



FASTSPRING SUBSCRIPTION KIT GUIDE

www.xlspadlock.com

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1. About this guide

XLS Padlock FastSpring Subscription Kit Guide

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For XLS Padlock version 2024 and further

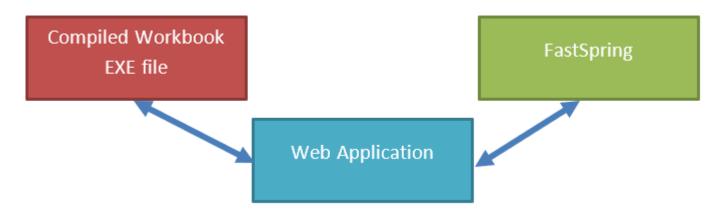
2. Description

Online activation and validation features of XLS Padlock let you control user access to your Excel workbooks remotely. For instance, you can sell <u>subscriptions for your</u> Excel spreadsheets and block access of customers if their subscription expired for non payment.

To manage subscriptions, we chose <u>FastSpring</u>, an ecommerce partner of choice for selling software online. This FS subscription kit requires an active FastSpring account.

The workbook applications compiled with XLS Padlock can communicate with a web application powered by this subscription kit. The application uses FastSpring API to manage customer settings and subscription data.

The following guide contains instructions to set up the web application on your server and link it to your Excel workbooks. After that, online activation and optionally validation will be functional. You will be able to manage access of your customers directly from the FastSpring Dashboard.



3. Server requirements for the FS Subscription kit

The web application is based on the Fat-Free Framework (https://fatfreeframework.com) so they share the same server requirements: please refer to https://fatfreeframework.com/3.9/system-requirements

The following requirements are generally provided by standard web hosting companies:

- > Apache. If you use NGINX, you must configure it so that the redirection rules defined in the .htaccess are handled
- > PHP 8.1 or greater
- > PHP CURL extension enabled
- Your server must handle the PUT HTTP Method. Otherwise, please ask your webhost to enable it
- mod_rewrite and mod_headers enabled (Apache)
- > a valid FastSpring account

4. Technical Support and license

Do not hesitate to send us your feedback, to report bugs or to share your modifications with us:

info@xlspadlock.com

This FS Subscription kit is provided "AS IS" WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THIS PRODUCT IS WITH YOU. SHOULD THIS PRODUCT PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR, OR CORRECTION.

By installing and using this FS Subscription kit, you agree to be bound by the license terms available from the LICENSE file in the folder named "xlspadlock-fskit".

Please note that, depending on your requests, we and/or FastSpring will <u>not</u> provide you with free technical support for this FS Subscription kit. You should have some server knowledge at least to deal with this kit.

This kit is not endorsed by FastSpring. Do not ask them for support.

5. Step 1: obtain FastSpring API Credentials

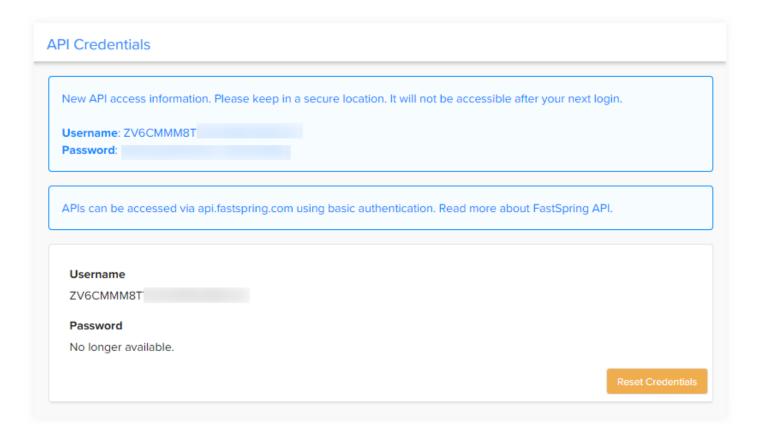
The web application uses RESTful to communicate with FastSpring. Thus, FastSpring API Credentials are required.

→ Follow instructions from this page to obtain the necessary credentials:

https://fastspring.com/docs/integrations/#api

After following these instructions, please keep the username and password in a safe place.

Here is a screenshot of the API Credentials page in FastSpring:



6. Step 2: install the Web application on your server and configure settings

6.1. Copy the files to your server

In the local folder on your computer where you unpacked the FS Subscription kit, you will find a folder named "xlspadlock-fskit".

