

Ruby master - Bug #6601

[readline] Alt-* commands do not work in reverse-i-search

06/17/2012 05:23 PM - rctay (Tay Ray Chuan)

Status: Closed	
Priority: Normal	
Assignee: kouji (Kouji Takao)	
Target version: 1.9.3	
ruby -v: ruby 1.9.3p236 (2012-06-11) [x86_64-linux]	Backport:

Description

=begin
= Steps to reproduce
Below are the steps to reproduce from an ({{irb}}) session. ^ is used to denote the cursor position on the screen.

- Type ({{puts :a}}) then ({{Enter}}). This is to populate the history for reverse-i-search.
irb(main):001:0> puts :a
a
=> nil
- Hit ({{Ctrl-R}}) (for reverse-i-search), followed by ({{u}}):
(reverse-i-search)`u': puts :a
^
- Hit ({{Alt-F}}) (for forward-word).

Observed: reverse-i-search terminated, with an 'f' inserted at cursor position.
irb(main):002:0> pfputs :a
^

Expected: reverse-i-search terminated, nothing inserted, cursor moves to end of the word ({{puts}}):
irb(main):002:0> puts :a
^

Note that other ({{Alt-*}}) commands don't work too (ie ({{x}}) is inserted instead of the command ({{Alt-x}}) being performed), including

- ({{Alt-B}}) (move backward a word)
- ({{Alt-C}}) (capitalize letter)
- ({{Alt-D}}) (delete till end of word)

= Fix

When we hit ({{Alt-F}}) from reverse-i-search, execution arrives at this piece of code in libreadline's ({{isearch.c}}):

```
387 /* ESC still terminates the search, but if there is pending
388 input or if input arrives within 0.1 seconds (on systems
389 with select(2)) it is used as a prefix character
390 with rl_execute_next. WATCH OUT FOR THIS! This is intended
391 to allow the arrow keys to be used like F and B are used
392 to terminate the search and execute the movement command.
393 XXX - since _rl_input_available depends on the application-
394 settable keyboard timeout value, this could alternatively
395 use _rl_input_queued(100000) */
396 if (cxt->lastc == ESC && _rl_input_available ())
397     rl_execute_next (ESC);
```

Due to ({{readline_getc}}), our ({{rl_getc_function}}) implementation, ({{IO::getbyte}}) is called, causing all input characters to be "swallowed" into our byte buffer in ({{readline_instream}}). Thus ({{_rl_input_available}}) incorrectly returns false, and the keystrokes (eg. Alt, F) fail to be recognized as a binding for a command.

The proposed fix (attached) uses `(rb_io_read_pending())` to emulate `(rl_input_available())`, and calls `(rl_execute_next())`, as libreadline does.

= Affected Versions

Ruby trunk and 1.9.3 (latest) exhibits this issue.

Ruby 1.8 also has exhibits this issue, but the fix would be different since `(rl_getc_function())` isn't overridden in `(ext/readline/readline.c)`.

Tested on readline 6.2; blame'ing the above snippet shows that readline as far back as 5.1 should also give this behaviour.

=end

Related issues:

Related to Ruby master - Bug #6262: [readline] reverse-i-search with multibyt...

Closed

04/06/2012

Associated revisions

Revision e2ad92a0 - 06/18/2012 01:43 AM - nobu (Nobuyoshi Nakada)

ext/readline/readline.c: [Bug #6601]

- ext/readline/readline.c (readline_getc): deal with ESC just followed by ASCII as meta prefix in incremental search mode. based on the patch from rctay (Tay Ray Chuan) at [ruby-core:45682]. [Bug #6601]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@36123 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 36123 - 06/18/2012 01:43 AM - nobu (Nobuyoshi Nakada)

ext/readline/readline.c: [Bug #6601]

- ext/readline/readline.c (readline_getc): deal with ESC just followed by ASCII as meta prefix in incremental search mode. based on the patch from rctay (Tay Ray Chuan) at [ruby-core:45682]. [Bug #6601]

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Revision d998ba1c - 06/19/2012 02:58 AM - naruse (Yui NARUSE)

- ext/readline/readline.c (readline_getc): fix editline compatibility broken by r36123. [Bug #6601]

Revision 36127 - 06/19/2012 02:58 AM - naruse (Yui NARUSE)

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History

#1 - 06/17/2012 05:26 PM - rctay (Tay Ray Chuan)

Oops, forgot to enter a proper title/subject. Can someone with sufficient privileges update it to

[readline] Alt-* commands do not work in reverse-i-search

? Many thanks.

#2 - 06/17/2012 06:46 PM - nobu (Nobuyoshi Nakada)

- Subject changed from [readline] to [readline] Alt-* commands do not work in reverse-i-search

- Category set to ext

- Status changed from Open to Assigned

- Assignee set to kouji (Kouji Takao)

- Target version set to 1.9.3

#3 - 06/18/2012 10:43 AM - nobu (Nobuyoshi Nakada)

- Status changed from Assigned to Closed

- % Done changed from 0 to 100

This issue was solved with changeset r36123.

Tay, thank you for reporting this issue.

Your contribution to Ruby is greatly appreciated.

May Ruby be with you.

ext/readline/readline.c: [Bug #6601]

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#4 - 06/19/2012 09:01 AM - drbrain (Eric Hodel)

- Status changed from Closed to Assigned

=begin

This breaks compilation on OS X 10.7 with editline:

```

compiling readline.c
readline.c:177:22: error: use of undeclared identifier 'ESC'
if (c == INT2FIX(ESC) &&
^
../../include/ruby/ruby.h:228:45: note: expanded from macro 'INT2FIX'
#define INT2FIX(i) (((VALUE)(((SIGNED_VALUE)(i))<<1 | FIXNUM_FLAG))
^
readline.c:178:2: warning: implicit declaration of function 'RL_ISSTATE' is
invalid in C99 [-Wimplicit-function-declaration]
RL_ISSTATE(RL_STATE_ISEARCH) && /* isn't needed in other states? */
^
readline.c:178:13: error: use of undeclared identifier 'RL_STATE_ISEARCH'
RL_ISSTATE(RL_STATE_ISEARCH) && /* isn't needed in other states? */
^
readline.c:182:21: warning: implicit declaration of function 'isascii' is
invalid in C99 [-Wimplicit-function-declaration]
if (FIXNUM_P(c) && isascii(FIX2INT(c))) meta = 1;
^
readline.c:184:12: warning: implicit declaration of function 'rl_execute_next'
is invalid in C99 [-Wimplicit-function-declaration]
if (meta) rl_execute_next(ESC);
^
readline.c:184:28: error: use of undeclared identifier 'ESC'
if (meta) rl_execute_next(ESC);
^
readline.c:185:9: error: use of undeclared identifier 'ESC'
return ESC;
^

```

editline does not have the ESC macro not the rl_readline_state variable (for RL_ISSTATE)

Checking for rl_readline_state in extconf.rb allows the second chunk of this patch to be ignored when compiled against editline, but I'm unsure how to update the test to get it to pass.
=end

#5 - 06/19/2012 11:58 AM - naruse (Yui NARUSE)

- Status changed from Assigned to Closed

This issue was solved with changeset r36127.
Tay, thank you for reporting this issue.
Your contribution to Ruby is greatly appreciated.
May Ruby be with you.

-
- ext/readline/readline.c (readline_getc): fix editline compatibility broken by r36123. [Bug [#6601](#)]

Files

readline.diff	852 Bytes	06/17/2012	rctay (Tay Ray Chuan)
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