



CactuShop

ASP SHOPPING CART v6.1

User & Developer Manual

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Introduction

CactuShop is an ASP shopping cart system based around established and widely adopted technologies on the Microsoft platform. The software is script-based and this, combined with a standard ODBC compliant database format, means it can be modified extensively by developers with suitable skills and experience in these technologies.

There are three versions of CactuShop v6:

- **CactuShop Trial** – this is a free demonstration version of CactuShop that uses the same skin system and database as the full versions, but lacks security code, payment gateways and some other functionality. The license agreement for this version does not permit live web use to run an actual web site; it may only be used for trial purposes to determine the suitability of CactuShop for your application. *CactuShop Trial* is designed to be easy to set up and run without much (if any) configuration and has tools built-in to aid installation, setup, debugging and obtaining server information.
- **CactuShop Standard** – this version is fully licensed for live web use and includes security code to help protect it from would-be attackers. It contains the features that most online stores require.
- **CactuShop Pro** – this contains the same features and security code as *CactuShop Standard* as well as a license for live web use. It also contains extra advanced features that many stores will find useful.

The 'Standard' and 'Pro' versions are sometimes collectively referred to within Cactusoft documentation as 'full' versions to differentiate them from the free 'Trial' version.

CactuShop v6 brings a number of new features including product options, standards compliant XHTML/CSS front end interface, attributes, SEO optimization as well as a complete rewrite of the underlying code. The v6.1 release improves Unicode support (for non-western character sets) as well as introduces Google Checkout. Protx VSP Direct is also now supported.

Don't be intimidated by the size of this manual. You don't need to memorize everything but a broad understanding of how the software works will help as you work to create your online store with CactuShop.

Happy shop building!

24/7 Online Help System

The quickest way to get answers to your CactuShop problems is by searching the online knowledgebase. 80% of the issues we get support requests about are already dealt with in the knowledgebase.

<http://www.cactushop.com/support/>

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1 What's New in v6

There have been a number of changes in v6 compared to the previous 5.1 version. If you're familiar with previous versions of CactuShop, we strongly advise you read this section in order to get a quick heads-up on how v6 differs. See section 1.13 for details of the latest minor release of v6 (which is v6.1).

1.1 Installation script

To make setup simpler and to reduce the likelihood of default settings being used, an installation script walks the user through setting the basic store settings (assuming the database connection is valid). The config settings set during this setup procedure can be editing from the back end just like in prior versions of CactuShop, although the system has been improved to offer dropdown menus and checkboxes where limited choices are available.

1.2 XHTML/CSS interface

Over the past couple of years, the rise in market share of browsers such as Firefox and Opera has focused attention on building standards-compliant HTML. XHTML is the recommended standard now and combined with CSS (cascading style sheets) offers a number of advantages:

- Reduced code size
- Better layout of code with improved readability
- Better separation of content and layout, enabling alternative layout style sheets to be used for some purposes (for mobile devices, printing, etc.)
- Better accessibility for those with disabilities

The new XHTML/CSS interface in CactuShop offers far more control over the appearance of page elements without requiring ASP scripts to be edited. Individual items on most pages can be referenced through the CSS and fine-tuned or completely reworked.

1.3 Database table names

All the tables in the database now have a number in the middle of their name, for example `tblCactuShop1Config`. This has been done so that it is possible to run more than one CactuShop store from a single MS SQL database. Each CactuShop would need to have a completely distinct set of scripts, with the `TABLE_PREFIX` constant in the `config.asp` file of each set to a different number. You will then need to set up each store to have its own complete set of tables, each with the appropriate number within the table names. If you only wish to run a single store per database, just leave everything unchanged – do not change the `TABLE_PREFIX` constant or the table names in the database.

IMPORTANT: This change has caused some people confusion when using the new v6 data tool software. Please review section 3.4 of this manual prior to beginning upsizing with the data tool.

1.4 Many-many category structure

In the prior version, it was possible to have products feature in multiple categories, and to have unlimited levels of categories. However, it was only

possible for a subcategory to belong to a single category. In v6 however, a category can be a subcategory of any number of categories, as well as a being a top level category too.

1.5 Product options

CactuShop now contains a sophisticated 'options' system. You can now create items with multiple options (colour, size, etc.) and choose to display them in a variety of ways. If you need to stock-track each combination separately, a tool allows you to create all combinations as versions so that each can have its own quantity tracked, but the same 'options' interface is presented to customers.

1.6 Attributes & product comparison **PRO***

Attributes can be created which you can then set for each product (see 4.8). These can be displayed on the product summary as well as being searchable. The product comparison feature gives shoppers an easy way to compare multiple items (including their attributes) side-by-side. This is useful for comparing the specs of technical items with various features.

1.7 Search engine optimization **PRO***

Previous versions of CactuShop contained a few features to improve the search engine performance of web sites, including HTML gateway pages. These are retained and improved in v6 (see 6.3). The 'pro' version also includes a new way to get the site to present 'friendly' URLs to search engines that appear to be a folder-hierarchy URL rather than a parametrized URL (see 6.4). Some evidence suggests Google and other search engines index such pages more readily since they assume the content to be static rather than generated dynamically via a database.

CactuShop v6 also includes Google Sitemaps functionality (see 6.5) and a Froogle export (see 6.6).

1.8 Improved checkout design

The checkout section of CactuShop has been entirely rewritten. The whole process is handled by the *checkout.asp* script, with a generic *callback.asp* that handles callbacks from remote gateways. Each payment gateway is implemented as a class, which should reduce the overhead of creating new gateway support.

1.9 Improved search

The front end CactuShop search has been improved to allow the results display to be switchable (normal view or thumbnail view). The search code itself now searches recursively in categories and well as searching price fields and the custom-configurable attributes.

The back end search has also been given a good work-over. The search box on the back end home page now searches products, versions, categories, customers, config settings and language strings.

1.10 New session management system

ASP session variables are not particularly robust because most sites will need to set a strict time-out value of around 20 minutes to protect server memory. If a customer is inactive for 20 minutes, they will lose items in their basket and other temporary information. ASP sessions are generally tied to a user by placement of a per-session cookie, meaning they rely on cookie support. To avoid the time-out issue, previous versions of CactuShop used similar per-session cookies to store values such as the basket contents and user information, which made them significantly more-robust than competitor session-variable-based carts.

CactuShop v6 has the most robust session system yet. Session values are stored in the database and tied to the user by a unique session ID which can be passed via querystrings and form posts as well as a cookie.

1.11 Improved membership system

In v6, the customers table is now used to store not just customers, but mailing list members and affiliates, as well as site members who may not be customers. We've designed it so that casual signups to the mailing list don't have to provide any more information than before. If they subsequently go on to make an order, further information will be collected and their record 'fleshed out'.

This new system means that a customer's (or member's) record will contain information about their mailing list and affiliate status as well as providing a firmer foundation for saved baskets and wishlist functionality. Tying everything together in this way means the 'My Account' section is much improved, providing a comprehensive control panel where the user can view affiliate sales, customer history, wishlists, saved baskets and set mailing list preferences from a single account login.

1.12 Promotions, customer groups & quantity discounts **PRO***

The new 'pro' version contains additional new features such as product promotions ("buy one get one free"), customer groups (restrict some products to particular groups of customers and price differentially) and quantity discounts (price breaks for 2+, 5+, etc.).

1.13 What's new in v6.1

v6.1 is a minor upgrade. The database structure is the same although there are a few extra language strings and config settings. The main improvements over the last v6.0xx release are:

- Google Checkout support
- Improved combinations editing/adding
- Better Unicode support for non-western character sets
- Improved currency display of dynamic prices on options products (the JavaScript price display now formats according to your currency settings in CactuShop, so you can use currency symbols of more than

one character, can have the currency symbol before or after the value, and currencies will display with decimals or without, as appropriate for each currency).

- Back end makeover, improved menu system.



FOR SECURITY REASONS YOU SHOULD NOT RUN **CACTUSHOP v6 TRIAL** ON A PUBLICLY ACCESSIBLE PART OF YOUR WEB SITE

It contains code that aids setup, installation, uninstall, debugging and obtaining server information, but this could help provide an attacker with the same benefits. If you must run it on a live web server, ensure you create a directory with a name that can't be obviously guessed, and if possible apply an IP block or basic authentication to ensure only you can access the code. For best security, run the code on a development server or local machine whose IIS server cannot be accessed from the internet. Remove CactuShop Trial when you have made a decision as to whether to purchase a full version or not.

There is a simple 'uninstall' button in the back end to remove all ASP files while leaving data and other files intact. Removing the ASP files in this way removes the risks associated with them.

CactuShop Standard and *CactuShop Pro* are designed to be run on live web sites and have a wide variety of security measures built-in. They do not include the special Trial version code and will flag security problems like default values for important settings. The security issues detailed above ONLY apply to the trial version.

2 Setup

2.1 CactuShop 'trial' version

Most users will set up the free 'trial' version and test the functionality before deciding to purchase the 'standard' or 'pro' versions. If you are using the 'trial' version, please note the important security information in the red box to the left. Also remember that many of the 'trial' scripts have small differences to the full versions and are missing some features. We strongly advise that you not embark on customization of the .asp scripts until you have the 'standard' or 'pro' version code to work on. If you make modifications to the 'trial' code, copying these scripts to the full versions will replace some of the full version functionality with the limited 'trial' functionality, and in some cases might cause errors.

You can of course add data to the 'trial' version and design your skin with it. Both of these elements are identical to the full versions and can be used with them, so replacing the .asp scripts of the 'trial' with the full versions from the 'standard' or 'pro' versions will give you the full functionality.

2.2 Base platform requirements

2.2.1 Operating system

CactuShop is an Active Server Pages application and as such needs to run on a web server that incorporates an ASP scripting engine. Although Linux/Unix servers can be made to run ASP using third party software, CactuShop is neither developed nor tested on these alternative platforms and to the best of our knowledge **it will not run on Linux/Unix/Apache**. We only endorse and support running CactuShop on Microsoft's IIS web server v4 or above. CactuShop will run fine on shared web space but check the platform and permission requirements listed on our web site with your host first if in any doubt. You can use the free *CactuShop Trial* version as a test, checking that you can successfully add and delete products, including the images.

2.2.2 Database

CactuShop ships with an Access database file. The ASP code is written to be switchable between MS Access, Microsoft SQL Server and MySQL syntax (similar but with some small differences). MS SQL Server and MySQL versions of the database are available as free downloads from our web site. CactuShop is only tested on the Windows version of MySQL although we know of users who successfully have CactuShop running with a MySQL database on Linux (with some modifications required). However, we only support MySQL on the Windows platform and do not recommend running CactuShop's database on a Linux/Unix machine for this reason.

2.2.3 VBscript version

The CactuShop code is VBScript – the ASP default language. CactuShop requires VBScript 5.5+. This should be standard on Windows 2000 and 2003 servers. On NT4 Servers, ensure that a recent version of Internet Explorer is installed, certainly IE5.5+. This should install the updated VBScript version for both the browser and the web server.

2.2.4 XML components

Some features in CactuShop use the capability supported by the MSXML components in Windows to grab data from external web sites via http. Some kind of Microsoft XML component should be present on Windows 2000 and 2003 servers. On NT4 servers, you may need to install this support. The actual component used can be set in the config settings of CactuShop, so it is not hugely important which version of the MSXML support you have. We have occasionally seen hosts that don't permit direct access from the XML components to the web but require going through a proxy. If this is the case, they should pre-configure the proxy using *Proxycfg.exe* rather than require convoluted script changes to use the proxy.

2.2.5 Email components

CactuShop needs to send various emails – order confirmations, newsletter signup confirmations and so on. There are various options for sending emails; CactuShop supports the Microsoft standards of CDONTS and CDO SYS (Windows 2000 and 2003 respectively) as well as the third party components Jmail (Dimac), ASPemail (Persits) and ASPMail (ServerObjects). At least one of these methods must be installed and working on the server that CactuShop is hosted on in order for CactuShop to send order confirmations and other emails.

2.3 Support for third party software

The system software set up referred to above is a prerequisite for running an ASP site. We cannot support set up and installation of Microsoft or other third party software – please consult the relevant web sites and use their sample applications to test that your server, scripting engine and RDMS (database) are running properly. Our tech support does not cover installing Microsoft or other third party software or getting ASP support to run on your site/development server.

2.4 Installing the database

CactuShop ships ready to run with an MS Access database. For sites with more traffic or larger databases where performance on MS Access is inadequate, MySQL or MS SQL client-server databases should be considered.

Cactusoft provides setup scripts for both MySQL and MS SQL databases which can be downloaded for free from our web site downloads page.

2.4.1 MySQL

MySQL is a free open-source client-server database. Data is held and managed by a database server, with the web scripts making requests to this via MySQL drivers.

To setup a MySQL database, you can download the MySQL setup script from the downloads page of our web site and run this using the Data Tool (for more information on setting up database scripts with the Data Tool see 3.4.1.2).

The CactuShop MySQL setup script creates both structure **and** data, including records necessary for CactuShop to operate.



CACTUSHOP REQUIRES MYSQL v5,
FOR WINDOWS

If your host only provides MySQL v4 rather than v5 then do not attempt to use this as it is not supported by CactuShop v6 and will not work properly.

You must ensure that your host is running MySQL v5 or above, on Windows, and in order to run the Data Tool, the appropriate port must be open and allow remote connections to the database.

In our experience the admin tools for MySQL are inferior to those for MS SQL and the database provides fewer options for performance increases on very busy web sites.

2.4.2 MS SQL

Microsoft SQL Server is our recommended database for optimal CactuShop performance on busy web sites or those with large databases. With Microsoft's release of the free *SQL Server 2005 Express* edition, much of the incentive to use MySQL may well have gone, for the moment at least.

To setup a MS SQL database, you can download the MS SQL setup script from the downloads page of our web site and run this using the Data Tool (for more information on setting up database scripts with the Data Tool see 3.4.1.2).

The CactuShop MS SQL setup script creates both structure **and** data, including records necessary for CactuShop to operate.

The script will work with MS SQL Server 7, MS SQL Server 2000 and MS SQL 2005. In order to connect the Data Tool to the database, your host must have the appropriate port open and permit remote connections.

For remote admin of your MS SQL database, you can use Microsoft Access 2000 or above (consult Microsoft's documentation for more information), or use *SQL Server Management Studio Express*, a free download from Microsoft's web site. A common complaint about this new version is that it lacks DTS (Data Transformation Services), which is used to copy data between two MS SQL Servers. If you need to do this, look for Microsoft's free *SQL Server DTS Wizard*.

2.5 Installing the files

2.5.1 Unzipping the software

The product is normally delivered as a zip file download from our web site. After unzipping, you should end up with a CactuShop folder containing several other folders and files. For security, we suggest that the Access database (which by default is located in the *database* folder) should be moved to a folder that is not on the web root (remember to adjust the `strPathToDatabase` setting in the *includes/config.asp* file to reflect this). Many web hosts provide a folder for this purpose – it may be called 'private' or 'data' and is generally alongside the 'wwwroot' folder when you FTP into the site. If using MS SQL or MySQL, the *.mdb* file is not required.

2.5.2 Importing into the web server with FTP

You can just drag and drop the whole CactuShop folder into your *wwwroot* folder, or FTP all the files within it to your web site – just as you would set up any new web.

2.5.3 Importing into FrontPage and upload to the web space using FP server extensions

If you set up the web by importing it into MS FrontPage, you may find that many of the back end files are not visible after importation. This is because FrontPage sees files beginning with an underscore as 'hidden'. To rectify this, go to *tools > web settings > advanced* and ensure that 'show documents in hidden directories' is checked.

We don't recommend you use FrontPage to upload your store to your web site. The problem is that FrontPage will overwrite files on the live site with your local version. This is not a problem when you first upload the site, but will be once the site is up and running. If you have made changes to your skin template (for example) and use FrontPage to upload them, you may end up wiping the database on the web site with your local version and hence losing customer orders, recently added product data and other information that the site has gathered. You may also delete product images from the live web site that you uploaded via the back end of CactuShop – because FrontPage does not see these on the local version of the site and so removes them. If you must use FrontPage, make sure you set it to exclude your Access database, 'uploads' folder and maybe the *config.asp* file.

2.5.4 Setting up CactuShop to use an ODBC datasource

Some users prefer to connect to the database via ODBC. If so, set up the data source and change the `strDataSourceName` setting in the *includes/config.asp* file to the name of your data source, with quotes around it. For example:

```
strDataSourceName = "mydatasource"
```

2.5.5 Setting the license number

It is important that you set up the license number you were provided with in the appropriate spot in the *config.asp* file. You should edit this file with notepad or a pure text editor that will not add extra formatting information to the file. Comments in this file should make it obvious where to enter the license number.

2.5.6 IP address security

For increased security of the CactuShop back end, you can limit access by IP address from within the *config.asp* file when you set up your store.

```
CONST BACK_END_IP_LOCK = "xxx.xxx.xxx.xxx"
```

You can also allow slightly broader access if you have consecutive IP addresses, for example:

```
CONST BACK_END_IP_LOCK = "xxx.xxx.xxx"
```

This feature is best for users with a fixed IP address. It will prevent anyone else from accessing the back end of the store even if they learn the username and password of a valid login account.

Do not use this feature if you have a dynamic IP address and are unaware of the range.

2.5.7 Setting permissions

The folders and Access database file need certain security permissions set in order to function properly. **Note that these permissions cannot be changed via FTP.** If your web host doesn't set these as standard, you will need either physical access to the server, access via PC-anywhere (or some similar system) or an obliging techie at the web hosting company. The database folder should be renamed or made 'private' as mentioned in 2.5.1. The 'uploads' folder (and everything within it) as well as the database folder should have 'IUSR' full control settings.

2.5.7.1 Why do some folders need IUSR full control permissions?

Folders where CactuShop needs to add, modify or delete files need IUSR full control permissions. The IUSR account is the "Internet Guest Account" – the user account that all web users use when on the web site. Without these permissions, the following problems will occur:

- uploading images or deleting images (when updating products from the back end) will give a "*permission denied*" error
- any page that writes to an Access database will give a "*must use updateable query error*"
- attempting to create gateway pages for search engines will give a "*permission denied*" error

2.5.7.2 How to set 'full control' permissions

On Windows 95 and 98, you do not need to set permissions.

On Windows NT, 2000, XP Pro and Server 2003, you need to set security permissions to allow the Internet Guest Account full rights to modify the database and create/modify files. Note (again!) that CactuShop requires the Microsoft IIS web server, and as such will not run on XP Home or Windows ME.

1. Using Windows Explorer, navigate to the folder whose permissions you wish to set. Right click it and click 'properties', then the 'security' tab*.
2. If the Internet Guest Account (also shown as *IUSR_MachineName* or something similar) is not present, you will need to click 'add' and then select and add this user. If the user is not there, click 'advanced' and then 'find now'. Scroll down the accounts found until you see the IUSR record. Select it, then click 'OK' and then 'OK' on the next screen too.
3. Next, select this *IUSR* user account and tick the top box, 'full control'. Click 'OK' and you're done.

*If you are using XP Pro and cannot see the security tab, open the 'tools' menu in any folder and click 'folder options'. Select the 'view' tab and then uncheck the bottom box, 'use simple file sharing'. Then click 'OK'. You should now see the 'security' tab in future.

2.5.7.3 Setting scripts permissions

Some folders within the web may not have 'scripts' permissions set – they may only allow reading of files. This is fine for HTML, but ASP pages are

dynamic and contain active code that needs to run. To ensure that the scripts have permission to run, navigate to CactuShop in the IIS manager or FrontPage, right click the web and tick the 'allow scripts to be run' box. You cannot do this from Windows Explorer; it must be done within FrontPage or IIS.

2.5.8 Run the software!

Type the address of the web that you've just created into a browser. If you installed IIS or PWS on your own machine, the address of the server will normally be <http://localhost/>, plus whatever your web is called. You could also try <http://127.0.0.1/>.

2.5.9 Setup routine

CactuShop v6 has a setup routine that should fire up first time to help you run it. The license number you have entered in your *config.asp* is used as a password to prevent someone else configuring your CactuShop.

This should walk you through the setup of the basic configuration and let you know if there are configuration errors or you are lacking certain permissions or required components.

2.5.10 Dealing with errors

If you get any errors at any stage, please refer to the FAQ section of this manual and search our knowledgebase on the CactuShop web site before contacting us. Most common problems are dealt with there already.



PLEASE ENSURE YOU TAKE A BACKUP OF YOUR SOFTWARE AND RESOLVE ANY TECHNICAL SUPPORT ISSUES DURING YOUR SUPPORT COVERAGE PERIOD

New licenses come with 6 months upgrade and support coverage. This should be more than enough to get a store up and running and iron out any bugs.

We regret that we cannot extend support coverage for free for any reason. If you do not use the software immediately, please ensure you take a backup of it and store off-site as you would with any important files. We also suggest you put the support expiry date in your calendar now so you can download the latest version prior to your support expiring (if you don't intend to extend support coverage). If you lose your local copy of the software and need to download it again after your support has expired, you would need to renew support coverage.

If you purchase and don't use the software immediately, please remember that the clock is ticking on your support and upgrade coverage. It is therefore wise to setup the software and resolve any technical problems you may have while you are covered by free technical support.

3 Upgrading your CactuShop

This section provides information on upgrading your store from a prior version of CactuShop to v6. If you purchased CactuShop for a new store and don't need to upgrade data from a prior version, please at least familiarize yourself with the upgrade policies and processes here before moving on to the next section.

3.1 Why upgrade?

From time to time, we bring out newer versions of the CactuShop software that include new features or redesigned pages that improve on previous offerings. There is no requirement for any customer to upgrade their existing site if they don't wish to. If the site is running fine and doing the intended job, Cactusoft bringing out a new version will not change this. However, for those who do wish to take advantage of the newer features, upgrading is worth the time and effort. There may also be security reasons why it is advisable to upgrade – the more recent versions will include code to mitigate and protect against any security breaches that have been found since the initial release.

3.2 Upgrade and support policy

3.2.1 Duration and scope

CactuShop upgrades are free for six months after the purchase of a CactuShop license. Beyond this you can purchase additional upgrade coverage for one year from our web site. Note that this is not an additional license, purely a fee to cover the cost of running the upgrade system and providing technical support. If you have multiple stores, you may upgrade as many of them as you wish with the newest code providing they are already properly licensed CactuShops. To install *CactuShop Pro* with a previous license number, you must ensure that the license has been upgraded to allow use of the 'Pro' version.

3.2.2 Upgrading to CactuShop Standard

CactuShop Standard is considered the direct replacement of the previous 'full' CactuShop versions 5.1 and earlier. For this reason, you may run *CactuShop Standard* v6 with a previous license number that was obtained with a prior version of CactuShop. *CactuShop Standard* will be offered as a free upgrade to those who have current support coverage.

3.2.3 Upgrade to CactuShop Pro

CactuShop Pro has extra features and is more complex. For this reason, it is sold at a higher price point, as is the support for it. If you are running *CactuShop Standard*, or a previous version of CactuShop prior to v6, you would need to pay an upgrade license fee to run *CactuShop Pro*. You would also need *CactuShop Pro* support cover. If you run a mixture of *CactuShop Standard* and *CactuShop Pro* web sites, you may only run the 'Pro' code on sites that have a valid 'Pro' license. Annual support cover for any customer operating *CactuShop Pro* will be charged at the *CactuShop Pro* rate. We will not provide support to *CactuShop Pro* web sites under the standard support cover.

3.2.4 Upgrading from v6 to v6.1

The v6.1 database is identical in structure to the v6 one. The only different is the addition of some language strings (page text elements) and config settings, and a new config setting category (for Google Checkout). Consequently, you can use the v6.1 database with old scripts, and even use the newer v6.1 scripts with an older v6 database without too many problems. But for best performance and to get the best of the features, your v6 database can be upgraded to v6.1 by just adding the new config settings, config category and language strings.

These can be found in the following tables:

tblCactuShop1ConfigCategories (add the new Google Checkout category)

tblCactuShop1Config (see records with 'version added' of 6.1)

tblCactuShop1LanguageStrings1 (see records with 'version added' of 6.1)

Alternatively, you could use the v6 Data Tool to upgrade your v6 database to the latest v6.1 database. However this will probably take significantly longer because it needs to copy all the data across, most of which has not changed. Since the changes are so small, it is almost certainly quicker and easier to make these changes manually.

3.3 Obtaining the latest version

All upgrade requests are handled through our web site, where there is a special downloads page in the user area. Please go to:

http://www.cactushop.com/support/user_login.asp

You will need to login with the username and password assigned to you when you purchased CactuShop. If you have lost these, you can have the system send an email reminder to the email address associated with the account. If you no longer have access to that email address, you will need to contact us via the 'contact' link on our web site, detailing the circumstances and providing some other corroborative evidence that you are the original purchaser (for example, details of the invoice/purchase that only the purchase would know). If we cannot establish beyond reasonable doubt that you are the original purchaser or the account holder, we cannot give you access to that account.

3.4 Upgrading using the CactuShop Data Tool

CactuShop is the only ASP shopping cart vendor that provides a free tool to automate upgrading your store to the latest version in a quick and (relatively) simple process.

For more information on using the Data Tool, see the CactuShop Data Tool User Manual, a PDF on our web site downloads page.

3.4.1 What the Data Tool does

3.4.1.1 Copies data to a newer database

The Data Tool lets you upsize unmodified CactuShops from v5 onwards to more recent versions. It can also transition data between MS Access, MS SQL and vice versa. The way it works is to copy data from a 'source' database (the

old one you want to upgrade) to a new 'destination' database (the newest database file). The Data Tool will overwrite most existing data on the new database, so should not be used to add new products to your store once it is up and running. The Data Tool will automatically detect the versions of the database you are copying from and copying to and run the correct upgrade process.