Upload the entire contents of the "xlspadlock-fskit" folder to your web server, for instance with a FTP software. It can be in the root folder of your website, but it can be somewhere else too.

You can then rename the folder to something else if you want, e.g. "subscription".

Open the "subscription" folder and you should see:



- If you are on Windows IIS, delete the unnecessary .htaccess file.
- If you are on Apache, delete the unnecessary web.config file.

6.2. Base URL for activation

Please ensure the inc subfolder is not web accessible (you should get a 403 forbidden error if you try to access it with a web browser): it contains sensitive data and should be protected by the shipped .htaccess file (on Apache) or the web.config file (on Windows IIS).

Write down the public URL that allows access to the "xlspadlock-fskit" folder because we will use it later.

In our case, since we renamed the "xlspadlock-fskit" to "subscription", it should be:

http://www.mywebsite.com/subscription

if you access your website at http://www.mywebsite.com

Now, we will test whether the URL rewriting works on your web server. Please open your web browser to visit the following URL:

http://www.mywebsite.com/subscription/dotest

Replace http://www.mywebsite.com by your own website URL.

You must see the following message:



This message comes from the XLS Padlock FastSpring Subscription Kit. URL rewriting works as expected.

If not, this means that URL rewriting is not working as expected and the subscription kit will fail. Contact your webhost support to ask for help in order to enable URL rewriting.

Note for Apache users: some servers require you to specify the `RewriteBase` directive in the .htaccess file. In such cases, it should be the path (relative to the document root) containing this .htaccess file.

6.3. Set up local encryption key

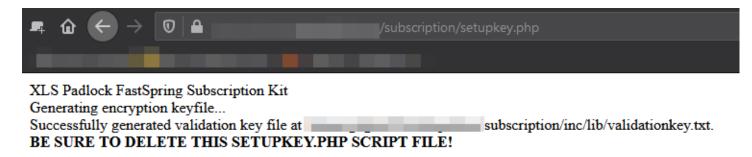
Open your Web browser and navigate to the URL defined previously + setupkey.php

With the example above, we would go to:

http://www.mywebsite.com/subscription/setupkey.php

This PHP script will set up the encryption key used by the web application to exchange with the workbook EXE.

After the execution of the PHP script, your web browser should show:

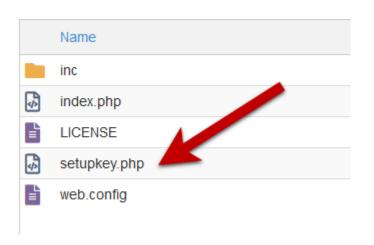


This encryption key is stored in a file at the location:

/subscription/inc/lib/validationkey.txt

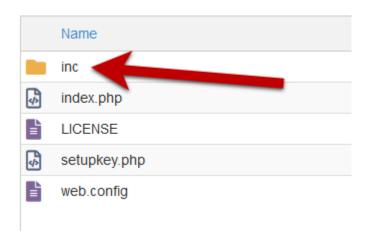
Once you are in production (i.e. you deployed your workbook EXE file made with XLS Padlock to customers), do not replace this file, otherwise end users will have to reactivate their workbook.

Finally, for security purpose, remove the setupkey.php file from your web server.



7. Step 3: configure mandatory settings in config.ini

1. Navigate to the "inc" subfolder and edit the config.ini file stored on your server.



Once again, check that the config.ini file cannot be accessed publicly (the .htaccess prevents end users from accessing it) because this file contains sensitive data for generating activation keys.

The important part of the config.ini file looks like this:

[globals]

```
; ===== Modify the following parameters for your workbook =====
; ** Your XLS Padlock user ID: paste your activation code after the xps- **
xlspadlockuserid = "xps-xxxxxxxxxxxxx"
; ** Default maximum number of activations per order allowed (we also take account
of order quantity).
; For instance, if the customer bought a quantity of 2 products and with
defmaxactivperorder = 2, we would allow 4 activations.
defmaxactivperorder = 2
; ** Your FastSpring API Username - see https://fastspring.com/docs/fastspring-api/
"Access the API"
fsapi username = "xxxxxxxxxxxxxx"
; ** Your FastSpring API Password - see https://fastspring.com/docs/fastspring-api/
"Access the API"
fsapi_password = "xxxxxxxxxxxxxxx"
Do not modify below
DEBUG=0
UI=./inc/app/views/
AUTOLOAD=./inc/app/controllers/|./inc/app/models/|./inc/lib/
```

- 2. Change the value of the entry named xlspadlockuserid to your XLS Padlock user ID. This user ID is available in the registration email that you received when you purchased XLS Padlock. Important: remember that the user ID begins with **xps-**
- 3. Finally, provide the API username and password you got from FastSpring at step 1.

```
fsapi_username = "ABCDEF12345"
fsapi_password = "54DEF321ABC"
```

4. Save modifications to the config.ini file.

The web application is now ready to receive data from the compiled workbook EXE files and communicate with your website.

