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## How do I convert between Unix and Windows text files?

The format of Windows and **Unix** text files differs slightly. In Windows, lines end with both the line feed and carriage return **ASCII** characters, but Unix uses only a line feed. As a consequence, some Windows applications will not show the line breaks in Unix-format files. Likewise, Unix programs may display the carriage returns in Windows text files with `Ctrl-m` (  $\wedge M$  ) characters at the end of each line.

There are many ways to solve this problem. This document provides instructions for using **FTP**, screen capture, **unix2dos** and **dos2unix**, `tr`, **awk**, **Perl**, and **vi** to do the conversion. Before you use these utilities, the files you are converting must first be on a Unix computer.

**Note:** In the instructions below, replace `unixfile.txt` with the name of the Unix file you are transferring, and replace `winfile.txt` with the name of the Windows file you are transferring.

### FTP

When using an FTP program to move a text file between Unix and Windows, be sure the file is transferred in **ASCII** format. This will ensure that the document is transformed into a text format

appropriate for the host. Some FTP programs, especially graphical applications like Hummingbird FTP, do this automatically. If you are using FTP from the command line, however, before you begin the file transfer, be sure to enter at the FTP prompt:

```
ascii
```

**Note:** You need to use a secure FTP client (e.g., SSH Secure Shell for Windows or MacSFTP for Mac OS or Mac OS X) to transfer files to and from Steel. For more information, see the Knowledge Base document [At IU, if I have a Steel, Ships, Nations, or da Vinci account, what do I need to know about secure FTP?](#)

## Screen capture

You can also convert files from Unix to Windows format when transferring them to a PC with a communications program by selecting ASCII text download. Select this option with your communications program to capture all the text subsequently displayed to your screen, and then enter at the Unix prompt:

```
cat unixfile.txt
```

Most communications programs will add carriage returns to the stream of text as they save it to your computer's hard drive. Once the file has finished displaying, abort the text download.

**Note:** This method may be slow for large text files. Also, no error checking is performed on the file as it is transferred.

## dos2unix and unix2dos

On systems using [Solaris](#), such as [Steel](#) and the [Nations](#) cluster at Indiana University, the utilities `dos2unix` and `unix2dos` are available. These utilities provide a straightforward method for converting files from the Unix command line.

To use either command, simply type the command followed by the name of the file you wish to convert, and the name of a file which will contain the converted results. Thus, to convert a Windows file to a Unix file, at the Unix prompt, enter:

```
dos2unix winfile.txt unixfile.txt
```

To convert a Unix file to Windows, enter:

```
unix2dos unixfile.txt winfile.txt
```

**Note:** These utilities are only available on Solaris systems. To determine what variety of Unix is running on your computer, see the Knowledge Base document [In Unix, how can I display information about the operating system?](#)

## tr

You can use `tr` to remove all carriage returns and `Ctrl-z` ( `^Z` ) characters from a Windows file by entering:

```
tr -d '\15\32' < winfile.txt > unixfile.txt
```

You cannot use `tr` to convert a document from Unix format to Windows.

## awk

To use `awk` to convert a Windows file to Unix, at the Unix prompt, enter:

```
awk '{ sub("\r$", ""); print }' winfile.txt > unixfile.txt
```

To convert a Unix file to Windows using `awk`, at the command line, enter:

```
awk 'sub("$", "\r")' unixfile.txt > winfile.txt
```

On some systems, the version of `awk` may be old and not include the function `sub`. If so, try the same command, but with `gawk` or `nawk` replacing `awk`.

## Perl

To convert a Windows text file to a Unix text file using `Perl`, at the Unix `shell` prompt, enter:

```
perl -p -e 's/\r$//' < winfile.txt > unixfile.txt
```

To convert from a Unix text file to a Windows text file with `Perl`, at the Unix shell prompt, enter:

```
perl -p -e 's/\n/\r\n/' < unixfile.txt > winfile.txt
```

You must use single quotation marks in either command line. This prevents your shell from trying to evaluate anything inside. `Perl` is installed on all `UITS` shared central Unix systems.

## vi

In **vi**, you can remove the carriage return ( `^M` ) characters with the following command:

```
:1,$s/^M//g
```

**Note:** To input the `^M` character, press `Ctrl-v` , then press `Enter` or `return`.

## Also see:

- [When using FTP, why might programs and files fail to transfer properly?](#)
- [With ProComm versions 2.42 and 2.43, how do I transfer files?](#)
- [With MacSSH, BetterTelnet, and NCSA Telnet, how do I use FTP to transfer files between my computer and a remote host?](#)
- [With FTP from DOS, how do I transfer files?](#)
- [With command line FTP, how can I transfer a group of files without typing out all their names?](#)
- [With PC/TCP Telnet, how do I transfer files between my PC and a shared computer?](#)
- [What are some common FTP commands?](#)
- [What hints do you have for using FTP?](#)
- [How do I convert between Unix and Mac OS or Mac OS X text files?](#)
- [How do I convert a text file that I'm transferring between Mac OS or Mac OS X and Windows?](#)

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*Last modified on December 13, 2005.*

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