Tails - Bug #9011
Opening Florence virtual keyboard disables touchpad
03/04/2015 10:39 AM - emmapeel

Status: Resolved
Priority: Elevated
Assignee:
Category:
Target version: Tails_1.3.2
Feature Branch: bugfix/9011-fix-syndaemon-vs-florence
Type of work: Code
Blueprint:

% Done: 100%
Estimated time: 0.00 hour
Spent time: 0.00 hour

Description
Reported by user, reproduced by me on a Toshiba satellite running Tails 1.3

Steps to reproduce:
- Click on Florence Virtual Keyboard
- Click on any key

After pressing the first key, the touchpad stops working. Comes back to work if pressing twice the Fn+touchpad key. Keyboard eeps working all the time.

Related issues:
Related to Tails - Feature #7779: Revisit default touchpad settings
Resolved 08/13/2014

Associated revisions
Revision 430709a8 - 03/24/2015 02:39 PM - anonym
Wrap syndaemon to always use -t (Will-fix: #9011).

Without the -t option, which makes syndaemon only disable tapping and scrolling and not mouse movements, florence is unusable when syndaemon is running. In Wheezy, GNOME invokes syndaemon without -t, and the option it passes are hardcoded, so we're forced to do this ugly workaround, which luckily can be removed once we're based on Jessie since -t is passed then. For details, see #9011.

Revision 3f8a8dc8 - 03/27/2015 04:37 PM - anonym
Revert "Wrap syndaemon to always use -t (Will-fix: #9011)."

This reverts commit 430709a8efad146d30980a2e3377a4e00be3e995.

This was a Wheezy-specific workaround.

History
#1 - 03/04/2015 02:55 PM - BitingBird
- Priority changed from Normal to Elevated
- Target version set to Tails_1.3.2
It's a regression, so I mark it as elevated.

#2 - 03/05/2015 12:29 PM - intrigeri
- Assignee set to emmapeel
- QA Check changed from Dev Needed to Info Needed

BitingBird wrote:

It's a regression

I see nothing in this bug report that says so. emmapeel, can you reproduce that in Tails 1.2.3?

#3 - 03/10/2015 09:28 AM - emmapeel
- Assignee deleted (emmapeel)
- QA Check changed from Info Needed to Dev Needed

intrigeri wrote:

BitingBird wrote:

It's a regression

I see nothing in this bug report that says so. emmapeel, can you reproduce that in Tails 1.2.3?

I confirm it is a regression. Florence Virtual Keyboard works well from Tails 1.2.3

#4 - 03/15/2015 01:41 PM - BitingBird
- QA Check deleted (Dev Needed)

#5 - 03/19/2015 10:08 AM - intrigeri
- Assignee set to emmapeel
- QA Check set to Info Needed
Can you reproduce this bug after disabling the "disable while typing" touchpad setting? (and possibly restarting Florence)

Also, can you reproduce with Tails/Jessie? (http://nightly.tails.boum.org/build_Tails_ISO_feature-jessie/)

#6 - 03/19/2015 02:36 PM - emmapeel
intrigeri wrote:

Can you reproduce this bug after disabling the "disable while typing" touchpad setting? (and possibly restarting Florence)

Also, can you reproduce with Tails/Jessie? (http://nightly.tails.boum.org/build_Tails_ISO_feature-jessie/)

Indeed, disabling the "disable while typing" touchpad setting makes Florence works as in Tails 1.2.3, even without restarting Florence.
I haven't been able to download the ISO image yet, I will try that one later.

#7 - 03/20/2015 10:36 AM - emmapeel
- Assignee changed from emmapeel to intrigeri
- QA Check changed from Info Needed to Dev Needed

intrigeri wrote:

Also, can you reproduce with Tails/Jessie? (http://nightly.tails.boum.org/build_Tails_ISO_feature-jessie/)

This bug has dissapeared in Tails/Jessie. I don't need to disable the setting, just works out of the box as in Tails 1.2.3
If target version is 1.3.1 then Dev is needed, but if we just wait I can say QA pass. Not sure what to do about that, so I pass you the ball, intrigueri!

#8 - 03/20/2015 10:06 PM - intrigeri
- Related to Feature #7779: Revisit default touchpad settings added

#9 - 03/20/2015 10:11 PM - intrigeri
- Assignee changed from intrigeri to anonym

This bug has dissapeared in Tails/Jessie.
Thanks!

