

DH_RegControl share-it! Automation Extension

User's Guide

System Description

This package extends DH_RegControl so that license keys can be generated automatically at the time of purchase through share-it!. It consists of two programs :

1. DH_RegControlKeyGen.exe
2. Product File Utility.exe

Each is described in detail below.

DH_RegControlKeyGen.exe

This program encapsulates DH_RegControl's key generation algorithm into a stand-alone executable that runs on share-it!'s secure key server.

It has been tested extensively using share-it!'s Key Generator Tester 5.3.0.0, and performed successfully when tested by share-it! using a test product on their live system on September 28, 2007. The following technical information may be requested by share-it! support when you submit it as your key generator.

The key generator was designed in accordance with share-it!'s *Key Generator SDK*, version 3.5. It was compiled, using Microsoft Visual C++ 2003 Toolkit, as a Windows NT / 2000 / XP console application executable for the x86 32-bit architecture. It requires no auxiliary DLLs other than the system's kernel32.dll and user32.dll.

The program requires one auxiliary data file, informally called a product file, which you will create using the Product File Utility discussed below. Your currently valid product file must be the only file in the same directory as DH_RegControlKeyGen.exe that matches the specification "dhrcsprod*.txt". The wild card "*" stands for your DH_RegControl customer identifier, which is assigned automatically by the Product File Utility. The key generator creates no files other than the two output files specified by the key server: the first specifies the key file's MIME type (text/plain) and name (key.txt); the second is the key file itself.

When a customer makes a purchase, share-it!'s key server writes input values from the transaction to a temporary file. DH_RegControlKeyGen.exe extracts two values from this input file: the name to which the customer chose to license the product (REG_NAME), and the share-it! product ID (PRODUCT_ID). The program uses the share-it! product ID as a key to look up the product's private DH_RegControl product ID in the product file. If all is successful, the program generates the license key, writes it to the second output file, and returns an exit code of ERC_SUCCESS_BIN to the key server. The share-it! system attaches the generated license key file to the email sent to the customer. A copy of the key file is also included with the order notification that you receive.

The product file may contain entries for multiple products. This enables the key generator to be used for multiple products, and allows products to be added and removed by uploading an updated product file.

The generated key file is a text file with the following format:

```
Thank you for purchasing <product name>!

Your registration details are:

User ID: <registration name>
License Key: XXXX-XXXX-XXXX-XXXX-XXXX

Please print this information and/or store this file in a safe
location.

<company name and contact information>
```

Product File Utility

Using this simple file editor to create and maintain your product file ensures that the product file you upload to share-it! is properly formatted. Please do not edit the product file using a text editor. DH_RegControlKeyGen.exe will return an error on every transaction if the product file is improperly formatted, and no keys will be issued.

The product file contains an entry for each product for which keys are to be generated. Each entry comprises a product's share-it! product ID, its DH_RegControl product ID, and a descriptive name. The file also includes your company's name and contact information, which appears at the bottom of the key file.

Figure 1 shows the Product File Utility's main screen, somewhat reduced to fit on the page. The name of your product file is displayed in the upper left of the window; your current number of products in the upper right. Next comes the box for your company information. Enter your company's name, support email and/or URL or other appropriate information here. Below this is a list box with a line for each product.

