

Vermont Oxford Network – eNICQ 6 Documentation

# eNICQ 6 Web Services Connectivity Guide

Release 1.2

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# eNICQ 6 Web Services Connectivity Guide

Welcome to the eNICQ 6 Web Services Connectivity Guide. Testing software has been developed to assist in troubleshooting internet connectivity issues installing or running eNICQ 6 at your center.

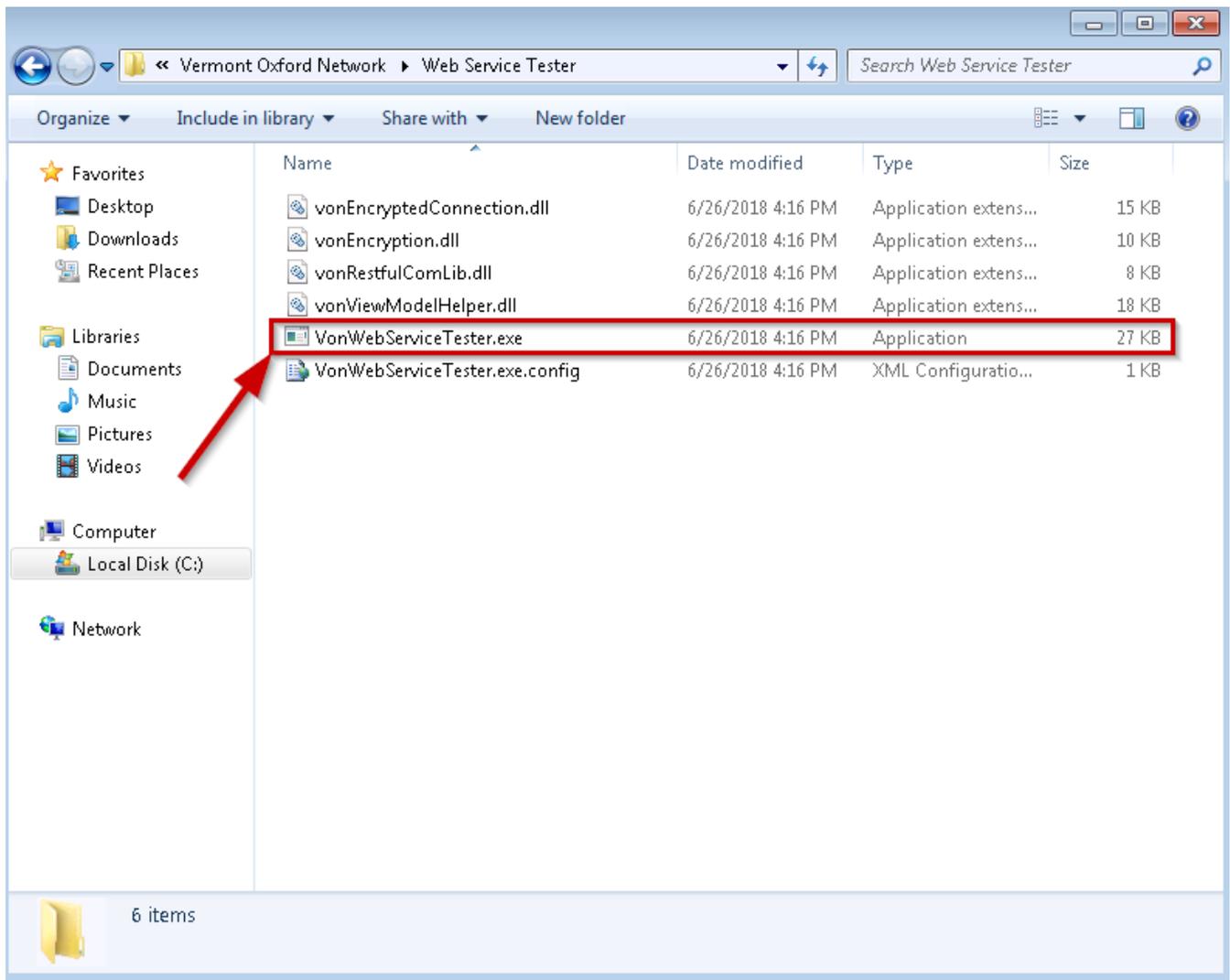
You may have been asked to run this software as a compatibility test due to difficulties connecting to our RESTful API web services. The Web Services Tester allows you to force all the relevant web service calls without running the eNICQ 6 application. Additional topics covered include proxy server integration and setting up packet captures.