So I think we have a few options (in increasing order of work needed):

- give up for Tails/Wheezy, document that problem in known issues, and focus on making Tails/Jessie happen ASAP
- disable the "Disable while typing" setting, keep the rest unchanged
  - pros: repairs the Florence + touchpad use-case
  - cons: I suspect that it'll make many touchpads basically unusable with tap-to-click; maybe it's not that bad, though; it would be useful to have a bunch of people try that on various hardware and report back
- disable the "Disable while typing" and "tap-to-click" settings
  - pros: repairs the Florence + touchpad use-case
  - cons: important usability regression compared to 1.3 for many users, e.g. those who don't have physical buttons on their touchpad, and those who come from another OS that enables tap-to-click by default
- try to debug and find the root cause, and then fix it; a few ideas:
  - look at logs to try to understand what happens
  - try to reproduce with florence 0.6.2-2 (testing) or 0.6.3-1 (sid), backported for Wheezy

So it seems that we've no easy and very satisfying solution :(

Reassigning to the current RM, who has time allocated to deal with regressions. anonym, what do you think?

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#10 - 03/24/2015 09:53 AM - anonym
- Assignee changed from anonym to intrigeri
- QA Check changed from Dev Needed to Info Needed

I managed to reproduce this, but with even worse results. For me whatever whatever key I press in florence gets stuck, i.e. the touchpad is disabled while in the key is in the 'down' state, so the character gets spammed. The Fn key workaround didn't work for me, but mashing Ctrl+Alt while moving the touchpad does, eventually. Another workaround is to have a mouse connected -- moving it immediately fixes the situation, quite as expected (since it will reset the timer for the keyboard disabling).

intrigeri wrote:

- try to debug and find the root cause, and then fix it; a few ideas:
  - look at logs to try to understand what happens

Here's the log from florence --debug, but it's not very interesting:

```
Key 0x9ce32b8 (type 0): Event 0 received : Switching from state 1 to 1 (fsm 0)
sending press event
CONF:sounds=<false>
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 1 to 0 (fsm 0)
keyboard layout found: <English (US)>
keyboard layout symbol name=<pc+us+inet(evdev)+group(shifts_toggle)+group(alt_shift_toggle)>
new xkb symbol found: <us>
XKB state notify event received
```

03/27/2020
CONF:activated='<FF0000'>
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 2 received : Switching from state 0 to 0 (fsm 0)
Key 0x9ce32b8 (type 0): Event 1 received : Switching from state 0 to 0 (fsm 0)
sending release event
Key 0x9ce32b8 (type 0): Event 3 received : Switching from state 0 to 1 (fsm 0)
CONF:ramble-button=<true>

The sending release event (and probably the Event 1 just before) appears exactly when I move the mouse I had connected, per my above mentioned workaround.

I couldn't find anything interesting in dmesg, syslog, xsession-errors or similar. Did you have any other logs in mind?

- try to reproduce with florence 0.6.2-2 (testing) or 0.6.3-1 (sid), backported for Wheezy

I rebuilt florence 0.6.3-1 for wheezy-backports and tested it, but the bug is still there.

#11 - 03/24/2015 12:03 PM - intrigeri
- Assignee changed from intrigeri to anonym
- QA Check deleted (Info Needed)

anonym wrote:

Did you have any other logs in mind?

03/27/2020
No, sorry.

#12 - 03/24/2015 12:54 PM - anonym

Also tested the vanilla xserver-xorg-input-evdev (we install a custom package with a patch for improved qemu/kvm mouse integration) but it didn't help.

#13 - 03/24/2015 01:11 PM - anonym

- Assignee changed from anonym to emmapeel
- QA Check set to Info Needed

emmapeel wrote:

intrigeri wrote:

Also, can you reproduce with Tails/Jessie? (http://nightly.tails.boum.org/build_Tails_ISO_feature-jessie/)

This bug has dissapeared in Tails/Jessie. I don't need to disable the setting, just works out of the box as in Tails 1.2.3

I just tested this in Tails/Jessie and, indeed, the bug is not there. However the reason for that seems to be that "Disable while typing" is not working. Emma, can you please retry this, and make sure to check whether that option seems to be working for you? FTR, the build I'm using is tails-i386-feature_jessie-1.4-20150323T1244Z-32a50d7.iso.

#14 - 03/24/2015 01:38 PM - anonym

- Status changed from Confirmed to In Progress
- Assignee changed from emmapeel to anonym
- QA Check changed from Info Needed to Dev Needed

anonym wrote:

However the reason for that seems to be that "Disable while typing" is not working.

Nevermind Emma! It turns out GNOME in Jessie just starts syndaemon differently, so different parts of the touchpad are disabled vs Wheezy, and this was what confused me to think that it was broken. Details:

- Wheezy: syndaemon -i 1.0 -K -R
From the man page:

-\t Only disable tapping and scrolling, not mouse movements, in response to keyboard activity.

If I manually start syndaemon -i 1.0 -t -K -R in Wheezy, and that fixes the issue with florence 'o'.

I will create a fix shortly via a wrapper since the arguments GNOME sets for syndaemon are hardcoded.

