



International Postal System

Web Tracking API Installation Guide

version 2017 and later

Contact

Postal Technology Centre - Universal Postal Union Weltpoststrasse 4 3000 Bern 15 - Switzerland

Phone: +41 31 350 31 11 / Fax: +41 31 352 43 23

Email: ptc.support@upu.int



This documentation and its associated software contain proprietary information of the Universal Postal Union (UPU); it is provided under a specific agreement with Postal Enterprises containing restrictions on use and disclosure and is also protected by copyright law. This document and its associated software are protected by international copyright law. No portion of this document may be copied without express written permission from the Postal Technology Centre (PTC). Reverse engineering of the software is prohibited. References in this publication to UPU products, applications, or services do not imply that the UPU intends to or can make these, or parts of, available in all countries or to all UPU members.

Any reference to a UPU product, application, or service is not intended to state or imply that only UPU's products, applications, or services may be used. Any functionally equivalent product, application, or service that does not infringe any of the UPU's intellectual property rights or other legally protected rights may be used instead. Evaluation and verification of operation in conjunction with other products, applications, or services, except those expressly designated by the UPU, are the User's responsibility. The information in this document is subject to change. Formal notification of changes and periodic updates of this document shall be forwarded to Postal Enterprises.

International Financial System, International Postal System, Customs Declaration System and POST*Net are trademarks or trade names of the UPU. Windows, Windows Explorer, Windows NT Server, Windows NT Workstation, SQL Server, and SQL Enterprise Manager are trademarks of Microsoft Corporation.

Copyright © 1996-2018 Universal Postal Union. All rights reserved.



Table of contents

About this document	4
Intended audience	4
How to use this manual	4
Installing the IPS Web Tracking API	5
Overview of the Web Tracking API	5
Installing the Web Tracking API	5
Troubleshooting the API installation	14

About this document

This guide explains how to install the Web Tracking API for IPS version 2017.

Intended audience

The guide is intended for use by IPS System Administrators and members of the UPU's Postal Technology Centre who are responsible for installing the Web Tracking API software.

Installing the Web Tracking API requires familiarity with Windows operating systems, Internet Information Services and SQL Server.

How to use this manual

This manual explains how to install the IPS Web Tracking API. Details of how to use the API can be found in the [Web Tracking Guide](#) or on the API documentation portal.

You may not copy, rewrite or redistribute this document in any form. To do so is a violation of international copyright laws. However, the PTC welcomes your input. Please email your questions, comments and suggestions to ptc.support@upu.int.

Installing the IPS Web Tracking API

Overview of the Web Tracking API

The Web Tracking API is a web service that uses the REST approach to expose IPS tracking functionality via a simple HTTP call, which returns a list of mail item events. It can be used from any platform capable of performing HTTP calls, making it ideal for developers wishing to integrate IPS tracking functionality in a mobile environment.

The API queries the same database as the Web Tracking public web site. It also filters the events using the same configuration as the Web Tracking public web site (for more information on how to configure which events are tracked, see "Using the IPS Web Tracking administration web site" on page 1).

The response can be in either JSON or XML format, so it can be handled without any additional platform dependencies.

Installing the Web Tracking API

Prerequisites


Before you can install the Web Tracking API, you must:

- install IIS 7.0 on the server; you can do this using the **Add/Remove Components** feature of the Windows Control Panel

