



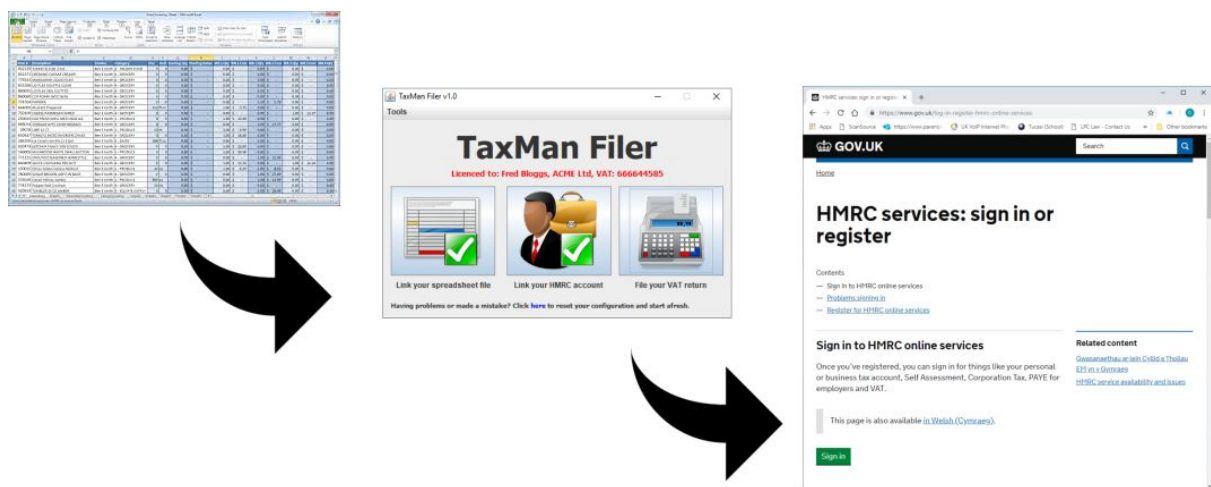
**HMRC MTD Filing for Spreadsheet Users &
3rd Party Developers Requiring a Simplified API**

Product User Guide
4th February 2019

Introduction

As part of its move to modernise the tax system, HMRC are introducing a new Making Tax Digital (MTD) initiative. This initiative introduces a new requirement for businesses to supply their business records to HMRC using software integrated to the MTD gateway. Many businesses use 3rd party accounting software which handles this responsibility, however many others keep their records in a spreadsheet such as Microsoft Excel.

TaxMan Filer allows users who keep their business records in Excel (or another application which can save XLS, XLSX or CSV files) to upload their business records (starting with VAT) to the HMRC MTD gateway and fulfill their obligations without having to migrate to a new accounting platform.



TaxMan Filer features include:

- Desktop installation (the software is installed on your PC - it isn't cloud based)
- Simple three step configuration
- Supports XLS, XLSX and CSV file formats
- Secure data transfer (we don't hold any of your data in the cloud or otherwise)
- Automation / 3rd party integration (ideal for developers who want to minimise the work involved in connecting their software to the HMRC MTD gateway)

The following instructions in this guide take you through installation of TaxMan Filer, linking it to your spreadsheet and uploading your first VAT return.

Licence types

TaxMan Filer is available with three different licence types:

- Single-business; filing is only possible for one VAT number / business. No integration / automation API access.
- Multi-business / agency; filing is possible for any number of VAT numbers. No integration / automation API access.
- Developer / API; filing is available for any number of VAT numbers. Integration / automation API is enabled.

The demo licence provides access to the integration / automation API for demonstrative purposes, development and testing.

Overview

This guide will take you through the following steps:

1. Installation of TaxMan Filer on your PC (Windows users)
2. Activating your licence (or using the demo licence)
3. Preparing your spreadsheet for linking with TaxMan Filer
4. Linking your spreadsheet file to TaxMan Filer
5. Authorising TaxMan Filer with HMRC to file on your behalf
6. Uploading your first VAT return

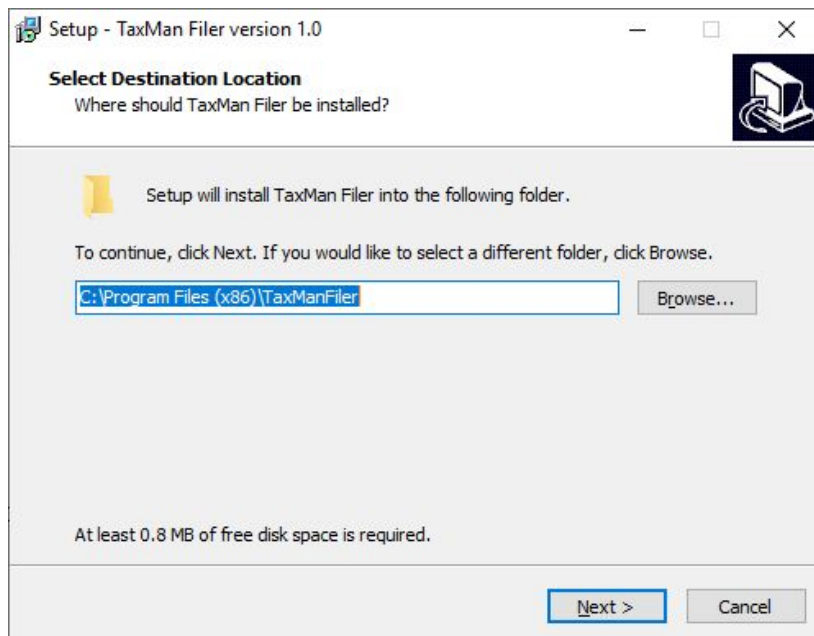
Software developers wishing to use TaxMan Filer as an API or “bridge” between their own software product and the HMRC MTD gateway should refer to the “Third Party Integration / Automation” section.

If you run into difficulties, additional support can be sort by emailing support@imagesoft.co.uk.

Installation

Before proceeding, please ensure that you have installed the latest version of the Java platform from <https://www.java.com>.

Once you have Java installed, download and run the TaxManFiler_Setup.exe file. The Setup wizard will open:

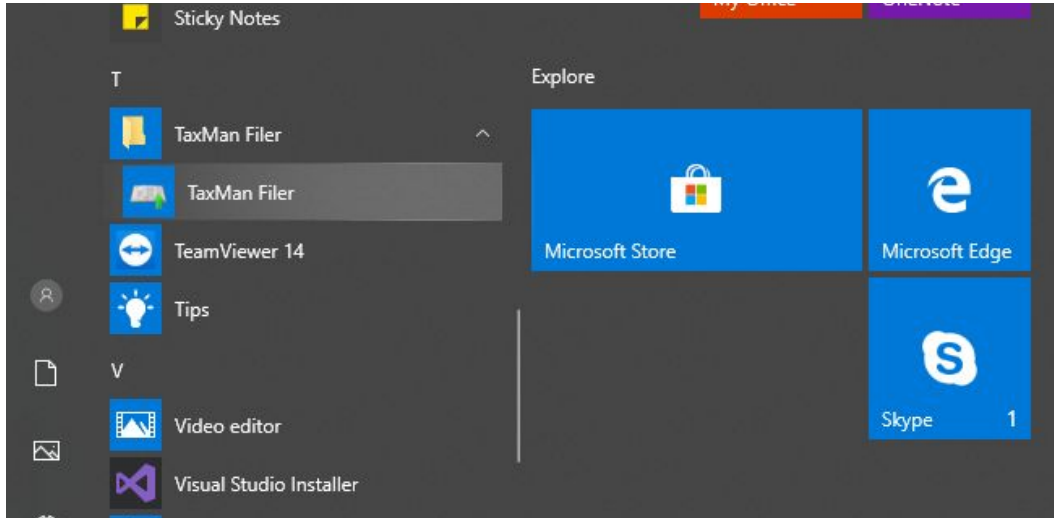


Follow the prompts using the Next button. It is recommended that you use the default settings on each screen of the installer.