Compatibility with CactuShop v6.1

The Data Tool is fully compatible with CactuShop v6.1, since that uses the same database structure as v6. All you need to do is ensure the destination database you upsize your data to is a v6.1, then the extra records this contains will be present in your upgraded store.

3.4.1.2 Runs .sql scripts

The Data Tool allows you to run .SQL scripts which you can download from the CactuShop web site. This allows you to create MS SQL and MySQL databases.

3.4.1.3 Imports from spreadsheet

The Data Tool can import data from a suitably formatted

3.4.1.4 Provides a backup option

The Data Tool ability to copy data between different databases can be used to back up your live MS SQL or MySQL database to a local MS Access copy. As all experienced IT people will tell you – you can never have too many backups.

3.4.2 What the Data Tool can't do

3.4.2.1 Customized CactuShops

If your CactuShop database has been customized and has had extra fields or tables added to it, the Data Tool will not be able to transition these customizations to the new database. These changes may also prevent the Data Tool from operating properly. Remember also that any script modifications you may have cannot be upgraded to newer versions of CactuShop automatically. Most such modifications and customizations will be lost during the upgrade process and need to be redone manually.

3.4.2.2 My CactuShop is a version prior to v5

If your CactuShop is v4.5 – v4.7, there is an older data tool that can convert your data to v5.1 format, which can then be upsized using the current data tool. If your CactuShop is a version older than v4.5, upgrading the data will likely be a complex manual task. It may be easier to start with a clean database unless you have a vast number of products.

3.4.3 Preparing to upgrade

Before upgrading or doing any work on your database, always remember to take a back up and to keep this in a safe place.

3.4.4 Using the Data Tool

3.4.4.1 Installing the Data Tool

The data tool will come as a zipped package, either with an installer or as a free-standing .exe file. If the latter, you may need to install the VB6 run time on your computer first.

3.4.4.2 Running the Data Tool

Double click the Data Tool. You should get two options; 'data copy' or 'run SQL'. If you are using MySQL or MS SQL, you will need to first create the new database using the second option. Once you have a v6 database setup, you can run the data tool and select the first option to copy data from your old database (or from a text file or Excel spreadsheet) to the new v6 database.

3.4.4.3 Selecting the databases to copy between

The 'source' database should be selected first. There are some additional fields including one labelled 'table prefix'. This is a new feature in v6 databases – for more information see 1.3. If selecting a pre-v6 database, the table prefix should be blank.

Next you select the 'destination' database in a similar fashion. For a v6 database, the table prefix must be entered. This will be '1' as default.

This new 'table prefix' feature is useful if you wish to upgrade an MS SQL or MySQL databases in particular. You can create the new tables on the same database (because the table names will not clash) and then upsize your data from the old tables to the new. You don't have to copy data to a local database and don't need to delete or overwrite your old CactuShop tables. The old tables can be removed once your new store is up and running perfectly and you're confident they're no longer needed.

3.4.5 Other upgrading issues

3.4.5.1 Affiliates

As part of the v6 user account system overhaul, there is no longer a separate affiliates table. Instead, affiliate records are in the `tblCactuShop1Customers` table, with certain fields set to flag this user as an affiliate.

The data tool will attempt to merge affiliate data with customers if possible based on the email address. So customers who are also affiliates should end up with a single login they can use for everything.

However, this change means that affiliate IDs will *not* be maintained. You should therefore ask your affiliates to update the affiliate links they use to connect to your site. They can get this information by logging into the 'my account' section. The link should look something like this:

<http://www.demo.xyz/?af=123>

One of the advantages of the new system is that the affiliate code works from any page, so you no longer need to pass everything to a single 'affiliate handler' script that plants cookies and then redirects. Instead, your affiliates can link directly to any page, and simply add the 'af=[ID]' as a parameter in

the URL. Remember that the [ID] part is now the customer ID which will almost certainly be different from the affiliate ID they used previously.

If wish to handle legacy incoming links, you can modify the *aftrack.asp* script (which is a place-holder in v6 without active code).

For example:

```
numID = request("ID")
If numID = 999 response.redirect("default.asp?af=123")
```

The above code looks for links coming in for the affiliate who had the affiliate ID of 999 (in v5) and then maps these to the same affiliate in v6, who now has a customer (and affiliate) ID of 123. You can add as many of these 'if' lines as you need to handle incoming legacy affiliate links.

3.4.6 Test with CactuShop Trial first

CactuShop Trial has an identical database format to *CactuShop Standard* and *CactuShop Pro*. If you are thinking of upgrading your store to version 6, we advise you download the Data Tool and upsize your data to the v6 database within *CactuShop Trial*. That way, you can satisfy yourself that the upgrade process works with your actual data before parting with any money for the new version.

4 Back End - Further Setup

Once you have gone through the installation and setup of CactuShop in section 2, and the upgrade process in section 3 (if required), you should have a functioning site running CactuShop v6. Now you will need to do some further configuration to get things ready to go live.

This section should walk you through the kind of decisions you will need to make and, where necessary, direct you to further information elsewhere in the manual.

4.1 Accessing the back end

The back end admin area is reached by going to the `_default.asp` page on your web. For example, if your site is at:

<http://www.demo.xyz>

then you should go to:

http://www.demo.xyz/_default.asp

CactuShop Trial does not have any username and password protection on the back end. It is a trial version and is not secure – please read the license agreement or 'Introduction' section of this manual if you need further information.

For the full versions, the username and password should have been set up during the install/setup routine. If you have forgotten these, you will need to look inside your database and find the `tblCactuShop1Logins` table. Open this up and you should be able to recover username and password info for the various back end user accounts.

If you try to login but cannot gain access, check to ensure that you do not have the store back end IP security activated (in the `config.asp` file).

4.2 Config settings

Highly configurable

CactuShop has a large number of settings and features that can be activated or customized from the config settings. We strongly suggest that once you have your development store running, you run through the various config sections. Each setting has an explanation that should make it clear what it does. You will find many useful features and gain much better control over how your store works.

Much of the configuration of various features and settings in CactuShop is done through the config settings in the back end. Once you have logged in, go to the 'Config settings' link in the *Configuration* section. From here, you will see menus containing the various sections of the config settings which you can click to view/edit.

4.2.1 How the config system works

There are several hundred config settings in total. The master copies of these are stored in the `tblCactuShop1Config` table in the database. However, rather

than read these from the database each time a page is called, CactuShop stores them in server memory as application level variables. When you run CactuShop for the first time, or when the server restarts, CactuShop reads these config settings into memory. It also refreshes the config settings in memory each time you edit one using the CactuShop back end (as well as updating the database master copy of that config setting).

Because it is the values in memory that are actually used by the scripts, any changes you make to config setting records directly in the database file will not take effect until the server restarts or you update a config setting via the back end of CactuShop (because either of these will force the system to refresh the config settings). If you want to force a refresh (for example, you uploaded an Access database and want the settings in that to take effect), you can pass *?appvar=reset* to any page, for example:

<http://www.demo.xyz/default.asp?appvar=reset>

4.2.2 'Important' config group

We have grouped some config settings into a group named 'Important'. In our experience, two of these in particular generate the most problems.

4.2.2.1 webshopfolder

This should be the subfolder of your web site that CactuShop runs in. If you set this incorrectly, the front end pages of CactuShop will fail as the skin template will not be found. If you run CactuShop on the root of your web, this should be **blank**. If you run CactuShop in a folder called 'store', set it to "store/" (and don't forget the forward slash at the end).

4.2.2.2 webshopURL

This is the config setting most frequently set wrongly. It is the full URL of your CactuShop. If you run the store on the root of your web site, it should be the full path starting with http and ending in a forward slash. For example:

<http://www.demo.xyz>

If your CactuShop runs in a subfolder on your web site, the URL should reflect this. For example:

<http://www.demo.xyz/shop/>

4.3 Back end search

Although this feature needs no setup (and so you could skip on to the next section now), it is useful to detail a bit about it here as it's an extremely useful feature that can help with the configuration tasks too.

The search is a keyword search that applies to the following sections of the store:

- Categories
- Products
- Versions
- Customers



INCORRECT VALUES FOR THESE CONFIG SETTINGS CAUSE MANY SUPPORT ISSUES

If you get an error message on front end pages that says "Error trying to open template", then your **webshopfolder** setting could be wrong.

If your site sends emails with links that don't work, or you get 404 errors clicking on some links within your store, check your **webshopURL** config setting carefully to ensure it is accurate and has the required forward slash at the end.

- Orders
- Site text
- Config settings

So entering the term 'basket' will find site text (language strings) that include the word basket in their name or content, as well as config settings that include 'basket' as part of their name.

Whenever you come across a config setting mentioned here, you can of course navigate to it in the config settings (which are grouped into categories), but the quickest way to find it is to type its name into the search.

The search is also very powerful once your store is configured and running. You can quickly find customers and orders by entering an email address (or name), or find specific categories, products and versions by entering relevant text. This is extremely useful if fielding emails or telephone calls from a customer with a query.

4.4 Currencies

4.4.1 Basic currency setup

To set the currency (or currencies) you wish to use, go to the 'Currencies' link in the *Regional Setup* section.

4.4.1.1 Activating multiple currencies

The first currency slot is your default currency. You cannot delete this currency or deactivate it. The exchange rate of any other currencies you have set up is related to this default currency. To activate other currencies, set the 'live on front end' radio button to the 'yes' position and then save your changes with the 'update' button at the foot of the page.

4.4.1.2 Currency display options

CactuShop gives you a lot of flexibility as to how currencies are displayed. You can specify a symbol (\$, £, ¥, etc.) or more than one character to act as currency symbol. You can also control the formatting of currency display, choosing whether the symbol comes before or after the amount. You can choose which decimal point to use – in mainland Europe the comma is generally used as a decimal separator rather than a point (period). For currencies that do not have decimal fractions (such as the Japanese Yen), you can switch decimals off. This will ensure proper rounding to whole numbers.

4.4.1.3 ISO code

You should also specify the three-letter ISO code for the currency (USD, GBP, JPY, etc.). This is used in email messages instead of the currency symbol (since many email systems use ASCII which does not support some currency symbols). It is also used for looking up live rates as well as passing currency information to some payment gateways that support multiple currencies. For this reason it is not advisable to switch the three-letter code to non-ISO values, even if you think those more appropriate abbreviations.

**CURRENCY RATES ARE NOT AUTOMATICALLY ADJUSTED**

The system will not automatically update your store's currency exchange rates. You must use the live currency rates lookup each time you wish to change the exchange rates on your site.

For most currencies, running the update daily should be easily enough to keep rates accurate.

**THIS IS NOT A SUBSTITUTE FOR TAX ADVICE FROM QUALIFIED PROFESSIONALS**

This guide only covers the mechanics of setting up your CactuShop to deal with certain tax scenarios. You should always seek advice from qualified accountants or tax advisors in your jurisdiction to confirm how your store should handle tax.

4.4.2 Live currency rates

CactuShop v6 contains a live currency lookup that should make it quicker to maintain accurate exchange rates on your web site. The 'Live Currency Rates' link is in the *Regional Setup* section. This page might load a little slower than other pages because it makes a call to the CactuShop web site to grab up-to-date currency rates. It shows the new live values it has obtained in text boxes. You can choose to override the lookup values if you wish before submitting them to update the exchange rates used on the store.

Live currency rates service

This lookup service is a value-added feature that will only work while your account support coverage is valid. Cactusoft provides the data 'as is' and makes no warranty for its accuracy. You should always double check the values obtained before submission (especially the first time you use the feature) to ensure the rates are correct. Some currencies may not be supported.

4.5 Tax

Most stores will need to consider the handling of tax. CactuShop has quite a few settings that determine how tax is handled and prices are displayed with regard to tax.

4.5.1 Prices including or excluding tax

4.5.1.1 Choice of which model to use

The first decision to make is whether you want your prices to include or exclude tax. This varies depending on your location, business type and in some cases, personal preference.

In the UK and Europe, it is common to quote prices inclusive of tax. In fact, in many European countries the law requires it. If you go to a shop in the European Union, the prices you see on items are almost always inclusive of tax. Because store owners typically like to determine the display price of an item it makes sense for most UK and European customers to set their CactuShops to display tax inclusive prices. This way, the price you enter for an item is considered to be inclusive of tax and the store will work out the 'ex tax' part and the 'tax' part based on the tax rate you have set for that item.

In the USA it is more common for prices to be displayed excluding tax. Tax as a percentage is then applied at checkout. Also, UK businesses that sell mainly to other businesses also often display ex-tax pricing because tax-registered businesses can claim the tax they pay back. In these cases, you should set CactuShop to display prices excluding tax.

The tax pricing model your store uses is set using the **pricesinctax** config setting which is located in the *System > Tax Rates* part of the config settings. Checking the box means prices you enter for items will be considered to include tax. Unchecking the box means prices you enter for items will be considered to be exclusive of tax.

4.5.1.2 Calculation differences with the two models

The way CactuShop produces tax and order totals differs slightly depending on whether you have opted for 'inc tax' or 'ex tax' pricing.

When you have **pricesinctax** checked, the system calculates tax 'per item', rounding it to the nearest whole subdivision of currency (0.01 in a currency that has decimal fractions, 1 if it does not). The total tax on the order is therefore the total of the tax amount for each item added together.

When you have **pricesinctax** unchecked, the system calculates tax 'per row'. This means that each row on the basket is totalled first, and then the tax on this is calculated. The tax subtotal for each row is summed to give the total tax.

4.5.2 Tax on shipping or billing address

The vast majority of customers order things for shipment to themselves. But it is not uncommon for people to want to pay for things to be shipped elsewhere, including to another state or country. This is common with gifts, but care should be taken as it can be a fraud warning sign too (see section 11.2 for more information).

Depending on the tax laws of your country and the products or services you sell, you need to decide whether your store charges customers tax based on the shipping address or the billing address. This can be changed with the **taxshippingbilling** config setting (within the 'Tax Rates' config setting category). In most cases where these are the same, it won't affect an order.

4.5.3 Setting tax rates

To set the tax rates your store will use, follow the 'Tax rates' link in the *Regional Setup* section. CactuShop supports multiple tax rates, so you can have a standard rate of VAT (17.5% in the UK), plus a zero rate for items that are not subject to VAT. You can also handle items that have a non-standard rate, such as energy goods, if required.

4.5.3.1 Setting which countries are to be charged tax

For each country (or state) you can select whether they are subject to tax when ordering on your store or not. To save time, it is best to set whether tax is required for each country (or state) while setting up shipping (see section 4.7.2.4).

4.5.3.2 Dealing with US state tax

If you are in the US, you may need to charge state tax to residents in just the states where you operate, with everyone else not being charged tax.

First, check the **Usmultistatetax** config setting to activate US state tax behaviour. This replaces the 'charge tax – yes/no' option when editing destinations to a text box.

Note: If you installed your v6 database prior to v6.039 you might also need to ensure the *D_Tax* field of the `tblCactuShop1Destinations` table is not an integer field type, but a number type that will support decimal fractions. You might also need to add the **Usmultistatetax** config setting to your database.

To configure this, go to the destinations section (follow the 'Destinations' link in the *Regional Setup* section). All the USA state records begin with 'USA', so click the 'U-Z' link to bring up an entire list (there are also links to call up

records by shipping group; the 'North America' group might be available, but this depends on whether you've changed your shipping zones yet from CactuShop's demo data).

In the default configuration, only the main 'USA' country record is set to be live; the individual US states are deactivated. Work down the list and switch all the US states to be live, and disable the single USA record. For each state, set the appropriate tax rate; zero for most states with a decimal value for the states where tax should be charged, for example, 0.07 for a state with 7% tax.

Don't forget to check the other country records too, making sure you're not charging tax to overseas customers.

You will need to ensure that you have a tax band set up for products of 100%, and that all products that are subject to tax are mapped to this.

IMPORTANT: You should always seek tax advice from your accountant or qualified tax advisors in your jurisdiction to ensure that your CactuShop configuration complies with your country or state's tax rules.

4.5.3.3 Dealing with EU VAT

In the European Union countries (25 of them at time of writing), there is a rather complicated system of sales tax called VAT (value added tax).

4.5.3.3.1 Basic VAT overview

For most products and services, the rules work as follows (using the UK as an example):

- All UK customers (businesses and individuals) must be charged VAT on items that are subject to VAT (VAT registered businesses and entities can claim this tax back later, so business oriented web sites often show ex-tax prices).
- All customers outside the EU are not charged VAT.
- Customers within the EU (but outside of the UK) who are VAT registered and supply their VAT registration number can have the goods zero-rated. They should then declare these items on their VAT return and pay VAT on them in their own country and whatever the prevailing rate there.
- Customers in the EU (but outside of the UK) who are not VAT registered must pay UK VAT on their order as the prevailing UK rate.

IMPORTANT: You should always seek tax advice from your accountant or qualified tax advisors in your jurisdiction to ensure that your CactuShop configuration complies with your country or state's tax rules.

4.5.3.3.2 Setting up CactuShop to handle EU VAT

The first step is to tell CactuShop that you wish to use EU VAT functionality. This is done by setting the **euvatcountry** config setting (System: Tax Rates) to the two-letter ISO code of your home country (a full list is shown below).

Austria	AT
Belgium	BE
Cyprus	CY
Czech Republic	CZ
Denmark	DK
Estonia	EE
Finland	FI
France	FR
Germany	DE
Greece	GR
Hungary	HU
Ireland, Republic of (EIRE)	IE
Italy	IT
Latvia	LV
Lithuania	LT
Luxembourg	LU
Malta	MT
Netherlands	NL
Poland	PL
Portugal	PT
Slovakia	SK
Slovenia	SI
Spain	ES
Sweden	SE
United Kingdom	GB

If the **euvatcountry** config setting is blank, EU VAT handling is deactivated.

Next, go to the destinations section (follow the 'Destinations' link in the *Regional Setup* section) and then ensure each EU country is set to have tax charged. Other countries should **not** have tax set to be charged.

Once this has been done, the VAT number is requested as part of the checkout procedure, on the page where shipping selected. Note that if you have shipping switched off, or only items that don't require shipping in the basket, this step of the checkout process WILL still appear if the customer's country means that a VAT number should be requested (although the shipping part of the page will not show).

CactuShop also has a basic EU VAT number check that can be turned on with the **euvatnumbercheck** config setting (System: Tax Rates). This looks at the country code part of the number and then ensures the basic format of the VAT number matches the format that country uses (correct number of digits, alpha and numeric characters in right place, etc.). It is important to understand that this check does not validate the VAT number in question against any EU database; it purely checks the format to prevent typos or other obvious errors from being submitted to you as VAT numbers. Think of it as the equivalent of a Luhn check for EU VAT numbers.



NEVER DELETE ALL RECORDS FROM THE DATABASE FOR A 'CLEAN' INSTALL

If you wish to clear demo data and start with a clean database for your store, we strongly suggest you use the procedure detailed in 4.6.2 rather than attempting to clean tables directly within your database manager program, or by using transact-SQL.

CactuShop needs config settings, language strings and many other records in order to function. If you delete such required data, the software **will not work**.

4.6 Product data

4.6.1 Overview of data structure

The hierarchy of product data in CactuShop appears more complex than it actually is if you look into the database directly. The basic structure is category – product – version.

Categories act as sections within your store. They can be nested in unlimited levels, so you can have a category within a category within a category, and so on. The relationship model allows a category to be within more than one other category.

Products always reside within categories. A product may belong to more than one category if you wish. Products can also belong to categories that contain subcategories too – in other words, you can have a category that contains both subcategories as well as products.

'Versions' are the smallest subdivision of item. It is the version record that contains the SKU (unique item code) as well as the price, stock quantity, etc. Products must have at least one version in order to be able to be bought and sold, since it is the version that is added to the basket and that is actually purchased. Versions belong to a product.

In CactuShop v6, versions may have modifiers applied to them in the form of 'options'.

4.6.2 Removing demo data

CactuShop generally contains demonstration data when you set it up. This can be useful for learning to use the software, seeing how existing products and categories are structured and having something to display on the pages when you are designing the look and feel of your store.

There are several ways to remove the demo data.

4.6.2.1 General deletion from CactuShop back end

To remove product data, click the link in the left hand menu for the first top level category. Then click the link near the top, 'Modify the Page'. This brings up the category for editing. Near the bottom there are two options. You can select either. Repeat this step for each top level category, and all subcategories, products and versions (and their images) should be removed.

You will need to perform a similar process on customers to remove customers and orders.

4.6.2.2 MS Access – form delete

The MS Access database file for CactuShop v6 includes a special method for removing demo data. If you open the database file within the MS Access program, then switch to view 'forms' in the objects menu, you should see a single form called '*frmEmptyDatabase*'. Running this will remove all product and customer data from the store while keeping core records such as config settings and language strings that are required for basic operation of CactuShop.

Note that this method does not remove the uploaded images for products, categories or versions. To remove those, you will need to manually clean out the various images folders within the 'uploads' folder.

4.6.2.3 MySQL / MS SQL delete scripts

Both of these databases can have product and customer data wiped using the special deletion script, available from our web site. Records such as config settings and language strings that are required for basic operation of CactuShop will be unaffected.

Note that this method does not remove the uploaded images for products, categories or versions. To remove those, you will need to manually clean out the various images folders within the 'uploads' folder.

4.6.3 Adding a category

Click the 'Add a New Category' link in the *Products* section, or use the 'New' link at the bottom of the *Categories* section of the left hand menu. You can name the category and add a description, select images and also control how subcategories and product listings within this category will be displayed. We suggest using the 'default' settings unless you have good reason not to – this way you can set the defaults for the whole store from the config settings. But with these dropdowns, you can override the store defaults for particular categories. If you have customer groups set up, you can restrict this category so that only members of that group can see it.

4.6.4 Adding a product

You can add a product by clicking the 'Add a New Product' link at the top of any category page – this is the easiest way to add a product because it selects the primary category that the product will be listed in (though you can change this and add others later). You can also choose 'Add a New Product' from the *Products* section.

4.6.4.1 Product type

In CactuShop v6 there are three product types. You can choose what type of product you're creating, and there are different display options for each.

4.6.4.1.1 Single price

This is effectively a product that has only one version, and hence a single price. If the product is of this type, CactuShop will guide you to add a version once you create the product.

A 'single price' type product can be converted to a 'multiple product versions' type later if required.

4.6.4.1.2 Multiple product versions

An item like ketchup may have a number of bottle sizes available, as well as squeezable dispensers, all containing exactly the same product. Rather than list these as separate products, it makes more sense to set up one product with each bottle/container as a different version. Each version can then have a separate price and SKU (unique item code) but share the same product

description and be listed on the same page. You can optionally set a description and image for each version separately too, as well as for the product.

You can convert a 'multiple product versions' type product to a 'single price' product only if you first remove all but one version of the product.

4.6.4.1.3 Assign to option groups

CactuShop v5.1 had a display type of 'option', but this was just a way to display a product with multiple versions so that the versions appeared in a dropdown menu.

In CactuShop v6, there is full support for product options – for more information, see section 4.6.6.

4.6.5 Sort order

Categories, products and versions will typically be arranged alphabetically. However you may want to override this for all or some items. As a general rule, the scheme used to sort items is set within their parent. So for example, the field used to sort versions is controlled from the product they belong to, and the field used to sort products is controlled by the category they belong to. Rather than have to set these settings for every category and product, default values can be set in the config settings, and each category or product set to use those defaults.

4.6.5.1 Sorting categories

The field used to sort categories depends on the **sortcategories** config setting. Typical settings would be 'CAT_Name', which is the default – sorting by category name. Alternatively you can order by other fields (to find the name of the field you wish to sort by, you will need to open up the database directly).

If you want to have precise control over the sort order, this can be done by first setting the **sortcategories** config setting to 'CAT_OrderByValue'. Then you can edit each category and set a numeric 'sort by value' for it, and the software will use this to sort categories on the site (including menus). It is good practice to pick sort values that are not consecutive (e.g. 10, 20, 30), this way you can always insert new categories between existing ones later and still have room for more. The numbers themselves aren't really important, they are arbitrary values. It is their relationship to each other that matters in terms of sorting.

4.6.5.2 Sorting products

To control the order of product display within a category, first go to edit the category. There is a dropdown menu 'Sort products by'. You can choose 'product name', 'sort by value' or 'default', in the latter case the **sortproducts** config setting will be used.

Typically you should set the dropdown to default for most of your categories, and only change it for specific categories whose products you wish to sort differently for some reason.

If you want to have precise control over the sort order, this can be done by first setting the **sortproducts** config setting to 'P_OrderByValue'. Then you can edit each product and set a numeric 'sort by value' for it, and the software will use this to sort products by. It is good practice to pick sort values that are not consecutive (e.g. 10, 20, 30), this way you can always insert new products between existing ones later and still have room for more. The numbers themselves aren't really important, they are arbitrary values. It is their relationship to each other that matters in terms of sorting.

4.6.5.3 Sorting versions

To control the order of version display within a product, first go to edit the product. There is a dropdown menu 'Sort versions by'. You can choose 'version name', 'sort by value' or 'default', in the latter case the **sortversions** config setting will be used.

Typically you should set the dropdown to the default for most of your products, and only change it for specific categories whose products you wish to sort differently for some reason.