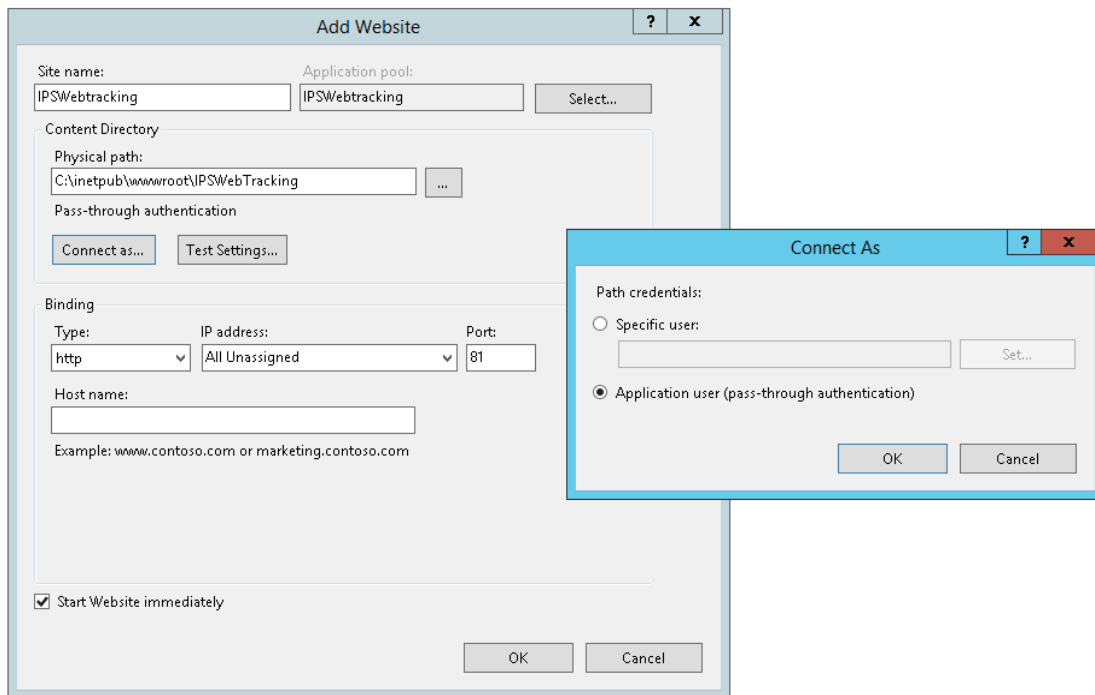
Install the database

Step	Action
1	Prepare the IPS database server for replication.
2	If the IPS database is on a separate server to the Web Tracking database, establish a connection between the two servers.
3	Run the setup program and install the Web Tracking database on the Web Tracking database server. The setup program also: <ul style="list-style-type: none">• synchronizes the IPS and Web Tracking databases• sets up replication

Install the web application

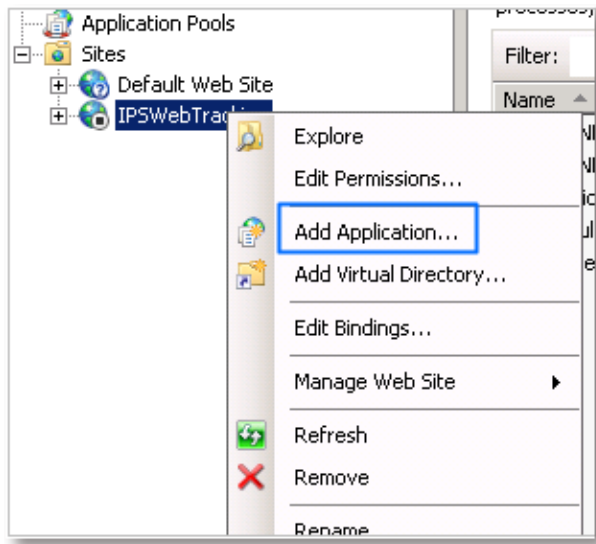
 **Note:** In the following installation procedure, folder names, virtual folder locations, website and web application names are chosen for demonstration purposes only. You are free to use another naming convention.