8. Step 4: associate your compiled workbook EXE files with the web application

The FS Subscription kit was designed to support multiple Excel workbooks at once. So, you must install the kit only once on your server even to manage multiple workbooks.

All the parameters of your Excel workbooks must be configured in a file called workbooks.json in JSON format.

You will find a template of the file in the "inc" directory of the application. We will see how to configure it in the following steps.



Be careful, your file must respect the JSON format, otherwise it will not be loaded correctly by the application. You can test the validity of your file using online tools such as https://jsonlint.com/

1. Navigate to the "inc" subfolder and edit the workbooks.json file stored on your server.

Once again, check that the workbooks.json file cannot be accessed publicly (the .htaccess prevents end users from accessing it) because this file contains sensitive data for generating activation keys!

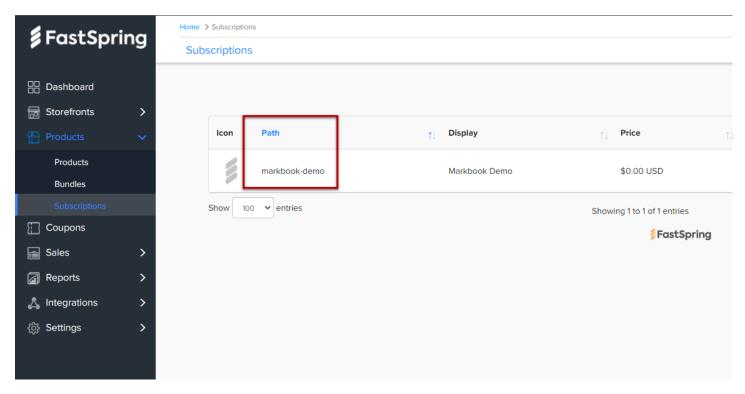
2. Here is the content of the workbooks.json file:

```
"products": {
    "product-path": {
      "title": "Your workbook 1 title",
      "xlspadlockprivatekey": "{Your workbook 1 private key}",
      "xlspadlockmasterkey": "Your workbook 1 master key",
      "usehardwarelocking": 1,
      "maxactivperorder": 2,
      "keymaxdays": 180,
      "shownagscreen": 0
    },
    "just-demo": {
      "title": "Just a demo, remove me in production",
      "xlspadlockprivatekey": "{6363CDED-4E14-412A-8196-5A52C356D6CD}",
      "xlspadlockmasterkey": "14JFGDBFG784GKLGSJSG1210SFB",
      "usehardwarelocking": 1,
      "maxactivperorder": 2,
      "shownagscreen": 0
}
```

"products" is a mandatory section. Do not change the value. The schema used is the following:

If not already done, go to the <u>FastSpring dashboard</u> and create the subscription product that will be associated to your workbook. If you do not know how to do that, please see the documentation at https://fastspring.com/docs/subscriptions-overview/

3. Choose Products then Subscriptions. The product path will be displayed. On the screenshot below, it would be marbook-demo:



4. In the workbooks.json file, replace "product-path" with the product path defined in the FastSpring Dashboard. In our case above, we would write "markbook-demo":

```
{
    "products": {
        "markbook-demo": {
        ...
```