If you want to have precise control over the sort order, this can be done by first setting the **sortversions** config setting to 'V_OrderByValue'. Then you can edit each version and set a numeric 'sort by value' for it, and the software will use this to sort versions by. It is good practice to pick sort values that are not consecutive (e.g. 10, 20, 30), this way you can always insert new versions between existing ones later and still have room for more. The numbers themselves aren't really important, they are arbitrary values. It is their relationship to each other that matters in terms of sorting.

4.6.6 Product options

Products can have 'options' associated with them. You might do this if you have items that are available in a range of colours and sizes, if they are configurable to some degree, or if they can be purchased with or without certain add-ons.

You can determine how options are displayed to the customer and you can associate each option with a weight and price modifier.

Options are formed into 'option groups' – for example you might have a group of colours or sizes.

Products that will use options must be set to be 'Assign to option group' type.

4.6.7 Setting up option groups

Use the link 'Option Groups' in the *Products* section. There is an icon near the top of the page to 'Add New Option Group'. If you have general options that apply to many different products throughout the store such as 'small, medium, large', then you can create these option groups and reuse them on many different products.

4.6.7.1 Back end identifier

This is the name used to refer to the option group in the back end of CactuShop. Choose a name that makes sense and will remind you what this option group contains. This will not show to the customer.

4.6.7.2 Name and description

These are optional fields. If you enter them, they will show next to the options when a customer views the product on the front of the site. If the options are self-explanatory (e.g. red, green, blue, etc.) then you may decide to omit the name and description so the options display is less cluttered.

4.6.7.3 Option display type

For a new option group, you have the choice between dropdown menu, option boxes (radio buttons) or a checkbox. If you select dropdown or option boxes you can create multiple options for this option group. If you select checkbox, then there is only one option available that the customer can either select or not select.

If you select an option type as 'checkbox', you cannot later change this to a 'dropdown' or 'option boxes' type.

If you select 'dropdown' or 'option boxes', you cannot later change this to a 'checkbox' type (even if you only have one option). But you can convert 'dropdown' option groups to 'option boxes' by editing them, and vice versa.

When you click to edit an existing option group, CactuShop will list the products using this option group. You will not be able to delete this option group from the CactuShop back end if there are products that still use it.

4.6.8 Managing options within option groups

The 'Options Groups' page in the *Products* section displays all the option groups and the options within them. To add an option, click the button on the line for the particular option group that says 'Add new option for this group'. Note that this will not appear for checkbox options because these groups can only contain a single option.

To delete an option from an option group, click the button on the line of the option you wish to remove as if you were going to edit the option. Then click the 'delete' button.

4.6.9 Setting up a product with options

You can create new products that use your existing options. Add a product as detailed in 4.6.4, selecting 'Assign to Option Groups' as the product type. You must name the product, but most of the other fields are either optional or can be submitted with default values.

When you submit the product, you will then be given the option of specifying option groups.

You can enter basic information about the product such as its SKU (unique item code), price and weight. You can also select the options that apply.

When you select an option group, it will expand – you can then choose the particular options within that group you wish to use.

You can select a price modifier and weight modifier for each option. You can also select an 'order by' value for the options to control the sort order that they are displayed in to the customer. Finally, you can choose which of the options is the 'default' – this is the one that will be pre-selected when a customer views this product. If you set a deselected option as default, no default will be set for this option group.

Note that it is not possible to select fixed prices for an entire product for an option, only price modifiers. The reason is not a technical one but a logical one – there can be several different options that apply to a product, so the total price of the product can depend on each. If you only have one set of options (let's say size) and want to specify the actual price of the item rather than a price modifier, then you should use multiple versions instead of options. That way you can specify each version and its price, and even choose to display these in dropdown format if you wish.

4.6.9.1 Create individual combinations

The traditional drawback of having products with options on a shopping cart is that since you have only one item (with the options being adjustments to this) you can only track the total number of the item you have in stock regardless of colour, size, etc. Furthermore, being a single item, you can have only one SKU (unique item code). For example, if you have a hat that you sell in both black and white, you may choose to set it up as product with options 'black' and 'white'. But if you wish to track the stock of this item, you only know that you have 10 hats in stock – not how many black and how many white you have.

Of course, if the only options were black and white, you could set it up instead as a product with two versions. That way, you can give each its own SKU (unique item code) and each could have its stock level tracked separately.

But the attraction of options comes when you have multiple variables that would result in a large number of possible combinations. Let's say you have an item that is sold in 3 colours, 3 sizes and 3 styles. That would mean $3 \times 3 \times 3$ combinations, or 27 different versions. It would be confusing for a customer to look down a list of 27 items to find the right combination, and would be time consuming to set up.

Thankfully, there is a solution. If you need to track stock levels for individual combinations of items but want the simpler-display and quicker-setup benefits of options, you can use the 'create individual combinations' checkbox. This converts the options to versions by producing each possible combination of option possible as a single version. But the options still display as options, with multiple dropdown menus, checkboxes, etc. - the best of both worlds.

4.6.9.2 'Disable all combinations and continue to edit option data'

One problem with combinations is that they are essentially just place-holders for each possible combination of options for a particular product. This means that it's not possible to just add a new combination, because these would not then correspond properly to the options they represent. Instead, it is necessary to redefine the options and then create combinations from these.



THERE IS A 250 COMBINATION LIMIT WHEN CREATING COMBINATIONS

With multiple options, the number of possible permutations can be very large. For example, three dropdowns each with 10 options means 1000 possible permutations.

Having an individual combination record for each to enable stock tracking would put a large overhead on the server, with each requiring a line of javascript to check the user's selection against the current stock levels. It is unlikely that products with this number of possible combinations would be kept in stock anyway. They would generally be configured to order in which case regular 'options' would function perfectly.

Therefore, to protect the server performance, the number of combinations is limited to 250.

Note that you **can** have options products that have many 1000s of permutations – this limit only applies if you wish to convert them to versions so you can stock track each individual combination separately.

In CactuShop v6.0 this was time consuming as you had to wipe combinations and options and build them up from scratch. Stock level data stored in each combination record would be lost, as would unique SKU (version codes) assigned to each combination.

In order to overcome this, CactuShop v6.1 introduces a new feature. When you click the 'options' tab for a combinations product, there will be a link 'Disable all combinations and continue to edit option data'. This reverts the item back to an options product, retaining the options settings. You can then change options as required and use the 'create individual combinations' checkbox to create combinations based on your new options settings.

The clever part is that if CactuShop finds that the combination name matches ones previously set up for this product, it recovers the stock level and version code (SKU) for you*. Any new options added that cause new combinations to be created will be coloured in orange, so you can distinguish recovered data (grey) from brand new combinations. Note that when adding combinations to an existing combinations product, CactuShop will not automatically generate version codes for each combination like it does if you're creating combinations the first time for a product.

**The combination name is used to identify whether the combination has previously existed before for this product. Consequently, if you change combination names, this functionality won't work and stock level and version codes cannot be recovered.*

4.6.9.3 Fast-add new option group

The bottom half of the 'Assign to Option Groups' page provide a quick way to setup option groups instead of adding options one by one. You can specify the name of the new option group (which will also be used as the back end identifier, see 4.6.7.1 – you can change this later for clarity if you already have an option group with this identifier and find it confusing). Put the names of the options you wish to create one per-line in the text area. Although this method does not allow you to create default price modifier, weight modifier and order-by values, it should make options creation much quicker in situations where these aren't needed.

4.6.10 Developer overview of products, versions and options

For all three product types, at least one version is always created to represent the item. For 'single price' products, one version is created. For 'multiple product versions' products, one or more versions can be created. In products with options, a 'base' version is created. A 'base' version record in the database is flagged with the *V_Type* field set to 'o' to show it is related to options. Normal versions are flagged with 'v'.

With options, the product is always tied to both the option group table and the options table with 2 link tables. The 'options' version is not tied to any options.

When combinations are created, a version is created to represent each one. These are flagged as type 'c'. The 'combination' versions are tied to their respective options. A 'base' version still exists - this is flagged as 'b'.

When a customer views or adds an option to the basket, two things can occur:

- If the product does not have option combinations, then the base version is used (added to the basket, stock reduced etc). The price and weight is worked out based on the base version +/- the modifiers of the option selected.
- If the product does have option combinations, then the correct 'combination' version is found in the database that represents that selection. This version has the right price and weight setting for its modifiers. It is this version that gets added to the basket and stock tracked.

From a customer point of view, there is no perceived difference between selecting an option that is a base version with modifiers, or selecting one where an individual combination record exists and is added to the basket.

Most of the workings for this functionality are wrapped up in the basket class. When accessing the basket class, you occasionally need to identify the difference between version types:

- v - normal product version
- o - 'options' version, that doesn't have combinations
- b - 'base' version that has combinations
- c - option combination

Most developers won't need to modify the basket class unless programming extra functionality that sits on top of this part of CactuShop.

4.7 Shipping

The term 'shipping' is used to refer to the costs of transporting the order to the customer, although normally of course this is done by the postal service and ships are rarely-involved except perhaps for heavy overseas orders.

CactuShop has two main methods of calculating shipping; a flexible banded system and a real time UPS rates feed. Shipping can also be switched off completely for sites that have no (extra) shipping charges to apply.

4.7.1 Shipping setup

The first choice you have to make is whether you wish to use the internal banded shipping system, UPS real time rates or disable shipping completely (either because all items are electronic or because you incorporate a shipping cost into the price of the items).

To set the shipping type you wish to use, go to the 'Config Settings' link in the *Configuration* section, then click the 'Shipping' link in the *Orders & Customers* section. Set the **shippingsystem** config setting using the dropdown menu and click to update.

4.7.2 CactuShop banded shipping

This system comprises a list of bands, each representing a price or weight range for a particular shipping method and destination region, for which a cost can be specified. The number of bands is virtually unlimited, with up to 5 regions (as standard) and 3 shipping methods (as standard) although the number of these can also be decreased and increased simply too. There are a

number of settings that affect the banded shipping that can be set from the 'Shipping' section in the *Orders & Customers* config category.

4.7.2.1 Shipping config settings

calcshipcostbyweight – If checked, the order weight rather than value in default currency is used to determine which shipping band applies. With this change, the unit changes from the default currency to whatever weight unit you have set in the **weightunit** config setting.

pickuption – When checked, this gives customers the option to pick up the items rather than have them sent. In this case, no shipping is charged to them. Uncheck this if you don't want your customers to have this option available to them.

shiptaxband – The tax band you wish to apply to shipping charges. In some jurisdictions, shipping may be a taxable item, in others it is not. Select the appropriate band from the dropdown menu. Remember that this setting only affects customers who are subject to tax. Those overseas who are exempt from sales taxes will not be charged tax on shipping regardless of this setting.

4.7.2.2 Shipping methods

These are the various types of shipping that are available, such as 'standard mail', 'priority mail' or 'overnight'. Generally the fastest methods are most expensive, so it is up to the customer to choose whether they wish to pay more for the faster delivery.

To set the shipping methods you wish to use, go to the 'Shipping Rates' link in the *Regional Setup* section.

There are three shipping methods as standard, but you can edit these, add new ones or delete them. Clicking on a method lets you change the name, description and sort order (which controls the sort order they are display during checkout). Typically you would set a higher sort order number for the more expensive options (the numbers you choose are arbitrary; we would suggest 10, 20 and 30 for starters as it allows you to insert new methods later that can appear between the existing methods).

4.7.2.3 Shipping zones

Each country (or even state if you are using individual state records for your country) must be placed within a shipping zone. This allows shipping calculations to take account of the differing costs of sending packages depending on the destination. Typically it costs more to send packages to far-flung places or less popular destinations. Local deliveries and those to developed countries where major air routes exist are normally less expensive.

To set the shipping zones you wish to use, go to the 'Shipping Rates' link in the *Regional Setup* section. The shipping zones are set on the bottom half of the page.

In general, setup the shipping zones in order of cost, so your zone 1 will be local/domestic working up to your highest zone being 'rest of world'. Don't feel limited to 5 zones just because our demo uses those. If you have states activated, you may want several domestic zones as well as multiple overseas zones. For example, a customer in Texas might want the following:



DELETING A SHIPPING ZONE

Deleting a shipping zone within the shipping rates screens will remove all those bands but NOT the actual shipping zone record.

To completely remove a zone, make sure you edit it on the shipping methods/zones page and select the 'delete' option. You must specify which zone to move those countries to (otherwise you could end up with countries that are unassigned to any zone).

Zone 1 – Texas
 Zone 2 – Southern US states
 Zone 3 – Rest of USA and Canada
 Zone 4 – South America
 Zone 5 – Europe
 Zone 6 – Australia and New Zealand
 Zone 7 – Rest of World

With these zones, he would then need to work through the country/state records and make sure each is assigned to the appropriate group. For example, the UK record would need to be changed from zone 1 to zone 5.

4.7.2.4 Setting destination countries

Now you've set up the different zones you'll ship to you need to set which countries are mapped to which zones. This is not difficult but takes a few minutes thanks to there being so many countries in the world.

Go to the 'Destinations' link in the *Regional Setup* section. Use the group links at the top of the page to view countries, then go through each and select the correct shipping zone it falls into. Once you've set all the countries on the page, hit the update button. To save time, you might also want to set other settings for each country at this point too.

You can choose whether this country/state is subject to tax on orders placed with your store, and also whether each country is live or not. You can deactivate countries that your store does not wish to deal with.

4.7.2.5 Managing the shipping bands

First, go to the 'Shipping Rates' link in the *Regional Setup* section. This lists the shipping methods you have setup in the top half of the page. Clicking on the name of the shipping method brings up a list of rate bands for that method, for each zone. Note that you don't need to have all zones for every shipping method, so if you only offer 'overnight' as an option to domestic customers in your first zone, this is not a problem.

Integrated Shipping

Your shipping system is currently set to integrated shipping ([change](#)).
 Integrated shipping set to calculate by order value ([change](#)).

Shipping Methods

Click on the name of the shipping method to view the shipping rates set up, or the edit button to change the method.

	Live?
Standard Post	<input checked="" type="checkbox"/> <input type="button" value="EDIT"/>
Express Post	<input checked="" type="checkbox"/> <input type="button" value="EDIT"/>
Express Air Overnight	<input checked="" type="checkbox"/> <input type="button" value="EDIT"/>

[Add New Shipping Method](#)

You can add a zone or delete a zone for this shipping method. You can also add and remove bands within each zone.

It should be fairly clear how the bands work. You set an 'up to' amount (or weight if you have the **calcshipcostbyweight** setting checked), and a

corresponding shipping price. This band applies to a particular zone and method; in this way you can create a very detailed and precise shipping calculation. For the most precise control, create many narrow bands, each costing slightly more than the previous one.

Each method/zone group must have at least one record: the 'all higher orders' one. This is a catch all for any order that does not fall within any of the other price bands. Be sure you consider what would happen if someone put a very large order through your site and make sure your bands will put an appropriate shipping price on it.

4.7.3 UPS real-time shipping rates

If the **shippingsystem** config setting is set to 'ups', the real time shipping lookup from UPS is activated instead of the banded CactuShop shipping system.

For further information regarding UPS Real Time Shipping, see:

<http://www.ups.com>

Download the shipping documentation UPS provides. You will need to sign up for an account on the UPS web site in order to use UPS shipping, though this is free (at time of writing).

The UPS real time Shipping integration in CactuShop allows you to get live shipping costs dynamically from the UPS web site. During the checkout process, various pieces of information (such as the weight of the items in the basket, the address of the shop and the destination address) are passed over to UPS, which then works out the various shipping methods (and corresponding prices) it can offer. These are passed back in XML format and CactuShop uses this information to display shipping options and calculate pricing of orders.

The result is a display that looks very similar to when CactuShop integrated shipping is selected. The difference is that the methods and prices are those quoted by UPS in real time, specific to this one order. It will also give estimated delivery times for some of the shipping methods.

Please note that accuracy of the options and prices quoted is subject to some limitations. The price quote of UPS is only as good as the accuracy you have used when setting product weight within CactuShop. Various other factors that are not passed to UPS, such as package dimensions, can also affect the price. That said, CactuShop's UPS integration should produce accurate rates providing your products are not unduly bulky or oversized in one or more dimensions.

Furthermore, returned delivery estimates (e.g. "by 8am tomorrow") are only accurate if you place your order with UPS the moment that the customer's order is made. Clearly 'next-day' will not be next day (as far as the customer is concerned) if you only package and dispatch the order 24 hours after receiving it. The language string *ContentText_UPSGuaranteedDeliveryExpl* is displayed with delivery estimates so that the customer is made aware of this. The text of this notification can obviously be changed through the site text editor (see 7.2 for more information on 'site text' editing).

Assuming you have set up a UPS account, to switch on UPS Real Time Shipping you first need to ensure that you have Microsoft's MSXML3.0 DLLs installed on your server. Contact your host for information if you get errors relating to this. You then need to configure the UPS config settings, and, finally, change the config setting **shippingsystem** to 'ups'.

4.7.3.1 Disabling or changing UPS methods

In some cases, your business might not use all the various shipping methods that UPS might have available. In this case, you can remove any of the methods you don't need directly from the `tblCactuShop1UPS` table. Although CactuShop will still receive them from UPS, it won't offer them as options to customers. Similarly, the names of individual UPS methods are drawn from this table. If you wish to change the names of the shipping methods for any reason, you can edit the records in this table. There are no admin screens for this in the back end as it is something rarely changed in our experience.

4.7.3.2 Config settings – UPS

4.7.3.2.1 UPS_AccessKey

Your UPS access key; this is required in order to use any UPS feed. You can request this through your UPS back end. Make sure you request a key for the XML feed and not for an HTML one.

4.7.3.2.2 UPS_Commercial

Whether all addresses you deliver to are commercial. Commercial deliveries are slightly cheaper than residential, so if you're sure all your products are going to commercial addresses, give your customers a discount by switching this on.

4.7.3.2.3 UPS_CurrencyConversion

UPS will return the shipping cost in the currency of the shop country (see config setting **UPS_ShopCountryCode**). If this is a different currency to your default site currency (e.g. your shop is in the UK, but your default currency is Euros rather than Pounds), enter a conversion rate here. Otherwise, leave this as a conversion rate of 1.

4.7.3.2.4 UPS_MoreInfoURL

When the UPS shipping method selection is created, a URL is displayed to find out more information on the different shipping options. The default points to a US-specific page, so you may want to alter this to make it specific to your location.

4.7.3.2.5 UPS_PackageType

The type of package UPS will be sending (default is 02).

00	unknown
01	UPS letter
02	customer supplied package

03	tube
04	PAK
21	UPS Express Box
24	UPS 25kg box
25	UPS 10kg box

See UPS documentation for more details.

4.7.3.2.6 UPS_Password

Your UPS account password.

4.7.3.2.7 UPS_PickupType

How UPS will pick up your package (default is 01).

01	daily pick-up
03	customer counter
06	one time pick-up
07	on call air
11	suggested Retail Rates
19	letter center
25	air service center

See UPS documentation for more details.

4.7.3.2.8 UPS_ShopCountryCode

The country code for the shop location – i.e. where UPS will be picking up the packages from. Use GB for all of Great Britain, or the ISO code for your country (these can be found in the *tblCactuShop1Destinations* table).

4.7.3.2.9 UPS_ShopPostalCode

The postal code/zip of the shop location.

4.7.3.2.10 PS_ShopRegionCode

us/eu/c/pr/m/o - The region where the shop is located. United States, European Union, Canada, Puerto Rico, Mexico and Other, respectively.

4.7.3.2.11 PS_ShowDeliveryDays

y/n - whether to show the number of days and the time the delivery is guaranteed to arrive. Note that only some inland deliveries retrieve this information.

4.7.3.2.12 PS_UnitOfMeasurement

KGS/LBS – this is the unit of weight measurement that your store uses. It should match your **weightunit** config setting. The difference between these two is that this config setting must be either KGS or LBS (case sensitive) whereas the **weightunit** config setting is purely for display purposes and as such can be set to 'lbs', 'Pounds', 'kg', etc. CactuShop will pass the unit to UPS when requesting prices – if the unit used generates an error from UPS (e.g. your store uses Kilos but you are in the USA so the UPS system wants to see lbs) then CactuShop can handle this automatically. It will convert the weight to the alternative unit and repost it to UPS in order to get a price back.

4.7.3.2.13 PS_URL

URL of the UPS XML feed – this is very unlikely to change.

4.7.3.2.14 PS_UserID

Your UPS account username.

4.8 Product attributes **PRO***

In v6 'pro', product attributes allows you to enter rich information for your products. For example, if you are selling books, you may want to set up attributes for ISBN number, Author, Publisher, etc.; for DVDs, perhaps you would require director, film length, region code, etc. This feature supersedes the spec table - rather than putting the data in one unstructured lump, setting up product attributes has the following advantages:

- Attribute data is displayed to the user in tabular format
- Data can be used on the search - either in the keyword box or as their own field, in a dropdown or textbox
- Data can be compared side-by-side with similar data from other products using the 'comparison' tool
- Special attribute fields can be created for HTML meta data

4.8.1 Setting up attributes

Attributes can be created from the "Product Attributes" link in the *Products* section, where you can also view, edit and delete attributes. Each attribute is available to all products. Click "new" to create the first attribute.

4.8.1.1 Enabling and disabling attributes

Attributes can be turned on and off with the "Live?" checkbox. Attributes that are unchecked can still be used in the back end, but are not displayed on the front of the store - they exist but are not 'live'.

4.8.1.2 Types of attributes

There are 3 types of attribute - *Text*, *Dropdown* and *Yes/No*. The first two are similar in that they allow general text entry; however dropdown is more applicable for a finite list of data (e.g. Region Code), the former for data that will differ for each product (e.g. Film Length). The type of attribute affects both data entry in the back end and display on the search on the front-end.

4.8.1.3 Show on product pages

"Show on product page?" sets whether to list as tabular data when viewing the product. There are some types of data you may not want to display, for example, a "keywords" search field, or html metatag data or even internal notes.

4.8.1.4 Show on search

"Show on search" has 4 different settings:

- "No, don't use on search"
- "Include with keyword search" (no extra field on the search, but it is checked when keywords are entered in to the main search box)
- "Add extra optional search field" (not included in the main search box, but has a separate search field. Will either be a text box, checkbox or a dropdown depending on the attribute type)
- "Both" (has its own field and is checked by the main search box)

Don't include too many fields to be used on the search - searching on attributes is data intensive and this will slow down the performance of the search. Test the search after making changes to this field to ensure the speed is acceptable. Too many fields and the search may not work at all (dependant on database type used).

4.8.1.5 Special attributes

There are 3 special use fields. As well as acting like a normal attribute, the data in an attribute flagged as 'special use' will be used for the page title or meta tags.

4.8.1.6 Show on comparison table

"Show on comparison table" and its 4 settings should be self-explanatory. "Products" here refers to the products in the comparison table.

4.8.1.7 Fast entry

Attributes set for 'Fast entry' are listed on the modify product page, making it quick and easy to add attribute data. Use this for common attributes that you will use for most of your products.

4.8.1.8 Order by (sorting) value

The *Order By Value* determines the sort order used for displaying attributes on the CactuShop front end pages. It should be set to a different numerical value for each attribute (if used); these attributes will then be displayed in

order of this value (lowest to highest). This is useful if you wish to arrange attributes by importance, for example.



DELETING ATTRIBUTES

You can delete attributes even when there are existing products that use them. For this reason, exercise extreme caution deleting attributes. There is no undo feature – if you are not completely sure you want to delete the attribute, use the 'Live?' checkbox to disable it. You can then delete it later once you have satisfied yourself there were no ill-effects.

4.8.1.9 Delete attribute

The attribute can be deleted. A list of products that use the attribute is shown. You can delete an attribute that is used by products, so be very careful with this button.

4.9 Coupon discounts

Coupons are unique codes that correspond to a percentage or fixed amount discount. Coupons are entered during the checkout procedure.

4.9.1 Generating coupons

Clicking the New link in the coupons section brings up the coupon creation form. The coupon value as a percentage or as a fixed amount in default currency can be set from the first line. Next, a start and finish date for the coupon's validity can be set. If the end date is not set, it is assumed to be valid forever (which in reality is 2050). The quantity box is used to specify the number of coupons you wish to generate - many store owners will generate coupons in bulk as part of a promotion. Finally, there is the option to set coupons as reusable. By default, a coupon cannot be used twice.

Reusable coupons with a set expiry are quite useful as promotional tools - the same code can be published in a newsletter, giving those who subscribe a period to use the coupon and obtain the accompanying discount. There is not the overhead of having to send individual coupon codes to everyone.

4.9.2 Listing and finding coupons

The 'List / Find' link brings up a list of recent coupons, grouped by the time of generation. Similar coupons therefore appear on one line with a quantity shown. The individual coupons can be viewed and edited/deleted by clicking on the 'List Coupons' link. Specific coupons can be found by entering part of the code into the search box.

4.9.3 Tax and coupons

When checking out, the way a fixed-amount coupon is represented in terms of its tax and value elements can look confusing. The reason is that fixed price coupons (e.g. \$10 rather than 10%) must be treated as 'cash' for tax and accounting purposes. You cannot simply apply the \$10 to the total amount before tax and then calculate tax on the resulting amount. To do so would effectively defraud the tax man; you would not treat a \$10 dollar banknote in this way, so you must not treat a coupon like this either.

CactuShop calculates the tax and value portions based on accounting best-practice. First, the total tax on the order is calculated, as is the order value (excluding tax). The tax percentage as a proportion of the ex tax value is calculated and this is used to determine how the coupon's \$10 value is spread between the ex tax amount and tax portions of the order total. The total value of the coupon will always be \$10, but the contribution to tax and value elements of the order total will vary depending on the items purchased as well as whether the buyer is subject to tax or not.

