# kartris

# 1. Overview

Kartris is a free ASP.NET web application for running online stores. The system is fully featured e-commerce CMS (content management system) that can store and display product and other data to customers, and has the e-commerce elements that allow items to be selected and purchased, and orders to be processed.  
  
Kartris is written in VB.NET 'web forms' with an MS SQL 2012+ database, and as such must be hosted on an MS Windows Server running the Microsoft IIS web server for production deployment, although it can be run for development and test purposes on a variety of Windows installations. The software consists of three main elements:

* The pages, controls, business logic, templates and other files (including full source code) that run the site
* The database, which stores all product, customer and other data, and the associated code (including stored procedures and the data access layer)
* Other product specific files such as uploaded product images, downloadable files, etc.

Kartris has a modern, user-friendly interface that makes use of AJAX to deliver a fast, feature-rich experience that works on all modern browsers.  
  
Certain sections of this manual are highlighted either for importance, or because they refer to more technical information that is intended largely for developers. We have marked such sections in colour as follows:

Sections marked like this contain technical information intended primarily for developers and IT specialists who are setting up Kartris systems. A general user can normally ignore these sections.Sections containing important security or other warnings are highlighted in red. All users should pay special attention to these sections.

# 2. Setup

This section deals with installing Kartris and doing some basic configuration.

There are two main scenarios for setup – local and remote. 'Local' means installation on a computer you have full access to such as your desktop or laptop computer, or a server if you have full admin rights. 'Remote' means a computer you can only access via FTP and MS SQL.2.1. Prerequisites

You must have the following software installed in order to run Kartris.

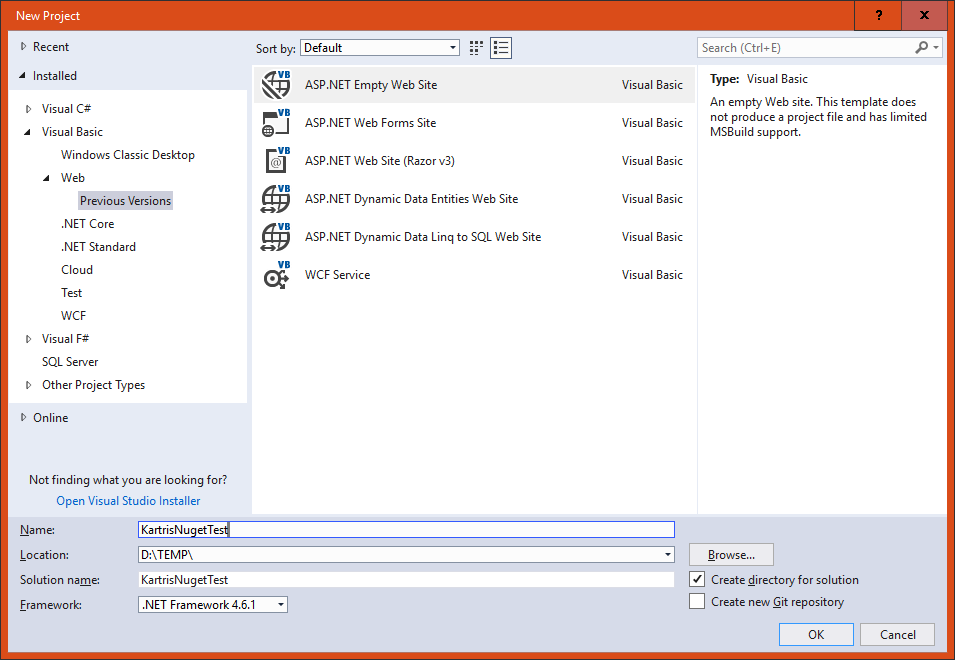
* IIS7.x (Windows Server 2008 or Vista) or IIS8 (Windows Server 2012 or Windows 8 or above)
* MS SQL 2008 R2 Express or above (available free from Microsoft's web site) or one of the full versions of MS SQL 2008 or above
* ASP.NET 4.6+

For best performance, a modern browser such as Firefox, Chrome, Safari or Edge for the back end. The front end still supports versions of Internet Explorer still under support.

## 2.2. NuGet

NuGet is a Microsoft run service that allows you to import packages from an online repository, directly into Visual Studio. This is probably the easiest way to get hold of the latest Kartris code to set up a new local version for development.

### 2.2.1. Setup a new web project in Visual Studio



Select from the left hand panel.

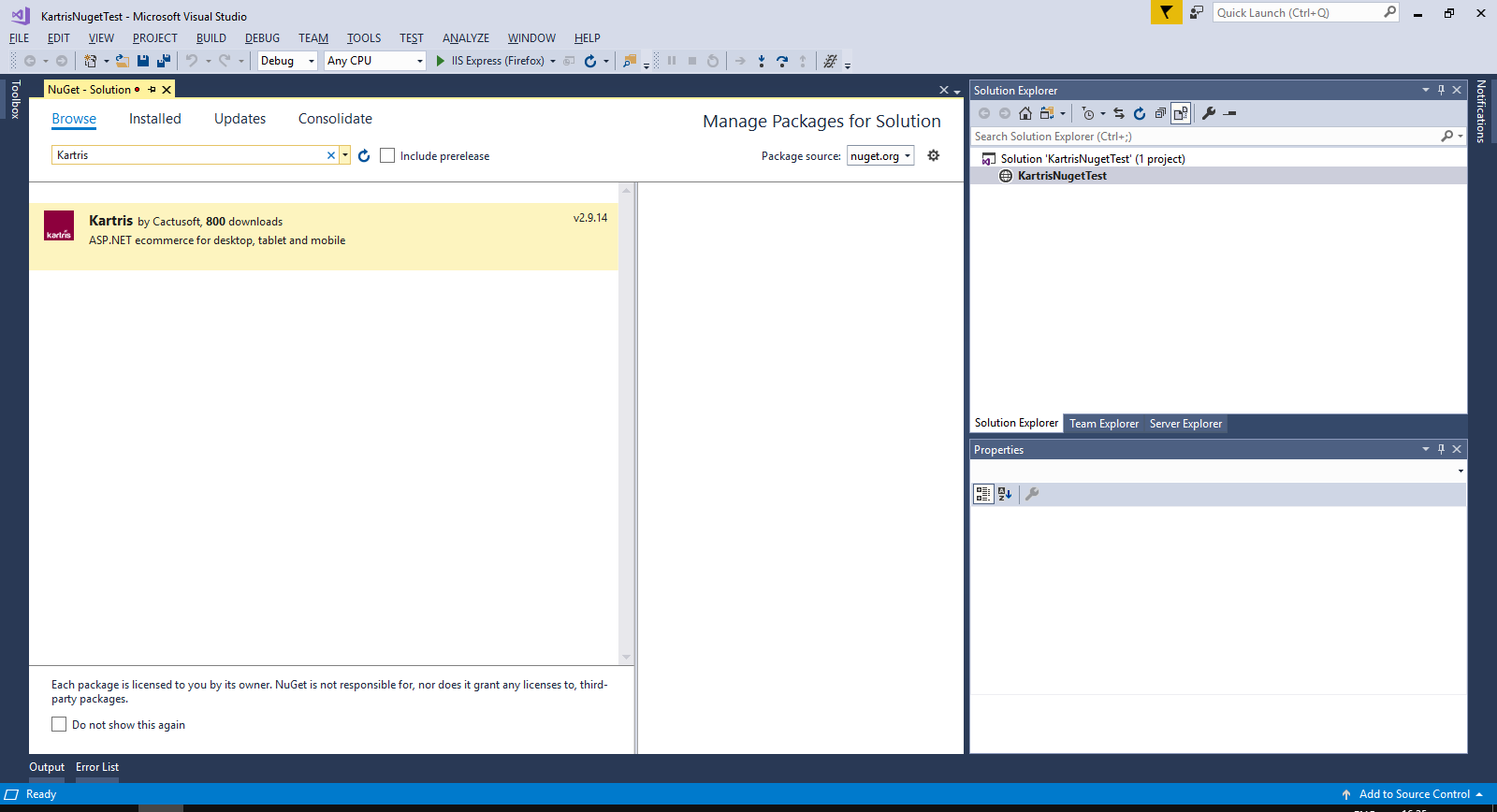
Then choose in the main content area, and choose a name and location for your project. The version of the framework isn't so important, as that should be set later when we pull the files in. But you must have at least .NET 4.6 installed.

Next, remove any files and folders that Visual Studio 'helpfully' adds to the web site, so it really is empty.

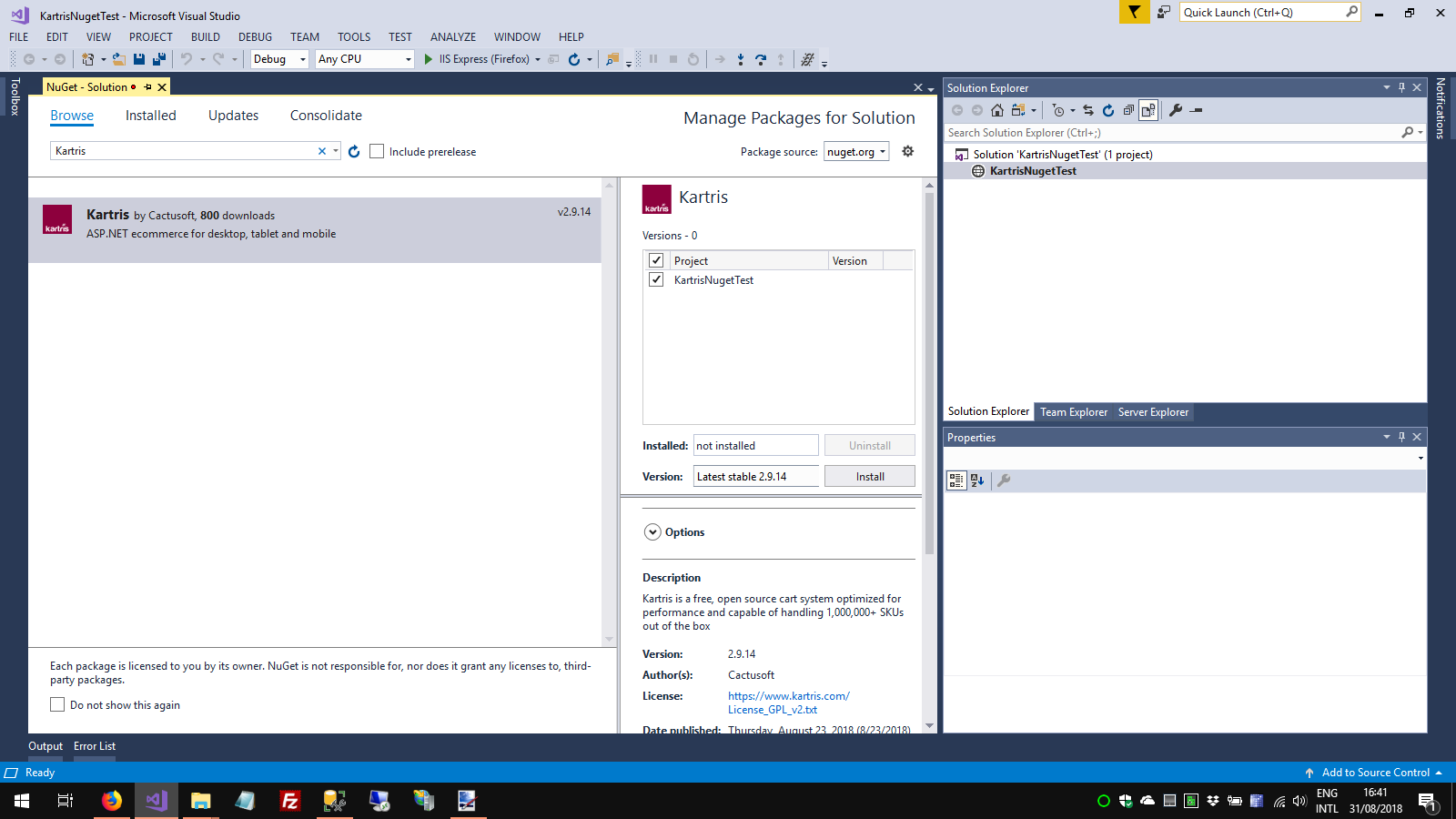
### 2.2.2. Install from Nuget

Select .

Click the 'Browse' link/tab, then type 'Kartris' in the search box. You should find the Kartris package.



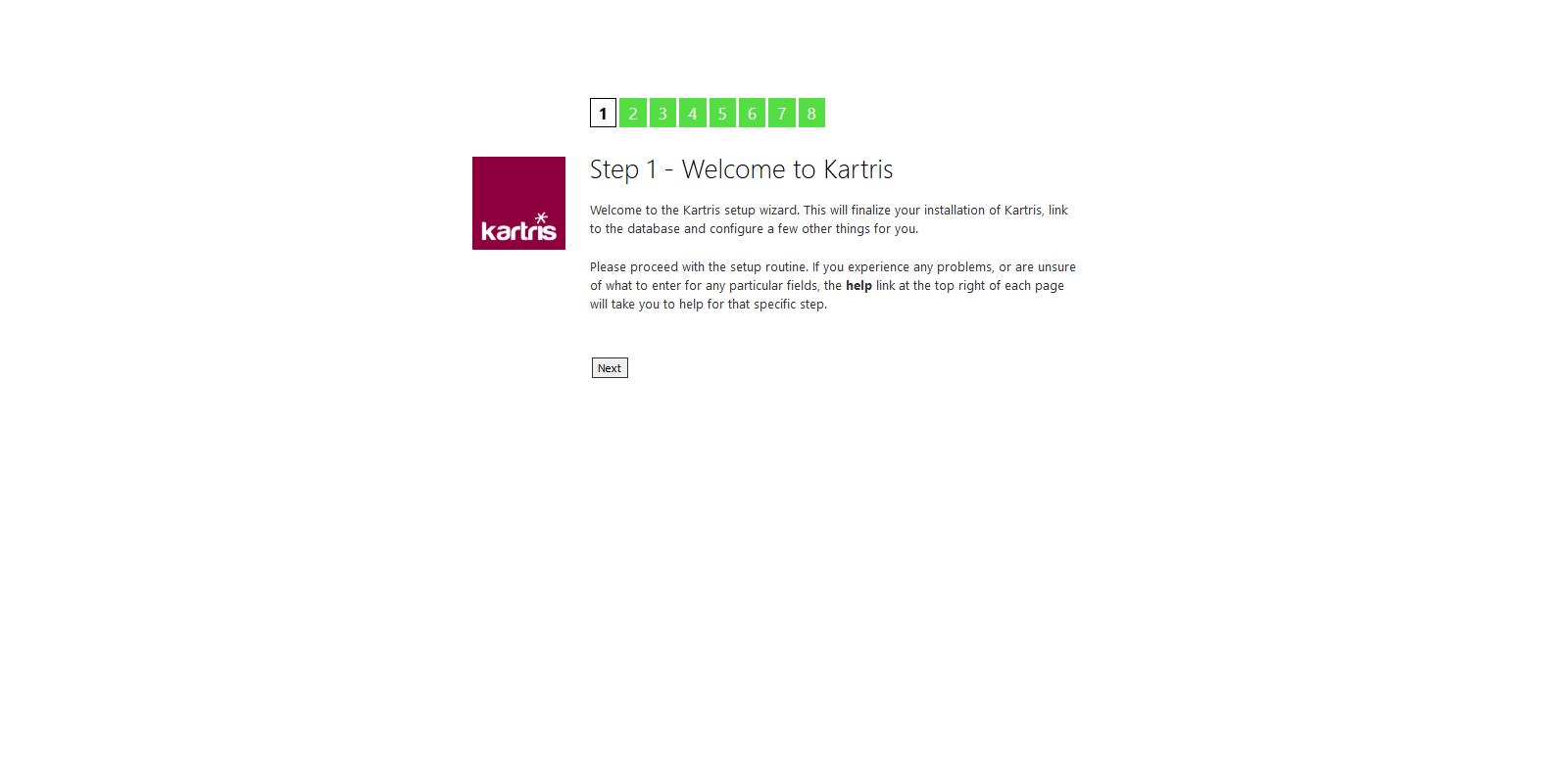
Click to select this, then check the box to install to the project you've just set up. Click the button.



Visual Studio will show you a list of dependencies. Click to proceed with the installation. You will also need to approve some licenses for dependencies. The required Kartris files will then be downloaded to your web.

### 2.2.3. Setup routine

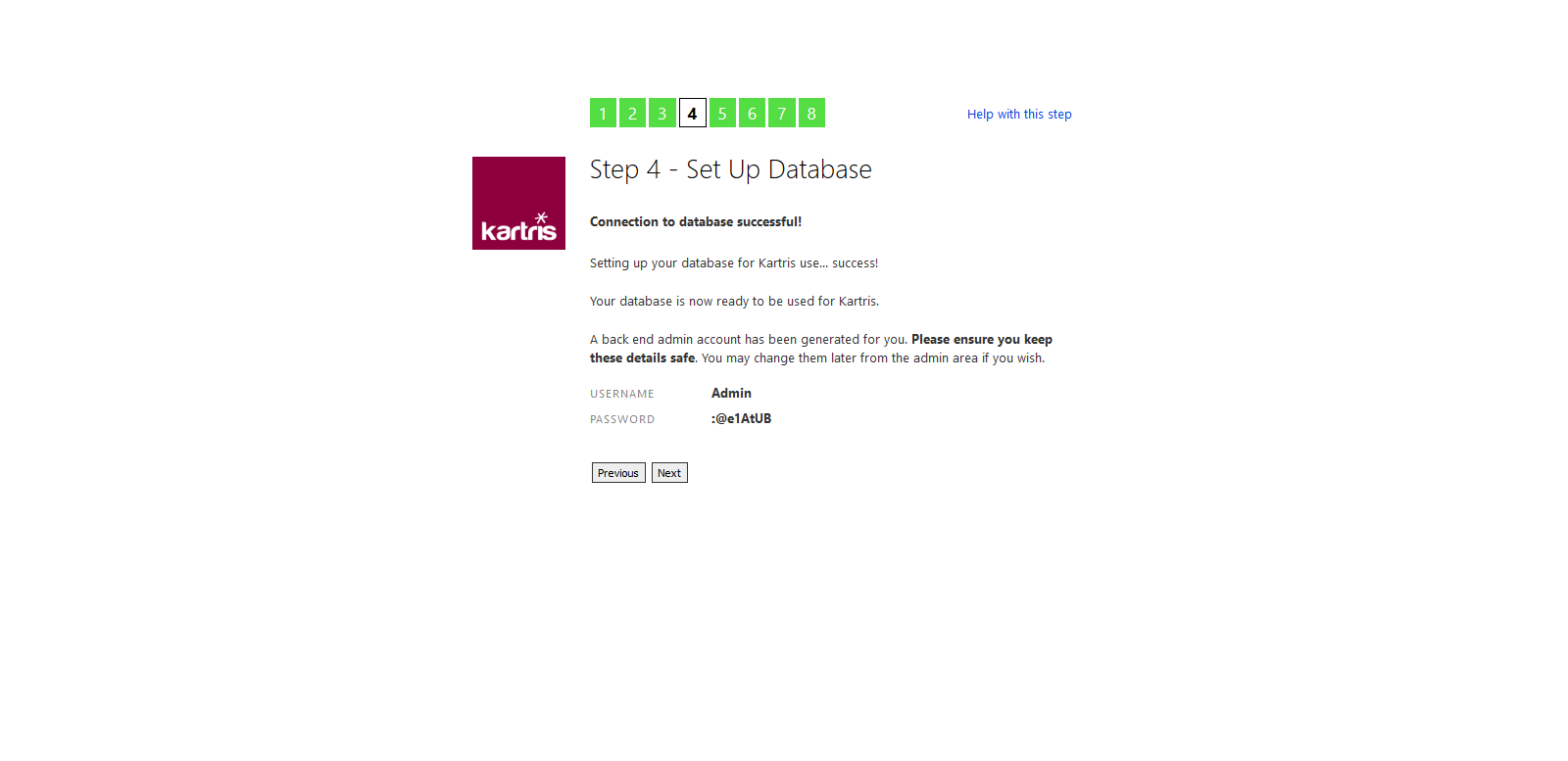
In Visual Studio, click to run the web site. You will get a warning that there were errors (this is because we don't yet have a database). Click YES to run the last successful build. You should see the setup routine in your web browser.



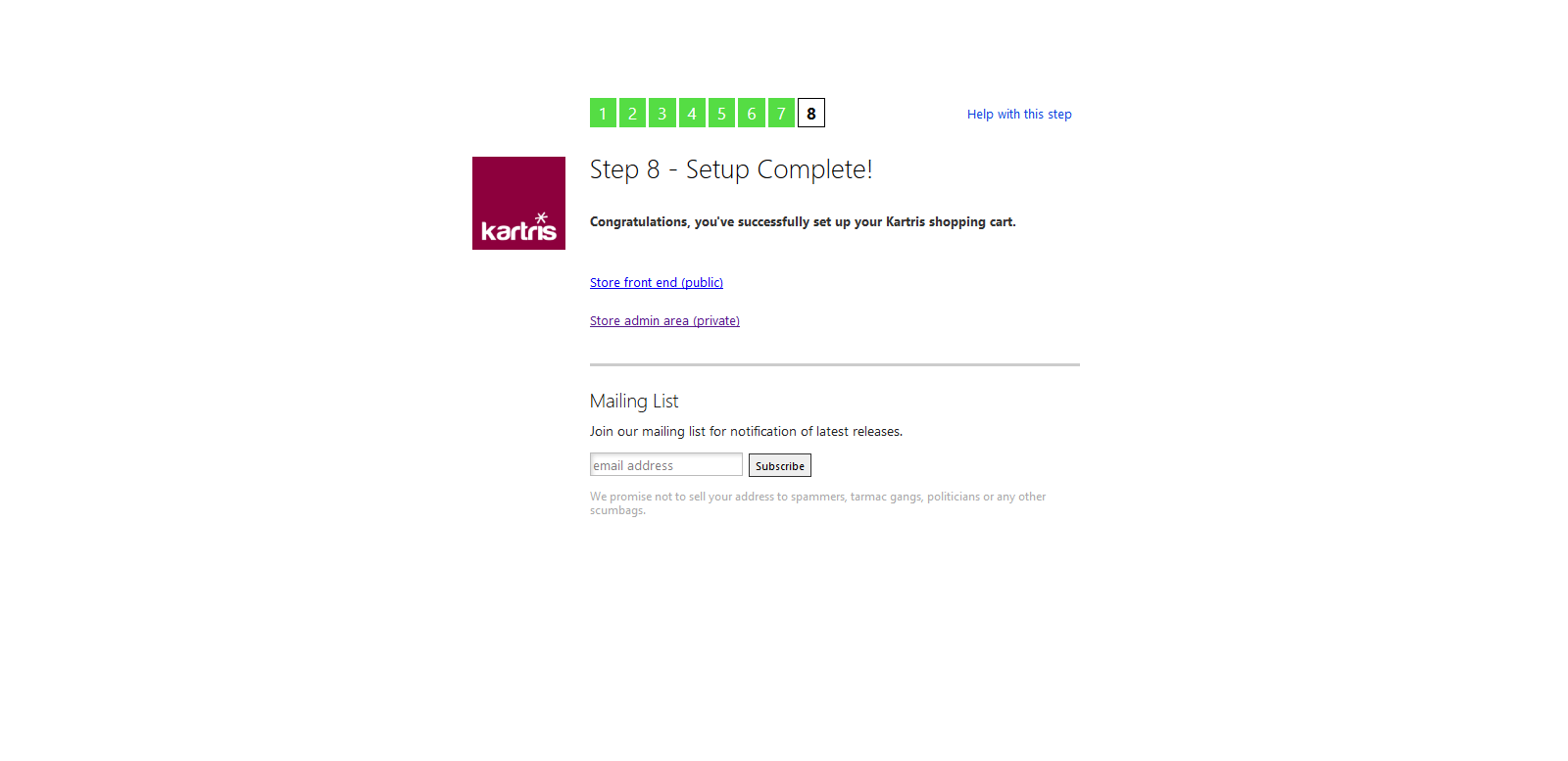
Follow the steps through. You will get to a step that lets you setup a database. Specify the path to your SQL Server, choose a database name and select that this is a new database, and Kartris can create and populate this for you. The checkbox to add demo data adds a few sample products and orders, which make it easier to test the basic features, and can easily be deleted later.



Installing the database can take a few minutes. Once done, you should see the admin account details that the setup routine created for you. We suggest you make a note of these now somewhere safe. You can change the password later if you wish, from within the Kartris back end.



Once you get to the end of the setup process, you should see two links, to access the front and back ends of Kartris.



The setup routine will make changes to the web.config file, to include the connection string to the new database and some other minor changs.

## 2.3. Manual installation

### 2.3.1. Download the software

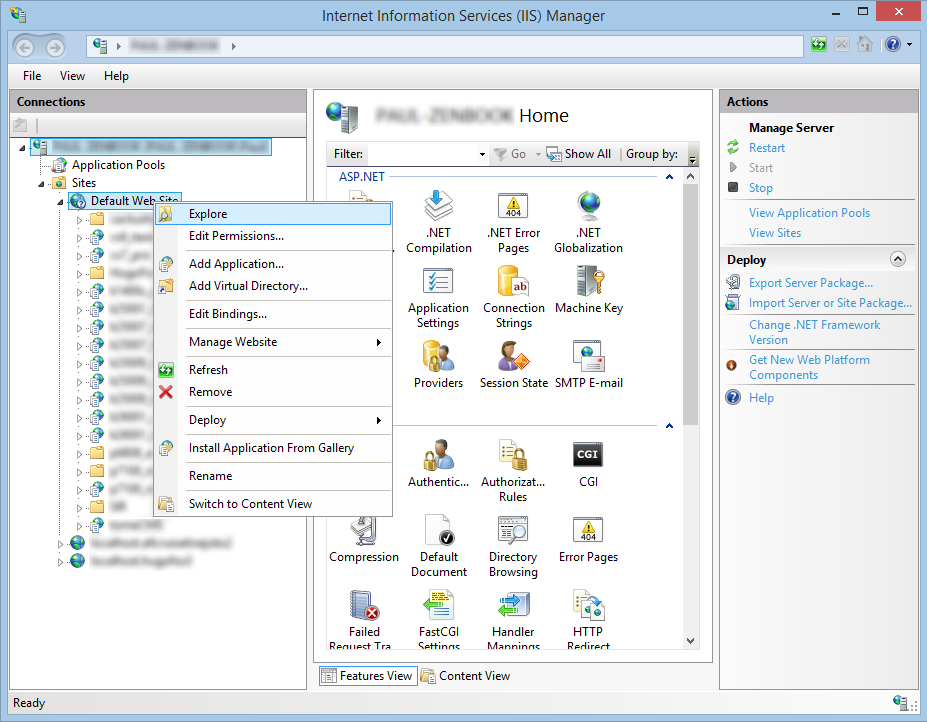
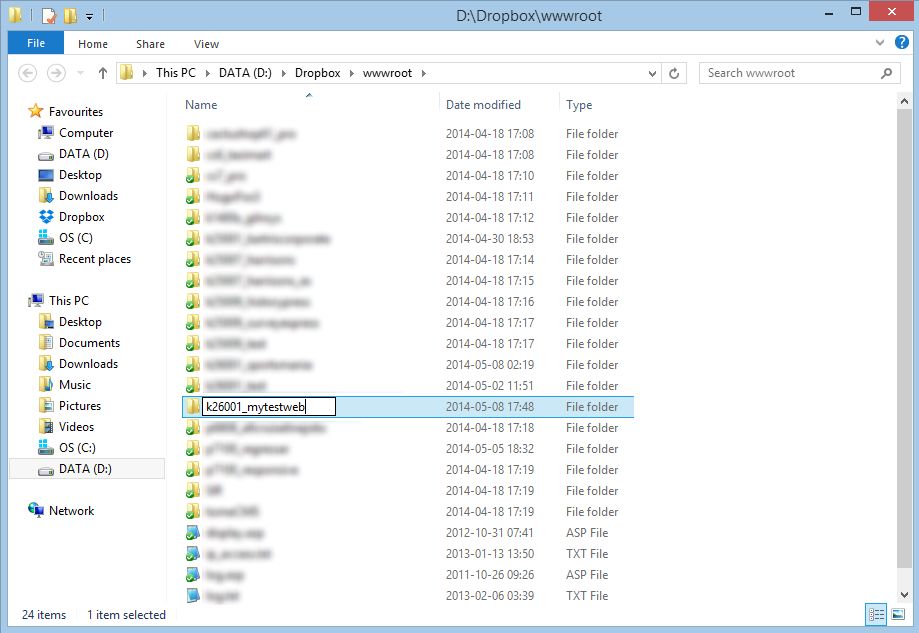
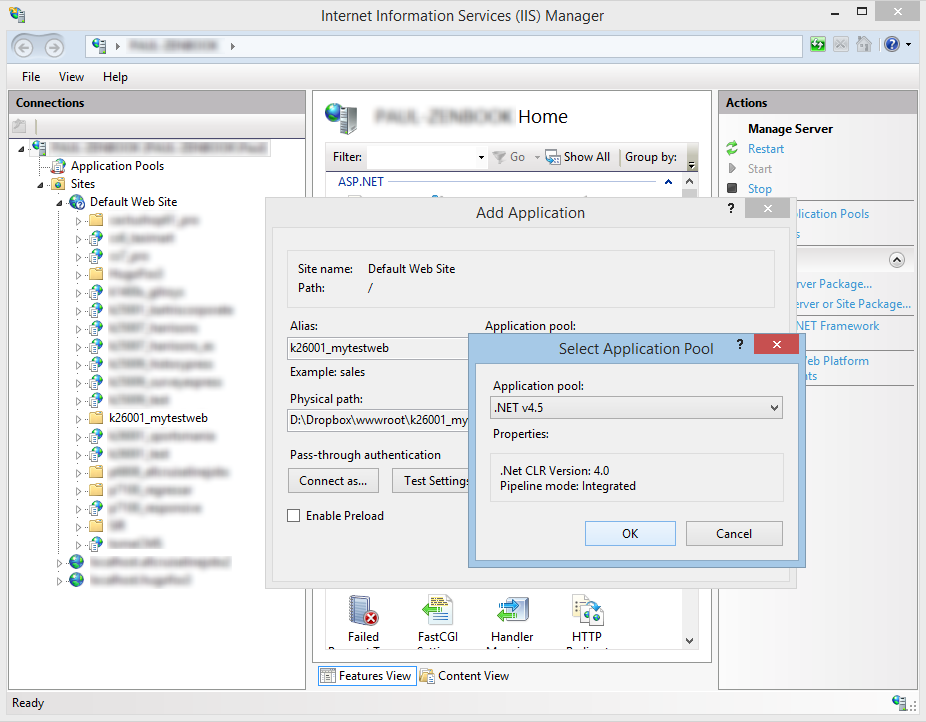
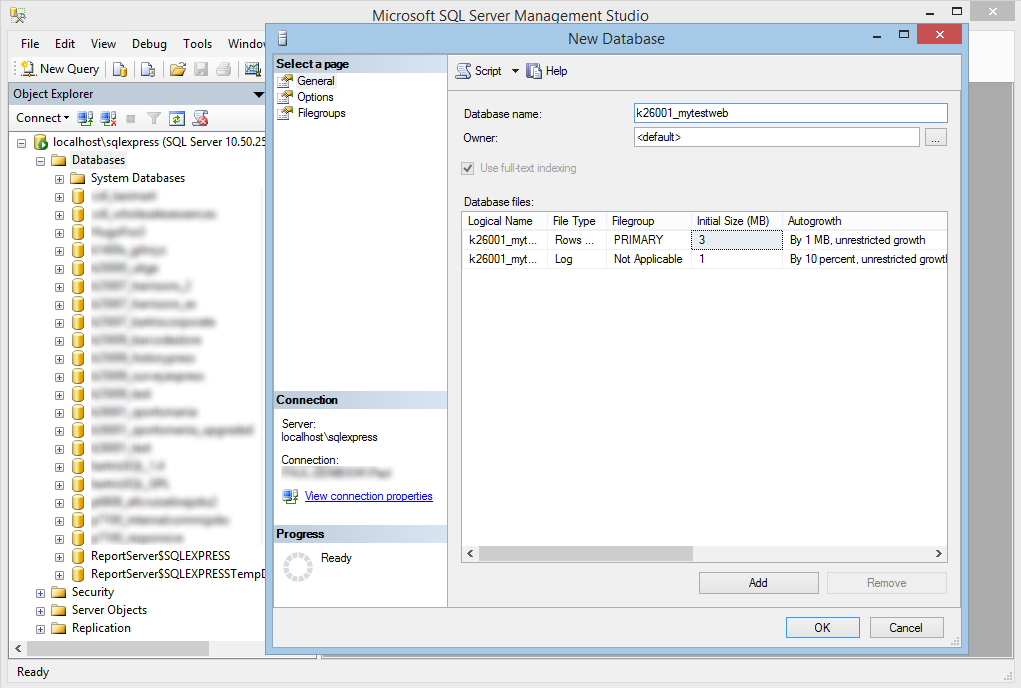
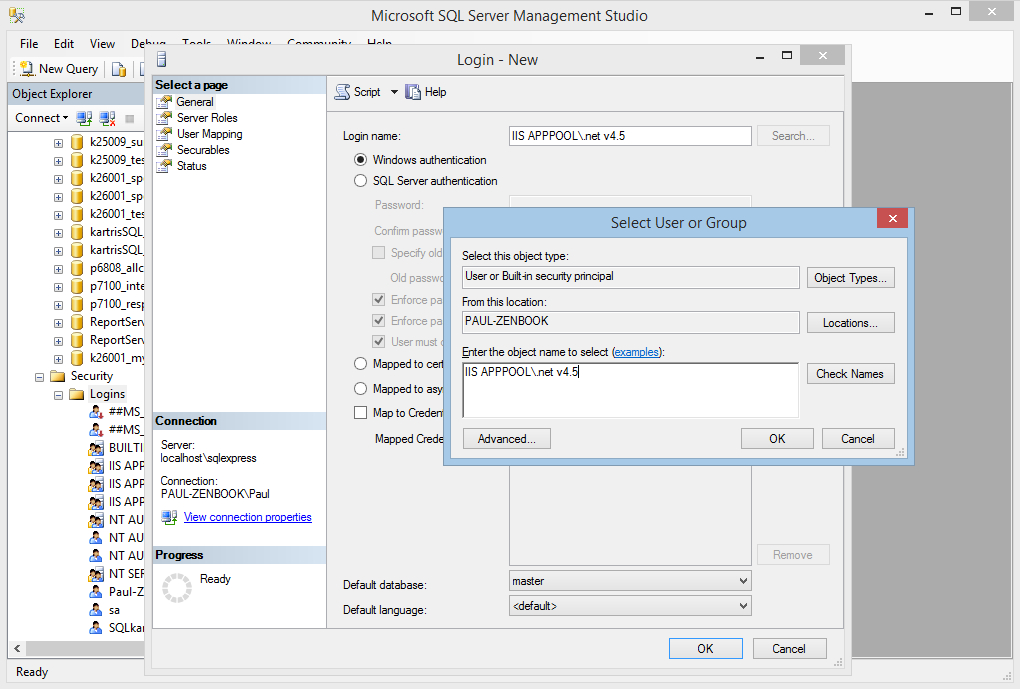
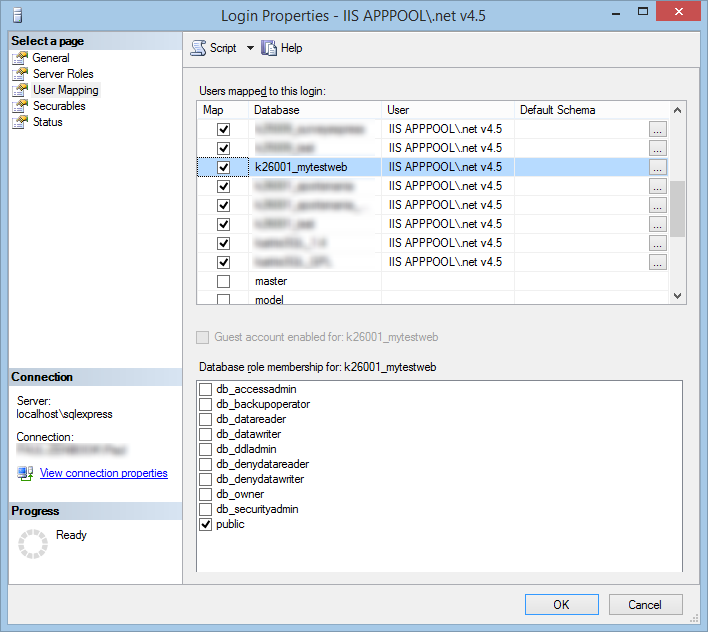
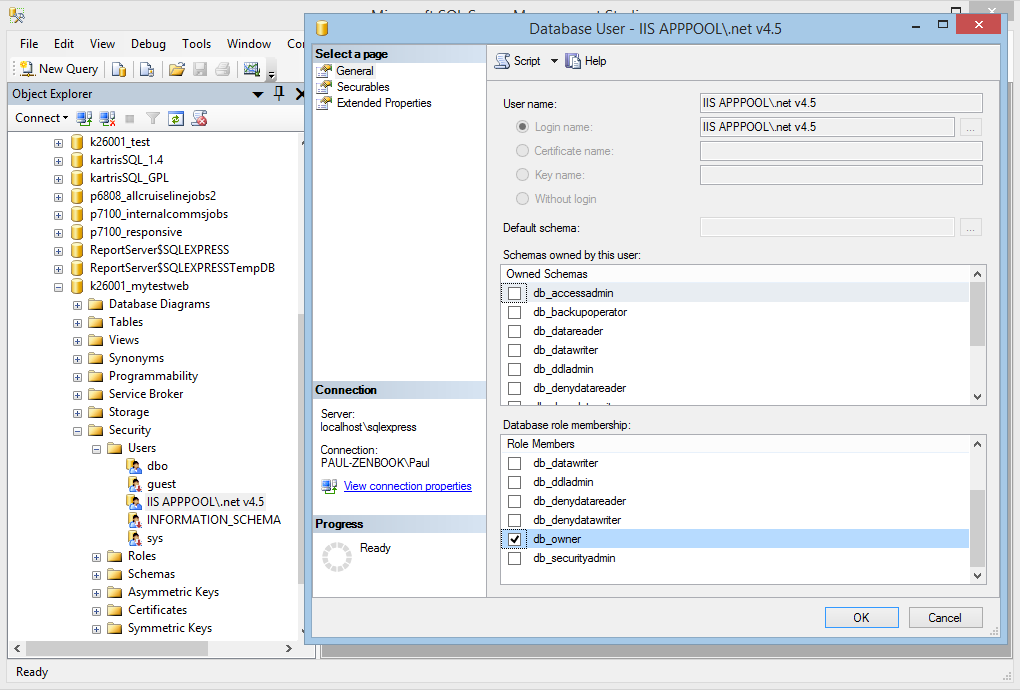
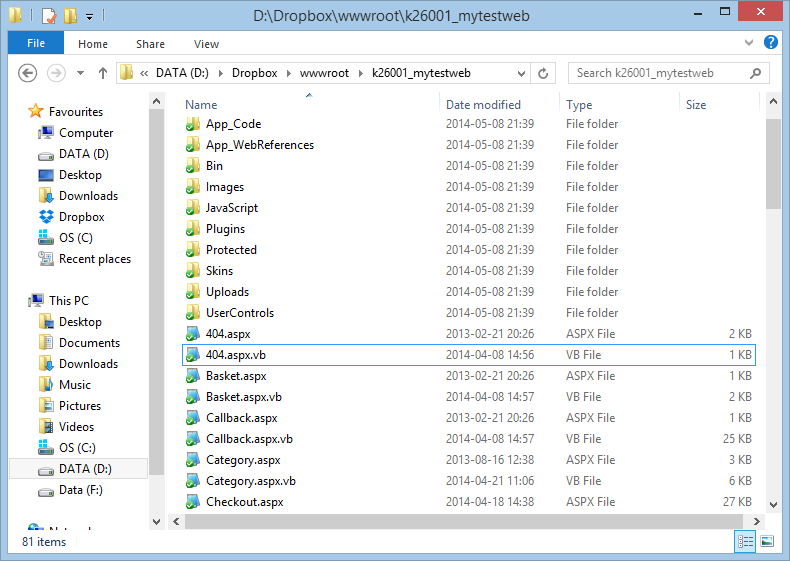
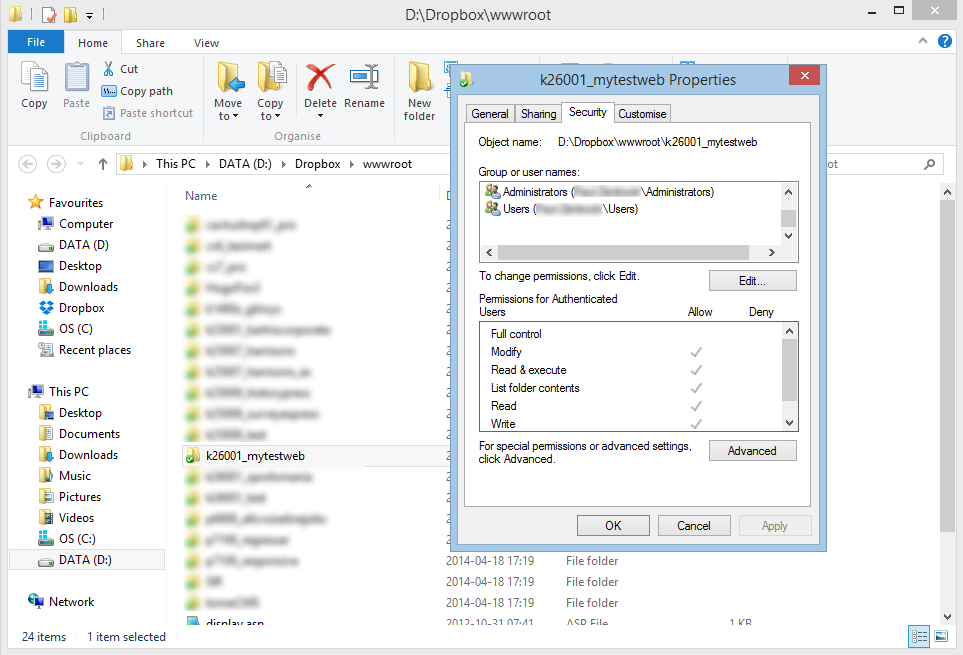
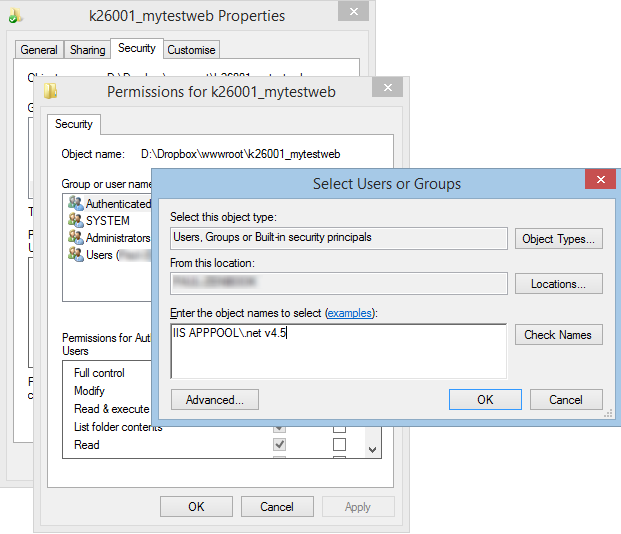
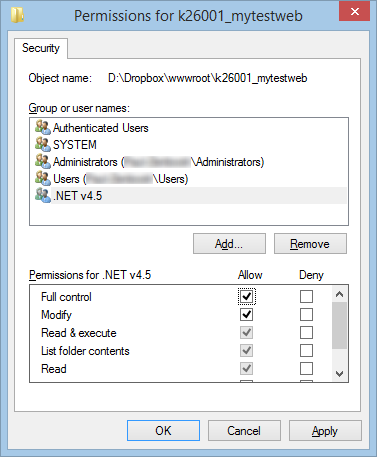
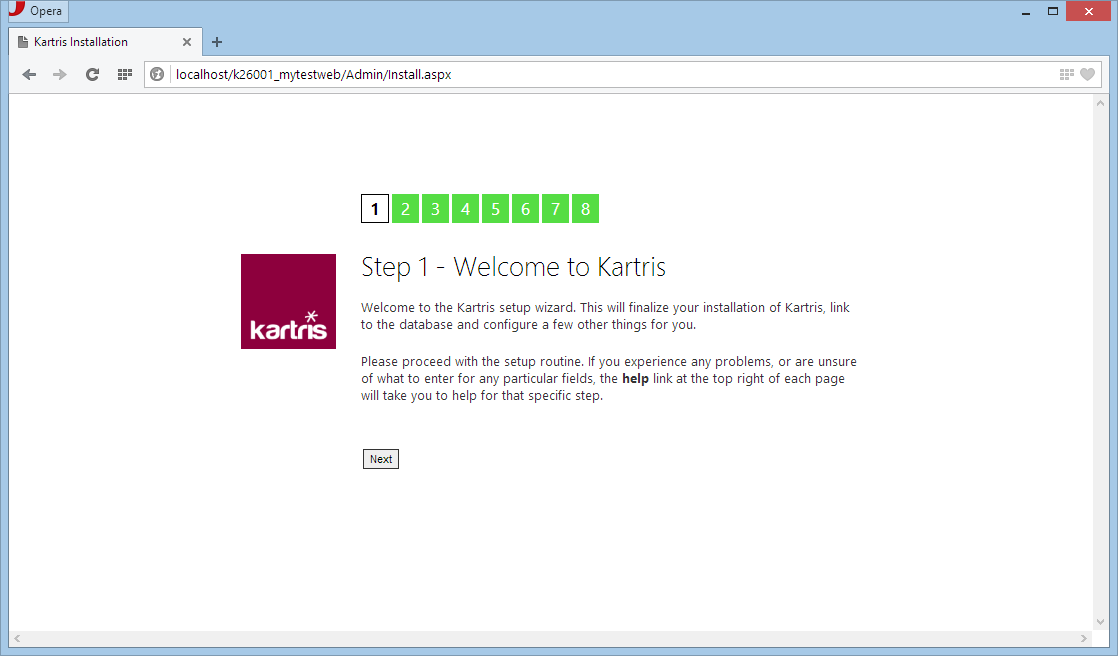
Our site downloads page has links to download the latest zip:  
  
<https://www.kartris.com/t-Downloads.aspx>  
  
The software itself comes as a zipped file.

If you want to obtain the very latest up-to-date code, you can go to the source repository on Github (this may contain development code, unfinished work, bugs and other issues, so the version zips on our downloads page are strongly recommended).

<https://github.com/cactusoft/kartris>

Don't forget to unblock any zip files you download before you unzip them.  More information... 2.3.2. Installing

#### 2.3.2.1. On IIS 7.5+

The process on IIS7 and earlier will be similar, the main difference being that the web site will run as a specific Windows user rather than an app pool identity. So you will need to add that user to your SQL Server, and create Windows permissions for it.Firstly, you must have Windows, IIS and SQL Server installed. This example is using Windows 8.1 and SQL Server 2008 R2. But the process will be similar for other versions of Windows with IIS7 or above.  
  