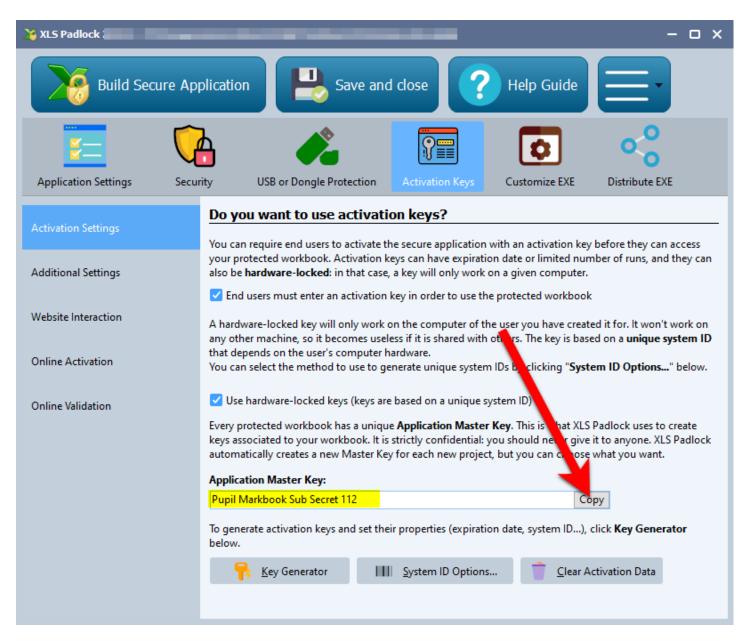
{

5. You can then give the title you want to your workbook. This is purely informative and can be useful to help you navigate when configuring multiple workbooks:

```
"products": {
    "markbook-demo": {
        "title": "My workbook title",
```

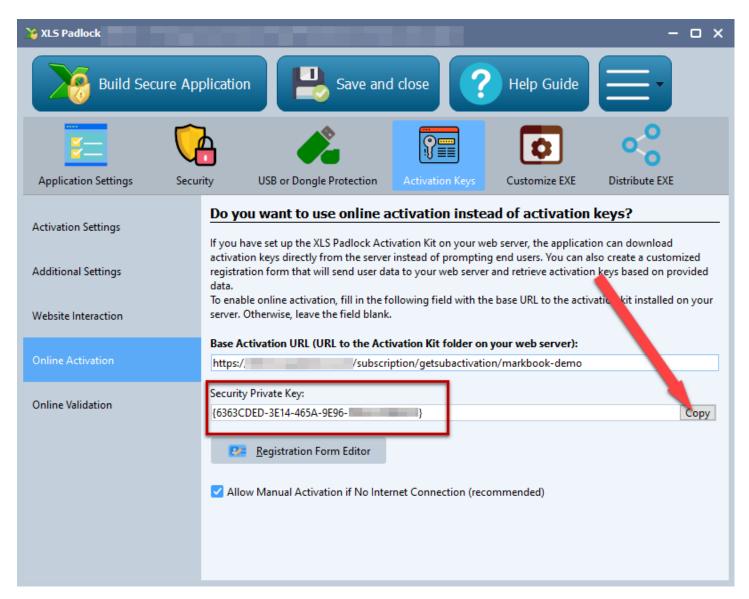
6. Start Excel, open your Excel workbook and XLS Padlock.

Navigate to the "Activation Keys / Activation Settings" page. Click the "Copy" button near the "Application Master Key" field:



Paste this into workbooks.json for the value of the xlspadlockmasterkey entry. Based on the screenshot above, this would give:

7. Back to XLS Padlock, choose Online Activation and click the "Copy" button near the "Security Private Key" field:



Paste this into workbooks.json for the value of the xlspadlockprivatekey entry. Based on the screenshot above, this would give:

- 8. Now we can configure the different properties for that variation:
 - ➤ If you do not want to generate hardware-locked activation keys (NOT RECOMMENDED), change the usehardwarelocking entry from 1 to 0.
 - ➤ Define the number of activations per order allowed thanks to the maxactivperorder entry. This lets you define on how many machines an end user (for instance who purchased your compiled workbook EXE) can activate the workbook. By default, it's the value defined in the config.ini (see above).

Note: the order quantity is also taken in account. For instance, if the customer bought a quantity of 2 products and with maxactivperorder = 2, we would allow 4 activations.

a. If you want to generate activation keys that would display a nag screen (useful for trials), change the shownagscreen entry from 0 to 1.

