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A/UX: NFS Record Delimiters and VAX RMS Formats (9/94)

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TOPIC -----

My VAX systems use four file formats: LF, CR/LF, Fortran, and Variable Length. However, the VMS systems use LF, and the Ultrix systems use CR/LF. Both must go through a conversion process to use the files across VAX platforms. Which file format does Apple's NFS and Cayman's NFS support to avoid having to support a third file format.

DISCUSSION -----

NFS on A/UX uses LF, and the Macintosh OS uses CR for record delimiters. The Cayman GatorBox automatically converts files from one format to another.

The items you mentioned are not file formats. Rather, LF and CR/LF are variations of the Stream record format. Variable Length is a record format, and FORTRAN carriage control is a record Carriage-Control attribute. CARRIAGE_RETURN attribute is the default and specifies that each record is preceded by a line feed and is followed by a carriage return when the record is written to a carriage-control device, like a line printer or a terminal. FORTRAN attribute specifies that the first byte (byte 0) of each record contains a FORTRAN carriage-control character. A space in this byte means single-space, a 0 (zero) means double-space, a 1 means Page Eject, and so on.

Here is a description of the file and record formats supported by VAX RMS. VAX Record Management Services (RMS)--the file and record access subsystem of the VAX/VMS operating system--supports three file organizations. These are sequential, relative, and indexed. It also supports four record formats:

- Fixed length: all records in a file are the same length.
- Variable length: each record is only as long as the data within it requires.
- Variable length with fixed-length record (VFC): similar to variable-length records except that a fixed-length control field is prefixed to the variable-length data portion.
- Stream: records are delimited by special characters or character sequences called terminators, which are part of the record they delimit.

Within the Stream record format, there are three variations:

- STREAM_CR: each record is terminated using a carriage return character.
- STREAM_LF: each record is terminated using a line feed character.
- STREAM: you have the option of specifying the terminating character from a limited set of special characters, including the carriage return character (CR), the carriage return/line feed character (CR/LF) pair, the form feed (FF) character, or the escape (ESC) character.

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