 - Find where your IIS web root folder is and add a new folder into it. If you're not sure where it is, go to IIS, right click the Default Web Site and select 'explore'. The default location is normally , but you can move this to another location for disk space reasons, or locate it into your Dropbox if you want files to be backed up to the cloud.  
 - Within windows explorer, add a new folder into your web root. We tend to use names that help identify the version of Kartris and the name of the customer or site, to make it easier to tell these things at a glance later.  
 - Back in IIS, refresh the sites and you should see the new folder within 'sites'. Right click this, and select 'Convert to Application'. A dialogue pops up. Click the 'Select' button and choose the ASP.NET 4.0 or ASP.NET 4.5 application pool. Then Ok everything. You should see the folder '' icon change. The web is now set up ready for our files, which will come a bit later.  
 - We need to create a new database for our site. Open up SQL Management Studio and connect. If you are using SQL Express, the default location will be . Right click on the 'Databases' folder and select 'New Database'. Name your database and save - again, we're going to call it '' (the name does not have to match your web, but it's much easier to tie up sites to their respective databases later if it does).  
 - We need to create the right permissions to allow our web to work with this database. This part is all about identifying which Windows user your web runs as, and giving this user permissions. Because we set the site up using the defaults, it should be running as an app pool identify user called 'IIS APPPOOL\.net v4.5. Remember the application pool we selected in step 2 above was called '.net v4.5' - the database user you need will be called 'IIS APPPOOL\[application pool name]'.  
  
To find users on this database, open up the 'Security' folder in SQL Management Studio and then 'Logins'. If you don't see 'IIS APPPOOL\.net v4.5' (or whatever the name of your app pool is), then you need to add it. If you see the user there already, you can skip to the next step. Otherwise, right click on 'Logins' and type the name of the app pool into the dialogue, then 'Search'. Another window appeals, and you need to enter 'IIS APPPOOL\.net v4.5' again into the box here. When you click 'Check names' you should see the text change, hiding the IIS APPPOOL part. This indicates that it is a valid user. OK everything, and this new user should now appear under 'Logins' in the treeview.  
 - We need to map this database to this user. Right click on the 'IIS APPPOOL\.net v4.5' user and select 'Properties'. On the dialogue that pops up, select 'User Mapping'. Check the box by the 'k26001\_mytestweb' database and Ok to save. This means that this user is now mapped to this database.  
 - Now we have the user mapped to this database, we need to give him permissions. Go to and then right click on the app pool user. In the popup, select '' in the ''. Then OK.  
 - Now we are all set to copy in the Kartris files. Download the latest zip, and ensure you unblock it (see here for more info). Open it up and copy the contents of the Kartris folder into the 'k26001\_mytestweb' folder. Your folder should look like this:  
 - The final configuration step is to give the web site user full control permissions. This is so the web site can write, modify and delete files, which is essential as you upload product images, make changes to payment systems. It also means that the install routine can rewrite the web.config file itself, which makes things a bit easier.  
  
To do this, find the web root in Windows explorer, right click the folder, and select '', then the '' tab.  
Click the 'Edit...' button, then 'Add...' and enter ''. Ok this, and the user '' should appear in the list.  
Finally, select this user in the list and give it full 'allow' permissions, and then OK everything.  
 - You now have the database and web set up with full permissions, and should be ready to start the installer. Call up the web site in a browser - the URL will be .  


## 2.4. Microsoft Web App Gallery

Kartris is featured within the Microsoft Web App Gallery. Various Microsoft Tools including IIS.  
  
[Kartris - Microsoft Web App Gallery](https://webgallery.microsoft.com/apps/Kartris/install)

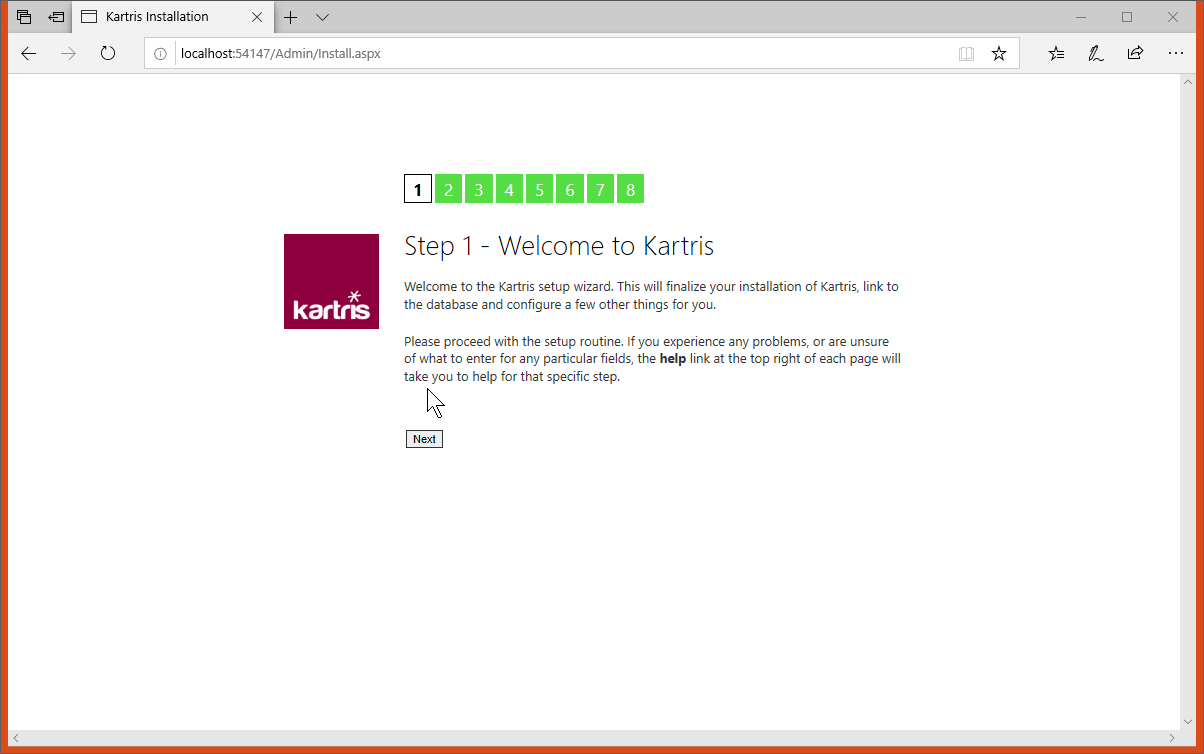
## 2.5. Installing Kartris on web space

1. Unzip Kartris to a folder on your desktop. Using FTP, upload the files to your web site.
2. Make sure your hosting is set to run as ASP.NET 4.0.
3. Call up the site in your web browser, and the setup routine should run.
4. When you get to the stage to setup the database connection, you will probably need to use the database address (or IP), name, username and password given to you by your web host. The install routine will try to rewrite your web.config file with these connection details, but if the permissions do not allow this, you can download it from the setup routine and then upload to the root of your site with FTP instead.
5. If you get problems running the database setup and want to create the database first through MS SQL's Management Studio interface, the .sql file is located here:  
     
     
     
   When you run the setup routine again, it should notice that you already have a Kartris database populated.
6. Once setup and logged in to the back end, you can go to the front end by clicking the Kartris logo link in the top left of the page.

## 2.6. Install routine

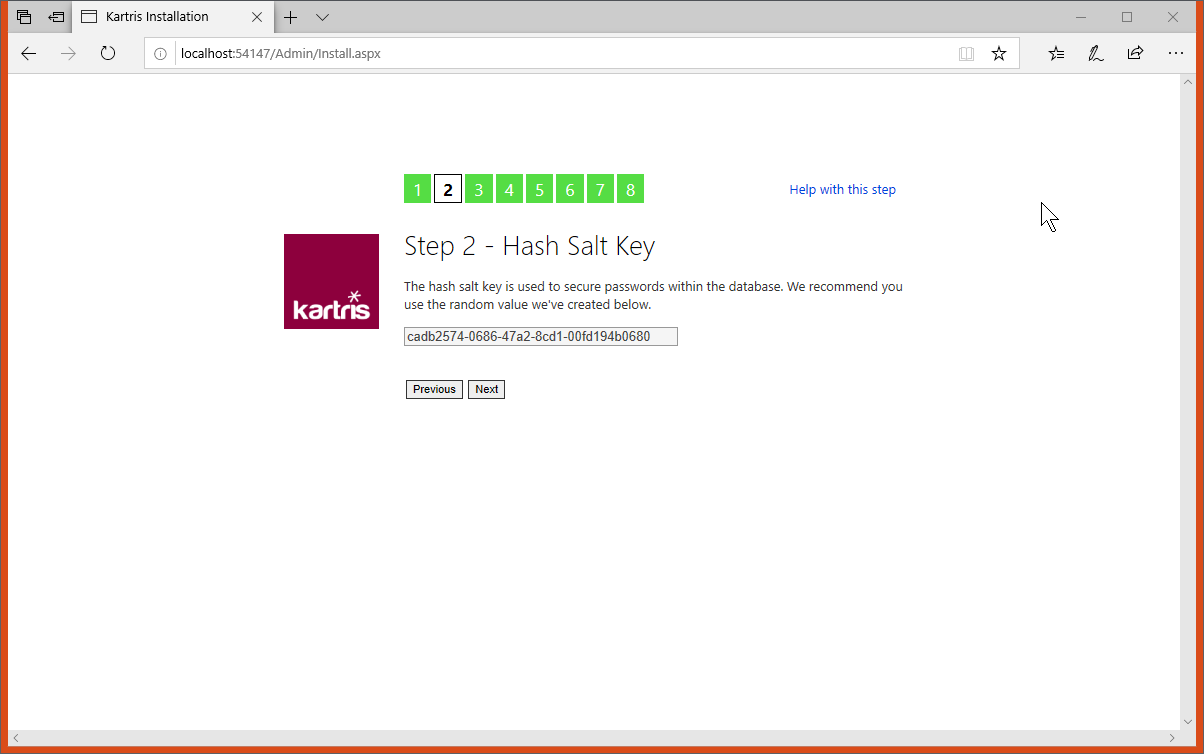
The install routine is a series of setup screens that displays in your browser when you first upload files and successfully run Kartris. This sets some basic settings and creates an admin login password too. The steps are as follows:

### 2.6.1. Installation - Step 1: Welcome



Nothing important here, it is just an intro screen.

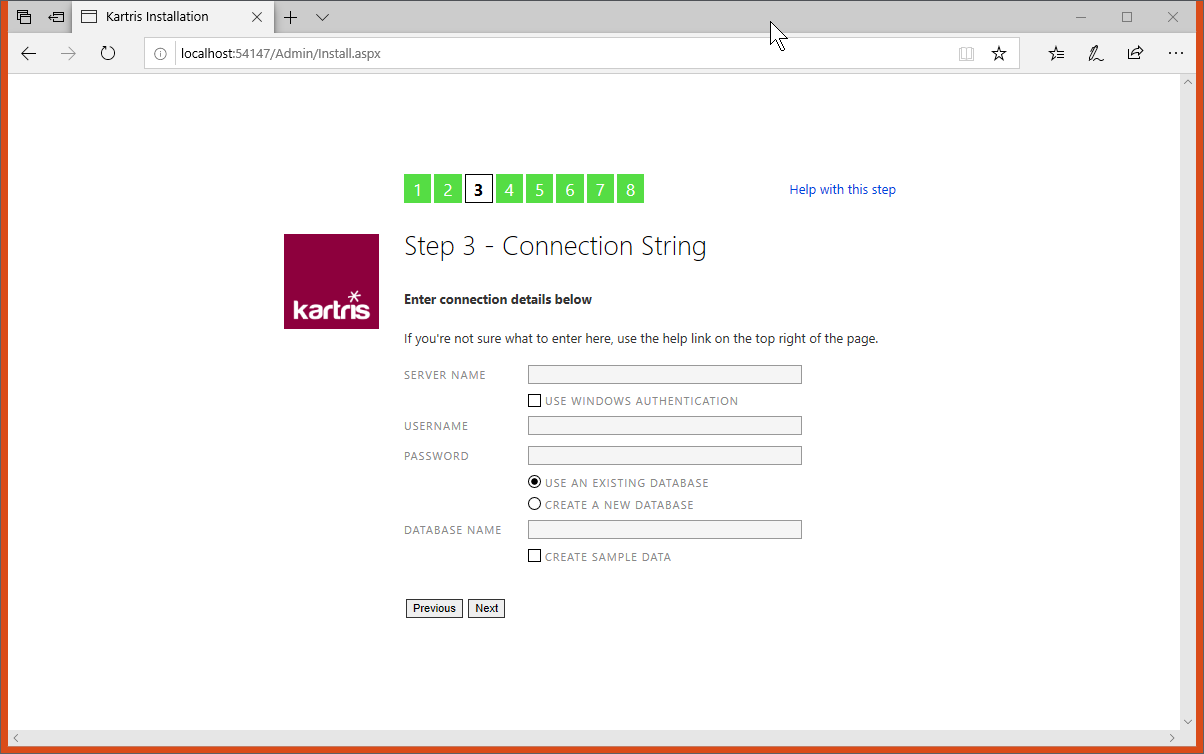
### 2.6.2. Installation - Step 2: Hash Salt Key



For security, Kartris secures passwords for both admin and user accounts by "hashing". For a new installation, just click to proceed here and accept the new random hash salt value we've created.

For more information about Kartris's password security, see @18.4. Password security‍ .

### 2.6.3. Installation - Step 3: Connection String



We need to set up the connection with the database.

#### 2.6.3.1. Server name

If you want to double check the name of your MS SQL Server instance, you can open up Microsoft SQL Server Management Studio (from your programs menu in Windows) and then check the name shown there. If your database server is running on the internet, or on your network, it might have an IP address or another name. It will normally be something like this:

#### 2.6.3.2. Use Windows authentication

Where you have the MS SQL and web server running on the same machine, and if you're developing in Visual Studio, you can use Windows authentication. There is no username or password stored in the connection string; the web server app pool account should have permission to access the database. If you are using Visual Studio, in most cases that user has admin permissions for databases, so you should not specifically need to set it up.

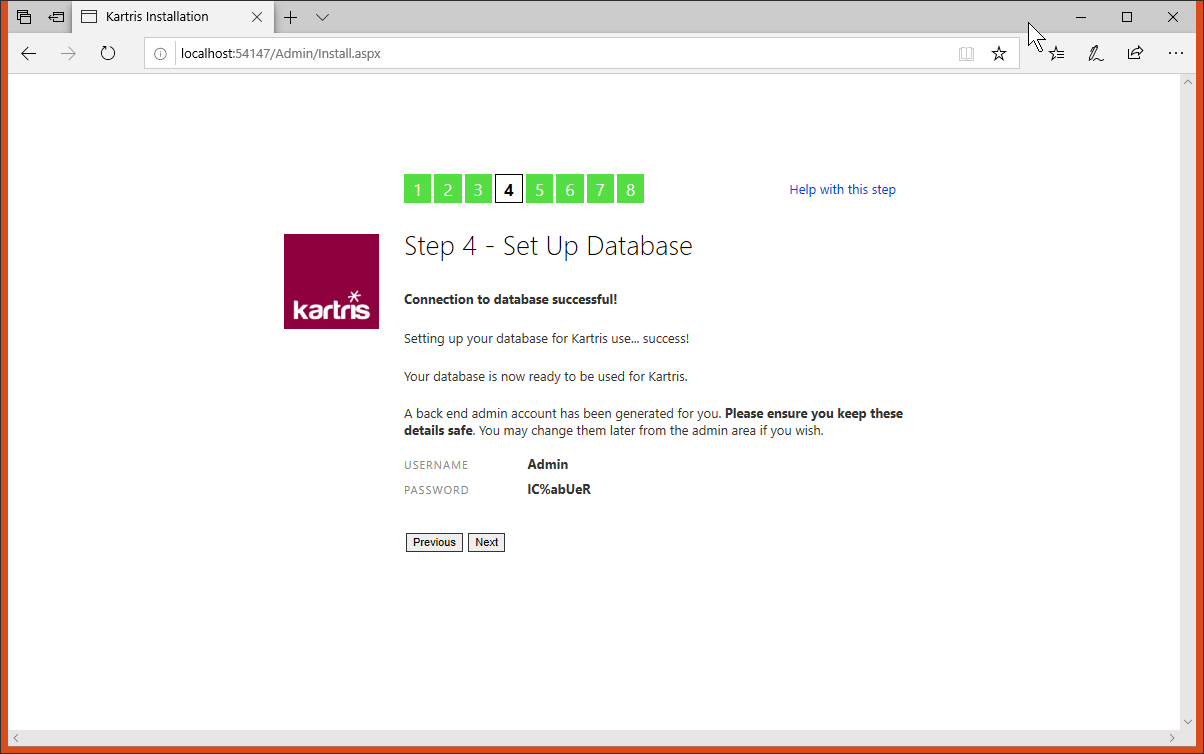
#### 2.6.3.3. Use existing/new database

Generally it is best to set up the database manually first on your MS SQL Server, and then enter the name here. It is also possible to create a database too but it requires sufficient permissions. If you're running in Visual Studio, it should have sufficient permissions to create a new database.

#### 2.6.3.4. Create sample data

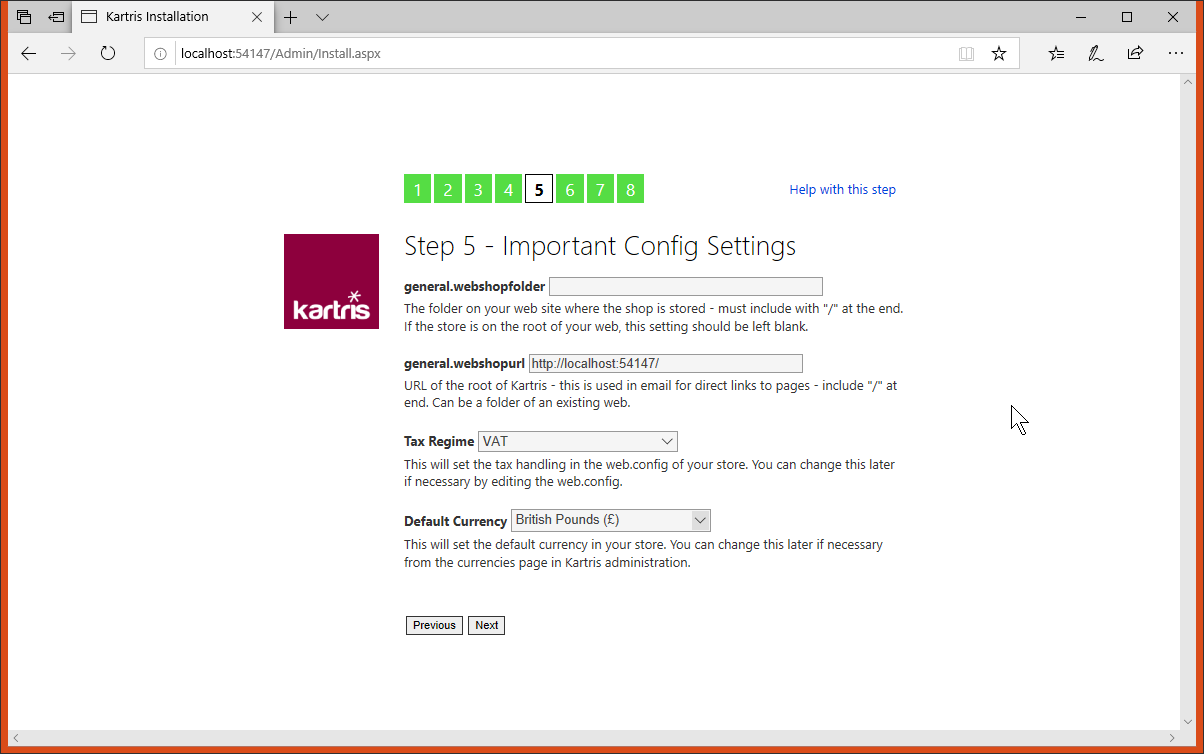
Even if you don't check this box, we add a lot of required data into your Kartris installation such as config settings, language strings and so on. But if you'd like to have a little test data in your new site such as categories, products, customers and orders, check this box. You can easily remove this test data later.

### 2.6.4. Installation - Step 4: Set Up Database



If the permissions are right, Kartris will connect to your database, run any setup scripts to create the database structure and stored procedures, and will generate an admin login. Copy and paste these details somewhere so you can access the store when setup is complete. You will be able to change the admin password or create other admin user accounts later.

### 2.6.5. Installation - Step 5: Important Config Settings



Kartris should automatically pick up the web address you're using. You can also choose a tax regime and default currency.

#### 2.6.5.1. Tax regimes

##### 2.6.5.1.1. VAT

This option is for countries that have a VAT tax system, outside of the EU. The UK, post brexit (most likely) and New Zealand can use this option, for example. Tax is calculated based on a percentage figure for each line item in an invoice, and then at the end you get a total for the goods, the tax, and a grand total.

##### 2.6.5.1.2. European Union

This works similarly to the @2.6.5.1.1. VAT‍ option above, but has some extra features. Because the EU consists of nearly 30 countries, it will set all of them to charge tax (based on the file in the root of the web, which contains a list of all EU members). VAT will be added to all orders from an EU country. But if the country is not the home country of the site, a VAT number field will show. If a valid EU VAT number is entered here, the VAT will be zeroed as the customer would declare this purchase and pay VAT in their own country at the prevailing rate.

##### 2.6.5.1.3. US

This is a simple sales tax system where tax is calculated as a percentage of the order value, rather than on individual items. You can set the tax rates of multiple states so if you have locations in multiple locations, orders will pay the correct amount. In states where sales tax varies by county, you can also add in those locations and have the appropriate tax rate for each (this would be done after the tax setup wizard has done the basic setup).

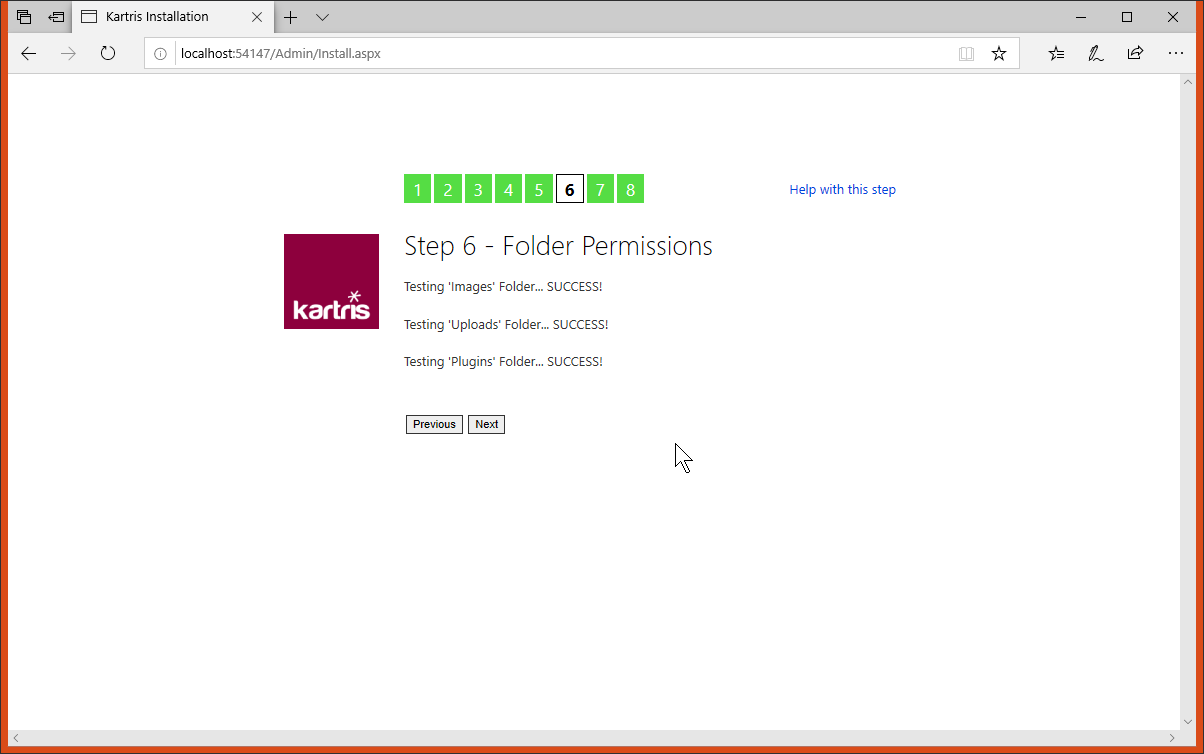
##### 2.6.5.1.4. Canada

Canada has a sales tax system with two taxes, GST and PST. In some provinces, these are combined into a single HST amount. If Canada tax is selected, there will be two tax amounts configurable for each item.

##### 2.6.5.1.5. Other

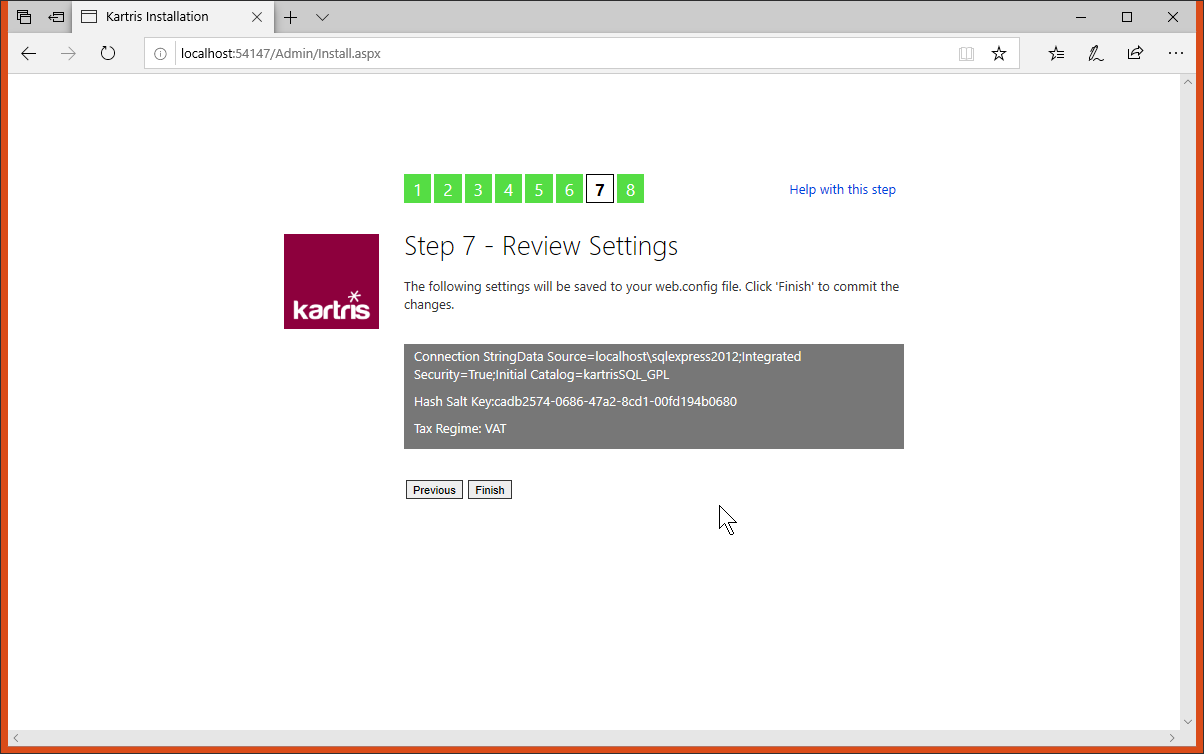
This creates a simple % sales tax to be added at the end of an order. In most cases, you will find one of the above models may more closely resemble your country, in which case it would be better to select that model, and then make country changes manually later.

### 2.6.6. Installation - Step 6: Folder Permissions



The install routine will check write permissions to ensure it can operate properly. These permissions are required to ensure you can upload images, and logs of errors can be created, for example.

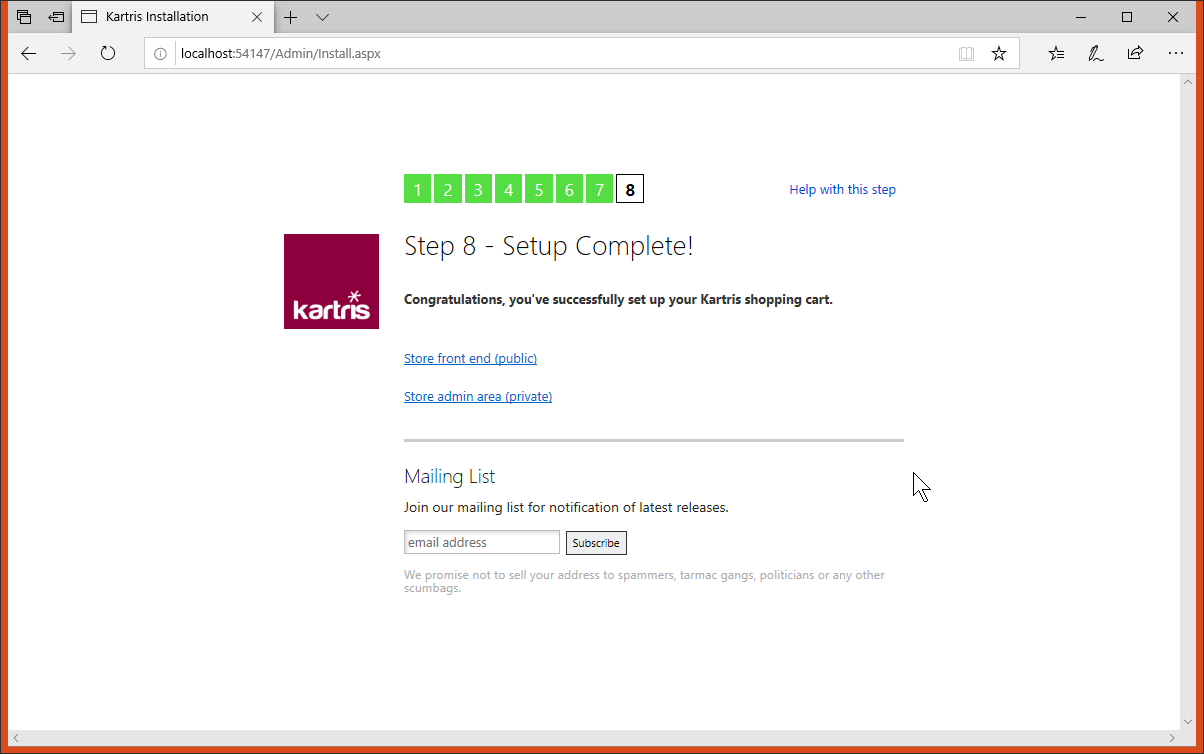
### 2.6.7. Installation - Step 7: Review Settings



The install routine will show you the changes it will make to the web.config in order to set the database connection up. It will also change the resource provider (via the globalization tag) so the software will use the database for language resources rather than the file which is used by the install routine.

If Kartris cannot write/modify the file, it will give provide a link for you to download the new edited file. You will then need to load this to your site, via FTP or just copying and pasting (on a local site). You may need to restart the site if the file is locked. Generally the site will restart after the is updated.

### 2.6.8. Installation - Step 8: Completion



If all went ok, you should see a link to the front end back ends. It may be a little slow the first time you access Kartris after it is first installed, or the server restarts. But once loaded, it should be responsive and fast.

## 2.7. Forcing the install routine to run again

Sometimes you might want to run the install routine again – for example, to reset the admin password for Kartris if you forget it. You can do this by making a couple of minor changes to the file.

First, change the connection string to a non-existent database:

|  |
| --- |
| <add name="KartrisSQLConnection" connectionString="Data Source=localhost\SQLEXPRESS;Database=BadDBName;Integrated Security=True;connect timeout=50" providerName="System.Data.SqlClient"/> |

Secondly, comment out the 'globalization' tag. This is what tells Kartris where to find language localization strings. The install routine uses a file for these, but once Kartris is up and running and connected to a database, it pulls this data from the database instead. Check there is no other 'globalization' tag nearby in the code which is uncommented.

|  |
| --- |
| <!--<globalization resourceProviderFactoryType="Kartris.SqlResourceProviderFactory"  culture="auto" uiCulture="auto" enableClientBasedCulture="true"/>--> |

## 2.8. Upgrading

If you wish to upgrade an existing Kartris site to the latest version, then you need to proceed as follows:

1. Download and install the latest Kartris to a new web.
2. Create a new database by restoring a backup of your old Kartris database.
3. Run the update SQL scripts on the database with SQL Management Studio to take it up to the latest version. These scripts are located in the new Kartris web, at this location:  
     
     
     
   You need to run the scripts necessary to take your database from its present version, to the latest version, in the right order. For example, if upgrading a v1.4001 to v2.5003, you would need to run these SQL updates on the database in this order:  
     
     
     
     
     
     
     
   There is not necessarily an SQL script for each Kartris release; one is only required if there were database changes. So in this case, we've upgraded the database to v2.5000, because that is the latest version of the database. Similarly, if you were upgrading v1.4004, you would need to start with the upgrade script, to ensure you get all the required changes.  
     
   You may get errors show up in the console during the upgrade process, but generally you can ignore these. It's normally because you have new language strings or config settings already for some reason, and so trying to add these in fails. But everything else should still be able to run, and since you have the required records already, there should be no problem.
4. Hook up your new web to the new upgraded database. To do this, edit the file to make the following changes (a) database connection (b) ensure that the 'globalization' tag is uncommented (see @2.7. Forcing the install routine to run again for more details).
5. You should also copy the 'hashsalt' value from the app settings near the top of your new site file. If you don't do this, you may find your back end login no longer works.
6. You should now be able to import your old skin to the Skins folder, and set up your site to use this from the back end.
7. If you changed any user controls or code in your prior version, you can try to import this to the new site. But be aware that they may not be compatible, or that by importing older files, you may lose newer functionality which we've added to the new version.
8. Other parts of the old site that will probably need to be imported too:  
     
   - Images folder, Uploads folder (except Logs, Resources, Temp)  
   - the .sitemap files in the root (these format navigation menus on your skin as well as breadcrumb hierarchy)  
   - any robots.txt in the web  
   - the .config files from any payment systems you have setup, these are stored in the relevant folder within /Plugins and hold the payment gateway configuration for that payment system).

# 3. The Back End

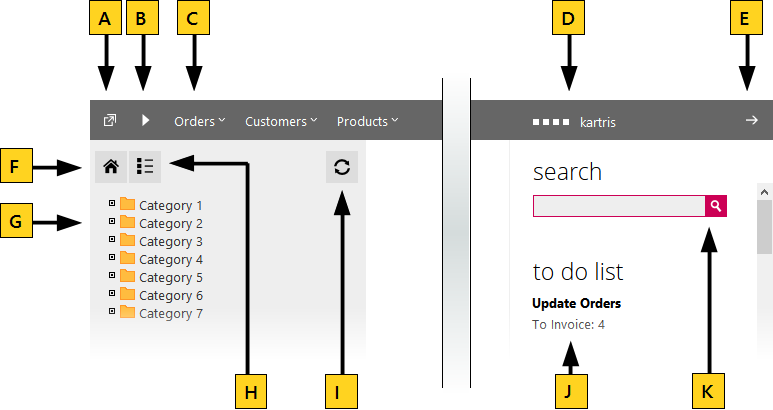
The back end is the admin section for Kartris. In some cases the terms 'back end' and 'admin section' may be used interchangeably.

## 3.1. Logging in

To access the back end of your Kartris site, go to:  
  
  
  
You will need your username and password. Note that if you forget these details, it is not possible for anyone to recover them, since they are 'hashed' for security. Instead, they can only be reset.  
  
If you have another user who has 'config' permissions in the back end, they can edit your login and create a new password for you. If you are the only admin, then you must either using the Data Tool to do the reset, or force your site to run the setup routine again, see @2.7. Forcing the install routine to run again.

## 3.2. Navigation and toolbar buttons

This section gives a quick overview of getting around within Kartris. We'd strongly recommend you read this section as some of the useful features which will save you a lot of time and hassle but aren't necessarily obvious.



- this button takes you to the front end of the web site. A similar button will be visible on the front end if you are logged in as an admin, to take you to the back end. The button is context aware - if you are viewing a product, category, custom page or KB article, the button will toggle you to the same item in the front or back end.

- You can open and close the front end of Kartris using this button. When logged in as admin, you can still see the front end, but the public will see a 'site closed' message instead.

- These dropdown menus provide access to all Kartris's back end features.

- Your username is displayed here, together with four pips indicating permissions for various roles in Kartris. A solid pip (as above) indicates you have the permission, a hollow pip indicates you don't. You can hover on each pip to see the permission role it corresponds to.

- Does what is says on the tin.

- Takes you to the back end home page.

- this is an expandable navigation menu showing the entire product catalogue. For performance reasons, sections are loaded up if expanded via AJAX, so the entire menu (with all content) does not have to be rendered. Items that are turned off ('Show on site' is unchecked) show with grey icons.

- Displays the top level categories page, you can drill down to any item from here.

- For performance reasons, Kartris caches most types of content that change rarely and are not user-specific. In most cases, the caches will automatically be updated when necessary, but this button forces caches to clear just in case. It will also reset the treeview to the default position.

- Kartris will flag tasks that need your attention such as new orders, items out of stock, and so on.

- This handy search box will find most things; products, versions, customers, language strings, config settings, etc. You can of course search for these things from within their respective sections. But generally it's just easier to put an SKU or a customer email address in here and let Kartris to the heavy lifting.

## 3.3. Creating and managing logins

Kartris will create an admin account for you during the setup process. However, many store owners will need to have multiple staff members accessing the back end. Kartris therefore allows an unlimited number of extra back end accounts to be created, with varying levels of access.

### 3.3.1. Creating logins

The login management page can be found by going to . All logins for the site will be displayed in tabular format. Checkboxes show the permissions settings for each account, as well as whether or not the login is live.  
  
The primary login accounts for Kartris don't have any 'delete' option and the permissions for these accounts cannot be changed. This ensures that the main admin accounts are always valid, and that you cannot inadvertently lock yourself out of control by removing the primary accounts or reducing their access level.  
  
Note that anyone with config permissions can create new users with any permissions they wish, or edit their own permissions to give themselves any permissions they choose. Bear this in mind if you grant configuration permissions to a user but deny them 'orders' permission, for example. The user would be able to edit their own permissions to give themselves 'order' permissions if they wanted.

### 3.3.2. Setting permissions

User accounts can be restricted using the permissions checkboxes so that they can only access certain areas in the back end. The back end is divided into four broad areas:

* - user can change config values, shipping, tax, countries and other setup details
* - user can view/edit categories, products and versions
* - user can view/change customers, orders, affiliates and coupons
* - user can view/change support tickets and knowledgebase articles

This permissions structure serves two purposes. Firstly it allows you to prevent certain users from being able to make major changes to site settings, or products, for example, while allowing them to process orders. Secondly, it simplifies the back end somewhat by removing extraneous menus for users who do not need them.

## 3.4. Config settings

The config settings should not be confused with the , which is a file on the site holding basic configuration for the site including the database connection. Config settings control all kinds of things relating to the functioning of your store, from the sizes of various images to the availability of certain features to users.  
  
Values are stored in the database (in the table); this has a number of advantages over setting values in the .

* Keeps the relatively uncluttered
* Works even when there is no 'write' access to the root (where the is located)
* Does not force the application to restart (which editing the does)
* Helps config settings to persist when you upgrade Kartris to a newer version
* Config settings can be searched easily from the main back end search box, or from their own dedicated search box within the config settings section.

Some important config settings are set during the setup routine; most of the others are less critical and can be tweaked later once you have Kartris running and your site under development.

### 3.4.1. Finding config settings

Config settings can be located most easily from any back end page using the general search box. Just enter a part of the name of the config setting, and the system will find any matching records (up to 15 maximum can be displayed). Since config settings are named fairly logically, you can generally find relevant ones by entering a single word search such as 'images' or 'SSL'.  
  
If you are less familiar with the config settings, you will find it easier to navigation to the config settings page (). From here you can navigate a hierarchical dynamic menu of the config settings. Hovering over either 'frontend', 'backend' or 'general' links will open out the menu – new sections will fold out as you hover over certain entries. This can be a good way to explore and find new settings relevant to particular features.

### 3.4.2. Changing config settings

Once you have located a config setting, you can click to edit it. Be extremely careful to ensure that you do not set config settings to an invalid value. This can cause errors in the operation of Kartris. Great care should be taken to double check values being changed before you click to submit any changes.

It is also possible to change config setting values directly in the table of the database. However, the new setting will only take effect after the site is restarted (this is because the actual config setting values that Kartris uses are stored as application variables which are built when the application starts from the database values - updating config settings through the Kartris back end also triggers a rebuild of these values).

### 3.4.3. Useful config settings

There are a huge number of config settings and we won't include them all. But there are some important and useful ones which are worth highlighting.

#### 3.4.3.1. General site settings

- this determines whether the prices for items you enter in the back end are inclusive of tax or not. In the US, prices would typically be entered exclusive of tax, and this setting would be 'n'. In Europe, it is more common that prices would be inclusive of tax (though business-to-business oriented sites may use ex-tax pricing).

#### 3.4.3.2. Security access

- this provides control over the level of access to the site that the public has.

'No' = full site viewable  
'Yes' = must login to view site  
'Partial' = prices & add buttons hidden until login  
'Browse' = full site viewable, must login to checkout

#### 3.4.3.3. Images

- this determines whether large views of images are launched in a new browser window [n] or within an ajax popup [a]. The latter is generally preferred these days as it's virtually instant and also avoids some of the issues with popup blockers that may interfer with launching new windows depending on browser settings.

## 3.5. Regional setup

### 3.5.1. Tax regime

Taxation in various countries differs considerably, and requires a quite different structure for the calculation. For technical reasons, Kartris has this value set in the rather than in the config settings, meaning it is not changeable from the back end of Kartris.  
  
This value gets set during the setup routine, and it's unlikely most stores would ever need to change this. But if for any reason you do, you can find the tag in the file and change it manually.

|  |
| --- |
| <add key="TaxRegime" value="EU" ></add> |

The possible values are:

* EU
* US
* Canada
* SIMPLE

#### 3.5.1.1. Tax rates

The tax system in Kartris works differently for US/simple models, and EU tax.  
  
The tax rates page itself is only really active when the tax regime is set to EU. It will list various rates which can be used for the various bands of VAT in your country. For example, in the UK these would be 0%, 20%, 5%, etc.  
  
Once these are set, you can choose which tax band applies when creating or editing product versions. For example, in the UK some items such as childrens' clothes are exempt from VAT, while most items will come under the 20% tax band.

### 3.5.2. Regional setup wizard

The tax settings of your store depend to a large degree on where you are based.  
  
To simplify matters, Kartris features a 'Regional Setup Wizard' (found within the 'Regional Setup' menu). This walks you through some simple questions and then sets up the various tax settings for you, including determining which countries/states are activated and set to have tax charged to them.

Note that the tax regime used is hardcoded in this wizard. That's because it uses the tax regime specified in the web.config file, which is generally set when the store is first set up.

See @3.5.1. Tax regime‍ for more details.

### 3.5.3. Currency

The currency section ('Regional Setup > Currencies') allows you to set the currencies that you want to use on your web site, and the relative values of these.   
  
You will see something like this:

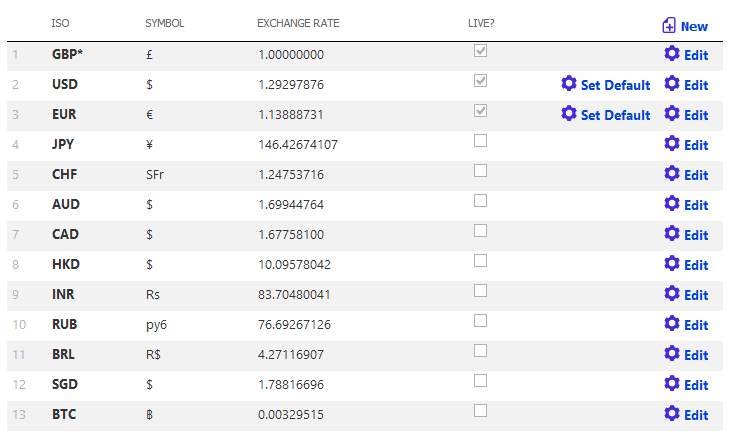


Figure Active currencies which are not presently default show the option to set them as default.

The first currency listed is your default one. It is the currency you use to set prices for your products, and the currency customers will see unless they choose to override it.  
  
To change your default currency, simple edit the values in the default slot. You will need to know the ISO codes of your currency, which can be looked up here:  
  
[ISO 4217 - currency ISO codes](http://en.wikipedia.org/wiki/ISO_4217#Active_codes)  
  
You can also determine how the currency is laid out using the two format fields as well as choose which decimal separator is used. Some currencies have the unit \*after\* the value, and in much of Europe, the comma is used instead of a point/period as the decimal separator.  
  
You can edit the other currencies in a similar way, but for these, you can also set the exchange rate relative to the default currency.

#### 3.5.3.1. Live currency rates

If you use multiple currencies, Kartris has an exchange rate lookup feature, which will look up current prices with the click of a button and fill them into the form. You can then make any manual adjustments, if desired, and submit the new prices. Please contact us for more information if you wish to use this.

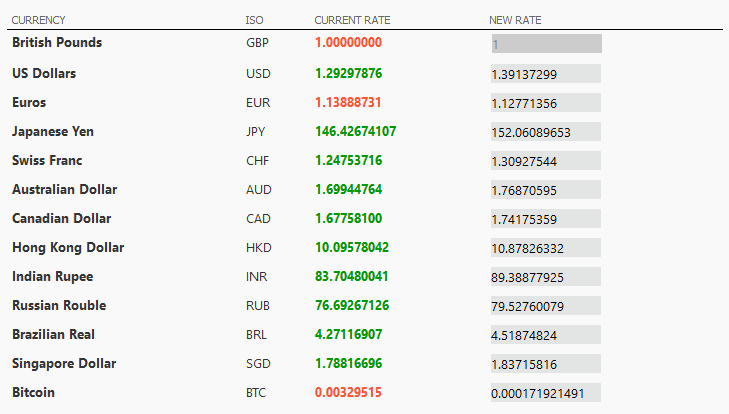


Figure The ECB feed which we use for all currencies (except Bitcoin) provides data for most major international currencies.

### 3.5.4. Price display

#### 3.5.4.1. Prices inc/ex tax

If you are in Europe, then typically you will want to enter prices on your web site of tax. Stores based in the US, or European stores that deal primarily with business customers, will normally want to enter prices of tax.  
  
This is controlled by the config setting which should be set to 'y' for tax inclusive prices, and 'n' for ex-tax prices.  
  
Note that for tax inclusive prices, tax is calculated 'per item' rather than per row of the basket. As such, a rounded 'ex tax' price can be calculated. But for ex-tax pricing, tax is applied to each row of the basket. Consequently, it is not possible to show a rounded inc-tax price for individual items, because this would in many cases not quite tally with the actual tax on the order (due to the different rounding used, per-item and per-row) and would be likely to confuse customers or lead to complaints that the site has added up the tax wrongly.  Instead a percentage figure is shown where necessary.

#### 3.5.4.2. Tax display

Most stores will typically show a singe price for each item, which might be either inc tax or ex tax. In this case, you should set your config setting to 'n'. If you wish to show the tax associated with an item, set this to 'y'.  
  
The way prices are displayed within Kartris depends on both of the following config settings:

The exact format will vary as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  | |  | |
|  |  |
|  |  |  |  |
|  |  |  |

Note that in all the cases in the table above, the item price is entered in the back end as 10.00, and the tax rate is 17.5%. It is the config setting that determines whether this means £10.00 at checkout (£10.00 inc tax) or £11.75 (£10.00 plus 17.5% tax).  
  
Note that if you enter prices into your store ex tax, and then switch to inc tax, the prices won't change (for example, an item entered as £10.00 won't suddenly become £11.75 – it will still be £10.00, just that this will now be considered inc tax instead of ex tax).

### 3.5.5. Shipping / postage

To access the shipping page in the back end, go to 'Regional Setup > Shipping'. Shipping is the term we use to refer to all methods of delivering physical products by post, parcel service or courier.  
  
Kartris has a flexible shipping system that lets you define shipping for particular countries/states, order weights/values and for different shipping types. You can also set real-time shipping lookups to handle all or just some shipping possibilities. For example, you may want to ship domestically within the US by one courier, ship orders up to 10kg to Europe by a different courier, and then specify your own pricing for orders to Europe above this weight, and for all other shipping zones.

