READ(c)   **READ(c)**

NAME
        read — read from file

SYNOPSIS
        read = 1.

ARGUMENTS (input)
        capability associated with file being read
        0 - segment ID
        1 - word offset into segment
        2 - byte count
        3 - block number in file.
        4 - remaining bytes to be read

VALUES (returned)
        2 - bytes read

DESCRIPTION
        Read converts the capability to a inode entry in file manager tables and checks the permissions
        on the file. *Read* messages must specify a starting block number in the file to be read from as
        well as a byte count. The File Manager converts the block number into a block number on the
        particular file system. The bytes read will not extend beyond the end of the file. If the word
        offset is negative, the offset is from the end of the segment. The sender of the message is re-
        quired to lock the segment into which the I/O transfer is to be done in memory. If the I/O
        transfer can be done in one operation, the acknowledgement to this message is sent directly
        from the particular device driver. Otherwise, the read messages are sent off in parallel to the
        appropriate device driver and waited for by the file manager.

SEE ALSO
        open(II), open(c).

DIAGNOSTICS
        A 0 is returned if end of file has been reached. An error status byte is returned if a bad capa-
        bility is given, the read would extend beyond the end of the segment or if physical I/O errors
        occur.