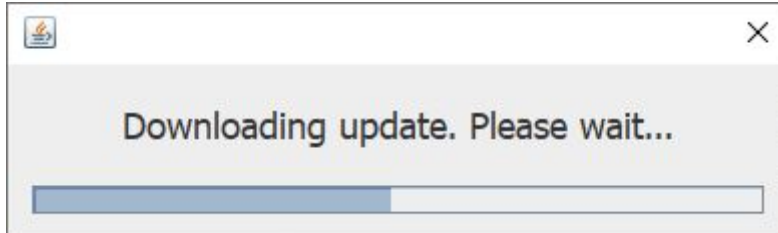
The final prompt contains the Install button that installs the application. Once installed, the application should be accessible from the Start menu.

Running the application

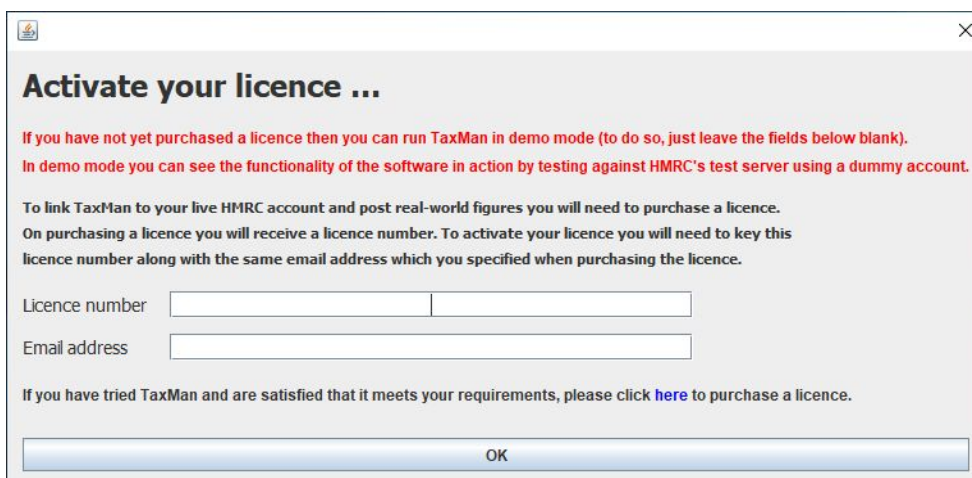
Launch TaxMan Filer from the Start menu, or from the desktop icon (if you opted to install it):



Each time the application runs it will check for any software updates and automatically apply them:



Once any updates have been downloaded, the licence activation window is displayed:



If you have already purchased a licence key, enter it now, along with the email address that you specified when you ordered the licence (both the licence number and the email address must match or the licence will fail to activate).

If you are wanting to run the application in demo mode then leave both the licence number and email address blank. Note that in demo mode you can only post data to the HMRC test server/URL using a test account (which you can create from within TaxMan Filer; see later).

Click OK to proceed.

The main window is displayed:

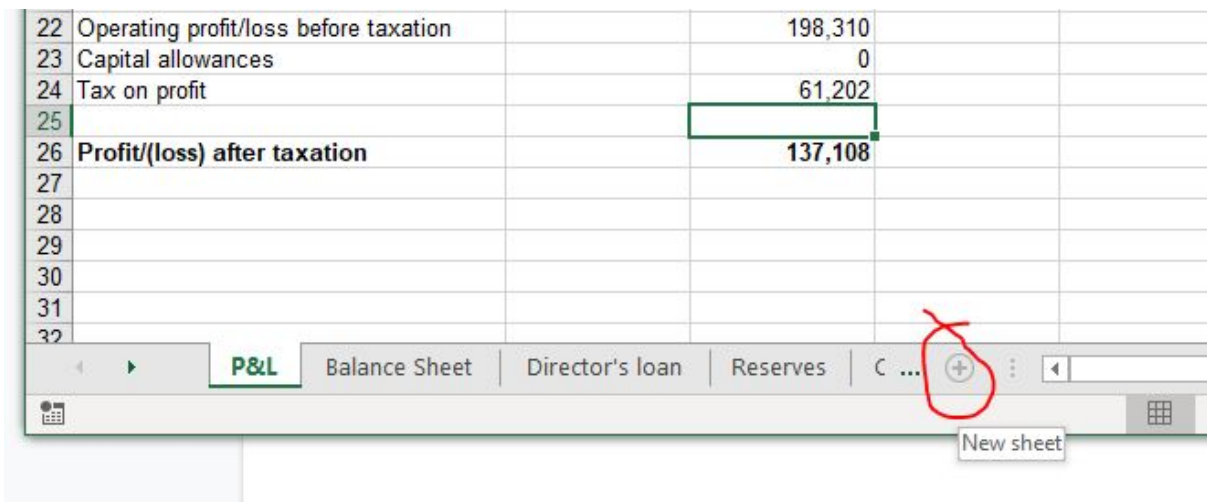


Preparing your spreadsheet file for linking

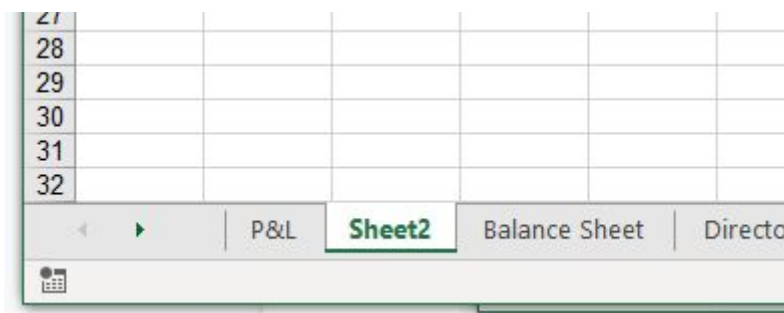
Before proceeding to configure TaxMan Filer, you will need to prepare your spreadsheet file for linking with the application and sharing its data for onward upload to HMRC.

These instructions were compiled using Excel Office 365 Edition as a reference. Other versions / applications may vary slightly, but the concepts are very much the same.