1. Open IIS 7.0. Right-click on **Sites** and select **Add Web Site...**
2. Specify the web site details as shown below.

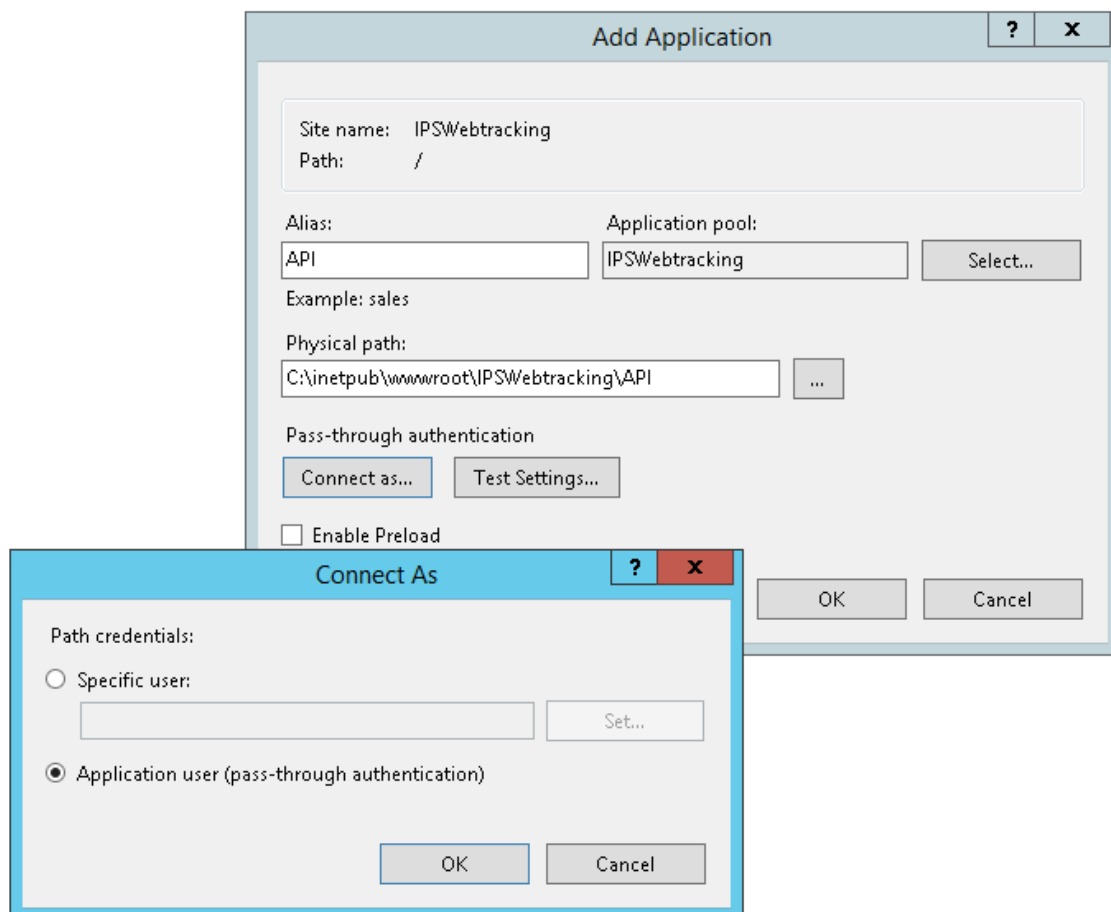


In this example, the virtual folder is in a local folder, so **Path credentials** can be set to **Application user (pass-through authentication)**. **Path credentials** are typically set to a specific user when the virtual folder is on a shared network resource in UNC format, i.e. \\com-putername\sharename\path\.

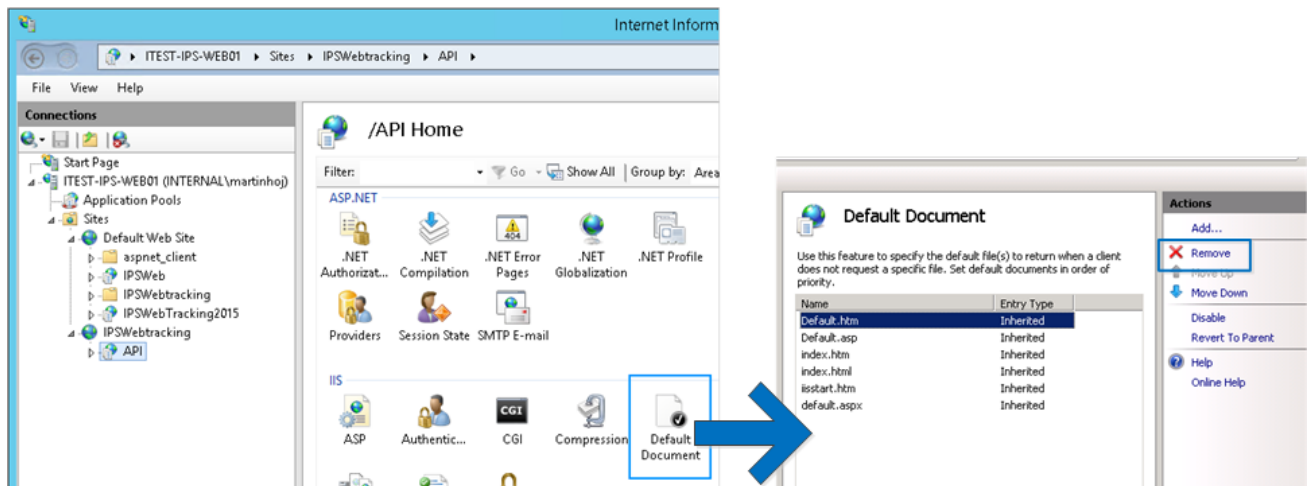
3. Click **OK** to close the windows and return to IIS.
4. Right-click on the **IPSWebTracking** website and click **Add Application...**



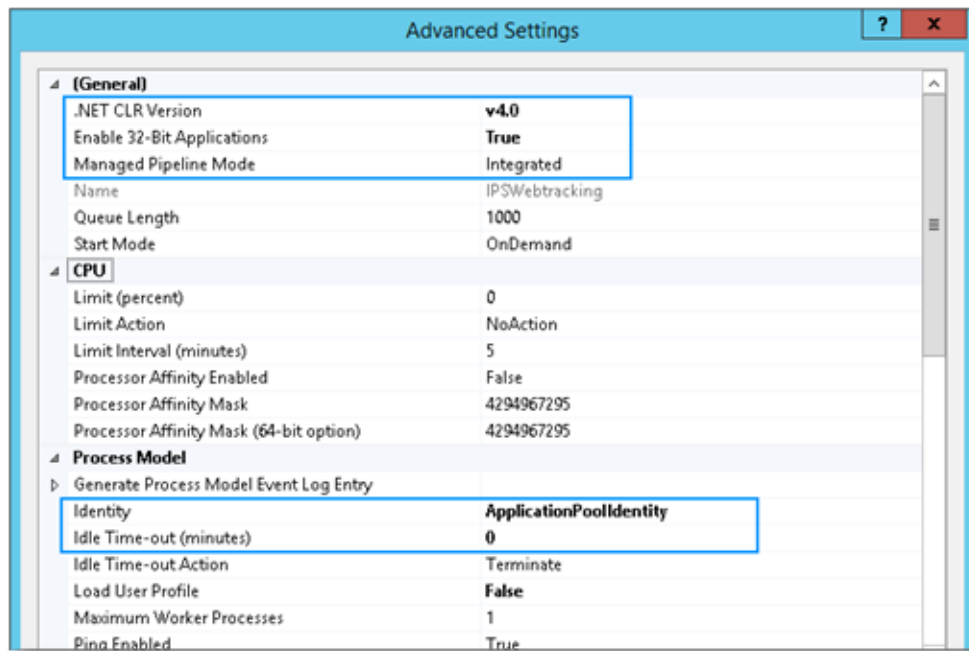
5. Specify the application details as shown below.