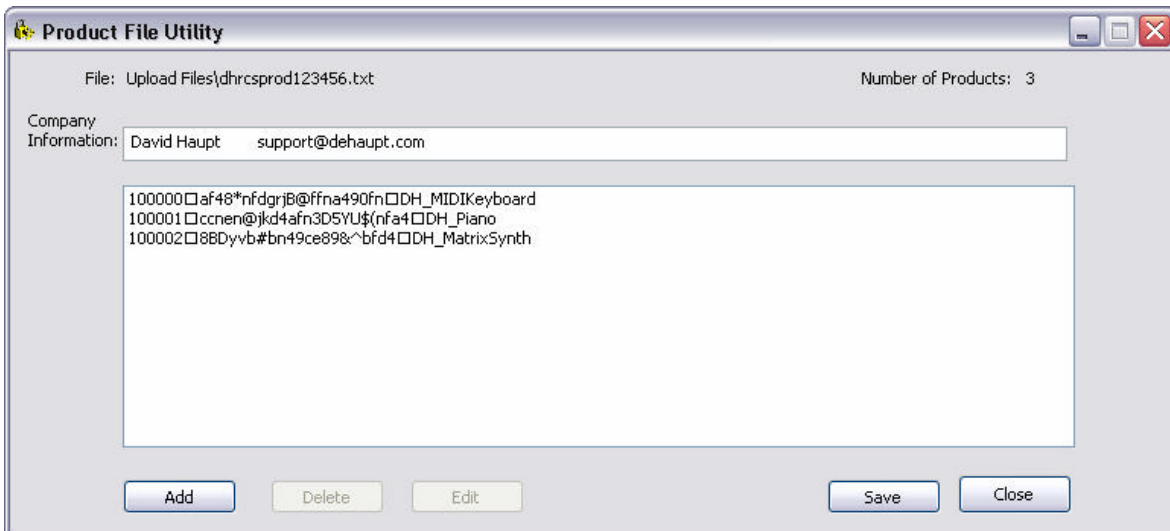


Figure 1

To add a product, click the Add button. This will display the Product Information dialog, shown in Figure 2. Enter the product's name as you want it to appear in the key file, the product's share-it! product ID, and its DH_RegControl Product ID, and click OK. If you are not already selling the product through share-it!, you will need to contact them to get the share-it! Product ID.

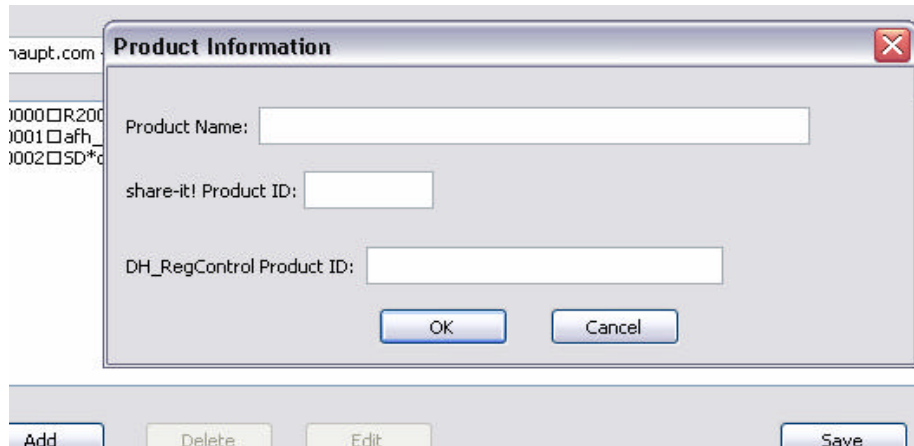


Figure 2

When you click on a line in the list box, the Delete and Edit buttons become active. To edit a product's information, click on its line in the list box to select it, and click the Edit button, or just double click on its line in the list box. This brings up the Product Information dialog, loaded with the selected product's name and product IDs for editing, as in Figure 3.

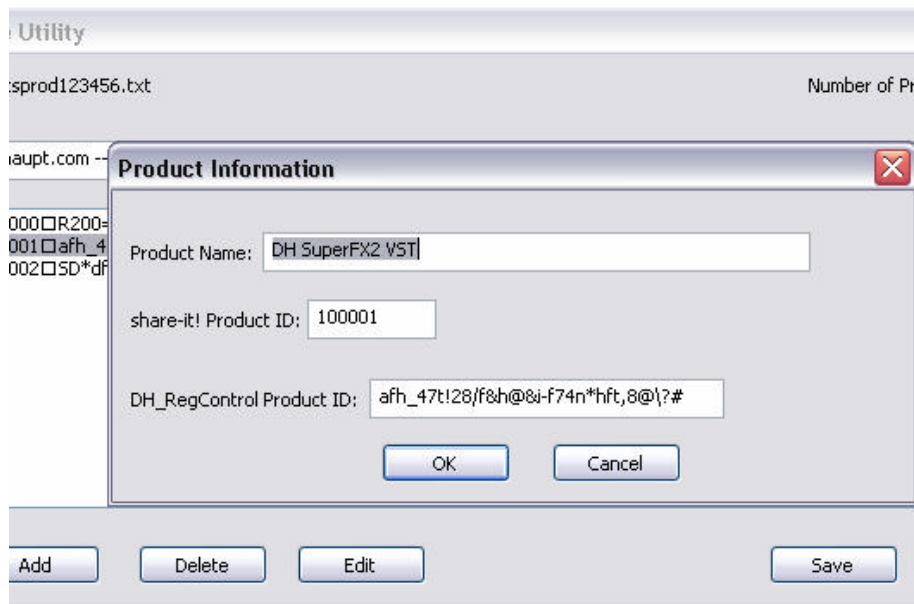


Figure 3

To delete a product, select it, and click the Delete button.