## **This Guide will explain...**

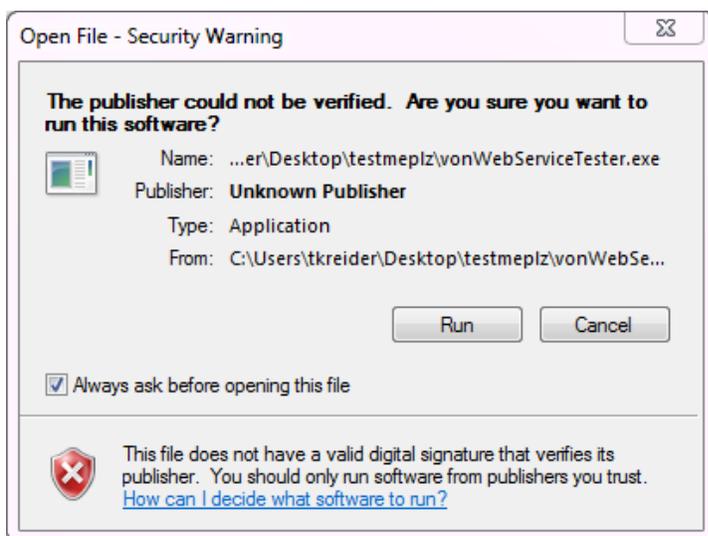
1. How to use the Web Services Tester
2. How to configure for proxy server
3. How to arrange a packet capture session

## **Part One: How to use the Web Services Tester**

1. Download the vonWebServiceTester.msi file to the workstation where eNICQ 6 is likely to be installed, or where eNICQ 5 is currently installed. VON support staff will provide you with a means of download.
2. Run the MSI. There is no installation wizard. It will just save all the files to C:\Program Files (x86)\Vermont Oxford Network\Web Service Tester (or C:\Program Files\Vermont Oxford Network\Web Service Tester if you are using a 32 bit computer).
3. Go to C:\Program Files (x86)\Vermont Oxford Network\Web Service Tester (or C:\Program Files\Vermont Oxford Network\Web Service Tester) and double-click on the VonWebServiceTester.exe file (if you have Windows set to hide common extensions it will just be called VonWebServiceTester).