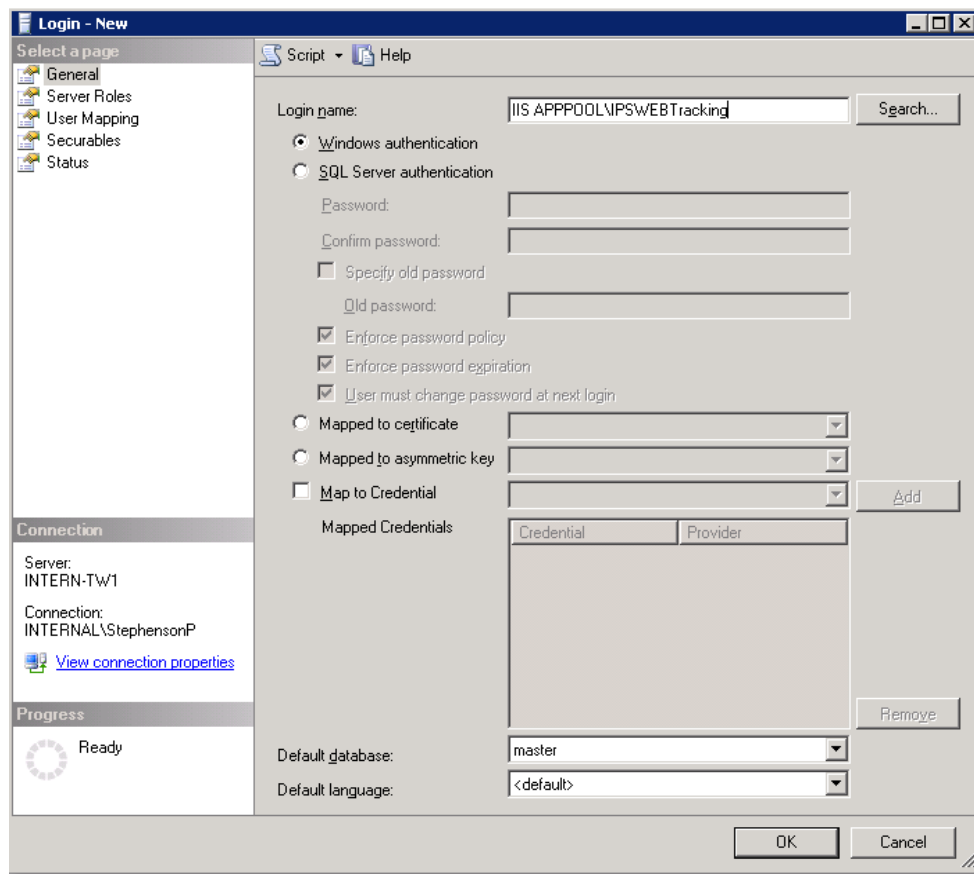
6. Click **OK** to close the windows.
7. Remove all default documents from the API Application node by selecting the **API** node, then **Default Document**. Remove all the listed items.