#### 3.5.5.1. Shipping by weight or order value

You can choose to calculate shipping based on the weight of an order, or  value, depending on your config setting. Set to 'y' to calculate by weight, or 'n' to calculate based on order value. Within each band, you can set either a price, or select any real-time shipping provider that you have activated from the Payment and Shipping Gateways section.

#### 3.5.5.2. Shipping methods

You can set up any number of shipping methods for your store, such as 'standard post', 'express post', 'courier' and so on. These will allow you to set separate pricing structures for each.  
  
Once you have created shipping zones and shipping methods, you can then start to set the rate structure denoting the cost of shipping, or link to real time shipping systems. Click the 'rates' link by each shipping method to set rates.

#### 3.5.5.3. Shipping zones

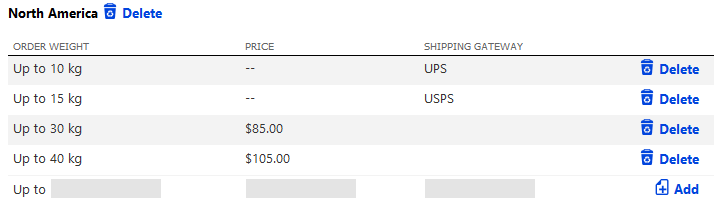
You can set up any number of shipping zones for your store. A shipping zone is an area which has its own shipping price levels. Countries and state records will be mapped to the appropriate shipping zone later. At the simplest, you might want a 'home' zone for orders in your own country, a 'regional' zone for countries nearby, and a 'rest of world' zone for everywhere else, for example.  
  
If you want to subdivide your own country into various shipping zones, you can do this by having multiple regional 'country' records each mapped to their own shipping zone. So for example, a store in the UK might decide to have three shipping zones within the UK:

* United Kingdom - Mainland
* United Kingdom - Highlands and Islands
* United Kingdom - Northern Ireland

You would then need to have three corresponding 'country' records, each of which is mapped to its appropriate shipping zone.

#### 3.5.5.4. Shipping rates

Once you have set the methods and shipping zones, you can start to create the actual shipping rates. Click the 'Shipping Methods tab' and then click the 'Rates' link by the first shipping method.  
  
This brings up a list of the bands that are in effect for each shipping zone. You can create any number of bands for each zone to fine tune the shipping price for any weight/value. This process can be repeated for each shipping method.  
  
If a real-time shipping price system like UPS, USPS or Fedex is enabled, you can also specify that this be used for that particular band.



#### 3.5.5.5. Free delivery and downloads

Please see @4.8. Free delivery and downloadable items.

#### 3.5.5.6. Real-time shipping providers

Kartris includes support for UPS, USPS and Fedex real-time shipping systems. These use an external web API call to send weight and location details, and then the available shipping method types and their costs are returned. The open plugin architecture of Kartris means other providers can be supported if suitable plugins are crafted. You need a free user account with whichever shipping system(s) you are using, and to set up the plugin within the Payment and Shipping Gateways section of the back end.

##### 3.5.5.6.1. UPS setup

To activate UPS as an option, you must first create an account with UPS.  
  
Go to [www.ups.com](http://www.ups.com) and sign up to create an account. Next, you will need access to the API, and also an 'access key' to retrieve the shipping rates (you need the XML key, when the option is given). You can apply for these here:  
  
<https://www.ups.com/upsdeveloperkit?loc=en_US>  
  
Note that the UPS web site is almost unfathomably complicated in layout, confusing to find anything, and the forms seem to behave in inexplicable fashion, asking for you to fix errors which are not displayed, wiping your address and other data and so on. Nothing we can do about this unfortunately. You might have to contact UPS support if you cannot figure it out.  
  
Once you have the 'access key', you can start to enter your account details into the UPS settings in Kartris. You will need to refer to UPS documentation with regarding to what values to enter for the various fields.  
  
Once the STATUS field is set to ON, UPS will be available. You can then go to shipping and view the shipping methods and rates. For each band you add, or for the 'all higher orders', you will see an extra text field. You can add 'UPS' or 'USPS' into this, if you want orders meeting this criteria to use real-time shipping. If you want to edit an existing band, you must delete it and create a new one with your preferred shipping provider, or value. This system is therefore very flexible; you can mix both UPS and USPS, specifying one or the other for particular locations (regions) and weights (or costs). You can also have your own static pricing for orders over the limit of what UPS or USPS will deal with (if for example you can use some other provider for large orders, or even hire a truck).

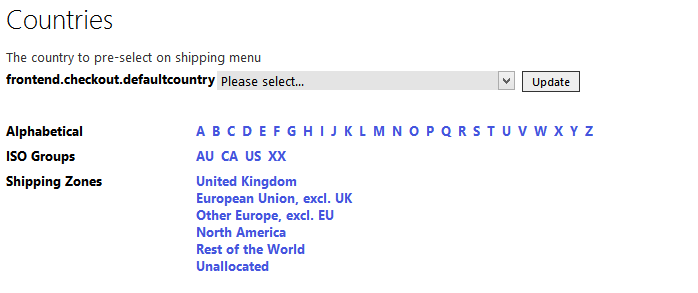
##### 3.5.5.6.2. Fedex setup

More info to follow.

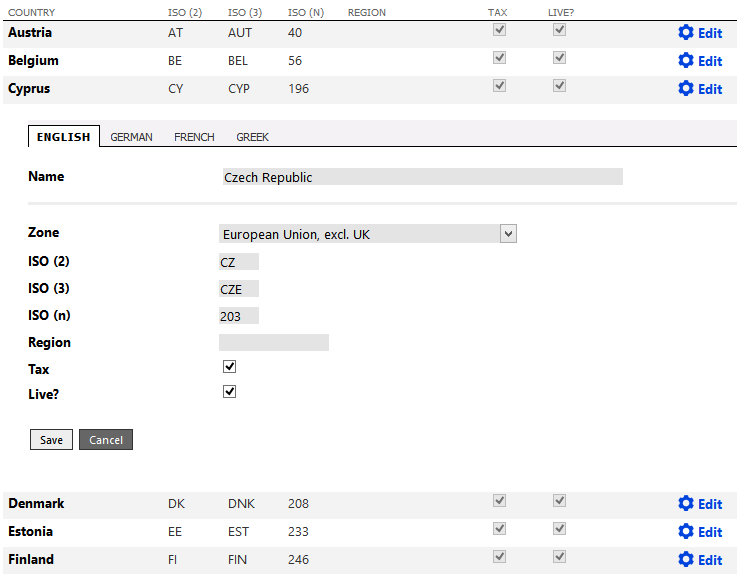
More info to follow.

### 3.5.6. Countries and States

You will need to control not only which countries you will accept orders from, but what tax and shipping will be charged to customers from them. You can access this section at 'Regional Setup > Countries'. This brings up a page showing an overview of countries, like this:



The default country setting allows you to pre-select a country for users at checkout (and for the basket's shipping price estimate). We generally advise not doing this as customers can sometimes hastily click through the checkout stages without noticing they've just confirmed the default country. By not selecting this setting, you force the customer to actively make a selection and so minimize the chances of them selecting the wrong one.  
  
The USA, Canada and Australia all have provinces or states. If your store is in one of these countries, instead of having a single country record, you will have multiple records - a Country / State record for each state or province. Each of these records has the same country ISO code, but can also accept a regional code (such as two-letter US state code) which may be used by some external systems such as real time shipping price lookups.  
  
You can also view countries by shipping zone. It is up to you which shipping zones you decide to have, and which countries are mapped to them. Each shipping zone is a region of the world (or country, if you have multiple country records) for which the shipping cost will be the same. For example, if your store is in the USA and shipping to France, Germany and Belgium is the same price, then you should have all these countries mapped to the same shipping zone.  
  
If your store is set to EU as the tax regime, you can set for each country whether tax is to be charged or not (boolean). If your store is set to US or Canada, you can set the tax rate that applies for each state.



## 3.6. Database admin

Kartris has a back end section dedicated to various database related tasks. To access this, go to ''.

You may find that some tabs referred to below are not visible when you log in. In this case, the config setting is probably off. This setting hides some back end features, even to those with 'config' user permissions. You can edit the config setting to turn on expert mode, which will show advanced tabs in the db admin section.  
  
Expert mode also allows you to edit certain field details of config settings and language strings that are normally hidden.3.6.1. Home screen

From here you can restart Kartris. This works by making a minor change to the web.config file and saving it – ASP.NET will restart a site when this file is changed. Therefore it only works if your site has write permissions to the root. If you need to restart Kartris and this does not work, you can manually change the web.config via FTP.

### 3.6.2. Clear data

This provides an easy way to clear data related to products, orders or sessions. For each type of deletion, the system knows which tables should be cleared.

Where possible, avoid clearing individual tables directly in the database unless you're absolutely sure you understand the consequences. There are some tables in Kartris (such as config settings and language strings) that should always have data, even in a new install that has no products or customer records.  
  
Deleting data from some tables without understanding the relationships can also leave orphan records behind. For example, version records always link to a parent product. If you delete all data from the products table only, you would end up with many orphan records from versions, language elements (the language specific content of products like descriptions and names), related products, etc.3.6.3. Run query

This provides an easy way to run a query against the database. You can user SELECT, INSERT, DELETE or UPDATE queries.  
  
SELECT queries will return results in a tabular format.

### 3.6.4. Data export

From time to time, you may need to export data from Kartris to a file. This might be anything from a customer list, order details, product inventory or statistical data for external analysis. Kartris provides both a built-in export for customers/orders, as well as a flexible export system that lets you write your own custom exports and save them within Kartris.



Figure The saved export controls

#### 3.6.4.1. Orders export

You can specify a date range, the file name you wish to export as, the delimiter (marker) for each field and that indicates string values (non-numeric / text as opposed to numbers). You can optionally include the full order details field (text of the confirmation email to customer stored in the system) and incomplete orders (orders where the status checkbox 'complete' is not yet checked to indicate the order has been fully processed).  
  
The file format is CSV - comma-separated values. This is a text format which spreadsheet programs such as MS Excel and Libre Office Calc can open. If you find data shows up in the spreadsheet with single quotes around values, try exporting again but select a double-quote as the 'string delimiter'.

#### 3.6.4.2. Custom exports

Custom exports are saved reports that you can run to output specific data that you need. If you go to the 'Saved Exports' tab, you can see some pre-written custom exports that come as standard within Kartris - clicking on edit will allow you to see how these are constructed. An export requires the following information:

* (any name will do, it just lets you identify this export in a list)
* (separator between different data values, normally a comma)
* (the marker around text / non-numeric values - experiment with a single or double-quote and open up the resulting file in your spreadsheet program such as Microsoft Excel - if you see the single or double-quote mark around data, then try using a different delimiter)

The database query is the key part of the export. This uses 'structured query language'  (SQL), which is a standard common language that is largely similar on different types of databases to specify which data is to be exported. A full explanation and grounding in writing SQL queries is beyond the scope of this manual, but there are plenty of books and web sites dedicated to the subject.  
  
Microsoft Access and MS SQL Management Studio also include graphical tools to help you build queries.  
  
Advanced users may also prefer to create stored procedures and then call these from the saved export - our standard 'Products data for data tool' export which is included in a default installation uses this method.

### 3.6.5. Tools

This gives an overview of your database, and lets you back it up. Note that this fires the backup facility within MS SQL server. It does not enable a remote backup. You should discuss with your hosting provider about the best way to obtain an off-server back up of your MS SQL database.  
  
The page shows the root of the current web, which can help you format the correct path to create the backup file in the correct location within your web in order to let you download it with FTP.

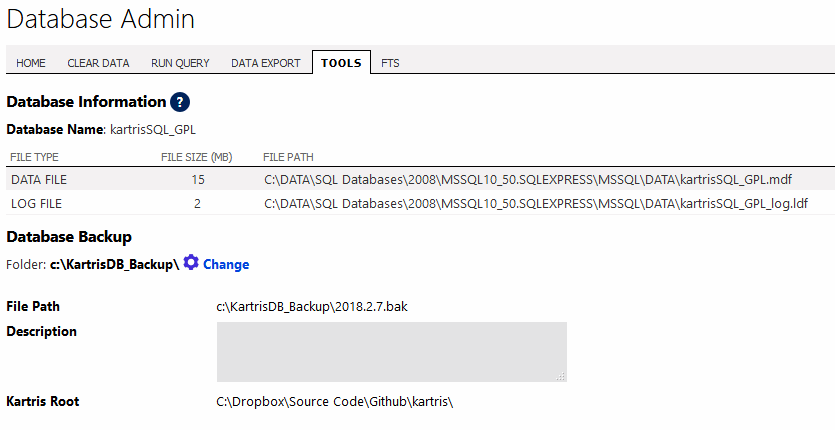
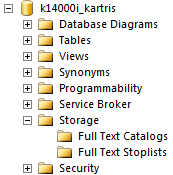


Figure The database tools show you the physical location of the underlying database files, and where a backup will be created.

### 3.6.6. Full-text search (FTS)

MS SQL has a feature called 'full text search' that significantly improves the performance of text searches across data, especially on very large databases with many records. This feature of MS SQL is installed with the 'advanced services' version, and therefore may not be available on all installations. For this reason, we don't activate it as standard. On smaller sites, the performance different with and without FTS isn't significant. You will probably find it simpler not to use this feature.  
  
But larger sites will get a huge benefit from this; especially when you have tens of thousands of items, or more.  
  
Before attempting to activate this feature, check that your server supports it by expanding your database and looking for the 'full text catalogs' folder, as shown below.



If the feature is supported, clicking the link within the FTS tab in your Kartris back end will create the required stored procedures and activate the feature. Searches in both the front and back ends of Kartris will use FTS. For this reason, even stores with a relatively small number of products but with a large customer/order database may also decide to use FTS to improve performance of back end searches.

## 3.7. Reports

### 3.7.1. Error logs

Kartris will log ASP.NET errors within the Uploads/Logs folder. This tab allows you to view these errors more conveniently from the back end of Kartris. In the event an error means the site is unavailable, you can view the error logs via FTP, in the following location:  
  
  
  
Error logs are created with a extension to ensure the raw files cannot be served to web users (even if they know the location and name of a particular log file).  
  
The presence of errors does not automatically indicate an issue with your site. 404s (file not found), cancelled orders and some other events will be recorded, as well as errors due to partially formed pages being submitted (for example, if a visitor has a slow internet connection and only receives part of the page before pushing a button). The logs are designed to be a useful tool to provide information to help resolve issues rather than a digest of problems on your site that need to be resolved.

### 3.7.2. Admin logs

Kartris keeps logs of certain actions by admins such as logins and changes to config settings. This can be useful when diagnosing problems that you suspect were caused by admins changing settings.

# 4. Product Data

Product data includes not just products, but categories, versions, options and attributes too. The relationship between these will be covered in this section, as well as the process for setting them up.

## 4.1. Relationships

Before you start entering product data, it is important to understand the way this data is structured in Kartris.  
There are three basic required elements of product data structure:

* categories
* products
* versions

A product must have at least one version, and feature in at least one category –  so in this respect, all three elements of data structure are required for every product item you have.

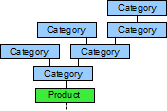
### 4.1.1. Unlimited category levels

Categories can be nested within other categories. Kartris is designed to allow unlimited category levels, though in order to manage even the biggest sites, five levels is probably more than enough.



### 4.1.2. Multiple parent categories

Each category can have any number of parent categories, and you do not have to have the same number of category levels throughout the store. For example, below we see a product whose category can be reached via three navigation routes. One of them has two levels, one three and the other four. A product can also have multiple parent categories.



### 4.1.3. Mix products and subcategories

A category can at the same time be a parent both to other categories, and products. This provides more flexibility as you can nest general interest products in a category, while still subdividing other items into further subcategories.



### 4.1.4. Product types

There are several different types of products that can be created within Kartris.

#### 4.1.4.1. Single product

This is the simplest form of product; it has a single version and for display purposes the two are merged into a single unit.



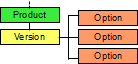
#### 4.1.4.2. Multiple version product

This is suitable for items that tend to have only one degree of variation. For example, ketchup that might come in several different bottle sizes (each with its own SKU / item code), or a book that comes in hardback, paperback and audiobook. Each version can have its own image, as well as the product having images too.



#### 4.1.4.3. Options product

This has a single base version and unlimited options can be applied to it. This is suitable for products with multiple types of variation such as size, style and colour. You can have as many options as required, and these can display as dropdown menus, radio buttons or a checkbox. It is therefore ideal for items such as computers that might be highly configurable, with a choice of hard-disks, processors, operating systems, RAM, and so on.  
  
You can control whether a selection is required for a particular option. So for example, when configuring a computer, the RAM and processor selections would be required (because a computer must have both) but the secondary hard-disk size selection might be optional (if the component was not necessary required).



#### 4.1.4.4. Combinations product

This is similar to an options product, and is created in the same way. But once you have configured the options, you can choose to create 'combinations'. The system will then create a unique version record for each permutation of the options. This allows you to record stock level for each permutation separately, have a different SKU / item code for each permutation and set a unique price for each too.  
  
The number of permutations will be limited to a few hundred for performance reasons. Remember that you only need to create a combinations product if you are stock tracking or need a unique SKU or price for each permutation - otherwise use an options product.

#### 4.1.4.5. Custom control product

In some cases, none of the built-in Kartris product types will suit your purposes. A typical example would be a site producing bespoke curtains or signage. You would need the user to enter a height and width (which could for example be anything in mm between 30 and 3000). Options would be impractical as you'd need to create every option between 30 and 3000. Furthermore, height and width values would both be required to calculate the area of fabric needed, and then the price - but option prices can only apply to a single option selection.  
  
Fortunately, if you're familiar with ASP.NET, it is possible to create virtually any type of product configurator and plug it into Kartris. This is done by creating a custom user control that contains all the logic needed to price and detail a product. Examples of the kind of thing that is possible with a custom user control:

* A product configurator for signage, with choice of materials, prices/m2 and all other data pulled from an Excel spreadsheet
* A product configurator for insurance policies which uses an XML web service to pull pricing from another remote web site
* A product configurator which uses a formula to calculate the price of the item based on the various values entered

For more information, see @14.3. Custom product controls‍

## 4.2. Adding product data

### 4.2.1. Creating a new category

All products must belong to at least one category, so before you can add any products, you should create the categories required.  
  
If you intend to have a '' option, then you should start with just two top level categories (one for each) and nest everything else inside those. Remember that products can have multiple parent categories, so any product can be in both sections (or subcategories within them).  
  
To add a new top level category, go to 'Products > Add New Category'.  
  
Alternatively, you can list the top level categories with the 'categories' icon next to the home button on the left hand menu, then click the 'new' link to the top right of this page. If you want to create subcategories, navigate to the parent category where you want to place the subcategory, and then click the 'new' link. This will pre-fill the 'parent' category into the form.

#### 4.2.1.1. Product display type

There are several options for how to format product appearance on the front end of the site in the listings. You can set this globally (for products that are set to use the global default) using the config setting or override it at category level, which will apply to all the products displayed within that category.

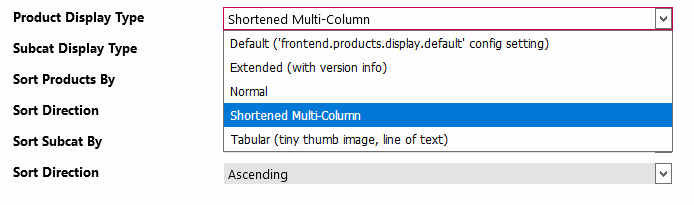


Figure There are four display modes for products when displayed for browsing on the front end

##### 4.2.1.1.1. Shortened multi-column

This formats products into a box, typically several per row, featuring a product image, the product name and 'from' pricing (if turned on).

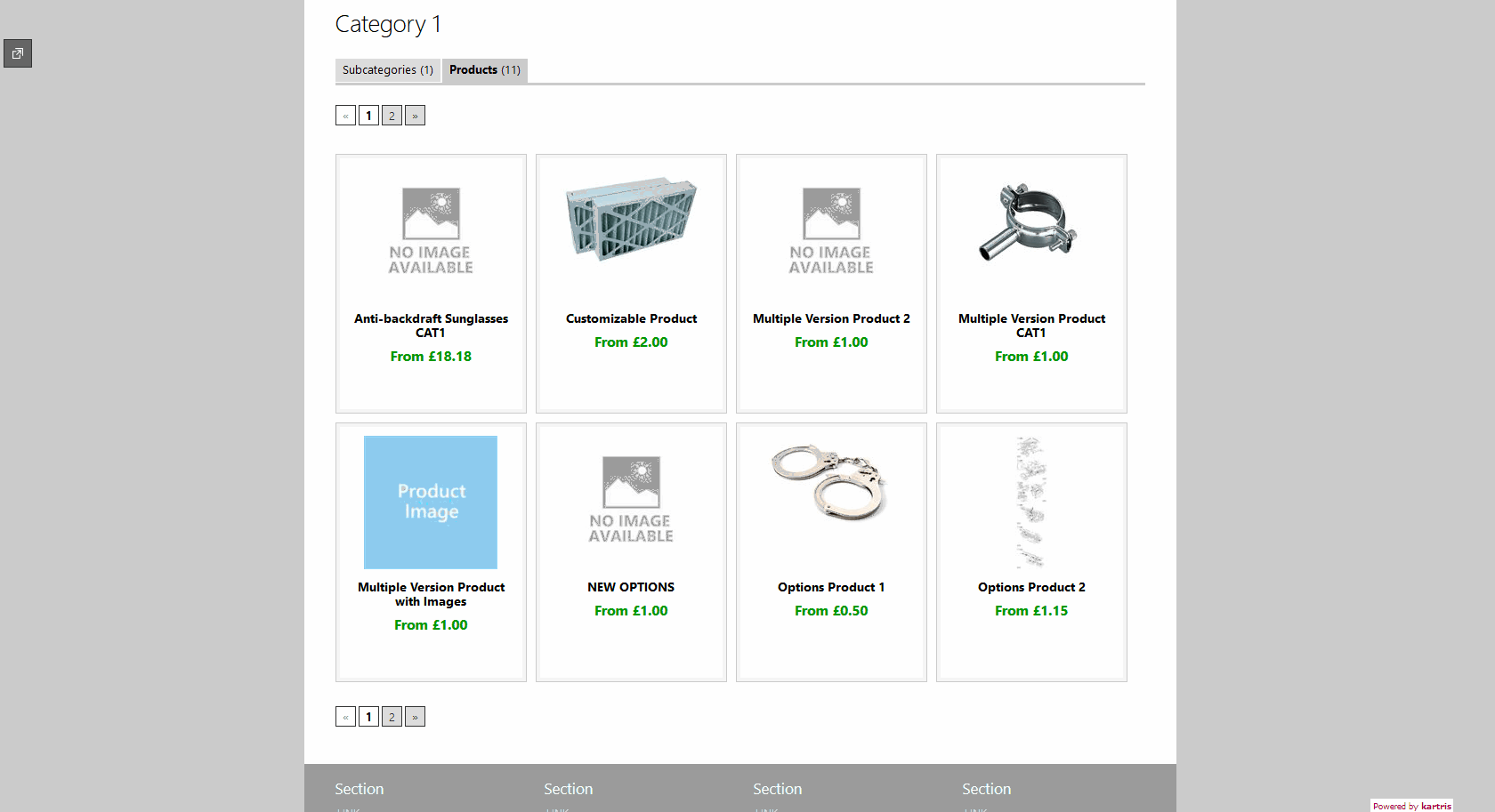


Figure 'Shortened multi-column' product display

The template used:  
  
  
  
CSS class:

(located in)

##### 4.2.1.1.2. Normal

This formats products one per row, with an image, product name and truncated description, plus the 'from' price (if turned on).

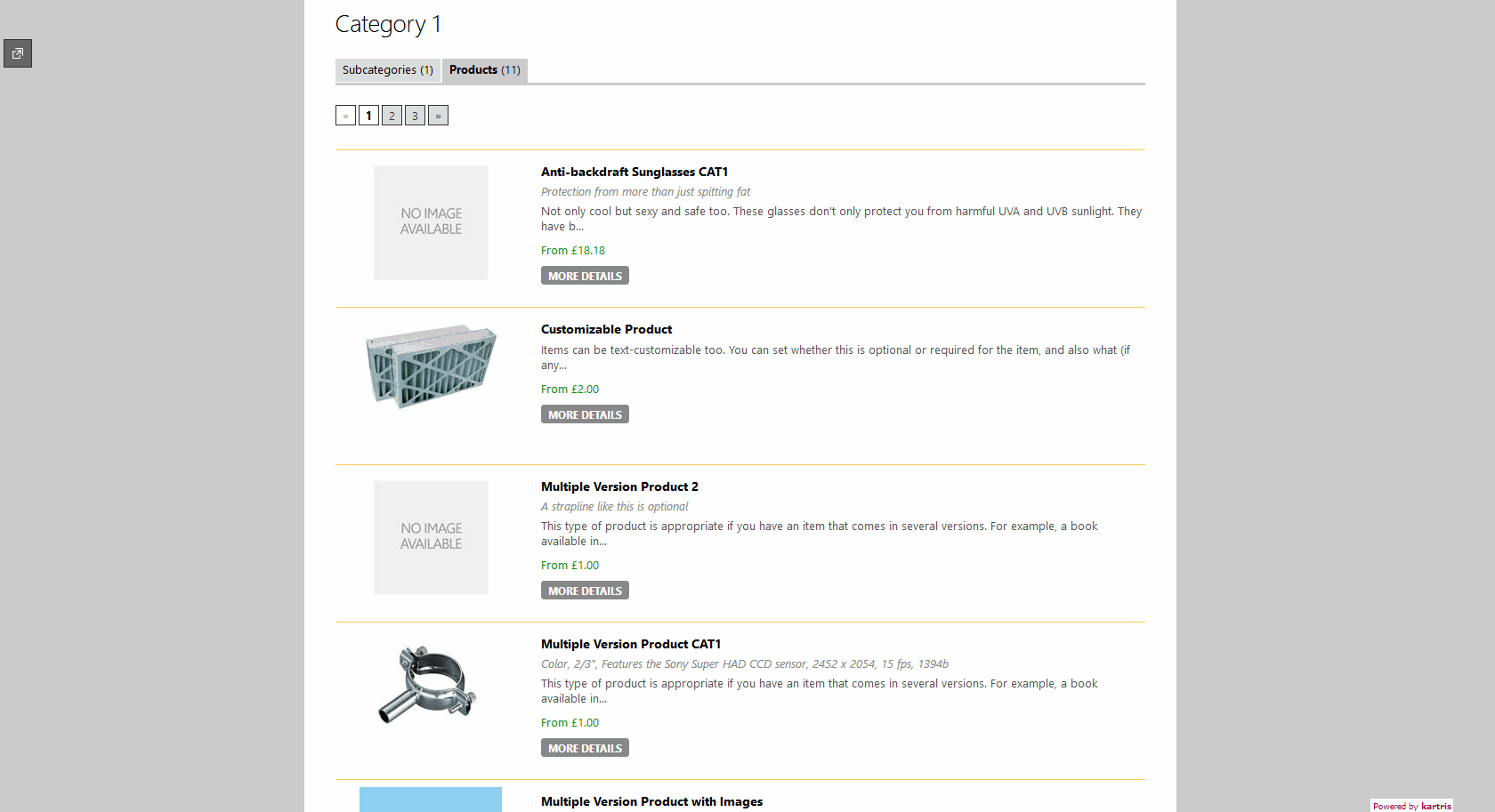


Figure 'Normal' product display

The template used:

CSS class:

(located in )

##### 4.2.1.1.3. Extended

This formats products similarly to 'Normal', but also includes their versions, so pricing can be seen and items added to the basket directly from the product listings, without having to click through to the product page itself. Any type of product - single version, multiple version or options - can be displayed in this way, including different types on the same page. 'Out of stock', text-customization and other version features all work exactly as they would on the product page itself.

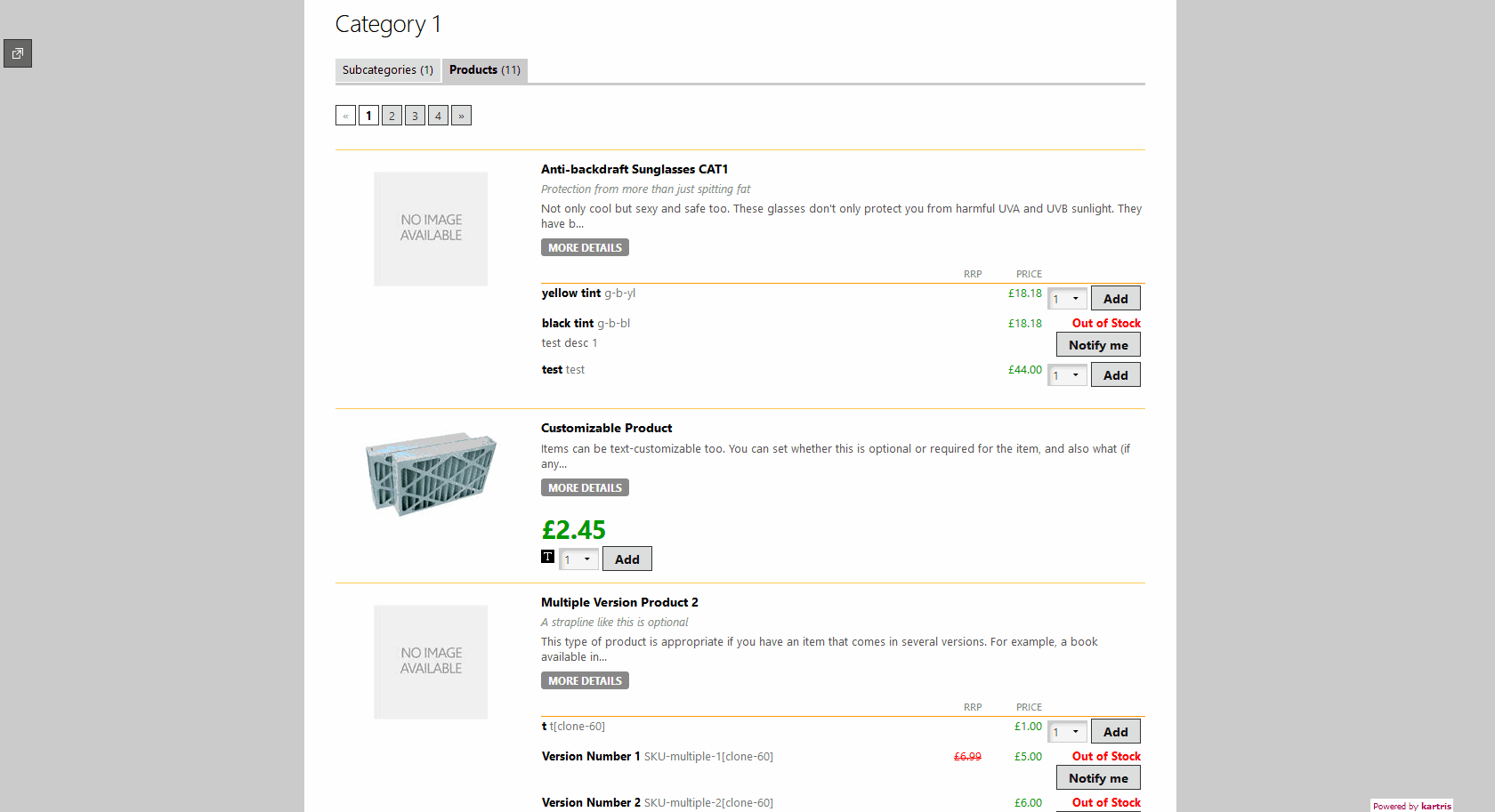


Figure 'Extended' product display

The template used:

CSS class:

(located in )

##### 4.2.1.1.4. Tabular

This is similar in terms of content and structure to 'Shortened multi-column', though has a different control and CSS class, allowing for different formatting if desired.

The template used:

CSS class:

(located in )

##### 4.2.1.1.5. Number of products per page

You can set the number of products per page for each type of product display from the following config settings:

### 4.2.2. Creating a new product

If you are creating an 'options' product, then you will need to create the options first.  
  
Then you can either go to '', or you can click the 'New' link next to the products section in a category view. This will bring up the product editor page.

#### 4.2.2.1. Category parent

Each product must belong to at least one category. In such cases, the category that a product belongs to is called its 'parent'. To select a category, enter the name (or part of the name) in the single line text box of the 'category parent' section. A list of matching categories will spring up. Select the appropriate one and hit the 'Add' link next to the box. The category will be added in the box above.  
  
Kartris supports multiple category parents. You can use the same process to add further categories. All the categories that a product belongs to will be listed in the multiple dropdown.  
  
To remove a category from being a parent of this product, simply highlight it in the multiple dropdown list and click the 'Remove selected' link.  
  
These product-category relationships will only be saved when the product is updated/created with the 'Save' button.

#### 4.2.2.2. Product type

There are three selectable types of product – single version, multiple version and options product. These are explained further in @4.1.4. Product types.  
  
When you select the product type, some of the dropdown menus immediately below will be enabled or preset to certain values and disabled. This is because certain selections of these only apply to certain product types.

If you are editing an existing product, and find that you are not permitted to change the product type, it is most likely because the product has associated data which is incompatible with the other product types. For example, if you have a multiple-version product, it cannot be changed to a single version or options products without first deleting the extraneous versions.

#### 4.2.2.3. Product not visible warning

After creating a new product, you will see a warning at the top of the page that the product is not live on the web site because there are no versions live.



This makes clear if there are any reasons why the product being viewed is not visible from the front end of the web site. The reasons include:

* ('show on site' checkbox unchecked)
* (in this case, the warning makes clear that the product is only visible to members of that group, and not the wider public)

If you find for some reason that a product you created doesn't show up on the front end of the site, check it in the back end - this warning should provide clear guidance on the reason, and hence what steps you need to take to fix it.

#### 4.2.2.4. Creating a version

In Kartris, every product must have an least one 'version' under it. A version is the record that contains the price, tax rate, SKU (unique item code), item weight and stock quantity information.  
  
If you create a 'single version' product, a new version is automatically created. However, you must still go to the 'versions' tab in order to enter a price and other minimum information, as well as to set the new version live.  
  
For other product types, you must also create at least one version before the product is complete and can be visible on the front of the web site to be purchased.

##### 4.2.2.4.1. RRP

RRP, or recommended retail price, let's you display a guide price on your site for the manufacturer's recommended pricing, typically in order to demonstrate how much cheaper than the norm your price is.  
  
To activate this, you must first turn the RRP display on with the config setting, then you can set a value for RRP for each version. Note that this only shows on some version types; options products do not display this for example, because the price of options products is not fixed - and providing an RRP for each permutation of options would be unnecessarily complex for what is essentially just a guide and marketing device.

#### 4.2.2.5. Editing versions and adding content

Once you have created a version, you may wish to add images or media. This can only be done for multiple version type versions.

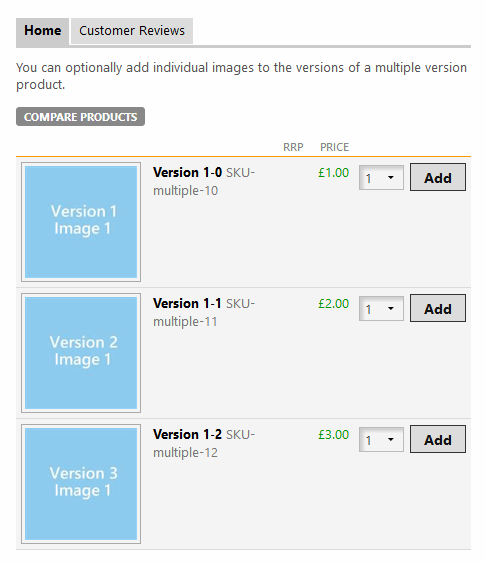
##### 4.2.2.5.1. The 'Images' tab

Kartris versions can have unlimited images. To add an image for a version, click the images tab and then 'Add new'.

Hit 'Browse' and navigate to an image on your local computer. Ideally, this image should be sized already for use as a 'large view' image on your site. Ideally this should be big enough to exploit the space available on large screens (e.g. 1200px or more wide) but compressed to a reasonable size (perhaps couple of hundred KB).  
  
Once selected, click the 'upload' link to the left of the browse box.

You can upload multiple images one by one, or you can multi-select in the dialog and upload several at once. They will appear here as a list. The image order can be changed using the up/down buttons, or it can be deleted.

Where there are multiple images, only the first will display within the version listing. The others will be visible in a gallery under the first image if the image is clicked to view the large view.



##### 4.2.2.5.2. The 'Media' tab

You can upload or create links to media in much the same way as for products. See @4.2.2.8. The 'Media' tab‍ for more details.

#### 4.2.2.6. Finding and viewing versions

Versions can be reached in a number of ways.  
  
You can navigate the category structure and see products listed; clicking the [+] sign to the left hand side of the product name will expand the product so that its versions are visible.  
  
Versions can also be found from the search box in the Kartris back end. When editing a product, you can switch to the 'versions' tab to see all versions listed.

#### 4.2.2.7. The 'Images' tab

Kartris products can have unlimited images. To add an image for a product, click the images tab and then 'Add new'.  
  
Hit 'Browse' and navigate to an image on your local computer. Ideally, this image should be sized already for use as a 'large view' image on your site. Ideally this should be big enough to exploit the space available on large screens (e.g. 1200px or more wide) but compressed to a reasonable size (perhaps couple of hundred KB).

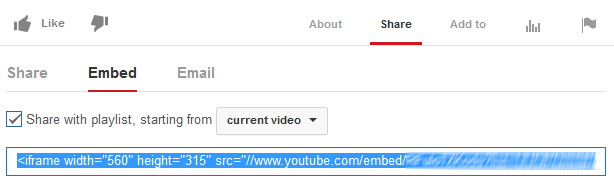
Once selected, click the 'upload' link to the left of the browse box. The image should appear in the list.  
  
The image aspect ratio will be maintained, and it will be reduced in size where necessary for use as various sized thumbnails, normal sized view, and large view.  
  
You can upload multiple images one by one, or you can multi-select in the dialog and upload several at once. They will appear here as a list. The image order can be changed using the up/down buttons, or it can be deleted.  
  
Where there are multiple images, the first will be used for the product on the front end of the site. On the product page itself, the first image will display larger, while the others will be thumbnailed below in a gallery. A large view feature is automatically provided.  
  
If no image is included, a place-holder image may be displayed on the front end instead, depending on the config setting.

#### 4.2.2.8. The 'Media' tab

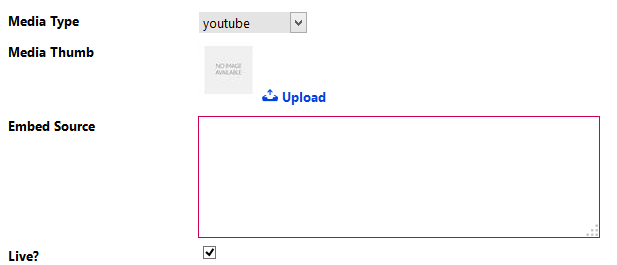
Kartris supports a number of different media formats that you can upload or attach to products or versions. You can also choose an icon for each media clip (for example, a screenshot), otherwise the media will be served with a default icon for whatever the type is.

##### 4.2.2.8.1. Youtube

This will actually work for any embedded media from video web sites. Follow the instructions on the web site to obtain the embedding code, and then paste this into the space provided in Kartris. For example, on Youtube, you choose the 'Share' and then 'Embed' tab, as follows:



Then copy this embed code (blue in the image above) to Kartris's 'embed' field:



##### 4.2.2.8.2. flv, mp3, html5video, swf

These will be embedded into web pages using the respective media template in the folder. You can customize or change these if required.  
  
If you would prefer that the media be served as a download, check the 'Downloadable?' box.

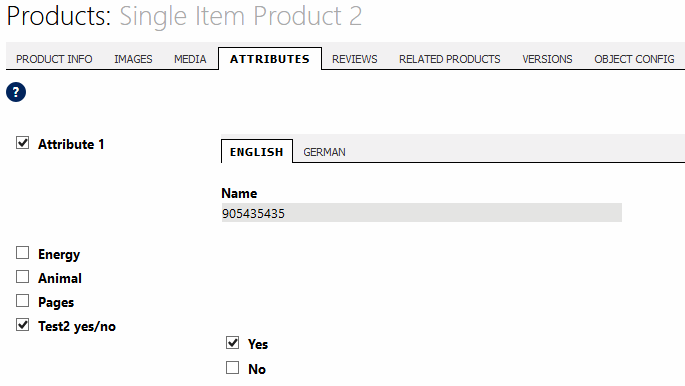
##### 4.2.2.8.3. pdf, doc

These will appear as links to download the media.

#### 4.2.2.9. The 'Attributes' tab

Attributes will need to be set up before using this feature.

For more information on setting up attributes see @4.5. Product attributes‍  
  
Check the attributes you wish to use. If they are free-text type, a text box will appear (this accepts values for all languages configured in your Kartris). If the attribute is a fix-option type, you will get a choice of selection.



#### 4.2.2.10. Related products

This feature lets you tie products together with one-way links, so customers viewing this product will see links to any other products you specify.

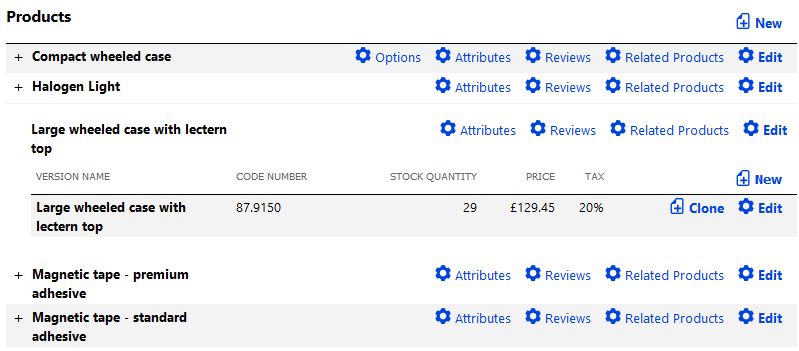
#### 4.2.2.11. The 'Object Config' tab

See @14.2. The object config system.

#### 4.2.2.12. Special pricing for certain customers

If you create customer groups, you can set specific pricing for items for members of that group. So for example, you could have wholesale pricing, preferred wholesaler pricing and so on, in addition to the normal price available to everyone else. See @6.2.3. Per-customer group pricing.

### 4.2.3. Expanding versions in main view



You can click the name of a product or the 'edit' link to bring up a product for editing. If you want to view the versions under it, you can click the [+] button to the left of the product name:

## 4.3. Sort order of products and categories

You have a number of tools to control the order in which products and categories are listed on the site. There are broad global settings which you can use to apply sort rules across the site, but you can also have granular control right down to individual items and put them in exactly the order you wish.

### 4.3.1. Default sort order

Typically as default, categories, products and versions will be sorted based on three corresponding config settings:  
  
  
  
  
  
The sort direction (ascending or descending) is determined by these config settings:  
  
  
  
  
  
These are the 'global' settings. When you create new categories and products, they will default to using these config settings for sorting the child categories, products and versions under them.

### 4.3.2. Changing the sort order of products

The sort criteria for items is set at the parent. If you want certain products to show in a particular order, you must set this at the parent category of those products. First you set the criteria by which products will be sorted:  
  
Sort Products By :

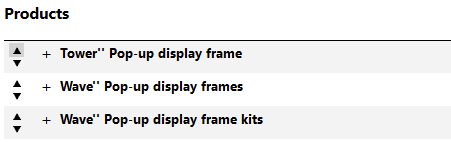
* Product ID
* Product Name
* Product Creation Date
* Product Last Modified Date
* Product Category Sort

The last one of these should be selected if you wish to manually sort the products into exactly the order you required.  
  
You also need to set a sort direction:

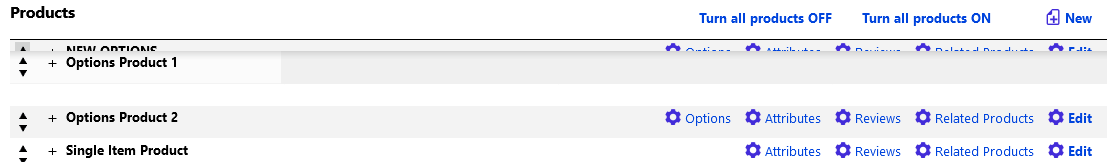
* Ascending
* Descending

For example, sorting by 'Product Last Modified Date' and sort direction 'Descending' will show the most recently edited/added products first.

To manually sort the products, you must first set the category to sort products by 'Product Category Sort'. You will then see up/down arrows appear on the products when viewed in the back end, as shown below. You can click these to sort the items.



Alternatively, from v2.9014 onwards, you can also drag and drop sort too.



If sorting products manually ("Product Category Sort"), make sure you select the direction as 'ascending'. It won't work correctly if set to 'descending' as the code that tries to find the item above or below to swap with will find the wrong value.4.3.3. Changing the sort order of categories

The sorting of categories is conducted in a similar way to sorting products; subcategories sorting criteria is controlled from the parent category.  
  
Top level categories are always manually sorted. You can click the 'view categories' toolbar button and then change the sort order of categories with the up/down buttons to the left hand side of each category.

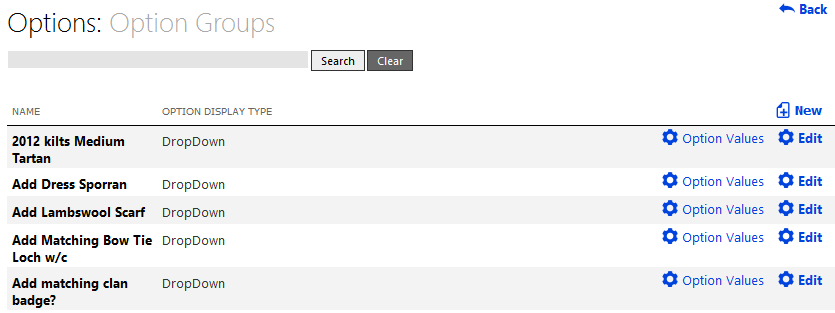
Alternatively, from v2.9014 onwards, you can also drag and drop sort too.

## 4.4. Options

Before creating 'options' products, you will first need to create some options.  
  
Options products are typically used when you have an item that is has more than one aspect of variation. For example, if you have an item that is available in 5 different colours, you should generally create it as a multiple version product, with each colour as a different version. But if the same item is available in 5 different colours AND 3 different sizes, then you have two different variables. In such cases, options result in a cleaner interface from the customer perspective.

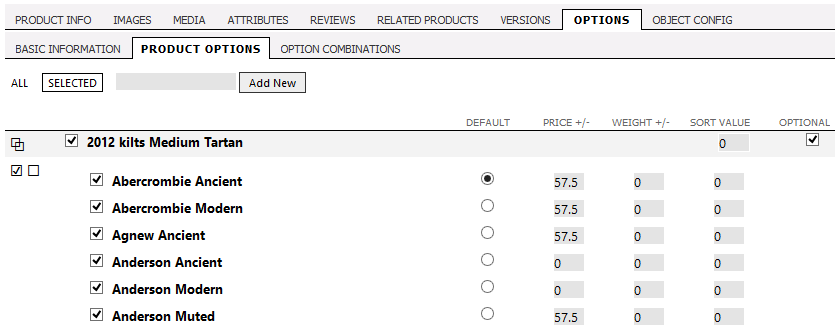
### 4.4.1. Creating options

Go to '' and click the 'new' link.  
  
Give the option a name, such as 'Colour', choose the display type. You will also have to set language specific names for this option for use on the front of the site. Click 'save'.  
  
Next, click on the 'Option Values' link for the option group you just created.  
  
Enter the name, e.g. 'Blue'. You can also enter a price and weight modifier for this option to reflect the fact that some options come at additional cost. Note that these values are just defaults – you can change them per product when you use the option later if you wish.  
  
Add as many options as you need.



### 4.4.2. Using options

Once you have options, you can create an options product.  
  
Click the 'options' tab within a product (if there is not one, make sure you created a product of the correct type, on the main Product Info tab).  
  
You can enter basic info for the item, including the base price.  
  