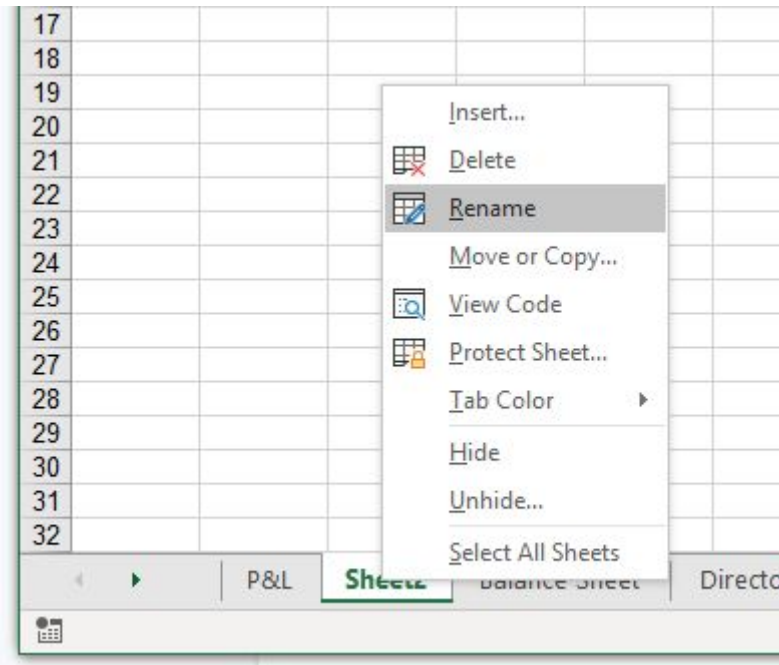
With your workbook loaded in Excel, select the “+” icon at the bottom of the window to add a new sheet to your file:



The new sheet will appear as a tab, with a generic name:



Right click the new tab to open the context menu of options and select the option to rename it:



Rename it specifically as “HMRC upload” (be sure to spell it exactly as shown).

Feel free to drag and drop the tab to re-arrange the ordering if you would like to do so (eg. to put the sheet at the end of the file). So long as it is named correctly, TaxMan Filer will be able to find the sheet whatever position it is located at in the file.

With the new blank sheet active, add the following two columns of content (at any location, but keep the cells together) You will recognise these as the familiar entries on a VAT return:

VRN	123456789
VAT due on sales	0.00
VAT due on EC acquisitions	0.00
Total VAT due	0.00
VAT reclaimed on purchases	0.00
Net VAT to pay	0.00
Total sales ex. VAT	0
Total purchases ex. VAT	0
Total EC sales ex. VAT	0
Total EC purchases ex. VAT	0

Feel free to change the formatting of the text; its font, size, colour, etc will not impact TaxMan Filer's ability to locate the required data.

An example file is available to download from our website, or on request from support@imagesoft.co.uk.

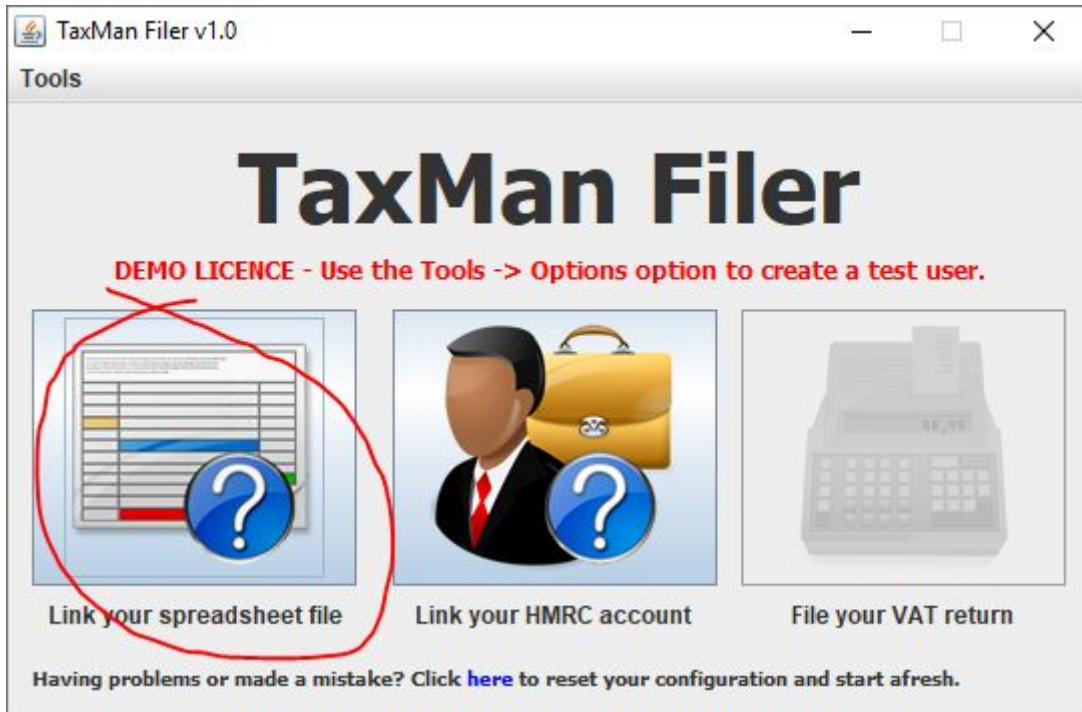
When you are ready, save the updated file.

NB: TaxMan Filer only supports XLS, XLSX and CSV file formats, so be sure to save your document in one of these formats.

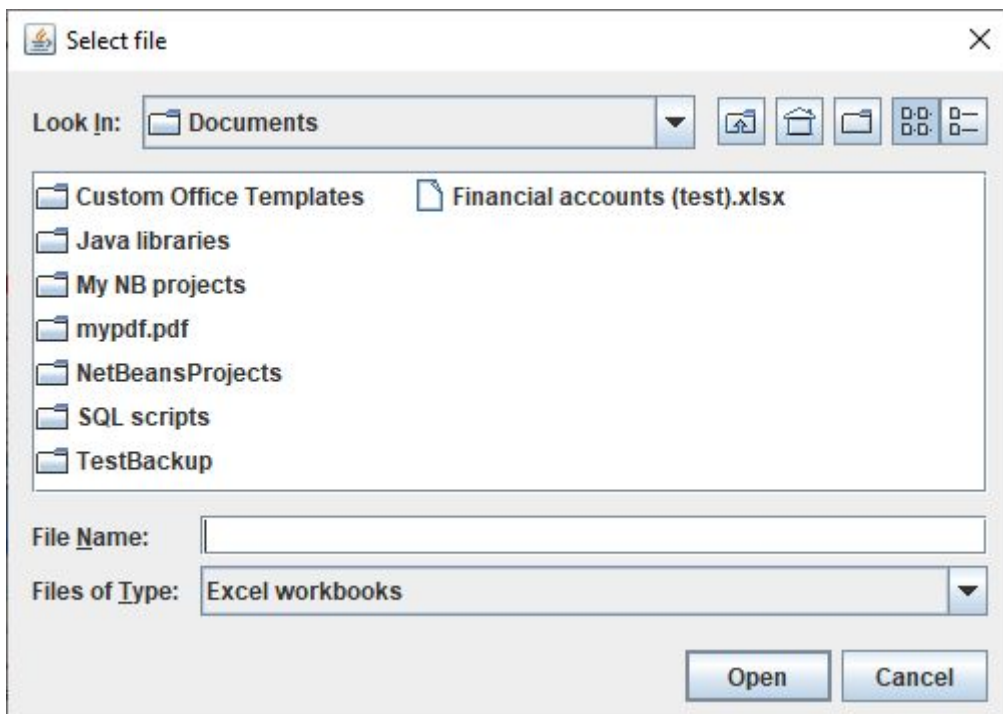
A single-business licence only permits filing for the VAT Registration Number (VRN) stipulated in the software licence. Multi-business and developer licences permit filing for any number of VRNs / businesses.