- b. Finally, if you want to set an expiration date or maximum number of runs / days, it's possible. Remember that XLS Padlock only allows one expiration mode: date, number of runs or number of days per activation key.
 - i. For a maximum number of runs, define the entry named "keymaxruns" and set its value to the number of runs you want to allow.
 - ii. For a maximum number of days, define the entry named "keymaxdays" and set its value to the number of days you want to allow.
 - iii. For a fixed expiration date, define the entry named "keyexpiredate" and set its value to the date with the following mandatory format: YYYY/MM/DD

```
"products": {
    "markbook-demo": {
        "title": "Your workbook title",
        "xlspadlockprivatekey": "{6363CDED-3E14-465A-9E96-5B52C356F6CD}",
        "xlspadlockmasterkey": "Pupil Markbook Sub Secret 112",
        "usehardwarelocking": 1,
        "maxactivperorder": 2,
        "keymaxdays": 180,
        "shownagscreen": 0
},
```

9. Step 5: configuring the Excel workbook for subscriptions

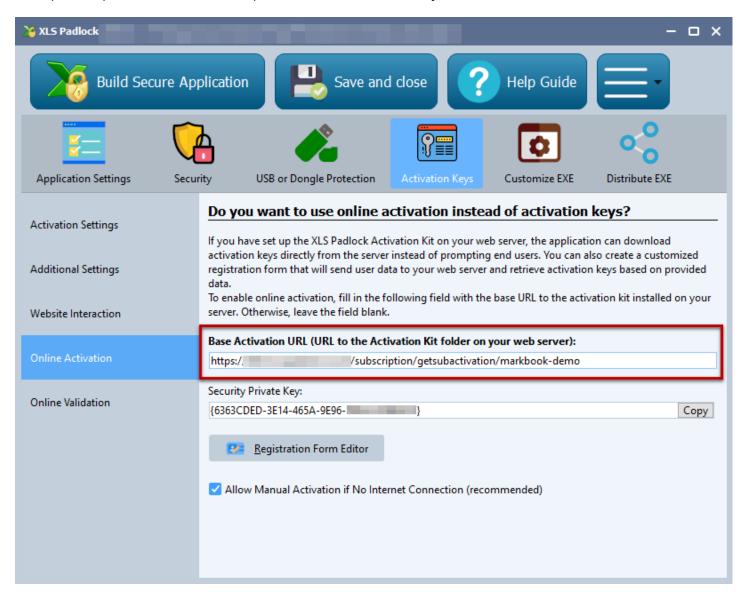
In your XLS Padlock project, navigate to the "Activation Keys / Online Activation" page.

In the Base Activation URL field, enter the base URL as defined previously (see <u>Base URL for activation</u>) on your web server followed by /getsubactivation/{product-path} (a final slash / is not mandatory) and replace {product-path} with the product path associated to your workbook (and defined in workbooks.json).

In our case started earlier, it would be:

https://www.mywebsite.com/subscription/getsubactivation/markbook-demo

If the product path is omitted, the first product defined in workbooks.json will be used.



XLS Padlock can handle TLS/SSL connections: if your web server has a valid SSL certificate, you can use secure URLs that begin with HTTPS.

2. Click Registration Form Editor. XLS Padlock shows a basic HTML editor and a preview of the dialog's text. You can define your own HTML text but at least an HTML field named token is required.



To identify the subscription of your customer, the web application expects the compiled workbook EXE to send a unique order identifier called token. For your customers, it's an activation code but internally we will name it the "token".

For instance, we can use the following HTML code for the registration form editor:

```
<FONT size="10"><B>Activation Required</B></FONT><br>
Welcome to this sample application made with Excel and XLS Padlock. <A
href="https://demo.xlspadlock.com">Learn more about this application</A><br>
To access this application, please enter
the activation code that you received after your order and press <B>Activate</B>.
If your computer has no Internet connection,
choose <B>Manual Activation</B>.<br/>
Your Activation Code:<br/>
CONTROL TYPE="EDIT" WIDTH="280" VALUE="" ID="token">
```

Only this part is mandatory because it defines the HTML field that lets the user enter his activation token:

```
<CONTROL TYPE="EDIT" WIDTH="280" VALUE="" ID="token">
```

Save your changes and close the editor.

3. Compile your workbook EXE application. It is now associated to the web application and ready for testing!

10. Step 6: let FastSpring generate activation tokens and send them to customers

When customers purchase your subscription from FastSpring, they need to be sent an activation code or token.

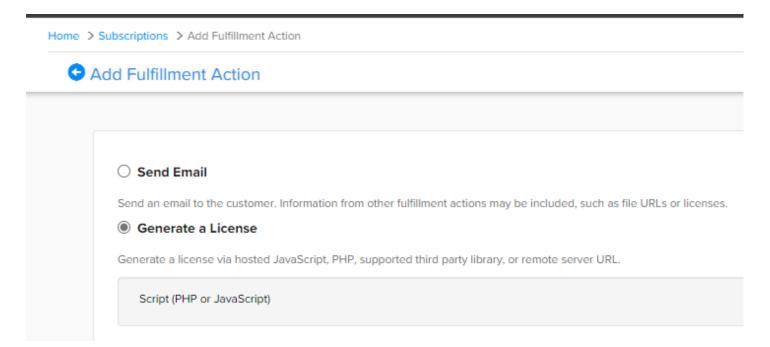
We will then configure FastSpring to automatically generate this activation code and send it to the customer by email. This token lets him activate the workbook.