On the 'Product Options' tab, you can select which option groups apply to this item, and which options in each to include. You can also override the default price and weight modifiers. For each option group, you can check the box if it is optional – in this case a select is not required. You can also select which of the option values is the default value – the menu or radio button on the front end will default to this.



On sites with fewer than 25 option groups, when you view the options tab under a product, all the options will be shown.  
  
On sites with 25 or more option groups, only the option groups which have been selected for this product are shown, and they are collapsed by default. They can be opened to view the option values with the overlapping squares icon. Once expanded, there are two links to quickly select or deselect all the option values.

Once you have created options, you can choose to convert the options product to a combinations one. Click on the 'option combinations' tab. For more detail see @4.1.4.4. Combinations product.‍

#### 4.4.2.1. Sort order value explained

The sort value is an arbitrary number used to determine the order that options appear in. If you leave it as zero, then Kartris will determine the order of options.  
  
So if you want 'colour' to appear after the selection for 'size', set the sort order value to 10 for size and to 20 for colour.  
  
It makes sense to assign in steps of 10 rather than with consecutive numbers, as it gives you the flexibility to insert new values later without having to change all the sort values. For example, you can insert a new option 'style' between size and colour by giving it a sort value of 15.

#### 4.4.2.2. Price and weight modifiers

When you create an option value, you can enter a price modifier and a weight modifier (in default currency). In this way, an option selection by a customer can change the overall value of an item. For example, a T-shirt might be €14.99, but the extra-large option might be €2.00. When the customer selects this option, the price of the T-shirt on the page will change to €16.99.  
  
Similarly, a particular option that adds additional weight can be accounted for (important if your shipping prices are related to item weight).

## 4.5. Product attributes

Product attributes are pieces of special information associated with a product. Entering information in the form of attributes, rather than just plain text within the description, not only aids the clarity of display, but also enhances functionality since the data is more structured.  
  
Attributes are entered at product level, so if you have multiple versions or an options product, care should be taken to ensure that the attributes apply to the product in general, including all versions.

### 4.5.1. Attributes vs. options

Attributes are sometimes confused with 'options', but they are quite different. Options are choices that are available to a customer to select when choosing a product. Attributes on the other hand are fixed pieces of information that apply to the product and cannot be selected or deselected by a customer.

To give an example of usage, a book might have a number of attributes:

ISBN (unique book number that all books have)

Publisher

Author

Genre (thriller, romance, non-fiction, etc.)

Format (hardback, paperback, audio book, e-book)

Once created, you can enter the information for each and every book you feature on your site (although there is no requirement to enter any attributes for any item where you don't wish to).

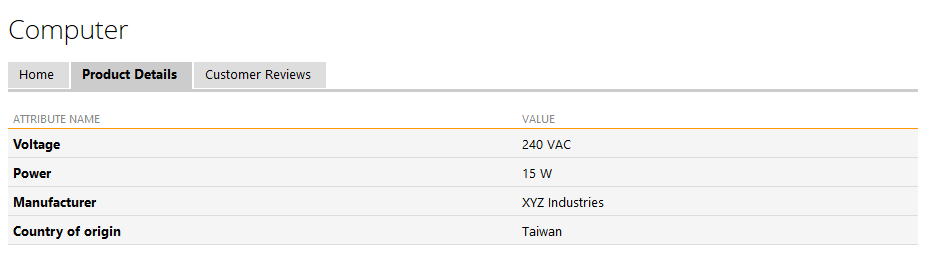


Figure Attributes set to display on a product page

### 4.5.2. Creating attributes

Go to ''. A list of all current attributes appears. You can click to create a new attribute, or edit an existing one.

Attribute type is fixed as 'text', but other types may be supported in future.

You can control if the attribute is displayed in the product page from the checkbox – unchecking the box means the attribute is hidden from displaying there.

If all the attributes of a product are hidden in this way, the 'product details' section on the product page will be hidden.

You can control whether an attribute is searchable too, with the 'include in search' checkbox. For example, you might not want voltage to be searchable, but you would most likely want the author attribute for a book to be searchable, or the ISBN number, as customers are very likely to use these to find particular items.

The final option is 'Show on comparison table'. This sets the circumstances under which the attribute will be displayed when comparing products.

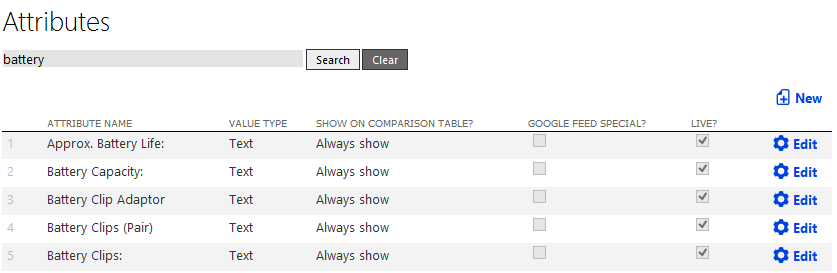


Figure The main attributes management page

### 4.5.3. Setting attribute values at product level

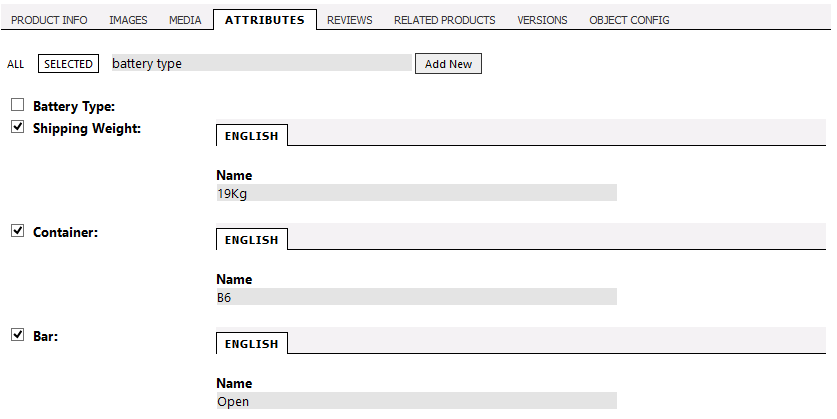
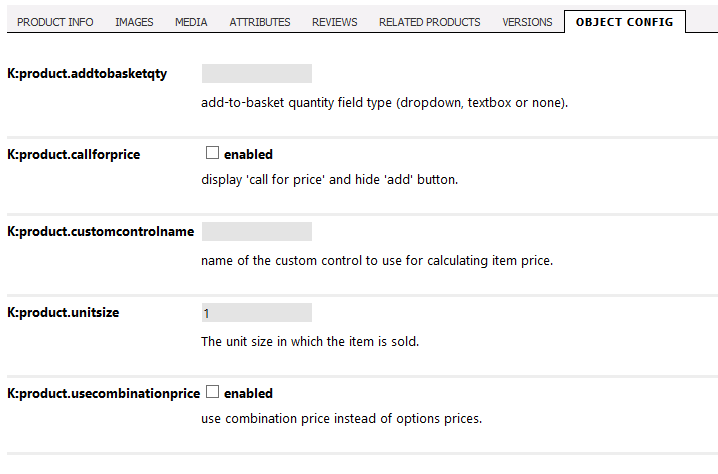


Figure The attributes tab under a product, with the extra
management features activated

On sites with very large numbers of attributes, displaying all of them in the back end product tab becomes very slow. To overcome this, if a site has more than 25 attributes, Kartris will by default only show the attributes that have been given values. To add new attributes that are not present for a particular product, a search box at the top of the attributes tab is used - add part of any attributes name, submit, and it will appear at the top of the tab, above the existing attributes. Checking the box by an attribute opens it so values can be added. Then the product can be saved to update it.

### 4.5.4. Object config

The object config system is a way of storing extra settings at product, version or category level, which can be edited from the item's page in the back end. These are kind of like config settings, but they apply just to a specific product or version.



If you are customizing Kartris and adding new functionality which requires settings at category, product or version level, adding a new object config setting is very simple. Just go into the database directly and add a record to the table. The data type can be []tring, []oolean or []umber. You can also choose whether the field in the back end is a textarea (multiline) or regular input field (single line).  
  
To retrieve the value in code, just call it like this:

|  |
| --- |
| ObjectConfigBLL.GetValue("K:product.addtobasketqty", 99) |

Where 99 is the database ID of the product, version or category that the object config setting is for.

#### 4.5.4.1. K:product.addtobasketqty

This controls the display of the 'add to basket' region of the product. The valid values are:

* 'dropdown' - a select menu numbered from 1 upwards (to a number set in ) displays just in front of the 'add' button so a customer can select a quantity and then add that number of items to the basket; this is most appropriate where users will only ever purchase a small number of similar items.
* 'textbox' - a free text field where the customer can enter a quantity and then click 'add'.
* 'none' - no quantity selection, just an 'add' button which adds a single item to the basket; this is most appropriate for big ticket items or customizable items where a customer is only ever likely to order one.

It should be noted that a customer can still edit the quantity of items as free text within the basket page, or click multiple times to add further items, so this setting does not create any limitation on what a user can checkout with.

Where no value is entered, the product will default to use the config setting value. So you should set that to act globally on your store, and then use this object config value on a per product basis to override it for particular items if desired.

#### 4.5.4.2. K:product.callforprice

If checked, this product's price will be replaced with 'call for price' or similar, and the button to add it to the basket will disappear. The actual display text can be set in the language string.

#### 4.5.4.3. K:product.customcontrolname

Custom controls is an advanced developer topic. It is a prototype system that allows the normal product 'add item' section for a specific product to be replaced by a custom user control. The control can handle all the logic of displaying options, accepting text input, looking up prices from a web service or spreadsheet or new database table, making calculations and formulating the price and description of an item which can then be placed into the standard Kartris basket. This permits total flexibility in the kind of products Kartris can handle, with total freedom for skilled developers to create complex configuration tools for products. It's particularly useful for handling custom measured items such as curtains, signage, boxes, etc. where the price can be a factor of multiple dimensions which themselves have 100s or 1000s of possible values. In these cases, it's simply not possible to use options.

This object config setting holds the name of a control in the folder that this product should use, for example '' (which we include as a sample in the core Kartris zip).

#### 4.5.4.4. K:product.unitsize

Most items you sell will probably be sold as individual pieces, in which case the unit size is 1. This means the basket allows only values divisible by 1 (i.e. integer values).  
  
But for some items, you may want to change this. If you sell cloth for example, it may be that you price it in metres, but can provide it in any length to the nearest centimetre. In this case, you can set the 'unitsize' object config for this item to 0.01 (1cm = 0.01m, the unit you're pricing in). Setting the value to 0.05 would mean only values rounding to 5cm would be accepted, and so on.  
  
It can also work in the other direction. If you sell screws or bolts to the nearest 100 or 50, you can set the unit size to those values, so customers can only add values divisible by 100 or 50 to the basket.  
  
The unit size can be any value, you could set it to 12 if bread rolls are priced individually but only available in 'dozens' or 0.25 if you price an item in kilograms but actually deliver it in multiples of a quarter kilo.  
  
If a user tries to add an incompatible quantity, either from the product page, or by editing quantities in the basket, a warning is displayed indicating that the item can only be ordered in multiples of whatever value you have set.

It is important to remember though that the posted price on the web site is always for 1.000 of an item. So for cloth or rope, it would be the per metre price (even if you can choose fractions of a metre) and for screws or bolts, it would be the single item price, even if the item must be purchased in larger quantities.

#### 4.5.4.5. K:product.usecombinationprice

This is an advanced setting that allows you to specific a fixed price for each combination of options available for a product. For example, a product might be available in two different widths, and three different heights. Normally with options, you can only set a price modifier for each option independently from other options. So for example, you could set that the taller item is +£10 in cost, but in practice the amount extra will need to vary depending on the width of the item too.  
  
By setting the 'usecombinationprice' object config on, you can price the individual combinations you create for a product without this being calculated by the base price plus/minus any option price modifiers.

#### 4.5.4.6. K:version.extrasku

Extra code number for versions (store specific). At present this is not used within the regular Kartris code, but it could have extra functionality written around it if required.

## 4.6. Suppliers

Suppliers are manufacturers or resellers from whom the store purchases items it sells.

To access suppliers functionality, go to ''.

Any suppliers you set up will be available in the 'suppliers' selection when editing or creating a product.

Setting the supplier is useful to help with managing stock in the back end of Kartris. You can list all the products from a particular supplier from the suppliers page – this makes it easy to locate all items from a particular source if you have a recall or other issue to attend to.

Also, you can filter the stock level warnings ('') by supplier. This allows you to see which items need ordering from any particular supplier while preparing an order.

## 4.7. Stock tracking

If you sell items where you have a limited number in stock, and where your resupply period might be more than a day, you will normally want to use stock tracking to ensure you don't sell items that you cannot deliver.

### 4.7.1. Activating stock tracking

Stock tracking does not need to be activated globally for the store. Instead, you can apply just to the items that you need to track stock for.

When creating or editing a version, check the 'stock tracking' checkbox. There are two relevant text fields: the actual stock quantity, and the warn level.

When the stock quantity reaches the warn level or below, a stock warning will appear in the 'To Do' list on the right hand side of the back end. This way, you can re-order more stock before your supplies are exhausted.

### 4.7.2. Out of stock

Items which are out of stock will have their 'Add' button on the front end replaced by an 'out of stock' message to prevent the items being purchased.

You can use the config setting to allow out of stock items to be purchased on your store.

## 4.8. Free delivery and downloadable items

The vast majority of items sold by online stores are physical items that require shipping to the customer. However, stores may wish to offer free delivery on some items or even sell items which are delivered digitally (as a download).

### 4.8.1. Digital / downloadable items

Kartris supports the sale and delivery of digital items. When you create a version, you can select the as either '' or ''. The former let's you specify a link to a file, either as a full absolute URL or a relative URL to a file on the same web site. This is useful if you have large general file downloads which don't need any special protection (perhaps because you issue licenses to use them separately).  
  
The '' option allows you to upload a file for the item. This is not ideal for huge files, but should generally be able to handle files up to several megabytes in size.  
  
The links to download files will be available to purchases in the 'downloads' section of their 'my account' pages.

#### 4.8.1.1. Controlling access to files

There are some settings which can help control how files are dispatched and protected.  
  
 - if this is set to 'y' (default), Kartris will hide the path of a file from the user and stream it them instead. This provides additional security for files.  
  
 - this is the number of days after a purchase that downloadable items are available for. The default is zero, which means there is no limit. If you only want a customer to be able to retrieve the download for 2 weeks (for example) then you can set this to 14 days.  
  
 - for security, you may only want files to be available to purchasers once you have set the order status to 'dispatched'. This is useful if you are concerned about fraudulent orders, which may be more common for downloadable items where no physical delivery address to retrieve the goods is required. If set to 'y' files will be available from the 'my account' area immediately when the order is paid and called back. The default is 'n'.

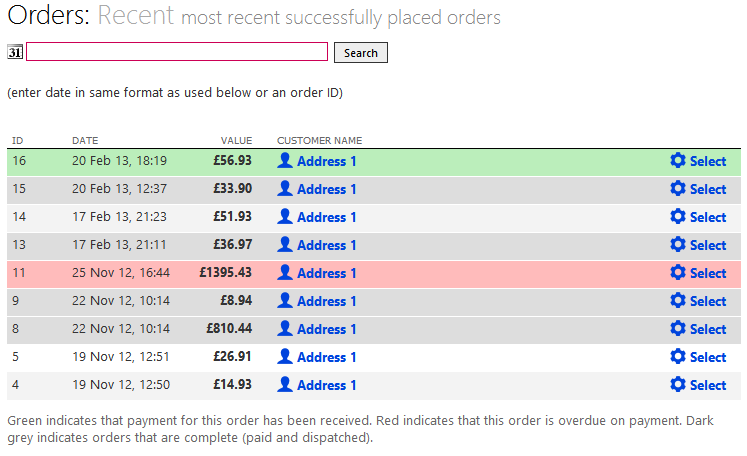
### 4.8.2. Free shipping

'Free shipping' is somewhat of a misnomer. What it actually does is to to exclude the weight or value of the item from total used to calculate shipping, so the shipping price for the order will be the same as it would be if the item was not in the order. To make sure that an order with just a single item that is 'Free shipping' actually gets free shipping, you should ensure that your shipping setup includes a 'zero' band, resulting in a shipping cost of zero for order weight/value up to 0.01 (or 0.001 for example).  
  
For more information on configuring your store's shipping, please see @3.5.5. Shipping / postage.

# 5. Orders

Orders are accepted through the front end of Kartris. But this is just the first step. The store owner will want to review orders, possibly check for fraud or other problems, and then assuming all is well, process them.

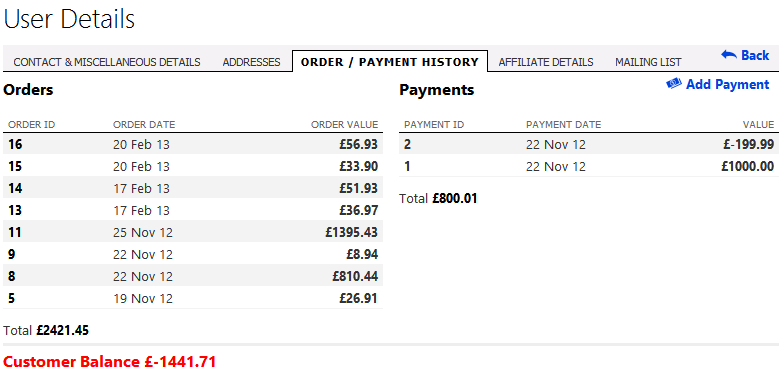
This section deals with processing orders and the various options and settings that affect the order process.



## 5.1. Finding orders

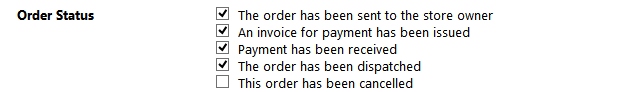
The first step to processing an order is to find it – there are several options for this in Kartris:

* The 'Orders' menu - this can bring up a list of orders filtered by various criteria such as recent, awaiting invoice, awaiting payment and so on.
* The main back end search box can find orders by ID.
* The search box on the orders list page can find orders by ID or date.
* Orders requiring attention (generally new orders) will show in the 'To do' list on the right hand side.
* You can click to view a customer's orders from either the customer listing, or the customer detail page; so if you need to find an order for a particular customer, you can find the customer by email or name (or part of) and then from there find their order(s).
* In Kartris 1.4x onwards, the order IDs on the customer's order history tab are also clickable.



## 5.2. Processing orders

### 5.2.1. Order status



There are 4 stages for orders to move through. These are indicated by 'Order Status' checkboxes when viewing an order in the back end.

– this box is checked when an order is successfully placed. Sometimes we refer to this simply as 'sent'.

– this box is checked manually in the admin section to record that an invoice has been issued to the customer for payment.

– this box indicates that payment for the order was successfully received. In the case of an online payment, the callback process normally triggers this box to be checked automatically when a successful payment is made.

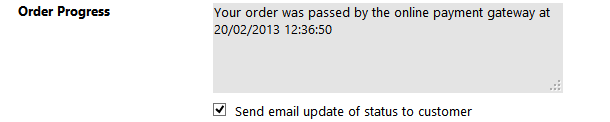
– this typically signifies that the order process is complete where payment was received via the web site. It is checked manually by the store owner once the order has been shipped. For orders that have been invoiced, this is of course not the end of the order process as payment is still awaited.

– checking this box retains the order in the database, but cancels it from order totals and releases any stock items back to the store.

In the most common scenario where a customer makes an online payment for the items in their basket, the first three boxes will typically be checked, leaving only the dispatch of goods to be manually changed on the order.

You can see and also adjust the status of any order by changing the status checkboxes and saving:

### 5.2.2. Order progress



The 'Order Progress' box is normally updated automatically for online payments just to confirm the payment, but the admin user can add extra comments and choose whether to send the status update to the customer by email. This is a useful way of notifying the customers of shipping delays or any other issues that might affect their order. These comments can be viewed from the 'My Account's section if the customer logs in to check the order progress.

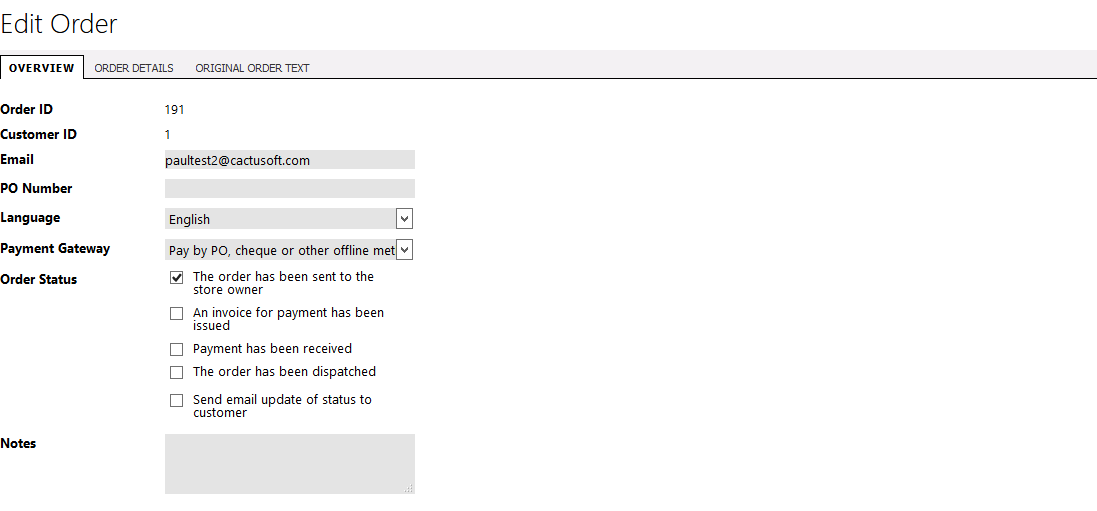
## 5.3. Editing orders

There are a few common situations which may require you to edit an order:

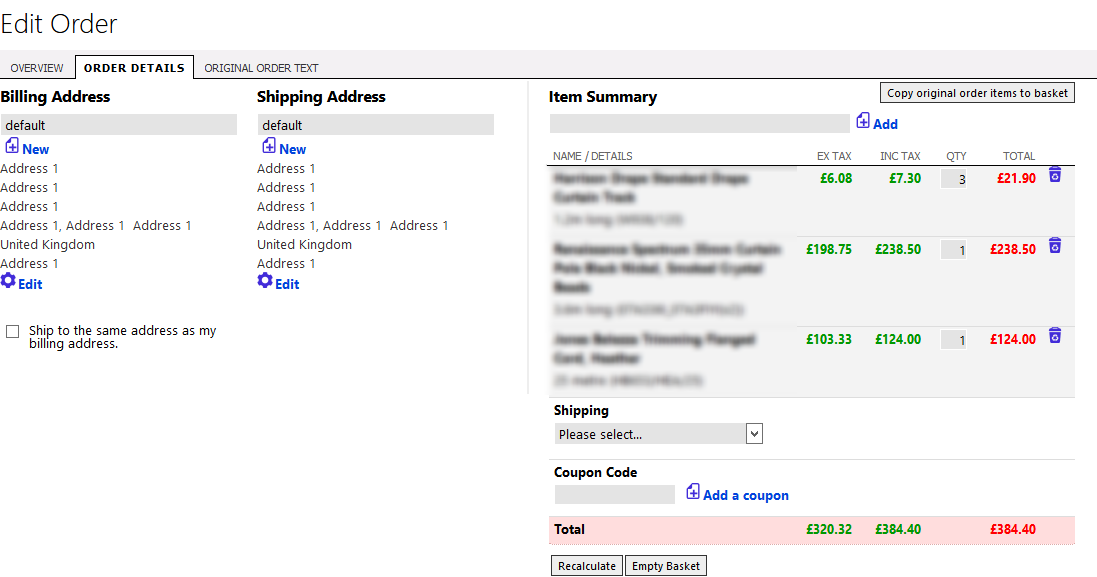
* The customer made a mistake, or changed their mind, and contacts you before you processed it
* You cannot obtain one or more items in the order
* The customer wanted to change address or some other detail

Rather than cancelling the order and letting the customer start again, you can choose to edit the order.

First, click to the order you wish to edit, and click the EDIT button at the top. You will see a multi-tabbed page, the first tab is the basic customer details.

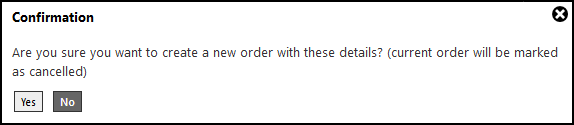


The second tab is probably where most changes will be made as it lets you change the items in the order. When you first view this, the basket side to the right will be blank. Click the button to load the items from the original order into the basket.

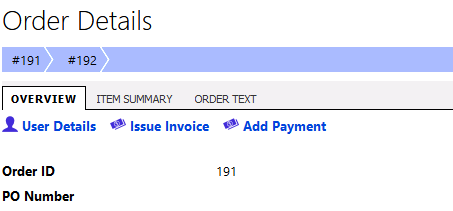


You will need to reselect shipping - you can flick to the original order text tab to see which method was used on the original order. Remember that if you've edited the items in the order, the weight or value of the edited order might mean that the shipping cost is different to before, or even that the method used on the original order is not available.

When you click to save the order, you'll see a confirmation popup.



Clicking yes will create a new order from the edited details; the old one gets tagged as cancelled, but both remain linked. When you view either, you will see a breadcrumb trail that links them.



In many cases, if you edit basket items, the order value will change. If the customer has paid already online, you will then either need to collect more from them, or give a partial refund. Once you have done this, you can update the customers account using the payments page (Orders > Payments).  
  
Enter the order number, click 'add' and the system will find the order and the payment required. You don't have to link payments to a specific order, so if you are giving a general account credit, or making some other adjustment, you can do that too.  
  
If the payment is positive, that means you received more money from a customer. If you refunded a customer, show the payment as a negative value.

## 5.4. Creating new orders

The process is very similar to @5.3. Editing orders‍, but you start the process from .

## 5.5. Invoices and receipts

Invoices and receipts are essentially the same thing, with invoices being sent to a customer to request payment while sales receipts are sent simple as a confirmation of what was paid.

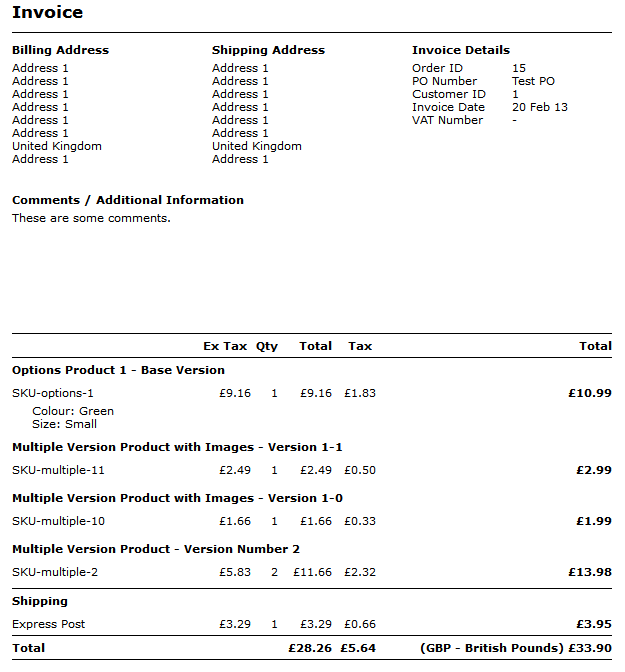
### 5.5.1. Issuing invoices

There is an 'Issue Invoice' link from each order. This can be used to view a print version of the invoice for printing if you require a customer be sent a print copy with their order, or by post to request payment. Note that viewing or printing this invoice does not automatically check the '' box. That box must be checked manually by the admin user to confirm that the invoice was sent to the customer.

Customers may view invoices from within their 'My Account' section in a print-ready format so some stores may decide to use this as the primary delivery method for invoices and receipts.

### 5.5.2. Customizing the invoice apperance

A basic invoice layout is included with Kartris. If you are printing onto headed paper, this version may well suffice.



However, if you need to customize this, you first need to understand the files involved in generating the invoice.  
  
Invoices can be viewed from two places; in the back end (by store admins) and also by customers within the 'My account' section. The back end invoice always uses the template in the Admin skin. The front end invoice display uses an if one is present in the selected front end skin. Otherwise, it defaults to the in the Admin skin. These master pages are the place you need to edit if you wish to add header and footers to the invoice(s), or company logos.  
  
If you need to edit the HTML layout of the invoice itself, for both cases, this uses the following file:  
  
  
  
This is the place to edit if you need to add your VAT number or any other extra fields that will appear on every invoice.

# 6. Customers

Although we use the term 'customers', the user records created in Kartris can actually be for people who may not have purchased anything on your site. For example, a user can create an account on the system in order to create a wish list, or save baskets, or sign up to the news letter.

If these users decide to purchase at a later date, they will use the same account that they created previously.

By keeping all user data linked to a single account (which is unique for an email address), it is easy for both the store owner and the customers themselves to see order history and access other features of the software.

## 6.1. Finding customers

You can click through to a customer from any order record in the back end.

On the Customers page (''), you can search by part of the email address, name, company or by the ID number. If you enter a number alone that matches exactly an ID number of a customer in the database, Kartris will take you directly to that customer's user record.

## 6.2. Customer groups

If you deal with certain types of customers such as retail customers, wholesale customers, preferred customers, etc. you may find it useful to group these customers so that you can easily find all similar customers or apply certain benefits, prices and restrictions to them. The customer group functionality in Kartris can be accessed by going to '').

### 6.2.1. Managing customer groups

The interface lists all the customer groups, and has special links to 'affiliates' and 'mailing list', which are special built-in customer groups.

### 6.2.2. Restricting access to certain products

One of the common requirements of an online store is to hide certain categories and products from all but specific customers. When editing a category, product or version, you will see a dropdown menu selection for ''. In this way, you can link a category, product and/or version to a specific group. In this case, only customers who are logged in to the front end and are members of the appropriate group will be able to see these items. Other customers will not see them, or be able to find them in searches.

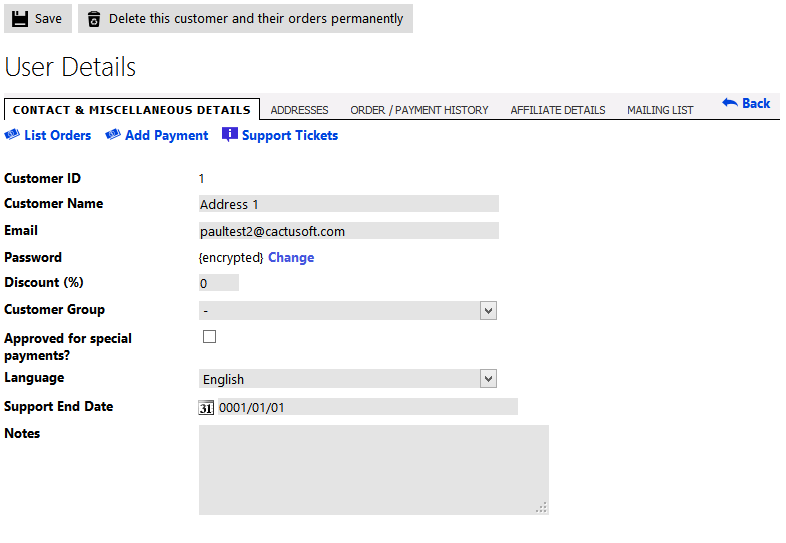
### 6.2.3. Per-customer group pricing

Although you can set a % discount at customer level, you may find that this does not give you the direct control you need. You may want to individually price certain items for a specific group, so for example it might be $15.00 for retail customers, or $13.25 for wholesale clients.

Kartris has a tab under versions labelled '' where you can override the price of any version for each customer group. Leaving the price at zero for any group will mean that the item for that group will be at normal price (and not zero!).

Of course, this functionality can enable you to have customer-specific prices too - you can create a customer group and assign just one customer to it, and then set prices for that group.

## 6.3. Customer settings



### 6.3.1. Customer discount

You can set a % discount for each customer if you wish. This will apply a % discount to the value of all items within the order, excluding shipping, handling and any other costs. This is in addition to any customer group discount applied so care should be taken to not give double-discounts inadvertently.

### 6.3.2. Change customer password

In Kartris, passwords are hashed for additional security. This means that the raw password is not stored in the database; instead, a function called a 'hash' is used to scramble the password, and this scrambled value is stored. When a customer logs in, the password they give is also scrambled and then compared to the stored scrambled password to make sure they match.

Because the raw password is not stored, the system cannot send the password to the customer as a reminder because the hash is not reversible. Similarly, you cannot find the password of a customer or an admin from the back end, or even by looking directly into the database.

Therefore if a customer loses or forgets their password, it must be reset. There are two ways to do this (1) the store owner can change any customer password from the back end (2) the customer can request a password change from the front end.

In the first case above, you should always be careful when customers request a password change on the telephone or by email that you are absolutely 100% sure that the customer is the genuine owner of the account.In the second case (online request to change password), the customer will be sent a link to the email address of their account that is valid for a limited period (1 hour) and that will allow them to reset their password.6.3.3. Change customer email address

There is no way for a customer to change their own email address in Kartris. The email address is assumed to be unique, and therefore we use this as the username. To avoid various issues with changing email addresses (including verification of the new account to ensure that its owner accepts the change and the problem of existing accounts), we have made changing email addresses a back-end only feature at present. If a customer needs to change their email address, then their only option is to contact the store owner so that an admin can change it for them.

The Kartris back end will check that the email address is not already in use (you cannot have two accounts with the same email), but it will not check that the owner of the new email address consents to the change (i.e. that the person making the change owns the new account), or that someone requesting the change (by telephone or email) is actually the owner of that account.

For security reasons, you should always be careful when customers request an email address change that you are absolutely 100% sure that the customer is the genuine owner of both email accounts. The best way is to write to both the old and new addresses separately and get a reply from both (a reply that includes your original email text). It is vital that you don't inadvertently hand control of an account to a third party due to lax security procedures. Although they could not access credit card data, they would be able to access personal details such as address and phone number as well as order history.6.3.4. Approve customer for special payments

Most payment gateways have a setting ''. If checked, this means that only customers whose accounts have the '' box checked will see this payment option at checkout. This is most commonly used for payment methods you may want to restrict to trusted customers, such as '' (where a customer can order goods without a credit card and the invoice is sent to them for payment later).

If the '' box for a payment method is not checked, then this payment option is available to all users.

If the '' box for a payment method is checked, but the user is not approved for special payments, they will not see this option at checkout.

### 6.3.5. Language

When an account is created, Kartris will store the current language in the account record so that it can be used for any communications later. It is also useful to know the preferred language in case you need to contact a customer about something.

### 6.3.6. Affiliate details

#### 6.3.6.1. IsAffiliate?

This determines whether the user has requested to become an affiliate or not (they can do this from a link in the 'my account' section on the front end). You can approve an affiliate by giving them a % commission above zero.

### 6.3.7. Mailing list

Kartris operates a strict 'opt-in' mailing list. This requires not just that someone sign up to the mailing list (including by clicking a link in the 'my account' section or checking a box during checkout), but also that they respond to the confirmation email that is sent automatically, by clicking the link within it.

#### 6.3.7.1. Mailing list process

Over the years that we have produced e-commerce software, some customers have queried the need for the extra confirmation step, as they feel it reduces the number of sign-ups on the list. While it does indeed do this, the reason is clear: to prevent the addition of addresses by people who don't own those addresses (either accidentally or maliciously).

For example, I could sign up an email address of someone with a very similar email address to mine by accident. But I would not then receive the confirmation link, and so could not click it to confirm the address. Consequently, this bad address would not be added to the mailing list.

Your web host will not tolerate you continuing to mail to a list which has generated spam complaints because some addresses turn out to belong to people who were added without their consent, especially once they find it is because you did not confirm addresses properly. In such cases, the whole list is tainted. While 99% of the addresses might be genuine, you have no way of knowing which ones are not, and will have no choice but to discard the whole list and start again using proper opt-in confirmation.

So there is nothing to be gained from not using opt-in confirmation, because it is only a matter of time before you'd be forced to discard a tainted list and start from scratch with it.

#### 6.3.7.2. Mailing list details

The mailing list details are stored for reference, so that if asked by your host, you can provide the sign-up date/time and IP, and confirmation date/time and IP for any email address. You can also provide proof that your system is coded to ensure only confirmed opt-in can be used.

#### 6.3.7.3. Sending to the mailing list

We don't provide any built-in tools to send to the mailing list. Proper mailing list management should use a dedicated mailing program that has the facility to parse bounce messages (as well as remove requests) to determine which email addresses should no longer be contacted.  
  
The mailing list can be exported from Kartris using the 'custom exports' feature - ''.

## 6.4. Affiliates

Affiliates are organizations and individuals who refer customers to the store via a specially coded link. In return, the affiliate will be given commission based on the sales generated by those they refer.

You can disable the affiliate system on your site (so visitors cannot see it and sign up to it) with the config setting.

### 6.4.1. Becoming an affiliate

A customer/user record can be an affiliate if two conditions are met:

1. – the customer can set this by applying to become an affiliate through the 'my account – affiliate referrals' section, or you can set it manually.
2. - this can only be done by a store admin on the back end of Kartris. In this way, each affiliate must be manually approved by an admin before their relationship with the store is confirmed and active.

### 6.4.2. Using an affiliate account

One approved as an affiliate, a user can see their status change in the 'my account – affiliate referrals' section. They are presented with a link such as: [http://www.demo.xyz/?af=123](http://www.demo.xyz/?af=184)

The 123 is the customer/user ID number, and can be passed to the home page.

### 6.4.3. Affiliate commission

When a new customer follows an affiliates link to a store powered by Kartris, the store sees the affiliate ID and records this in the customer's session. A 'hit' is also recorded, indicating that the link resulted in a customer visiting the site.

If the new customer goes on to make a sale, two things happen.

Firstly, the new customer's record is permanently tagged as 'belonging' to the affiliate who referred them.

Secondly, the affiliate will be credited with commission for this order, which will be the % of the total value of the order minus shipping, and any discounts.

### 6.4.4. Returning customer commission

If a new customer's record was tagged as belonging to a certain affiliate as described above, then if the return at any time in the future to make further orders, the affiliate will receive commission on these too.

If an existing customer who does not belong to any affiliate follows a referral link and subsequently makes a purchase on this visit, they will from that point on 'belong to' the affiliate whose link referred them. The affiliate will receive commission for this sale and any future sales made to the same existing customer.

### 6.4.5. 'Double' affiliates

It is not possible for a customer to 'belong' to multiple affiliates. Therefore, a customer who 'belongs' to a certain affiliate will remain as such regardless of whether they follow any other affiliate's links in future.

The original affiliate will receive any commissions on sales to a customer who they referred originally, even if that customer has followed another affiliate link on subsequent visits.

This is to ensure that affiliates cannot be 'poached' later to deny the original affiliate credit for a customer they referred.

### 6.4.6. Using affiliate features to track incoming links

A store owner may have external advertising or links that contribute traffic to his or her site. Advertising networks such as Google Adsense provide fairly detailed information on click-throughs, and even conversions when coupled with Google Analytics. However, sponsored links or forums or blogs may harder to track.

It is therefore possible to use the affiliate system to track such links, but setting up each link as a separate affiliate. This will require either using bogus email addresses, or setting up multiple new addresses. But it will mean that you can then ask your partners to use a specific URL you give them, so all incoming traffic, and the sales generated can be monitored.

### 6.4.7. Viewing data

Affiliates can view both hits and sales that resulted from their referrals from the 'my account – affiliate referrals' section on the front end.

Store admins can view similar information by going to ''.

### 6.4.8. Paying commission to affiliates

Payment information to the affiliate can be viewed from the '' link from the customer record in the customer listing. This will show the affiliate's total commission earned, and the value of any payments made to them.

Any commissions earned that have not been paid yet will be listed. If you pay a commission (or issue a coupon for it instead, if your terms are to pay commissions as discount coupons instead of as cash), you can check the box next to the commissions paid and click the '' button. A payment for the total amount will appear below, while the commission records will disappear. If you make a mistake, or cancel a coupon/payment, just select '', and the commissions will be unpaid again.

# 7. Promotional Tools

Kartris contains a number of features that enable you to draw attention to particular items or provide special prices that will encourage purchases.

## 7.1. Featured products

Featuring products on the home page is a way to highlight popular or high value items and channel traffic to them. To set a product as 'featured', go to '' in the back end.

Enter some text in the search box, and matching products should appear in the filter list. Click to select one. In the smaller box next to this, you can set a priority value - higher values will rank items higher on the home page. You can set items with the same value if you don't want to determine an order. Values must be more than zero for an item to display.

You can set the maximum number of items to display using the config setting. If you have more than this number of items set with featured values above 1, this will limit the number that appear on the site.

You can set which product display format is used for featured products with the config setting.

## 7.2. Promotions

Promotions are special offers that provide some benefit to customers if the order meets certain criteria. Offers such as '' are classic examples, though the Kartris system is somewhat more flexible than this.

Promotions can be created and managed by going to '' in the back end.

The basic principle of promotions is that they are two-sided. On one hand you have the item or amount required to be purchased or spent in order to trigger the promotion. On the other side, there is the saving or free product(s) that are received.

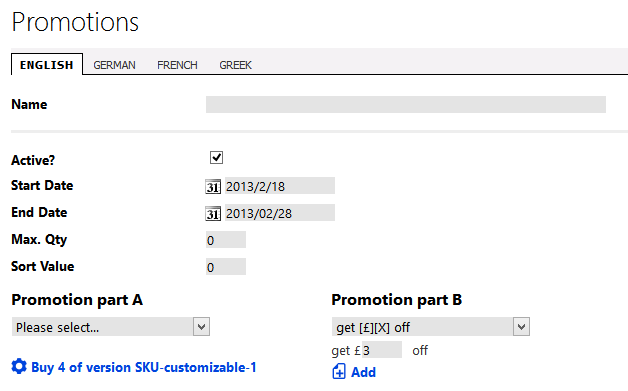
### 7.2.1. Limiting the number of promotions

Promotions can rapidly cause major problems when they overlap, as it creates many more possible options as to what rules should be applied.

For example, if you have a in a store that also has , you are effectively giving both B and C away when the user buys two of 'A'. Other problems can occur when one of the 'free' items (B or C) in the case of the above, also earns some promotion discount. For example, if you had another promotion , then the item B (which is free thanks to one of the promotions above) also results in a free item 'D'. So the purchase of two 'A' now gives B, C and D for free. Probably not was intended when each promotion was created.

To limit the chance of multiple promotions, stores may wish to limit the total number of promotions that can be triggered in a single order. The config setting can be set to zero for 'no limit', or any number above to limit promotions.

### 7.2.2. Creating a promotion



When clicking the 'New' link, the promotion form comes up.

The promotion can be given a name, in multiple languages if you store supports that, and a checkbox can be set to determine if the promotion is 'live' (available) or not.

You can choose a start and finish data and you can also set the maximum number of this promotion that can be applied.

The sort value helps set the priority with which a promotion will be treated if there are multiple overlapping promotions (for example, the conditions of items in the basket triggers two different promotions).

Promotions consist of two sides – the first being what the customer must spend or purchase, and the second being what they receive as a result. We refer to these as part 'A' and part 'B' for simplicity.

On the promotions page, part 'A' is set on the left hand side, and part 'B' on the right hand side.

From the first dropdown menu of part 'A', the type of promotion can be chosen. Once a type is selected, textboxes will appear to let you specify further information. For example, if you select buy [X] of [P] (buy a certain number of a certain product), a textbox appears for the quantity (X). Enter a whole number. A second textbox also appears for the product (P). Enter the name or part of a product name here, and the filtered box will display the options. Select the appropriate one, and it will be entered to the textbox. The last step is to click the 'Add' link to add this new pattern to part 'A'. It will turn into a blue link just below the dropdown menu.

Note that you can add multiple requirements to part 'A'. So you could have a requirement to buy one product D, spend $10, for example.

The next step is to fill out what the customer receives on part 'B'. The process is similar to that for part 'A'. Again, remember to click 'Add' to register your selection. You can create multiple received items too.

If you enter multiple requirements, e.g.Spend XBuy 1 item from Category Ythen all requirements will need to be met to unlock the promotion. In other words, it is an AND rather than OR operation. The customer must spend X buy 1 item from category Y.  
  
Category-based promotions are not . This means they only apply to products immediately within a category, not products nested within subcategories of the category.It is that you consider carefully the result of promotions and the possible ways they can potentially work in ways that seem to the detriment of either the store or the customer. The promotions system is extremely complicated, there are infinite possibilities and what might seem logical in one context doesn't in another. Some examples to avoid, or that may be problematic are outlined below.

### 7.2.3. Promotions to avoid and potential problems

This list is by no means exhaustive, but is a useful guide to the pitfalls and problems that can arise with promotions:

* - you should avoid cases where an item can appear on both sides of promotions, as you can have situations where buying one item earns you another for free, and having 'bought' that item then earns you another item for free, and so on. Remember that items can be included in promotions through being in a certain category, as well as by being specifically included.
* - for example, let's say you have a promotion on a product that has four differently priced versions. If a user picks two items, you would typically want to give the cheaper one free. However, if they buy 4 items together, and you just give the 2 cheapest free, it may cost them more than if they made two separate purchases of 2 items (where they could get the cheapest and second most expensive items for free instead of the two cheapest). The logic of dealing with such promotions in the fairest way possible is highly complex and dependent on a number of factors; what seems fair in one situation may well not seem fair in another. It is far simpler to have type promotions only on items of the same price.

### 7.2.4. Adding promotional items to basket

We are often asked why we don't add promotional items automatically to the basket, rather than require customers to do this.

There are several reasons. Firstly, a promotion may not give a free item. It may be . In such cases, the user has to decide whether they want the additional item at that reduced price, or not. We cannot automatically decide for them.

Secondly, the promotion may be , but this 'B' might be a product with several versions or be an options product. So we have no way to know which version a user wants, or what options they might want even if we know the item will be free and so they'll almost certainly want one.

In some cases, a promotion may 'gift' a specific version for free, so there is no doubt that a user would benefit from having this item. But for consistency, we don't add it in such cases. The page where the item is, as well as the basket will highlight the promotions that are available on these items, but the ultimate decision to add items to the basket is for the customer, just as it would be in a regular supermarket. If an item is , a nice cashier (if you can still find a human) might let you know about it if you only have one in your basket. But it's still up to you to go get it - they won't keep them under the till in order to add it for you.

### 7.2.5. Full list of promotion types

For reference, these are the types of promotion components available:

Buy [X] of version [V] – e.g. buy 2 barbecue beans, small size

Buy [X] of items from category [C] – e.g. buy 5 items from 'books'

Buy [X] of product [P] – e.g. 1 barbecue beans (any size)

Spend [£][X]

Get [X] of [V] for free – e.g. get 1 barbecue beans (small size) free

Get [X]% off [V] – e.g. get 10% off barbecue beans (small size)

Get [£][X] off – e.g. get £5 off

Get [X] of [P] for free – e.g. get 1 floor mat (any colour) free

Get [X]% off [P] – e.g. get 5% off 1 floor mat (any colour)

Get [X]% off items from category [C] – e.g. get 15% off any book

[X] = a whole number

[V] = a specific version of a product

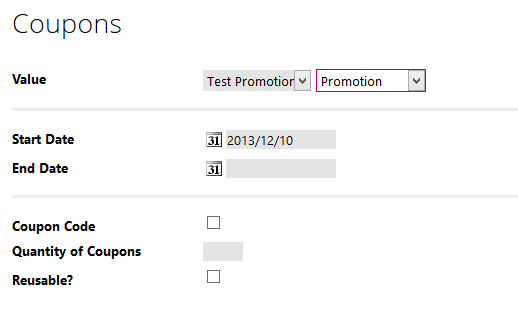
[P] = a product (any version)

[C] = a category

[£] = the default currency (£, $, etc. depending on your store)

### 7.2.6. Linking promotions with a coupon

Promotions are typically publicly visible and available to all customers. But in certain cases, you may want to create a promotion but only make it available to a certain customer, or give it as a 'one off' incentive.  
  