Linking your spreadsheet file to TaxMan Filer

Once your spreadsheet file has been prepared, it is now ready to link with TaxMan Filer. With TaxMan Filer loaded, click the leftmost button in the window, labelled "Link your spreadsheet file":

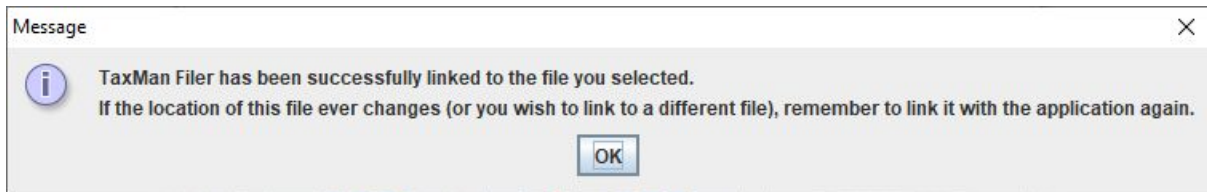


A file open/choose dialog will open:



If required to do so, navigate to the folder/drive holding your spreadsheet file, select the file and click Open (or alternatively double click the file to automatically select it).

TaxMan Filer will scan your file to ensure that it can locate the “HMRC upload” sheet and that it can find your VAT entries (both the descriptions and values shown previously). If the file validation is successful, you will see the following message:



If you receive an error message stating that the application was unable to locate the “HMRC upload” sheet, or any of the VAT values, then re-visit the previous section and ensure that your sheet is in the correct format.

TaxMan Filer records the location of your file. If you ever move the file, or switch to using a different spreadsheet for your financial records, simply repeat the steps in this section to link the application to your new file.

The link button image changes to show a tick, indicating that you have setup a successful link to your spreadsheet file:



You are free to load, edit and work on your spreadsheet as required. TaxMan Filer will only use your file when you go to do an upload to HMRC.

Test mode and creating a HMRC test account

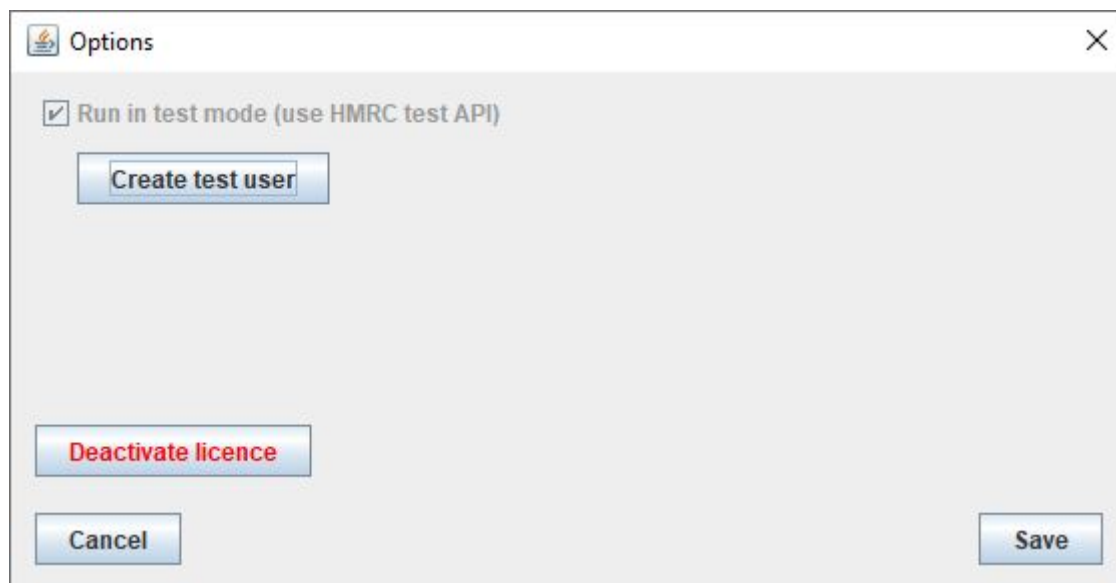
If running TaxMan Filer with a demo licence, it will already be in test mode. Licenced users can also place the application in test mode so that they can test the process of filing with HMRC without using a live account.

NB: You cannot file figures to the HMRC test server with a live account. Use these instructions to ensure the application is in test mode and to create a test user.

From the TaxMan Filer window, click the Tools -> Options menu item:

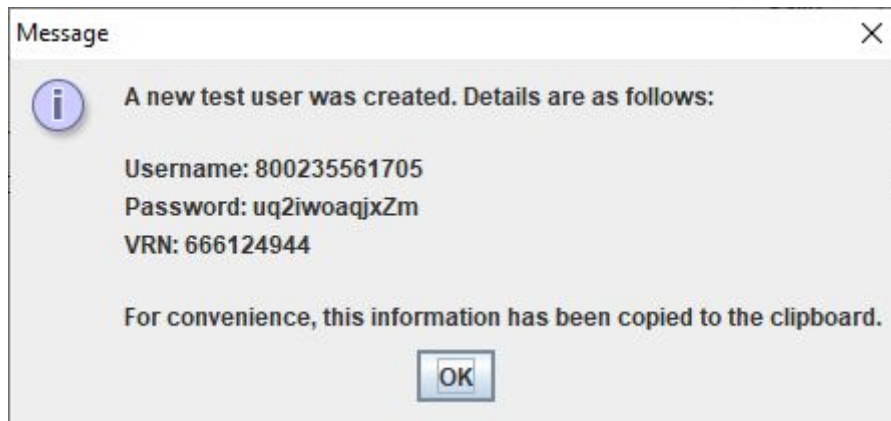


This will open the Options window:



Licensed users can tick the test mode checkbox to switch to test mode. It is only possible to run a demo licence in test mode, so unlicensed users will have this option already ticked.

To create a test user on the HMRC server, click the “Create test user” button. After communicating with the gateway, the test user’s details are displayed:



Note that VRN is an abbreviation for VAT Registration Number.

For convenience, the details are copied to the clipboard. You may wish to paste them into Notepad, or another suitable application, so that you can copy and paste them into the HMRC website when authorising / linking the application with HMRC (as covered in the next section).

Note that HMRC routinely delete test accounts (they stipulate that they do this every 2 weeks). Should a test account expire, simply repeat the above process to create a new one.

