Porting a File between Systems

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Does FTP convert a text file to the recipient's format?

A file created with a text editor, when the user hits ENTER after each line, here's what gets put in the file →

- *on WINDOWS:*   2 characters, <LF> & <CR>, are inserted (as the line-separator)
- *on LINUX:*   the '\n' (newline = linefeed = <LF>) character is inserted (as the line-separator)
- *on UNIX:*   the '\n' (newline = linefeed = <LF>) character is inserted (as the line-separator)
- *on VMS:*   the "N-bytes-in-line" count (as a 16 bit int) precedes each line of N characters

If a text file created on one system (say, VMS) is copied to another system (say, Unix), will the file get CONVERTED to the recipient's format?

- using **ASCII** ("A") transfer mode   → text file gets converted to appropriate format
- using **BINARY** ("B") transfer mode   → text file is NOT converted
  – it's an EXACT byte-by-byte transfer

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--------------------------------- VMS ---------------------------------

VMS> type video.txt
046ROBIN HOOD    MILLER, K   PCOSTNER, K    FRIEDMAN, M   DR  8405995
070JACKSON       GRATA, D    RGALL, A       PRINTER, B    THFO9901000
...
VMS> dump video.txt                                              BYTE-COUNTS
20444F4F 48204E49 424F5236 34300047   G.046ROBIN HOOD    000000      ← 0047 hex
50202020 4B202C52 454C4C49 4D202020     MILLER, K    P   000010       = 71 decimal
46202020 20204B20 2C52454E 54534F43   COSTNER, K    F   000020
52442020 20204D20 2C4E414D 44454952   RIEDMAN, M    DR  000030
4A303730 00470035 39393530 34382020     8405995.G.070J   000040      ← 0047 hex
41524720 20202020 20204E4F 534B4341   ACKSON      GRA   000050
...
--------------------------------- UNIX ---------------------------------

UNIX> ftp kanga.cc.wmich.edu        (kanga... = vms, default is "A" mode transfer)
   ...
   ftp> get video.txt
   ...

UNIX> cat video.txt
046ROBIN HOOD    MILLER, K   PCOSTNER, K    FRIEDMAN, M   DR  8405995
070JACKSON       GRATA, D    RGALL, A       PRINTER, B    THFO9901000
...

UNIX> od -c video.txt
0000000   0   4   6   R   O   B   I   N       H   O   O   D
0000020       M   I   L   L   E   R   ,       K               P   C   O
0000040   S   T   N   E   R   ,       K                   F   R   I
0000060   E   D   M   A   N   ,       M                   D   R
0000100   8   4   0   5   9   9   5  \n   0   7   0   J   A   C   K   S
0000120   O   N                           G   R   A   T   A   ,
...

UNIX> od -x video.txt
0000000   3034 3652 4f42 494e 2048 4f4f 4420 2020
0000020   204d 494c 4c45 522c 204b 2020 2050 434f
0000040   5354 4e45 522c 204b 2020 2020 2046 5249
0000060   4544 4d41 4e2c 204d 2020 2020 4452 2020
0000100   3834 3035 3939 350a 3037 304a 4143 4b53     ← 0a for '\n'
0000120   4f4e 2020 2020 2020 2047 5241 5441 2c20
...
```