From Kartris v1.4 onwards, it is possible to combine the coupons functionality with promotions. You create a promotion in the standard way, but the '' checkbox must be unchecked (so the promotion is not live, otherwise it would be available to any user already).  
  
You then create a new coupon, and select 'Promotion' from the value menu. The value textbox changes to another dropdown menu. From here you can select the promotion you wish to link this coupon to.



Remember - only promotions which are inactive (the 'Active?' box is not checked) can be linked to coupons. Because any promotion that is active will be available anyway, so would not need a coupon to activate it.

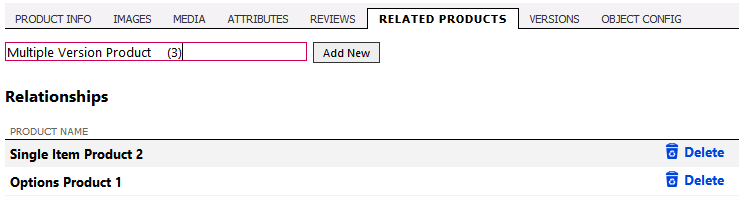
## 7.3. Related products

Cross-selling means being able to sell an additional product or service to an existing customer. One powerful way to do this is targeted links between certain products that might appeal to similar buyers, or are related. For example, if you sell electronic items, you might wish to link through to the appropriate batteries or carry case.

### 7.3.1. How relationships work

Related product links are in that if you create a link from product 'A' to product 'B', there will be no link from product 'B' to product 'A' (unless you create this separately of course). The logic is probably obvious – in the case above regarding batteries, you would not want to visit the battery page and see links to every single electronic item that links to this type of battery.

Single direction links gives you more control and choice than bi-directional links; you can always achieve bi-directional links by adding relationships on both items, if you wish.



### 7.3.2. Creating relationships

Navigate to a product page and click the 'Related Products' tab.

In the text box, start to type the name, or part of the name of the product you wish to create a link to.

A list of products will appear – select the correct one. Then click 'Add New' and it will appear below. You can repeat the same process to relate more products with this one.

You can delete any relationships from the list too.

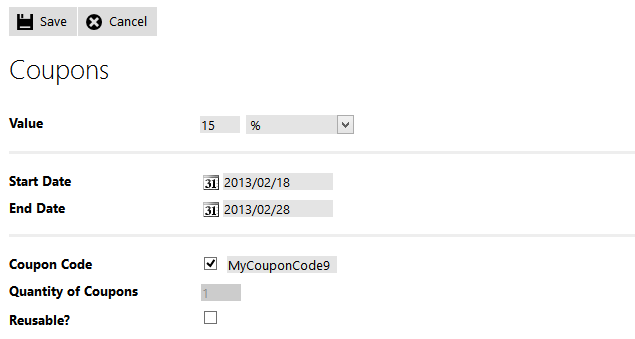
Don't forget to click 'Save' to store the changes.

## 7.4. Coupons

Coupons are special codes that can be entered by a customer before checkout to obtain some kind of discount (fixed or percentage). They can also unlock promotions too.

Coupons can have various restrictions on use; from the time period during which there are valid to the number of times they can be used. A fixed value coupon, if used on an order of lower value, will not give change or retain the unused value.

### 7.4.1. Creating a coupon



Navigate to '' – you will see a list of previously created coupons (if any), and a link to create new ones.

You can choose the value of coupon discount (fixed amount or percentage), or you can select to link the coupon to any non-live promotion, which will be available only to customers who use the coupon (see @7.2.6. Linking promotions with a coupon for more details). You can also specify the start and finish date of the coupon, and whether the coupon is reusable or not. Coupons that are not reusable will expire when used.

The 'coupon code' checkbox lets you choose whether to enter the coupon code yourself. This way, you can choose something short, memorable and easy to type. This is useful if you create multiple use coupon codes to publish in and advertisement for example.

If you want to create multiple coupons of the same kind in one go, then the store will name them with pseudo-random codes.

You can disable and re-enable any coupons from the listing.

You can delete coupons only if they have not been used. Any coupon that was used for an order is protected from deletion, so the record of it will always remain.

### 7.4.2. Accounting for coupons

Tax authority rules typically require that money-off coupons be applied as cash would. For example, if you had an order which contained two items of similar price, one of which had tax and the other that did not, if you applied the coupon to the taxable one to reduce its price, you thereby reduce or even zero the tax due on the order. However, if you applied the coupon to the non-taxable item, the total tax on the order remains the same. Similarly, coupons must always be applied to the order total after tax, just like cash would. The value of a coupon should be evenly applied across the tax inclusive prices of all items in the order in proportion to their value. Kartris does this, and will also calculate the % split of the coupon itself between the tax and order value.

## 7.5. Customer discounts

See @6.3.1. Customer discount.

## 7.6. Customer group discounts

See @6.2.1. Managing customer groups.

## 7.7. Quantity discounts

It is a common feature of many transactions to provide discounts for quantity to encourage bulk purchases. Sometimes this is referred to as 'price breaks'.

Kartris has a flexible quantity discounts system that allows unlimited price breaks for any quantities specified. This is set at version level (since it is the version that holds the price info).

Simply click to edit a version, and then click the 'Quantity Discount' tab.

Enter the quantity break point, and the price for purchases of that number or more. Note that the price you must enter is per item, so prices should go DOWN as the quantity goes up.



Make sure you enter the discounted price PER ITEM, and not for the total number of items.If quantity discounts are available, the user will see a link for quantity discounts on the front end when viewing the product.If a user adds 5 items into the basket (below the price discount level) and then later adds a further 6, the system will automatically pool these together and apply the discount from that point on. Similarly, if a user adds 10 items (with discount) and then removes one from the basket, they will immediately be recalculated at the normal price.7.8. Product reviews

Product reviews can provide a valuable way to encourage customer interaction. Good reviews can help reinforce the reasoning for new customers to purchase, but even negative ones can help build trust in the web site, and also give you an opportunity to address customer concerns.

### 7.8.1. Settings

There are a number of config settings relating to reviews which control how the system works.  
  
  
Whether to automatically set 'reviews' to live on the site. If 'n', then reviews must first be checked on the backend and set manually to live. It is highly recommended that you don't turn this feature on, in order to prevent spam or malicious postings.  
  
  
The format to use for displaying the date of a review on the front-end. You can see a full list of the formats you can use here: [Microsoft Docs: Custom Date and Time](https://docs.microsoft.com/en-us/dotnet/standard/base-types/custom-date-and-time-format-strings)

Whether to send the store owner an email when a new review is submitted. New reviews will show up in the 'to do list', but it can be nice to get an email alert as soon as a new review comes in if you want to ensure you can check and approve them quickly.

Site-wide change of whether to enable customer reviews - If turned on (y), this can be customized on a per-product basis.

Limits the number of reviews to show on each product - e.g. 3 will only show the 3 latest reviews. Set to 0 for no limit. This is useful if your site receives a huge number of reviews, but in most cases, 0 (no limit) should work fine.

Set who is allowed to add reviews to products. '' allows all site users to add a review; '' only allows logged in customers; '' only allows logged in customers who have purchased the product via your store.

Whether to enable customers to add rating with product reviews - 'y' to allow, 'n' to turn off, and 'r' to make them a required field (in which case there is no 'no rating' option to customers).

Maximum on rating scale for reviews (e.g. 5 will give the user a 1-5 selection). Unless your site is a Spinal Tap-themed amplifier store, there will be no obvious reason to change this. You should also not change this once your site has reviews, as the scores users gave will no longer make sense against a new maximum value.

Whether to enable customers to add a title/summary on product reviews - 'yes' to allow, 'no' to turn off titles, and 'required' for titles required (customer must enter a title).

### 7.8.2. Moderating and publishing reviews

#### 7.8.2.1. From the 'to do list'

When new reviews are added, they will generally (if you use recommended settings) be 'awaiting authorization' until you approve them. These will show up in the 'to do list':

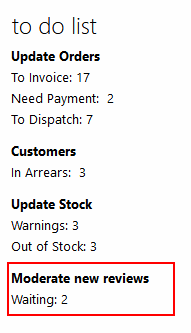


Figure Clicking the 'Moderate new reviews' link will take you to a list of pending reviews

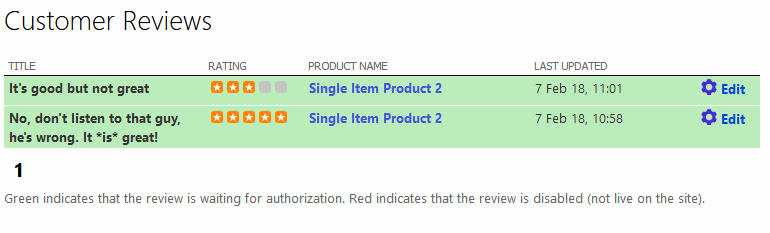
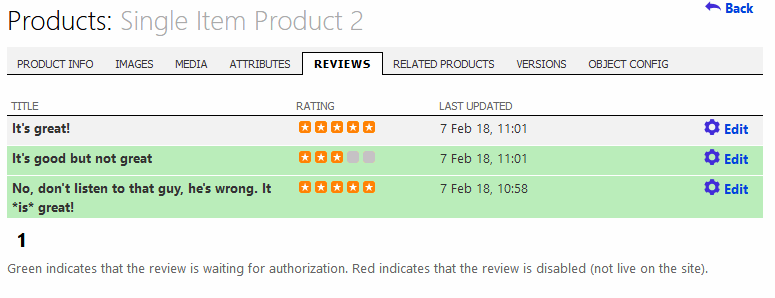


Figure Click to edit a review. You can make any changes required, and change the status to 'Live' or 'Disabled'.

The review listing accessible from the 'to do list' will only show reviews that are awaiting authorization.

#### 7.8.2.2. From the product

Each product will have a reviews tab listing all reviews (of any status - awaiting authorization, live or disabled).



# 8. Custom Pages - Basic CMS

In addition to product data, most sites will have a requirement for a few additional content pages such as 'About Us', terms and conditions, and so on. Kartris includes a feature called 'Custom Pages' for this purpose.

## 8.1. Creating a custom page

Navigate to 'Miscellaneous > Custom Pages'. A list will appear with existing custom pages. Click the 'New' link. A form appears into which you can enter your content.  
  
The 'ID' field is a unique text-based ID for the page. This will form part of its URL, and it is also what appears as the name of the page when listing custom pages in the back end. So a good descriptive ID is best. The ID cannot contain spaces and special characters should be avoid. Hyphens (dashes) should be used in place of spaces. For example, these would be appropriate IDs:  
  
  
  
  
  
The text is the content of the page. HTML can be entered here too, using the HTML editor button to the bottom right of the text field. Don't forget to save the content after editing (the save button on the toolbar above).  
  
The 'Title' field is used within the breadcrumb trail. Originally we used the page ID here, and replaced the dashes with spaces. But this means page titles cannot include dashes or other characters, and furthermore are not language specific. Hence we created a specific field for this.  
  
SEO fields are also available to be populated.

## 8.2. The 'Default' page

On our demo, you will notice a slideshow in a prominent position towards the top of the home page. This content area of Kartris is a free-text HTML area that you can easily add in content to. Simply edit the 'Default' custom page, and the content will appear here.  
  
You can also use the SEO fields for the Default custom page too, which will control the values used on the home page of your web site.

## 8.3. Breadcrumb trail parent pages

The breadcrumb trail, as on other pages, is created automatically. The page name in this comes from the 'Title' field of the custom page.

In some cases, you will want to nest content, and have the breadcrumb trail indicate this. To do this, you can select another custom page from the 'Parent Page' control. For example, you might want the breadcrumb trail for a particular page to appear like this:

I this case, you'd have to first create a page called 'Services'. You can then create 'Repairs' and select 'Services' as the parent page.

The breadcrumb trail for products, categories and custom pages is created dynamically from database data. However, pages such as the Basket, Customer Account and so on are included from the file. If you add new physical pages (aspx files) to your site, and want them to use the breadcrumb trail, you will need to ensure references for these new pages are added to the .

See @14.1. Adding new pages‍ for more information.

## 8.4. Site menus

Links to custom pages will not automatically appear on the web site. You must add them to menus manually, or create links in your skin to them.  
  
If you look at our demo, you will see a light grey coloured menu which is triggered by the hamburger button (top left of page). The content for this comes from the file which is in the root of Kartris. You can edit this XML file manually to create the menu structure you require.

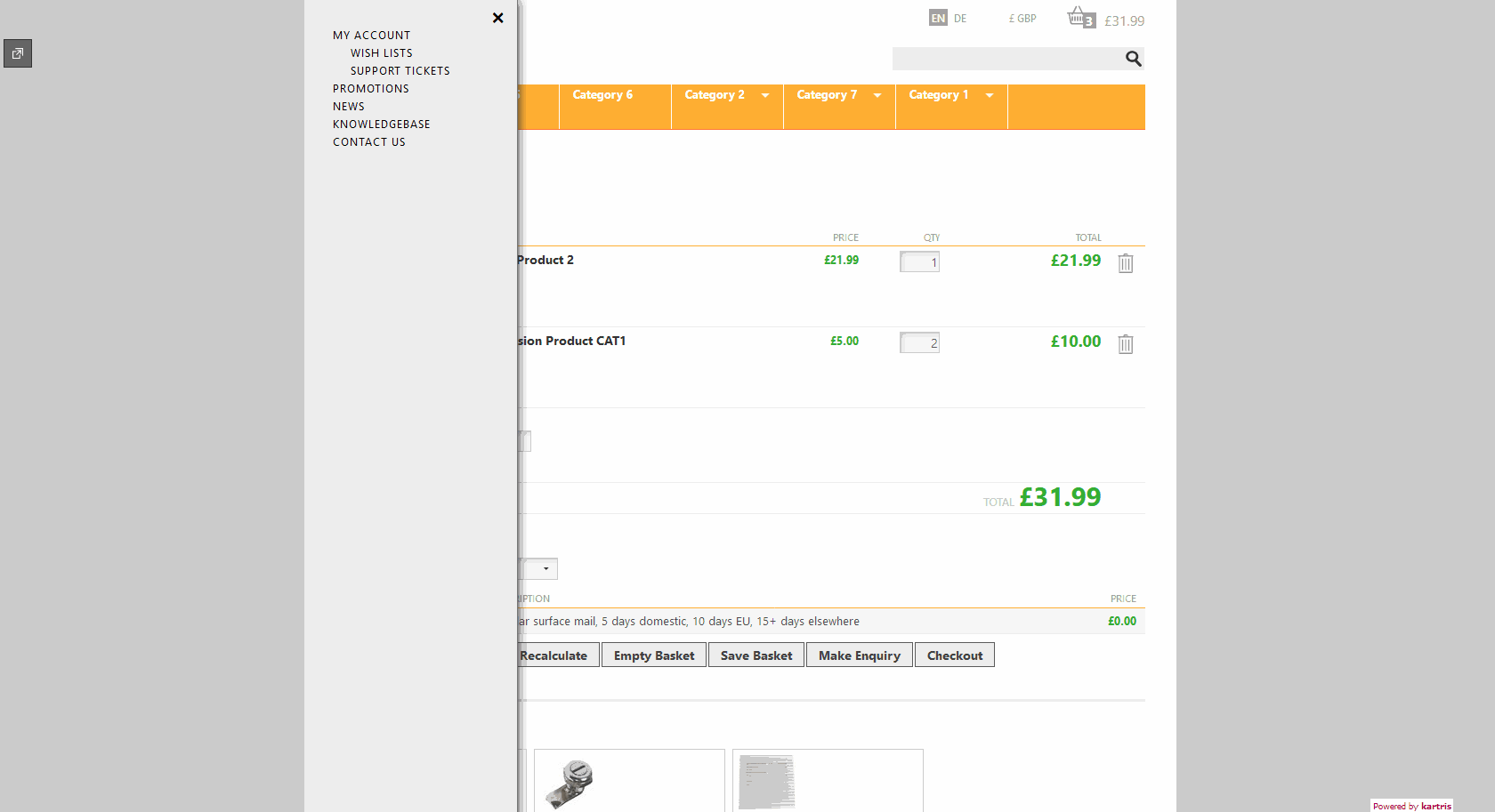


Figure The general navigation menu; on the default skin this is launched with the hamburger button (top left of page)

We strongly recommend you back up the file before modifying it. When modifying it, take careful note of the structure of tags, and whether a tag is self-closing or not. If you have two or more links to the same page, ASP.NET may generate an error because they are not unique. You can overcome this by appending an unused parameter to the URL, for example ?x=1, ?x=2, etc.You can also add Hyperlink controls to the file to provide links to your custom pages, such as those we have in the footer. We recommend using ASP.NET Hyperlink controls rather than standard HTML <a> tags, because URLs can be specified relative to the app root using the format. These will work correctly from any friendly URL page, and whether the site is running in a subfolder of localhost, or on the root of a fully-qualified domain.8.4.1. XML structure

The default file code looks like this:

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?> <siteMap xmlns="http://schemas.microsoft.com/AspNet/SiteMap-File-1.0" enableLocalization="true" >  <siteMapNode url="~/Default.aspx" title="$resources:Kartris,ContentText\_Home" description="$resources:Kartris,ContentText\_Home" >   <siteMapNode url="~/Customer.aspx" title="$resources:Kartris,PageTitle\_MyAccount" description="$resources:Kartris,PageTitle\_MyAccount" value="myaccount">  <siteMapNode url="~/Wishlist.aspx" title="$resources:Kartris,PageTitle\_WishListLogin" description="$resources:Kartris,PageTitle\_WishListLogin" value="wishlist" />  <siteMapNode url="~/CustomerTickets.aspx?" title="$resources:Tickets,PageTitle\_SupportTickets" description="$resources:Tickets,PageTitle\_SupportTickets" value="supporttickets" />  </siteMapNode>    <siteMapNode url="~/News.aspx" title="$resources:News,PageTitle\_SiteNews" description="$resources:News,PageTitle\_SiteNews" value="news" />   <siteMapNode url="~/Knowledgebase.aspx" title="$resources:Knowledgebase,PageTitle\_Knowledgebase" description="$resources:Knowledgebase,PageTitle\_Knowledgebase" value="knowledgebase" />    <siteMapNode url="~/Contact.aspx" title="$resources:Kartris,PageTitle\_ContactUs" description="$resources:Kartris,PageTitle\_ContactUs" />   </siteMapNode> </siteMap> |

Note carefully the structure; siteMapNodes with children such as are not self-closing - they have a separate close tag after the children. Child nodes like are self-closing (they have a / before the closing of the tag).  
  
The refer to language strings (see @15.2. Language strings‍). If your site only uses a single language, you can add links that have hardcoded text instead of references to language strings, for example:

|  |
| --- |
| <siteMapNode url="~/MyPage.aspx" title="MyPageTitle" description="Title of My Page" /> |

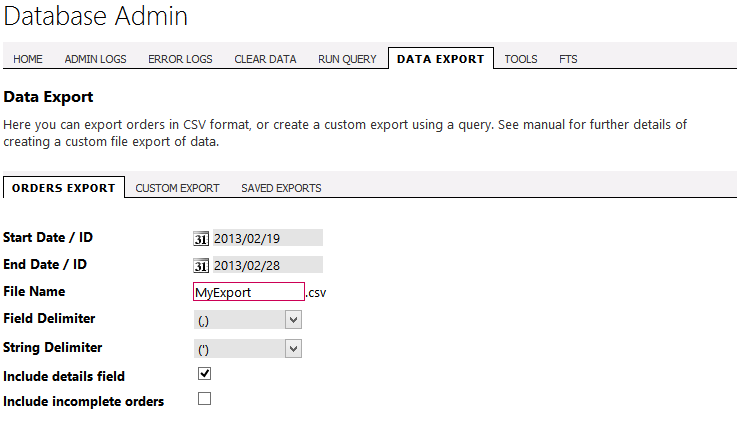
# 9. Exporting Data

## 9.1. Data export

There are many cases where a store owner might need to export data from Kartris. Exporting customer and order data is one of the most common requirements; either to satisfy local tax authorities, or for import into other databases. For this reason, Kartris has a built-in order export tool. But it also has a flexible export system that can be used to create exports of any data you might need to CSV format, without any coding (although some tech savvy is still required).

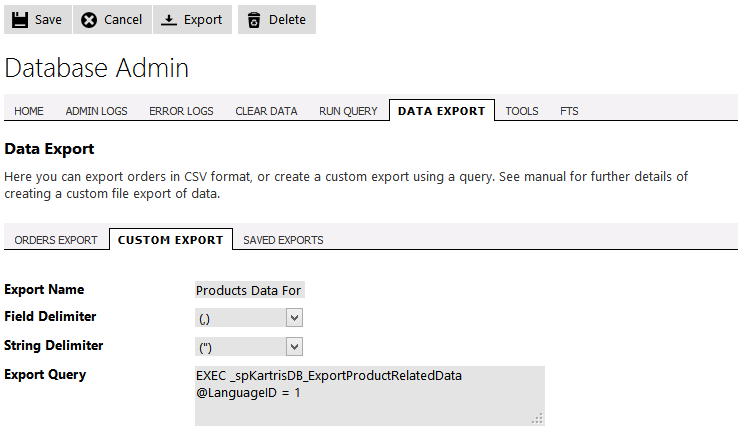
### 9.1.1. The customer/order export

Navigate to and then select the tab. On the first tab, 'Orders Export', you can specify various criteria of the orders you require exported, and then hit the export button on the toolbar above the page. A file download dialog should appear, allowing you to save the file. You may need to allow several minutes to download the file if you're exporting a large amount of data.  
  
You can choose to export orders between certain dates or certain order ID numbers.  
  
The field delimiter is the character that will be used in the exported file to separate data. In 'CSV' (comma-separated values) this will be a comma, but you can override this.  
  
The string delimiter is the character that will surround string (text) values in the exported data. The default is a single-quote, but if you find some of the data columns are misformatted when you open in Excel or another program, you can try overriding this.



### 9.1.2. Custom exports

Navigate to and then select the tab. The second tab 'Custom Export' allows you to create a new custom export. The third tab, 'Saved Exports' lets you run existing custom exports that have been saved.  
  
The essential part of a custom data export is the SQL query that specifies the data to be retrieved from your Kartris database. Defining this requires some technical knowledge and a basic understanding of databases, as well as some knowledge of the Kartris database (although a competent database admin should be able to figure this out). SQL is a standard language, similar versions of which are used on most relational databases from Microsoft's Access and MS SQL to Oracle and MySQL. A tutorial in SQL is beyond the scope of this user guide, but there are many such resources available on the web.  
  
Once you have a query, you can name a custom export, choose the field and string delimiters and then save it with the save button on the toolbar. You can also run exports directly from here with the export button on the toolbar.



### 9.1.3. Saved exports

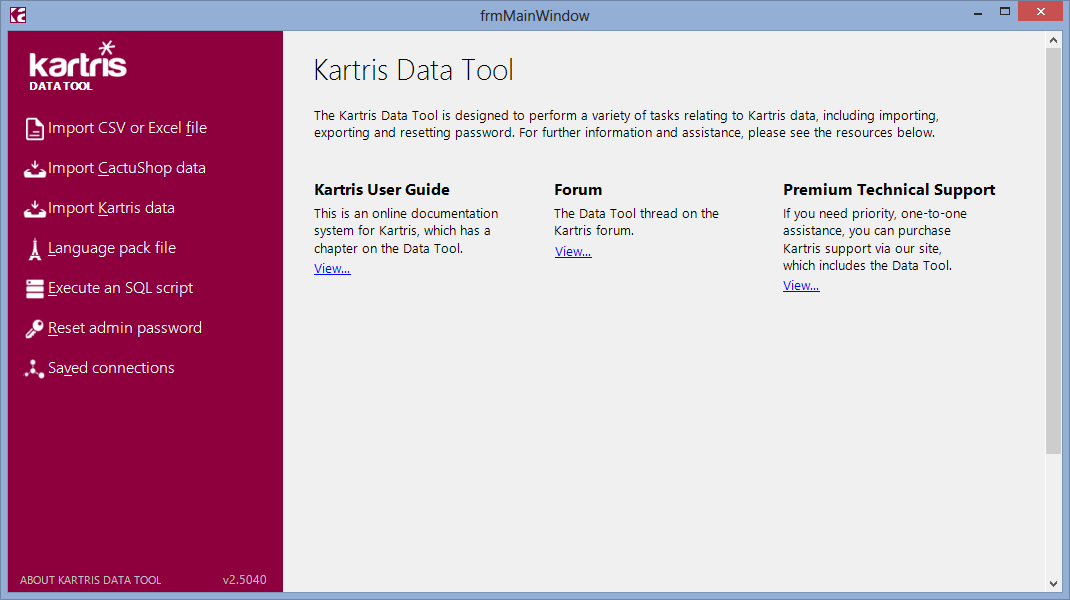
Navigate to and then select the tab. The third tab, 'Saved Exports' lets you run existing custom exports that have been saved.  
  
You can run exports direct from the listing of custom exports, or you can edit an existing export (if for example you need to set a date or some other value in the export before running it).  
  
There is no limit to how many saved exports you can have. There is also no limit to what data can be exported in this way, with a suitable SQL query.

# 10. The Data Tool

The Data Tool is a companion product to Kartris. It's a Windows application that is designed to carry out various tasks relating to Kartris, although it is primarily used for importing data.  
  
The Data Tool is presently a [free download](http://www.kartris.com/t-Downloads.aspx) from our web site.

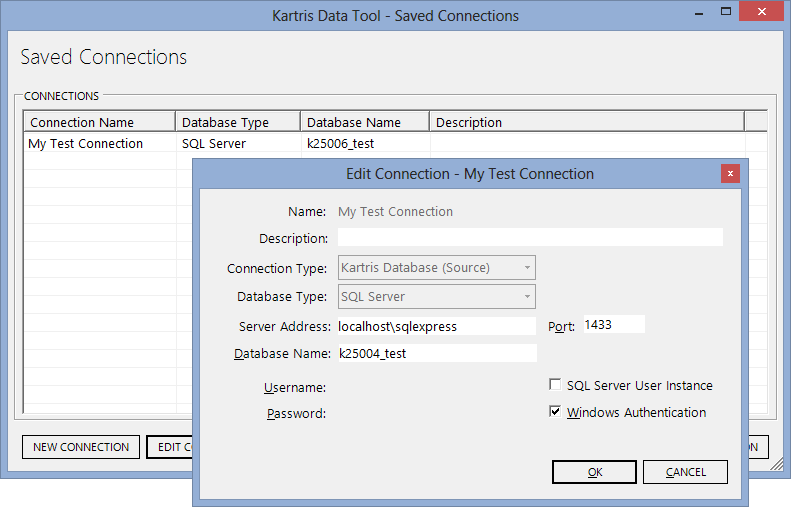
## 10.1. Overview

The Data Tool requires .NET 4.0 or above installed on your machine in order to run. It can be downloaded for free from our web site 'downloads' page. It does not need installation, just unzip the files to your desktop and then open to get started. You should see the following:



## 10.2. Getting started

You will generally find it's easier to use the Data Tool if you set up the connections you need before starting. Clicking 'Saved connections' in the left hand menu brings up a dialog which lets you create as many connections to different databases as you need.



## 10.3. Importing data

The Data Tool can import from CactuShop v6 or v7 (CactuShop is an older classic ASP shopping cart also produced by Cactusoft), from a CSV or Excel spreadsheet, or from another Kartris database.  
  
The basic principle of data imports is to have a source and destination, and copy information from one to the other. In this way, imports and upgrades do not damage or change the original database.  
  
The import dialogs will typically walk you through step-by-step, and give information if there are problems.

### 10.3.1. Formatting spreadsheet/CSV data for import

The Data Tool requires CSV or spreadsheet data to be suitably formatted for import. A sample spreadsheet with some correctly formatted data is included in the data tool zip, or you can download it below.

Downloadable Content:

This download is available at: <https://tome.host:443/Downloads/2071__fs_1519051679_8531.xls/>

#### 10.3.1.1. Categories

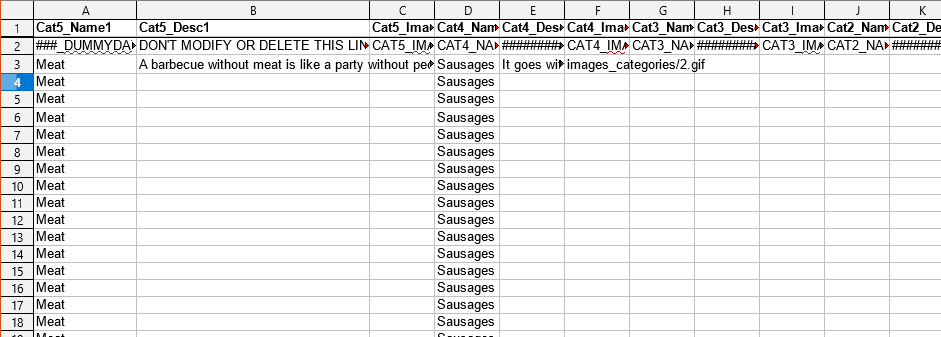


Figure the category fields section of the data tool import spreadsheet

The spreadsheet can contain categories nested up to FIVE levels deep. The first column, , holds a top level category name. The field on the same line would hold a subcategory of this, and so on down to .  
  
Since each product must have at least one parent category, every row of your spreadsheet should have a value, but not necessarily any subcategories.

#### 10.3.1.2. Products

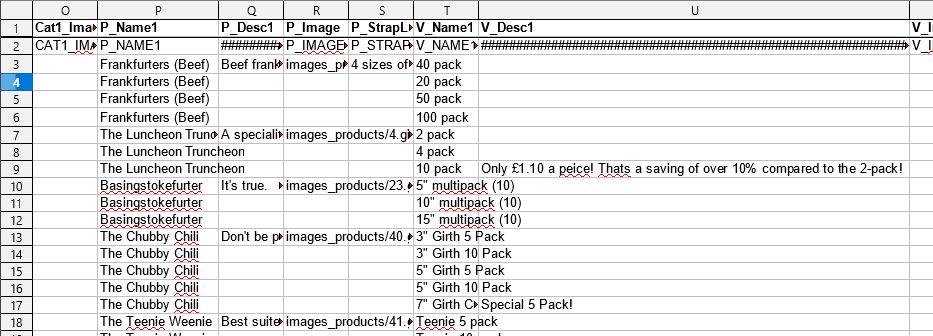


Figure the product fields section of the data tool import spreadsheet

The field (product name) holds the name of the product. Product name is used by the data tool as the key for a product, therefore you should not have multiple products with the same name in a data tool spreadsheet (if you do, they will be assumed to be the same product). However, the product name will appear on multiple rows if a product has multiple versions.

#### 10.3.1.3. Product images

The field in the spreadsheet is very flexible in accepting the locations of images.  
  
You can enter a single image name, or you can add multiple image locations, separated with either a comma or semi-colon.

|  |
| --- |
| image1.jpg image1.jpg,image2.jpg,image3.jpg image1.jpg;image2.jpg;image3.jpg |

If you enter local paths to images (e.g. just an image name, or a folder plus image name), then the data tool will look for these within the source images folder you specify. So in the case above, if you selected a folder on the C: drive called 'source', it would look for those JPG files in C:\source.  
  
You can also get the data tool to retrieve web images, if you have a full URL. In this case, the data tool will still need a 'source' folder, but will retrieve the web image, copy it to this source folder and then process it and position it in the destination folder. For example:

|  |
| --- |
| http://www.site.xyz/images/image1.jpg http://www.site.xyz/images/image1.jpg,http://www.site.xyz/images/image2.jpg http://www.site.xyz/images/image1.jpg;http://www.site.xyz/images/image2.jpg |

If you leave the image field blank, then no image will be created in the new 'Images' folder system. However, this will not delete images that are already on the site in that location.

#### 10.3.1.4. Versions

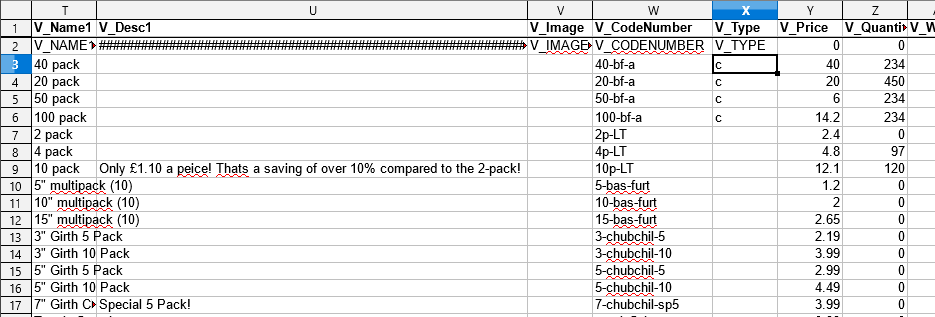


Figure the version fields section of the data tool import spreadsheet

The  (the SKU) is the unique key for versions and must be unique.  
  
 and should all be numerical values with no currency or weight units.

can be 'c' for combination, 'b' for base version (the base of an options product) or 'v' for version. The field is not required, if blank, 'v' will be assumed.

#### 10.3.1.5. Tax rates

The field for EU sites, and others using a VAT model (UK, NZ) should hold the % rate of VAT that applies. The field should have zero.

For Canadian sites, it will hold the GST value, while the field would hold the PST value.

#### 10.3.1.6. Supplier

The supplier field should hold the name of the supplier.

#### 10.3.1.7. Attributes

Attributes for each item can be formatted within a single field, using the following structure:

|  |
| --- |
| Energy {{4500kcal}} || Animal {{Cow}} |

You can have multiple attributes. Each attribute contains a name, with the corresponding value after it (space separator) enclosed in double curly brackets.  
  
Each name-value pair should be separated from the next with two vertical pipes, and spaces.

#### 10.3.1.8. Options

Options products can be imported into Kartris using the data tool and a spreadsheet, but the formatting is a little more complex. First, you must format the options available on the second worksheet of the spreadsheet. Each is unique, so if you have multiple different sets called 'Colour' for example, you should rename these to avoid them all merging during import.  
  
Because options requires a second worksheet, it's not possible to use CSV format. You must use an Excel spreadsheet format.

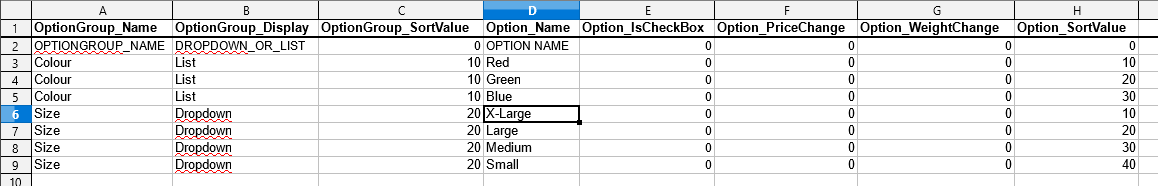


Figure the options group data on the second worksheet

The options for each product should then be formatted within the regular data page of the spreadsheet in name-value pairs, similar to the format used for attributes above.

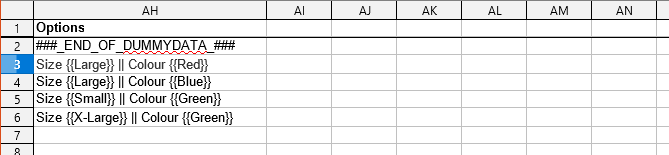


Figure the formatting of option data at the end of the main worksheet

Both the names and values (for example, "Size" and "Large") must match up with options detailed in the second worksheet, the and respectively.

### 10.3.2. Importing from CactuShop

The Kartris data tool can import product and order/customer data from CactuShop databases, versions 6.0 and above. If you have data in an older v5 CactuShop database, you can use the CactuShop data tool to upgrade/import this to a new CactuShop v6 database, then use the Kartris data tool to import data from this database to Kartris.  
  
The Kartris data tool will preserve the product, category and version database IDs from CactuShop in the new Kartris site. This is extremely valuable for search engine purposes as it ensures that requests to old CactuShop URLs can be mapped by Kartris to the equivalent new page URL. Your existing pages in search engines will therefore not return a 404 to visitors or search engine spiders; both will get a 301-redirect (permanent redirect) and land on the same product in the new Kartris site. Search engines will update their indexes relatively quickly with the new URLs, but old links that users may have posted in forums and so on will continue to drive traffic to the correct page in your new site.  
  
The image storage in CactuShop worked a bit differently to the structure used in Kartris. Therefore, when importing data from CactuShop to Kartris, you can select the 'Uploads' folder within the CactuShop web, and the 'Images' folder of your new Kartris site (or you can create a local 'Images' folder on your desktop, and copy it to the Kartris site later), and Kartris will copy and file the images correctly into this folder to work with Kartris. Because Kartris does not need smaller thumbnail images, only larger ones (as it thumbnails dynamically where required), it will look first for large images to import for a product, and only go down to normal sized ones if no large image is found.  
  
Order IDs are also maintained, and historical orders from CactuShop can be imported with customer data into Kartris for a seamless upgrade. In fact, orders placed in CactuShop and still awaiting processing in the back end will be upgraded and can be processed and closed off with Kartris after upgrading. Customer accounts will retain the same username and password, and will retain historical order history.

### 10.3.3. Data tool caveats

In order to import bulk data from a spreadsheet, the Data Tool needs to make some assumptions.

* The SKU (version code) for every item must be unique. You cannot have two items in Kartris with the same SKU; if Kartris finds duplicate SKUs, it will either ignore or replace the existing item with the same SKU (depending on settings).
* All products must have unique names, because products don't have any SKU (these belong to versions). It is possible to have a product with multiple versions, therefore each line in this case will repeat the product name, but have a different SKU and version name. The Data Tool will assume that any row with a repeated product name is the same product.
* All categories must have unique names - the reasoning is similar to the point above regarding products.

Because of the reasons given above, at present the Data Tool cannot handle cases where multiple products have the same name, or where a products and/or categories have multiple parents.10.3.4. Importing from other databases

If you need to import data from a third-party database, such as that from another shopping cart package, the best approach is to produce a query/script in that cart which can output product data in a flat-file format. You can then manipulate this in Excel into the required spreadsheet layout for important by the data tool.

### 10.3.5. Exporting and reimporting data

You may find that for large updates, you wish to export all your product data, make changes in a spreadsheet, and then import it. We provide a saved export in the back end (DB admin, exports section) for this, which has been updated in v2.9005 to match the format the data tool requires for import.  
  
The images fields will be output as blank; you can run in data without these and it won't wipe images, as the images are stored in the 'Images' folder on the site, and the data tool will only update the database content.

### 10.3.6. Import options

The Data Tool can be used both to populate a brand new store with product data and to update an existing store. In cases where you are updating a store, there are three options as to how you handle existing data already in the store:

* - do this if your site database data is the 'master' version, and you've made corrections and changes to it, or are just confident existing data is already perfect
* - in this case, any duplicates in the destination will be updated from the source data
* - this will clear existing data, and then import the data so you retain no previous data

Depending on where you are importing data from (CactuShop, Kartris or spreadsheet), there are also a variety of filters to control what data is updated.

### 10.3.7. Post import processing

Very often whether you've imported from a data file or from an older CactuShop database, you will want to run some additional processing on the order. For example, you may want to change the product display type for all items, or fix other problems you might find in imported data.  
  
Fortunately the Data Tool has a built in method for doing this. Within the folder, there is an file called ''. This SQL gets run against the database after an import is complete. This mainly fixes null values and other such issues, but you can add your own SQL code to this if required.  
  
This SQL file gets run after both data file or CactuShop data imports, both using the GUI or in command line mode.

### 10.3.8. Command line support

The Data Tool is also accessible via a command line interface, which means you can use the pre-written functionality to handle imports to a site on an automated or scripted basis. For example, you may have stock or other data deposited in spreadsheet format to a particular folder on a periodic basis (e.g. nightly) which you want to update the web site with.  
  
Using a .vbs file (or some other scripting system), you can call the Data Tool, pass parameters and so on, without having to manually operate it or write your own SQL code to update Kartris.

|  |
| --- |
| PARAMETERS:  /MODE:[ignore|update|deleteall] -> what to do with existing product data  /FILE:[csv\_or\_xls\_file]  /DATASHEET:[worksheet\_name\_of\_data\_in\_xls\_file] (XLS only) /OPTIONSSHEET:[options\_sheet\_name\_for\_Kartris\_v1.4] (XLS only)  /DBSERVER:[servername] /USEWINDOWSAUTH (optional) /DBUSER:[username] /DBPASS:[password] /DBNAME:[databasename]  /HELP (optional)  /OUTPUT:[logfile(default)|display] (optional) /SOURCEIMAGESFOLDER:[folderpath] (optional, can use full image path in spreadsheet) /KARTRISIMAGESFOLDER:[folderpath] (optional) /TEST (optional) (no processing - just check if parameters are all correct)  /HASH:[hashsalt\_value\_from\_web\_config\_of\_site] |

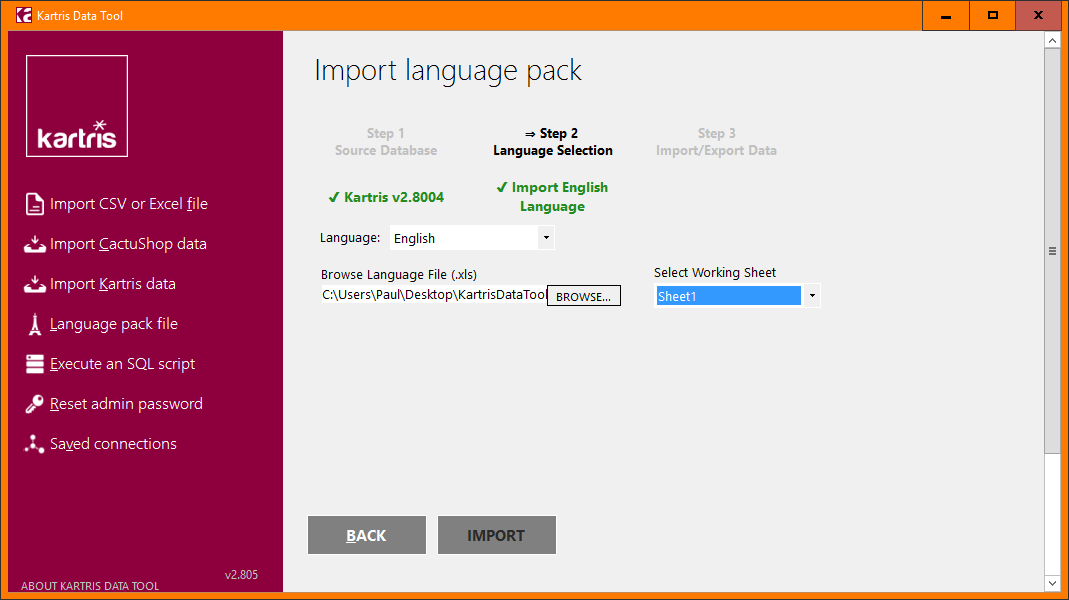
For example (single line, though some browsers may wrap it below):

|  |
| --- |
| C:\Data Tool\KartrisDataTool.exe /mode:update /file:"c:\user\desktop\exampledata.xls" /dbserver:localhost\sqlexpress /usewindowsauth /dbname:kartrisSQL |

If you have spaces in the names or paths of files submitted through command line arguments, you will need to enclose the path in double quotes. Alternatively, try to position files close to the root in a folder without spaces in the name.

## 10.4. Importing language packs

Language packs are Excel spreadsheet files that contain language specific strings which can be imported into Kartris when new languages have been added.



### 10.4.1. Importing a language pack

First ensure you have added the new language in the Kartris back end, if it is not already present.  
  
Next, within the Data Tool, choose the database of your Kartris site, specify which language you're importing the strings to, and select the .xls file that holds the strings. Then import and restart Kartris to see the new language content.

### 10.4.2. Exporting a language pack

The export process works similarly, you can choose which language in your store to export, and the file to export to. This lets you copy a language from an existing store to a new one. It can also be used if you wish to update strings; you can for example export English strings, get them translated by a contractor (or power translate in Google Docs) and then re-import them to the new language. Or you can use this process to make changes to the English strings and then re-import to update the site.  
  
For minor language tweaks, it will be easier to use the Kartris back end.

## 10.5. Execute an SQL script

You will generally find this is easier to do by opening a new window within SQL Management Studio, but it's provided here in case you need to run a quick bit of SQL code.

## 10.6. Resetting your admin password

Because Kartris passwords are hashed, there is no way to recover your password if you forget it. Instead, the password must be reset. Customers have a facility to do this through the front of the web site, by having a temporary link sent to their email address.  
  
However, this is not a feature of the back end admin password system.  
  
To reset the admin password, if you forget it, you can use the Data Tool feature. You will need to have a copy of the site's file as well as a connection to the MS SQL database. The web.config file is required, because it contains some of the information that is used to hash (scramble) the passwords, which the Data Tool can read from this file.

# 11. Web API

This feature is intended for use by developers and experienced programmers who need to integrate third party systems with Kartris (such as EPOS or accounts systems) or add/update/remove/read data within Kartris remotely and programmatically.The web API ('Application Programming Interface') is a feature introduced in Kartris v2.5005 onwards. It provides a flexible, web-accessible route to access the Kartris BLL functionality. This allows you to write code which can connect to Kartris and add/modify/delete or read data. It is intended for developers and experienced programmers who understand formatting and parsing SOAP requests.  
11.1. Activating the web API

To activate the web API you have to set a couple of things in your site's file:

* - App Setting
* -  entry

|  |
| --- |
| <appSettings>  <add key="KartrisWebAPISecretKey" value="[YourSecretKeyHere]" /> </appSettings> ... <baseAddresses>  <add baseAddress="[YourWebShopURLHere]Protected/KartrisWebAPI.svc" /> </baseAddresses> |

Note that should be exactly the same as your config setting (in the Kartris back end config system).

## 11.2. Using the web API

Once you have activated and configured the web API, you can access it as follows:  
  
  
  
The web service contains a single method called 'Execute' with two parameters:

The function itself is below, together with guidance on usage in the XML comments.

|  |
| --- |
| '''<summary> '''Execute Kartris method '''</summary> '''<param name="strMethod">Name of the method that you want to execute (fully '''qualified name, case-sensitive) e.g. CKartrisBLL.WebShopURL </param> '''<param name="strParametersXML">XML parameter array for the specified method</param> '''<returns>XML Serialized Object</returns> '''<remarks></remarks> Public Function Execute(ByVal strMethod As String, ByVal strParametersXML As String) As String |

In order for the API calls to be authenticated, the web API secret key value must be passed as the '' HTTP Header in the request. The service can be accessed through a standard SOAP request.  
  
  
  
e.g. ()

|  |
| --- |
| set xmlhttp = WScript.CreateObject("MSXML2.ServerXMLHTTP.6.0") xmlhttp.Open "POST", "[YourWebShopURLHere]Protected/KartrisWebAPI.svc", False xmlhttp.setRequestHeader "Authorization", [YourSecretKeyHere] xmlhttp.setRequestHeader "Content-Type", "text/xml" xmlhttp.setRequestHeader "SOAPAction", "http://tempuri.org/IKartrisWebAPI/Execute" xmlhttp.send requestDoc.xml |

...where is the generated SOAP request. An example of which is shown below:

|  |
| --- |
| <s:Envelope xmlns:s='http://schemas.xmlsoap.org/soap/envelope/'>   <s:Body>   <Execute xmlns='http://tempuri.org/'>   <strMethod>TaxBLL.GetTaxRate</strMethod>   <strParametersXML>   &lt;?xml version="1.0" encoding="utf-8" ?&gt;   &lt;KartrisWebAPI&gt;   &lt;Parameters&gt;   &lt;Parameter Name="numTaxID" Type="Byte"&gt;   &lt;Value&gt;2&lt;/Value&gt;   &lt;/Parameter&gt;   &lt;/Parameters&gt;   &lt;/KartrisWebAPI&gt;   </strParametersXML>   </Execute>   </s:Body>   </s:Envelope> |

The method will serialize the output data and return it as an XML string. The sample request above will return a standard SOAP response:

|  |
| --- |
| <s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">  <s:Body>  <ExecuteResponse xmlns="http://tempuri.org/">  <ExecuteResult>  &lt;?xml version="1.0" encoding="utf-16"?&gt;  &lt;double&gt;20&lt;/double&gt;  </ExecuteResult>  </ExecuteResponse>  </s:Body> </s:Envelope> |

Extracted data (HTMLDecoded value):

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?>  <double>20</double> |

Which can then be XML deserialized in .NET as a "Double" variable with a value of 20.

