

Profiles RNS patch to address October 2020 changes to NIH/NLM E-utilities API

October 27, 2020

In early October 2020, the NIH/NLM made 2 changes to their E-utilities API, Firstly, they updated their SSL security to TLS1.2; and, secondly, they changed their API rate limits. These changes prevent Profiles RNS users from searching for, or importing PubMed articles while editing their profiles.

Profiles RNS Versions 2.11.0, 2.11.1, 2.12.0 and 3.0.0 can be patched to restore this functionality. Earlier versions of Profiles use .Net 3.5 which does not provide support TLS1.2 certificates, because of this, no patch is available for these versions.

To enable support for TLS1.2 certificates, an extra line must be added to the HttpPost function of /Profiles/Edit/Modules/CustomEditAuthorInAuthorship/CustomEditAuthorInAuthorship.ascx. This function should be:

```
public string HttpPost(string myUri, string myXml, string contentType)
{
    Uri uri = new Uri(myUri);
    ServicePointManager.SecurityProtocol = SecurityProtocolType.Tls12;
    WebRequest myRequest = WebRequest.Create(uri);
    myRequest.ContentType = contentType;
    //myRequest.ContentType = "application/x-www-form-urlencoded";
    myRequest.Method = "POST";

    byte[] bytes = Encoding.ASCII.GetBytes(myXml);
    Stream os = null;

    string err = null;
    try
    { // send the Post
        myRequest.ContentLength = bytes.Length; //Count bytes to send
        os = myRequest.GetRequestStream();
        os.Write(bytes, 0, bytes.Length); //Send it
    }
    catch (WebException ex)
    {
        err = "Input=" + ex.Message;
    }
    finally
    {
        if (os != null)
        { os.Close(); }
    }

    try
    { // get the response
        WebResponse myResponse = myRequest.GetResponse();
        if (myResponse == null)
        { return null; }
        StreamReader sr = new StreamReader(myResponse.GetResponseStream());
        return sr.ReadToEnd().Trim();
    }
    catch (WebException ex)
    {
        err = "Output=" + ex.Message;
    }
    return err;
} // end HttpPost
```

The extra line is the second line:

```
ServicePointManager.SecurityProtocol = SecurityProtocolType.Tls12;
```

To support the new rate limit, a 1 second sleep must be added between the two calls to the eutils API. The following line:

```
System.Threading.Thread.Sleep(1000);
```

should be added before line 588 of CustomEditAuthorInAuthorship.ascx.cs (the line before the URI is set for the second API call in btnPubMedSearch_OnClick). Please note, line numbers may be slightly different in different versions of profiles.