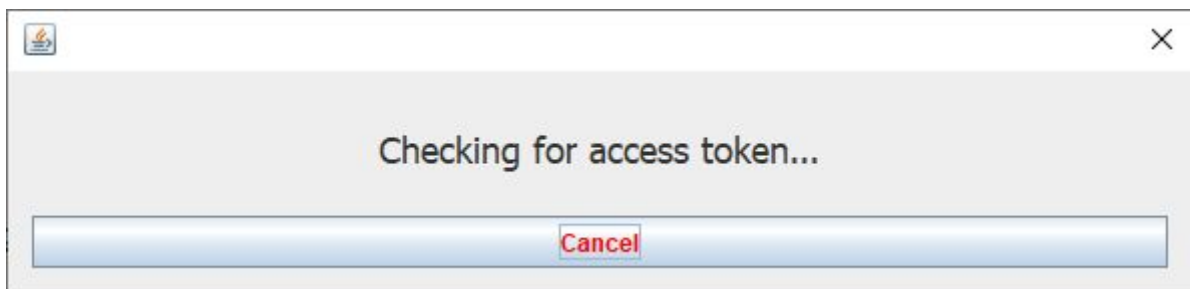
Once done, close the configuration window.

Linking your HMRC account to TaxMan Filer

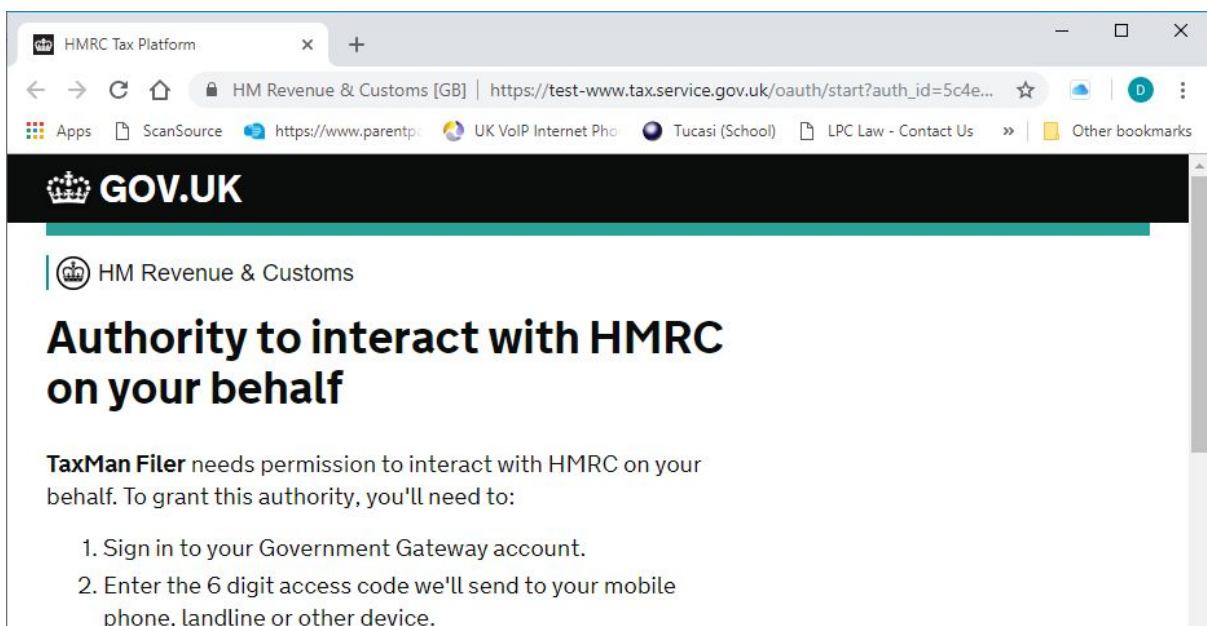
Before the application is able to file on your behalf, you will need to authorise it with your HMRC account. You will need to have registered with the HMRC website and have your login details to hand before you can proceed with this section of the setup.

If you are running the application in demo mode, or would like to test the upload process against the HMRC test server with a dummy account, please refer to the previous section before proceeding.

From the TaxMan Filer window, click the middle button, titled “Link your HMRC account”. The application begins communication with HMRC. A progress window opens, explaining each step of the process being undertaken:



If the application hasn't yet been linked to an account (or the settings have been cleared) then a web browser window should open:

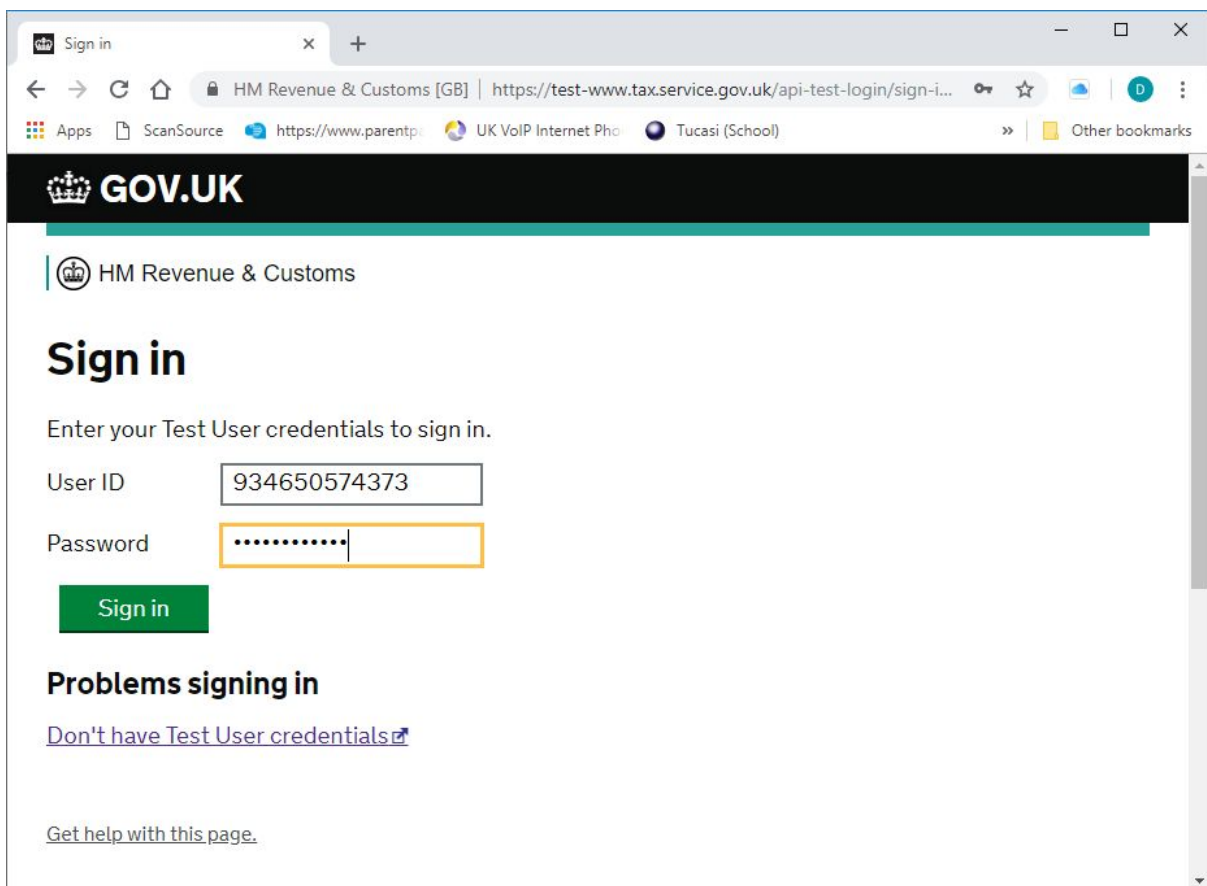


Click the green “continue” button at the bottom of the page:

in with the account that’s enrolled for Self Assessment for Agents - it’s the same account you use to access the HMRC agent portal.