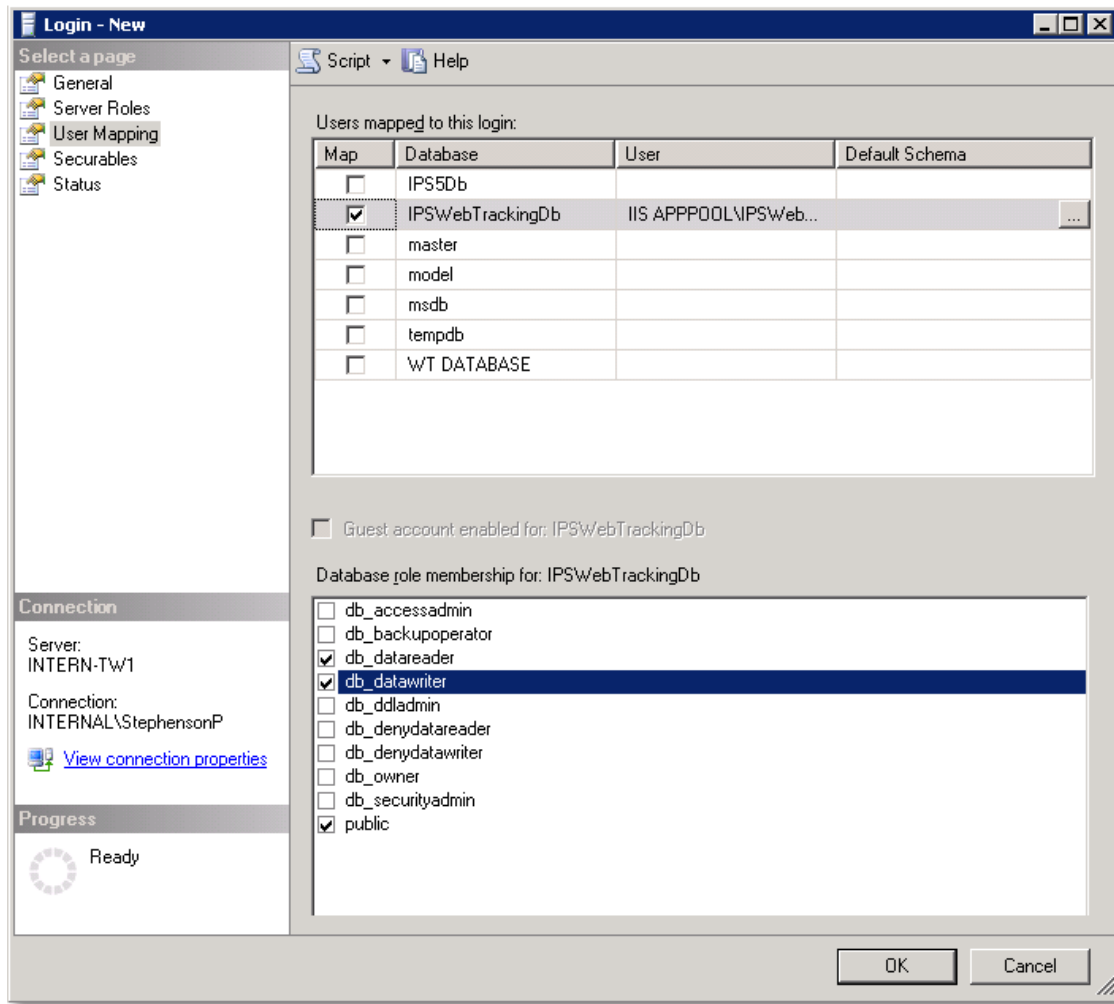
8. Select **Application Pools**, then select the **IPSWebTracking** pool (created automatically by IIS when you created the new web site). Click **Advanced Settings** and enter the following values.



9. Copy the entire Web Tracking API distribution to the application's Virtual Directory (in this example, C:\inetpub\wwwroot\IPSWebTracking\API).
10. The IIS Application Pool user is the one used to query the Web Tracking database, so you need to create a corresponding user in SQL Server Management Studio. Under **Security**, right-click on **Logins** and select **New Login...**. Enter details of a new user with the IIS Application Pool user name, e.g. **IIS APPPOOL\IPSWebTracking**.



11. In the **Server Roles** section, check **Public**.
12. In the **User Mapping** section, check the following options.




13. Run this script on the database:

```
CREATE ROLE [IPSWebTrackingAPIRole]
AUTHORIZATION [dbo];

GRANT EXECUTE ON dbo.SP_GETWEB_MAILITM_EVENTS TO [IPSWebTrackingAPIRole]
GO

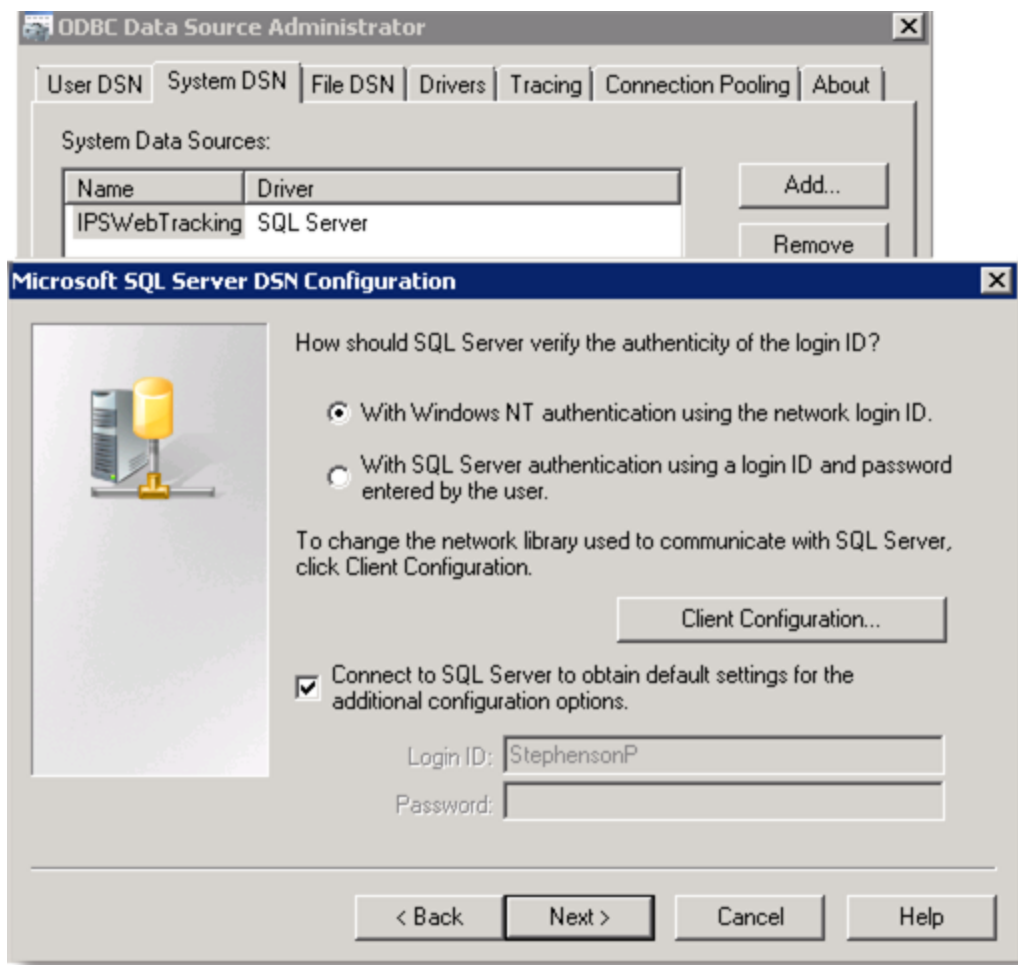
sp_addrolemember 'IPSWebTrackingAPIRole', 'IIS APPPOOL\IPSWebTracking'
GO
```