## 11.3. Sample code

We have a sample .vbs script which uses the web API within the core Kartris zip, located here:  
  
  
  
Obviously you don't have to use VBscript. This is a SOAP interface, so you can use .NET, php, Javascript, Java, or whatever.  
  
A Kartris developer POLYCHROME has also kindly donated some sample extension code, 'helper' classes which may be useful to help illustrate how to extend Kartris's BLL for use via the web API for your specific application.

Sample code for extending Kartris with helper classes to use via the web API

Downloadable Content:

This download is available at: <https://tome.host:443/Downloads/2071__fs_1541760152_8548.zip/>

# 12. Skins and Visual Design

This sections contains a lot of information intended for developers using the Kartris software. While it is possible for users who are relatively tech savvy (familiar with HTML and CSS) to skin their own site, the majority of end users will benefit from hiring a web developer to do this for them.  
  
A developer should not necessarily require either specialist Kartris or ASP.NET knowledge to develop a skin for Kartris, though use of, or access to a Windows computer with Kartris installed and running is essential in order to test the skin with Kartris.Every site will want to customize the appearance to some degree, even if just to change default colours and add an appropriate logo. Kartris groups elements that control appearance across the site into 'skins', which can be found in the folder within Kartris.12.1. Setting a skin

To choose a skin for your site, go to '' and choose which language you want to set the skin for. In the form that opens, you can the skin from the 'theme' menu. If there are multiple masterpages in the skin, you can choose one of those too.



If you leave either selection blank, Kartris will use the defaults (which are the skin '' and the '' template file).  
  
This menu automatically picks up any new folders added to the folder within a Kartris site. So all you have to do to import or create a new skin is to place the new folder there and then select it from this menu.  
  
Rather than modify the default Kartris skin, we suggest you clone it, and then select your new skin's name and develop from there.

## 12.2. Responsive interface and mobile/tablet support

Kartris v2.5 and above features a responsive interface.  
  
The number of users accessing the web on mobile devices is increasing all the time. Although most devices have browsers which can handle web sites designed for bigger screens, the user experience is less than ideal. Kartris incorporates support for 'responsive' design, which enables a web site to dynamically reformat pages to better fit small screens, as well as optimizations for use on touch screens.

### 12.2.1. Overview of the responsive approach

The original approach to providing support for mobile devices was to create a separate interface, and have the web site check the user-agent of the device requesting the page to decide which version of a page to send. But with the rise of smartphones as perhaps the most common web accessible device, and the increase in power allowing them to run full web browsers with javascript and web standards support, the responsive approach has become the norm.  
  
A responsive web site sends exactly the same pages to all devices - mobile, tablet, laptop and desktop. It is the device itself which decides how to display the page, based on rules and code that is embedded within the page.  
  
The advantages of this approach are:

* Single set of interface code to create and maintain
* Richer experience - full feature set (since not using a separate cut-down interface) and same styling and feel as the main site (because they are essentially the same site with some minor tweaks)
* The interface can be adjusted for a variety of devices of various sizes; for example, tablets can use the chunkier touch-enabled navigation menus while still formatting pages for the larger screen space
* Same URLs for mobile and desktop - since all clients get the same page, there are no separate URLs for the mobile site; this has search engine benefits and also benefits customers who sync bookmarks between their desktop and mobile browsers (because the same URL will work from both devices, but the pages will format appropriately for each device)

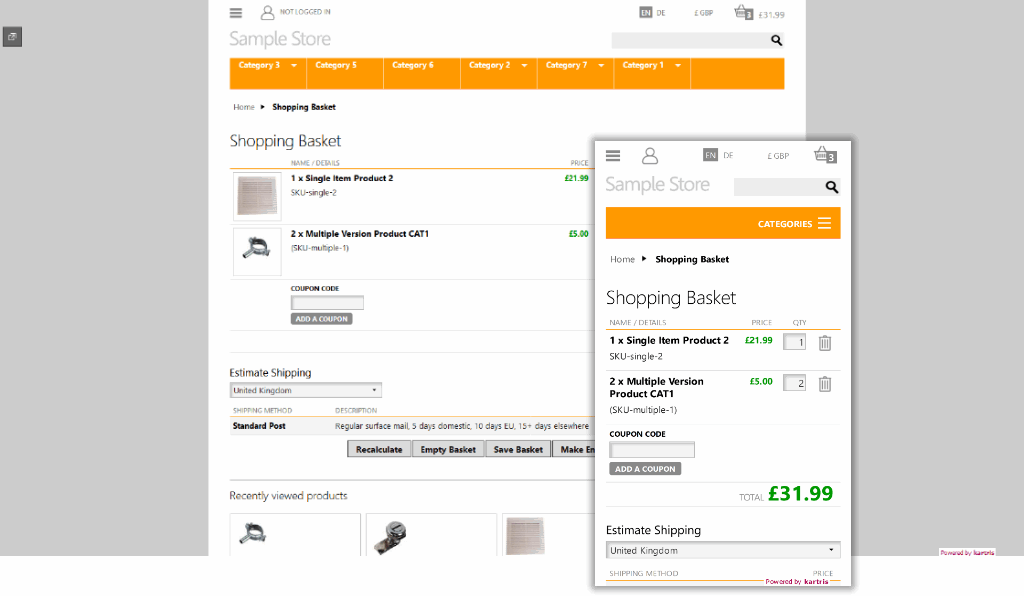


Figure The same page displayed in both a computer and smart phone browser

### 12.2.2. The Foundation framework

Rather than reinvent the wheel, we've integrated the best open-source responsive framework into Kartris. Zurb's provides many useful tools, and is proven on thousands of high-profile web sites across the world.  
  
For more information see <http://foundation.zurb.com/>  
  
Because Foundation is integrated into Kartris, you can use all its built-in features in your content without needing to fiddle with any javascript. For example, you can easily create lightboxes, slideshows, hover buttons, dropdown menus, tooltips, sticky navigation in either your skins, or your site content, with just some simple HTML. And because Foundation is designed to be responsive, your content will automatically be mobile-friendly.  
  
For an overview of the various Foundation features, see the documentation: <http://foundation.zurb.com/docs/>

### 12.2.3. Designing a responsive skin

#### 12.2.3.1. From scratch

If you are creating a skin for a new site, the best place to start is with our default skin. This has all the required mark-up in the master page, and links to the required CSS and javascript files.

#### 12.2.3.2. Modifying an older Kartris skin to be responsive

This is a little more complicated. It's best to use our as a guide, but we'd strongly recommend starting with a cloned copy of our default skin, and working from there.  
  
First, you will need to add in the extra CSS files; make sure they are in the right order (we tend to put the Foundation and associated files in first, and then override them where needed in ):

|  |
| --- |
| <link href="foundation.css" rel="stylesheet" type="text/css" /> <link href="normalize.css" rel="stylesheet" type="text/css" /> |

Also need the custom.css, which overrides some settings in the default Foundation css file:

|  |
| --- |
| <link href="custom.css" rel="stylesheet" type="text/css" /> |

Then need this tag to tell mobile devices to size things properly:

|  |
| --- |
| <meta name="viewport" content="width=device-width" /> |

You will also notice from the responsive template that the DIV structure uses various additional classes. These mark-up the page to format the layout using Foundation's 'grid' feature. This should be quite familiar to those who were used to layout out HTML with tablets in the old days, because the principles are quite similar. There is a good overview of the Foundation grid here:  
  
<http://foundation.zurb.com/docs/components/grid.html>

Foundation also changes the DOCTYPE declaration, and handles older browsers:

|  |
| --- |
| <!DOCTYPE html> <!--[if IE 8]><html class="no-js lt-ie9" lang="en" ><![endif]--> <!--[if gt IE 8]><!--> <html class="no-js" lang="en"> <!--<![endif]--> |

At the end of the file, we need a tag which will insert a link dynamically to either the Zepto or Jquery library. Zepto is preferably, but IE can't run it. This code therefore links in Zepto on most browsers, but Jquery on IE.

|  |
| --- |
| <asp:Literal runat="server" ID="litZeptoJquery"></asp:Literal> <script> $(function () {  $(document).foundation(); }) </script> |

Finally, the page load sub in the code-behind needs to create the content of that new tag:

|  |
| --- |
| 'Add zepto/jquery tag at end of page, 'this is part of the responsive layout Dim strWebShopFolder As String = CkartrisBLL.WebShopFolder()  litZeptoJquery.Text = "<script>" & vbCrLf & \_ "document.write('<script src=JavaScript/'" & vbCrLf & \_ "+ ('\_\_proto\_\_' in {} ? 'zepto' : 'jquery')" & vbCrLf & \_ "+ '.js><\/script>');" & vbCrLf & \_ "</script><script src=JavaScript/foundation.js></script>" |

#### 12.2.3.3. Old IE support

Foundation uses newer CSS techniques and Jquery which require newer browsers to run on. Users on Chrome and Firefox are generally automatically updated by default, so these users are rarely on old versions. However, Internet Explorer 9 or above is required for Foundation.  
  
Because there are still a number of users stuck on older versions of Internet Explorer, we have built in support to deliver a non-responsive version of the site to them.  
  
To create a non-responsive version of your skin for users on IE8 and earlier, it should be called the same as your main skin, but with 'NonResponsive' added to the name. For example, we ship Kartris with a default skin called 'Kartris', and the non-responsive version of this is therefore called 'KartrisNonResponsive'.  
  
If you're upgrading a site to the responsive version of Kartris, you could keep your old skin and rename it to be used as the non-responsive skin.  
  
From January 2016, Microsoft will only support the latest version of its browser available on each platform, which effectively means IE8 is no longer supported (as Vista can run IE9). From this date, the requirement to service older browsers should cease as they are no longer supported with security fixes, and every browser vendor will be delivering regular browser updates automatically by default.

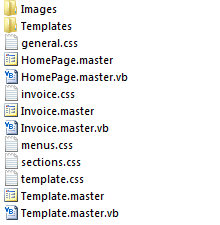
The determination of whether to serve users the Foundation-based responsive skin or the 'NonResponsive' version is done based on server-side browser-sniffing for IE8 or earlier.

## 12.3. Required skins

Every Kartris must have at least two skins - one called 'Kartris' which is the default front end skin. And another called 'Admin' which is used by the back end admin area. You can also add new skins to change the appearance of the front end.  
  
If you wish to support browsers below IE8, and have a modern responsive skin on your site, you can also add a non-responsive skin for older browsers. Please see @13.2.3.3. Old IE support.

## 12.4. Skin components

A typical skin folder will contain a selection of files and folders. The exact number of files and folders can vary, but the default skin in Kartris will look something like this:



The is the key template file; this contains the HTML structure of the site layout, and contains links to the various stylesheet and image files. Every skin must have a page.  
  
 is an optional file. If present in a skin, the home page of the site () will use this template instead of the main file. It is quite common for sites to have a different layout on the home page to that used throughout the rest of the site, hence this feature. It is however possible to use different templates for various other parts of the site too. More details later in this section.  
  
The files are cascading-stylesheet files. These control the styling of the various page elements that make up a Kartris page, such as fonts, colours, the position of the various layout columns, the width of the page and so on. CSS is a web standard way of formatting web pages, it isn't proprietary to Kartris. There is a vast amount of information on the web about using CSS. In our skins, we tend to divide the CSS up into several files:

* - controls the position of various page elements within the page
* - sets the appearance of fonts, form controls and various other elements used throughout Kartris
* - controls the appearance and layout of various elements used in particular parts of Kartris, such as the layout of products and the checkout
* - controls the appearance of menu systems such as the dropdown navigation menu and the categories menu.

The folder holds images used within the CSS (background images) as well as the site logo and any other images embedded within your templates.

### 12.4.1. The 'Templates' folder

Some payment systems allow you to serve back HTML in response to a callback. For some, the HTML served back should be nothing more than a simple message, which they will insert into the confirmation page they show to users. For others, the callback page should serve back the full HTML of a page that they will relay to customers.  
  
In order to handle this, HTML templates can be added here. Kartris will look for these automatically in the live skin, based on the following naming criteria:  
  
  
  
Where is the name of the payment system's folder in the folder of Kartris. Not all payment systems can return HTML from the callback to the customer, so this feature only works where the payment system supports it.  
  
A simple callback template will look as follows:

|  |
| --- |
| <html> <head>  <title>Order Confirmation</title> </head> <body> [orderdetails] </body> </html> |

The tag is where the text summary of the order contents will appear. If no template is present in the skin, the order details will appear on their own, without any skinning.

### 12.4.2. Invoice.master

See @5.5.2. Customizing the invoice apperance.

## 12.5. Skin config file

For certain web sites, you may want particular categories or products to use a different skin to that of the main site. This allows you to create a completely separate look and feel for a part of your site selling a particular brand, for example. Or you may want to brand the site for a particular customer, so major customers have their own customized version of the site.  
  
This can be done through a file added into the folder. It looks something like this:

|  |
| --- |
| <?xml version="1.0" encoding="utf-8" ?> <configuration>  <CustomerSkinRules>   <Customer ID="123" SkinName="DifferentSkin"/>  </CustomerSkinRules>  <CustomerGroupSkinRules>   <CustomerGroup ID="456" SkinName="AnotherSkin"/>  </CustomerGroupSkinRules>  <ProductSkinRules>   <Product ID="789" SkinName="SkinNumber3"/>  </ProductSkinRules>  <CategorySkinRules>   <Category ID="100" SkinName="BlackAndOrange"/>  </CategorySkinRules>  <ScriptSkinRules>   <Script Name="Basket.aspx" SkinName="BasketSkin"/>  </ScriptSkinRules> </configuration> |

You can add multiple tags into each section.

: The tags in the are case sensitive. If settings are not working as expected, check the case of tags carefully to ensure tag names and values match those above.12.6. Setting a page's masterpage

Pages within Kartris have a default masterpage set in the block right at the top, for example the page which displays a product has this at the top:

|  |
| --- |
| <%@ Page Language="VB" AutoEventWireup="true" MasterPageFile="~/Skins/Kartris/Template.master"  CodeFile="Product.aspx.vb" Inherits="Product" %> |

If this is unchanged, then Kartris will enforce the various skin rules to determine which skin to use. This means looking at the file (if present) and the choice of skin set in the Kartris back end. However, if this code is changed to point to another file, Kartris will use that instead and not run the various rules. So if you want to set all products to use a different page, you can edit this code at the top of to achieve this.

## 12.7. Menus

### 12.7.1. Product categories

There are three different types of product category menus that Kartris comes as standard with. The most commonly used is the default CSS fold out type that our demo uses. It is also possible to use an accordion type menu, or a select/dropdown menu. Our demo zip includes a skin which uses an accordion control. It is possible to change the control reference within this skin's .master file to use the select/dropdown menu too. The following shows the different code for each:

|  |
| --- |
| <user:CategoryMenu ID="UC\_CategoryMenuCSSFoldout"  runat="server" EnableViewState="False"  Visible="True" />         <user:CategoryMenuAccordion ID="UC\_CategoryMenuAccordion"  runat="server" EnableViewState="False"  Visible="True" />         <user:CategoryMenuDropDownSelect ID="UC\_CategoryMenuDropDownSelect"  runat="server" EnableViewState="False"  Visible="True" /> |

At default, the category menu will build up from the root of your category structure, including all categories. In some cases, you may want to have two or more category menus on your page, with each using a specific category as a root. For example, if you have two top level categories 'Shop by Brand' and 'Shop by Type', you may prefer to have these as two distinct menus in different locations on the page. To achieve this, you can set the root category for a category control, like this:

|  |
| --- |
| <user:CategoryMenu ID="UC\_CategoryMenuCSSFoldout"  runat="server" EnableViewState="False"  RootCategoryID="1" Visible="True" />   <user:CategoryMenu ID="UC\_CategoryMenuCSSFoldout2"  runat="server" EnableViewState="False"  RootCategoryID="2" Visible="True" /> |

The RootCategoryID is set to either 1 or 2 (in order to use the Categories with IDs 1 and 2 as the base for each menu. Also note that both controls have different IDs; these are largely arbitrary, but must be different. You will generate an error if you try to have two controls with the same ID on a page.

### 12.7.2. General navigation

For controlling the content of the general navigation menu, please see @8.4. Site menus.

# 13. Search

## 13.1. Search Engine Optimization (SEO)

If there is one aspect of web development that produces more myths, unsubstantiated hunches and pseudo-science, it's SEO. Store owners understandably want to improve the rankings of their stores. But don't lose sight of the most important things to increase traffic - good content and good incoming links.  
  
There is no magic wand, and anyone promising miraculous increases in traffic with minor tweaks to the format of pages or URLs should be regarded with some skepticism.

### 13.1.1. Domain forwarding

Kartris is designed to run on a single domain. If multiple domains are mapped to the same web, Kartris will 301-redirect any requests to the domain set in the config setting. This helps channel page rank and links towards the preferred domain.

For example, many sites have both and pointing to their site. Kartris will redirect to the preferred one of these if someone uses the other one where necessary. While this has no real impact from an SEO point of view (there really aren't the duplicate content issues as we'll cover later), it does ensure that all users are using the same domain always, which is important for cookies.  
  
For more information on config settings see @3.4. Config settings‍.

### 13.1.2. Meta-tags

Meta-tags are three common HTML tags that appear in the 'HEAD' section of the HTML code of most pages:

|  |
| --- |
| <meta name="description" content="Content Here" /> <meta name="keywords" content="Content Here" /> <title>Content Here</title> |

The 'title' tag contains the text that will display at the very top window bar when the page is open in a browser. It is also the page title that a search engine will typically show as the main hyperlink in its search results.

The meta tag for 'description' gives a summary of what the page contains. Typically this will be the additional test just under the hyperlink in a search engine result.

The meta tag for 'keywords' contains extra keywords that are relevant to the page but is not displayed in search results, and is not read by Google and most search engines. So we tend to leave this blank.

Because Kartris forms pages around a standard template, these tags are not present in the template; instead the tags are created dynamically by Kartris for every page.

#### 13.1.2.1. Default values

You can set the Kartris defaults for the meta-tags using the following language strings:

In places where no other data is available, Kartris will fall back on the values here. But in most cases, it will find more page-specific data to use if possible. As mentioned earlier, the meta-keywords tag is not read by Google and most major search engines, so is probably best left blank so as not to increase page sizes unnecessarily.

#### 13.1.2.2. Overriding default meta tag values

Kartris will do a fairly good job of filling meta-tags and page title for pages automatically. For example, on a product page, it will use the product name in the title tag, and fill the description with a truncated section of text from the product description. The keywords will generally use the value.

But you can override these default values in many cases.

For example, when creating or editing a product, category, knowledgebase article or custom page, you can open extra fields with the link. This allows you to override the default values that Kartris will insert, and specify the exact text you want to appear.

This can be useful if you want to keep the product or category name short and concise, but have the page title itself longer and with more keywords to help improve page indexing.

You don't need to duplicate your product names and descriptions in these SEO fields. Only use these fields if you want those meta tags to be different to the actual product name and description.13.1.2.3. Overriding default URLs

Kartris can format 'friendly' URLs. You may wish to optimize the text/name part of the URL for products and categories using the box. This allows you to replace the default value (normally the item name) with whatever text you prefer to use.

You should only enter keywords or text here, not full URLs. The values entered are used for the text part of the URL. But the numeric part and file extension are required and cannot be removed.

### 13.1.3. The canonical tag

One frequent point that SEOs raise is the so-called 'duplicate content penalty'. The claim is that having a page accessible with multiple URLs will harm search engine ranking, or even (according to some SEOs) have you booted from Google for spamming.

In reality, as the official Google blog makes clear (see link below), you will be penalized for this. In fact, Google will even do a good job of recognizing multiple URLs that point to the same page, pooling them and their page rank.

<http://googlewebmastercentral.blogspot.com/2008/09/demystifying-duplicate-content-penalty.html>

But in order to eliminate any doubt, Google, Microsoft (Bing) and Yahoo all now recognize the 'canonical' tag. This lets you specify within the source of a page which URL that page should be indexed as. So even if it is reachable through multiple navigation routes, you will tell Google the preferred URL to use. Kartris forms canonical links automatically within pages, so you don't need to activate anything in this regard.

Google's official position is that it takes the canonical tag as a strong hint, rather than obeying it absolutely.

#### 13.1.3.1. Why doesn't Kartris use 301-redirects instead?

301-redirects were commonly used as a method of getting the preferred URL indexed by search engines prior to the canonical tag being introduced. The problem with using 301-redirects is that it loses 'location awareness' in a URL. For example, a product 'laptop' can be in multiple categories, and the folder hierarchy in the URL will be different for the same item depending on the route you use to navigate to it.

Using 301-redirects means that end users, as well as search engines, only get to see a single URL, and therefore lose location awareness through the hierarchy and breadcrumb trail.

Using the canonical tag is better because it allows us to pass location specific information through the URL, giving users a clear idea of where the product lies within the category structure, while at the same time notifying search engines that it is a single page, with a preferred URL.

### 13.1.4. 'Friendly' URLs

On database driven applications like Kartris, a single page such as is used to display every single product in the store. Since extra information needs to be passed to it to tell it which product to display, the URLs (web addresses) typically contain extra parameters and values passed to the page.

For example:

<http://www.demo.xyz/Product.aspx?ProductID=10>

As more information is passed, the URL can become longer and messier.

To overcome this, Kartris at default creates 'friendly' URLs, which appear like static page addresses (rather than a single page with dynamic information passed to it as parameters). When properly configured, this will make the site appear (both to users and search engines) as a collection of 'static' pages in a folder hierarchy, just as if every product was on its very own page and these pages were sorted into folders.

Despite what many SEOs believe, there is little if any evidence that the format of the URL has any influence on search results (though it may well have done many years ago). Google's official blog says that it doesn't, and even goes as far as to suggest not rewriting URLs.

The format of Kartris's 'friendly' URLs still includes numbers, just before the at the end. It is not possible to remove this as the numbers are used by the system to locate the content. This is very similar to the URL format used by Amazon and the BBC, that uses numbers within a static format of URL.

#### 13.1.4.1. Turning off 'friendly' URLs

You can turn friendly URLs on or off from the config setting.

### 13.1.5. XML Sitemap

Sometimes incorrectly referred to as a 'Google Sitemap' since Google was the first to popularize this, it provides a direct route for search engines to find all the pages on a site without having to spider the site (following all links). On a large site in particular, it can help notify Google of new pages. It doesn't really help in rankings at all, it's purely a method of discovery, so smaller sites or sites where the content does not change regularly will get less benefit.  
  
Versions 1.4 and earlier created the file in a 'temp' directory, but the file really needs to be in the root of the site to have an effect (as sitemaps can only cover pages below themselves), so would need to be copied across. Kartris v2 creates the file in the root of the site itself, though this will require write permissions there.

### 13.1.6. Google Product Feed

Google Products (formerly 'Froogle' and several other names) is a searchable system that requires highly formatted product data to be submitted. Unlike general web spidering where it must try to pick content from all manner of pages, the formatted nature of the data submitted means it has a clear unambiguous understanding of product names, prices and other details.  
  
Kartris contains a tool to generate this feed automatically in the back end. Navigate to and then click to to generate the Google Products feed file. The recommended format is RSS (XML). The page will tell you the location of the file produced so that you can submit it to Google.  
  
It is important to note that Google Products has a number of required attributes. The required values are detailed here:  
  
[Google Product Feed Specification](http://support.google.com/merchants/bin/answer.py?hl=en&amp;answer=188494#GB)  
  
By default, Kartris will create the following attributes in the feed:

|  |
| --- |
| <g:id>[the version code / SKU]</g:id> <title>[the version or product name]</title> <description>[the product description]</description> <g:price>[the item price]</g:price> <link>[the canonical URL of the item]</link> <g:image\_link>[link to the full size image file for the item]</g:image\_link> <g:condition>[value set in the dropdown when generating the feed]</g:condition> |

To add further required values to the feed, you must create special use product attributes. In the the back end, navigate to and click to create a new one. Name the attribute as Google requires (see their specification) and ensure you check the 'Google special use' checkbox. This attribute will then appear in the attributes tab when you edit a product, allowing you to add the appropriate value. This information will then be incorporated the next time you run the Google Products feed.  
  
Because attributes are created at product level, if you have items with multiple versions that require different custom attributes to be sent to Google, these would have to be separated out to be single version products at present.

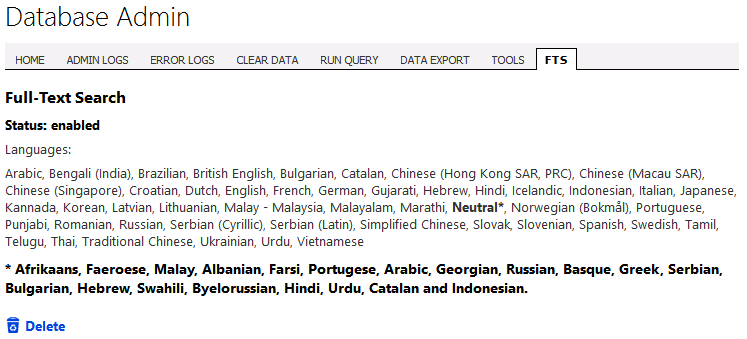
## 13.2. Kartris Site Search

### 13.2.1. Overview

The basic search takes keywords and then runs a search which aims to produce results ranked in order of relevance. For performance, the results and manipulation are done within the database, so Kartris itself receives back a ready-sorted list of search results to display.  
  
The stored procedure responsible is . It is fairly complex due to the manipulation of results it does. But the basic principle is that for any search phrase (multiple words) entered, results containing the exact phrase are scored highest. Those containing all or most of the words (though not necessarily together as an exact phrase) will come next, and those containing fewer of the words will come lower. Also, the presence of the search term or words in certain fields such as product name, will score higher than for other fields. There is also a special routine to search version codes (SKUs). Once each result is scored, a temporary table is used to sort them, highest scoring first. This methodology allows keyword-relevance-sorted results even where full-text search is not available.

### 13.2.2. Full-text search

Full-text search is a feature that can be enabled in MS SQL to improve the performance of searching, especially across large quantities of text. If full-text catalogs are enabled on your database, you can activate this feature in the back end of Kartris. Navigate to and then the tab. Click the link to enable the feature, and it should confirm the various languages it is supported for.  
  
The process of activating FTS also creates a new stored procedure - (and a corresponding back end one called ). These are used in place of the normal search stored procedures on sites where FTS is enabled.  
  
The benefits of FTS are really felt on a large site with more than 10,000 products. For sites upwards of this, FTS is almost essential as conventional searching will become slower and slower the more data there is.



### 13.2.3. Advanced search

The main search page has a secondary tab for 'advanced search'. It is somewhat of a misnomer, as the basic search is actually pretty sophisticated already. But the advanced search gives a little more control - the user can search for items between certain prices, and also specify whether they want to match the search terms to an exact phrase, to items including all keywords only, or just to items including any of the keywords.

### 13.2.4. Searching product attributes

Product attributes are additional pieces of information that are associated with a product (see @4.5. Product attributes for more information). If you want to have attributes included within the keyword search, ensure you check the 'Include in search' checkbox for the attribute in the back end. For example, a book store might have ISBN, Author and Publisher as attributes which you'd probably want to include in the search. Electrical items on the other hand might have voltage and power requirement values in numbers - you'd probably not want to include these in the search as numbers are unlikely to generate direct matches to help search results.

# 14. Custom Development

Although Kartris has an extensive array of features and is highly configurable, there will always be some requirements that necessitate customization. Kartris is open source and so the source code to enable virtually any customization is available. But Kartris also includes specific design features to aid customization.

## 14.1. Adding new pages

One of the most common modifications developers might want to make to extend Kartris is to add new pages. For simple text pages, there is the built in CMS system (see @8. Custom Pages - Basic CMS‍). But if you need to add a functional page that contains some programming logic, you will need to add actual .aspx pages to the site.

In order to integrate properly into your Kartris site, you'd want the new page to inherit the Kartris skin and features such as the basket and menus. You will want the new page to appear on menus, and also in the breadcrumb trail.  
  
Here is a guide to adding a new page, which we will call 'Test'.

First, create a new page in your root called , with a code behind (). The aspx page content will be as follows:

|  |
| --- |
| <%@ Page Language="VB" MasterPageFile="~/Skins/Kartris/Template.master" AutoEventWireup="false"  CodeFile="Test.aspx.vb" Inherits="Test" %>  <asp:Content ID="cntMain" ContentPlaceHolderID="cntMain" runat="Server">  <user:BreadCrumbTrail ID="UC\_BreadCrumbTrail" runat="server" EnableViewState="False" />  Your new content can go here </asp:Content> |

The code behind is even simpler, and will look like this:

|  |
| --- |
| Partial Class Test  Inherits PageBaseClass End Class |

Note that this page inherits from rather than the standard class. This ensures it picks up all the special Kartris page features, and employs Kartris security. So for example, if your site is set to require people to login to be able to view pages, this page will enforce that rule too.

To get your pages to appear in the navigation menu, and the breadcrumb trail, you will need to add references to them in a couple of places. Firstly, the file (see @8.4. Site menus‍).

For the breadcrumb trail, you will need to add references for your new page in (also located in the root of the web).

## 14.2. The object config system

Very often when creating new features, you need to set values at the product or version level. We found this ourselves when adding new features to Kartris. Rather than adding new fields in the existing product and version tables, we came up with a better solution - the object config system.

### 14.2.1. Adding settings

Each new setting required is added as a record to the table in the database. The data type can be string (s), boolean (b) or numeric (n). Once a record has been added here, the new setting is immediately available on the object config tab when editing products. Any values set are stored in the table.  
  
There is no Kartris GUI for adding these values; it needs to be done manually within SQL Management Studio. However, it's not something that will be done routinely, and even then only by developers, so it's not something that we'd really want to have a back end page to handle doing anyway.

### 14.2.2. Reading settings

Of course, as well as setting values, you will also want to read them within whatever new code you write. Fortunately, the functions to support this are already in Kartris. You can call an object config value simply as follows:

|  |
| --- |
| Dim strSampleValue As String = ObjectConfigBLL.GetValue("K:product.myobjectname", numProductID) |

The value, which is the database ID of the product (P\_ID from the table) is available in some for or another in most places that products are being handled.  
  
You should of course replace with the actual name of your object config setting.

## 14.3. Custom product controls

Kartris has multiple product types, including 'options' products and text-customizations, which can handle most scenarios. However, some kinds of products, especially ones that are custom made, can't be adequately handled by the built in product types.

### 14.3.1. When to use custom product controls

A typical case where a customized product interface is required would be a site that makes items such as curtains and blinds. Both height and width could be any value (in centimetres) between perhaps 50 and 300, so it becomes impractical to create every possible width or height as an option. Furthermore, although options can have a price modifier associated with them, this doesn't really help with pricing where width and height are both variable.  
  
Instead, a far more manageable solution would be for pricing to be obtained from a lookup table or a formula.  
  
Situations where a highly customized product interface is also required or where a client side configuration system has already been created may lend themselves to custom product controls. For example, a client side tool that lets you design a t-shirt and add text and/or images, then buy the item.

### 14.3.2. Creating custom product controls

Kartris ships with a couple of sample custom controls in the folder. There are comments within the files to help explain the code. Our examples are very simple in nature, but you can make things as complicated as necessary as long as you can dump a price and item description out of the control.  
  
For example, you could have a control that has textboxes for the width and height of curtains, a dropdown menu of different lining types and then some other checkboxes for some further options. Prices could be looked up in an Excel spreadsheet with a table of curtain costs. This not only allows very fine control of pricing, but also makes it easy to change or update pricing by editing prices in the spreadsheet.  
  
Engineering applications such as industrial fans could use either a 'black box' software component from the manufacturer or a web service to look up pricing based on various performance requirements, and return the fan specification as the item description, as well as the price.

### 14.3.3. Hooking up custom product controls

Once you have written your custom control, it is simple to incorporate it into Kartris. First, upload it to the folder.  
  
Next, create a new single version product. Give it an appropriate name, but price is not important as that will come later from the custom control.  
  
Finally, edit the product and go to the object config tab. Enter the name of the control in the object config setting. For example: 'SampleCustomControl.ascx' (the .vb part will be linked in automatically).  
  
When you view this product on the front end, you should now see your custom control providing most of the interface.

### 14.3.4. Further information

You can use a custom control from different products. So for example, in the case of a curtains web site, you can have each curtain set up with an image of the type of fabric, and then use the custom control on each curtain to handle pricing. You can also use per-product settings. So if the price per square metre of fabric is different for each product, you can set that at each product, and then just have the common values within the custom product control.  
  
You can have as many custom controls as you need, so you can for example configure curtains and blinds using different custom controls within the same site, and of course mix in standard Kartris product types too.  
  
As you can see from this simple overview, the custom product control support is extremely flexible and can cope with virtually any scenario.

# 15. Localization

Kartris was designed from the ground-up to support multiple languages. There is no hard limit on the number of languages; the design is expandable without any database modifications or extra fields being required.

## 15.1. Languages and email setup

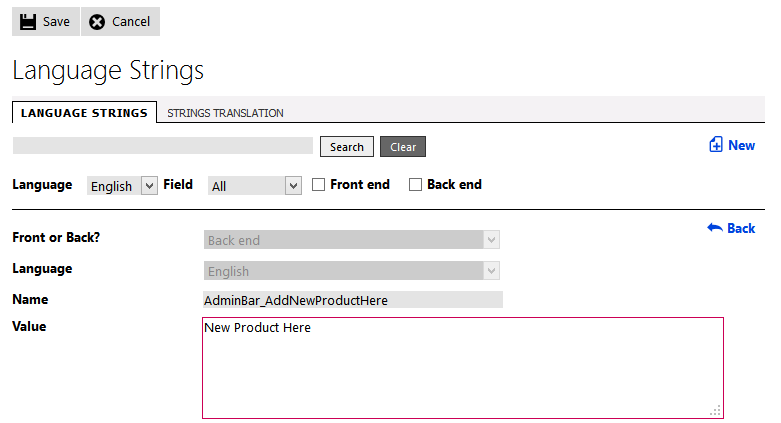
Navigate to 'Regional Settings > Lang. & Email Setup'. From here you can add new languages, and control the settings for each language. Note that the setup of email addresses for the site is located here as they can be set independently for each language.

## 15.2. Language strings

The text throughout Kartris for routine features such as field labels, button text, titles of functional pages such as the basket and checkout is all stored in the database by means of records we refer to as 'language strings'. This system is built on top of the built-in ASP.NET localization features (which normally run from XML files), replacing that with an SQL database-driven system.  
  
Having the system database-driven makes it far easier to search for, edit and update the string values, essential because of the volume of text in Kartris which can be customized in this way. This system is used in both the front and back end, and so there are several thousand strings for each language. The values pulled out are also cached for performance reasons.

### 15.2.1. Finding the appropriate string to edit

The general back end search box includes language strings within the scope of the search. You can find language strings with a partial text match on either the name of the string or the value. For example, searching for '' will find any language string that includes the word '' within its value (the visible text you see on the front of the site) or its name (for example, ).  
  
If you navigate to the language strings page, you have more powerful search tools. Go to 'Regional Settings > Language Strings'. You can filter the search to a particular language, or to only search for the submitted text within the value, name or class. You can also filter by whether a string is used on the front or back end of Kartris.



### 15.2.2. Editing language strings

When editing language strings, we strongly suggest you only edit the 'value' field and the 'description' field. Changing the name of a language string will mean that any page which includes that language string will no longer be able to find it.

### 15.2.3. Caching of language strings

Being database-driven, the Kartris language provider is very efficient. However, to improve performance even more, language strings are cached because in most cases they change very rarely. If you change a language string, you may find that the change does not appear immediately, even if you rebuild the caches with the button above the left hand category menu. In this case, you can force the language strings to be rebuilt by restarting the site. This can be done from the back end home page.

### 15.2.4. Language string translation

The easiest way to add a new language is to import it through the Data Tool. See @10.4. Importing language packs‍ for more information.

If you later upgrade Kartris, you may find that new English language strings were added, but that your other languages lack these records. This can be addressed through the languages page - see @15.1. Languages and email setup‍  
  
Once you have 'fixed' the other languages so that they have the same number of strings, you may need to translate those new English strings into the desired language. This can be done from this section. You can choose the target langauges, and filter records to find the strings you need to translate, then enter the new values.

## 15.3. Localizing skins

Skins contain language strings, so for similar languages where the layout and fonts would be the same (e.g. European languages), you can typically use the same skin for multiple languages.  
  
If you need to have specific localization such as logos, or for languages such as Chinese which have their own unique fonts, or even Arabic and Hebrew which may have special CSS markup to handle RtL (right-to-left) text, you can do this from the languages section too. See @12.1. Setting a skin for more information.

# 16. Multi-Site Functionality

From version 3.0 onwards, Kartris introduces multi-site functionality. This lets you set up sub sites based on a subset of data from your Kartris installation, or you can build a new set of categories and products solely for these sub sites, but share a common checkout and order processing channel.

More information on this coming soon.

# 17. Payment Systems

## 17.1. Overview

Payment systems are used by Kartris to accept payment (or in some cases, a promise of payment) through the store.  
Kartris supports a number of different payment systems and has a flexible open plugin architecture that allows more to be added in future. There are four broad types:

* – e.g. RBS Worldpay, SagePay VSP Form – these redirect customers to a secure page at the payment gateway's site, with the successful payment being communicated back to Kartris via some kind of 'callback'.
* – e.g. SagePay VSP Direct – the customer enters card details directly into Kartris and Kartris then communicates with the payment system server-to-server. Since card details are entered through Kartris itself, SSL is obligatory.
* – e.g. Google Checkout (now no longer available) – the customer is routed to the payment system's web at the start of the checkout  and stays there for the entire process, with information such as pricing and shipping options, as well as payment success/failure communicated between the payment system and Kartris using server-to-server communication. Although the card details are not entered directly into Kartris, Google Checkout still requires that all communication between Kartris and the payment system be done under SSL.
* – this typically describes certain payment methods through Kartris that don't require a third party payment system. For example, payment by 'PO' (purchase order – to take an order where actual payment will be invoiced or made offline).

### 17.1.1. Payment Gateway - Common Settings

There are some settings which are common to most payment systems in Kartris.

#### 17.1.1.1. Status

This lets you switch the operation of the payment system as follows:

* – the payment system is active and is available for customers to select for payment
* – the payment system is disabled
* – the payment system is set in test mode; it will only be visible at checkout if you are logged in as a store admin. Orders will be passed with a 'test' flag so cards will not be billed.
* – an additional test setting; this simulates an order callback without sending anything to the payment gateway. It is a useful way to test the settings and see what happens with successful orders but without having to repeatedly go through the payment stage on the remote site.

#### 17.1.1.2. Process currency

Most payment systems have a process currency. If you leave this blank, Kartris will pass orders to the payment system in whatever currency the user selects on your site. For that to work, your payment system provider must support multiple currencies, and your account with them must permit orders in all the currencies available on your site.  
  
You should set the process currency from blank, if:

* Your payment system account only supports one currency
* Your store offers customers a choice of at least one currency that your payment system account does not support
* Your payment system provider provides very poor currency conversion rates, so you prefer to pass all orders in a single currency as customers will get better conversion rates from their credit card providers.

The process currency (if not blank) should be a three-letter ISO code for the appropriate currency.  
  
Customers will be alerted at the last step of the checkout that the actual amount they will pay will be converted, and they will be shown the converted amount in that currency, as well as the order total in their preferred currency. This conversion will be done at the rate in your currency settings.

#### 17.1.1.3. Encrypting the settings file

The settings for each payment system is stored in an XML file. This is given a extension so that the file contents can not be read across the web if the exact path to the file is typed into a browser. For additional security, it is advisable to encrypt this file using the checkbox provided once your site is going live.

### 17.1.2. Installing Further Payment Systems

Kartris is designed to allow new payment systems to be added without changing code or making changes to the database.  
  
Unzip the files and copy the folder for the payment system to the 'Plugins' folder in the Kartris web. Then go to ''.  
  
Click the 'Refresh' link and Kartris should find the new payment system. Once in the list, you can click 'Edit' to change its settings. Each payment system has its own settings, which vary from system to system. This information is not stored in the database; instead it is stored as XML within the payment system itself. This makes installation simpler since you don't need to add new database records for each new payment system.  
  
If you receive an error when you try to save changes to the settings of a payment system, it is most likely caused by there not being 'write' permission to the 'Plugins' folder. You will need to adjust this from the 'properties' dialog in Windows Explorer, or (if on shared hosting) contact your host's technical support team.

## 17.2. 2Checkout

2Checkout is a popular online payment service. Its primary feature is that it is easy and quick to setup an account and start receiving orders, and that it is available to companies and individuals in most countries.

### 17.2.1. Setup within Kartris

1. Go to and click to edit 2Checkout.
2. For 'friendly name', you can enter '2Checkout', or just simply 'Credit Card'. This is just the name of the payment method that customers will get to choose on the web site during checkout if you have multiple payment methods.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' invokes a demo order, allowing you to test the full integration and pass multiple orders at zero cost without needing to do refunds. 'FAKE' means that Kartris will skip the 2Checkout site and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the 2Checkout payment process.
4. Set your 'SID', which is the vendor number assigned to you by 2Checkout.

### 17.2.2. Setup within 2Checkout

In order to ensure that 2Checkout calls back your Kartris site to notify it that a payment for a particular order was made so that confirmation mails can be sent and the order can be tagged as 'paid', you need to set up a few things within your 2Checkout account.

1. Login to 2Checkout and go to .
2. The 'Approved URL' will be and the 'Direct Return' should be set to 'Immediately return to my web site'.

2Checkout should now be set up and working. We would advise that you always test a site in live mode when you first open it (status = 'ON') even if all the test modes checked out ok. This confirms that everything is working with Kartris and that your account with 2Checkout is live and working. The best way is to create a low value product of a dollar which you can purchase.

### 17.2.3. Currencies

2Checkout does support multiple currencies, but its conversion rates are quite poor. Furthermore, it stores currencies in US Dollars. So a merchant based in the UK who chooses to receive payments in GBP will see these converted to USD for storage. If the merchant chooses to receive payment in GBP, the USD amount will then be converted again to GBP for the wire transfer.  
  
To avoid losses in currency conversion, we recommend only using US Dollars for 2checkout - encourage your customers to pay in USD (their credit card company will convert at a better rate than the one 2Checkout would present to them) and have 2Checkout wire the money to you in USD, for your bank to convert to local currency.

## 17.3. AffordItNow

Coming soon.

## 17.4. AuthorizeNet AIM

AuthorizeNet is a leading payment system. It is primarily US-oriented. AIM stands for 'Advanced Integration Method' - it is a local-type payment gateway, where customers enter card details directly into the checkout page of your Kartris. For this reason, you must have SSL on your site.

### 17.4.1. Setup within Kartris

1. Go to and click to edit AuthorizeNet AIM.
2. For the 'friendly name', enter the name you want this payment system to be referred to on the front of your site where customers select it, for example 'Pay by credit card with AuthorizeNet'.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that a test order will be passed, allowing you to test the full integration and pass multiple orders and no cost without needed to do refunds. 'FAKE' means that Kartris will skip the AuthorizeNet payment process and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the test payment process.
4. ProcessCurrency - Typically AuthorizeNet accounts are single-currency, so you should enter this as a three-letter ISO code, for example 'USD'.
5. Test URL - (for test orders) should be:
6. Post URL - (for live orders) should be:
7. TransactionKey - This is the transaction key which is generated on the AuthorizeNet back end system. It is used in the generation of the MD5 hash. If this does not match the one on the back end of AuthorizeNet, transactions will not be accepted by AuthorizeNet.
8. LoginID - Should be provided to you with your AuthorizeNet account details.
9. TransactionType - One of the following (see AuthorizeNet documentation for further details): AUTH\_CAPTURE, AUTH\_ONLY, PRIOR\_AUTH\_CAPTURE, CAPTURE\_ONLY, CREDIT, VOID

### 17.4.2. Setup within AuthorizeNet

Some configuration to your account must be done at Authorize.Net's Web site (Authorize.Net will have supplied you with access details). This is referred to as Authorize.Net's . Login at:  
  
<https://secure.authorize.net>  
  
Go to 'Settings and Profile', under 'Security', select 'obtain transaction key'. Enter your secret answer to obtain your key. This key must be entered in the TransactionKey setting (see @17.4.1. Setup within Kartris).

## 17.5. AuthorizeNet SIM

AuthorizeNet is a leading payment system. It is primarily US-oriented. SIM stands for 'Simple Integration Method' - it is a remote-type payment gateway, where customers are forwarded to a secure page on AuthorizeNet's servers to make the card payment.

### 17.5.1. Setup within Kartris

1. Go to and click to edit AuthorizeNet SIM.
2. For the 'friendly name', enter the name you want this payment system to be referred to on the front of your site where customers select it, for example 'Pay by credit card with AuthorizeNet'.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that a test order will be passed, allowing you to test the full integration and pass multiple orders and no cost without needed to do refunds. 'FAKE' means that Kartris will skip the AuthorizeNet payment process and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the test payment process.
4. ProcessCurrency - Typically AuthorizeNet accounts are single-currency, so you should enter this as a three-letter ISO code, for example 'USD'.
5. Test URL - (for test orders) should be:
6. Post URL - (for live orders) should be:
7. TransactionKey - This is the transaction key which is generated on the AuthorizeNet back end system. It is used in the generation of the MD5 hash. If this does not match the one on the back end of AuthorizeNet, transactions will not be accepted by AuthorizeNet.
8. LoginID - Should be provided to you with your AuthorizeNet account details

### 17.5.2. Setup within AuthorizeNet

Some configuration to your account must be done at Authorize.Net's Web site (Authorize.Net will have supplied you with access details). This is referred to as Authorize.Net's Merchant Management System. Login at:

<https://secure.authorize.net>

1. Go to 'Settings and Profile' and select 'Relay Response'. Change this to the callback URL of your site, i.e. .
2. Click on 'Receipt page' and 'receipt method'. This sets the page on your site that a user is returned to after finishing a transaction (normally should be )
3. Set the receipt method to 'Link', and text to "Click here to return to the store", or something similar.
4. Go to 'Settings and Profile', under 'Security', select 'obtain transaction key'. Enter your secret answer to obtain your key. This key must be entered in the setting (see 7. above).

## 17.6. Bitcoin

Bitcoin is a radical peer-to-peer payment system that enables transactions to be made in virtual currency between any user; unlike credit cards, there are no charge-backs, transaction fees are virtually zero and there is no reliance on third party providers or infrastructure.  
  
Bitcoin payments require simply a bitcoin alpha-numeric address; this makes them very simple to conduct, unlike credit card payments which typically require card number, expiry date, CVV codes, name, street address and so on. Kartris takes advantage of this by opening up the possibility to take 'anonymous' orders when Bitcoin is used for downloadable or digital content. Essentially, customers need not provide identifying details other than an email address (and it's easy to set up free email addresses) - it's possible to transact in the kind private way one might traditionally only be able to do in a bricks and mortar store while paying cash.

### 17.6.1. Basic overview

Kartris communicates with the Bitcoin client via a JSON interface. When the order is created in the checkout, Kartris contacts the Bitcoin client and tells it to generate a new payment address, which is notified to Kartris. Kartris saves the order in the database, shows the 'checkout complete' page which shows the Bitcoin payment address the customer must make payment to. This is also emailed to the customer.  
  
Because each order generates its own payment address, it's easier to tie up incoming payments with the corresponding order. A .vbs script which can be run on a schedule checks to see what pending Bitcoin orders are in Kartris, and whether the required number of confirmations have been made yet. If they have, the script calls back Kartris to notify it. The order status is then automatically updated as 'paid'.

