to access the application.

Note: If the wildcard mapping is not setup correctly you may find that requests to links such as

<http://localhost/EnterpriseTester/>

will fail, but a request to a specific page such as the following will work:

<http://localhost/EnterpriseTester/authentication/login.rails>

3. Re-register IIS

In some cases ASP.Net may not be setup correctly and require re-registration, to do so use the `aspnet_regiis` tool from the command line.

For details on using this tool see here:

[http://msdn.microsoft.com/en-us/library/k6h9cz8h\(v=vs.71\).aspx](http://msdn.microsoft.com/en-us/library/k6h9cz8h(v=vs.71).aspx)

To install ASP.Net again you could open the Command Prompt:

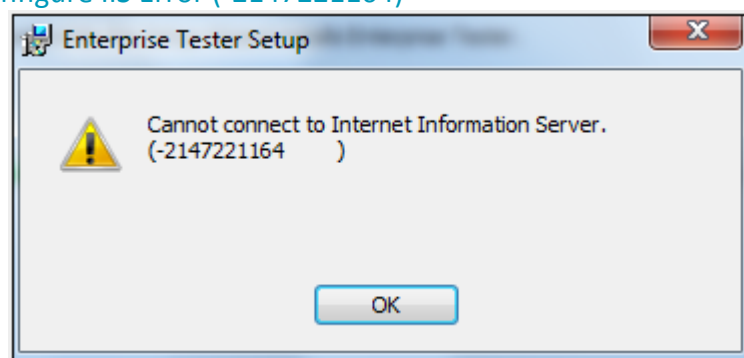
Start -> run -> "cmd"

Then from the command prompt type:

```
c:\windows\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe -i
```

Which will re-install ASP.Net

6.12.2 Cannot Configure IIS Error (-2147221164)



A common cause of this issue is when Enterprise Tester cannot locate the "Default Website" - the current installer technology identifies the default website by name, for the installation to complete you may need to rename the site if it is called something else.

6.12.3 400 Server Errors

If you are receiving an IIS 400 error, this could suggest one of the following:

- * In IIS 6.0 - ASP.Net v4.0 is disabled/prohibited under the "Web Service Extensions" folder.
- * In IIS 7.0/7.5 - That the ISAPI filter for ASP.Net might be disabled, or the handler mappings are incorrect.
- * ASP.Net requires re-registering (see here [http://msdn.microsoft.com/en-us/library/k6h9cz8h\(VS.80\).aspx](http://msdn.microsoft.com/en-us/library/k6h9cz8h(VS.80).aspx)) - this often just requires running the follow command from the command prompt: "aspnet_regiis -i".

If this is a problem with IIS 7.0 or up (i.e. Windows Vista, Windows 2008, Windows 7 and Windows 2008 r2) - then you can use Failed request tracing to determine where the request to the Enterprise Tester application is happening.

The enable failed request trace logging:

- * Add the "Tracing" role service to the IIS role (via Control Panel -> Programs -> Turn Windows features on or of -> Roles Web Service (IIS) -> Add Role Service.
- * Start IIS Manager, navigate to Sites -> Default Web Site. On the right hand side "Actions" menu under "Configure" you will see "Failed Request Tracing...". Click on the link.
- * Check the "Enabled" checkbox, and click OK.

- * Locate the "Failed Request Tracing Rules" icon in the centre pane and double click on it.
- * In the right hand actions pane choose "Add.."
- * Choose to log All content (*) and click Next.
- * Choose to log by Status code(s) and Enter "400-600".
- * Leave All providers selected, defaults should be to log everything.
- * Click Finish.

Once the failed request tracing is enabled, you can then attempt to access the Enterprise Tester application, and navigate to "C:\inetpub\logs\FailedReqLogFiles" and email the log file(s) to us for analysis.

More details on enabling failed request logging/how it works can be found here:

<http://learn.iis.net/page.aspx/266/troubleshooting-failed-requests-using-tracing-in-iis-7/>

In some cases, if Enterprise Tester database setup is incorrectly configured, the first request will display a 500 error, but subsequent requests will display a 400 error. In this case, you need to disable custom errors, at which point the error message will include details of the problem. To disable customer error messages, you need to edit the web.config file and locate this section:

```
<customErrors mode="RemoteOnly">
```

And replace "RemoteOnly" with "Off"

```
<customErrors mode="Off">
```

Then save the changes, and access Enterprise Tester again in the browser, at this point you should a 500 error page with details of the problem. Cut/paste the contents of the error message and email it to us, and we can then provide further assistance with resolving the issue.

6.12.4 POST Install Error due to Security Settings

The PostInstallTasks is a set of tasks that run during installation to update the web.config, It's there to apply fixes/changes to the web.config file, and is for customers who are normally upgrading from very old versions of Enterprise Tester.