4. Click "Run" if you receive a security warning. This test application lacks a digital signature.



5. When it opens you should see this screen:

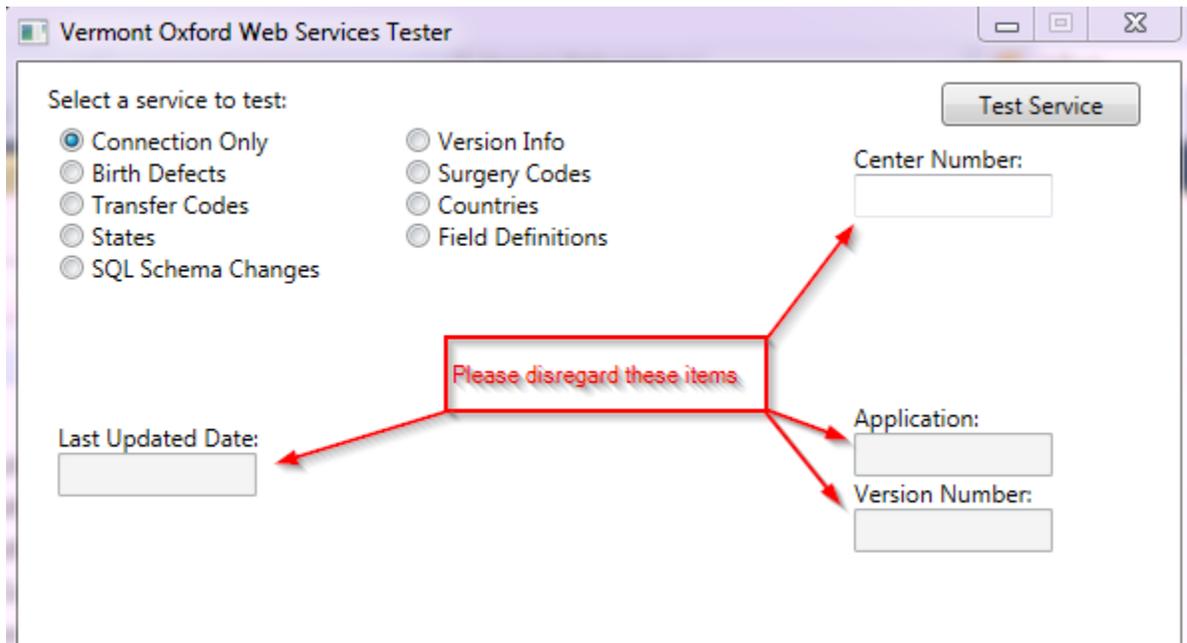
The screenshot shows a window titled "Vermont Oxford Web Services Tester". The interface includes a "Test Service" button at the top right. Below it, there are two columns of radio button options under the heading "Select a service to test:". The first column contains "Connection Only" (selected), "Birth Defects", "Transfer Codes", "States", and "SQL Schema Changes". The second column contains "Version Info", "Surgery Codes", "Countries", and "Field Definitions". To the right of these options are three input fields: "Center Number:", "Application:", and "Version Number:". Below these is a "Last Updated Date:" input field. Further down, under "Select proxy (if any):", there are four radio button options: "No Proxy Server" (selected), "Anonymous", "Windows Authentication", and "Custom Credentials". There is also a checkbox for "Use eNICQ Connection File". At the bottom, there is a "Results:" label, two buttons: "Copy Results to Clipboard" and "Clear Results", and a large empty text area for displaying results.

6. At the bottom of the screen, begin by confirming that you are set to “No Proxy Server” so that we can test your baseline connectivity.

Select proxy (if any):

- No Proxy Server
- Anonymous
- Windows Authentication
- Custom Credentials

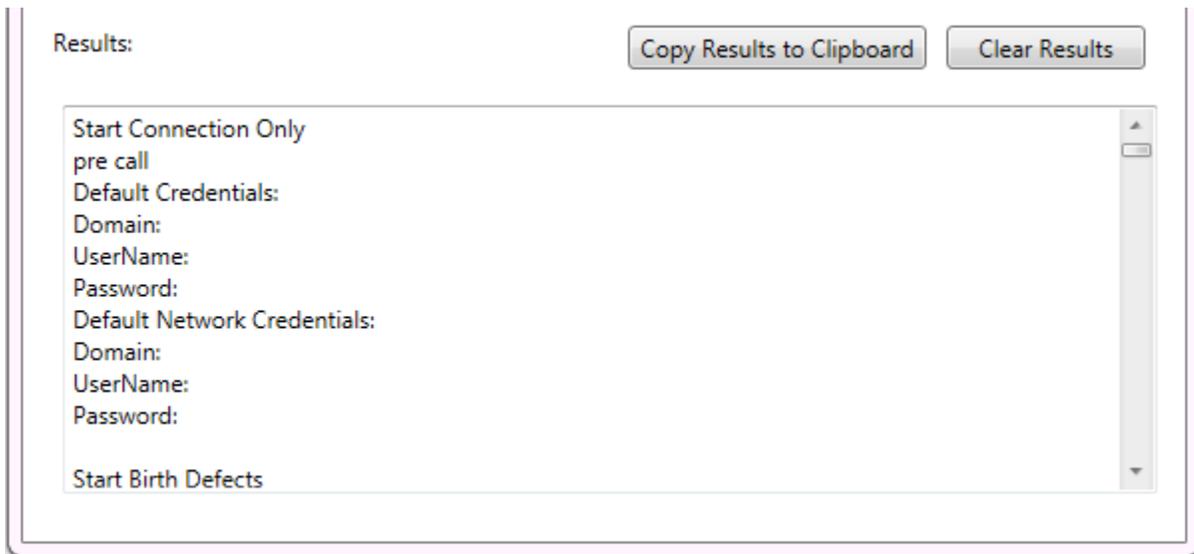
7. At the top of the window are a number of items that are OK to ignore. These are optional test parameters that are unnecessary in most cases. The image below shows which items you can disregard.