Generate the activation code

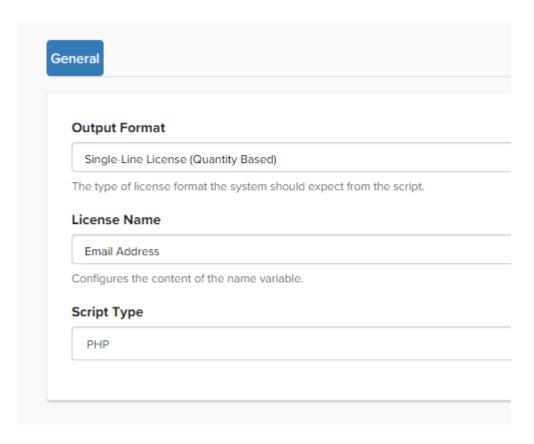
In FastSpring dashboard, select Catalog / Subscriptions then edit the subscription associated to the workbook.

In Fulfillment, click Add New Fulfillment.

Choose Generate a License then Script (PHP), click Next:



Configure all fields like on this screenshot and click Create.



In PHP Script Source, copy and paste the following PHP code:

```
<?php

$ascii = $subscription;
$hex = '';
  for ($i = 0; $i < strlen($ascii); $i++) {
    $byte = strtoupper(dechex(ord($ascii[$i])));
    $byte = str_repeat('0', 2 - strlen($byte)).$byte;
    $hex.=$byte;
}
$res = wordwrap($hex, 4, '-', true);
print $res;

?>
```

Click Test to verify the code and Save to save your changes.

The activation token is based on the subscription ID internally used by FastSpring.

Send the email with activation code

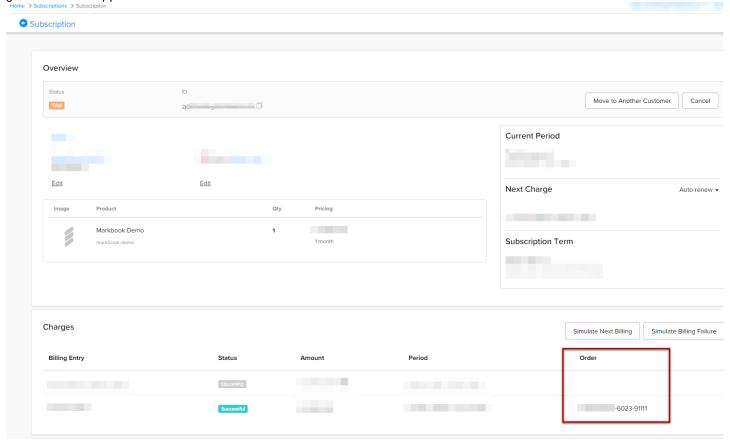
After purchase, FasSpring sends a receipt message that automatically includes relevant fulfillment details, including the activation code generated as described above.

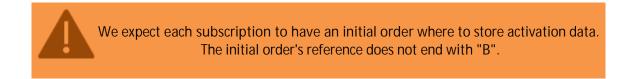
There is no additional step to configure.

11. Description of the activation process

To determine the number of allowed activations for your compiled workbook EXE, the web application stores custom data into FastSpring orders thanks to the Tags feature.

When a customer purchases a subscription for your compiled workbook EXE through FastSpring, an initial order is generated and appears in the Orders list:



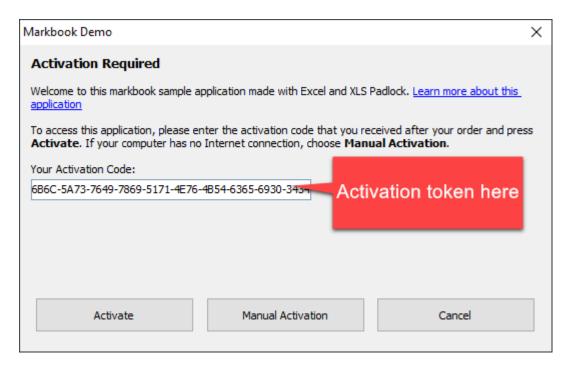


Activation and validation processes for a subscription managed by the web application use the activation token that identifies the subscription in FastSpring.