4.10 Customer discounts

Most stores will have valued customers who make regular orders. In many cases it is worthwhile offering such customers a discount for their loyalty. If you want to apply ongoing discounts on a discretionary basis to individual clients, you can do this simply by opening up the customer in the back end and entering a value in the 'Discount (%)' box.

Customer discounts apply to all items – you cannot limit this type of discount to particular items or categories. For that you might want to consider customer groups (see 4.10.1).

4.10.1 Customer groups **PRO***

This feature lets you group customers together, which can make it easier to manage stores with a large numbers of customers, or grant privileges to certain groups of users.

Different customer groups can be given a percentage discount. For example, you might create one group called 'preferred customers' with a 20% discount and another group called 'good customers' with a 15% discount.

Grouping customers in this way also gives a convenient categorization that can help find certain types of customers, even if you don't want to offer any discount to them. For example, if you sell computer games, you might decide to categorize customers into whether they have a PS2, Xbox or PC. This can be useful later if you need to find all the customers that are interested in a particular platform.

Customer groups can also be used to enforce a login for access to certain sections of the product catalogue, useful if you have a 'trade' section with items or pricing only available to wholesale customers that you don't want casual visitors to see.

4.10.1.1 Setting up and managing customer groups

Click on the 'Groups' link in the *Customers* section of the left hand menu. This lists the groups that you have set up. There are two special groups listed even if you have no groups set up – affiliates and mailing list members. These are dealt with in section 4.10.1.6.

You can create a new group using the 'New' link in the top right corner of this page. You can edit any group by clicking the 'Edit' button on its row. You can also view the members of any group by clicking on the hyperlinked group name.

4.10.1.2 Customer group discounts

A percentage discount for customer groups applies in the same way as a normal customer discount percentage. It applies to all customers in the group. You can set whether a customer discount percentage either is added to, or overrides, a customer discount percentage by setting the **customerdiscount** config setting.

For example, say "customer A" has their own percentage discount of 20%. "Customer B" has no percentage discount. Both belong to group "Wholesale Customers", and this group is set to a discount of 10%.

If your config setting **customerdiscount** is set to "override", then customer A's personal discount overrides the group discount, giving him a discount of 20%. If it is set to "add", then the customer will have a discount of 30%.

In both cases, customer B will just have the group discount of 10%.

4.10.1.3 Assigning parts of the catalogue to a customer group

When at least one customer group has been created, a new option is available when creating or editing a category, product or version - it can be assigned to be available to only one group. Note that this setting is inherited by any products or versions below the level where it is set, but is not inherited by subcategories. So if you set a category to belong to a particular customer group, that category and its products and versions will not be available to non-members of the group. But any subcategories of that category will need to be set individually to be restricted to the customer group.

If a part of the catalogue is unavailable, it will be hidden from the site. A customer will need to log in and belong to the group in order to be able to view it.

4.10.1.4 Special per-item pricing for customer groups

When at least one customer group has been created, you can also set a special price for a customer group on a per-version basis. Click to edit a version and then look for the 'Customer Group Prices' link about halfway down the page. This expands this section of the page and gives you a box to specify pricing of that item for each group.

This price is reflected to logged-in customers who are members of that group when browsing the site catalogue and adding products to the basket.

Note that CactuShop always tries to find the lowest price that a customer would be entitled to. So if you try to apply a higher than normal price to an item for a particular group it will have no effect; CactuShop would realise the base price is cheaper and give the customer that instead. Similarly, if the item has a quantity discount that works out cheaper than the group discount, CactuShop will use this instead.

4.10.1.5 Adding customers to groups

To add customers to groups (not including the 'special' affiliate or mailing list groups), simply find and edit the customer's record. There is a dropdown menu where you can specify the group they belong to.

4.10.1.6 Special customer groups

In prior versions of CactuShop, affiliates and mailing list members were distinct from customers. In v6, these have been merged to the customers table.

Customers (or members who have created an account) can choose to apply to become affiliates by logging into their account and clicking this option. They are not actually considered affiliates until they have been allocated a % commission.



UPGRADED AFFILIATES DATA

If you have upgraded data from a CactuShop version prior to v6 that contained affiliate records, these affiliates' IDs will have changed.

You **must** take action to ensure that affiliate links continue to earn credit for these affiliates. Please see section 3.4.5.1 for information on handling this.

Membership of the mailing list is by customer request too, either by signing up from the 'mailing list' page on the front end, opting in from within the customer/member account, or by checking the option during checkout. In all three cases, the user is not considered a member of this group until they have confirmed their membership by clicking the confirmation link that is emailed to them.

4.10.1.6.1 Upgraded affiliates

If you have upgraded data from a CactuShop version prior to v6 that contained affiliate records, these affiliates' IDs will have changed. You must take action to ensure that affiliate links continue to earn credit for these affiliates. Please see section 3.4.5.1 for information on handling this.

4.10.2 Quantity discounts **PRO***

Quantity discounts allow you to set a lower price per-item for bulk purchases. To set this up, first set the **quantitydiscounts** config setting to the maximum number of price breaks allowed per product. Set this feature to 0 to turn it off. If you do not use this feature, it is recommended you turn it to maximize the performance of your site.

To set the actual break points and prices, expand the 'Quantity Discounts' section when adding/editing a version. Remember that the price you enter is always the per-item price, not the total price for that quantity of items.

When a version is set to have quantity price breaks, then this will be indicated on the front-end. A link to a pop-up window details the available quantity discounts.

4.11 Content management

Online stores will generally require a few extra content pages to complement the product catalogue. CactuShop v6 incorporates a basic content management system to create and maintain these extra pages.

Some other content such as the new items on the front page can also be controlled from the back end of CactuShop without having to edit scripts.

4.11.1 'Site text' (language strings)

To change the majority of language-specific content throughout the store, see 7.2.

4.11.2 Custom pages

Follow the link 'Custom Pages' in the *Miscellaneous* section. This brings up a list of the custom pages your store has.

4.11.2.1 Adding/editing pages

There is a 'New' link in the top-right corner of the custom page listing. This brings up a blank form where you can enter the page title (heading on the page) as well as meta tag values and the page body text.

The 'ID' field can accept an alphanumeric name up to 10 characters long. This is the name that will appear in the URL bar when this page is viewed, so a logical name rather than number makes most sense.

You can edit pages in a similar way.

If your store back end is set to support multiple languages, you will have multiple fields to enter the various contents for each language into.

4.11.3 Front page 'news' items

As a store owner you will likely want the front page to feature some introductory text as well as some brief text to draw users through to other parts of the site. The text here is set from the 'Front News Items' link in the *Miscellaneous* section.

There are four 'stories' that can be edited. The first is the headline news story and also provides the option to upload an accompanying image.

You can switch language to enter text for alternative languages that your store supports.

4.11.3.1 Positioning and styling news items

Because CactuShop v6 generates pages that are XHTML/CSS compliant, the formatting of news items (as with all front page elements) is controlled by CSS. The styles for the news items are in *cactushop.css* in the skin's 'templatestyles' folder.

In particular, use your text editor's 'find' facility to search for 'newsitem'.

The CactuShop front (home) page is divided into four sections which you can clearly see if you open up the *default.asp* file. You can easily change the order of these sections by juggling the positions of the include files on the page.

4.12 Logins

When you run through the installation script, a login and password for accessing the back end is set up in the `tblCactuShop1Logins` table for you.

This is the primary site admin record and cannot be removed from the back end system (although it can be removed directly from the database of course).

4.12.1 Adding further logins

From the back end home page, look for the 'Logins' section. You can list the logins on the system, or opt to create a new login.

You can choose a username and password for the login, choose the language for this login (if multiple back end languages are available), and also choose which areas of the back end this user will have access to. This means it is possible to have someone process orders but prevent them from changing product data or config settings, for example.

You can also disable a login temporarily with the 'live' radio buttons.

5 Visual Design

5.1 Overview of CactuShop's template system

CactuShop is designed around a flexible template system that gives freedom to manipulate the look and feel of the cart without hacking the ASP scripts. This separation of functionality and content makes it possible for visual designers with little or no ASP knowledge to have full control over the look of the finished site.

In v6, this has been taken to the next level by a complete CSS and XHTML work-over. It is now possible control the position, colour, style and properties of almost any page element from the CSS files alone.

CactuShop v6 is designed to conform to the W3C's recommended web standards*, ensuring the best cross-browser performance and access for users with disabilities.

*W3C standards compliance

The current recommended W3C standard is actually XHTML 1.1 rather 1.0 (which is used for the CactuShop default skin). The only real difference between the two is that XHTML, being XML, should be served with the MIME-type of *application/xhtml+xml*, *application/xml*, or *text/xml* rather than *text/html*. Unfortunately, this is not supported properly by Internet Explorer 6. But the actual XHTML syntax produced by CactuShop is compatible with both XHTML 1.1 and 1.0, so CactuShop can easily be switched to support XHTML 1.1 later when support is more complete (in other words, the vast majority of Internet Explorer users have IE7).

If you really must use XHTML 1.1 now, the W3C has a workaround to get Internet Explorer 6 to support it:

<http://www.w3.org/MarkUp/2004/xhtml-faq#ie>

5.2 The HTML template

This is the core of the skinning system. The default location is within the *skin_default* folder, and the file should always be named *template.htm*.

CactuShop v6 generates HTML that conforms to the XHTML web standards. The default template is also XHTML, though CactuShop will work fine with HTML4 and 'generic' HTML. If you need more information on the advantages of using standards-compliant code, or the differences between XHTML and older versions of HTML, see the W3C web site or Google.

To redesign and customize the look and feel of your site, the first place to start is by editing our default skin.

5.2.1 Editing our template

If you find the *skin_default* folder and open up the *template.htm* file in a browser, you will see the skin that is used to format CactuShop pages.

You should be able to edit this template in most modern visual development tools. If creating your own skin, stick to our default folder names 'templateimages', 'templatestyles' and 'templatescripts' because CactuShop recognizes these and uses them during the skinning process.

5.2.2 Multiple languages

If your store uses multiple languages, you should design a different skin for each of the languages. You can name the skin folders appropriately, e.g. *skin_english*, *skin_french*, *skin_german*, etc.

The skin name used for each language is set up by going to *Languages / Email* and then the 'Lang. & Email Setup' link. You can also use this to change the default skin folder name from *skin_default* if you prefer.

5.2.3 Skin tags

The skin template contains the basic look and feel as well as static items that appear on all front end pages, such as the logo, navigation menu, etc. For elements that appear on every page but need to be dynamically generated (such as the mini-basket, whose HTML varies depending on what products are in it), special skin tags such as `xxxBASKETSUMMARYxxx` control the placement. The `xxxPAGECONTENTxxx` tag controls where the general page content will be displayed.

5.2.3.1 Custom tags

If you need to add other dynamic items to every page of your site, then the way to approach this is to create a custom tag. The knowledgebase contains information on how to approach this.

5.2.4 Cascading style sheets (CSS)

Cascading style sheets are specially formatted text files that contain information on how HTML elements on the page should be displayed. Items in the HTML can be given an 'id' in which case they can be uniquely referenced in the CSS. Alternatively, they can be given a 'class', so that a general style in the CSS can be applied to them.

CactuShop has several CSS files that apply to different parts of the software.

5.2.4.1 `template.css`

This controls elements that are part of the skin template HTML file. This file is where you control the position and nature of the main skin elements. For example, if you wanted to move the right hand side bar to the left, set the page-width to 100% or change the hyperlink styling of the navigation menu, do it here.

5.2.4.2 `cactushop.css`

This file is the largest of the CSS files and contains style information for elements of HTML that are contained in, or generated by the ASP scripts that form CactuShop.

If you want to change the way tables are displayed, change the hyperlink colour used in CactuShop pages or fine-tune the product display, it should be done here.

The file is organized so that the most important styles that are likely to be changed (generally ones with colours) are near the top. As you work further down you will reach styles that control spacing and positioning of elements;

most users won't need to change these for the average store design, but HTML masters will appreciate the ability to fine-tune the display down to the pixel level.

5.2.4.3 **invoice.css**

This contains style information relating to the *invoice.htm* file which is used to format HTML invoices. Invoices for printing can be issued from the back end; there should be a link to issue an invoice when you view an order. For more information see 11.1.2.

5.2.4.4 **print.css**

When printing pages, it is normally desirable to have the page laid out slightly differently. The customer is generally only interested in the main part of the page rather than the navigation menus, page headers and footers, search box or basket summary. CactuShop features a separate CSS file for printing pages, so layout, colours and font-faces can be optimized for printing as well as extraneous page sections removed. Most modern browsers should use this special printing CSS automatically when using 'print' or 'print preview' commands from the browser.

5.2.5 **Useful tools**

For web developers, there are a number of tools that can speed up the process of dealing with CSS, especially CSS of a site you are unfamiliar with.

Since most developers will have all three browsers installed for testing anyway, it makes sense to install all three toolbars as each has certain features that will make it useful in some circumstances.

5.2.5.1 **Mozilla Firefox web developer toolbar**

We're big fans of Mozilla Firefox, and this with the web developer toolbar installed is something no web designer should be without. To get it, first install Firefox, which you can get here:

<http://www.mozilla.org>

Once you have this installed, go to *Tools > Extensions*, and then click the link 'Get More Extensions'. You might need to dig around on the add-ins site to find it, but it's worth it.

A feature that is very useful is 'Edit CSS'. This brings up the style sheets for any page you are viewing and allows you to make changes that take effect immediately in your browser. This saves a lot of time if you are tinkering with CSS or making test changes to see if you've found the right item.

There is also validation features, including 'validate local HTML' which is useful when your dev server is not accessible from the internet.

5.2.5.2 **Opera web dev toolbar**

There is also a similar utility for Opera that you can obtain here:

<http://nontroppo.org/wiki/webdevtoolbar>

The Opera browser is available for free from here:

<http://www.opera.com>

It provides validation and some similar tools to the Firefox one. The *Display > View Computer CSS* is particularly useful as you can get a summary of the CSS code applied to an element by hovering over it, as well as a summary of the HTML code of a particular element by clicking it.

5.2.5.3 IE web developer toolbar

Microsoft has got itself in on the act too. If you search their web site, you should find a download for their own IE toolbar.

It's not quite as funky as the other two, but is a useful addition to the web developers set of clubs.

6 Search Engine Optimization

Most online stores, perhaps with the exception of large established brands, rely heavily on search engines to deliver traffic and hence customers to them.

In recent years, Google has become the pre-eminent search engine in the market, and the ground-breaking force that every web store must contend with. But the good practices for obtaining good Google rankings apply to all major search engines.

CactuShop contains a number of measures that are designed to improve the SEO (search engine optimization) capabilities of CactuShop.

6.1 SEO myths

There are a lot of myths and we've heard most of them. Here are few...

6.1.1 Google doesn't index ASP web sites

Claim: Sites aren't included in Google's index if they use ASP (or some other non-html file type.)

This is **FALSE** – source: Google

At Google, we're able to index most types of pages and files with very few exceptions. A sampling of the file extensions we're able to index includes: pdf, asp, jsp, html, shtml, xml, doc, xls, ppt, rtf, wks, lwp, wri, swf, cfm, and php.

<http://www.google.com/webmasters/facts.html>

However, it is true that the parametrized nature of database-driven site software like CactuShop can have an adverse affect on page indexing. This applies to PHP, JSP and other dynamic scripting technologies too – it is not ASP-specific. Fortunately CactuShop provides solutions to these issues - see 6.3 and 6.4.

6.1.2 Apache or open source solutions rank higher in Google

Claim: a page with exactly the same content but served from a Microsoft server, or with a PHP rather than ASP extension (implying an open-source technology) performs better in Google.

This is **FALSE** – source: Google

Google does not distinguish between different web server types in our rankings; use whatever type of web server is best for your situation.

<http://www.google.com/webmasters/facts.html>

6.2 Improving rankings

There are no shortcuts to getting your site to perform well in search engines, even if the pages are well-optimized. The key points to maximize the performance of your site are:

- Make sure your site contains good content and that is readable by search engines – image heavy sites might look nice, but ensure you include good descriptive text that uses a variety of terms. For example, if selling vacuum cleaners, you should consider that people might be searching for a 'hoover' or a brand name, as well as 'vacuum cleaner'. They might also be searching for 'domestic appliances' or 'household appliances'. Your introduction text or 'about' page is particularly important.
- Get relevant links to your web site. This is where many sites fall down - Google uses page links from other sites as a form of 'vote' for your site. Avoid link farms or other deceptive methods designed solely to boost your page rank. The best links are ones from relevant directories and forums to your site.
- Don't deliberately attempt to 'spam' search engines with optimized pages designed purely with search engines in mind. Even if they perform well initially, you risk having your site booted out of the search engines for use of deceptive methods. Remember that search engines are always working to improve their algorithms to exclude 'spammy' methods and overcome attempts to distort their results.

It may be tempting to believe the promises of quick returns offered by SEO 'specialists', but care should be taken to check out their methods to ensure they don't breach the established search engine rules. You should also ensure that the SEO company you use understands CactuShop and the SEO features it employs. We have heard horror stories of CactuShops being 'optimized' for search engines by editing the ASP scripts badly and breaking the whole site.

6.3 Gateway pages

This is a legacy system from prior versions of CactuShop that has been upgraded to work with CactuShop v6.

It is believed by some people that parameterized URLs (i.e. web addresses that pass database ID parameters rather than different pages for each product) are not indexed by Google. This is incorrect; most (maybe all) of the pages on our own online demo for v5.1 were in Google. However, Google itself says that such pages are not as readily indexed, especially those with long parameterized URLs.

To counter this problem, the 'gateway pages' feature allows static .html documents to be created based on the database content. As default, these are created in the *uploads/HTML* folder. An index document called *default.htm* with links to all the pages is also created. To allow Google to follow through and index all these static pages, a link on the skin template or home page that points to the *uploads/HTML/default.htm* page should be included.

6.3.1 My SEO company says this is spamming the index and will get my site booted from Google

Most search engines specifically outlaw use of doorway or gateway pages if the intention is to spam their index and provide multiple entry points optimized for various keyword terms. Some SEO companies we have

encountered insist that using CactuShop's gateway pages feature conflicts with these rules.

This is not the case. CactuShop's system is designed to produce static representations of each product for indexing by search engines that have trouble seeing the main site. In fact, Google recommends this method.

Source: Google

Consider creating static copies of dynamic pages. Although the Google index includes dynamic pages, they comprise a small portion of our index. If you suspect that your dynamically generated pages (such as URLs containing question marks) are causing problems for our crawler, you might create static copies of these pages.

<http://www.google.com/support/bin/answer.py?answer=745>



SEO FRIENDLY URLs
FUNCTIONALITY REQUIRES THE
SETTING OF THE CUSTOM 404
PAGE ON YOUR WEB SERVER

If you activate this feature from CactuShop but don't set it up properly on the server, you will get 404 'page not found' errors.

6.4 SEO 'friendly' URLs **PRO***

A new, unique, feature to CactuShop v6 is the ability to create search-engine friendly links to categories and products. Formerly, this kind of solution could only be achieved by 'mod-rewriting' using specially installed third party components on the server.

Search engines such as Google spider your website to index the contents. Many search engines will only index a certain number of "dynamic" pages (dynamic pages being those that have data in the querystring, i.e. parameters passed after the ? in the web address bar of your browser). By enabling the friendly URLs feature, search engines and visitors alike see unique URLs for each category and product.

As an example, say you have a product "Canon Digital Rebel XT" in the "Canon" category that resides in a "Cameras" master category. A normal link would look like:

http://www.demo.xyz/product.asp?strParents=3&CAT_ID=1&P_ID=5

By enabling friendly URLs, these will instead look like:

http://www.demo.xyz/Cameras/Canon/CANON_Digital_Rebel_XT/p-3-1-5/

The search engine spider (and any visitor in fact) - sees each page as a unique, semantically named, static page. This should mean both that pages are indexed more quickly, and that more of them get indexed.

6.4.1 Technical overview

Friendly links work by exploiting the 'custom 404' functionality offered by the Microsoft IIS web server. When a page is requested that doesn't exist, normally the user is diverted to a 404 error page. By default, this is a page that tells the user that the page they requested does not exist.

However, IIS lets you override the default 404 page and specify an alternative page. By setting up a custom 404 page on CactuShop, we can handle these 404 errors. If we recognize the requested page as one of our special 'fake' URLs to a category or product, then we display the correct category or

product. If the request is a real '404' error, then we display a normal 404 message.

Because the visitor only ever sees the 'friendly' URL and because the custom 404 page that handles the whole process gives the 'ok' response header, the visitor cannot tell the difference between this page and a true static page.

6.4.2 Activating the 'friendly' URLs feature in CactuShop

In CactuShop v6, the custom 404 page is called *404.asp*, and is located in the root of your store. We want to point all 404 requests to this script. For the examples below, we will assume your domain is:

<http://www.demo.xyz>

with your CactuShop installed in the subfolder /shop/. Therefore your custom 404 script will be at

<http://www.demo.xyz/shop/404.asp>

If you are on a shared host, you may need to contact your host and ask them to set this up for you if they do not provide a control panel that enables you to set this yourself. Ask them to set the custom 404 page on your shop subfolder to the custom 404.asp page at "/shop/404.asp". If your CactuShop is on the root of the website (i.e. not in a subfolder), tell them to set the custom 404 for your whole website to "404.asp".

If you are running your own server - or you wish to set this up locally on your personal web server for testing - you will need to set up the custom 404 page yourself. Firstly, load up IIS and find your store subfolder (you must do this in IIS Manager, not Windows Explorer). Right click on the folder and select "Properties".

Click the "Custom Errors" tab at the top, find the entry for 404.asp in the list, and click "Edit Properties...". For 'Message Type', select URL. In the URL box, enter in a relative URL to the 404 page - for example, "/store/404.asp" if your CactuShop runs in a folder called 'store'. If your shop is on the root of the website, set the URL to "/404.asp". In either case, note the forward slash at the start of the URLs.

Once you have your custom 404 page set, test it by requesting a page that does not exist such as

<http://www.demo.xyz/shop/thispagedoesnotexist.asp>

You should be redirected to the new 404 page with a message saying the page could not be found. This page should be CactuShop's one rather than the default Microsoft one. If the 404 page is the standard Microsoft page then the 404 page has not been correctly configured –in that case contact your host again or work through the steps above.

Once this is set up correctly, you just need to turn on the feature to change the way some links are formatted. This is done with the "fakelinks" config setting in the "Important" section.

Why aren't all URLs friendly?

Some links in CactuShop such as those from home page featured items, related product links, search results, etc. may still be of the parametrized type rather than the static-looking 'friendly' type. This is not a bug. It is not necessary for all links to be friendly; it is enough that Google and other search engines have a route right the way through to products that is 'friendly'. The worst that can happen is for search engines not to follow these remaining 'unfriendly' links; but it doesn't matter since every product can be reached anyway through an alternative 'friendly' route.

6.5 Google sitemap

Search engines typically find and index sites by following links from page to page – a process known as 'spidering'. However, Google has also introduced another option called Google sitemaps. More information on how this works can be found on Google's site:

<https://www.google.com/webmasters/sitemaps/>

CactuShop includes a sitemap script – it is called *googlesitemap.asp* and is located with the rest of the ASP pages in the root of the web. You should set up the Google sitemap functionality to point at this file.

6.6 Froogle feed

Google also provides another useful service for web stores called 'Froogle'. The technology behind this is not quite as user-friendly as other Google services, requiring you to FTP your file to them rather than posting it on your site and letting them check it regularly.

Uploading data to Froogle is worthwhile though, as it gives you another way into the Google results and opens another avenue for directing traffic to your web site.

For more information, see Google's web site:

http://froogle.google.com/froogle/intl/en_us/about.html

6.6.1 Generating the Froogle feed file

In the back end, go to the 'Froogle Export' link in the *Export* section of the back end. Once you have generated this file, follow Google's instructions for uploading it to them.

6.7 XHTML

Although not primarily an SEO optimization, CactuShop v6's XHTML provides some advantages for improving search engine performance.

There is much evidence to suggest that search engines rank text that is nearer to the top of pages (or more precisely, the page source) more highly than that further down. In traditional HTML, the items near the top of the page source were generally the items near the top of the page itself when viewed as HTML because of the left-to-right, top-down nature of HTML table

layout. This meant that your header and navigation menus often occupied the prime SEO real estate near the top of the page source.

In XHTML, elements are normally enclosed in <div> tags and then positioned by CSS. This can be done in a 'flow' format similarly to traditional HTML, where items are positioned relative to each other. But XHTML/CSS also provides the capabilities for 'absolute' positioning of items. This way you can have your important <h1> title tags and accompanying text near the top of the page source, with header and navigation menus further down. But you can use CSS to position them in the desired location at the top of your page.

Furthermore, XHTML results in smaller page sizes since it dispenses with the use of bulky HTML tables to lay pages out. This results in a higher density of useful content, which should also benefit search engine optimization.

7 Localization

7.1 Multiple language support

CactuShop supports up to 5 languages. To access the language controls, click the 'Lang. & Email Setup' link in the *Languages / Email* section.

7.1.1 Activating multiple languages

The default language occupies the first slot. Each language has a couple of checkboxes to determine whether it is live on the front end and back end of the system. You may decide to activate a language for the back end so you can prepare products and other content in that language, but only wish to set it live once that process is complete.

You can name the language for use on the front and back end separately. Generally you would want to put the front end name in that language itself so that speakers of that language will understand it in the menu option.

7.1.2 Email addresses

If your store operates in more than one language, you may wish to have different staff handle orders and contact messages in each different language. Therefore, the email addresses for receiving orders and contact form messages are set from this section rather than config settings (which might otherwise seem the obvious place for these).