8. There are nine web services that this tool is able to test. Please click each one in order to test.
- Click "Connection Only", then click "Test Service"
  - Click "Birth Defects", then click "Test Service"
  - Click "Transfer Codes", then click "Test Service"
  - Click "States", then click "Test Service"
  - Click "SQL Schema Changes", then click "Test Service"
  - Click "Version Info", then click "Test Service"
  - Click "Surgery Codes", then click "Test Service"
  - Click "Countries", then click "Test Service"
  - Click "Field Definitions", then click "Test Service"

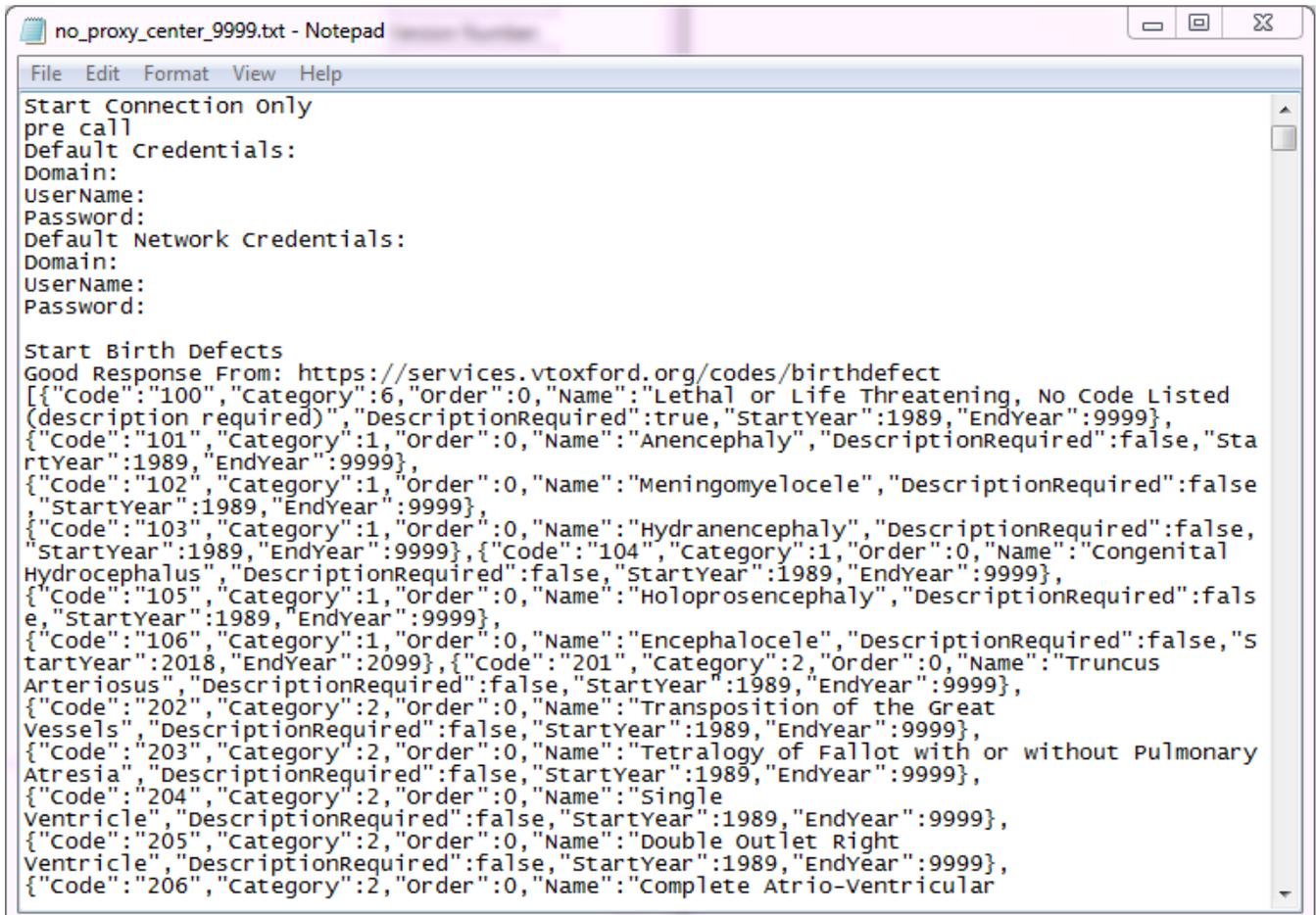
Note: Please do these tests in the exact order listed above. It will make it much easier for our team to review your results.