Continue

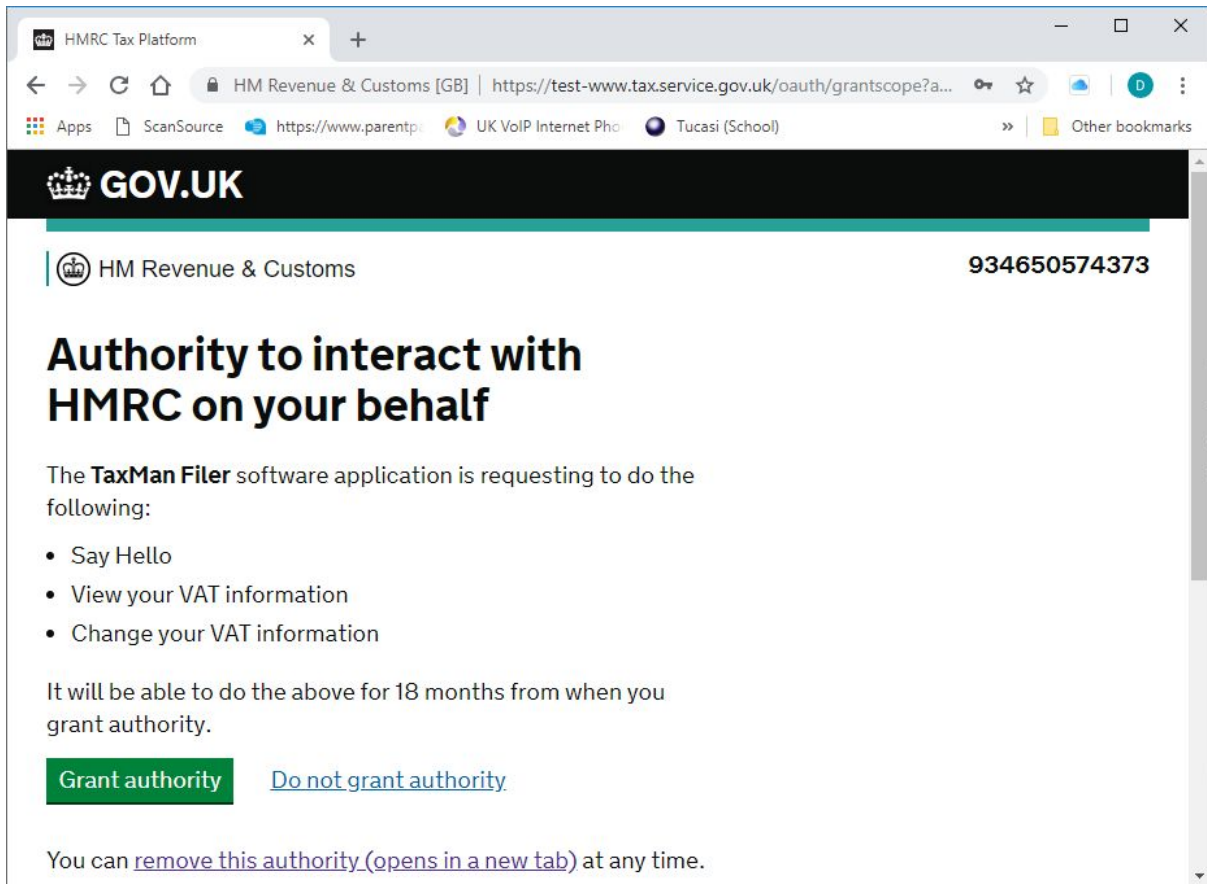
This will take you to the login page:



The screenshot shows a web browser window with the URL <https://test-www.tax.service.gov.uk/api-test-login/sign-i...>. The page header features the GOV.UK logo and the text "HM Revenue & Customs". The main heading is "Sign in". Below this, there is a prompt: "Enter your Test User credentials to sign in." The form contains two input fields: "User ID" with the value "934650574373" and "Password" with masked characters. A green "Sign in" button is positioned below the password field. At the bottom of the form, there is a link for "Problems signing in" and a sub-link "Don't have Test User credentials". A footer link reads "Get help with this page."

Enter your login details (either your own, if using the application in licensed mode to file actual figures) or a test account if running the application in test/demo mode. Refer to previous section on how to create a test account, should you need to do so.

After logging-in, the HMRC website prompts you to authorise TaxMan Filer to file on your behalf:



Click the green “Grant authority” button.

After a few seconds, TaxMan Filer should detect that you have authorised it via the HMRC website and a suitable message will be displayed:



Click OK to clear the dialog box.

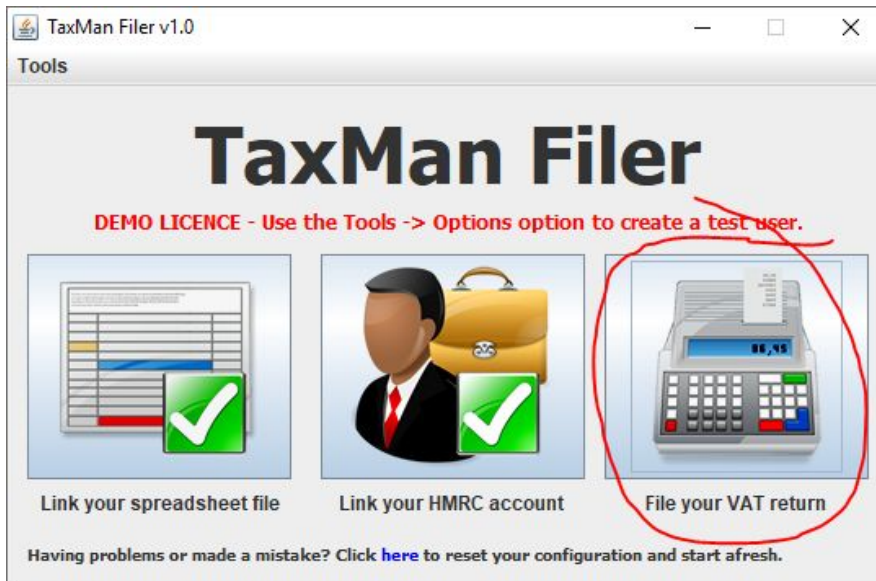
You will notice that the link button now has a green tick in it and that the option to file a VAT return (the rightmost button) is now active and available:



Filing a VAT Return

Once you have linked a spreadsheet file and HMRC account to TaxMan Filer you are ready to submit a VAT return when it becomes due.