7.1.3 Date and time formats

CactuShop v6 allows the data and time display formats to be customized for different regional preferences (on a per-language basis). You may decide to use numerical date formats if the language locale of your server does not match the language and hence the month names generated appear foreign to some users. US stores can format dates in a month/day/year format while British can use the day/month/year format.

7.1.3.1 timeoffset config setting

Given the global nature of the internet, many store owners host their site in different time zone or even a different country to where their own business and customers are located. To fix this, set the *timeoffset* config setting ('Important' group) to the number of hours between your time zone and that of your server. Remember to check the time occasionally, especially around spring and autumn when daylight savings time (in either location) might affect the time difference. For example, our office in Dubai is 3 hours ahead of the UK during summer and 4 hours ahead in winter.

7.1.3.2 databasedateformat config setting

CactuShop also allows you to specify the preferred format for dates to be entered to the database. We generally use a reverse format (year/month/day) as default since this is unambiguous and databases typically understand this correctly whether set to US or British date defaults. This config setting is located in the 'Backend' group.



SETTING THE 'REPLY-TO' ADDRESS THE SAME AS EITHER THE 'CONTACT' OR 'ORDERS' EMAIL ADDRESSES CAN CAUSE MAIL TO FAIL

This is not a CactuShop issue as such; by design, many mail servers do not permit sending FROM one address TO the same address.

Furthermore, many hosts block mail from being sent if the FROM address domain does not resolve to their system. If your host does this, make sure you do not set the 'spoocontactemail' to checked, otherwise messages sent via the contact form will fail.

7.2 Site text (language strings)

7.2.1 Overview

Unlike some other carts that have text files containing translations of words and phrases used throughout the software, CactuShop has a more sophisticated database-driven system. Rather than hard-code language-specific text into the ASP scripts, each word or phrase for a particular language is put into a record in the database. This record is then pulled out on each page where that piece of text is required and its contents dynamically inserted to the correct part of the page.

As standard, there is support for up to 5 languages, each in one of these tables:

```
tblCactuShop1LanguageStrings1  
tblCactuShop1LanguageStrings2  
tblCactuShop1LanguageStrings3  
tblCactuShop1LanguageStrings4  
tblCactuShop1LanguageStrings5
```

The text elements that make up a page are sometimes referred to as 'language strings'.

7.2.2 The language string editor

Language strings can be edited online from the back end of CactuShop or directly in the language strings tables of the database. When relatively few strings need to be changed, it is quicker and more convenient to use the back end tools in CactuShop to do this.

You can use the general back end search or the search in the 'Site Text' section to find language strings that need changing based on several criteria:

- Name of the item, or part of the name, e.g. enter 'thank' would find *ContentText_Thankyou*
- Any part of the text that is in the language string, for example, a search for 'shopping basket' will bring up all language strings that contain that phrase.
- The ID number of the language string (only in the 'Site Text' search, not the general search)

You can also add new language strings. This feature is useful if you make a bug fix and need to add one or two strings, or if you customize the store and want your modification to support multiple languages.

Unlike most tables, the language string IDs are not allocated automatically by the database. Instead, CactuShop suggests the ID number for the new record, but allows you to override this.

If you add your own custom language strings to CactuShop, we'd suggest numbering them from 5000 (for example), just to avoid any future clashes with CactuShop ones if you upgrade your store.

7.2.3 Technical workings

The 'Site Text' (language strings) functionality of CactuShop is relatively simply to work with as a developer once you understand the basic operation.

CactuShop formats a string of comma-separated language string ID numbers required for the page being called. This is composed of general strings that feature on most/all pages (built up in the *config_init.asp* file), and page-specific strings (built up at the top of each page as the *PageStrings* variable).

In the *config_init.asp*, the *LoadStrings* sub (in *functions.asp*) is called to read the string of IDs, pull out those language string records from the database and read them into a *Scripting.Dictionary* object.

Once in this dictionary object, the pages can refer to the strings by name, calling them with these subs:

```
WriteString(strLanguageStringName)
WriteSafeString(strLanguageStringName)
GetString(strLanguageStringName)
GetSafeString(strLanguageStringName)
```

The 'write' subs call the string and `response.write` it to the page. The 'get' subs fetch the language string but do not write it to the page. They are used when the language string is needed for building up a larger string of text, such as when the body text for an email is being constructed.

The 'safe' part in two of the sub names is because these two subs sanitize the text to protect against XSS (cross site scripting) threats.

7.2.3.1 Adding a new page or new language strings

The method for adding new language strings to the database is dealt with in 7.2.2.

In order to use these in your pages, you must do two things:

- Ensure the ID number of your new string is added to the *PageStrings* list at the top of the ASP source of the page
- Ensure you reference the string by name using one of the subs detailed in 7.2.3.

If your new language string does not show on the page, check that you have the ID number in the *PageStrings* list on that page, that the record is in the database and has the ID you intend and that you are using one of the 'write' subs (the 'get' ones will only call the value, they will not actually write it to the page).

7.3 Skinning and multiple languages

As detailed in 5.2.2, each language has its own skin template. This way, you can localize the navigation menus, header images and other such language-specific content.

7.4 User accounts

If you run a multiple language CactuShop, each customer/member will have a preferred language. When they are logged in, their language preference is stored in their account. If a logged-in user changes the language they view the site in, their preferences will be automatically updated. When a user logs into the site, their preferred language is selected for them.

8 Exporting Data

Most web businesses will reach a point in their development where they need to analyse and process store information off-line, or generate data in particular formats for associate businesses to use. CactuShop v6 features powerful data export tools to make this process easier.

8.1 Froogle export

This is for SEO purposes and is dealt with in 6.6.

8.2 Backup database link

The 'Backup Database' link in the *Export* section only appears if you store is based on MS Access. It provides a simple method to backup the site data. Even if your database is located off the web space (as advised for security purposes), this link will stream the file to you via a web browser.

For more on making backups, see 8.4.

8.3 Export data

This general export page is reached by the 'Export Data' link in the *Export* section.

8.3.1 Export orders

This form allows you to export orders (including customer data) as a comma, tab, semi-colon or space-delimited text file. You can choose whether to include the 'order details' field and whether unfinished orders should be included too. Once you have exported this file, it can be opened in MS Excel or another spreadsheet for further manipulation.

8.3.2 Custom export

More advanced store owners and developers might wish to export other data from CactuShop. Previously, a custom ASP script with a query and code to format the results as text would need to be constructed. However, v6 provides flexible tools for devising custom exports without having to create or edit ASP scripts. It also provides simply tools for storing these export templates so that you can use them easily at a future date.

It should be noted that it still requires a good working knowledge of SQL (structured query language), so is primarily designed for IT-savvy store owners and developers.

8.3.2.1 Constructing a custom export

Custom exports should be entered in the text area provided. They should consist of the following, each of which should occupy a new line in the text area:

- Line 1 – SQL query (not a problem if this wraps onto several lines)
- Line 2 - comma-separated list of field names

- Line 3 - comma-separated list of field types (i.e. n for numeric or s for string)
- Line 4 - field delimiter on the fourth ('comma', 'tab', 'semicolon' or 'space' [no quotes])
- Line 5 - string delimiter ('singlequote', 'doublequote' or 'nothing' [no quotes])

So a sample export for mailing list subscribers could be:

```
SELECT C_ID, C_EmailAddress, C_CardholderName, C_ML_SignupDateTime,
C_ML_SignupIP, C_LanguageID FROM tblCactuShop1Customers WHERE
C_ML_SendMail='y'
```

```
C_ID, C_EmailAddress, C_CardholderName, C_ML_SignupDateTime,
C_ML_SignupIP, C_LanguageID
```

```
n, s, s, s, s, s
```

```
comma
```

```
doublequote
```

(**Note:** extra line breaks have been added to distinguish each line – in reality each of the five sections should be on a line of its own).

8.3.2.2 Managing saved exports

Once you have constructed an export, you can save it in the database. Previously saved exports can be recovered for editing/running or deletion.

8.4 Data backup

It is impossible to overstate the importance of **regular** backups of data to your business. This goes not just for CactuShop, but for all important data you deal with, from your accounts to email folders.

The usefulness of a backup depends largely on how recent it is. With high-speed fixed-price broadband connections, there is no excuse whatsoever not to back up your store data regularly.

8.4.1 What to backup

CactuShop is database-driven; backing up the database (whether it is MS Access, MS SQL or MySQL) is therefore the priority. But remember too that product images are stored in a series of *'images_'* folders in the *'uploads'* folder and are renamed by CactuShop when they are uploaded. You must save backup copies of these renamed images if you want any change of restoring them in the event of a site failure.

To emphasize this point, imagine you have a product called XYZ for which you upload an image called *xyz_smallview.jpg*. CactuShop renames this image based on the product ID of that item in the database, let's say *123.jpg*. Now consider what would happen if you needed to restore your site backup, but only had the database backed up. Your item XYZ now has no image. Even if you have a local copy of *xyz_smallview.jpg*, that would need to be renamed to *123.jpg* in order for CactuShop to display it with that product. There is no simple way to rename this image, especially if you have hundreds or thousands of similar images that would need renaming. But if you'd backup



IT IS ESSENTIAL THAT YOU KEEP
REGULAR BACKUPS

**Do not wait until you have a
nasty data-loss experience to
learn the importance of
regular backups.**

Never rely solely on a third party
for this important task.

Remember to backup not just the
database, but the rest of the files
too.

up the images folders on CactuShop, you'd simply FTP these images to the web site and they're already named appropriately.

Of course, to restore the site functionality, you'd need the ASP files and skin template as well as the data. So you should always have an up-to-date copy of these too.

In summary, consider what you would need to allow you to set up a new site on clean web space in the event of a catastrophic hosting failure where everything on the live site was lost:

- Recent database backup
- Up-to-date copies of product images taken from the live site (and hence appropriately named to match up to items in the database)
- Full copy of site ASP files
- Full copy of the skin template

8.4.2 Backing up your database

8.4.2.1 MS Access

MS Access is the simplest database to backup because it is a single *.mdb* file. CactuShop provides a backup link for this purpose – see 8.2. If you have MS Access installed on your computer, open up the database after downloading a backup to make sure the file was fully received and not corrupted in any way.

You can also FTP down an Access database file, however this will lock the file and prevent your web site from working, which could take it down for some minutes depending on the size of the file and your download speed.

8.4.2.2 MS SQL

MS SQL databases can be copied from server to server using Enterprise Manager's 'Data Transformation Services' (DTS). However, we've found that some field settings are not carried across, so people often get problems with primary keys and *autonumber* fields needing resetting after restoring such a backup.

Another option is to use MS Access to connect to your MS SQL server. Go to *File > New > Project: existing database*. Once you have set up your MS SQL database as a project, you can copy data to a local MS SQL database or an MS Access file using the 'Get External Data' option. For more information, see the help files in MS Access.

Using an Access database as a backup medium for a live MS SQL database can be an attractive option. Firstly, you can easily create blank Access databases and then import live data. This way it is easy to maintain historical backups, not just the latest version. Also, you can do this on a machine that doesn't have MS SQL installed. And if setting up a new SQL database on a web host is more time consuming, you could potentially run temporarily using MS Access (though for many MS SQL sites performance may seriously suffer).

IMPORTANT: some hosts do not provide access to the MS SQL server through port 1433 (or an alternative port), and instead provide a web interface for administering MS SQL databases. In this case, the above

methods will not work. You will need to contact the host directly to ask them how you can make backups.

8.4.2.3 MySQL

We have generally found MySQL more difficult to work with than either of the Microsoft databases. The backup options vary from host to host. We would suggest contacting them if you need advice on the options for backing up your database.

If you run MySQL on your own server, you can use command line commands.

This needs to be executed in [MySQL Installation Path]/bin in the server.

BACKUP:

```
mysqldump -a -u [username] -p[passwordhere] [db_name] > backupname.sql
```

* may add option [-c] to compress backup

RESTORE:

1. Drop the database

```
mysqladmin -u [username] -p[passwordhere] drop [db_name]
```

2. Recreate the database

```
mysqladmin -u [username] -p[passwordhere] create [db_name]
```

3. Import the backup data

```
mysql -u [username] -p[passwordhere] [db_name] < backupname.sql
```

8.4.3 Data tool

Cactusoft provides a free data tool – a program that allows you to import data from a spreadsheet or text file, upsize old CactuShop data to a newer version and convert data from one type of database to another.

The latter option can be an effective method of backing up both MS SQL and MySQL data. It will work too with MS Access databases, but this is less useful when the download link is available in the back end, which will generally be quicker.

8.4.4 Storing backups

Consider the worst case scenario and ensure your backup regime is robust enough to cope. For example, never store backups in the same physical location as the server. A burglary or fire could take your live data and backups with it in one go.

9 Promotional Features

CactuShop v6 offers a wide-variety of tools to promote items on your store and increase sales.

9.1 Promotional items **PRO***

Store owners have many creative ways to entice customers to purchase certain items. Of course a simple discount is relatively easy to do on certain items. But typically it has been harder to offer the kind of 'supermarket' promotions like 'buy one, get one free'. CactuShop v6 addresses this with flexible 'offers' functionality that.

Click the 'Promotions' link in the *Products* section to bring up a list of existing promotions. The 'New' link on the top-right of the page allows you to create new promotions.

On the basket and product pages, any promotions that apply to specific items on those pages will be displayed (subject to the promotions config settings permitting this – see 9.1.3.3). This is useful to encourage take-up of the offers on those items. Note that a promotion will feature in this way if the page includes either a version that earns the offer, or one that is given free as part of it.

9.1.1 Types of promotions

9.1.1.1 Buy *X* of Version *A*, Get *Y* of Version *B* for free

This lets you do 'buy one, get one free' but is not limited to single items. You can offer any quantity of an item free with any quantity of another item (or the same item).

9.1.1.2 Buy *X* of Version *A*, Get £*Y* off

This offers a fixed price discount for buying a certain quantity of an item. It doesn't have to be £ (GBP) of course; it will be whatever your default currency is.

9.1.1.3 Buy *X* of Version *A*, Get *Y*% off product *B*

This offers a percentage discount for buying a certain quantity of an item.

9.1.1.4 Spend £*X*, Get *Y* of Version *B* for free

This offers a free item for spending a specified amount in default currency.

9.1.1.5 Spend £*X*, Get £*Y* off

This offers a fixed price discount for spending a specified amount in default currency.

9.1.1.6 Spend £*X*, Get *Y*% off product *B*

This offers a percentage discount of a specified item for spending a specified amount in default currency.

9.1.2 Adding a promotion

When you create a new promotion, you must first select the type of promotion you'd like to create. Then you can name the promotion.

9.1.2.1 Naming promotions

If the name field isn't set, then one is dynamically built up in the same format as just selected (e.g. "Spend £X, Get Y of Version B for free", with X, Y and B replaced with the relevant figures). By setting this field, you can have more control over the display. For example, you may wish to change it to something like "Spend over £50 and claim 1 free t-shirt!". The name field also supports dynamic tags `<name1>`, `<value1>`, `<name2>` and `<value2>`, which refer to the version names and values for the parts of the promotion. So for this promotion you could enter in a name as "Spend over `<value1>` and claim `<value1>` free `<version2>`!".

Why use dynamic tags? If the user changes currency or language selection on the front end, the values will display properly for their settings (with the correct currency symbol, conversion, and language entered). If you use the `<name1>` or `<name2>` tags, the system will automatically build a hyperlink to the relevant version too.

9.1.2.2 Start/finish dates

You can specify a start and/or finish date for each promotion (optional). Dates should be entered in either US format (*mm/dd/yyyy*) or reverse format (*yyyy/dd/mm*). Unrecognized dates will be ignored.

9.1.2.3 Maximum quantities

The "max quantity" limits total number of this promotion that can be used per order. For example, if you have an offer "*Spend \$200, get 1 of Version A free*", you could limit it to one per order, in which case someone spending \$1000 would still only get 1 free item. If you set the max quantity to 10, that same \$1000 order would get 5 free items (since the maximum quantity limit doesn't kick in yet).

9.1.2.4 Order by (sort) value

The 'order by' value is important not just for the sort order that promotions are displayed in, but also for the priority used when deciding which promotions to give a user in some cases. This can be important if an order would normally trigger multiple promotions but the **maxpromotions** config setting restricts each order to one (or less than would otherwise be available). See 9.1.3.1 for further information.

9.1.2.5 Specifying the versions the promotion applies to

In the second section of the form, you need to configure the details of the promotion. In our example, enter "50" in the "Spend" box and "1" in the "Get" box. To select the version, you need to search based on name or code number (SKU). Enter in part of a name or code number and click search. If matching items are found, you will see a dropdown with the details to choose from. If no results are returned, click "New search" to try again. Once a version is selected you will be able to save the promotion.

9.1.3 Promotion config settings

The promotions system is complex and there are a number of config settings that allow it to be tweaked to your requirements. Note that unless many features of CactuShop, promotions don't have a config setting to turn them on or off. To deactivate promotions, simply remove all promotions from your store.

9.1.3.1 maxpromotions config setting

This controls the maximum number of promotions that a user will be allowed on each order. This is a global setting that affects the number of **different** promotions per order, not the number of times the same promotion can be used (which is set on a per-promotion basis, see 9.1.2.3).

9.1.3.2 promotionnameformat config setting

This controls the way the promotion names are displayed. It should contain the dynamic tags `<productname>` and `<versionname>`.

9.1.3.3 promotionsbasketpage, promotionspage and promotionsproductpage config settings

There are two ways to display promotions, either plaintext or 'extended' (which includes an image, if available). For the basket page and product pages, you can also choose not to display promotions.

9.1.3.4 showpromoadditionaltext config setting

This is a simple switch that determines whether or not additional information relating to the promotion is displayed on the promotions page.

9.2 Featured items

The front page real estate on your site is the most valuable and will typically get more hits than any other page. You can choose to display certain items here, ensuring they are put to the widest possible audience.

To set this up, edit a product and set the 'Featured' dropdown menu to a number above zero (zero means the item is not displayed). If you have many items selected, the store will sort them in order of their 'featured' setting, highest first. For obvious reasons, don't select too many items for your home page or site load times will suffer.

9.3 Customer reviews

Another common method of promoting products is by letting customers and visitors add reviews. In practice this is only really a valuable tool on larger stores that have a critical mass of customers to add reviews.

To activate customer reviews and adjust other settings, go to the 'Reviews' link in the *Front End* section of the config settings. Most of the config settings should be self-explanatory.

9.3.1 Configuring reviews functionality

The biggest worry for most store owners is that disgruntled customers, competitors, spammers or other miscreants will abuse the opportunity to post comments and opinions to your site through the customer review functionality. Therefore, we have provided a couple of config settings to help prevent abuse of the system.

9.3.1.1 autopostreviews config setting

This determines whether reviews that are contributed by visitors go live immediately, or must be approved by the store owner first. This is a useful safeguard against malicious reviews, profanities and other inappropriate posts. Exercise your censorship power with restraint!

9.3.1.2 reviewpermission config setting

This allows you to control who can post reviews. You can choose to let anyone post reviews, only logged in users or only those customers who have purchased this particular item. Remember that the more restrictive you are on who can post reviews, the smaller number of reviews you will receive.

9.3.2 Approving reviews

If your site is set to require approval before any review goes live (see 9.3.1.1), this can be done by clicking the 'Moderate new reviews' link on the 'to do' list, or by the 'Customer Reviews' link in the *Products* section.

Reviews that are pending authorization are coloured green in the listing.

Keeping Reviews Real

Of course, reviews functionality can result in bad reviews as well as good ones. But don't be too hasty to remove anything negative. Remember that you rely on customers to make the reviews feature work; respecting their opinions, particularly if a review contains constructive criticism, is vital in order that they (and others) post reviews in future.

A negative review might not necessarily damage sales or your reputation either. Customers reading a bad review may instead decide to purchase another product on the store.

And remember, any site that contains only glowing endorsements of every product is likely to be treated with suspicion.

9.3.3 Accessing reviews for a particular product

When you view a category in the back end, there is an orange button with 'REV' on it by each product. This will bring up reviews for that particular product.

9.3.4 Related products

This is a useful way to show cross-selling links from a particular product to another product. Unlike 'people who bought this' (see 9.3.6), it is set up manually by the store owner, and so can provide links to and from brand new products that have not been purchased yet.

9.3.4.1 Setting up a related product

Related products are setup on a per-product basis. In the back end, navigate to the category where the product you want to add to the link to belongs. Click the orange 'REL' button by the product.

Next you need to select the product that the link will point to. Select its category from the dropdown menu and hit 'select'. You should then be given a multiple selection menu with the products in it. To select a product (or deselect one that is already selected), hold down the CTRL key on your keyboard (or command key on a Macintosh) and click the item you want. You may select multiple products if you wish. Then click the 'select' button. The current related items will be listed.

To save your changes to selected products for this item, you must hit the 'save' button.

Note: product relationships are one-way, i.e. if product X has a relationship for product Y set up, the link to product Y will appear when product X is viewed, but a link to product X will not display when product Y is viewed. If you want two way relationships, you must set up reciprocal links on both products X and Y.

9.3.5 Recently viewed products

The system remembers the last few items you viewed and presents these at the bottom of the product page in a section titled 'Recently viewed products'.

9.3.6 People who bought this also bought

One way to automate the process of suggesting other products to users is by looking at what previous purchasers of that product also bought. CactuShop has built in code to handle this that displays on the product page.

There are a couple of config settings that can tweak how it works.

9.3.6.1 peoplewhobought config setting

This is the maximum number of items that should be suggested to a visitor. Setting it to zero turns the 'people who bought this' functionality off.

9.3.6.2 peoplewhoboughtjustorder config setting

This determines whether the 'people who bought this' functionality should only apply to products purchased in the same order as the item on the page, or buy the same customer (in any order). Checking this box will produce fewer results.

9.3.7 Try these categories

Some items might be in more than one category, or be accessed from a search or link rather than via a particular category. In this case, the 'Try these categories' suggestion will appear. It lists the categories that the item belongs to (other than the category you accessed the product through).

10 Payment systems

There are a number of ways in which payment by credit card can be handled by CactuShop. It is also possible to handle off-line sales too, such as when a customer will mail a cheque or phone you to give their credit card details.

We strongly recommend using a payment gateway for accepting credit card payments. This is by far the most convenient and secure option because the gateway authorizes and bills the card so you don't handle sensitive card data yourself.

Note that the trial version does not contain any payment system support.

10.1 Payment methods overview

10.1.1 Remote payment gateways

Examples of these include Worldpay, Payflow Link and AuthorizeNet SIM. They have a number of advantages:

- Fewer security headaches (card data is handled by the gateway, so you don't need to handle it directly)
- Generally no requirement for your own SSL certificate or secure area, because the card transaction is done on the remote gateway's secure payment form
- Simple to set up – generally just a case of setting a few CactuShop config settings and a few details on the gateway

The basic mode of operation is that a customer selects the items they wish to buy on your web site and then proceeds through to checkout. They enter some customer information and are then passed to the secure payment form on the payment gateway to give credit card details. The result of this transaction is passed back to your CactuShop, normally by the gateway calling the *callback.asp* page on your CactuShop and passing certain details to it. This notification process is variously referred to as a 'callback', 'silent post' or 'passback'.

The main disadvantage is the level of integration into your web site is limited. The customer is routed off to the secure page on the payment gateway, and in most cases you have limited (or no) control over how this looks. Even if you can make it look like the rest of your site, the customer will see the URL in their address bar change.

All gateways require a little setup on CactuShop; most (but not all) also require that you login to their own admin area and set up some details in order that they can make a 'callback' to you store to notify it of the results of a transaction.

10.1.2 Server-server solutions

Examples of these include AuthorizeNet AIM and Payflow Pro.

The primary advantages this type of integration is the seamless appearance from a customer's point of view. The user stays on the CactuShop itself to enter card details, and the URL they see in the address bar is your own domain.

The main disadvantages are:

- You need a secure certificate for your own domain installed on your web site. Applying for a secure certificate can be a hassle and these typically cost several hundred dollars per year. If you change host, it will normally be impossible to take the certificate with you to the new host.
- Sometimes a component may be required to handle encryption. This can rule out shared hosting, meaning you need a dedicated server (which is typically much more expensive).
- Your site is handling card details directly. This can make it a more attractive target for hackers who might falsely believe that you are retaining credit card details within the web site. Your site is more likely to be subjected to probing, brute force attacks and other deliberate attempts to gain unauthorized access. Even if unsuccessful, left unchecked these could eat up bandwidth and CPU cycles, significantly affecting site performance.

10.1.3 Alternative methods

As well as support for various remote payment gateways and server-server online authorization methods, CactuShop provides several other options for accepting payment including emailing encrypted card details and storing card details for secure viewing (see), 'CactusPay' remote encrypted mailing (see 10.6) and 'pay by PO' (purchase order) for offline payments (see 10.11).

The encryption options require Cactusoft Encrypted Mail (CEM), an add-on available at additional cost from our web site.

10.1.4 Common config settings

Each payment method has a set of config settings in the back end of CactuShop that apply to it. Some of these are present for most/all payment methods.

10.1.4.1 [method]_AuthorizedOnly

If you check this option for a method, it means that only customers/members with the 'approve for special payments' box checked will get this option at checkout. This is particularly useful for the 'Payment by PO' option, where customers can order without supplying card info. You might only want to allow trusted customers to purchase in this way.