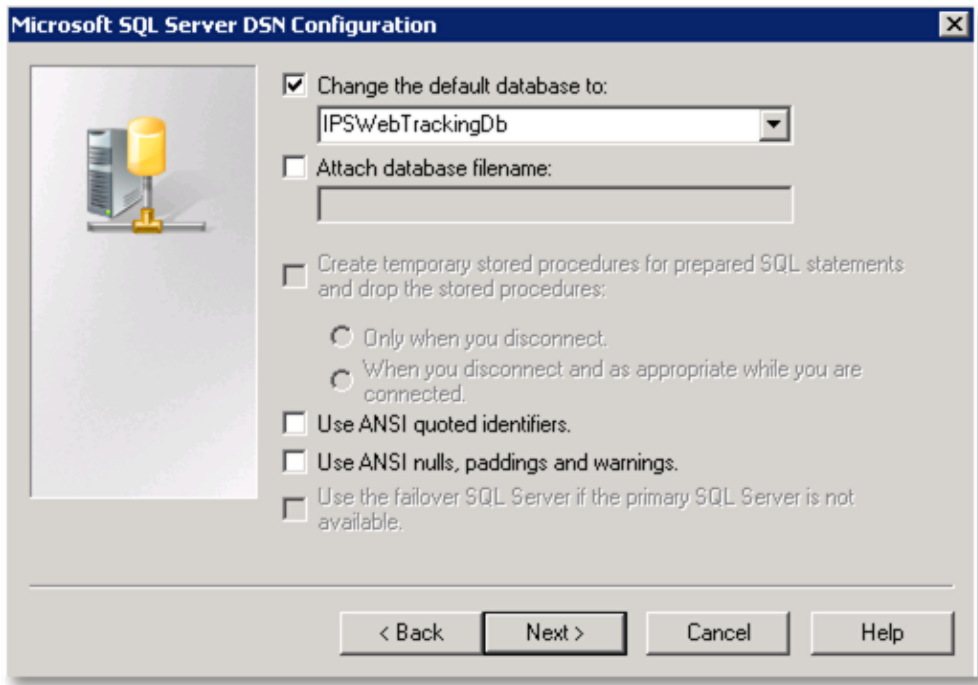
This will create a role for the IPS Web Tracking application (similar to IPSUsers and IPSAdmin). SP_GETWEB_MAILITM_EVENTS is currently the only stored procedure called by the Web Tracking API. Therefore, for security reasons, it is the only one with *Execute* permissions.

14. Check that the ODBC data source is properly configured in the API's `web.config` file (located in the API virtual folder in IIS) and the ODBC Data Source Administrator, as follows:
 - a. Open the ODBC Data Source Administrator.  **Note:** You need to open the `odbcad32.exe` instance that corresponds to your server architecture.