Click the Save button to save your changes to the file. If you click the Close button with unsaved changes, you will be prompted to save them. The product file is saved to a folder named Upload Files, which is inside the folder where you installed the Product File Utility. The installer creates a shortcut to this folder in your Start menu, as shown in Figure 4..

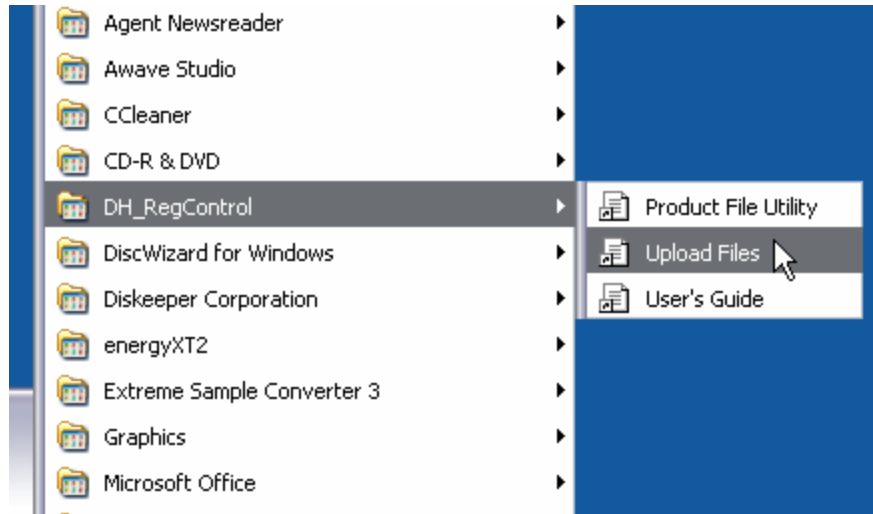


Figure 4

In addition to your product file, the Upload Files folder contains a copy of the key generator, DH_RegControlKeyGen.exe. When you first submit your key generator to share-it!, send both the key generator and the product file. After that, just upload an updated product file when you want to add or remove products.

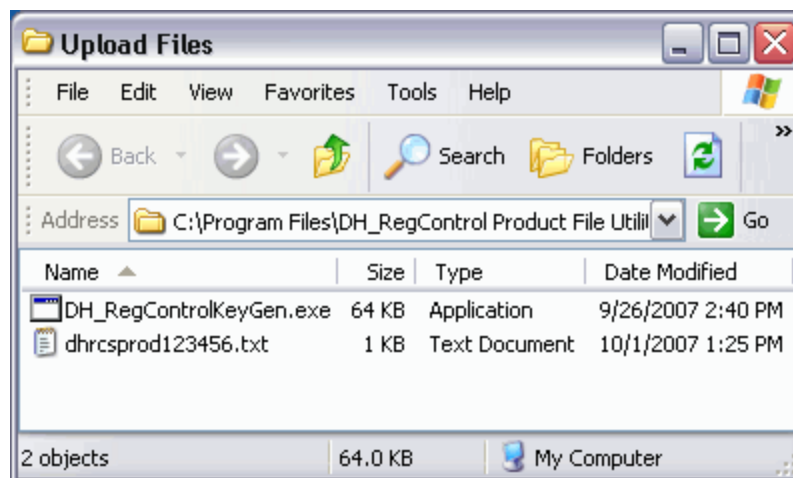


Figure 5

Input Limitations

The need for compatibility with the existing DH_RegControl system imposes some constraints on input character encoding and values:

1. **No Unicode.**

DH_RegControl's User ID field expects ISO-8859-1 (Latin 1) character encoding. A key generated using a registration name encoded as UTF8 Unicode would not work when entered into the DH_RegControl registration dialog. Therefore, DH_RegControlKeyGen.exe returns an error if the input file specifies ENCODING=UTF8.

2. **Registration name length**

DH_RegControl requires that the User ID be between 4 and 64 characters long. DH_RegControlKeyGen.exe returns an error if the REG_NAME value's length is outside of these limits.