10.1.4.2 [method]_ProcessCurrency

You may want to display multiple currencies on the front end of your store, but convert all prices to your base currency prior to payment. This can simplify accounting significantly. Some gateways only support a single currency (e.g. Payflow Link) or handle multiple currencies badly (2checkout), so this option may be essential or at the very least, highly advisable.

The actual value you set should be the three-letter ISO code for the currency, for example 'GBP', 'USD', etc.

10.1.4.3 [method]_Status

In prior versions of CactuShop, each gateway could be activated using the **paymentsystems** config setting. In CactuShop v6, you must turn individual payment methods on or off from this config setting.

Some methods also have two extra options – ‘test’ and ‘fake’. The former is useful when running test transactions because it will pass transactions in the gateway’s test mode as well as providing extra information along the way. The ‘fake’ option is also useful for testing; it fakes a callback, which is useful for testing that your callback script is working correctly.

Note that both the ‘test’ and ‘fake’ options are only visible as payment options on the front end when you are logged into the back end of CactuShop. In other words, normal users will never see these. This way, you can activate and test a new payment gateway on your live site without having to worry about real users making (test) payments on it before you have actually set it to be live.

10.1.4.4 [method]_URL

Most payment gateways and payment methods have a URL setting where you can specify the remote page to direct the user to for payment. In most cases our default should suffice. But from time to time, gateways do change the address of their payment pages, and some have a different address for the test server.

10.2 2checkout

2checkout is technically not a payment gateway. Instead, it acts as an ‘authorized reseller’ for your goods and services. But the set up and integration is effectively the same as for standard payment gateways, and for all practical purposes 2checkout performs a similar role as a payment gateway.

Although the percentage commission per sale is quite high at 5.5%, 2checkout has a number of features that make it an attractive option for many web stores:

- Low one-off setup fee and no annual or monthly fees for the service - useful if you only take occasional orders
- Supports vendors in most countries
- Quick setup – can be up and running in a matter of hours

Previous versions of CactuShop supported 2checkout using the AuthorizeNet SIM config settings and scripts (because 2checkout can emulate AuthorizeNet). However, CactuShop v6 has built-in support for 2checkout’s own parameters and therefore can run 2checkout side-by-side with AuthorizeNet SIM if you wish.

From v6.052, CactuShop also passes the parameters to 2checkout that are required for product creation. This means that the first time an item is purchased on your store, the scripts pass the name, description, price and item code to 2checkout so that it can create an entry on its internal database. Note that the **first time** an item is passed, it will not show up as a separate item on the 2checkout basket page. On subsequent orders, the item will show up (since after the first time, it is present on the 2checkout internal database).

This is not a CactuShop limitation; it is how the 2checkout system is designed to work. Note that on subsequent orders for a particular product, 2checkout takes the name and description from its internal database, but the price from the actual order. So if you change the price of an item that was previously created on 2checkout, it should show the new price and not the old one.

It is also possible to pre-load your product data to 2checkout so that you don't need to wait for an item to be passed to 2checkout once before appearing on subsequently orders.

For more information go to:

<http://www.2checkout.com>

10.2.1 2checkout setup on CactuShop

Go to the '2checkout' section of the config settings in the *Payment and Shipping Gateways* section.

For config settings that are common to all payment methods, see section 10 introduction.

10.2.1.1 2CO_SID

2checkout will supply you with this information when you set up an account. It is typically a six-digit number and is variously referred to as your 'vendor ID' or 'sid'.

10.2.1.2 2CO_ProcessCurrency

We strongly recommend that if you choose to use 2checkout, you process all transactions in US Dollars (i.e. set this to 'USD'). Although 2checkout does handle other currencies, it only works internally in US Dollars and the conversion rates are very poor. It works out far more economical to set up a US Dollar bank account with your existing bank and have 2checkout accept payments and pay out funds in US Dollars only. You can then transfer funds from your US Dollar account to your local currency account (GBP, EUR, etc.) which will almost certainly be done at a far better exchange rate.

10.2.2 Setup on 2checkout

In order to ensure that 2checkout calls back your CactuShop and notifies it of the results of a transaction, you need to set up a couple of things on 2checkout.

Login to your account and find the 'Settings' link next to 'Look & Feel' in the *Helpful Links* section.

The 'direct return' dropdown menu should initially be set to 'No' as 2checkout suggest. Turn it to 'Yes' once you get the process working successfully.

Set both the 'Approved URL' and the 'Pending URL' to point to the full path of the *callback.asp* script on your CactuShop, for example:

<http://www.demo.xyz/callback.asp?g=2co>

Check that you have this path correct (including subfolder name if necessary) and verify this by entering it in the address bar of your browser – you should get an error message saying 'The payment gateway refused the transaction' (because you're calling the callback without passing any order information). If you get a 404 'page not found' error, then your URL is wrong, or your *callback.asp* file is missing from your web site.

You don't need to enter a value for the 'secret word'.

10.3 AuthorizeNet AIM

AuthorizeNet AIM is a server-server online authorization method, not to be confused with AuthorizeNet SIM.

For more information go to:

<http://www.authorizenet.com>

10.3.1 Prerequisites

With AuthorizeNet AIM, the customer remains on your web site and enters their card details into the secure payment form on your CactuShop. For this reason you **MUST** have a secure certificate on your domain such that any page on the web could be called with http or https.

10.3.2 AuthorizeNet AIM setup on CactuShop

Go to the 'Authorize.Net AIM' section of the config settings in the *Payment and Shipping Gateways* section.

For config settings that are common to all payment methods, see section 10 introduction.

10.3.2.1 AIM_ResponseCharacter

Each response value from AuthorizeNet can be wrapped by a character, for example a single or double quote. By default this is a blank. If you change this on the AuthorizeNet back end, you must make the change here too.

10.3.2.2 AIM_ResponseDelimiter

The response from AuthorizeNet is delimited with a character. By default this is a comma (,). If you change this on the AuthorizeNet back end, you must make the change here too.

10.3.2.3 AIM_TxnKey

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.

10.3.2.4 AIM_Type

This specifies the type of transaction you wish to make. The options are AUTH_CAPTURE (default), AUTH_ONLY, CAPTURE_ONLY, CREDIT, VOID, PRIOR_AUTH_CAPTURE. See AIM documentation for more details.

10.3.3 Setup on 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>

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 **AIM_TxnKey** config setting (see 10.3.2.3).

10.4 AuthorizeNet SIM

AuthorizeNet SIM is a remote gateway authorization method, not to be confused with AuthorizeNet SIM.

For more information go to:

<http://www.authorizenet.com>

10.4.1 AuthorizeNet SIM setup on CactuShop

Go to the 'Authorize.Net SIM' section of the config settings in the *Payment and Shipping Gateways* section.

For config settings that are common to all payment methods, see section 10 introduction.

10.4.1.1 SIM_TxnKey

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.

10.4.2 Setup on 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>

Go to 'Settings and Profile' and select 'Relay Response'. Change this to the callback URL of your site, i.e.

<http://www.demo.xyz/callback.asp?g=sim>

Click on 'Receipt page' and 'receipt method'. This sets the page on your site that a user is returned to after finishing a transaction (we advise your home

page). Set the receipt method to 'Link', and text to "Click here to return to the store", or something similar.

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 **AIM_TxnKey** config setting (see 10.4.1.1).

10.5 Barclaycard Business ePDQ

Barclaycard Business provides total solutions for all business's card payment and processing needs, nationwide and internationally, whether you're a smaller business, a Government department or a multinational enterprise. The ePDQ Cardholder Payment Interface (CPI), their end-to-end solution handles everything for merchants including responsibility for security.

For further ePDQ information, go to:

<http://www.barclaycardmerchantservices.co.uk>

Important: ePDQ requires that the callback script is protected by basic authentication. You must make sure your hosting has this facility if you intend to use ePDQ.

10.5.1 ePDQ setup on CactuShop

Go to the 'ePDQ' section of the config settings in the Payment and Shipping Gateways section.

For config settings that are common to all payment methods, see section 10.1.4.

10.5.1.1 EPDQ_ChargeType

An indicator of whether the store provides immediate or delayed shipment. Possible values are:

'Auth' (for immediate shipment)
'PreAuth' (for delayed shipment)

Note: these are case sensitive and must appear as shown.

10.5.1.2 EPDQ_ClientID

Barclaycard Business assigned numeric identifier to your store. (Also known as your Store ID). This is very unlikely to change.

10.5.1.3 EPDQ_CurrencyCode

ISO numeric currency code that must match that assigned to your store, e.g. 826 for British Pounds (see 'CPI Integration Extensions' document for information on additional currencies).

10.5.1.4 EPDQ_encryptionURL

The page on ePDQ where values that need to be pre-encrypted are sent - don't change this unless Barclays tell you to.

10.5.1.5 EPDQ_Password

Text string containing your passphrase; note - this must be the passphrase and not the store password.

10.5.1.6 Callback proxy

ePDQ requires that the callback script be protected by basic username/password authentication. However, basic authentication can only be applied on a per-folder basis. You cannot apply it to an individual script like the *callback.asp*. Even if you could, putting basic authentication on the *callback.asp* alone would cause problems if you had other payment gateways set up that did not support it.

The solution is a callback proxy script. For ePDQ, this is located at *payment/proxy/epdq.asp*. The way it works is that ePDQ posts its callback information to this script, which in turn posts it to the regular *callback.asp* script on the root of your store. Effectively the proxy script is an intermediate step that can have basic authentication, and can then relay the received values to the main callback which does not.

To set this up, apply basic authentication to the *payment/proxy/* folder. You may need to contact your server administrator to do this, or you might have the option on your web hosting control panel. Remember the username and password as you will need to enter these into the ePDQ CPI admin screens later.

You must also set the URL of your CactuShop in the *epdq.asp* file (this should match your **webshopURL** config setting). There are comments to guide you.

10.5.2 Setup on ePDQ

Barclaycard Business provides you with a user account to access the Store Admin. It is recommended that you use a separate user account to integrate the ePDQ CPI, with a user role of 'CPI Access'. This allows you to control the permissions of the person integrating the CPI and prevents access to the Store Admin.

Using the separate account, configure 'ePDQ CPI' to use the same 'passphrase' set in your store. Also, set 'Allowed URL' to point to your site's checkout page, i.e.

<http://www.demo.xyz/checkout.asp>

'POST Order Result' should also be set to 'Yes' and finally set the 'POST URL' to that of your callback proxy page, for example:

<http://www.demo.xyz/payment/proxy/epdq.asp>

Make sure the basic authentication details match those you setup above in 10.5.1.6.

10.5.3 Common problems

ePDQ uses encryption passed through XML to handle orders securely, so you will need to ensure your site has MS XMLHTTP support. See the System >

XML Components config settings and check with your web host which XML support components they have installed on their servers.

Also, the ePDQ admin area is not very user friendly, and when editing details you will find that the form clears some fields each time, requiring you to re-enter the passphrase and passwords with each edit to avoid submitting blanks. This can become rather frustrating after a while.



CHECK YOUR CREDIT CARD
MERCHANT AGREEMENT BEFORE
YOU OPT TO USE CEM

The Cactusoft Encrypted Mail (CEM) package encrypts card details and sends them by email. Ensure that such a system complies with any CNP (card not present) credit card processing agreement you may have in place before opting for this method.

We provide the technical tools. Only you can verify that your business/legal agreements permit use of such a system.

10.6 CactusPay

CactusPay is part of the Cactusoft Encrypted Mail (CEM) add-on, which can be purchased from our web site.

Essentially it works similarly to a remote payment gateway, but instead of doing an online authorization, it sends the entered card details as an encrypted attachment to the store owner.

The decryption program included with CEM can be used to decrypt the attachments, allowing the card details to be manually processed in the same way as fax or phone orders are dealt with.

10.6.1 Prerequisites

Because CactusPay scripts take the credit card details, they must be hosted on a secure area. This can be a shared secure area on a different machine (or even a different network) to the main part of CactuShop that runs on your domain. It must still be a Windows web server; CactusPay has the same platform requirements to CactuShop.

10.6.2 Installing the CEM system

Follow the instructions that come with the CEM system. You must use the key generator utility to create an encryption key. This will be a string of hex characters that are saved in a text file with a *.cek* extension. This will be used to decrypt the order attachments that come from CactusPay.

10.6.3 CactusPay setup on CactuShop

10.6.3.1 Don't change usesecurearea config setting

The **usesecurearea** config setting switches CactuShop to run the checkout pages and the back end using https instead of http. This will only work if you have a secure certificate for your domain on your main site hosting. If you're using a shared SSL arrangement (i.e. secure area is separate from rest of web site, the most common reason for using CactusPay) then you need to ensure this config setting is left **switched off**. If you accidentally activate it, you will not be able to reach your site back end and will have to change this config setting directly in the database and refresh the config settings (or restart the web site in IIS) to clear the problem.

10.6.3.2 CP_CallbackPassword

This should be set to the same value as the password you set on CactusPay.

10.6.3.3 CP_URL

This is the address of the secure *orderform.asp* page on your CactusPay installation. For example:

<https://www.securedemo.xyz/cactuspay/orderform.asp>

10.6.4 Setup on CactusPay

The CactusPay scripts supplied with the CEM package must be installed on your secure area.

Because the CactusPay scripts don't have a database to connect to, the config settings for these are set in the *includes/config.asp* file within CactusPay.

10.6.4.1 emailmethod

This should be set to `'cdonts'`, `'cdosys'`, `'jmail'`, `'persits'` or `'aspmail'` depending on which mail method(s) your server has installed. You can also use the `'write'` test method too.

10.6.4.2 sendorderstoaddress and sendorderstoaddress2

These let you set your email address to receive orders, as well as a backup address (such as a hotmail address) where a copy of each order will be sent for use if your primary mail is down or rejecting mail for some reason.

10.6.4.3 mailserver

For most email methods, you will need to specify the SMTP server to send email. Your secure area host can supply this information.

10.6.4.4 xmlcomponent

This is used to make the callback to the main web site. Change if your secure server has a different component installed.

10.6.4.5 callback_password

This should be the same as the one specified in the main CactuShop config setting (see 10.6.3.2)

10.6.4.6 callbackURL

This should be the full path to the *callback.asp* script on your main CactuShop site. Don't add any password or gateway parameters to this.

10.6.4.7 EncryptionKey

This should be the encryption key generated by the CEM key generator (see 10.6.2). This must match the one in your local *.cek* file, otherwise you will just see unreadable random text when opening up encrypted orders.

10.6.4.8 LocalKeyFileName

This should be the name of the encryption key file generated by the CEM key generator (see 10.6.2). This name is added to the encrypted order so that the

CEM decryption utility knows which key to use to decrypt it. You can have multiple CactuShop stores sending encrypted orders, each with a different key. The software will know which key to use with each order.

10.6.4.9 deleteencryptedfiles

This has two possible values – 'y' or 'n'. If you set it to 'n', the encrypted order files will remain on the CactusPay web site rather than being deleted after they have been emailed. This can be useful in the event of an email failure, since you can FTP in and download these. However, you should ensure you clear old files down from time to time if they are not deleted each time a mail is sent.

10.6.4.10 tempfolderlocation

This is the name of the folder in the secure area where the encrypted attachments are written to. This folder must have IUSR full control in order that the files can be created.

10.7 DIBS

DIBS is based in Denmark and is the leading Scandinavian payment gateway, serving clients in 17 countries.

For further DIBS information, go to:

<http://www.dibs.dk>

10.7.1 DIBS setup on CactuShop

10.7.1.1 DIBS_Account

This is optional. If you have multiple accounts under your merchant ID, you can use this to specify which account the orders are to go through. If you only have one account, it can be left blank.

10.7.1.2 DIBS_Calcfee

This has two possible values – 'y' (customer pays fees) or 'n' (store owner pays fee).

10.7.1.3 DIBS_capturenow

This has two possible values – 'y' or 'n'. Setting to 'y' means the store will authorize and capture funds immediately rather than authorizing and then requiring the store owner to capture the funds. You must have permission from DIBS to set this to 'y'.

10.7.1.4 DIBS_Color

This controls the colour of the payment pages on DIBS. Current acceptable values are 'sand', 'grey' or 'blue'. DIBS may add other options in the future, hence this has been left as a text field.

10.7.1.5 DIBS_Currency

This is the 3-digit ISO code for the currency that your store will process orders in (see ISO4217). Enter '208' for Danish Kroner or '826' for British Pounds. This should correspond to the **DIBS_ProcessCurrency** setting. For example, if you set **DIBS_Currency** to '826', you should set **DIBS_ProcessCurrency** to 'GBP'.

10.7.1.6 DIBS_Lang

This is the language that the payment pages on DIBS will appear in. Enter 'da' for Danish or 'en' for English.

10.7.1.7 DIBS_MD5_k1 and DIBS_MD5_k2

These are the MD5 keys set on the DIBS admin area.

10.7.1.8 DIBS_Merchant

This is the MerchantID that DIBS provided you with. It uniquely identifies your DIBS account and ensures that transactions are credited to your store.

10.7.1.9 DIBS_Paytype

You can limit the payment types your store accepts – please contact DIBS for further information.

10.7.1.10 DIBS_Uniqueoid

This has two possible values – 'y' or 'n'. Determines whether DIBS will require all order IDs passed to it to be unique or not.

10.7.2 Setup on DIBS

Login to your DIBS admin back end with the URL and username/password that DIBS provides to you. You will need to navigate to 'Integration: MD5 Keys' and ensure that the two key values are copied and pasted into the DIBS_MD5_k1 and DIBS_MD5_k2 config settings in CactuShop. Make sure you don't have any leading or trailing spaces, and also that you just include the actual key, and not the 'k1' or 'k2' part that appears before it on the DIBS page.

Next, go to 'Integration: Return Values' and ensure all the boxes are checked to ensure that sufficient information is returned to CactuShop in the callback that it can find and process the order.

10.7.3 Testing DIBS

Unlike some other payment gateways, DIBS runs an authorization on the card number submitted even when in test mode. For this reason, you will need to use specific card details that the various card issues specify when testing. More information can be found here:

<http://www.dibs.dk/2297.0.html>

10.8 NetBanx

Developed in 1996 NetBanx is the most popular and longest standing generally available payment solution in the UK. The major UK acquiring banks approve NetBanx and agreements are already in place extending facilities and electronic commerce into the international arena.

CactuShop support for NetBanx has been tested and approved by them and it is an officially supported solution. If setting up with NetBanx, mention you are using CactuShop and they will know settings are required (otherwise you will be given a long and rather complicated document to fill in).

For further information, go to:

<http://www.netbanx.com>

10.8.1 NetBanx setup on CactuShop

Go to the 'NetBanx' section of the config settings in the *Payment and Shipping Gateways* section.

For config settings that are common to all payment methods, see section 10.



YOUR SITE MUST HAVE A SECURE CERTIFICATE TO USE GOOGLE CHECKOUT

Google Checkout (Level 2 integration) requires that the callback must run under SSL. This means your site must have its own secure certificate. Shared SSL is not sufficient for CactuShop to run Google Checkout. The certificate MUST be for your site domain and applied such that any web site pages can be called with https without generating an error.

Google provides some information on obtaining secure certificates that are acceptable here:

<http://www.google.com/checkout/ssl-certificates>

You should ensure you check with your host about purchasing secure certificates as many will not install those not purchased via themselves.

Furthermore, you will need the ability to set basic username/password authentication on specific folders. Google Checkout requires that the callback script is protected in this way.

10.8.1.1 NB_URL

The URL of secure payment page on NetBanx for your site. Different stores usually have individual URLs set up by NetBanx.

10.8.2 Setup on NetBanx

Before you can use NetBanx, you must first fill in their Integration Questionnaire for them to set up your merchant account.

Most of their 'default' configuration will work fine but the following should be set in order to integrate well with CactuShop:

1. Referring page should be your shop's checkout page.
2. A CGI Call to the callback URL in this format should be called in **successful** transactions, i.e. <http://www.demo.xyz/callback.asp?g=nb>
3. A CGI Call to the callback URL in this format should be called in **failed** transactions, i.e. <http://www.demo.xyz/callback.asp?g=nb&outputresult=failed>

10.9 Google Checkout

Google Checkout is a payment gateway system by the same company that bought you Gmail and... the search engine. It provides low cost processing with a powerful API. Google checkout is a remote payment gateway, with customers being directed to Google's secure payment page in order to conduct their credit card transaction. However, it is far more complex than most other integrations, because the user does the whole checkout including shipping selections from Google's site.

Important: Google Checkout support (Level 2 integration, with callback) requires you have SSL running with your own secure certificate on your site. It also requires that you set basic authentication on the callback script. These may not be available on all hosting packages; if available, a secure certificate will add extra cost to your hosting. Please see the sidebar for more information.

For further Google Checkout information, go to:

<http://checkout.google.com>

10.9.1 Overview

CactuShop's Google Checkout integration is a 'Level 2' implementation, which means that the entire checkout process is done on Google's web site. For elements such as shipping and tax, Google interfaces with CactuShop to obtain pricing details. At the end of the checkout process, Google passes data collected from the user so that an account and order record can be created in CactuShop. This differs significantly from the usual gateway process in CactuShop.

As mentioned above, for Level 2 integration, you must have SSL and basic authentication available on your hosting package.

10.9.2 Google Checkout setup on CactuShop

Go to the 'Google Checkout' section of the config settings in the *Payment and Shipping Gateways* section.

For config settings that are common to all payment methods, see section 10.1.4.

10.9.2.1 GOOGLE_MerchantID

Your Merchant ID supplied by Google Checkout.

10.9.2.2 GOOGLE_MerchantKey

Your Merchant Key supplied by Google Checkout.

10.9.2.3 GOOGLE_ProxyURL

The path to your *google.asp* script, which is the one Google connects to when communicating with your store. As default, this will be located at:

<https://www.demo.xyz/payment/proxy/google.asp>

For testing you can use http, but for live use this path **must** begin with https. The 'proxy' folder **must** be protected with basic authentication.

10.9.2.4 GOOGLE_ProcessCurrency

You must set this config setting to the 3 letter ISO currency code of your Google Checkout 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 Google Checkout.

If you don't set this (and your store supports multiple currencies), you will pass values in GBP or USD to the Google Checkout gateway, but it will assume these amounts are in Euros.

10.9.2.5 Callback proxy - further info

Google Checkout requires that the callback script be protected by SSL as well as basic username/password authentication. However, basic authentication can only be applied on a per-folder basis. You cannot apply it to an individual script like the *callback.asp*. Even if you could, putting basic authentication on the *callback.asp* alone would cause problems if you had other payment gateways set up that did not support it.

The solution is a callback proxy script. For Google Checkout, this is located at *payment/proxy/google.asp*. The way it works is that Google Checkout posts its callback information to this script, which in turn posts it to the regular *callback.asp* script on the root of your store. Effectively the proxy script is an intermediate step that can have basic authentication, and can then relay the received values to the main callback which does not.

To set this up, apply basic authentication to the *payment/proxy/* folder. You may need to contact your server administrator to do this, or you might have the option on your web hosting control panel. The username and password you set up for basic authentication should match your Google Checkout ID and Google Checkout key respectively.

10.9.3 Setup on Google Checkout

For Google Checkout to notify your shop with new orders (Level 2 Integration), you must first provide Google Checkout with the URL of your callback page. Unlike most other payment gateways, Google Checkout requires that the callback script is protected by basic authentication and SSL. As detailed in 10.9.2.5 above, we must use a proxy script to receive the callback rather than the main *callback.asp* page. The URL would therefore be:

<https://www.demo.xyz/payment/proxy/google.asp>

If your site runs CactuShop in a subfolder, you would need to reflect this in the URL of course.

You can set this by logging to Google Checkout's Merchant Center with your Google Account ID and password. Select the "Settings" tab and click on the "Integration" link in the left pane. This should display the Integration Settings page where you can set your **API Callback URL**. Be sure to tick the "For extra security, my company will only post digitally signed XML shopping carts. (Google should reject all other)" checkbox and select "XML" option as the Callback method.

10.9.4 Testing Google Checkout

CactuShop automatically chooses where the XML calls are sent based on the `GOOGLE_Status` setting. If it's set to "test", CactuShop will pass the XML call to Google Checkout's Sandbox instead of to the "live" Google Checkout Servers. You may need to register a separate account to have access to the Sandbox as using your actual Merchant Account is not advisable.

Note: the sandbox tests will work without basic authentication or SSL protection on your callback proxy script. But the live Google Checkout will not – do not be fooled by the sandbox into thinking you can get away without SSL or basic authentication. You must have these in place for Google Checkout to work in 'live' mode.

10.10 PayPal IPN

PayPal is popular worldwide as a convenient method of payment to both companies and individuals. CactuShop support for PayPal uses the 'Instant Payment Notification' (IPN) integration method. It works similarly to a standard remote payment gateway, with the user being passed to PayPal's secure area for the actual card transaction.

In 2005, PayPal acquired the PayFlow Pro and PayFlow Link payment systems from VeriSign. Both of those systems have been supported by CactuShop for some years. While we have updated this manual to reflect the changes, we decided to keep both those sections in the same position to avoid renumbering that might render knowledgebase articles and other documentation out-of-date (see 10.18 and 10.19).

For further PayPal information, go to:

<http://www.paypal.com>

10.10.1 PayPal setup on CactuShop

10.10.1.1 PAYPAL_Business

This is the email address that is your account login/ID on PayPal.

10.10.1.2 PAYPAL_Cmd

PayPal command instruction. The default value is "_xclick" (without the quotes). This is very unlikely to change.

10.10.1.3 PAYPAL_PP_ValidateCommand

The security validation command sent back to PayPal from the callback script. There is no reason to change this unless specifically told to by PayPal or Cactusoft support.