#15 - 03/24/2015 02:43 PM - anonym
Applied in changeset 430709a8efad146d30980a2e3377a4e00be3e995.

#16 - 03/24/2015 02:46 PM - anonym
- % Done changed from 0 to 40
- Feature Branch set to bugfix/9011-fix-syndaemon-vs-florence

#17 - 03/24/2015 05:02 PM - anonym
- Assignee deleted (anonym)
- % Done changed from 40 to 50
- QA Check changed from Dev Needed to Ready for QA

My fix works according to my tests.

#18 - 03/25/2015 12:42 AM - BitingBird
Youhou, congrats!

#19 - 03/27/2015 11:44 AM - bertagaz
- Assignee set to bertagaz

#20 - 03/27/2015 02:04 PM - bertagaz
- Assignee changed from bertagaz to anonym

I confirm the fix works, congrats.

Still I have two remarks:

- the resulting syndaemon wrapper is not set -eu. Any reasons?
- I'm wondering why the -t option is added with this lines:

```
if ! echo "$@" | grep -qw "--t"; then
  set -- "$@" -t
fi
```

rather than just doing a one-liner
exec /usr/bin/sydaemon.distrib "-t ${@}" 

or something like that. Why testing if the "-t" option is set, when we expect it to be during the Wheezy cycle? Maybe I'm missing a shell trick needed to pass this "-t" option?

I'm not firmly opposed to merge this though, given we have limited time and it works.

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#21 - 03/27/2015 03:01 PM - anonym
- Assignee changed from anonym to bertagaz

bertagaz wrote:

   I confirm the fix works, congrats.

Cheers! Did you also reproduce the error (e.g. with Tails 1.3.1) on the same hardware?

Still I have two remarks:

- the resulting syndaemon wrapper is not set -eu. Any reasons?

- set -e isn't needed since no command can fail in any meaningful (vs. set -e) way. If echo (with set -o pipefail so the error propagates) or grep fails in some unexpected way (ENOOMEM or a bit flip or buffer-overflow bug or whatever) I don't know how we can distinguish that from the expected grep failure (i.e. "-t" is not present) since it's used in the conditional. Well, there are very convoluted ways to do it but we're not preparing for such arcane errors in other shell scripts.

- set -u is irrelevant since the only variable used is ${@}, which isn't checked.

   I'm wondering why the -t option is added with this lines:

\[...\]

rather than just doing a one-liner

\[...\]

or something like that. Why testing if the "-t" option is set, when we expect it to be during the Wheezy cycle? Maybe I'm missing a shell trick needed to pass this "-t" option?

You're not. I'm just trying to avoid some issues I've seen before when writing shell wrappers. For instance, I've seen applications do unexpected things when a flag is provided twice, e.g. a second instance cancels the first, and also think of -v -v... for increased verbosity. It's conceivable that some Tails user would invoke syndaemon -t herself (perhaps by discovering this fix herself :)). I haven't checked if double -t does something bad for syndaemon, and I doubt it does, but I'm just careful.

Using set -- ... is most elegant way I know to modify a wrappers parameters while also keep ${@}'s special quoting rules for a "single" @exec call at the end. The alternative would be to repeat the exec call, e.g. something like this:

```bash
if echo "${@}" | grep -qw -- "-t"; then
    exec /usr/bin/sydaemon.distrib "0(@)"
else
    exec /usr/bin/sydaemon.distrib "-t ${@}" 
fi
```
which is less elegant due to the repetition.

So, yeah, I'm just following my own "shell wrapper best practices" which perhaps is overkill for this very simple one.

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#22 - 03/27/2015 03:23 PM - bertagaz
  - Status changed from In Progress to 11
  - Assignee changed from bertagaz to anonym
  - % Done changed from 50 to 100
  - QA Check changed from Ready for QA to Pass

I'm convinced! Meanwhile I tried the simpler wrapper and it isn't working. So I guess your wise best practices are justified. Closing this bug, but shall I open a new one to remember we'll have to remove this wrapper in Jessie?

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#23 - 03/27/2015 04:37 PM - anonym
  - Status changed from 11 to In Progress

Applied in changeset 3f8a8dc8b2521ab22b145f6f5fe5dca5bf5f34068.

#24 - 03/27/2015 04:40 PM - anonym
  - Status changed from In Progress to 11
  - Assignee deleted (anonym)

bertagaz wrote:

  I'm convinced! Meanwhile I tried the simpler wrapper and it isn't working. So I guess your wise best practices are justified.

  :)

  Closing this bug,

Please reply to the thread on tails-dev@ too!

  but shall I open a new one to remember we'll have to remove this wrapper in Jessie?

I have already fixed it in feature/jessie.
- Status changed from 11 to Resolved