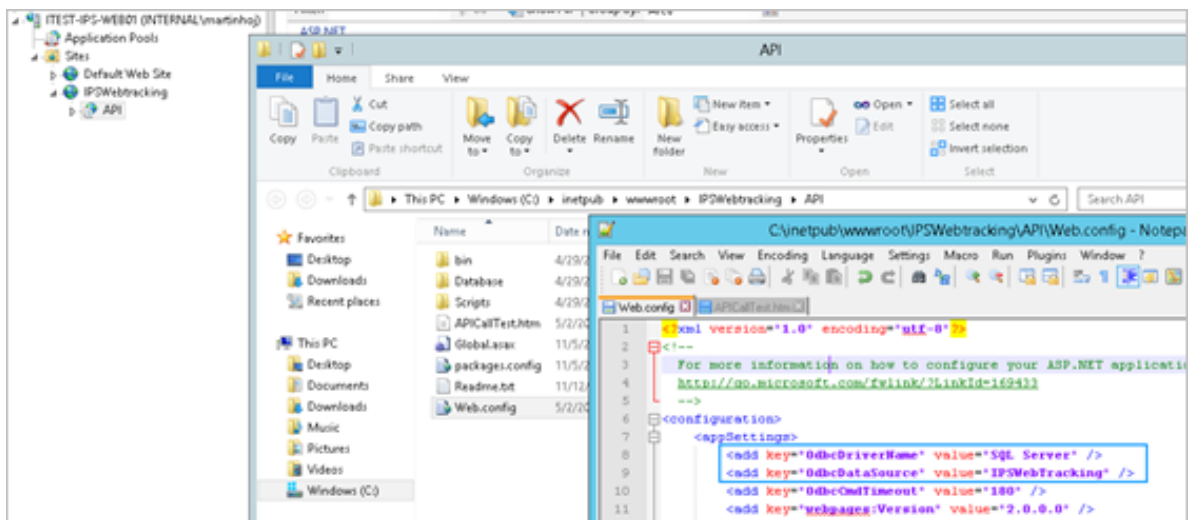
Platform	odbcad32.exe location
32 bits	C:\Windows\System32
64 bits	C:\Windows\SysWOW64

- b. Select **IPSWebTracking** and click **Configure**. Click **Next** to advance through the screens. Verify that the ODBC data source is using Windows authentication and pointing to the correct database in the relevant screens. Click **Finish**.

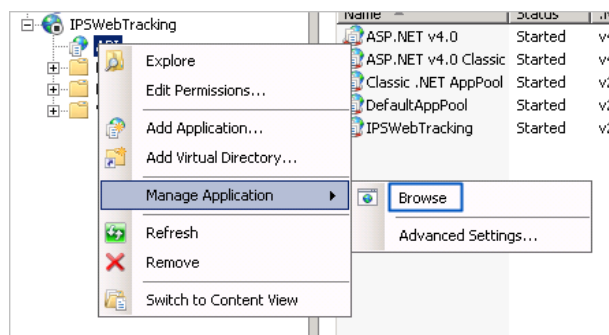




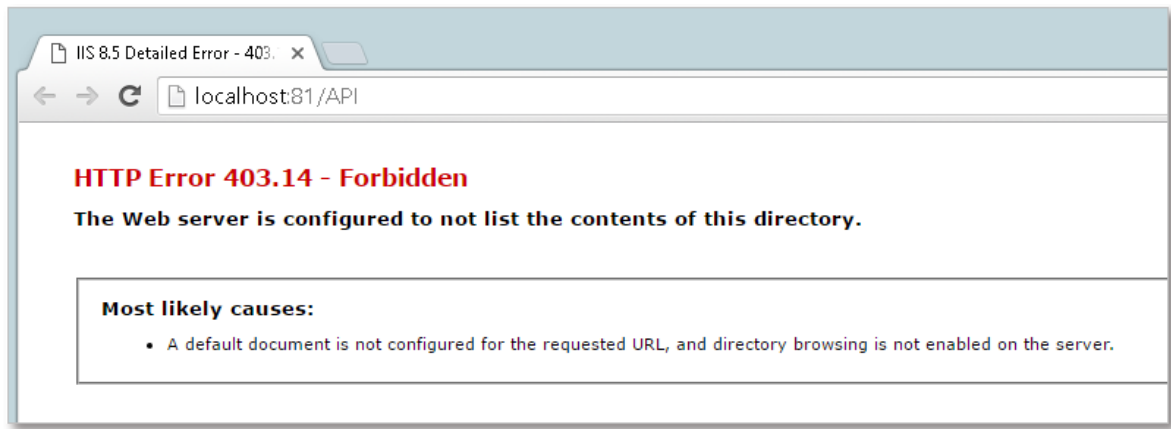
- c. Verify that the data source specified in the API's `web.config` file matches the definition in the ODBC Data Source Administrator (in this example this is **IPSWebTracking**, but the data source name may differ from one installation to the next).



15. Test whether the Web Tracking API is working, by right-clicking on **API**, then selecting **Manage Application > Browse**.