### 17.6.2. Pre-requisites to run Bitcoin support

Kartris includes native Bitcoin support, by which we mean it can process payments using the official Bitcoin client running on your own hardware as opposed to using some third party service which will charge you a fee.  
  
The Bitcoin client can be downloaded here:  
  
<http://bitcoin.org/en/download>  
  
We use the command-line JSON support in this client, so you must use this rather than third party clients or the cut-down versions.  
  
The Bitcoin client must be installed on the web server where your web site is hosted, so this rules out shared hosting - you must really have your own server or virtual server.

### 17.6.3. Setting up the Bitcoin client

Install the software locally on the server where your site is running. Make sure it is set to start up automatically when Windows does.  
  
You will then need to locate the Bitcoin settings folder. This should be located here by default:  
  
  
  
(where [username] is the Windows user account name)  
  
Within this folder, there may be a file called . If there isn't you can create one and paste the following into it:

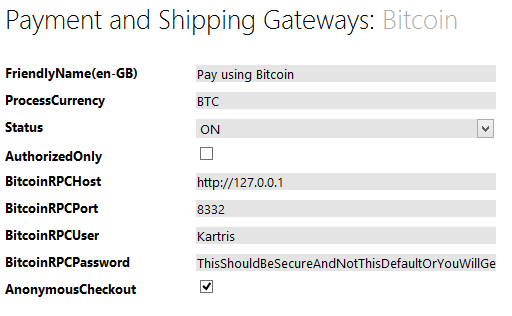
|  |
| --- |
| # bitcoin.conf configuration file. Lines beginning with # are comments.      # Network-related settings:    # Run on the test network instead of the real bitcoin network.  #testnet=0    # Connect via a socks4 proxy  #proxy=127.0.0.1:9050    ##############################################################  ## Quick Primer on addnode vs connect ##  ## Let's say for instance you use addnode=4.2.2.4 ##  ## addnode will connect you to and tell you about the ##  ## nodes connected to 4.2.2.4. In addition it will tell ##  ## the other nodes connected to it that you exist so ##  ## they can connect to you. ##  ## connect will not do the above when you 'connect' to it. ##  ## It will \*only\* connect you to 4.2.2.4 and no one else.##  ## ##  ## So if you're behind a firewall, or have other problems ##  ## finding nodes, add some using 'addnode'. ##  ## ##  ## If you want to stay private, use 'connect' to only ##  ## connect to "trusted" nodes. ##  ## ##  ## If you run multiple nodes on a LAN, there's no need for ##  ## all of them to open lots of connections. Instead ##  ## 'connect' them all to one node that is port forwarded ##  ## and has lots of connections. ##  ## Thanks goes to [Noodle] on Freenode. ##  ##############################################################    # Use as many addnode= settings as you like to connect to specific peers  #addnode=69.164.218.197  #addnode=10.0.0.2:8333    # ... or use as many connect= settings as you like to connect ONLY  # to specific peers:  #connect=69.164.218.197  #connect=10.0.0.1:8333      # Maximum number of inbound+outbound connections.  #maxconnections=      # JSON-RPC options (for controlling a running Bitcoin/bitcoind process)   server=1 tells Bitcoin-QT to accept JSON-RPC commands.  #server=0    # You must set rpcuser and rpcpassword to secure the JSON-RPC api  rpcuser=Kartris  rpcpassword=ThisShouldBeSecureAndNotThisDefaultOrYouWillGetRobbed    # How many seconds bitcoin will wait for a complete RPC HTTP request.  # after the HTTP connection is established.   #rpctimeout=30    # By default, only RPC connections from localhost are allowed. Specify  # as many rpcallowip= settings as you like to allow connections from  # other hosts (and you may use \* as a wildcard character).  # NOTE: opening up the RPC port to hosts outside your local  # trusted network is NOT RECOMMENDED, because the rpcpassword  # is transmitted over the network unencrypted.  #rpcallowip=10.1.1.34  #rpcallowip=192.168.1.\*    # Listen for RPC connections on this TCP port:  rpcport=8332    # You can use Bitcoin or bitcoind to send commands to Bitcoin/bitcoind  # running on another host using this option:  rpcconnect=127.0.0.1    # Use Secure Sockets Layer (also known as TLS or HTTPS) to communicate  # with Bitcoin -server or bitcoind  #rpcssl=1    # OpenSSL settings used when rpcssl=1  #rpcsslciphers=TLSv1+HIGH:!SSLv2:!aNULL:!eNULL:!AH:!3DES:@STRENGTH  #rpcsslcertificatechainfile=server.cert  #rpcsslprivatekeyfile=server.pem      # Miscellaneous options    # Set gen=1 to attempt to generate bitcoins  #gen=0    # Pre-generate this many public/private key pairs, so wallet backups will be valid for  # both prior transactions and several dozen future transactions.  #keypool=100    # Pay an optional transaction fee every time you send bitcoins. Transactions with fees  # are more likely than free transactions to be included in generated blocks, so may  # be validated sooner.  #paytxfee=0.00    # Allow direct connections for the 'pay via IP address' feature.  #allowreceivebyip=1    # User interface options    # Start Bitcoin minimized  min=1    # Minimize to the system tray  minimizetotray=1 |

This sample file comes from the Bitcoin documentation here:  
  
<https://en.bitcoin.it/wiki/Running_Bitcoin#Bitcoin.conf_Configuration_File>  
  
You can see that the majority is commented out, but the relevant lines that you need active in your file are as follows:

* - this turns on the JSON support in the client, so Kartris can communicate with it
* - this defines the port that will be used for remote communication
* - this defines the address at which the client is running; 127.0.0.1 is the default local network address
* - a username (you can choose your own)
* - you should define your own password here, don't use our default!!!
* - this is not essential, it just tells the Bitcoin client to start minimized, preferably if running on your server
* - again, not essential, but preferable as the client starts up whenever the server reboots

### 17.6.4. Set up within Kartris

Go to and click to edit Bitcoin. You should ensure that Bitcoin is turned 'ON' (or set to TEST or FAKE for testing). Your settings should look similar to the following:



The ProcessCurrency be BTC. This ensures that orders are converted to the right value in Bitcoin at checkout.  
  
, , and should all match the ones you configured in the Bitcoin.conf file, see @17.6.3. Setting up the Bitcoin client

### 17.6.5. Setting up the VBS - notifying Kartris of payment

The final step is to ensure that successful payments are notified to Kartris so it can update orders appropriately. To do this, we created a .vbs script. By default, this script comes in the Bitcoin plugin folder within the Kartris site zip. But you can put this anywhere on your server.  
  
There are a number of settings within this that will need to be set. You can edit it in notepad or a similar plain text editor. A typical file might look like this:

|  |
| --- |
| '==================== 'Kartris Database '==================== strKartrisDBName = "k25008\_test" strKartrisDBServerName = "localhost\SQLExpress" blnUseWindowsAuth = true strKartrisDBUserName = "sa" strKartrisDBPassword = "sa" strKartrisDBPort = 1433  '==================== 'Bitcoin Client - Should match with your Bitcoin payment gateway settings in Kartris '==================== strBitcoinHost = "http://localhost" strBitcoinPort = "8332" strBitcoinUsername = "Kartris"  strBitcoinPassword = "ThisShouldBeSecureAndNotThisDefaultOrYouWillGetRobbed"  '======================= 'REQUIRED CONFIRMATIONS 'Number of confirmations for bitcoin payments to be considered 'paid' '======================= intRequiredConfirmation = "1"  '==================== 'WORKING FOLDER PATH 'Folder where the log files will be saved to '==================== '--don't forget to put backslash at the end (\) strWorkingFolderPath = "C:\Users\TestUser\Desktop\" 'Whether to only log confirmed payments, will not log queries for addresses that returns 0. '\*True = smaller log file size but with less details.  blnLogConfirmedPaymentsOnly = True  '==================== 'Other Settings '==================== numCursorType = 1 'for SQL Server strEmailMethod = "off" strMailServer = "localhost" strEmailFromAddress = "no\_reply@mysite.xyz" strEmailSubject = "Summary" |

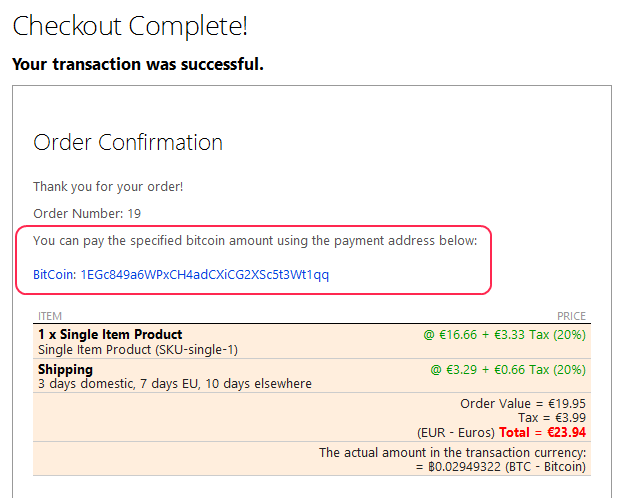
In the above file, we have values for the and , but because we set to true, these aren't required, so the values don't matter.  
  
The Bitcoin client details should match those configured in the bitcoin.conf file, and the Kartris back end (see @17.6.3. Setting up the Bitcoin client and @17.6.4. Set up within Kartris above).  
  
We have set the to "1". This is the number of confirmations the Bitcoin client should receive before an order is considered as successfully paid. Most Bitcoin documentation suggests waiting for 3-6 confirmations before considering a transaction as successful and irreversible, but the downside is that this will take longer. We'd suggest you start with a higher number (e.g. 6) and only reduce it if the delay becomes an issue (for most mail order items, waiting up to an hour, but normally less isn't going to make any real difference as to how quickly the customer will get their order.  
  
You should set up a scheduled task in Windows to run this .vbs on a regular basis, we suggest every 10 minutes.

### 17.6.6. Currency rates

Bitcoin rates can change sharply very quickly. For this reason, you need to be particularly careful to update the currency rates on your store regularly, even several times per day. From Kartris v2.5008 onwards, the live rate feed in Kartris includes a Bitcoin rate from BCChanger.com. However, you may want to adjust this rate manually before saving to cover you for any potential movement in rates.

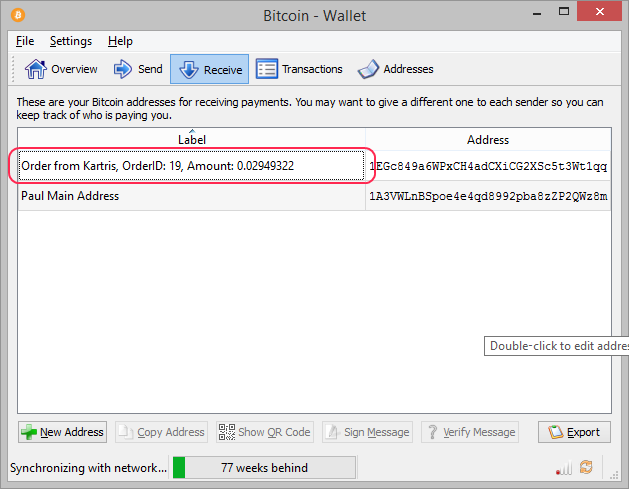
### 17.6.7. Process from a customer perspective

The order process through checkout for a customer is virtually identical to that for any other payment system. The main difference is that after placing the order, the customer is notified of the Bitcoin payment address that they need to send funds to (circled in red below):



### 17.6.8. Process from a store owner perspective

The process for a store owner will be similar to that for orders using any other payment system. To check payments in the Bitcoin client directly, view the 'Receive' tab. The addresses for each order will be listed, together with the basic order information to help reconcile them with the corresponding orders in Kartris (circled in red below):



## 17.7. Docdata

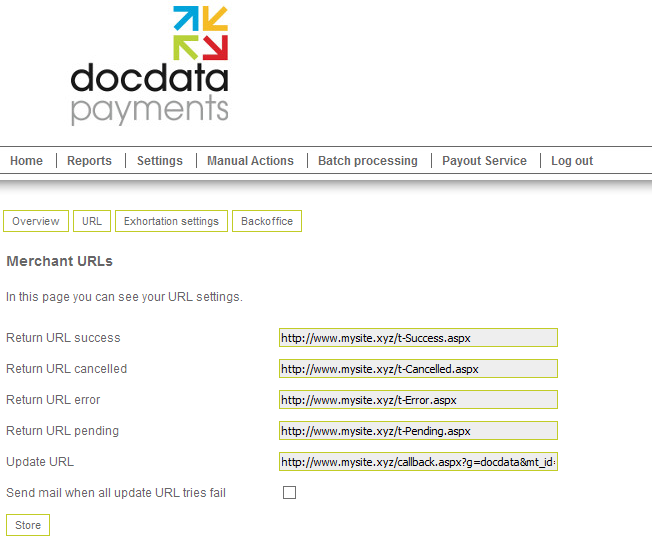
Docdata is a Netherlands-based payment provider. It supports payments using credit cards, bank transfers and iDeal.

### 17.7.1. Setup within Kartris

1. Go to and click to edit Docdata.
2. For the 'friendly name', enter the name you want this payment system to be referred to on the front of your site where customers select it, for example 'Pay by credit card, bank transfer or iDeal'.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that a test order will be passed, allowing you to test the full integration and pass multiple orders and no cost without needed to do refunds. 'FAKE' means that Kartris will skip the Docdata payment process and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the test payment process.
4. ProcessCurrency - if left blank, payments will be sent to Docdata and processed in the customer's selected currency. If you would prefer to only process Euros, you can enter EUR, and all orders will be converted to EUR at the rate set in your store at checkout before going to the payment system.
5. PostURL\_Test - (for test orders) should be:
6. PostURL\_Live - (for live orders) should be:
7. MerchantPassword - This is the api key password, not the password you use to login to Docdata's panel.
8. MerchantName - The account name Docdata provide to you.

### 17.7.2. Setup within Docdata

You will need to set up Docdata with details of where to send updates on the status of payments to, and whether to redirect the user to after payment. To do this, login to your Docdata account, then go to , then click the button near the top. You should see a form like this:



The Update URL is the most important setting; this should point to the callback.aspx page on your site, for example:  
  
  
  
It's important that you leave the mt\_id= at the end; Docdata will append the order ID number to this. This URL is not called in a user's browser, rather it is called directly by Docdata each time the order status is updated.  
  
The other settings control where a user is sent immediately after payment. We suggest you create custom pages in Kartris for each, so you can design the message to show to customers. For example create pages called:  
  
  
  
  
  
  
These will have the URLs as follows:

### 17.7.3. Implementation and important setup info

When Docdata sends updates to your Kartris site, it only sends the order ID. The web site is then required to send a request to see the updated status information for the order. The problem is that this requires the payment cluster key. In order to make this work, we therefore have an Access db within the plugin that stores cluster keys against the order ID when an order is first created, and this is then queried later when we need to find the cluster key using the order ID which Docdata sends us.  
  
So there are a couple of things you need to ensure when setting up your site. Firstly, that the Docdata plugin folder is full permissions for the web site account, in order that it can write data to the Access db. Secondly, the site needs to run 32-bit, as it relies on 32-bit Access drivers. You can set this from IIS; find the application pool that the site is running in, view the Advanced Settings for it, and set 'Enable 32-bit Applications' to TRUE.

## 17.8. GP Webpay

GP Webpay is a payment system based in the Czech Republic, providing a remote-type payment system that supports 3DS.

### 17.8.1. Setup within GP Webpay

Please review the GP Webpay documents. You will need to create secure certificates on their admin interface before setting up your Kartris.

### 17.8.2. Setup within Kartris

1. Go to and click to edit GP Webpay.
2. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that a transaction will be sent to the alternative 'test' processing URL, which behaves the same as the main production URL but does not actually bill the card. 'FAKE' is another mode to aid setup and testing, Kartris itself formats an appropriate callback to itself, simulating what the remote side should pass back. It is useful for checking order emails, for example.
3. Most of the settings will correspond to named settings provided to you by GP Webpay.
4. The setting is the full local path to the .pfx file created as part of the GP Webpay account setup. If this is located on your web site somewhere, you can find the local path of the root of your Kartris installation from This path value should end with the name of your .pfx file.
5. The is the password associated with this .pfx file, not your account or any other password.
6. The is the local path to the .cer file that contains GP Webpay's public cert. There is a production (live) cert, and one for the test server. Both files are included in the GP Webpay plugin folder for Kartris. You just need to find and enter the actual local path to the right file ( for live transactions, for test transactions to the test server).
7. The can be left blank if you want Kartris to use whatever currency the user has chosen on the web site. Alternatively, you can set a 3 letter ISO code such as GBP or USD to force orders to be converted into that currency before processing.

Although GP Webpay uses numeric currency codes, Kartris will convert to these from the three-letter ISO codes. So you should NOT enter numeric values here, only recognized three letter currency codes. Setting the process currency is useful if your merchant account only supports one currency, or if your site has currencies available to users that your merchant account cannot handle. GP Webpay itself supports these currencies (though your merchant account may not): CZK, EUR, GBP, HUF, PLN, RUB, USD.17.8.2.1. Further setup

On most payment systems, the gateway vendor will create a new account/installation for each of your sites. However one of the attractions of GP Webpay for admins with many sites is that they can all run through a single account. One issue that results from this is regarding the uniqueness of order IDs.  
  
Typically Kartris allocates order IDs as numbers, sequentially as orders go into the table (which happens before orders are paid, hence actual paid order numbers might have gaps between them where orders allocated some IDs don't end up paid and finished). If you run multiple sites, these will all start numbering from 1, hence you'll have multiple sites creating IDs which might be duplicates. This will be an issue when these orders are sent to GP Webpay, as it requires all orders have a unique ID. If another of your sites previously used the same ID, GP Webpay will reject it.  
  
The fix is relatively simple. You should adjust the 'seed' value on the O\_ID field of the tblKartrisOrders table (don't from within SQL Server Management Studio), so instead of being '1' (starting numbering at 1), it is some higher value. For example, if you had three web sites, you could start one at '1' another at '1000000' and another at '2000000'. Put the numbers far enough apart that each is never likely to reach where the next starts numbering, and you should avoid your sites ever issuing the same order IDs as each other.

### 17.8.3. Setup on IIS

With just the settings above in @17.8.2. Setup within Kartris, you will get errors at checkout and in the logs see references that the crypto provider cannot find the file specified (i.e. the .pfx file), even though you have verified that the path to it is correct. For technical reasons, to access the certificate, you need to make an adjustment to the application pool that the site runs in.

1. go to IIS Manager
2. go to the application pool instance
3. click advanced settings
4. Under Process model, set Load User Profile to

Once this is done, you should be able to checkout and reach the GP Webpay payment pages.

## 17.9. Netbanx

NETBANX is a service of a global payments company Optimal Payments PLC, which is currently based on the Isle of Man. It is a 'remote' type, UK-oriented payment gateway.

### 17.9.1. Setup within Kartris

1. Go to and click to edit Netbanx.
2. For 'friendly name', you can enter 'Netbanx', or just simply 'Credit Card'. This is just the name of the payment method that customers will get to choose on the web site during checkout if you have multiple payment methods.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' invokes a demo order, allowing you to test the full integration and pass multiple orders at zero cost without needing to do refunds. 'FAKE' means that Kartris will skip the Netbanx payment page and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the Netbanx payment process.
4. Rather than having an account ID to identify your orders to Netbanx, it has customized payment URLs that include your site or company name. There are both test and live URLs, with the format as follows:  
     
     
     
     
   Kartris will decide which one to use based on the STATUS setting for this gateway.

### 17.9.2. Setup within Netbanx

Netbanx will provide you with details of their admin panel. You will need to add permitted URLs to this; their gateway will only accept orders that are referred to it from these allowed URLs.  
  
The callback also needs to be set up at Netbanx - this tells Netbanx the page to send payment success or failure messages to, so that Kartris can update the order status to show it was paid, and send confirmation mails. This should be set to:

## 17.10. Ogone

Further information to follow...

## 17.11. Opayo VSP Form

Opayo (formerly called 'Sagepay') is one of the most popular credit card payment providers in the UK.  
  
VSP Form is a remote-type payment system, where customers are sent to a secure page on Opayo's servers to conduct the card transaction.  
  
The system is simple to set up, but is unusual compared to most remote type payment systems in that the 'callback' (relaying information on a successful payment back to the store) is achieved by redirecting the user's browser back to the store. Most payment systems make the callback themselves (their server calls the store's callback page directly), even if they subsequently send the user back to the store after payment. In theory, payments might not be notified back to your store if a user closes their browser immediately after the payment was made, but in practice, we rarely see this and the system seems stable and reliable.

### 17.11.1. Setup within Kartris

1. Go to  and click to edit SagePay VSP Form.
2. For the 'friendly name', enter the name you want this payment system to be referred to on the front of your site where customers select it, for example 'Pay by credit card with SagePay'.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that a test order will be passed, allowing you to test the full integration and pass multiple orders and no cost without needed to do refunds. 'FAKE' means that Kartris will skip the Opayo payment process and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the Opayo test payment process.
4. ProcessCurrency - if your store supports some currencies that your Opayo account cannot process, you should set this with a three-letter ISO code to convert all orders to this currency prior to sending users to the payment pages.
5. Test URL - (for test orders) should be:
6. Post URL - (for live orders) should be:
7. VSPProtocol - Opayo uses a versioning system so that when a newer version of their system is introduced, you can continue to process orders with the older version (at least for some period). The Kartris Opayo support is designed for 'Protocol 3.00', so you should not change this number unless your Kartris payment system is upgraded at some point in the future.
8. The other various Opayo settings required should be supplied to you by Opayo.

### 17.11.2. Setup within Opayo

All the required information to process an order and direct the callback back to your store is actually posted through to Opayo with the order, so no further setup is required at their end. However, you should ensure with Opayo's support that your account is live before you start processing orders.

### 17.11.3. Common issues

#### 17.11.3.1. The VendorTxCode has been used before

Orders passed through your Opayo account must have unique IDs. If you experience this error when trying to checkout, it means the order ID that is being passed has been used before on your account. This can happen if you've switched to Kartris from another store system, so IDs are starting from a low level. It can also happen if you restored a older backup of your Kartris database for some reason.

The simple way to fix this is to set your database so that order numbers are allocated from a much higher based (above the range of any order numbers you might previously have run through the account). In SQL Management Studio, open up the table in design view and view the properties of the O\_ID field. There is a section for 'identity'. Within this, there is a seed value, which at default will be 1. Change this to a number in the tens of thousands, or hundreds of thousands, save the table changes. From now on, orders should be allocated much higher ID numbers, and these will be passed to SagePay as order IDs.

## 17.12. Pay360

Coming soon.

## 17.13. PaymentSense

PaymentSense is a UK-based payment system that provides credit card payment services primarily to smaller merchants. Kartris includes a plugin for the method. This is a remote-type payment system where the transaction occurs on the payment vendor's own secure gateway pages, and a POST is made back to your Kartris site to notify it of the result.

### 17.13.1. Setup within Kartris

Go to and click to edit PaymentSense.

Enter the various acccount details given to you by PaymentSense. You may have both test and live account details, so ensure you don't mix these up. We suggest first configuring the test details, setting the status to 'test' in Kartris (this will only show the payment option for PaymentSense at checkout if you are logged in to the site as an admin) and then running through some tests with the test card details available from PaymentSense.

In older installations (up until Kartris v2.9012), the hashmethod was hardcoded into the plugin as MD5. From v2.9013 onwards, the default is SHA1, though this is changeable through a new setting called HashMethod, within the PaymentSense settings in the Kartris back end.

The may be different depending on which processor you signed up from. This is the location of the payment form on the vendor's site where the user is redirected in order to make payment.

### 17.13.2. Setup with PaymentSense

See PaymentSense's own documentation regarding setup within their admin area.  
  
Make sure that the hashing type matches the Kartris plugin version you are using. You can check the version of the DLL you have by navigating to it in Windows explorer, right-clicking and choosing 'properties', then viewing the details tab. Newer versions of Kartris also show this DLL version number within the list of payment systems.

If it's the older DLL (v1.x), then you should use MD5. If it's the newer v2.x DLL (introduced in Kartris v2.9013) then use SHA1 (if using this version, your Kartris should have a 'HashMethod' setting withing the PaymentSense settings).

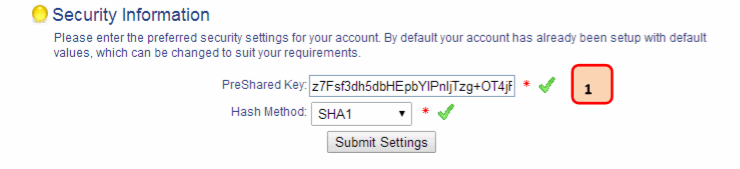


Figure The hash selection within PaymentSense's admin area. This must match your Kartris installation.

## 17.14. Paypal

Paypal is a popular internet payment service available in most countries. At present, Kartris integrates only with .

### 17.14.1. Setup within Kartris

1. Go to and click to edit PayPal.
2. For the 'business', enter the email address of your Paypal account - this is effectively your PayPal user ID.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that transactions will be sent to PayPal's sandbox server. 'FAKE' means that Kartris will skip the PayPal site and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the PayPal payment process.
4. If you have Kartris v2.9 or above, it will automatically determine whether to post to the live or sandbox Paypal server. If you have an earlier version of Kartris (or a Paypal DLL in Kartris earlier than 1.1.0.0) you will need to change the URL setting to the appropriate one for LIVE or test orders.  
     
   For live orders:  
     
     
   For test orders:

### 17.14.2. Setup within Paypal

In order to ensure that PayPal calls back your Kartris site, to notify it that a payment for a particular order was made so that confirmation mails can be sent and the order can be tagged as 'paid', you need to set up a few things within your PayPal account.

1. Login to PayPal and go to . Then click to view (left hand side) and then a bit over half way down, click the 'update' link by 'Instant payment notifications'.
2. The Notification URL should be . The 'Receive IPN messages' radio button should be checked.
3. Back on the page, click the 'update' link by 'Website preferences'. Turn 'Auto Return' on, and enter as the 'Return URL'. This will redirect the user back to your site after they complete a payment on PayPal. But it is important to note that the order itself is called back immediately after payment by PayPal's server calling the Callback.aspx page of your site (see 2. immediately above).
4. Set 'Payment Data Transfer' off - we don't need this as we send info via the IPN step in 2. above.

You may find that orders where data submitted contains non-English characters (such as French or German accented characters) generate an INVALID response at PayPal. To fix this:

1. Log into PayPal
2. Go to (see above)
3. Click 'Paypal Button Language Encoding' link at foot of page, and then click the 'more options' button
4. Set 'Encoding' to 'UTF-8'
5. Set 'Do you want to use the same encoding for data sent from paypal to you?' to 'Yes'.
6. Click 'Save'

We advise doing this even if you're in the US or UK, as it's quite possible you'll have customers with names and/or addresses either domestically or overseas that contain non-English accented characters.

### 17.14.3. Google Analytics

Google Analytics ecommerce tracking requires that a client side javascript is run the user's browser when they complete an order. This happens in Kartris on the page right after returning from the payment gateway (see 3. above).

It cannot be done on the callback because that is called by PayPal, not the customer's browser. Unfortunately PayPal puts in a 5-second delay after a completed payment before returning the customer to the store. This inevitably results in some customers dropping out after a successful payment but before they have been redirected back to your site, and hence not being logged by Google Analytics as completed sales. There is no workaround for this; the Google Analytics code can only run on the user's browser; it must run after the payment is complete (otherwise you will log sales as successful that don't complete payment) and PayPal apparently has no way to reduce or eliminate the 5-second delay). This is not a Kartris issue alone; it is an issue with all carts that support Google Analytics when they are set up to use PayPal Web Site Payments Standard.

## 17.15. Paypoint (formerly SecPay)

Further information to follow...

## 17.16. PO - Offline Payment

This is a built-in payment method that can handle situations where you wish to accept orders without payment. We commonly refer to this as 'payment by PO' (purchase order); essentially a customer can check out from the site and instead of providing credit card details, you invoice them for subsequent payment (which might be by cheque, or bank transfer, or even cash).  
  
Many companies require invoices to them include a purchase order number, so there is a field to receive this during checkout.

### 17.16.1. AuthorizedOnly

All payment systems have this setting, but typically it is most commonly used with the 'PO - Offline payment' system. If checked, only users who have pre-approved will see this option at checkout and hence be able to use it. This way, you can accept orders for payment later by customers who you have granted credit terms to, but new customers and others that are unapproved must make payment by credit card or another online payment system.

See also .

We would advise that even if not using the PO option on your store, you keep it set to ON but then set it as , which will prevent the public from using it unless you specifically allow them to. This is because orders of zero value (which can occur either if some items are free, or if a coupon is used for the full value of the order) will use the PO checkout route. If you turn the PO option off, you will effectively prevent the store bypassing the payment system for zero value orders.

## 17.17. QuickPay

QuickPay is a payment provider launched in 2004 and based in Denmark. Kartris uses the "QuickPay Form" integration method.

### 17.17.1. Setup at QuickPay

In order to configure Kartris, some values will need to be obtained from QuickPay. These are

* (a general ID applicable to the customer's QuickPay account)
* (an ID for the specific agreement within the QuickPay account - a merchant may have several)
* (a key used for hashing values for each agreement, for security)
* (a key used to hash values to verify the integrity of the callback from QuickPay)

These can be obtained by logging into the QuickPay account control panel as detailed below.

#### 17.17.1.1. Merchant ID

This is stated at the top left of the control panel under the customer name

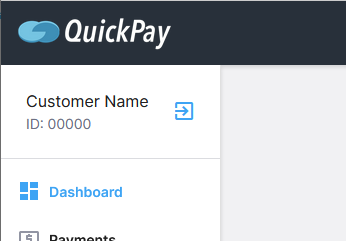


Figure Finding the QuickPay Merchant ID

#### 17.17.1.2. Agreement ID and Agreement API Key

Using the left hand menu navigate to and then under click to select

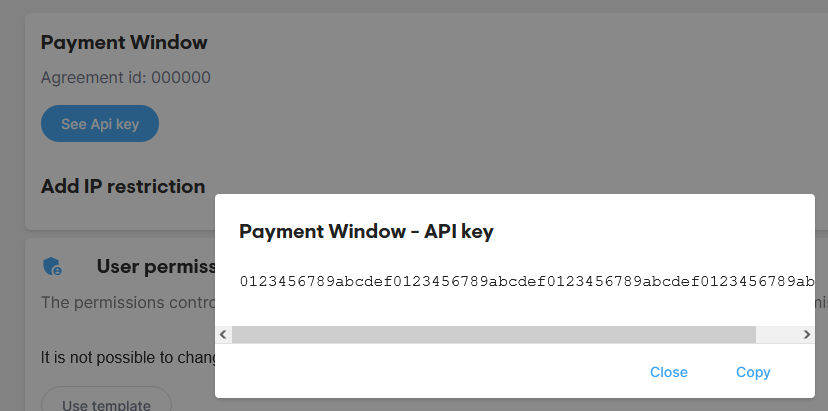
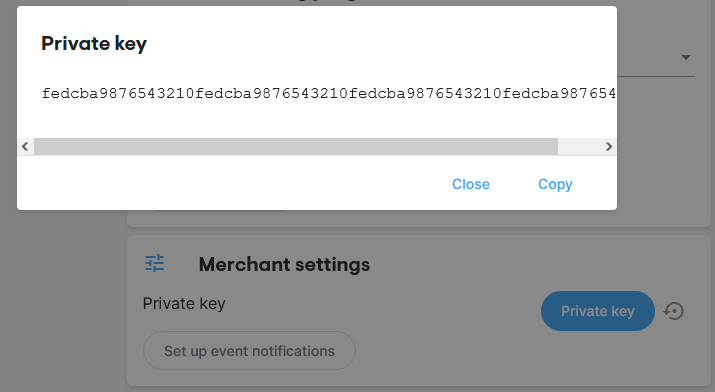


Figure Obtaining the Agreement ID and Agreement API Key

#### 17.17.1.3. Private Key

Navigate to and then scroll down to .



#### 17.17.1.4. Enable Test Transactions

To enable test transactions while testing the integration the required setting must be changed on QuickPay. Navigate to and ensure the setting for is set to yes

### 17.17.2. Setup in Kartris

1. Go to Configuration > Payment and Shipping Gateways and click to edit QuickPay.
2. For the 'friendly name', enter the name you want this payment system to be referred to on the front of your site where customers select it, for example 'Pay by credit card with QuickPay'.
3. - If your QuickPay account can process orders in all the currencies you have available for customers to use on the site, then you can leave this blank to process the order in whatever currency the customer is using. If you cannot process all the currencies available, you can convert all orders to a specified currency at checkout. The total will be shown to the user in both currencies, with an explanation. For example, setting this to 'GBP' will convert all orders to British Pounds at checkout.
4. should be set to https://payment.quickpay.net
5. should be left as defaulted (most likely v10)
6. Change the from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that a test order will be passed, allowing you to test the full integration and pass multiple orders and no cost without needed to do refunds. 'FAKE' means that Kartris will skip the QuickPay payment process and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the QuickPay test payment process.
7. should be the setting for this field you obtained from QuickPay in @17.17.1.1. Merchant ID‍
8. and AgreementAPIKey should be the settings you obtained from QuickPay in @17.17.1.2. Agreement ID and Agreement API Key‍
9. should be set to the value obtained from QuickPay in @17.17.1.3. Private Key‍
10. should be set to [your site URL]/callback.aspx
11. should be set to [your site URL]/checkoutcomplex.aspx
12. should be set to [your site URL]/basket.aspx

## 17.18. Realex

Realex is a popular payment system for the UK and Ireland.

### 17.18.1. Setup within Kartris

1. Go to and click to edit Realex.
2. MerchantID - supplied by Realex. This is the merchant number supplied by your bank.
3. SharedSecret - This is supplied by Realex. It is used in the generation of the SHA1 hash. If this does not match the one on Realex, transactions will not be accepted by the gateway.
4. ProcessCurrency - You must set this config setting to the 3 letter ISO currency code of your Realex account. For example, if your account processes Euros, this setting must be set to ‘EUR’. Setting this config setting correctly ensures that all orders will be converted to Euros prior to passing over to Realex. If you don’t set this (and your store supports multiple currencies), you will pass orders in GBP or USD to the Realex gateway, but it assume these amounts are in Euros.
5. AutoSettleFlag - Used to signify whether or not you wish the transaction to be captured in the next batch or not. If '1', then all the transactions will automatically be settled in the next batch. If '0' it means that you will manually settle transactions after the goods have been shipped.
6. URL - address of the secure payment page on the Realex site.
7. ReturnTSS - Use to signify whether or not you want to use Realex’s Transaction Suitability Score. If this is '1', six additional fields will also be supplied to Realex in every transaction (shipping code, shipping country, billing code, billing country, customer id, customer email). Otherwise, set to '0'.

### 17.18.2. Setup within Realex

Before you can use Realex’s Realauth Redirect, you must first provide Realex with the URL of your callback page. This should be:

(this is URL-mapped to the Callback.aspx file by Kartris)

The response URL is to be mailed to [support@realexpayments.com](mailto:support@realexpayments.com). You can also have an HTML template uploaded to the Realex Payment servers so that the redirection should resemble the rest of the shopping experience (or else it will use Realex’s default template). You can send your template to them via same email address. For further info, check the Realex developer's guide.

In case Realauth is unable to contact your callback page, you can set a static success/failure message. This can be done at Realex's administration web site (Realex will have supplied you with access details).

### 17.18.3. Custom response template

It is also possible to customize the look and feel of the HTML response Realex sends to users with a template on your Kartris site. If present, this will be used to format the response Kartris sends to Realex when an order is called back. Realex then relays this HTML to the customer.  
  
The response to Realex from Kartris is formatted using a file which should be placed here on your site:

## 17.19. Secure Trading

IMPORTANT: Secure Trading is no longer accepting customers on this particular implementation. We are maintaining it for legacy reasons. New customers therefore should not choose to setup an account with Secure Trading as Kartris is not compatible with the version they will require you to run.Secure Trading delivers a fully PCI DSS compliant online payment processing solution to businesses worldwide.  
17.19.1. Setup within Kartris

1. Go to and click to edit Secure Trading.
2. For 'friendly name', you can enter 'Secure Trading', or just simply 'Credit Card'. This is just the name of the payment method that customers will get to choose on the web site during checkout if you have multiple payment methods.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' invokes a demo order, allowing you to test the full integration and pass multiple orders at zero cost without needing to do refunds. 'FAKE' means that Kartris will skip the Secure Trading site and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the Secure Trading payment process.
4. 'Required Fields' should be set to 'name,email'.
5. 'CallbackID' should be set to 1 if you only have a single web site. If you use your Secure Trading account with multiple web sites, you can number each of them.
6. 'SiteReferenceID' should be set to the values provided by Secure Trading.
7. 'Password' is an arbitrary password you use to protect the callback process; it should match the one set up in the callback.txt file (see @17.19.2. Setup within Secure Trading).

### 17.19.2. Setup within Secure Trading

The majority of configuration for Secure Trading is contained in a number of text files that are uploaded through your Secure Trading admin area. We provide versions of these files configured for Kartris within a zip in the folder of Kartris. You must use these text configuration files rather than the default ones available from Secure Trading. You can remove the zip itself from your site, as it does not need to be present there.

contains the following text:

|  |
| --- |
| method1 POST url1 http://www.mydomainnamegoeshere.com/callback.aspx?g=securetrading&p=stpassword fields1 orderref, streference, email, amount, stresult |

You should edit the URL to match your site. The parameter 'g' should remain as 'securetrading' but 'p' should be set to the same 'Password' configured for Secure Trading within your Kartris back end.  
  
If you have multiple online stores using the same Secure Trading account, you can copy these three lines of text and paste them below. The 'CallbackID' in @17.19.1. Setup within Kartris will be '1' for the site covered by the first three lines of the file, '2' for the next three lines and so on.

Remember, our callback.txt file is different to the standard one available from Secure Trading. You must use our version or your callbacks will fail. and   
  
These files are templates for the pages displayed to a customer when making an order. These must be static HTML files, do not change them to .asp or .aspx or other active pages because the Secure Trading server will not run these.  
  
  
This is the HTML template used for the credit card form that Secure Trading displays to your customers. Be very careful when editing this that you do not change any field names, remove required fields or otherwise break the form.  
If you experience problems with Secure Trading, please ensure that you revert files to the ones we provide with Kartris. The most common issues we see are bugs introduced by edits to the various template files, or use of default files provided by Secure Trading.

## 17.20. Stripe Checkout

Stripe is a popular payment solution that supports many countries and provides a number of integration routes. Kartris implements "Stripe Checkout". Stripe support was added to Kartris with v3.3001. There are some small changes to the Checkout, CheckoutProcess, CheckoutComplete and Callback to handle it. Also, the Stripe.net library needs to be added to the bin folder too.  
  
If you have v3.3001 or later installed, Stripe will be available in the payment gateways list already.

### 17.20.1. Setup within Kartris

In addition to the general settings most gateways have, Stripe requires these particular ones:

#### 17.20.1.1. ApiKeyPublishable

This is the "publishable" API key that Stripe will generate for you inside your account. This key is used by Kartris when formatting the javascript that forwards user sessions over to Stripe for the payment. It will generally start with the letters "pk\_". It is called "publishable" since this is used in client-side code so can be visible to users.

#### 17.20.1.2. ApiKeySecret

This is the key that Kartris uses server-side to communicate with the Stripe servers. This will not be visible to the user's browser in any way during the process, and as such is "secret". It will generally start with the letters "sk\_".

#### 17.20.1.3. WebhookEndpointSecret

Webhooks are setup in Stripe to post information back to web sites when certain events happen. In our case, we're interested in getting notification when checkout sessions are completed (i.e. customer completes payment). More detail on setting these up below. But a secret value is used to secure these, and that should be entered here.

See @17.20.2. Setup within Stripe‍ for more details.

#### 17.20.1.4. StripeJSSourceURL

A client-side javascript library is used to format javascript to redirect user sessions from Kartris over to Stripe's payment pages. This is the path to that library. In future, Stripe may require we link to newer libraries, hence we have this URL in the settings so it can be changed easily.

#### 17.20.1.5. OrderDescription

For simplicity, we format the order as a single item with a value to send to Stripe. When users checkout, they will see this item on the left of the page with its value. The name shown to users will be [OrderDescription][OrderID]. You can change the OrderDescription part here to customize the order description to your own site's name.

### 17.20.2. Setup within Stripe

To receive notifications from Stripe to your Kartris store, a webhook is required. You should configure this point to   
  
You will have to associate at least one event. You should choose "" followed by checking the box for

A webhook endpoint secret will be generated, and you should ensure you add this into your Stripe settings in Kartris. See @17.20.1.3. WebhookEndpointSecret‍ for more details.  
  
This will be called "Signing secret" but you will have to click to reveal it. It should begin "whsec\_".

#### 17.20.2.1. Stripe API version

Stripe let's you choose the version of its API that you use. We have tested our integration with both these versions (which were default, and latest, at the time of writing) and both work fine.  
  
2022-11-15  
2020-08-27

### 17.20.3. Development and testing

If you are developing and testing locally, Stripe provides a useful tool in the shape of the CLI (Command Line Interface). At time of writing, the latest version is here: <https://github.com/stripe/stripe-cli/releases/tag/v1.13.6>

Copy the Stripe.exe file to your local machine, and then use a command prompt to navigate to it. If you run your Kartris on Visual Studio's built in server, you can get Stripe's CLI to listen for webhooks and forward them to your local development site's callback page (Kartris will map requests to callback-stripe.aspx to callback.aspx?g=stripe, which tells Kartris which gateway DLL to use for processing the callback). For example, something like this:

|  |
| --- |
| stripe listen --forward-to http://localhost:4242/callback-stripe.aspx |

The CLI will give you the webhook endpoint secret to use. You need to add this in your settings, see @17.20.1.3. WebhookEndpointSecret‍

Once this is set, you can move through your checkout process, select Stripe as payment method, and go through to pay. If you have Stripe set to TEST mode, you will see some dev info on the page before you go to Stripe, and have a checkout button to push. This way, you can view the page source if you need to see what is being posted during development. This page does not show in LIVE mode, Kartris will format the javascript silently and submit it immediately.

You should see the order details to the left, and a payment form to the right. Use the following test card details:

4242 4242 4242 4242  
any name

a date in the future

any three digit security code

Stripe should show the transaction as complete and forward you back to your development site.

You should see the order showing as paid in your back end, with the event ID added as the reference code. In the CLI window, you should see some indication that the webhook was triggered and received a 200 ok response.

The full CLI reference is here: <https://stripe.com/docs/cli>

## 17.21. WorldPay

The WorldPlay plugin was updated in Nov 2023 to add the MD5 hashed signature field. If you are activating or updating WorldPay, please ensure you get the plugin DLL from the latest Kartris release. You will also have to add the new MD5Secret section from the .config file to your existing file.17.21.1. Setup within Kartris

1. Go to and click to edit WorldPay.
2. For the 'friendly name', enter the name you want this payment system to be referred to on the front of your site where customers select it, for example 'Pay by credit card with WorldPay'.
3. Change the status from 'OFF' to 'ON' (for live orders) or 'TEST' or 'FAKE' for testing. 'TEST' means that a test order will be passed, allowing you to test the full integration and pass multiple orders and no cost without needed to do refunds. 'FAKE' means that Kartris will skip the WorldPay payment process and instead format a post back itself to the callback page of Kartris. This is useful for testing that the callback process works, triggers the appropriate emails and so on without keep having to keep going through the WorldPay test payment process.
4. ProcessCurrency - If your WorldPay account can process orders in all the currencies you have available for customers to use on the site, then you can leave this blank to process the order in whatever currency the customer is using. If you cannot process all the currencies available, you can convert all orders to a specified currency at checkout. The total will be shown to the user in both currencies, with an explanation. For example, setting this to 'GBP' will convert all orders to British Pounds at checkout.
5. Test URL - (for test orders) should be:
6. Post URL - (for live orders) should be:
7. AuthMode - This should be set to 'A' to authorize and bill transactions or 'E' to just authorize and hold funds (useful if you wish to do further fraud screening before accepting the payment). You will need to contact your WorldPay representative to set this facility up. Transactions can only be held unbilled for a few days before they lapse - see WorldPay’s documentation for further information. If you just hold transactions, you must login to your WorldPay admin area and manually choose to bill a transaction.
8. InstallID - WorldPay will give you a unique number for your installation, which needs to go here.
9. CallbackPassword - This value should match the password you set within your WorldPay account (see below)
10. MD5Secret - text between 20 and 30 chars, including at least one upper case letter, one lower case letter, a number and a special character, but no spaces (despite what the WP documentation says!). This needs to match the same specified in your WorldPay account.

### 17.21.2. Setup within WorldPay

1. Check the 'Payment Response Enabled' box.
2. Enter the 'Payment Response URL' as
3. Check the 'Enable Shopper Response' box. This will show a text version of the order on WP.
4. Enter a callback password. This should match the one you specify in your Kartris back end.
5. MD5 secret - this should match the value entered in your WorldPay account.
6. Signature fields - enter
7. If you want to have a standard looking WorldPay confirmation page, uncheck the 'Enable Shopper Response' box. You can then customize the page returned using resultY.html and resultC.htm pages.  
   <http://www.worldpay.com/support/kb/bg/customisingadvanced/custa7105.html>

### 17.21.3. Templating the WorldPay response

When WorldPay calls back your site, you can send HTML to WorldPay of a response that you wish it to relay to the customer. In this way, when the customer successfully pays, they see your confirmation page on the WorldPay secure area.  
  
For security reasons, WorldPay restricts the HTML tags that can be used in the template. Javascript and embedded objects are banned. You should refer to WorldPay documentation for more details.  
  
The response to WorldPay from Kartris is formatted using a file which should be placed here on your site:

### 17.21.4. Adding the new MD5 support

If you are updating an existing Worldpay installation, you will need to do the following.

#### 17.21.4.1. Add the new Worldpay payment DLL

You may need to stop the web site in IIS first to unlock the existing DLL. Then copy the new file from the latest Kartris zip ( folder) into your web, overwriting the existing file. Then you can restart the web site in IIS.

#### 17.21.4.2. Add the new setting to your Kartris site

Find the file in the same folder as the Worldpay.dll you just changed. Open this in notepad for editing and add this new section into the settings, ideally between the CallbackPassword and InstallID ones. The new section looks like this:

|  |
| --- |
| <setting name="MD5Secret" serializeAs="String">  <value /> </setting> |

Now, we need to add a value to this setting. Go to your Kartris back end, and you should see Worldpay near bottom. The verson should show as 2.1.0.1 (or above). Click to edit Worldpay.  
  
You should see the new MD5Secret field. Add a value - this should be text, between 20 and 30 characters, no spaces. It must contain at least one number, one lowercase letter, one uppercase letter and one special character. Copy this value as you'll need it in the next step.

#### 17.21.4.3. Add the setting into the Worldpay admin panel

You need to login to Worldpay, find the live account settings for the correct install ID and update a couple of fields.

First, the MD5 Secret. You should copy exactly the same value into the new MD5Secret field you just added into your Kartris back end.  
  
You will also need to add the following to the Signature fields:   
  
Save the settings. If there are errors reported with your MD5 Secret value, fix them, but ensure that you copy any changes back into Kartris, so your MD5 secrets in both places match.

# 18. Security

## 18.1. SSL / TLS for incoming connections

When the browser uses a URL starting with https, rather than http, the connection is encrypted. These days, this is done using a protocol called TLS (transport layer security) although the term SSL (which was the predecessor protocol) is still widely used to refer to secure connections.

### 18.1.1. Checking for HTTPS support

The first step is to check your web site has HTTPS enabled. To do this, simply go to the front page of your site and then edit the address in the browser so it uses HTTPS instead of HTTP. For example,  
  
  
  
If you see an error in your browser that the site is untrusted, or that the connection was interrupted, or any other browser error, then SSL is NOT running properly on your site. You should contact the host or your developer if you believe it should be.  
  
Only once you have verified that HTTPS support is setup and working should you attempt to activate the SSL/TLS support within Kartris.

