



# Using cvendian to Convert Between Big-Endian and Little-Endian Systems

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# Using cvendian to Convert Between Big-Endian and Little-Endian Systems

Caché provides a utility to convert a Caché database from a big-endian to a little-endian format, and vice versa. It is called **cvendian**, for *convert endian*. This is useful when moving a database among platforms of the two types.

**Note:** This utility does not work for backup and journal files. You must restore databases on a platform of the same endian, move the restored databases to the different endian platform, and then use the **cvendian** utility to convert the databases.

## 1 Conversion Process

On Windows systems, **cvendian** is located in <cache-install-dir>\Bin\cvendian.exe. On OpenVMS and UNIX systems, it is located in the Caché system manager directory.

You can run **cvendian** on either the machine that has the files to be converted or the machine that will be using the converted files. For example, to convert a database from a little-endian to a big-endian machine, you can perform the conversion on the little-endian machine and then transfer the database to the big-endian machine, or you can transfer the file first, and then convert it.

**Note:** Users converting databases to run on OpenVMS systems must convert them on the source machine instead of the OpenVMS target machine.

To convert a database, the process is:

1. Make a copy of your database files, since the utility replaces the source file(s) with the converted file(s).
2. Run **cvendian** using the syntax as described below.

3. After converting a multivolume database file, use the **^LABEL** utility to rename the directory in each volume. Using the Caché Terminal, from the %SYS namespace, call **^LABEL** with the **Do** command; it prompts you for the proper input:

```
USER>zn "%SYS"  
%SYS>Do ^LABEL
```

Enter the name of the directory in which the database is stored. For a multi-volume database, enter the name of the primary volume's directory, even if you want to relabel a secondary volume. For a multi-volume legacy 2K database, you should enter the name of the secondary volume directory if you need to relabel it.

Directory:

## 2 Utility Syntax

The **cvendian** database endian conversion utility allows for positive identification of the desired endian orientation, or to optionally inform the current endian orientation with no conversion. Use the following syntax:

```
cvendian [-option] file1 [file2 ... file8]
```

The *option* argument is one of the following:

- **-big** — convert the database to big-endian
- **-little** — convert the database to little-endian
- **-report** — report the endian orientation of the database

You may shorten the options to their initial letter. If this is a conversion request (*-big* or *-little*), and the database already is of the specified endian orientation, the utility displays a warning message and stops processing. The utility still supports previous call formats without the option argument; however using the option argument.

The *file1* through *file8* arguments are the files to convert; each file listed can include a complete pathname. The *file2* through *file8* arguments are for a multivolume database; if you are converting a multivolume database, you must specify all the volumes on the command line, in order.

The utility performs the following actions:

- Auto-detects which format the database uses

- Displays format information and other information
- Performs the conversion
- Displays a message indicating success or failure

For multivolume databases, if the files are out of order or the list is not complete, the utility does not perform any conversions and leaves the files as they are.

## 2.1 Example

For example, suppose you are converting a database for use on Solaris SPARC from Windows XP. Since SPARC and Intel have incompatible data representations, you must convert from little-endian format (for Intel) to big-endian format (for SPARC). The output from running **cvendian** on the Windows machine before moving the file to the Solaris machine looks similar to this:

```
C:\CacheSys\Bin>cvendian c:\\temp\solarisdb\cache.dat
This database is little-endian.
This database has a block size of 8192 bytes.
This is a BIG database.

This database has 1 volume and 1 map.
The last block in the primary volume is 18176.

Original manager directory is c:\\temp\solarisdb\
No extension volumes.

Done converting c:\temp\solarisdb\cache.dat to big-endian
C:\CacheSys\Bin>
```

You can now move the converted database file to the Solaris machine.

**Note:** The **cvendian** output statement, “This is a BIG database.” refers to the database using the standard Caché 8-KB blocks instead of 2-KB blocks. It is not a comment on the amount of space that the database is using or the database's use of a big-endian format.