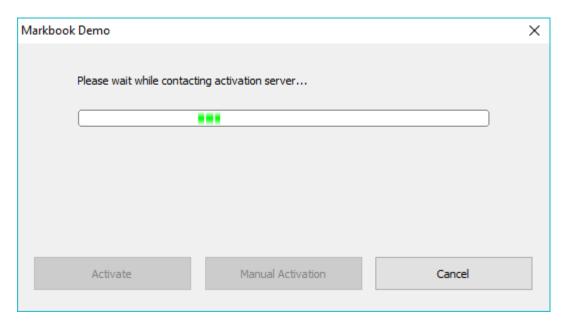


This activation token must be sent to the customer who purchased your workbook. This token lets him activate the workbook. By default, FastSpring will send the activation token automatically.

When customers run the compiled workbook EXE file, a dialog box appears telling them that an activation is required. As said before, the dialog box must at least ask for the activation token (you can name it what you want but the associated HTML field ID must be "token", see configuring the Excel workbook for subscriptions).



When the customer clicks Activate, data is sent to the activation server:



The FS kit on the activation server will check the subscription's status and different settings.



This ensures that only paid customers with an active subscription can activate your workbook.

After a successful activation, a confirmation message is shown, and the compiled workbook EXE is restarted. If an error occurs, the corresponding message box is shown, and customer can try to activate again.

12. Description of the validation process

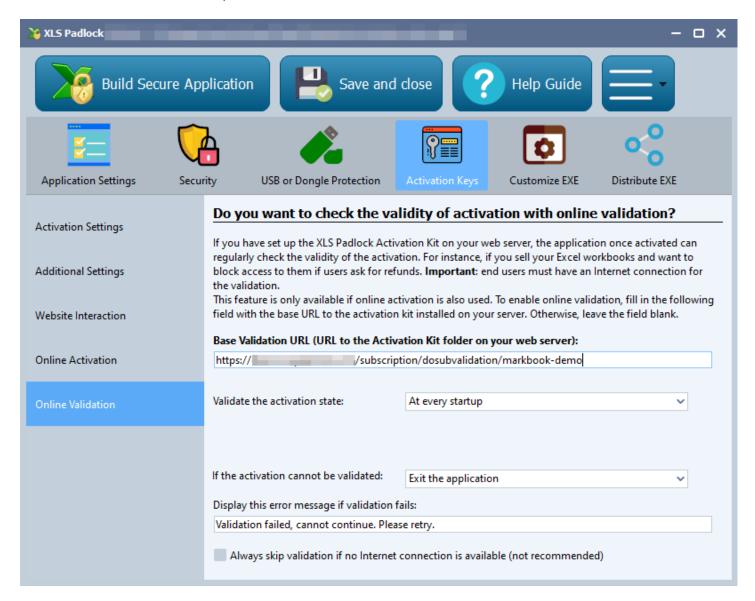
Suppose that your customers want to get a refund after purchasing or cancel their subscription, you can now block their access to your workbook. This is possible thanks to the <u>validation feature of XLS Padlock</u> handled by the FS Subscription kit: you can configure your compiled workbook EXE to check the validity of the customer's subscription regularly.



Possible uses:

- you sell Excel workbooks and you want to block access to them if end users ask for refunds.
- you want to control who can access Excel workbooks regularly.

To activate the validation feature, fill in the base validation URL field.



In the Base Validation URL field, enter the base URL as defined previously (see <u>Base URL for activation</u>) on your web server followed by /dosubvalidation/{product path} (a final slash / is not mandatory) and replace {product path} with the FastSpring product path associated to your workbook (and defined in workbooks.json).

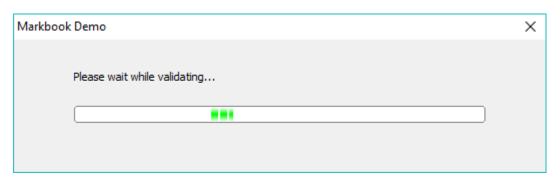
In our case, it would be:

https://www.mywebsite.com/subscription/dosubvalidation/markbook-demo

Then, define the frequency of validation and what should happen if the validation fails. Please refer to the <u>XLS Padlock</u> <u>User Guide</u> for further details about each setting.