### 18.1.2. Activating Kartris's SSL / TLS support

Once logged in to the back end, find the setting. There are four possible settings ('always on' SSL was introduced in Kartris v2.7000, 'external' was introduced in Kartris v2.9008).

* 'n' = off
* 'y' = on for pages where sensitive data is transferred (login, checkout, back end, any page when user is logged in)
* 'a' = always on, SSL for all pages
* 'e' = external SSL, applied by a platform like Cloudflare, see @18.1.3. External SSL‍

Using HTTPS puts an additional overhead on a web server and a user's browser, and so originally was used only in places where sensitive data is transferred, especially for credit card transactions. There was seen as little point applying it to all traffic such as when a casual visitor is browsing the site, or a search engine is spidering it.  
  
However, in recent years, HTTPS has become more widespread. Many web sites such as Google use it by default, and the revelations by Edward Snowden of pervasive internet surveillance by security agencies have further highlighted the issues of eavesdropping and user-privacy. In summer 2014, Google indicated that it would start to give slight preference in its results to sites running HTTPS, which has led to a surge in the take up of 'always on' HTTPS.  
  
With the arrival of services such as Let's Encrypt and Cloudflare, both of which can provide a free route to HTTPS, there is no reason these days not to implement it.18.1.3. External SSL

This is the simplest way to add SSL to your web site. You register and set up your domain with Cloudflare.com (or a similar service), then set the nameservers for your domain to point to the ones Cloudflare tells you.  
  
We'd recommend going into the Cloudflare settings and hitting 'pause' so Cloudflare will only serve DNS for the site at first. This will ensure the site continues to work as before (without SSL) until you decide to do the switch. Leave it a day or two, and check that Cloudflare has issued the required secure certificate for your site.  
  
Once it has, you can activate Cloudflare to handle requests for your web site. We suggest for most sites using the 'flexible' SSL setting in Cloudflare, so you can run your web server with just http, which doen't require a secure certificate, and let Cloudflare add the SSL to the front end for you.  
  
Then in the back end of Kartris, you should set the '' config setting to 'e' (for external).  
  
Because Kartris will no longer be able to check programmatically if a page is being called with http or https (it will actually think everything is running http, because there is no SSL at the web server itself), you need to add some page rules into Cloudflare to ensure that appropriate redirection occurs. The ones shown below will redirect http requests to https, and also requests to kartris.com to www.kartris.com. The first request bypasses Cloudflare's cache for payment gateway callbacks to Kartris. This is a good precaution to avoid any unexpected behaviour on those such as redirections, which can prevent them working properly.

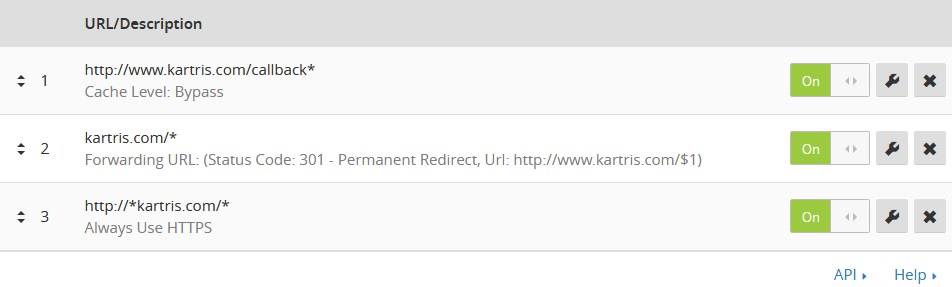


Figure Suggested rules for ensuring requests to http addresses or to the root get redirect to https and your www. The first rule bypasses cloudflare for the callback.

## 18.2. Outgoing TLS connections

Not to be confused with the security applied to the pages of your web site, Kartris must also at times call URLs securely. For example, Kartris connects to the changelog feed, shows the latest Kartris version available, the news and so on. But most importantly, some payment systems require Kartris to connect to them using TLS, and real time shipping systems like UPS and USPS also use secure connections.  
  
In 2018, many different payment systems will be dropping support for older protocols, and will only support TLS 1.2 or above. In order for your web site to continue to be able to connect to remote systems using secure connections, you must ensure that your web site is ready.

### 18.2.1. Server support

The first step is to ensure your server has support for TLS 1.2, outgoing, as well as incoming. If you are on a shared server, you should check with your web host. If you have your own server, you will need to check and may have to make registry changes yourself. We found that Windows Server 2008 R2, for example, even with all up-to-date patches on, does not have TLS 1.2 support by default and requires registry changes.  
  
Check the following article for further details:  
  
[Enabling TLS 1.2 on Windows Server 2008 R2](https://support.quovadisglobal.com/kb/a433/how-to-enable-tls-1_2-on-windows-server-2008-r2.aspx)

### 18.2.2. Run site as ASP.NET 4.6 or above

From ASP.NET 4.6 onwards, TLS 1.2 is the default. This means if your server has been kept up to date with patches and .NET updates when they've become available, and (if required) has the necessary registry changes (see @18.2.1. Server support‍ above) then it should make outgoing secure connections using TLS 1.2 by default. The easiest way to test this is to simply try switching the web site to ASP.NET 4.6 and then test that it works. To do this, open the file (in the root of the web) and find this code:

|  |
| --- |
| <compilation debug="false" batch="false" targetFramework="4.5"> |

and simply change the target framework to 4.6:

|  |
| --- |
| <compilation debug="false" batch="false" targetFramework="4.6"> |

Then reload the web site. It will take a few seconds as changes to the web.config will cause the web site code to rebuild. But you should see the web site load up and it should work exactly like it did before the change. If some page error appears, and you're sure the change you made above was done correctly, restore the original file, as it seems your server does not have .NET 4.6.  
  
You can try adding this (or check with your host if on a shared server), and then try the process above again. This avoids any code changes in Kartris.

### 18.2.3. ASP.NET 4.5 solution

If you are on a server where you cannot install the newer .NET versions, then you may be restricted to ASP.NET 4.5. This does support TLS 1.2, but it is not used by default. You can force this by adding this code within the event in the file in the root of the web:

|  |
| --- |
| Try  System.Net.ServicePointManager.SecurityProtocol = System.Net.SecurityProtocolType.Tls12 Catch End Try |

### 18.2.4. Older ASP.NET versions

If you are running older versions of Kartris that are still on the ASP.NET 2.x branch (up to 3.5), then it seems Microsoft is rolling out support to these. However, we're no longer providing all payment plugins compiled for this branch, and are not supporting these older sites with updates, so we'd strongly recommend upgrading to the latest version of Kartris.  
  
[TLS 1.2 support, including for older ASP.NET versions](https://blogs.perficient.com/microsoft/2016/04/tsl-1-2-and-net-support/)

## 18.3. IP Restrictions

While the username and password system provides a decent level of security, it is not fool-proof. If your computer is lost or stolen, or some spyware passes your access details to a potential attacker, then an attacker could use your details to access your site. An attacker may also attempt a brute force attack - repeated trial and error attempts and logging in.  
  
Since the number of admin users is typically quite small, and they will normally access from one or two locations (e.g. office or home), then it is possible to apply extra security to the back end in the form of an IP address restriction. For this to work, you must have a fixed IP (or one within a relatively narrow range).  
  
Open up the file in the root of the web, and find this tag:

|  |
| --- |
| <add key="BackEndIpLock" value=""></add> |

Into the value, add your IP address, or part of your address. Separate multiple values with a comma. For example:  
  
000.000.000.000,111.111.111  
  
(the first number is a single IP address, the second is a partial IP address)

If you have your own server or virtual server, and have admin access to the IIS web server, you can restrict access to the back end through this.  
  
In IIS 6, the ability to limit access by IP is built in. In IIS 7, you might have to activate this feature separately.  
  
Using IIS to enforce security in this way adds an additional level of security because it is completely independent of Kartris. Anyone trying to access the Kartris back end will be turned away unless their IP address matches one of those you have expressly authorized. Kartris pages won't even get run.  
  
You can also ban particular IP addresses and ranges (although it is far better from a security perspective to 'deny all' and then allow specific addresses rather than try to ban problem IPs and ranges).

## 18.4. Password security

For security, passwords for both admin accounts and front end users (customers) are salted and hashed before being stored in the database.

For the salting, we use two separate salt values. The first is a global value, typically set during installation of Kartris, and is stored in the web.config file of the site. For example:

|  |
| --- |
| <add key="HashSalt" value="9e3cdce4-a52e-47e6-ba12-697e64760ce9" /> |

The second salt value is generated per-user, and stored with the user record. It's generated at the time a user record is created, or if the password is changed.

It is stored in the field of the table, or for back end admins, the field of the table.

Before hashing user and login passwords, the first salt string is appended to the front, and the second to the end of the user's chosen password. This whole string is then hashed using sha-256, and the result stored in the database ( in the table and in the table).

Salting the passwords prior to hashing ensures that rainbow tables or similar methods cannot be used to brute force the passwords from the database, if it was ever obtained by an attacker. Or to put it another way, if two or more users choose an identical password, these will result in entirely different values being stored in the password field of the database (because both will have different per-user salt text appended before hashing).

Furthermore, the use of two salt strings, one which is stored in the database record and one that is stored in the web.config file adds an additional level of security, as there are two separate elements in different storage locations that would need to be obtained.

When a user logs into the site, the password they enter has the global and per-user hashes applied, the resulting string is hashed with sha-256 and compared to the stored value in the database. If they match, the password entered is correct, if they don't match, it is not and the user is not granted access.

# 19. Other Features

## 19.1. Support systems

Kartris contains built-in facilities to handle customer support through your web site.

These include a searchable knowledgebase system that you can load up with articles relating to specific products or technical issues, and a support ticket system that allows you to handle support from customers in a managed way, instead of via a slew of emails.

### 19.1.1. Knowledgebase

The knowledgebase features can be turned off (so they are hidden on the front end of your site) using the config setting.

To access the knowledgebase features in the back end, go to ''.

#### 19.1.1.1. Keywords

Articles can be created with just a name (display title), text (details) and page-title tag (for search engines). It is also suggested to use keywords; as well as populating the meta-keywords tag on the page, these keywords are also searched as part of the knowledgebase search on the front end. It is useful to add alternative spellings or names for certain things, or common misspellings, to ensure that articles have the best chance of being found with the knowledgebase search.

### 19.1.2. Support tickets

The support tickets system can be enabled for customers and site visitors with the config setting.

#### 19.1.2.1. Why not use email?

The Kartris support ticket system provides a web-based alternative for dealing with technical and sales support that has a number of advantages.

* Tickets go into a pool, with any member of staff being able to take them from the back end. Even staff in multiple offices can provide support.
* If a customer is in discussion with a member of staff who is absent or unavailable, another staff member can easily take over the ticket and ensure that support continues to be provided, unlike email where it may be problematic to access an absent staff member's email.
* The ticket system keeps the original support request and subsequent replies from staff and the customer in a chronological thread.
* The support ticket system is based around the same customer records that order history and other account-related features are linked to. It allows you to access further customer information easily from the support ticket. It also means that the customer's ability to post tickets can be linked to their account status. The system effectively controls access to support, so only those entitled to it are given it.
* Having support issues all contained within the database creates scope to monitor performance, as well as search for similar issues. Kartris keeps track of the time taken in responding each time, so a total time for each ticket and customer can be calculated.

#### 19.1.2.2. Dealing with support

Support tickets opened by customers will show up in yellow in the back end support tickets view when they are still unassigned to a staff member. Once a site admin views the ticket and assigns it to themselves (the simplest way is using the 'Me' link next to the 'Assigned to' menu), they can reply to it.

The customer will receive an email when the ticket is updated. They should enter any follow up comments through the web site rather than by responding to the email, to ensure all comments are linked to the thread. The ticket will show as light grey in the listing.

Once a customer has replied, the admin responsible for the ticket will receive an email notification. The ticket will show again as yellow, meaning that action is required.

Once an issue has been resolved, the ticket can be closed. At this point it will change colour to dark grey.

The status can also be set as 'not sure' or 'unresolved'. Tickets will generally be set to this when you wish to highlight them for future attention rather than immediate attention.

Both site admins and customers should not reply to the notification emails themselves. You can only reply to a ticket via the web-based interface. For store admins, tickets awaiting a reply are shown in the 'to do' task list on the right hand side of the admin panel. Customers on the front of the site must login and go to the support tickets section of their account to make replies.  
19.1.2.3. Statistics

Kartris shows a number of statistics on each ticket, including the number of tickets raised by this customer, the total number of messages and the total time taken on tickets for this customer (in addition to the time taken for this ticket, which is under the ticket details on the left hand side).

## 19.2. Quickbooks integration

The Kartris support for QuickBooks is partially complete. It will not handle orders with promotion discounts or coupons. These may be addressed in future versions.  
QuickBooks is an accountancy program from Intuit. There are various versions offered with different levels of features and with specific country-related features. The country versions include the USA, UK and Canada. The different country versions have much in common, but have specific support for certain localized features. For example, the UK version supports VAT (value added tax), whereas the US and Canadian versions support the different types of sales taxes that operate in those countries.19.2.1. QuickBooks Web Connector

In order that QuickBooks can 'talk' to online systems such as shopping carts, Intuit developed the QuickBooks Web Connector (QBWC), an extra piece of software. This is available as a free download from Intuit:  
  
<http://marketplace.intuit.com/webconnector/>  
  
The QBWC runs on the same computer on which QuickBooks is installed, and acts as middleware between QuickBooks and a special web service on your Kartris web site.  
  
The QBWC supports a wide range of different QuickBooks versions, including the different country versions. For this reason, you don't need a specialized version of the QBWC for your specific version of QuickBooks. Check Intuit's documentation if you are not sure whether your version of QuickBooks is supported by the QBWC.

#### 19.2.1.1. Installing the QBWC

If you are using an older version of QuickBooks (more than one year old) then you may get an error when using the QBWC. This seems to be because newer versions of the QBWC assume your system has some software installed that is installed by newer versions of QuickBooks, but not by older ones. In this case, you should uninstall the QBWC, sign up to the Intuit Developer network and download the SDK (Software Development Kit). Install this, and then re-install the latest QBWC and it should fix the problemThe QBWC must be installed on the same machine on which you run QuickBooks.  
  
Ensure that you have QuickBooks running, the QBWC running and that your Kartris web site is accessible and running.  
  
In QuickBooks, go to chart of accounts, and add a new account called 'Kartris Store' – make it an 'income' account.  
Then add a new non-stock inventory item called 'Kartris Order Item', and set it to belong to this account.  
  
Now, in Kartris, go to ''. In the field, enter your choice of password (this can be anything, but the longer the better for security purposes). Hit the update button to set this config setting.  
  
Then you can enter a Poll Interval too – in minutes. The QBWC will check for new orders or information on this schedule.  
  
The final step on Kartris is to click the button to generate a .qwc file and save this to your computer. In the QBWC interface, push the 'Add an Application' button at the bottom and browse to the .qwc file you just made.  
Some confirmation screens will popup up – accepting these should create the link between Kartris and QuickBooks.

### 19.2.2. SSL support

The QBWC is hardcoded to require SSL (secure sockets layer) on remote domains. This is recommended since it encrypts the information transfer between QuickBooks and Kartris, which may contain sensitive information.  
  
The QBWC will work however with any URL that contains 'localhost', presumably so that developers can test using a local web site. We have therefore coded Kartris to append an unused parameter 'localhost' to URLs, in order to permit operation on a live web site that does not have SSL – for testing purposes for example.  
  
While this means that Kartris/QuickBooks integration will work on a live site without SSL, we would urge store owners to consider the benefits of SSL and not to risk using the feature without SSL. Intuit have hardcoded the use of SSL in for a reason after all.

## 19.3. Stock notifications

The stock notifications system was added to Kartris with version v2.9005. It allows items that are out of stock to display a 'notify me' button. Users can click this, and enter their email address into the popup that appears. When the item is back in stock, the user will receive an email to tell them.

### 19.3.1. Configuring your site for stock notifications

To activate stock notifications, you must have the following set in the config settings:  
  
 = y  
 = y  
  
Even then, only versions that have stock tracking turned on will use this feature (i.e. for the notify button to show for an item, in addition to the correct config settings, the version in question will need to have a stock qty of zero and a warn level above zero).

### 19.3.2. Technical implementation

This is technical detail designed to help developers understand how the feature works in case they need to make changes or deal with issues of non-deliveryThe system adds a new table to Kartris: . When a customer signs up to a stock notification, a record is added here with their email address, the version ID, and some other details. We store the product name and the link to this product's page with the notification, as well as the language ID.  
  
When we send a notification, we can use the language ID to pull the appropriate mail template and we can pull the product name and the link to the page directly from the notification record - we don't need to look these things up separately.  
  
We also add a new field to the table. The sprocs that modify and update version records are modified so that this parameter can be passed in, but will default to NULL if not. If a NULL value occurs, the current time and date will be added by the sproc to that field. Versions that are updated through the Kartris back end (i.e. the BLL functions) will pass in 1900/1/1 as the date. In this way, versions that are updated by the Data Tool will end up with a recent date in the V\_field, while items updated via the Data Tool will end up with either a NULL value or 1900/1/1. Because the BLL version update functions will run stock notification checks when they update a version, we can use the V\_field to identify versions that have not had this stock notification check after being updated (i.e. those updated via the Data Tool).  
  
If there are versions that were updated by the Data Tool and so have not had stock notification checks, a new item will appear in the task list showing the number of such versions. Clicking the 'Stock Notifications' link will go to a page which shows pending notification requests (any stock notification sign ups from users), as well as completed (sent) ones in a second list.  
  
If there are versions to be checked, this page will also have a button to run those checks. Clicking it will loop through versions with a V\_date of after 1901. When a version is checked, it's V\_date is reset to 1900/1/1.  
  
When a stock notification is sent, the stock notification record is updated so the field has the date and time added to it, and the 'status' field changes from 'w' (waiting) to 's' (settled).

## 19.4. Android and Windows push notifications

To help store owners stay informed while on the go, we have developed a Windows Store App and an Android widget. Both are available via the respective app stores - just search for ''.

### 19.4.1. System requirements

Windows apps run on Windows 8 only; Windows Phone apps run on Windows Phone 8 or above; the Android widget runs on Android versions 4.0 and above. You need Kartris v2.5 or above.

### 19.4.2. Setting up push notifications within Kartris

Push notifications are turned off by default, so you need to turn them on for your store with the following config setting: .  
  
Push notifications are set up per-user, so you need to first go to the logins page in the Kartris back end - you must have full admin permissions for this:  
  
  
  
Click 'Edit' by the user that you want to set up the notifications for. At the bottom of the page, you will see the heading 'Push notifications'. Click the 'New' link to the right hand side of the page.  
  
- this is any name you want to give; typically best to name it after the device you are setting the notifications up for, such as 'Derek's Android Phone' or 'Tiffany's Windows 8 Laptop'.  
  
- this is a unique code that the app on your device creates. Simple enter it here, and your device will be linked to your user account. To make life a little easier, the code can be emailed or saved as a text file (e.g. to Dropbox).

Once you submit the details DO NOT FORGET TO SAVE (using the save button at the top of the page, to update this login account).19.4.3. Further information

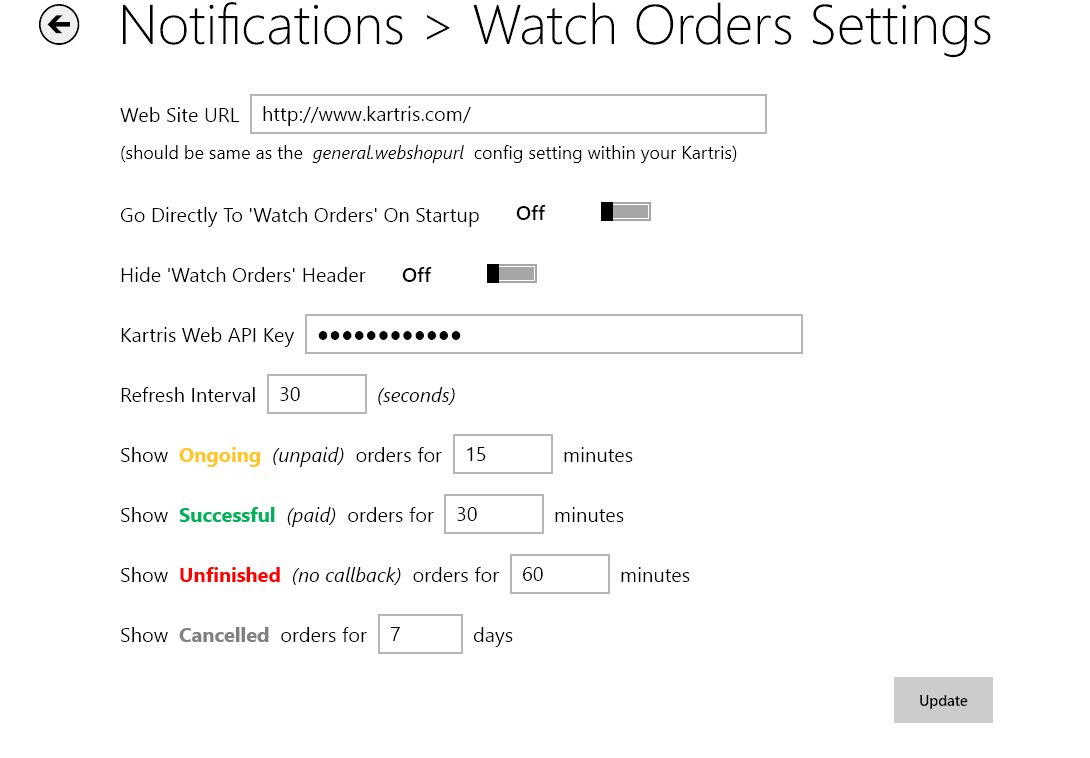
The Kartris push notification supports multiple devices per user. You set up each in the same way; when you install the app on different devices, each will general its own separate . So you can have push notifications to your desktop, laptop and phone.  
  
The push system is specifically designed NOT to send privileged or private information. Although all push notifications must be first routed via our server which in turn sends them on to Microsoft or Google, and then to your device,, Kartris only sends notification that there was an order or new ticket, together with the pending totals for orders and tickets. No information about the content of any order or ticket, the person who made it, the value or any other information is sent. For more information, see our [Privacy Policy](http://www.kartris.com/t-Privacy.aspx).  
  
If you do not enable the push notifications from the config setting, no information on orders or tickets whatsoever is sent to our servers.

### 19.4.4. Windows 8 app - watch orders

Busy stores may want to have a real-time overview of orders in progress in order to monitor processing times, pending queues or spot any site or payment gateway issues such as a backlog of orders which have been registered but remain unpaid.  
  
The Kartris Notifications app for Windows 8 includes a 'watch orders' feature. This is configurable, and polls a web service on your web site directly to retrieve information on pending orders, creating an almost real-time overview of order progress.



The app has a number of configuration settings which can control the frequency at which your site is polled, and the duration in minutes that orders in various stages are visible for.



This feature relies on a web service; in order for this to be active, you need to ensure you have the following in your web config:

|  |
| --- |
| <appSettings>  <!-- other settings here -->  <add key="com.kartris.livetile.Service1" value="http://livetile.kartris.com/KartrisNotificationServer.svc" />  <add key="KartrisWebAPISecretKey" value="dxuIyFt992As" />  <add key="KartrisWebAPIIPLock" value="" /> </appSettings> |

You will also need this one in there too:

|  |
| --- |
| <system.serviceModel>  <services>  <service behaviorConfiguration="DefaultBehavior" name="KartrisWebAPI">  <endpoint address="" binding="basicHttpBinding" bindingConfiguration="DefaultHttpBinding" contract="IKartrisWebAPI"></endpoint>  <endpoint address="mex" binding="mexHttpBinding" contract="IMetadataExchange"></endpoint>  <host>  <baseAddresses>  <add baseAddress="https://www.kartris.com/protected/KartrisWebAPI.svc"></add>  </baseAddresses>  </host>  </service>  </services> </system.serviceModel> |

The 'baseAddress' should of course contain the path to your own site's web API.  
  
You can test if the web API is working by calling it as follows (obviously with your own domain rather than ours):  
  
[https://www.kartris.com/Protected/KartrisWebApi.svc?wsdl](http://www.kartris.com/Protected/KartrisWebApi.svc?wsdl)

## 19.5. Postcode lookup

In Kartris v2.9, a postcode lookup for UK addresses has been implemented.  
  
To use this, you will need to setup an account with <http://www.postcodes4u.co.uk/> and purchase lookup credits. From within your account there, you can create a key to go with your username. These two values can then be added to the following Kartris config settings in order to activate the postcode lookup feature.  
  
  
  
  
When entering addresses, UK customers will get the option of entering a postcode, from this, a list of address choices is displayed, and clicking one will pre-fill the details into the regular address form. This saves significant time for the customer, and is especially useful for mobile users where typing address details is the most time-consuming and laborious part of the checkout process.

## 19.6. MailChimp integration

MailChimp is a popular online service for running mailing lists and authoring messages to subscribers. The service is free for lists under 2000 users, and the ecommerce integration available through the v3 API is now also available to free users.

This feature requires Kartris v2.9010 or later.

### 19.6.1. Setup

#### 19.6.1.1. Setting up API access in MailChimp

First, you will need a MailChimp account. Login at https://login.mailchimp.com, or create an account if you don't have one.

Click on your username on the Right side of the Side and access the Account Menu.

Navigate to "Extras > API Keys"

Create an API Key if you don't have already one and note it down somewhere like a blank text file.

#### 19.6.1.2. Creating a list for ecommerce users

On the upper menu click "Lists" and "Create a List"

Select the created list.

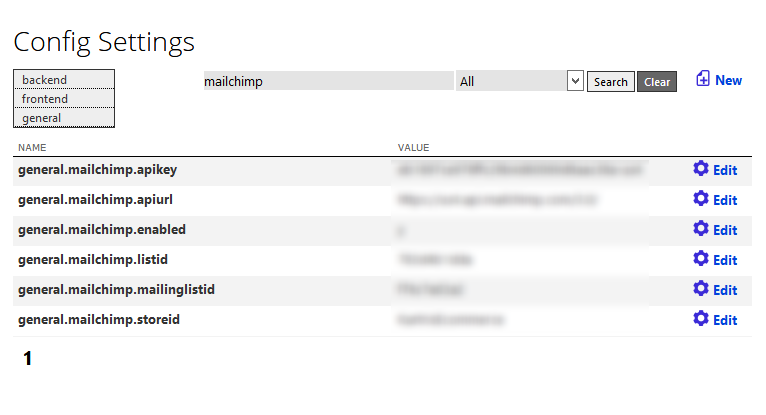
Go to the "List Settings > List name and defaults"

Find and copy the List Id from the screen, it should be top of the right hand column, and look something like this: 783d4b1dda.

#### 19.6.1.3. Set up in backend of Kartris

Login to your Kartris back end.

Navigate to the Config Settings, then enter 'mailchimp' in the search box and click the search button. You should see the required config settings listed:



- this is the API key you created or copied from the MailChimp back end in @19.6.1.1. Setting up API access in MailChimp‍

- This is the URL of the MailChimp API. This varies by account. For example, is the one we use, but the 'us4' part depends on the data centre of your account. You can tell this from the URL in the address bar of your browser when logged into MailChimp. The data centre is the first part of the URL, for example, ours shows , hence the 'us4' for the API URL.

- this one is simple enough. Needs to be 'y' to activate the MailChimp integration.

- this is the List ID you got in @19.6.1.2. Creating a list for ecommerce users‍

- Kartris can also use MailChimp to subscribe users to a general mailing list in MailChimp. This separates users who sign up to your newsletter, from ecommerce customers who purchase things through the site. Set up a list using the same steps as in @19.6.1.2. Creating a list for ecommerce users‍, or use an existing mailing list if you have one already.

- Each 'store' in MailChimp needs a name. You can choose this, for example 'Kartris Ecommerce'. It will be registered through the API later.

#### 19.6.1.4. Finishing off

Now you have all the settings and preparation done, the final step is to connect to MailChimp and create the new integration. In the Kartris back end, go to "Miscelleneous > MailChimp". This page should show the relevant MailChimp settings you've entered. You can name the store, enter your store's domain and your email address and then push the 'Create MailChimp Store' button.

This sends a request through to the MailChimp API which actually creates the new store record there.

You should see a confirmation of the result. If you get a message saying the Id already exists, that suggests that you already created this store previously.

### 19.6.2. Operation

Once the integration is setup, MailChimp should start recording ecommerce data. You can also set MailChimp to perform other tasks with the data.

#### 19.6.2.1. Abandoned cart emails

One common use for MailChimp is to send abandoned cart emails. These follow up potential customers who got all the way to the checkout and through to payment, but did not complete for whatever reason. These can provide a rich source of potentially untapped sales.

Access MailChimp, login and Select "Automation" from the Top menu.

Select "Add Automation".

Find "Abandoned Cart Series" and Select "Add Automation". You could also use "Abandoned Cart Email", but the series option is more flexible, and can send either one or several follow up emails.

The minimum period after which a mail can be sent is an hour. This should allow plenty of time for an order to be completed; a completed purchase should cancel any pending abandoned cart email.

## 19.7. GDPR features

GDPR, the 'General Data Protection Regulation' is a new pan-EU law that will protect the private data of citizens across the continent. It will take effect from 25 May 2018. For more information see the [official GDPR home page](https://www.eugdpr.org/).  
  
It's important that businesses who deal with EU citizen's data are compliant; it does not just affect companies and organizations within the EU, but all those who process the data or, or deal with EU citizens.

In Kartris v2.9012 (released 16 March 2019), we have included a number of features for compliance with the GDPR regulations, and to ease the process of delivering some of the rights under GDPR.

### 19.7.1. Customer account opt-in

When a customer creates an account on Kartris, we now have an extra checkbox signifying acceptance of the terms and conditions. This helps ensure that any time a record for a user is created, there is an explicit confirmation of terms and conditions.

This feature can be turned on or off using the config setting , though we would recommend it remains on whether you are EU based or not.

### 19.7.2. Mailing list explicit approval

The aspect of GDPR that has perhaps been given the most publicity, is that users must explicitly opt-in to receive marketing information. It is no longer considered acceptable to imply consent because a user places an order or creates an account on a web site.  
  
Kartris has always employed best practice with regard to adding users to mailing lists; an email confirmation is sent which the user must respond to by clicking a link, in order to confirm their addition to the mailing list. We have never considered it an acceptable practice to add users to mailing lists other that with an explicit approval, and an email verification to ensure consent is gained from the owner of the email address for this purpose. It also ensures that email addresses cannot be added to the mailing list by third parties, either maliciously, or accidentally (e.g. a typo).  
  
The mailing list approval emails that Kartris sends are formatted using an email template, which you can find in the templates folder of a skin (see the Kartris default skin, if your own skin lacks this). Therefore, we would recommend expanding the text within this template to explain that clicking the confirmation link will give explicity consent to add your email address to the mailing list.

#### 19.7.2.1. Mailchimp mailing lists

As well as maintaining its own internal mailing list, Kartris can also insert email addresses to Mailchimp. See @19.6. MailChimp integration‍ for further details.  
  
In this case, Mailchimp should handle the GDPR aspects.

### 19.7.3. Customer data GDPR export

EU data privacy regulations have for many years given the public the right to request a copy of all the data an organization holds on them. The organization was allowed to charge a reasonable fee for this service, typically £10 in the UK or a similar amount in Euros. The nominal fee was in most cases not enough to cover the real cost of providing the data, but was at least a deterrent to spurious and unnecessary requests.  
  
However, the GDPR requires that organizations provide the full data held on an individual free of charge, and within 28 days. This aspect may in time be the most onerous on businesses, though at present it is not getting much attention. While there will undoubtedly be an increase in legitimate, well intentioned requests, it's also possible that requesting data could also become a practice to test or inconvenience companies that consumers may have a dispute or disagreement with. Regardless, the company is compelled to respond.  
  
To make this process as simple as possible from Kartris, we've created a data export button on the customer edit page. If a member of the public requests data, you can extract this from Kartris by simply finding the users record in Kartris with an email search, and then using the 'GDPR export' button.

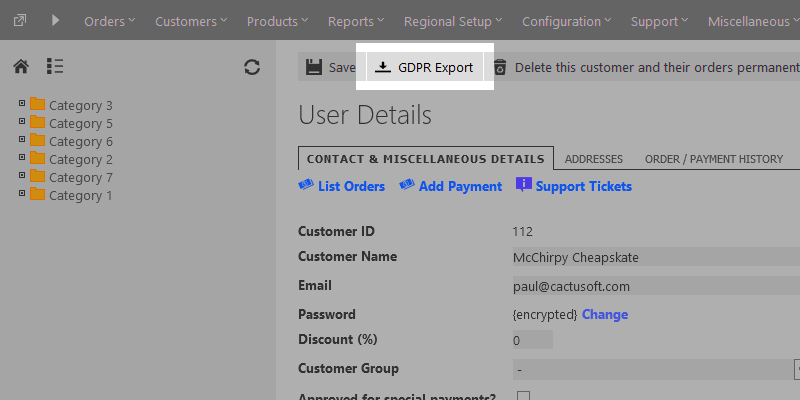


Figure The GDPR export button that simplifies exporting private data to comply with requests

This will format a plain text file containing all data linked to that email address:

* Customer data
* Street address records
* Details of all orders, including the items purchased in each
* Copies of all reviews submitted by the user
* All wishlists created by the user
* All saved baskets created by the user
* All support tickets created by the user, including full thread discussion

The data is formatted in a fairly raw state, with the database field name (in square brackets) followed by the value. This is to ensure that the user receives the full set of data and no fields are emitted.

The GDPR export feature can only export data held within your Kartris store. It cannot export email correspondence, accounting software records or other data you may hold on the individual.  
  
While it may not provide a complete solution to GDPR requests, it will significantly reduce the work required. What would previously have required direct database access and perhaps an hour or so of work, can be accomplished with a single button click.

## 19.8. Popup tomehost help

Kartris is a complex piece of software, and we have always aimed to provide extensive documentation. While developers may be used to consulting technical documentation when working with software, many end users aren't.  
  
In 2017, we switched the Kartris technical documentation to this new platform. This improved the general speed and performance of the documentation, and also made it easier to write and publish content ourselves.  
  
From Kartris v2.9012 onwards, we have also integrated tomehost documentation directly into the back end of Kartris. There are 'help' links near many features - an orange circle around a question mark. Clicking these will bring up a new popup window that links through to the relevant section or subsection of the Kartris documentation.

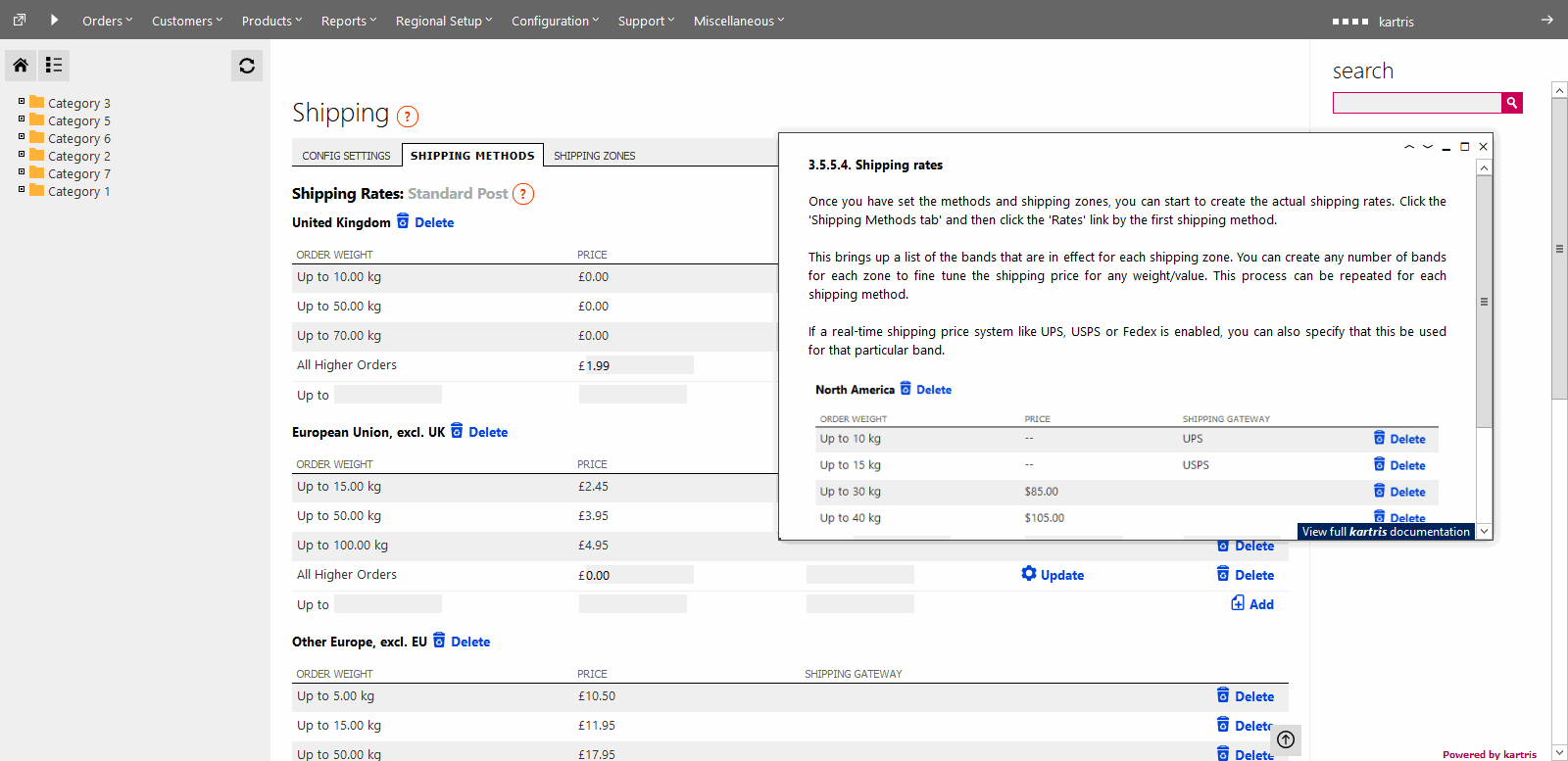
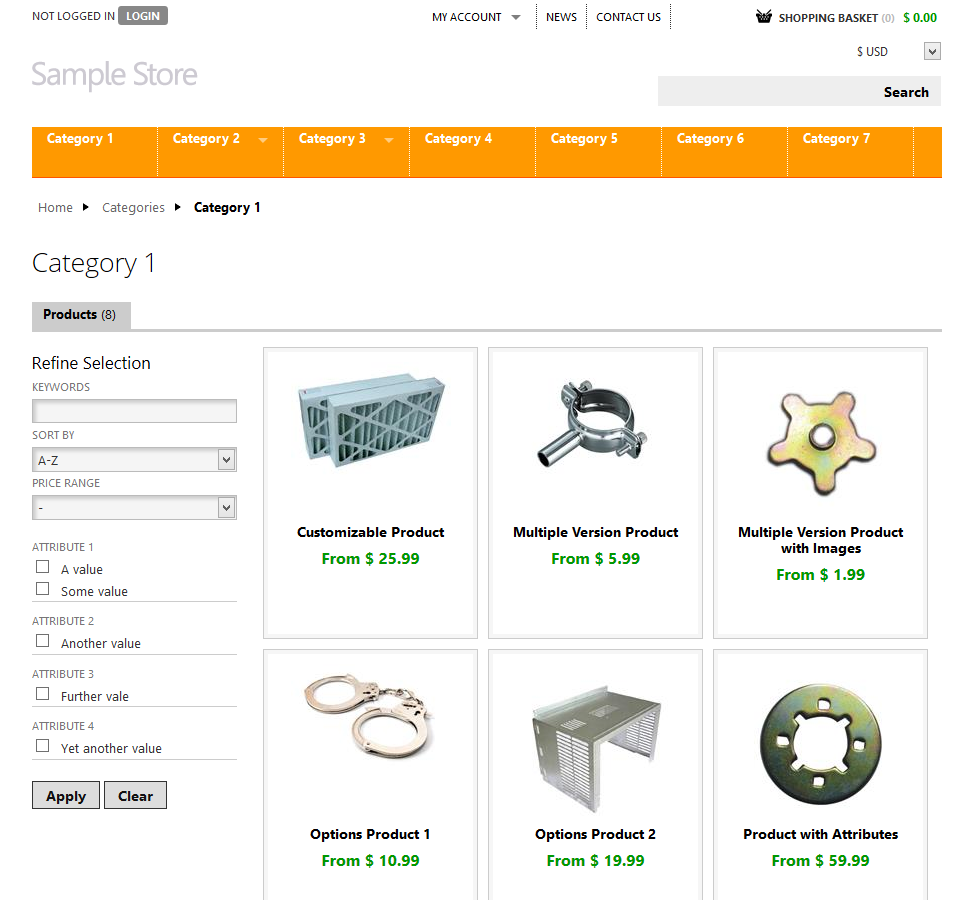


Figure The Kartris shipping admin page, with tomehost popup help window opened

These popup help windows are not modal, so you can continue to access the other parts of the page and work on them, while reading through the documentation. You can also drag the window to another location, resize it or minimize or expand it to full screen.  
  
There is a link in the foot of the window that will open up the full Kartris tome in a new browser window, with this section selected. This makes it possible to navigate up to the section parent, or view other parts of the documentation. We hope this feature will help users access the Kartris documentation more easily, and in particular, access the relevant parts, without having to leave the Kartris and hunt through the documentation for the relevant section.

# 20. Kartris PowerPack

The is a paid add-on to Kartris which adds extra functionality. It is compatible with onwards, though can be added to v2.5 with some further changes.20.1. Installation

Kartris v2.6 already incorporates some elements required by the PowerPack, including a place-holder BLL file, some interface code and CSS (in the default Kartris skin, file). This makes installation very simple.  
  
Copy the file into the /App\_Code/BLL/ folder, replacing the place-holder file there of the same name.  
  
Run the SQL update script on your database. If you are installing the PowerPack for the first time, use the version of the SQL file named for a single version of the PowerPack, e.g. .  
  
If you are updating the PowerPack on your site from an older version, you will have to run the .SQL files for each step from your current version to the latest version. For example, to upgrade your PowerPack from v1.001 to v1.004, you'd run these files:  
  
  
  
  
  
You may get warnings in the SQL console that some language string records already exist. Ignore these; it only means the required records are already in there, so everything is ok.  
  
The PowerPack is now installed.

## 20.2. PowerPack Overview

The PowerPack is an optional paid add-on that adds or extends Kartris features. At present, it includes the following, though it will be expanded over time:

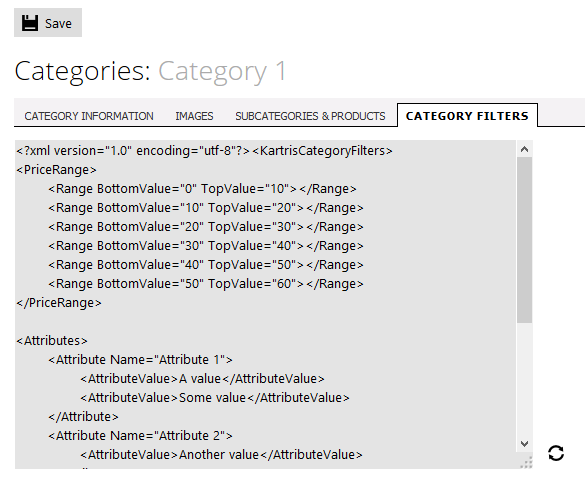
* Product filtering and sorting within categories
* Search suggestions that appear in real-time as you type within the search box that is on all pages

The features can be turned on/off individually after installation with the following config settings:

## 20.3. Product Filters

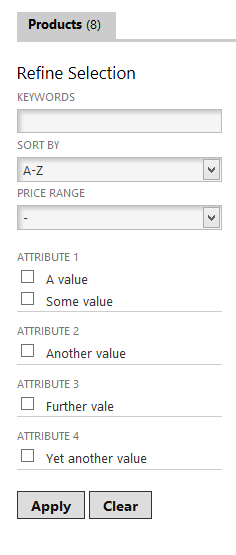
### 20.3.1. Configuration

Every category on your site is different. It will have different types of products, which will have different price ranges and attributes. Kartris lets you create and customize a filter solution for each category, or not have filters on some categories (they're only really required where you have enough products to make sorting necessary).  
  
Creating filters is simple. Navigate to the category in the back end and click to edit it. You should see a tab 'CATEGORY FILTERS'. This holds a text area. There is a small refresh button next to this; clicking it will auto-generate XML configuration for the filters. This looks at which attributes are used by products in the category, and the prices of these products.  
  
You can opt to SAVE this default configuration, or you can manually edit it before saving. This gives you the flexibility to cut particular filters you feel you don't need, adjust price ranges and so on.  
  
If there is no data in this field, the filters won't show. Therefore you can remove filters from a category which has them by simply removing everything from the field and saving it.



### 20.3.2. The Front End

The filters will appear on categories that have them as shown below:



The filters, by default, will display down the left hand 25% of the category page. This is controlled by the mark up in , which is using Foundation classes to form a left hand column of width '3' and a right hand content area of width '9' (Foundation works based on a grid of 12 columns). The column is set using this tag:

|  |
| --- |
| <div class="small-12 large-3 columns filterbar"> |

The main content area is set with this tag:

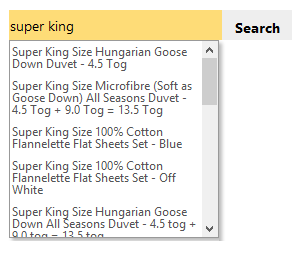
|  |
| --- |
| <div class="small-12 large-9 columns"> |

In both these tags, you will notice from the '' class that on small screens, the page will collapse so that the filters appear full width and above the main page area.  
  
The filter system works with products displayed in shortened, normal and extended format. However, a little consideration should be given to the number of items per page in shortened view. Normally you may have 4 items per line (depending on your design), but with the filters there, this would generally reduce that number to 3 per line.  Therefore, you should try to pick a setting for appropriately so that you get full rows in both cases (we'd suggest 12 in this case - on categories with no filters, you get 3 rows of 4, on categories with filters, you get 4 rows of 3).  
  
CSS for the filters is based on the 'filterbar' class, and sample code can be found within our default Kartris skin, in . We have also put this in a self-contained file, though it is not used within the default Kartris skin. If adding the PowerPack to an existing site, you may prefer to just add in a new reference to the file instead.

|  |
| --- |
| /\*  ======================================================================== CATEGORY FILTERS - if you have the PowerPack installed ======================================================================== \*/ .page\_category #filterbar\_pad { padding: 3px 10px 10px 0; background: #fff; } .page\_category #customprice { padding: 5px 0; } .page\_category .filterattributes { padding: 15px 0 10px 0; } .page\_category .shorttext { display: inline-block; } .page\_category select, .page\_category input { margin: 1px 0 3px 0; } .page\_category label, .page\_category span.attribute\_title { font-size: 11px; text-transform: uppercase; display: inline-block; letter-spacing: 0px; color: #777; margin-bottom: 3px; font-weight: normal; vertical-align: top; } .page\_category table { margin: 0 0 10px 0; background: none; border-bottom: solid 1px #ccc; } .page\_category table tr td { background: #fff; padding: 1px; border: none; } .page\_category table tr td label { color: #333; text-transform: none; font-size: 100%; } |

## 20.4. Search Suggest

Once turned on, this gives product suggestions in a dropdown menu that appears right below the search box, as shown below:



The user can navigate up or down the list using the cursor keys and 'enter' to choose an item. Alternative, the mouse can be used.  
  
This functionality is not a replacement for the full Kartris search which occurs when you submit a search term in the box. That search is more sophisticated; it will search more fields and rank results based on relevance (see @13.2. Kartris Site Search. This suggestion feature finds products where the name contains the search text entered, or where any versions that belong to it has an SKU or name which contains the text - but in many cases these results will be sufficient.

# 21. Licenses

## 21.1. GNU General Public License v2

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## 21.2. Kartris Commercial License

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