From the main window, click the button labelled “File your VAT return”:



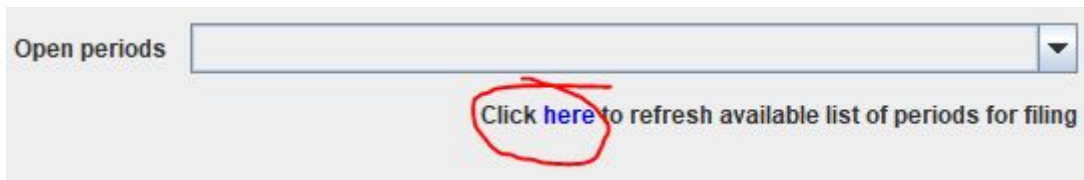
The VAT return dialog then opens:

Description	Amount
1) VAT due on sales	£20,000.00
2) VAT due on EC acquisitions	£100.00
3) Total VAT due	£20,100.00
4) VAT reclaimed on purchases	£100.00
5) Net VAT to pay	£20,000.00
6) Total sales ex. VAT	£100,000.00
7) Total purchases ex. VAT	£60,000.00
8) Total EC sales ex. VAT	£0.00
9) Total EC purchases ex. VAT	£500.00

You will notice that the financial figures for the VAT return have been automatically populated from your spreadsheet.

NB: To meet HMRC requirements, financial figures cannot be edited from within TaxMan Filer itself. Any amendments will need to be made within the spreadsheet itself.

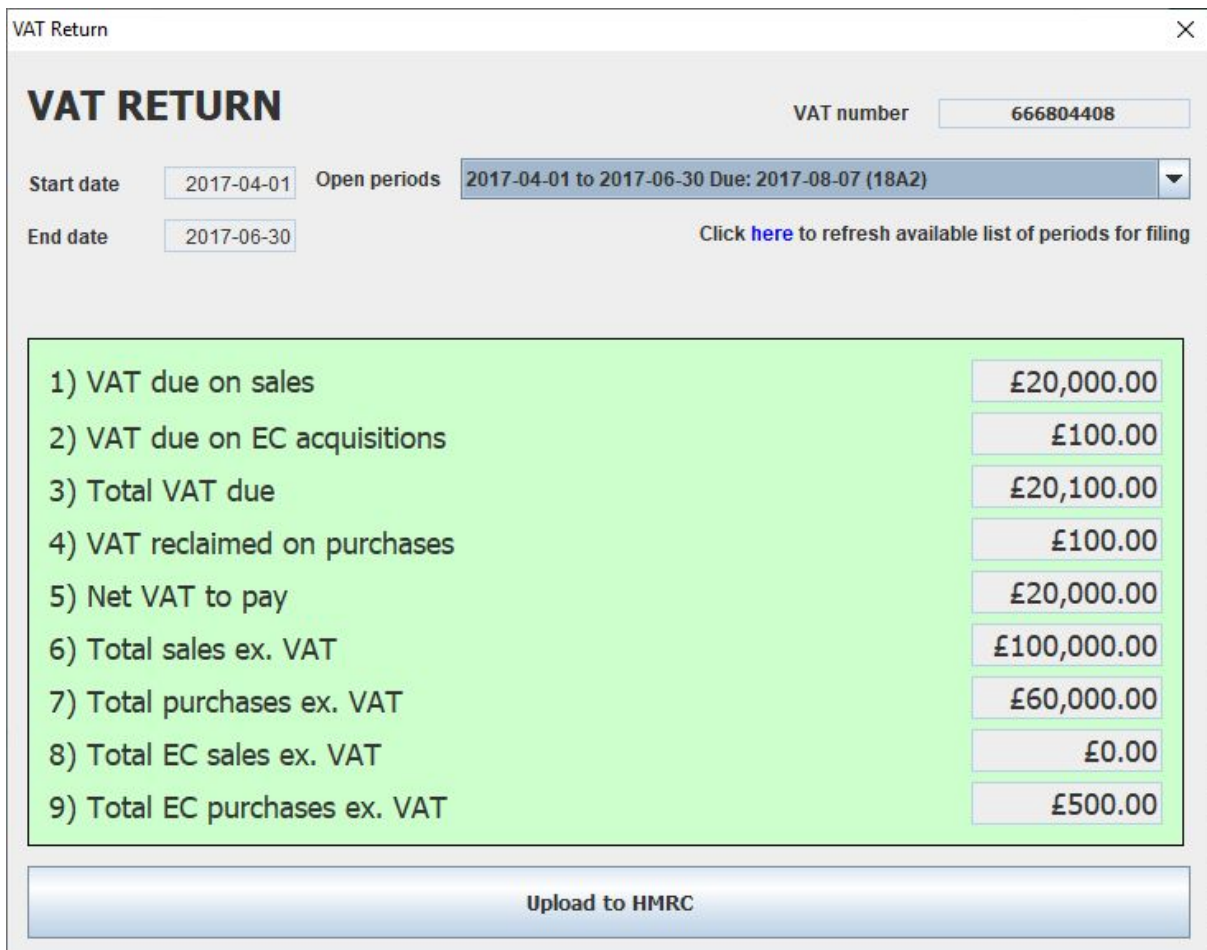
Before filing the figures, you will need to select the open period for which you are reporting. To populate the drop down list of open periods, click the refresh link:



Open periods

[Click here](#) to refresh available list of periods for filing

A progress dialog will appear as TaxMan Filer communicates with the HMRC gateway and downloads a list of available periods for filing. Once complete, the display is updated and the first open period is automatically selected:



VAT Return

VAT RETURN

VAT number: 666804408

Start date: 2017-04-01 | Open periods: 2017-04-01 to 2017-06-30 Due: 2017-08-07 (18A2) | End date: 2017-06-30

[Click here](#) to refresh available list of periods for filing

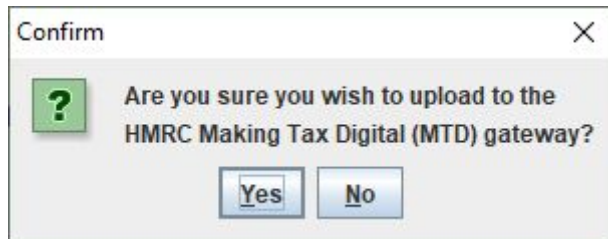
1) VAT due on sales	£20,000.00
2) VAT due on EC acquisitions	£100.00
3) Total VAT due	£20,100.00
4) VAT reclaimed on purchases	£100.00
5) Net VAT to pay	£20,000.00
6) Total sales ex. VAT	£100,000.00
7) Total purchases ex. VAT	£60,000.00
8) Total EC sales ex. VAT	£0.00
9) Total EC purchases ex. VAT	£500.00

[Upload to HMRC](#)

If filing for a different period, change the selection in the “Open periods” dropdown.

Double check that you are happy with the dates of the period for which you are filing and the figures to be uploaded.

Finally, click the “Upload to HMRC” button. A confirmation window asks you to confirm that you are happy to make the filing:



Clicking Yes will proceed with the submission.

After posting your submission, a dialog appears with the result:



Especially whilst MTD is a relatively new service, you are strongly advised to check your HMRC account to ensure that the filing has been accepted and that the figures are accurate and correct.