9. At the bottom of the screen, you should now see a series of responses showing in the “Results” panel.



10. Click “Copy Results to Clipboard”.

11. Open a plain text editor such as Notepad. Paste the full results set into your plain text editor.



12. Save the file as “no\_proxy\_center\_[your center number].txt”. (Please add your center number to the file name where indicated.)
13. Click “Clear Results” if you have finished copying and pasting your results set.
14. Please send your results file to [support@vtxford.org](mailto:support@vtxford.org) with your center number or support ticket number in the email subject.

## Part Two: How to configure for proxy server

*Note: Please skip this section if you do not use a proxy server.*

1. Click “Clear Results” if results panel still contains text.
2. If you are using a proxy server and received error messages on your test results, please repeat the test with your proxy credentials entered. Select the type of credentials needed to connect and then enter in the required information. The fields for the proxy information will appear on the right:

Select proxy (if any):

- No Proxy Server
- Anonymous
- Windows Authentication
- Custom Credentials

Use eNICQ Connection File

Enter custom proxy credentials:

Proxy Address:

Proxy User Name:

Proxy Password:

Please use either Windows Authentication or Custom Credentials if possible. Anonymous connection is not recommended.

Please leave “Use eNICQ Connection File” unchecked for now.

3. Please repeat all tests with your proxy server configured, as per item number 8 above. Please copy all results to another text document, noting what proxy settings you are using.
4. Save the file as “with\_proxy\_center\_[your center number].txt”. (Please add your center number to the file name where indicated.)
5. Please return your results (whether they are successful or not) to [support@vtxford.org](mailto:support@vtxford.org) for our staff to review.

6. If you believe that your proxy server is operable and available, but you cannot get eNICQ 6, its installer, or the web services tester to recognize your proxy server consistently, please see Appendix A of this document for information on editing the config files to force the connection.
  - a. The work-around in Appendix A is particularly recommended if you notice that you can connect to VON services intermittently, or only when your web browser is also running. In that scenario, your proxy server is clearly working but the application is hesitating to use it.

### **Part Three: How to arrange a packet capture session**

*Note: A final troubleshooting tool for web service connectivity is the packet capture. Please note that any packet capture activity done individually by your IT team will not be as effective in identifying the connection failure as a joint packet capture effort by both of our security teams together. Capture logs from both sides are usually necessary, as is a direct exchange of ideas between our security teams.*

1. Notify VON support that you would like to start a packet capture. You can do this through an open support ticket, or start a new support ticket by emailing [support@vtoxford.org](mailto:support@vtoxford.org). Please include your center number in any contacts with our support team.
2. Provide VON support with the IP address or range of IP addresses that your connection attempt will originate from and ask us to begin capture on our side.
3. Provide your security team with the IP address for services.vtoxford.org and ask them to begin capture on their side. The IP address is subject to change but can be provided by VON support on request.
4. Confirm that capture has started on both sides with the respective teams.
5. Perform the operation that generated your original service connectivity failure. It may have been a failure to run the eNICQ 6 installer, or a failure to run eNICQ 6 itself. Run the installer or application until you see the error message that has been identified with the connection failure.
6. Next, perform the tests outlined in Part 1 of this document, using the Web Service Tester tool and following the instructions in order. If you are using a proxy server, you may also want to perform the tests in Part 2 and possibly the work-around in Appendix A.
7. Return your packet capture results to VON support and ask for the corresponding log results from the VON security team.
8. At this point, both of our security teams should have both sets of logs. Each security team should share their observations or conclusions with the other security team. Often, our security teams may have different interpretations of the results. Each team should state what they think the results mean.
9. If your security team has found the cause of the connectivity problem on your side and has an idea on how to fix it, great, please pursue whatever corrections are necessary and repeat the tests.
10. If your security team has not found the cause of the connectivity problem on your side or believes that the connectivity problem is happening on the VON side, our next suggestion is to arrange a joint conference call between our security teams to repeat the tests live.
  - a. Contact VON support and request a live conference call between our security teams to repeat the tests and discuss different interpretations of results.

