

Subject: MCR-10032, Repair loop in input_history attach

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When attempting to count lines in the USER_NAME.history segment, input_history attach calls a support routine in the input_history_ I/O module; that support routine calls its hSeg_count_lines subroutine to count lines in the .history file being attached. This subroutine can loop forever if the final line of the file does not end with a NL character.

Though this is an unlikely condition for a .history segment, it is one of the designed states for such files. The bug causing the looping is a code implementation error, not a design flaw.

Since this type of infinite looping in a process can use more than 99% of the available CPU time, it thereby affects overall system performance. This bug is a major defect that must be corrected before the input_history_ I/O module is released.

Reference URL of Multics Change Ticket: <http://multics-trac.swenson.org/ticket/49>

Proposed Changes

Change input_history_.pl1 as follows:

- Change hSeg_count_lines routine to stop looping when no NL characters remain in the .history segment.
- Change I/O module's VERSION from ih.03.01 to ih.04.00.

The input_history_ I/O module is part of bound segment: >sss>bound_video_

Documentation

No interfaces have changed, so no documentation or info segments affected.

Testing

A .history file known to end in an incomplete line was tested. With the repair, infinite loop was avoided.

Version History

Date	Revision	Author	Comment
2017-02-19	1.0	Gary Dixon	Initial version of this MCR.