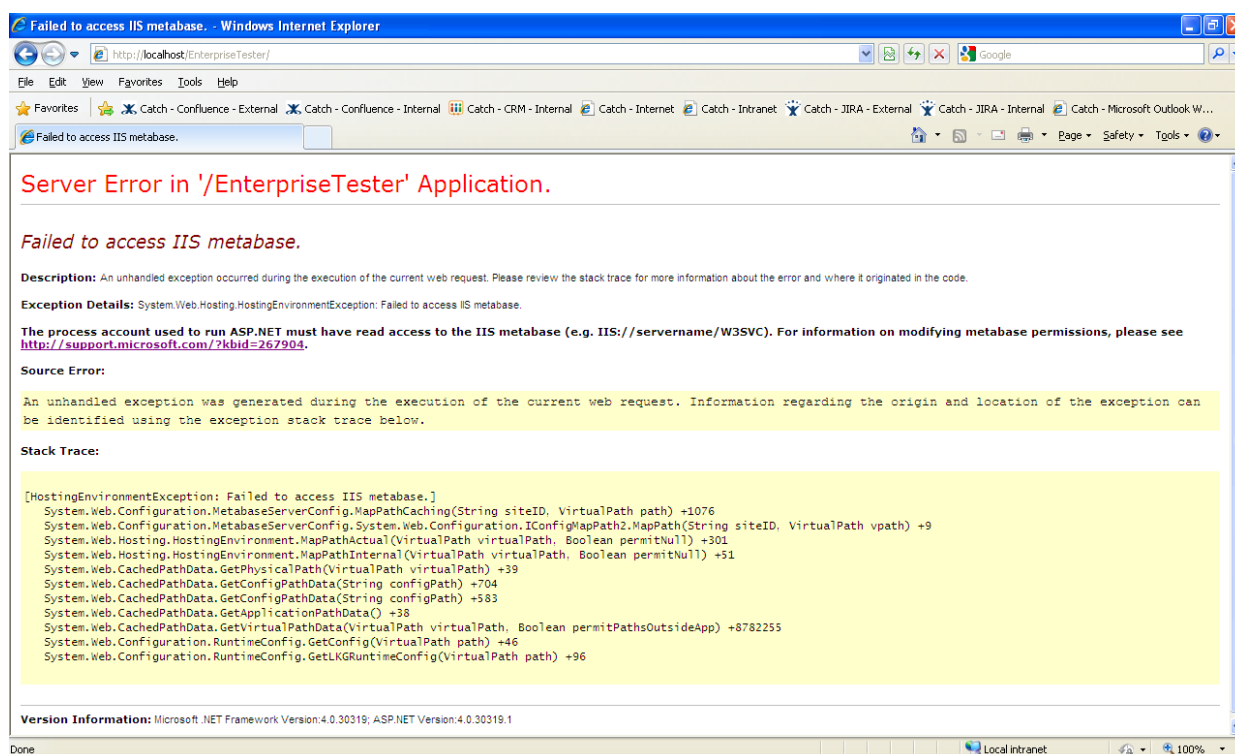
The task will attempt to update the web.config file, which on your server will be in C:\Program Files (x86)\Catch Limited\Enterprise Tester\Web\ - on windows server 2008 r2 and windows 7, Program Files is now a protected folder, so in some cases, depending on UAC settings, this can cause security exceptions during installation.

The work-around is to launch the installer as an Administrator. To do so:

- Go to Start -> All Programs -> Accessories, right click on "Command Prompt" and select "Run As Administrator". You should now see a command prompt window i.e. C:\windows\system32\
- Change to the directory where you have the Enterprise Tester .msi file, so in my case the install file is in "c:\downloads" so I would type "cd c:\downloads\" (without quotes). The command prompt should now have changed to the new folder.
- Run the following command "msiexec -i EnterpriseTester-2.4.1282-Setup.msi", where "EnterpriseTester-2.4.1282-Setup.msi" is the name of the installation file you have downloaded from the Catch website.

At this point the installer should launch with elevated permissions, and the PostInstallTask should not cause a security exception during installation.

6.12.5 Failed to access IIS Metabase error after installing Enterprise Tester



That error suggests that the process account used to run ASP.Net does not have read access to the IIS metabase (e.g. [IIS://localhost/W3SVC](http://localhost/W3SVC)).

Normally, running either of the following from the command line should fix the issue:

```
C:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis -ga ASPNET
```

or

```
C:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis -i
```

Another possibility is that the error is caused by the virus checkers installed on the machine. Sometimes, virus checkers can prevent `aspnet_regiis` from completing successfully. Disabling the virus checker, before attempting to run the tool may be a workaround.

Other workarounds include:

- *Uninstall IIS/Reinstall IIS. Then try `aspnet_regiis -i` again.

- * Uninstall the .Net Framework, Uninstall IIS, Reinstall IIS, Reinstall the .Net Framework.

- * Following these steps:

1. Unregister all the versions of ASP.NET with command "C:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis -ua".
2. Delete the ASPNET account from "Local Users and Group – Users".
3. Then register ASP.NET v4.0.30319 with IIS using "C:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis -i".
4. Give permissions to the ASPNET account using "C:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis -ga machinename\ASPNET".
5. Reset the IIS and that resolved the issue for ASP.NET v4.0.30319.
6. "C:\WINDOWS\Microsoft.NET\Framework\v1.1.4322\aspnet_regiis -i".
7. Reset the IIS.

* Following these steps:

1. Go to IIS Admin
2. Right Click on Default Web Site
3. Go to Operator Tab
4. Add the ASPNET user to the list

Additional references:

<http://social.msdn.microsoft.com/forums/en-US/asmxandxml/thread/162f85cf-0621-4bab-b4b8-583a4d5d4aa5/>
<http://forums.iis.net/t/1148195.aspx?PageIndex=1>
<http://forums.asp.net/p/1064973/3425046.aspx>
<http://professionalaspnet.com/archive/2008/04/18/How-to-Deal-with-the- 2700 Failed-to-Access-IIS-Metabase 2700 -Error.aspx>