Recompile your workbook EXE with XLS Padlock.

The compiled workbook EXE can now perform validation at startup:

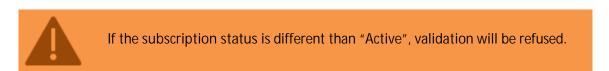


Suppose that you blocked the access of your customers (by cancelling their subscription) or if the subscription expired, they will get this error (returned by the web application):



Otherwise, if validation is successful, the compiled workbook EXE continues its execution.

During validation, the FS kit also checks the subscription's status.



This ensures that only paying customers with active subscriptions are validated, and therefore, may access the workbook.

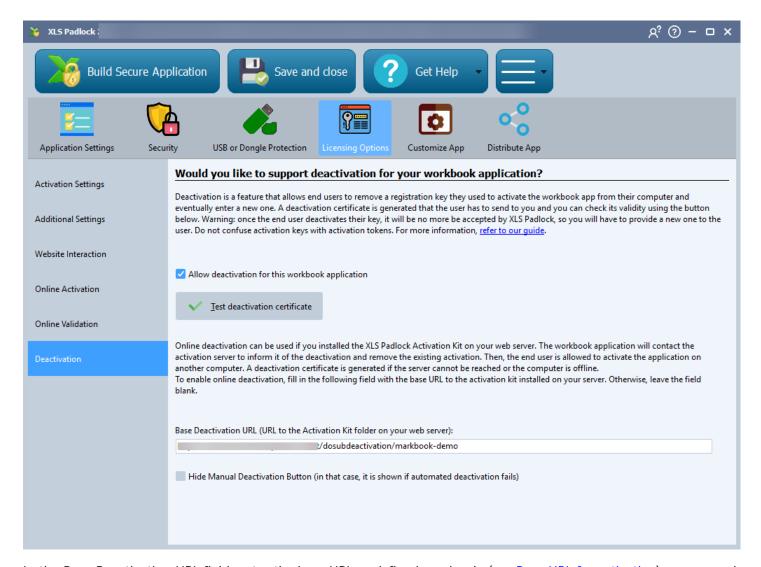
13. Setting up deactivation

The deactivation process in XLS Padlock allows end users to unregister their activated Excel workbook apps from their current device, enabling them to transfer their license to another device. This process is useful in scenarios like hardware changes, system upgrades, or when switching to a new computer.

The FastSpring Subscription Kit manages the online deactivation process efficiently. When a user decides to deactivate a license on their device, the process is automated, streamlining the workflow for both users and administrators. No need to check deactivation certificates manually.



To enable the deactivation feature, tick the "Allow deactivation for this workbook application" option and fill in the Base Deactivation URL field:



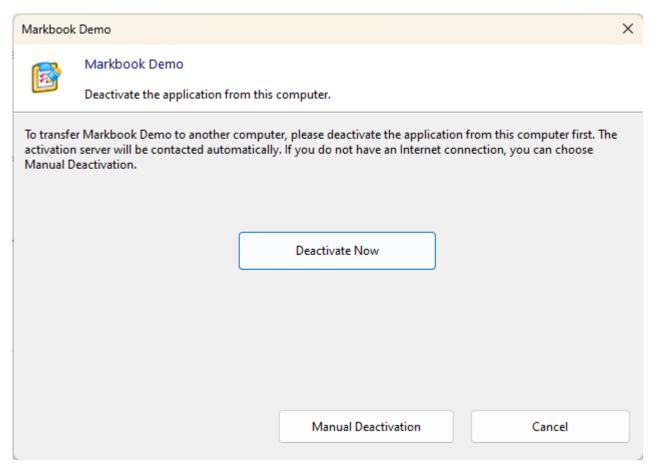
In the Base Deactivation URL field, enter the base URL as defined previously (see <u>Base URL for activation</u>) on your web server, followed by /dosubdeactivation/{product path} (a final slash is not mandatory) and replace {product path} with the FastSpring product path associated to your workbook (and defined in workbooks.json).

In our case, it would be:

https://www.mywebsite.com/subscription/dosubdeactivation/markbook-demo

Recompile your workbook EXE with XLS Padlock. That's all.

When end users want to deactivate (see the XLS Padlock user guide for instructions on how to deactivate a workbook app), the server will be informed and the existing activation stored on it will be removed.



During deactivation, the FastSpring Subscription Kit also checks the subscription's status.



This ensures that only customers with an active subscription can deactivate existing licenses in order to transfer them.