10.10.2 Setup on PayPal

Make sure that you have Instant Payment Notification (IPN) turned on in your PayPal account settings (*My Account > Profile > Instant Payment Notification Preferences > Instant Payment Notification (IPN)*) before integrating your CactuShop with PayPal. You must also set the notification URL to that of your callback page, i.e.

<http://www.demo.xyz/callback.asp?g=paypal>

10.10.3 Common problems

PayPal does a kind of double callback, so you will need to ensure your site has MS XMLHTTP support. See the *System > XML Components* config settings and check with your web host which XML support components they have installed on their servers.

10.11 PO (off-line) payment

PO stands for 'purchase order', a document given by a company to another when they wish to be invoiced for a particular order rather than pay at the time of ordering. This method allows for CactuShop to accept orders without credit card details, where payment will be made separately off-line (over the phone, by cheque, by cash, by wire transfer, etc.).

The PO number itself is arbitrary from CactuShop's point of view— it is determined by the purchaser. If the purchaser has a more formal accounts system, a PO number is normally required for each invoice and the accounts department will only accept invoices that have been pre-approved and include a PO number that they have issued. If the purchaser does not have such a formal procedure, then this field can have any kind of reference entered.

10.11.1 PO payment setup on CactuShop

PO payment can be activated very simply. Unlike payment gateways, there is no account information or remote setup required.

10.11.1.1 PO_AuthorizedOnly

Many store owners have two types of customer; a casual 'new' user who finds the web site and purchases items, and a trusted regular (often a 'trade' customer) who makes regular orders. The relationship with the trusted regular will often go back some years, with the regular accustomed to ordering goods and paying the invoice some weeks after delivery. The 'payment by PO' option is perfect for such customers. However, you're unlikely to want to dispatch goods to new customers without first receiving a credit card payment.

Setting the *PO_AuthorizedOnly* config setting means this payment system will only be available at checkout to those who you have set as 'Approved' within their customer record. This way, you can pre-enable trusted users to enable them to order in this fashion while excluding this for new customers and other customers that you don't want to run a tab.

10.12 Protx VSP Form

Protx is a UK-oriented remote gateway. It is simple to setup and does not require SSL as the transaction is completed on Protx's server. For further information, go to:

<http://www.protx.com>

10.12.1 Protx VSP Form setup on CactuShop

Enter the various Protx account details into the Protx config settings in CactuShop.

10.12.1.1 PROTX_URL

This is the URL where the customer is directed to in order to make a payment. ProtX advises that the following URLs are used from 1st August 2007:

Test server:

<https://ukvpstest.protx.com/vspgateway/service/vspform-register.vsp>

Live server:

<https://ukvps.protx.com/vspgateway/service/vspform-register.vsp>

10.12.1.2 PROTX_TxType

This is the type of transaction. Please refer to ProtX documentation for more details of the alternative values.

10.12.1.3 PROTX_VendorEmail

The email address of the vendor (store owner) that ProtX will send emails to.

10.12.1.4 PROTX_VendorID

ProtX will supply this with your account details.

10.12.1.5 PROTX_Password

ProtX will supply this with your account details.

10.12.2 Setup on ProtX

Unlike most other gateways, the 'callback' URL is passed to ProtX with the other transaction details (within the hash fingerprint), so it does not need to be set up at the ProtX end. If you experience callback problems, make sure your **webshopURL** config setting on CactuShop is correct (including slash at the end).

Review the other options in the ProtX admin area – see their PDF documentation for further information.

10.12.3 Common problems

ProtX requires that every transaction it processes has an ID number/code, which is determined by the customer and passed to ProtX as part of the hash fingerprint. This value, called 'VendorTxCode', must be unique to ProtX, not just your account. If we simply passed the order ID from CactuShop (numeric value, starting from 1 and incrementing by 1 with each new order), you would get errors saying the transaction was already processed. This is because other stores have long since passed orders with these ID numbers and ProtX won't let you use them again.

To get round this problem, CactuShop adds your CactuShop license number before the CactuShop order number and passes this as the *VendorTxCode*. It is highly unlikely that these will clash with another store, even if that store uses CactuShop. When it calls back, CactuShop can find the ID number by removing the license number from the *VendorTxCode* again.

However, we occasionally still see problems. If you delete some orders and compact your database, or maybe restore an older database (with some recent orders missing), your store will start to generate *VendorTxCode* values that ProtX has already seen before. In this case, we'd suggest bumping your database's order number up to the previous level.

This can be done in Access by copying and pasting records to the table (and then deleting them but not compacting the database until you have some new real orders).

In MS SQL, you can change the 'seed' value for the order numbers table from within Enterprise Manager.

In MySQL you can use the following T-SQL code:

```
ALTER TABLE tblname AUTO_INCREMENT = seedvalue
```

Note that this will be ignored if the seed value is lower than the last existing record ID number.

10.13 ProtX VSP Direct

ProtX is a UK-oriented server-server gateway. It does not require installation of COM objects or DLLs but does require a secure certificate on the site itself for SSL (shared certificate SSL will not work). It includes support for the three domain security (3DS) model provided by both Visa and Mastercard which provides added security for the transactions. For further information, go to:

<http://www.protx.com>

10.13.1 ProtX VSP Direct setup on CactuShop

Enter the various ProtX account details into the ProtX config settings in CactuShop.

10.13.1.1 PROT_X_URL

This is the URL that CactuShop calls to pass the credit card details and obtain a response.

Test server:

<https://ukvpstest.protx.com/vspgateway/service/vspdirect-register.vsp>

Live server:

<https://ukvps.protx.com/vspgateway/service/vspdirect-register.vsp>

10.13.1.2 PROT_X_TxType

This is the type of transaction. Please refer to ProtX documentation for more details of the alternative values.

10.13.1.3 PROT_X_VendorID

ProtX will supply this with your account details.

10.13.1.4 PROTXDIRECT_3DCallbackURL

This is the URL that is used for the 3DS (3D Secure) callback process.

Test server:

<https://ukvpstest.protx.com/vspgateway/service/direct3dcallback.vsp>

Live server:

<https://ukvps.protx.com/vspgateway/service/direct3dcallback.vsp>

10.13.1.5 'usesecurearea' config setting

This should be set on to ensure the payment pages are handled under SSL.

10.13.2 Setup on Protx

See the Protx VSP Direct PDF documentation for further information.

10.14 Realex

Realex is a payment gateway developed by major banks in Ireland. They manage payment exchanges for businesses, merchants and banks. Some of the services they provide include card authorization, fraud scoring, electronic funds transfer, foreign exchange, reporting and reconciliation tools and payer authentication. For further information, go to:

<http://www.realex.ie>

10.14.1 Realex RealAuth Redirect setup on CactuShop

Go to the 'Realex' section of the config settings in the *Payment and Shipping Gateways* section.

For config settings that are common to all payment methods, see section 10.

10.14.1.1 RX_MerchantID

Your Merchant ID supplied by Realex.

Note: This is not the merchant number supplied by your bank.

10.14.1.2 RX_SharedSecret

This is the Shared Secret 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.

10.14.1.3 RX_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.

10.14.1.4 RX_AutoSettleFlag

Used to signify whether or not you wish the transaction to be captured in the next batch or not. If 'checked', then all the transactions will automatically be settled in the next batch. If 'unchecked' it means that you will manually settle transactions after the goods have been shipped.

10.14.1.5 RX_URL

URL of secure payment page on the Realex site - very unlikely this will change.

10.14.1.6 RX_ReturnTSS

Use to signify whether or not you want to use Realex's Transaction Suitability Score. If this is 'checked', six additional fields will also be supplied to Realex in every transaction. (shipping code, shipping country, billing code, billing country, customer id, customer email).

10.14.2 Setup on Realex

Before you can use Realex's Reauth Redirect, you must first provide Realex with the URL of your callback page. This should be the path to your *callback.asp* page, including the 'g' parameter to tell it which gateway the callback is for:

<http://www.demo.xyz/callback.asp?g=rx>

The response URL is to be mailed to support@realexpayments.com. You must 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 'reauth developer's guide page 8.

In case Reauth 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). This is referred to as Realex's RealControl Management System. Login at:

<https://emerchant.payandshop.com>

...and go to 'Administration' section.

10.15 SecPay Premium

SecPay is a UK-oriented remote gateway. CactuShop supports the 'Premium' integration method. For further information, go to:

<http://www.secpay.com>

10.15.1 SecPay setup on CactuShop

Most of the config settings should be self-explanatory. The *SECPAY_Template* config value can be left blank, but gives the option of customizing the look and feel of the secure form. See SecPay's documentation for more information.

10.15.2 Setup on SecPay

The callback URL is passed to SecPay from CactuShop, so does not need to be set up on SecPay's site. However, you should review the documentation with SecPay and check the settings in the admin area for further configuration.

10.16 Secure Trading

Secure Trading is a UK-oriented remote gateway. It has one of the most customizable and flexible interfaces of all the remote payment gateways.

For further information, go to:

<http://www.securetrading.com>

10.16.1 Secure Trading setup on CactuShop

Secure Trading is more flexible than most remote payment gateways. It allows you to use template files to control the look and feel of the payment pages on their web site, as well as sharing one account between multiple web sites.

10.16.1.1 Extra files

Secure Trading requires some extra files which are uploaded to the Secure Trading web site through their admin area. Cactusoft has produced files that are pre-configured in most respects for CactuShop. These are contained in a zip file called *cs6_securetrading.zip* which is located in the 'payment' folder in CactuShop. You can remove this zip from your live site – the files are not needed by CactuShop, they are to be uploaded to the Secure Trading admin area. You should use these CactuShop files rather than the default files provided by Secure Trading; the *callback.txt* is particularly important – the default Secure Trading will not work with CactuShop and your callbacks will fail.

10.16.1.2 ST_CallBackID

The *callback.txt* file that you upload to Secure Trading supports multiple numbered callbacks. This number determines which of those applies to this site. If you only have one site, this should be left as '1'.

10.16.2 Setup on Secure Trading

Most of the settings for Secure Trading are controlled by the various files contained in the *cs6_securetrading.zip* that are uploaded to the payment gateway. See Secure Trading documentation for further information.

10.16.2.1 callback.txt

This text file contains details of where Secure Trading should communicate the results of transactions to. As mentioned in 10.16.1.1, you must use the file provided in the *cs6_securetrading.zip* and not the default Secure Trading *callback.txt* file.

You should leave the first and third lines untouched. The 'url' line should be changed to match the location of your *callback.asp* script. It must pass the



USE THE SECURE TRADING FILES SUPPLIED WITH CACTUSHOP RATHER THAN THE DEFAULT ONES SUPPLIED BY SECURE TRADING

Our *callback.txt* has been customized to include the required values that CactuShop's callback needs returned from Secure Trading. If you use Secure Trading's sample *callback.txt*, CactuShop callbacks will fail.

parameters 'g=st' and 'p=[password]' where [password] matches the *ST_Password* config setting on your CactuShop.

If you use your Secure Trading account with other stores, you can create multiple callbacks. To do this, copy the three lines of the *callback.txt* and paste them below. Then change the '1' at the end of each variable name to another number.

Note again that the 'fields' line in our *callback.txt* is different to the default Secure Trading *callback.txt*. CactuShop callbacks will fail if you use the default Secure Trading 'fields' values.

10.16.2.2 failure.html and success.html

These are static HTML pages that are uploaded to Secure Trading and are displayed in the even of a failed or successful transaction respectively. You can customize the look and feel of these pages if you wish. Do not change these to ASP pages or embed server-side code – Secure Trading will not run scripts, only display static HTML.

10.16.2.3 failureemail.txt and merchantemail.txt

These are email templates used to format the failure or merchant (order) message sent to the merchant.

10.16.2.4 form.html

This page is the template for the credit card payment form that Secure Trading will display to customers. You can customize this page to match the look and feel of the rest of the site if you wish. Take care not to rename fields or corrupt the form HTML. We can only help with problems using our default HTML templates; if you experience problems with Secure Trading, ensure you reinstate unmodified CactuShop templates and test again before contacting us to report bugs.

10.16.3 Common problems

With the increased flexibility of the Secure Trading template system comes more opportunity for the introduction of bugs and incorrect settings.

The most common problem encountered is incorrect *callback.txt* files (especially use of the default Secure Trading ones which don't contain the 'fields' required for the CactuShop callback to work). Please make sure you use the Cactusoft-supplied ones in the Secure Trading zip file as a base (payments folder).

As mentioned in 10.16.2.4, the HTML form template is a potential source of problems too. If you customize the default *form.html*, you can introduce bugs that can stop it working. We regret that we cannot debug your HTML (even if you insist it is bug free). We will only address bugs that occur when our default HTML files are used.

10.17 VelocityPay (CardStream)

VelocityPay ceased trading in late 2006, but the gateway support lives through CardStream. To distinguish it from other CardStream offerings, and to

avoid confusion with the various config settings within CactuShop, we will continue to refer to this system as VelocityPay for the time being. CactuShop supports the 'Direct Connection' and 'Hosted Pages' payment methods.

For further information, go to:

<http://www.cardstream.com>

10.17.1 VelocityPay setup on CactuShop

There are a few config settings that differ from most integrations:

10.17.1.1 VELOCITY_IntegrationType

This selects which of the two supported integration types are used. If you have your own secure certificate such that you can call pages with your own domain using http or https then you should be able to use the 'direct' method. This way, the customer stays on your CactuShop, with the authorization handled by an XML call to VelocityPay. If you don't have SSL or it is not your own secure certificate on your site, then you should use the 'hostedpages' method instead. This routes users to VelocityPay's secure area for making payment.

10.17.1.2 VELOCITY_CountryCode

This uses the numeric ISO 3166-1 code rather than the more familiar 2 or 3 letter codes. There is a full list here:

http://en.wikipedia.org/wiki/ISO_3166-1

10.17.1.3 VELOCITY_CurrencyCode

This uses the numeric ISO 4217 code rather than the more familiar 3 letter code. There is a full list here:

http://en.wikipedia.org/wiki/ISO_4217

Note that in most cases, the currency and country codes between ISO 3166-1 and ISO 4217 are the same.

10.17.1.4 VELOCITY_ProcessCurrency

This must be specified in the 3 letter format from ISO 4217 and must correspond to the *VELOCITY_CurrencyCode* setting. In this way, CactuShop can force transactions to the correct currency AND pass the correct numerical ID to VelocityPay.

10.17.1.5 VELOCITY_URL

This setting depends on whether you're using the VelocityPay 'Hosted Pages' solution or VelocityPay 'Direct'. CardStream should tell you which values to use.

If you're using the direct method but find that all orders return a message that the card is declined and insert an extra payment form onto our checkout

form then it's because you are submitting to the hosted pages URL instead of the 'direct' one.

10.17.2 Setup on VelocityPay

There is no set up of CactuShop details required at VelocityPay. However, if you are using the 'hostedpages' integration type, you can customize the payment form by supplying a header and footer file. Please see VelocityPay documentation for further information.

10.18 PayPal PayFlow Link (PFL)

PayFlow Link was previously a payment method operated by VeriSign, but was acquired by PayPal. We have revised the manual to take account of this change, but have kept the position of this section the same so as not to affect the numbering of other sections (which might cause confusion).

For further information, go to:

<http://www.paypal.com>

CactuShop supports two PayFlow implementations, PayFlow Link and PayFlow Pro. For more information, see 10.19.

PayFlow Link is a remote gateway and uses a secure area on PayPal's own site. The customer is transferred from CactuShop to the secure area to make payment and a 'callback' is made from the PayPal server to CactuShop to let it know if the transaction was successful. This solution is cheaper than PayFlow Pro since you don't need your own secure certificate and can run your site on a shared (virtual) server.

10.18.1 PayPal PFL setup on CactuShop

10.18.1.1 PFL_ProcessCurrency

PayPal accounts for both PFL and PFP only support a single currency. You just therefore set this config setting to the 3 letter ISO currency code of your account. For example, if your account processes US Dollars, this setting must be set to 'USD'. Setting this config setting correctly ensures that all orders will be converted to US Dollars prior to passing over to PayPal. If you don't set this (and your store supports multiple currencies), you will pass orders in GBP or EUR to the gateway, but it assume these amounts are in US Dollars.

10.18.1.2 PFL_Type

You can set your store to pass all transactions to PFL as either 'S' (for 'sale') or 'A' (for 'authorize'). The former bills the card immediately; the latter will authorize the card and hold funds but will only bill the transaction when you decide to from the back end. There is a limit to how long you can hold an authorization unbilled before it lapses – please see the PFL documentation for more information.

10.18.2 Setup on PayPal

To configure Payflow Link, log in to the PayPal Manager at <https://manager.paypal.com>. Navigate to *Service Settings > Payflow Link* and

click on the Configuration page. For information about configuration, click Help on that page.

10.18.2.1 Return URL Method

This should be set to LINK so the user is returned to the shop successfully.

10.18.2.2 Return URL

This will provide the link at PayPal to return the users to the store once payment has been completed. Usually just set to the homepage of your site:

<http://www.demo.xyz/default.asp>

10.18.2.3 Relay Response

Select 'Relay Response', and change this to the callback URL, which should look like:

[http://www.demo.xyz/callback.asp?g=pfl&p=\[password\]](http://www.demo.xyz/callback.asp?g=pfl&p=[password])

[password] should match your *PFL_CallbackPassword* config setting.

10.18.2.4 Silent Post URL

The checkbox needs to be checked to enable the silent post URL (callback URL). Next to the checkbox, there's space to input the callback URL, which should look like:

[http://www.demo.xyz/callback.asp?g=pfl&p=\[password\]](http://www.demo.xyz/callback.asp?g=pfl&p=[password])

[password] should match your *PFL_CallbackPassword* config setting.

10.18.2.5 Transaction Process Mode

Set this to TEST whilst configuring the gateway and ensure AVS and CSC are turned off. When you're ready to go live, set this to LIVE and activate AVS and CSC (for improved security).

10.18.2.6 Other settings

The other options configure email sends and some properties of the payment pages. Once the gateway is working correctly, you can adjust these.

10.19 PayPal PayFlow Pro (PFP)

PayFlow Pro was previously a payment method operated by VeriSign, but was acquired by PayPal. We have revised the manual to take account of this change, but have kept the position of this section the same so as not to affect the numbering of other sections (which might cause confusion).

For further information, go to:

<http://www.paypal.com>

CactuShop supports two PayFlow implementations, PayFlow Link and PayFlow Pro. For more information, see 10.18.

PayFlow Pro, as the name suggests, is a heavier-weight solution of the server-server type. It requires SSL on your CactuShop site. It also requires that a PayPal COM object be installed on your server. For this reason, it is generally only suitable where you have your own dedicated server, or a very obliging web host. On PayFlow Pro, the customer makes the order on CactuShop's secure form rather than one hosted by PayPal. CactuShop uses the COM object to call PayPal, authorize the card and get a response back.

10.19.1 Prerequisites

You must install the COM object libraries supplied by PayPal on your server. You will also need a secure certificate on the domain itself such that you could call any page on your site with https or http without generating an error. Please see the PFP documentation for further information.

10.19.2 PayPal PFL setup on CactuShop

10.19.2.1 PFP_HostAddress

Use 'test-payflow.paypal.com' for testing, 'payflow.paypal.com' for real transactions.

10.19.2.2 PFL_ProcessCurrency

Accounts for both PFL and PFP only support a single currency. You just therefore set this config setting to the 3 letter ISO currency code of your account. For example, if your account processes US Dollars, this setting must be set to 'USD'. Setting this config setting correctly ensures that all orders will be converted to US Dollars prior to passing over to PayPal. If you don't set this (and your store supports multiple currencies), you will pass orders in GBP or EUR to the PayPal gateway, but it assume these amounts are in US Dollars.

10.19.2.3 Proxy settings

CactuShop's PFP implementation has settings to allow your server to contact PayPal's server even if it is behind a firewall and needs to use a proxy server.

10.19.2.4 PFL_Type

You can set your store to pass all transactions to PayPal as either 'S' (for 'sale') or 'A' (for 'authorize'). The former bills the card immediately; the latter will authorize the card and hold funds but will only bill the transaction when you decide to from the back end. There is a limit to how long you can hold an authorization unbilled before it lapses – please see PayPal's documentation for more information.

10.19.3 Setup on PayPal

See PayPal's documentation for further information. There is no requirement to set a callback or 'silent post' since the transaction is made via an XML post and response made by the server.

10.20 WorldPay

WorldPay is a UK-based payment provider that servers a number of countries. For further information, go to:

<http://www.worldpay.com>

CactuShop implements WorldPay as a remote payment gateway using the 'select junior' implementation. If you tell WorldPay that you are going to use CactuShop, they will ensure you're given the correct account.

10.20.1 WorldPay setup on CactuShop

10.20.1.1 WORLDPAY_AuthMode

This should be set to 'A' to authorize and bill transactions or 'E' to just authorize and hold funds. 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.

Our experience has suggested that WorldPay's standard fraud screening is not as good as many other gateways. For this reason it may be advisable to set your store to 'E' to hold transactions so that you can perform further fraud checks yourself before deciding whether to bill the card and proceed with the order.

10.20.2 Setup on WorldPay

Within WorldPay's Merchant Management system you must set up the following (in addition to standard setup info)...

10.20.2.1 Callback password

This should match your *WP_CallbackPassword* config setting.

10.20.2.2 Use callback enabled

Should be activated.

10.20.2.3 Use callback response

Should be activated.

10.20.2.4 The callback URL

This should be the path to your *callback.asp* page, including the 'g' parameter to tell it which gateway the callback is for:

<http://www.demo.xyz/callback.asp?g=worldpay>

10.20.2.5 Further customization

WorldPay gives you the facility to customize the look and feel of their pages, specify minimum transaction values and a whole lot more.

10.20.3 Activation

Once your shop is working in test mode, you can complete WorldPay's activation form in order to turn your account live. Please note that when prompted for the name of your payment page this will be the path to the *checkout.asp* script on your CactuShop, for example:

<http://www.demo.xyz/checkout.asp>

10.21 Secure Email / Review

One of the most obvious ways of accepting credit cards is to have the details emailed to your so that they can be processed offline in the same way you would process telephone or fax orders.

The main problem with doing this is one of security. Even if your web site has a secure certificate so you can protect the details as they travel between the web browser and the server, you need some way to ensure that the credit card details can be emailed securely from the web site to your email account. This is where the Cactusoft Encrypted Mail package comes in – it encrypts card data as an attachment using the Data Encryption Standard (DES) algorithm in either 56 or 168 mode (3DES).

The decryption program included with CEM can be used to decrypt the attachments, allowing the card details to be manually processed in the same way as fax or phone orders are dealt with.

This method requires Cactusoft Encrypted Mail (CEM), an add-on available at additional cost from our web site.

Alternatively, you could opt just to store the credit card details in the database and view them securely. This way is less secure but does not require the CEM system, and is hence a little cheaper.

10.21.1 Prerequisites

Because credit card details will be entered directly into the checkout page of your CactuShop, you must have your own secure certificate for your domain installed on the server such that your site can be called with http or https without causing an error.

10.21.2 Installing the CEM system (secure email)

Follow the instructions that come with the CEM system. You must use the key generator utility to create an encryption key. This will be a string of hex characters that are saved in a text file with a *.cek* extension. This will be used to decrypt the order attachments that come from CactuShop.

10.21.3 Secure email/review setup on CactuShop

10.21.3.1 EMAIL_CreditCardStorage

With this payment method, you can decide whether to store credit card details with an order in the database, or have them emailed using the CEM system.



WE STRONGLY ADVISE AGAINST USING THE SECURE REVIEW METHOD

We have included this method only because some customers insist on it.

For best security, use a remote payment gateway to process card details. This way, you don't handle card details yourself; the responsibility for card security is in the hands of the gateway provider who will have high level security measures (including physical security of servers).

Accepting and holding credit card details is inherently risky, especially on a shared server or collocated server where you have no idea who else might have access to it.

If you really must hold card data in this way, ensure you always use the back end tools provided to wipe the card number once the order is processed.

10.21.3.2 EMAIL_EncryptionKey (secure email)

This is the hex key that you generate within the key generator software (part of CEM system). It does not apply if you opt to store card details in the database instead of emailing them.

10.21.3.3 EMAIL_EncryptionKeyFile

This is the name of the key file that you generate within the key generator software (part of CEM system). This setting ensures CactuShop can tell the CEM system which key to use for decrypting orders. It does not apply if you opt to store card details in the database instead of emailing them.

10.21.3.4 usesecurearea config setting

This should be switched on. Note that if you enable this before SSL is working, you will not be able to access the CactuShop back end (which will try to use SSL). You would need to change this config setting within the database to 'n' and then restart the web site in IIS or refresh the config settings (by passing ?appvar=reset to any page address).

10.21.4 Reviewing orders (secure review)

If you opt to have credit card orders saved to the database, you should see the customer's card info when you view customer data in the back end.

Remember that storing card data like this poses a security risk if an unauthorized person managed to obtain access to your database. To mitigate the risk you should always use the 'Delete Details' button in the credit card section of the back end after you have processed the order. This way, any security breach would expose the minimum amount number of customer details.

The security of this method depends not just on our code, but also on the store owner's operation of the store, the security of the hosting and other such factors. Cactusoft takes no responsibility for any data loss that may occur and strongly advises against use of this method. Remote payment gateways are the safest method of accepting payments.

10.22 Integrating new payment gateways

This is an advanced topic

Integrating payment gateways requires programming knowledge and experience. This guide is designed to help experienced developers through the process. All gateways are different and there are no guarantees that CactuShop's payment system implementation can be made to work with every gateway, although we have found the v6 system flexible enough to support a wide range of different payment systems and are yet to come across one that CactuShop could not support.