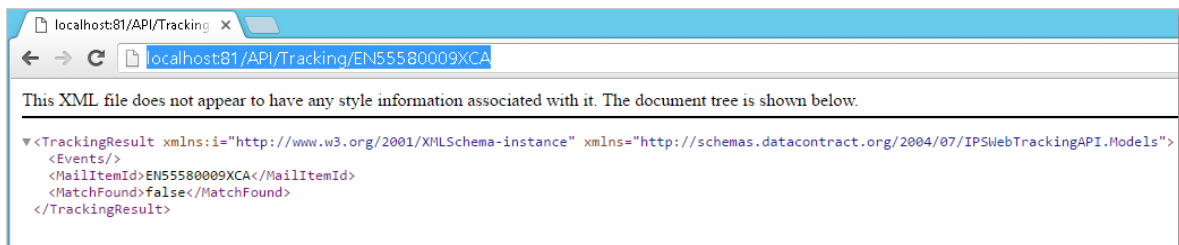


16. A new browser opens displaying an error.

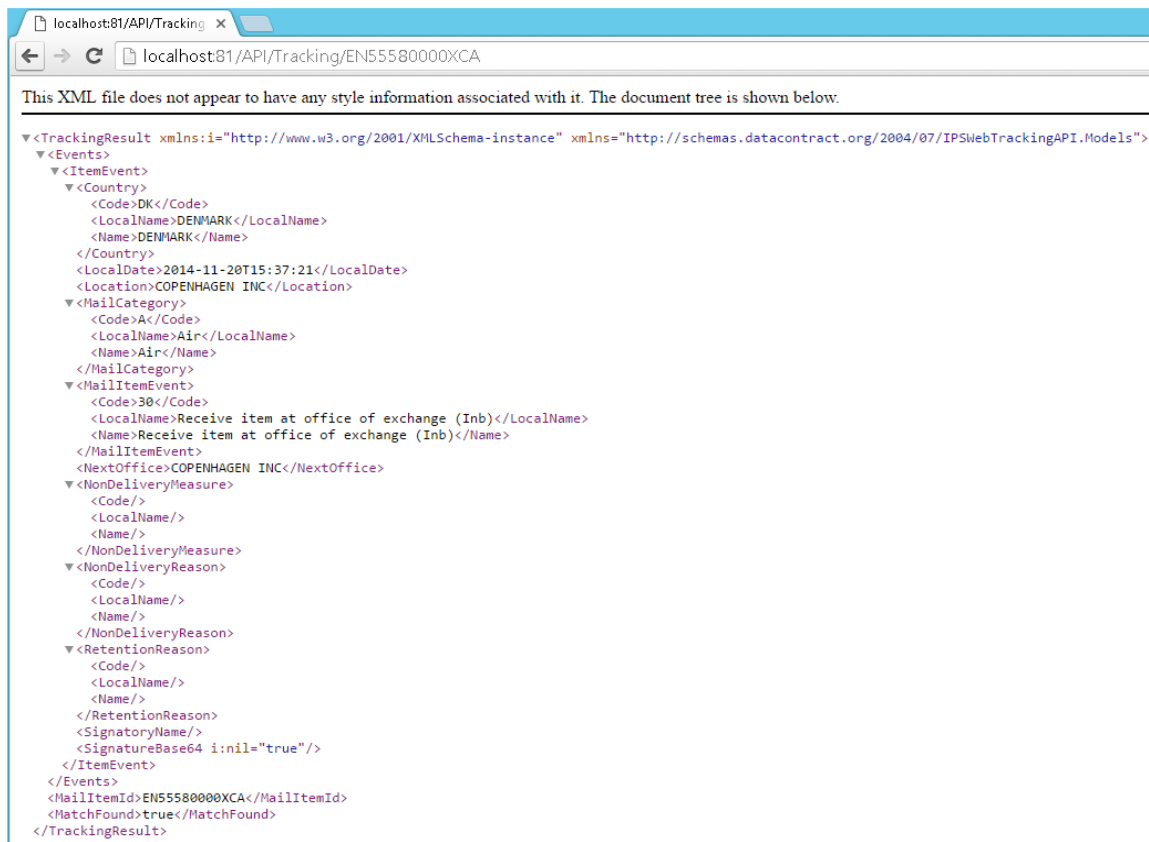


17. Append **/Tracking/EN55580000XCA** to the URL and press Enter. The Web Tracking API returns results similar to those shown below.

If the mail item does not exist:



If the mail item exists:



Troubleshooting the API installation

This table gives guidance on what to do if you experience issues when testing the Web Tracking API.

Error	Cause	Solution	For more information, see
SQL Server does not exist or access denied. ERROR [01000]	The connection string defined in the ODBC Data Source Administrator does not match the data source key in the web.config file.	Open web.config (located in the API virtual folder) and ensure that the appSetting key <add key="OdbcDataSource" value="IPSWebTracking" /> matches the one configured in the ODBC Data Source Administrator.	Step 14c of Installing the Web Tracking API
[ODBC Driver Manager] The specified DSN contains an architecture mismatch between the Driver and Application	The application pool is running on a 64 bit platform and the application pool's Enable 32-Bit Applications setting is True , but the ODBC data source is configured using the 32 bit version of odb-cad32.exe.	Configure the ODBC data source using the correct odb-cad32.exe, i.e. if the application pool is running on a 64 bit platform, run the odb-cad32.exe located in C:\Windows\SysWOW64. If the error persists, open the Application Pool's advanced settings and double-check in the General section that Enable 32-Bit Applications is set to True .	Step 8 of Installing the Web Tracking API