- b. Screen sharing, immediate sharing of results, sharing of informal thoughts and ideas, these are all possible during a live conference call. The teams can brainstorm and address any differences in opinion they may have about where the fail point may be.
- c. The live packet capture call is the highest level of support that VON can offer on web service connectivity problems. VON cannot fix connectivity issues if they are happening on your side of the connection, but we can help you to identify them.

## Appendix A: Forcing a Proxy Server Connection

*Note: It is possible to edit an application's config file to force it to use your proxy server. This can be done for any of our applications that use the RESTful API web services including*

- The eNICQ 6 Application
- The eNICQ 6 Web Services Tester

*This appendix will show you how to find and edit the connection files for each of the above systems.*

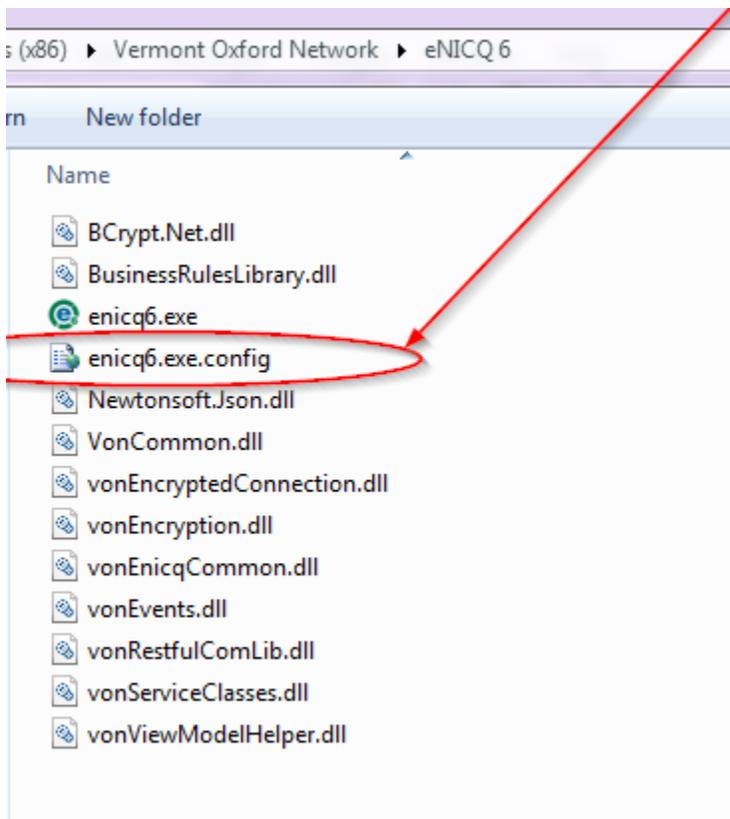
*This solution is not intended for use with an anonymous proxy connection.*

*This solution is not helpful (and will break connectivity) if no proxy server is in use.*

*Any solution found through testing (using the tester) will have to also be applied to the application.*

## The eNICQ 6 Application

1. In the application directory (typically C:\Program Files (x86)\Vermont Oxford Network\eNICQ 6), look for the file **enicq6.exe.config**:



2. Open the config file in a text editor. Copy the following three lines:

```
<system.net>  
  
  <defaultProxy useDefaultCredentials="true"/>  
  
</system.net>
```

3. You will need to paste the three lines to the bottom, just before the </configuration> end tag:

```
...  
<system.web>  
  <membership defaultProvider="ClientAuthenticationMembershipProvider">  
    <providers>  
      <add name="ClientAuthenticationMembershipProvider" type="System.We  
    </providers>  
  </membership>  
  <roleManager defaultProvider="ClientRoleProvider" enabled="true">  
    <providers>  
      <add name="ClientRoleProvider" type="System.Web.ClientServices.Pro  
    </providers>  
  </roleManager>  
</system.web>  
<system.net>  
  <defaultProxy useDefaultCredentials="true" />  
</system.net>  
</configuration>
```