CactuShop v6's payment system has been streamlined and is now far more modular than in previous versions of the store.

10.22.1 The checkout files

The following files handle payment:

checkout.asp

This handles the entire checkout process in CactuShop, creates the relevant gateway object, and initiates the transaction.

callback.asp

All remote processing gateways pass back to this script, which handles the callback response and completes the order (if transaction was successful).

checkoutcomplete.asp

This is a simple script that handles successful LOCAL transactions. Users are redirected to *checkoutcomplete.asp* to protect against users refreshing and resubmitting an order.

payment/payment.asp

This handles the objects required for each gateway, and covers gateway class creation. Each gateway is passed a reference to the *PaymentProcessor* class.

payment/gateway_*.asp

These files handle each gateway implementation.

10.22.2 Steps to integrating a new gateway

If CactuShop does not include built-in support for the gateway that you intend to use, support will need to be added. Here are the steps for integrating an imaginary gateway called 'SwankPay'. These steps assume you have reviewed the gateway's technical documentation extensively.

1. The first step is to create the new 'SwankPay' config setting group in the database for your gateway. Open up the `tblCactuShop1ConfigCategories` table and add a new record in, with `CFG_C_ParentID` set to 10 (this way, your new payment gateway settings will appear in a group within the *Payment and Shipping Gateways* section).

Note the ID of the config category record you just created – you'll need this for the next step.

2. Now the new config settings records need to be created. Open up the `tblCactuShop1Config` table and note that payment gateways generally all have these config settings:

```
[gatewayprefix]_AuthorizedOnly
[gatewayprefix]_ProcessCurrency
[gatewayprefix]_Status
[gatewayprefix]_URL
```

It's best to copy these config settings from another gateway and then rename them for the new gateway, e.g. *SWANK_AuthorizedOnly*.

We're using 'Swank' as the gateway prefix for config settings – we'll use this at further points too, so remember it.

Your payment gateway will almost certainly need further settings such as login, username or account number for the gateway, some kind of password or hash value. You can only determine this from the documentation provided with the gateway itself. As you can see from our built-in gateway support, the number and type of config values for each gateway varies.

3. Add a language string used to refer to this method on the front end of the site (for example in the dropdown selection if there are multiple payment options and the customer can choose). It MUST be named 'ContentText_*[gatewayprefix]*', so for our sample gateway will be 'ContentText_Swank'. For details on the language strings system, see 4.11.1). We would suggest giving the new language string a high ID number, so it does not clash with others we might add in future updates.
4. Add a reference to the new *gateway_*[gatewayprefix]*.asp* include at the top of *payment.asp*, where all the other gateway includes are referenced. In our case:

```
<!--#include file="gateway_swank.asp"-->
```

5. Add the gateway prefix to the *strPaymentSystems* list

```
strPaymentSystems = "[omitted..]velocity,worldpay,swank"
```

No spaces, just comma separators between each one. This entry MUST match the prefix for your gateway config settings (not case sensitive).

6. Add the ID of the new language string you created in step 3 above to the *strPaymentLanguageIDs* string in *payment.asp*. This should be both comma and space separated (as the other numbers are).
7. Still in *payment.asp*, find the public function *SetGateway(strGateway)*. This has a select case statement for each gateway supported. Add a new line in:

```
Case "swank":           Set Gateway = New SwankGateway
```

8. Alter your new *gateway_swank.asp* file, setting relevant properties and functions and naming the class with the same name used in step 7 above, in our case 'SwankGateway'.

If you design your class properly, it should support both a 'test' mode as well as the capability to fake a callback to itself, both of which are useful for testing that things work.

10.22.3 Payment class variables

When coding the processing functions in the gateway, various standard variables are available. These are all exposed in the payment class, which is accessible with the private variable 'm_payment'.

CustomerID (ID of customer record in database)

CustomerEmail

CustomerTelephone

OrderID (ID of order record in the database)

OrderAmount (total amount to process at the gateway)

OrderDescription (simple text set in language string *Config_OrderDescription* that can be passed to gateway as a summary of the order)

Basket

If you need more detailed access to the contents of the basket - such as passing string or XML data of the contents of the order - then you have full access to the basket contents through this variable. It contains a collection of *basketitems* that have all the details such as product and version name, price, quantity, options etc.

CallbackURL

The URL - including gateway identifier in the query string - that should be called back by the gateway (used for gateways where this is passed over to it instead of being set on the gateway's own admin panel).

Status (whether in 'on', 'off', 'test' or 'fake' mode)

GatewayCurrency (The currency object to process the order in)

Also there are two sub-classes - Billing and Shipping - which refer to the address details entered by the customer. The variables for this class are:

- Name
- StreetAddress
- TownCity
- County
- Postcode
- CountryID (ID record of country in CactuShop's database)
- CountryName

There are also two properties - FirstName and LastName. CactuShop doesn't support a split in the name, but many gateways require it: these properties try to split the name (around the first space).

So if, for example, you wish to get the customers billing name, you would reference it in your code by:

```
m_payment.Billing.FirstName
```

10.22.4 Gateway Class

All gateway classes require the following properties and subs. These need to be overridden with each new gateway created.

10.22.4.1 Properties**ProcessingType** (enum)

This should return either REMOTE_PROC_TYPE or LOCAL_PROC_TYPE, defining the processing type for this gateway.

TakePONumber (boolean)

Whether to show the PO number field. For processing gateways this would normally return FALSE.

ConfigPrefix (string)

The prefix used for config settings - don't include the underscore.

ShowCallbackResponse (boolean)

Whether to write HTML to the screen on callback. Some gateways support writing a custom response to the screen (such as WorldPay).

TakeCreditCard (boolean)

Only required for local processors (server-server type): sets whether to show a form with credit-card details. For 'offline payment' (payment by PO) cheque this would be FALSE. For remote processors, this is assumed to be FALSE.

ProcessesPayment (boolean)

Only required for local processors: sets whether payment is actually processed. This would be set TRUE for gateways, FALSE for processors such as encrypted email and offline payment by PO/cheque.

StoreCreditCardInDatabase (boolean)

Only required for local processors (server-server type): whether to store the credit card information in the database.

StoreCreditCardInEmail (boolean)

Only required for local processors (server-server type): whether to store the credit card information in the email. If this is set to TRUE, function *EncryptEmail* must exist.

10.22.4.2 Variables

Variables need to be set to indicate the response to transactions.

Callback

This class needs to hold the response to a callback. This includes 3 properties:

- OrderID
- OrderAmount
- CustomerEmail

All 3 of these should be set by a callback. *OrderID* should be the ID of the order record in the CactuShop database (`tblCactuShop1Orders` table). This will need to be passed to the gateway and returned so that CactuShop can find the relevant order. The *OrderAmount* is also passed back in most cases, as a double check that the full order amount was paid for. If the gateway returns, for example, the order amount in pence (or cents, etc.), it needs to be converted.

TransactionID

This is the ID given to the transaction by the payment gateway. This can be alphanumeric. It's stored in the CactuShop database and displayed in the back end (as 'reference number'), to make it easier to tie up the order with the payment record you have on the gateway.

TransactionError

This indicates both whether an error occurred, and a description of what the error is. If the transaction was successful, make sure this is set to a blank string. Otherwise, set this to a general description of the response error, including any relevant error codes or descriptions from the gateway. This is not displayed to the customer but it can be displayed in test mode or sent in error emails.

10.22.4.3 Subroutines

There are 4 subs that need to be coded, 2 of which are only required for remote gateways.

WriteHiddenFields

For a remote process, this should write out the hidden fields that are posted to the gateway. It should not include a <form> tag.

WriteFakeFormFields

For a remote process, if the gateway is set to 'fake', then rather than posting to the gateway, this function is called to pass fake form fields straight to the callback. The form fields here should be what the callback script is expecting, such as a response code, order ID and amount, etc. These should be text boxes not hidden fields so the tester can change the data.

ProcessTransaction

Both a remote processor and a local processor use this function. For a remote processor, this is called on callback to check the response and set callback variables. Firstly it should check the response (usually a response code is passed back to indicate whether the transaction was successful). If it fails, then set the *TransactionError*.

If the transaction was successful, set *TransactionError* to blank and set all callback variables *OrderID*, *OrderAmount* and *CustomerEmail* and the *TransactionID*.

For a local processor (server-server type), this is called to process the transaction. This should send the process to the gateway, and handle the response. Again, if it's successful, the *TransactionID* should be set and *TransactionError* blanked; on a failure *TransactionError* should be set to describe the problem.

EncryptEmail

For a local processor (server-server type) with *StoreCreditCardInEmail* set to true; this is the function to encrypt the email text. It should return the encrypted string.

11 Processing Orders

11.1 The normal order process

Once your store has been configured properly, orders should trigger an order email to be sent from CactuShop to the store owner (the 'orders' address configured in the 'Lang. & Email Setup' part of the back end).

The customer should also get a confirmation mail, with similar order details on.

Payment gateways also send confirmation emails to both the customer and account holder (store owner). So when using a payment gateway you will normally expect to receive two mails for each order; one from your store and one from the payment gateway.

11.1.1 The order view page

When an order is received, you can look this up in the back end of CactuShop by clicking the 'Recent / Search' link in the left-hand menu. If you received confirmation of the order from the payment gateway but not CactuShop, this suggests that the 'callback' is not working. In this case you should check the setup of the gateway on both CactuShop and on the gateway's own admin area. Explanations for correct setup of the various gateways supported by CactuShop can be found in section 10.

You will see a list of the few most recent orders. The search box will accept either an order number or a date.

Each order has two buttons on it – one is to view the order, the other to view the info on the customer who made the order.

The order progress field is a free text field where you might choose to add comments regarding the progress of the order. Text may also be added to this automatically by a payment gateway.

The 'order text' link reveals a text copy of the order email as a historical record. This can be useful when queries arise or there are disputes about the content of a particular order.

When viewing the order, there are four 'order status' checkboxes.

11.1.1.1 'Order sent to store owner' checkbox

The first 'the order has been sent to the store owner' is checked for orders that have been successfully paid for on a gateway, or sent (if payment method is secure payment or PO).

11.1.1.2 'Invoice for payment has been issued' checkbox

The 'invoice for payment has been issued' box is checked when a payment is successfully made if you have the **checkinvoicedonpayment** config setting checked. Otherwise it must be manually checked when you issue an invoice to the customer.

11.1.1.3 'Payment has been received' checkbox

The 'payment has been received' box is checked automatically when an order is successfully called back by a payment gateway. If you are processing orders by 'secure email' or 'PO' methods, you must manually check this once you have processed the order (in the case of secure email) or received payment (for PO orders, where payment may be sent by cheque or other offline payment some time after the order was received).

11.1.1.4 'Order has been dispatched' checkbox

The final box, 'the order has been dispatched' must be manually checked at the point when you sent the goods to the customer. If you sell downloadable items and have the **instantdownloads** config setting unchecked, the customer will not be able to access them until you check this box for the order, approving the dispatch.

11.1.2 Invoices

CactuShop does not issue invoices directly to customers electronically. The customer will receive an order confirmation, and it is assumed that the store owner will issue an invoice as part of the order process and send this to the customer when dispatching the goods. This way you can ensure that you wish to accept the order before any invoices are generated.

The 'issue invoice' link on the order view brings up an XHTML invoice for printing. This is controlled by a file in the skin called 'invoice.htm' and can be modified by changing this template and accompanying CSS. You can for example add a logo, company header and footer, and any other static information (such as your company's VAT number – the `xxxVATNUMxxx` tag inserts the customer's VAT number if applicable).

If you wish to dispatch PDF invoices, there are a variety of tools to cut PDFs from Adobe and other vendors. The invoice can then be printed to PDF and sent to customers by email (useful if you dispatch goods electronically).

11.2 Fraud

The internet has created opportunities for traders to sell to the world that did not exist 10 years ago, but it has also created opportunities for criminals too. Once upon a time someone had to risk walking into a store with a fake or stolen credit card; but now they can attempt the same crime from the comfort of their home which may be in a completely different country. Internet fraud is so prevalent that it's unlikely that you will find any law enforcement agency in your country with any interest in receiving notification of fraud attempts.

Consequently, it is up to you, the merchant, to defend yourself and ensure that you minimize the risks to your business while not inconveniencing or turning away legitimate customers.

11.2.1 How is fraud committed?

The vast majority of fraud attempts we encounter are made from overseas locations, especially SE Asia and Eastern Europe, and normally involve stolen credit card details from US or UK cardholders. In most cases the fraudster is in possession of the correct cardholder address and phone number, suggesting that the details were probably obtained from another web site

(either by hacking or because the web site was a scam). Because the fraudster has full card details, the 'security code' check on the credit card will almost certainly be passed. Therefore it is important to look for other signs that an order might be fraudulent.

11.2.2 Billing and shipping addresses

When trying to obtain tangible goods, a fraudster needs to have them sent to somewhere he can access to pick them up. For this reason, you should be cautious about any order where the destination of the goods is different from the billing address, and highly suspicious if the destination country is different from the billing address. Why is someone in the UK or USA ordering goods to be shipped to someone in Vietnam or Romania? Such an order is 99.99% certain to be fraud.

11.2.3 IP address

With electronically dispatched goods (downloads), the fraudster's task is easier since he can use the same shipping and billing address, safe in the knowledge that he does not need to pick up the goods from the physical address, but can instead get the account details sent to an email address.

Things are even better when the access or dispatch of the goods is granted instantly. For this reason, we suggest unchecking the **instantdownload** config setting unless you're absolutely sure of your payment gateway's ability to reject fraudulent transactions (see 11.1.1.4 for more information).

To help spot fraud attempts like this, CactuShop's order notification email contains the customer's IP address. There are many places on the web where this can be looked up, revealing where the customer is located, for example:

<http://centralops.net/co/DomainDossier.aspx>

(check the 'network whois' box)

The information returned may seem a bit overwhelming at first, but you will quickly get used to finding the country from this information. If the person ordering has entered card data for a UK or US resident, but the IP address suggests they are in another country (especially SE Asia or Eastern Europe), treat the order with extreme caution.

It is important to remember that the cleverer fraudsters know how to hide their IP by operating via a hacked server in the US or UK. In this case the IP check will show them to be in that country. For this reason, never rely on the IP check to confirm the order as genuine if other signs tell you to be suspicious.

11.2.4 Email address

Fraudsters know that the email address is one of the few links to them and that they'll probably have to change them regularly. Look at the email address with an order and see if it appears to match the customer. Very often fraudsters set up multiple email accounts and then work through a list of stolen card details trying to obtain whatever they can. If you get an order from someone claiming to be called 'Bert Smith' with an email address of '*TerryBolan@freemailsystem.xyz*', this should be treated with suspicion. If

selling downloadable items, you may decide to not accept any orders from free email addresses (hotmail, yahoo, etc.). Always check the email domain out to see what kind of site it is, as some fraudsters avoid the well known free email services because they know orders might be refused because of this.

11.2.5 Different names

Fraudsters will often start an order on CactuShop and then find the gateway rejects the first cardholder info they try. They will then work through their stolen card data until they get to one that the gateway accepts. If you receive an order confirmation from CactuShop with a customer name different to the cardholder name on the order confirmation from the gateway, it *could* indicate fraud.

11.2.6 What is the customer ordering?

Remember that fraudsters are spending other peoples' money. For this reason they are likely to order multiple high value items and select the most expensive shipping option. They are also unlikely to exhibit the kind of caution most buyers would prior to ordering. You may sell an expensive item that legitimate customers would normally ask questions about first before parting with money. An order where someone orders one (or especially more than one) of such items without contacting you first might merit further checks.

11.2.7 If in any doubt, contact the customer

Sometimes you might receive an order than has some characteristics you associate with fraud, but others that you don't. If in any doubt, an email or phone call to the customer is an excellent extra check. Genuine customers will rarely be annoyed by such checks.

With many orders, the fraudsters use the cardholder's actual phone number that was stolen with the card info (otherwise the country and area code will reveal it as false). On several occasions we have called the phone number provided where we've suspected fraud only to reach the actual cardholder who was oblivious to the fact someone is using their card.

Do remember though that there are now systems where someone in one country can setup a 'local' phone number in another country and have calls routed via Skype or another internet telephony system. The country and area code with a phone number may no longer be a safe way to confirm someone's location. Also consider that in the UK and many other countries, it is possible to buy a mobile phone with cash and buy calling credit on a 'pay as you go' basis. Such phones are pretty much untraceable unless you can persuade MI5 to get involved.

If you follow up by email, it is almost certain to go to the fraudster himself, who will attempt to confirm he is genuine. Despite this, the reply can speak volumes. Fraudsters are nearly always in a different country and normally write very poor English. They spend so much time online committing fraud that their replies are normally short, sharp and impersonal whereas most genuine customers are more friendly and relaxed in feel. Look carefully at replies you get - is your customer's level of written English consistent with his stated location and name? For similar reasons, a phone call is still a valuable way to confirm a customer is genuine, despite the fact that 'pay as you go' mobiles and internet land line numbers are pretty much untraceable.

11.2.8 Weighing up fraud evidence

We have outlined several things that you should check with orders if you wish to minimize fraud. When you're familiar with these checks, they only take a minute or two per order. After time you will find that you rarely need to perform all checks; many orders are so blatantly fraud that you can discard them at the first or second check.

Some payment gateways offer fraud screening; this is certainly a useful service, but consider that in most cases the risk is still assumed by you the store owner. For this reason, you should always take ultimate responsibility for determining whether to accept an order or not.

11.3 Customer accounts

When a customer first makes an order, creates an account or signs up to the mailing list, a new account record is created in the database. Duplicate email addresses are not permitted, so if the same customer returns to store to order again, then would need to login rather than go through the checkout procedure again. There is a facility to request their password; while it may take them a minute or so to receive and pick up the mail, this will still save them time as they will not need to re-enter their personal information again.

If a customer changes email address, they will need to set up a new account.

Customers can choose their own password at checkout. This password can be changed from the 'My Account' section.

11.4 Configuring the checkout process

Store owners frequently request changes to the checkout page or the process, for example to bypass the shipping stage. CactuShop v6 provides a number of config settings in the 'Checkout Process' config setting category to handle such changes.

Some changes are not possible. It is important to remember that certain information (especially location information) affects both tax and shipping costs, and therefore the order total. For this reason, some information like this **MUST** be taken prior to the final order calculation.

12 Support

CactuShop bundles technical and upgrade support with new licenses. As standard such support is of 6 months duration, following which it can be renewed.

12.1.1 What support covers

'Support' covers both technical support (with limitation, see 12.1.3.3) as well as the provision of upgrades ('upgrade support').

12.1.2 Accessing the user (support) area

To login to the user area on our web site, go to:

http://www.cactushop.com/support/user_login.asp

In the event of problems with our primary support site, the system can also be accessed via an alternative URL:

<http://www.cactusoft.com/techsupport.aspx>

The username and password are contained in the email you received from us after purchasing CactuShop. If you do not have this email, you can request the login details by entering your license number in the lookup provided. This will send them to the email address that was used to order the license.

12.1.3 Technical support

12.1.3.1 Read the documentation and knowledgebase first

The CactuShop web site contains documentation such as this manual as well as an extensive knowledgebase system featuring many common problems. Both of these are publicly accessible and do not require support coverage or even a user account to access. We advise all customers to seek answers first in the documentation and the knowledgebase prior to contacting us. Most common problems have been encountered before and a few words in the knowledgebase search should be enough to find most answers.

Remember that the knowledgebase can provide instant answers. Using it can save your time as well as ours.

12.1.3.2 Contact us with a support issue

If you cannot find the answer using these documents, you can post a new ticket through our support system once you've logged in (see 12.1.2).

Please do not open multiple tickets for the same issue (unless the ticket was closed or has been dormant for a few weeks – in that case you should refer to the old ticket number in the new ticket). Follow the instructions on the emails from the user area to reply to the ticket if a reply is necessary. This way, the whole issue will be contained in one thread. Putting each reply in new tickets will cause utter confusion since there is no easy way to tie them to the original issue.

We only provide technical support via our online ticket system

In our experience, technical issues normally involve URLs, email addresses and error messages. We need to *see* the error message, preferably with a link to the site and a description of how to recreate the error. We may also need back end login details and possibly FTP details too. To transfer such details accurately on the phone is virtually impossible. This is why we now do all support exclusively via our online ticket system.

This ensures the most efficient response to queries, gives us a searchable database of data that we can use to improve performance over time and ensures tickets can be queued and handled from both our UK and Dubai offices.

For customers that *insist* on telephone support, we would be happy to discuss custom support contracts for an appropriate fee.

12.1.3.3 Scope of technical support

CactuShop support is offered to the account holder for a license only, via our online system (i.e. customers who purchased from us). We will not provide technical support to you just because your store runs CactuShop – if you bought the license from a developer or a reseller as part of a site-build then you must contact them for technical support as we can only provide support to them.

CactuShop technical support covers the following:

- Addressing errors and bugs with CactuShop scripts
- Answering technical queries regarding setup or configuration of CactuShop
- Giving advice and information regarding the operation of certain features
- General advice on how to approach particular customizations

The following are beyond the scope of our technical support coverage:

- Customizing scripts
- Giving detailed advice on customizations that would effectively amount to doing the actual customization
- Fixing bugs on scripts that have been modified
- Configuring or addressing server/hosting issues (other than on our own hosting) or other problems with any third party's offerings that were not sourced via us
- Installing the CactuShop scripts for you or installing or configuring or testing any other software (such as IIS, Windows Server software, MS SQL, COM objects, etc.)

From time to time people report bugs or problems with a script without informing us that they have made changes, or in some cases denying that changes have been made. We can only provide technical support on unmodified scripts (with the exception of small changes to scripts such as *config.asp* that are made in accordance with our instructions in this manual).

Please be advised that the first step we will take when addressing any bug report with a script is to have the latest working version from the CactuShop zip reinstated to ensure that it is uncorrupted and unmodified CactuShop code. This may be required for include files too.

We cannot commit to address support issues with, or bug-fix, or complete, *any* customer modifications, even if in your judgement the changes you have made have not caused the bug. We will simply reinstate unmodified CactuShop scripts first to verify whether the error still occurs in these. If it does, only then will we look into the issue. If our unmodified scripts clear the issue, we will consider it resolved.

12.1.4 Upgrade support

You can obtain the latest version of the CactuShop zip file as well as older versions of the software from the user area. A revisions list (change log) detailing bug fixes and changes is posted on our web site, within the user area.

There is also a file called `__revisions.txt` included on the root of the CactuShop zip. This is the up-to-date revisions list for the version of CactuShop it is contained in.

We advise all users to check the revisions list regularly and to ensure they receive the 'Cactusoft News' feed on the back end of their CactuShop to alert them of any critical bug fixes.

12.1.5 Upgrading a customized CactuShop

If you have modified your scripts in any way, please remember that installing newer versions of scripts we issue as bug fixes or improvements will overwrite your changes. There is no easy way possible to perform customizations in such a way that they can survive installing new scripts over the top of them. Therefore, installing bug fixes or security updates to customized CactuShops may require reviewing the changes detailed in the `__revisions.txt`, dissecting the updated scripts mentioned and then transferring our changes to your customized scripts.

12.1.6 Support policy

There are a number of questions that we encounter relating to support provision.

Q: My support period has expired so I can't download the latest version... can you send it to me?

A: We do not send upgrades manually. The support system handles access to upgrades based on your support coverage. Please ensure you download the latest version within your six months free support if you don't wish to extend your support coverage.

Q: I've destroyed my only copy of CactuShop by accident / disk-crash / mail server crash, etc. - can you send me the latest version, or the last version I could have got under my upgrade cover?

A: We do not send upgrades manually. The support system handles access to upgrades based on your support coverage. Please ensure you download the latest version within your six months free support if you don't wish to extend your support coverage.

Q: I've modified my CactuShop and broken it - can you resend the original files

A: We do not send upgrades manually. The support system handles access to upgrades based on your support coverage. Please ensure you download the latest version within your six months free support if you don't wish to extend your support coverage.

Q: I didn't download the latest version before my support expired, so please send it to me as it has a couple of changes I want to put on my store

A: We do not send upgrades manually. The support system handles access to upgrades based on your support coverage. Please ensure you download the latest version within your six months free support if you don't wish to extend your support coverage.

Q: I bought CactuShop over 6 months ago but never used it because the intended client backed out - please reset my account so I can have six months access to the user area starting now, or send me the latest version I would have been able to download but didn't

A: The six months free support period starts from the day you purchase CactuShop. Whether you choose to use this service while it is provided is up to you. We are not responsible if you purchase the software for a project that subsequently falls through – it is good business practice for any developer to secure a deposit prior to commencing work to cover such risks.

Q: My support has expired but I still want you to answer this question for me for free because I don't want to pay \$210/\$420 for just one question

A: We do not charge \$210/\$420 per question. We charge for a whole year of tech support coverage plus access to the latest version of CactuShop and occasional additional bonus downloads. If we answer 'just one quick question' then it normally gets followed up by 'just another quick question' and so on. If we made an exception to this rule then there would be little point charging for tech support. The result would either be that we stop offering tech support completely, or that we are forced to bundle 5 years support with the license, in which case it would cost 3 or 4 times as much. Ultimately time is money and support is time. We feel that the fairest way is to offer six months free support (which should be ample to get the software installed and running) and then cover the costs of further support from those who require and use it.

If you really have 'just one quick question' and don't wish to pay for one year's support coverage, we would be happy to charge instead based on our custom development rate of \$115 (USD) per hour. As with custom development, a minimum order size of 2 hours applies.