See ERC_BAD_INPUT under Error Messages below for a description of how these exceptions are handled.

Error Messages

DH_RegControlKeyGen.exe conforms to share-it!'s standards for error reporting. If a failure occurs, the key generator returns one of share-it!'s seven prescribed error codes, and writes a message describing the cause of the error to its first output file. All of the error messages issued by DH_RegControlKeyGen.exe are listed below, grouped by their associated share-it! error codes. Those most likely to require your intervention are listed first, along with suggestions for what to do if share-it! reports these errors to you.

ERC_INTERNAL

"PRODUCT_ID not found in dhrcsprod*.txt file"

The share-it! PRODUCT_ID for the product the customer selected does not match an entry in your current product file.

If you have recently uploaded an updated product file, please contact share-it! to make sure they have replaced the old file with the new one in the DH_RegControlKeyGen.exe's directory.

Otherwise, please review the share-it! PRODUCT_IDs assigned to your products; then use the Product File Utility to make any necessary changes so that the product file includes an entry with the correct share-it! product ID for each of your products, and upload the new product file to share-it!.

"Missing dhrcsprod*.txt file"

The key generator could not find your product file.

If you have uploaded a file, please contact share-it! to make sure it gets placed into your directory with DH_RegControlKeyGen.exe

If you have not uploaded a product file along with DH_RegControlKeyGen.exe, please create one using the Product File Utility and upload it. The key generator cannot work without one.

"Improperly formatted dhrcsprod*.txt file"

This error is unlikely if you have used the Product File Utility to create and edit your product file. It is possible, however, that the file could have been damaged during the upload process, so try uploading it again.

ERC_BAD_INPUT

"Value for REG_NAME must contain at least 4 characters"

"Value for REG_NAME must contain at most 64 characters"

The name to which the customer chose to register the product is too short or too long to meet DH_RegControl's requirements. When this occurs, share-it! will contact the customer to resolve the issue. Once a valid REG_NAME is provided, share-it! will send a notification to you regarding the data changes and will initiate a redelivery process. They have an internal system that shows them all key generator error messages and they try to solve them as soon as possible. According to share-it!'s *Key Generator SDK*, the ability to edit fields interactively on the order page using JavaScript may be added in the future. Meanwhile, a share-it! representative reports that the present system has worked very well in the past,

"UTF8 encoding not supported"

The input file specifies ENCODING=UTF8, indicating that the text in fields like REG_NAME is encoded as Unicode. As discussed in Input Limitations above, this is not compatible with DH_RegControl, and should not be used with DH_RegControlKeyGen.exe. The share-it! *Key Generator SDK* says that unless a key generator is registered as Unicode compliant when it is submitted, UTF8 input will not be sent to it. If a misunderstanding or mistake occurs, share-it! will probably fix it immediately. If they do contact you, just tell them that your key generator does not support Unicode.

"Missing required input fields"

DH_RegControlKeyGen.exe uses two of the fields passed to it by share-it!'s system: REG_NAME and PRODUCT_ID. According to share-it!'s SDK documentation, these fields always contain valid information, so this error should never occur.

ERC_FILE_IO

"Error opening dhrcsprod*.txt file "

"Error reading dhrcsprod*.txt file"

These are most likely system errors, but could possibly occur if your product file becomes corrupted. If share-it! reports a persistent problem, try uploading your product file again.

"Error reading current directory "

"Error opening input file"

"Error reading input file"

"Error opening output1 file"

"Error writing output1 file"

"Error opening output2 file"

"Error writing output2 file"

These I/O errors are likely caused by system problems, and would be handled by share-it!.

ERC_MEMORY

"Unable to allocate buffer for dhrcsprod*.txt file"

This is likely a system problem, as product files should generally be no more than a few KB in size.

"Unable to allocate buffer for input file"

Very unlikely to occur, as this file, generated by share-it!'s system, is very small.

ERC_BAD_ARGS

"Usage: DH_RegControlKeyGen <infile> <outfile1> <outfile2>"

The program issues this if it is called without the correct number of command-line arguments.

ERC_EXPIRED

DH_RegControlKeyGen.exe does not use this error code.

ERC_ERROR

"Unknown error"

This message is sent only for errors that are not trapped by more specific error-handling code. It may occasionally be caused by a system error. Repeated occurrences could indicate a possible program flaw. Please contact me at dave@dehaupt.com if share-it! reports that this error is being returned persistently.