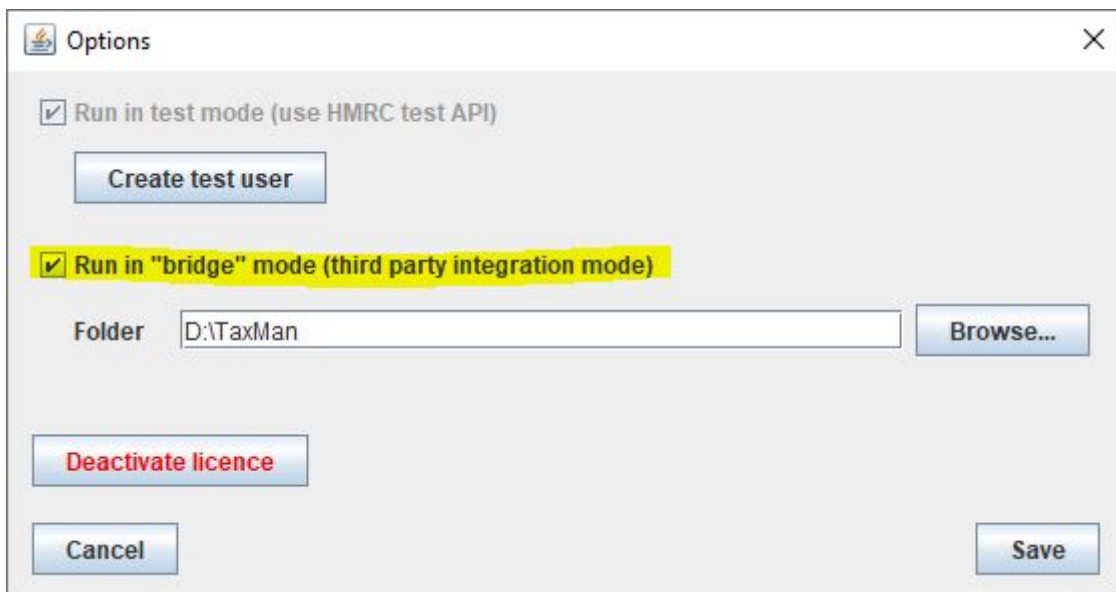
Third Party Integration / Automation

Third party software developers not wishing to integrate directly with the HMRC MTD API, but preferring a simpler route to integration, can use TaxMan Filer in automated/bridge mode to simplify the filing process using a simple, file based comms method.

Integration with TaxMan Filer is as simple as creating an input TXT file with your VAT figures in a configured folder and reading the returned output TXT file containing the response. TaxMan Filer handles all communication with HMRC.

NB: As authorisation of TaxMan Filer with your HMRC account is an interactive process, you will still need to follow the instructions in the earlier section entitled "Linking your HMRC account to TaxMan Filer".

To enable automation / bridge mode, select the corresponding option in the config window, as shown below:



Create an empty folder in Windows Explorer which both your own application and TaxMan Filer will be able to access. Use the "Browse" button to select this folder (or enter the pathname directly into the "Folder" text field as shown above).

From within your application, create a function which generates an "input.txt" file in the below format in the folder you have specified / selected in the TaxMan Filer config:

1=VAT
2=start date of VAT period (in YYYY-MM-DD format)
3=end date of VAT period (in YYYY-MM-DD format)
4=box 1 figure
5=box 2 figure
6=box 3 figure
7=box 4 figure
8=box 5 figure
9=box 6 figure
10=box 7 figure
11=box 8 figure
12=box 9 figure
13=VAT registration number

An example file is as follows:

1=VAT
2=2017-04-01
3=2017-06-30
4=20000.00
5=100.00
6=20100.00
7=100.00
8=20000.00
9=100000.00
10=60000.00
11=0.00
12=500.00
13=666679113

Note that the monetary values for the box figures should be in decimal format XXX.XX. eg. £123.45 should be stated as 123.45.

TaxMan Filer continually polls the import folder, will detect your input.txt file, process it, delete it and produce an output.txt file containing the result of the operation.

The output.txt file is in the following format:

1=SUCCESS|FAIL
2=Human readable message
3=HMRC response (JSON format)

An example output.txt file for a successful request is as follows:

1=SUCCESS

2=Your return was accepted by the gateway

3={"processingDate":"2019-01-29T06:53:58.048Z","paymentIndicator":"BANK","formBundleNumber":"364575598436"}

An example output.txt file for a failed request is as follows:

1=FAIL

2=The VAT return was NOT accepted by the gateway

3={"code":"BUSINESS_ERROR","message":"Business validation error","errors":[{"code":"DUPLICATE_SUBMISSION","message":"The VAT return was already submitted for the given period."}]}

Java library

As an alternative integration method, Java developers can embed the TaxMan Filer Java executable file (JAR) into their own Java SE application as a library and directly call the exposed methods in their own code. This facilitates very simple integration with the HMRC MTD gateway, abstracting away the need for handling the underlying communication and authorisation process.

Add the JAR file to your application's project as a library (the method required will depend on the development environment being used and is therefore beyond the scope of this documentation).

The following sample code explains the classes/methods used:

Firstly, create an instance of the TaxManFilerLink class. This is used to perform MTD operations:

```
TaxManFilerLink link = TaxManFilerLink.getInstance("<your licence key>");
```

Your licence key is provided on purchase of your developer licence.

Next, you should test the link to obtain and ensure authorisation with a HMRC MTD account:

```
boolean result = link.confirmLink();
```

Where necessary, a browser window is launched and the user re-directed to the HMRC website where they are prompted to link their account with TaxMan Filer.

If gateway access is confirmed, this method will return a true, otherwise it will return false.

You can obtain a textual response for a failed call using the following method:

```
String result = link.getLastError();
```

The returned string will either be in plain text format or JSON (in the case of the latter, the first and last characters will be "{" and "}").

Retrieve a list of open VAT periods using the following call:

```
String vrn = "<VAT registration number>"  
List<TaxMan.VatPeriod> periods = link.getOpenVatPeriods(vrn);
```

The `TaxMan.VatPeriod` class contains three final `String` fields:

```
public String startDate;    // VAT period start date YYYY-MM-DD
public String endDate;     // VAT period end date YYYY-MM-DD
public String periodCode;  // HMRC's code / reference for the VAT period
```

Note that this call will fail (and return null) if there is an error. Use a call to `link.getLastErrorMessage()` in order to retrieve the last error string/response.

To file a VAT return, use the following code and method call:

```
String vrn = "<VAT registration number>";
String periodCode = "<HMRC period code>";
int[] boxTotals = new int[9];

boxTotals[0] = <VAT due on sales>                // all values in pence
boxTotals[1] = <VAT due on EC acquisitions>
boxTotals[2] = <Total VAT due>
boxTotals[3] = <VAT reclaimed on purchases>
boxTotals[4] = <Net VAT to pay>
boxTotals[5] = <Total sales ex. VAT>
boxTotals[6] = <Total purchases ex. VAT>
boxTotals[7] = <Total EC sales ex. VAT>
boxTotals[8] = <Total EC purchases ex. VAT>

Boolean success = link.fileVatReturn(vrn, periodCode, boxTotals);
```

The `boxTotals` array should be filled with the VAT return box totals in lowest denomination of currency (ie. pence).

The call will post the figures and return true in the case of a successful operation, or false if failed. Use a call to `link.getLastErrorMessage()` in the event of failure to retrieve the last error string / response.

Note that TaxMan Filer uses the intermediary server at imagesoft.co.uk; you should ensure that this hostname is whitelisted in your firewall.