4. Save the file and please repeat any tests using the application to connect to our web services.

### The eNICQ 6 Web Services Tester

1. Open the working folder for the Web Service Tester. This will be the folder you extracted its files to, not the .zip file that it is distributed in. Look for the file **vonWebServiceTester.exe.config**:

Name	Date modified	Type	Size
BCrypt.Net.dll	5/1/2018 4:34 PM	Application extens...	15 KB
BCrypt.Net.pdb	5/1/2018 4:34 PM	PDB File	24 KB
BCrypt.Net.xml	5/1/2018 4:34 PM	XML Document	12 KB
enicq.Connection	5/1/2018 4:34 PM	CONNECTION File	1 KB
vonEncryptedConnection.dll	5/1/2018 4:34 PM	Application extens...	15 KB
vonEncryptedConnection.pdb	5/1/2018 4:34 PM	PDB File	30 KB
vonEncryption.dll	5/1/2018 4:34 PM	Application extens...	8 KB
vonEncryption.pdb	5/1/2018 4:34 PM	PDB File	22 KB
vonRestfulComLib.dll	5/1/2018 4:34 PM	Application extens...	7 KB
vonRestfulComLib.pdb	5/1/2018 4:34 PM	PDB File	14 KB
vonViewModelHelper.dll	5/1/2018 4:34 PM	Application extens...	14 KB
vonViewModelHelper.pdb	5/1/2018 4:34 PM	PDB File	36 KB
vonWebServiceTester.exe	5/1/2018 4:34 PM	Application	27 KB
vonWebServiceTester.exe.config	5/1/2018 4:34 PM	XML Configuratio...	1 KB
vonWebServiceTester.pdb	5/1/2018 4:34 PM	PDB File	48 KB

- Open the config file in a text editor. Copy the following three lines:

```
<system.net>
```

```
  <defaultProxy useDefaultCredentials="true"/>
```

```
</system.net>
```

- You will need to paste the three lines to the bottom, just before the </configuration> end tag:

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <startup>
    <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.5.2"/>
  </startup>
  <appSettings>
    <add key="VONInternal" value="false"/>
  </appSettings>
  <system.net>
    <defaultProxy useDefaultCredentials="true"/>
  </system.net>
</configuration>
```

Add the highlighted text here, just before the </configuration> end tag.

- Save the file and please repeat any tests using the application to connect to our web services.

## Appendix B: List of VON Services URL's

*Note: The following is the current complete list of web services used by the eNICQ application.*

<https://services.vtoxford.org/codes/FieldRelationship>  
<https://services.vtoxford.org/center/installtype>  
<https://services.vtoxford.org/center/logintype>  
<https://services.vtoxford.org/codes/InfantError>  
<https://services.vtoxford.org/codes/ApplicationError>  
<https://services.vtoxford.org/codes/BacterialPathogen>  
<https://services.vtoxford.org/codes/CongenitalInfection>  
<https://services.vtoxford.org/codes/FieldValues>  
<https://services.vtoxford.org/center/center>  
<https://services.vtoxford.org/sqlschemaservice/SqlSchemaChange>  
<https://services.vtoxford.org/codes/transfer>  
<https://services.vtoxford.org/codes/Surgery>  
<https://services.vtoxford.org/codes/BirthDefect>  
<https://services.vtoxford.org/codes/state>  
<https://services.vtoxford.org/codes/country>  
<https://services.vtoxford.org/Version/Version>  
<https://services.vtoxford.org/codes/field>  
<https://services.vtoxford.org/Record/Enicq>  
<https://services.vtoxford.org/user/user>  
<https://services.vtoxford.org/Error>

The IP address for **services.vtoxford.org** is available on request.

## Appendix C: Saving edits to your connection file

*Note: While the Web Service Tester allows you to test different proxy server settings, it will not currently allow you to save these edits to your connection file. This can be accomplished by using the Connection File Editor, a separate utility available on our website. Please contact our support team if you are unable to locate this utility or have questions about its operation.*

**End of Document**