User Interface - Bug #7742

NPE on LinuxKeyboardReader when pressing Escape in ChUI Swing application

08/23/2023 09:15 AM - Vladimir Tsichevski

Status:	WIP		Start date:	
Priority:	Normal		Due date:	
Assignee:	Hynek Cihlar		% Done:	80%
Category:			Estimated time:	0.00 hour
Target version:				
billable:	No		case_num:	
vendor_id:	GCD		version:	
Description				

History

#1 - 08/23/2023 09:26 AM - Vladimir Tsichevski

ChUI Swing: when I press Escape, the client crashes with NPE here:

```
Thread [AWT-EventQueue-1] (Suspended (exception NullPointerException))
LinkedBlockingQueue<E>.offer(E) line: 411
LinkedBlockingQueue<E>(AbstractQueue<E>).add(E) line: 95
LinuxKeyboardReader.keyPressed(KeyEvent) line: 214
ChuiClient(Component).processKeyEvent(KeyEvent) line: 6497
```

The origin in this LinuxLeyboardReader, l. 214:

```
            queue.add(null);
```

The queue field is defined as

```
  /** Incoming keystroke buffer. */
  protected final LinkedBlockingQueue<KeyCode> queue = new LinkedBlockingQueue<>();
```

And the LinkedBlockingQueue explicitly does not support adding nulls:

```
    public boolean offer(E e) {
        if (e == null) throw new NullPointerException();
```

#2 - 08/23/2023 10:00 AM - Greg Shah

Are we sure we need to add a null keyboard event to the queue?

Tomasz: Have you encountered this issue in <large_chui_app> regression testing?

#3 - 08/23/2023 10:32 AM - Hynek Cihlar

Greg Shah wrote:

> Are we sure we need to add a null keyboard event to the queue?

Yes, it is used to signal a modifier key in multiple places. I am just checking in a fix.

#4 - 08/23/2023 11:14 AM - Vladimir Tsichevski

Hynek Cihlar wrote:

> Greg Shah wrote:
>
> > Are we sure we need to add a null keyboard event to the queue?
>
> Yes, it is used to signal a modifier key in multiple places. I am just checking in a fix.

Have you created a branch for this issue?

#5 - 08/23/2023 11:25 AM - Hynek Cihlar

The issue is fixed in 7742a revision 14707. The problem only showed in Swing ChUI client. Please review.

#6 - 08/23/2023 11:26 AM - Hynek Cihlar

- % Done changed from 0 to 100

- Status changed from New to Review

#7 - 08/23/2023 11:28 AM - Hynek Cihlar

Vladimir, please also retest.

#8 - 08/23/2023 11:52 AM - Tomasz Domin

Greg Shah wrote:

> Are we sure we need to add a null keyboard event to the queue?
>
> Tomasz: Have you encountered this issue in <large_chui_app> regression testing?

No, it was a problem with limited taBuf Deque size causing IllegalStateException

#9 - 08/23/2023 12:12 PM - Hynek Cihlar

I added missing code comments in 7742a revision 14708.

#10 - 08/23/2023 12:36 PM - Vladimir Tsichevski

- vendor_id deleted (GCD)

- Assignee set to Eric Faulhaber

Hynek Cihlar wrote:

> Vladimir, please also retest.

The NPE disappeared now, but it seems the code works incorrectly.

Pressing Escape has no visible effect, and the boolean escPressed just flips on and off.

#11 - 08/23/2023 12:38 PM - Vladimir Tsichevski

- Subject changed from NPE on LinuxKeyboardReader when pressing Escape in ShUI Swing application to NPE on LinuxKeyboardReader when pressing Escape in ChUI Swing application

#12 - 08/23/2023 12:43 PM - Hynek Cihlar

Vladimir Tsichevski wrote:

> Hynek Cihlar wrote:
>
> > Vladimir, please also retest.
>
> The NPE disappeared now, but it seems the code works incorrectly.
>
> Pressing Escape has no visible effect, and the boolean escPressed just flips on and off.

Please compare the behavior with the terminal client. If you find differences post your test case.

#13 - 08/23/2023 12:46 PM - Vladimir Tsichevski

Hynek Cihlar wrote:

> Vladimir Tsichevski wrote:
>
> > Hynek Cihlar wrote:
> >
> > > Vladimir, please also retest.
> >
> > The NPE disappeared now, but it seems the code works incorrectly.
> >
> > Pressing Escape has no visible effect, and the boolean escPressed just flips on and off.
>
> Please compare the behavior with the terminal client. If you find differences post your test case.

Do you mean I should compare two FWD ChUI native mode?

#14 - 08/23/2023 12:53 PM - Vladimir Tsichevski

Vladimir Tsichevski wrote:

> Hynek Cihlar wrote:
>
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> >
> > > Hynek Cihlar wrote:
> > >
> > > > Vladimir, please also retest.
> > >
> > > The NPE disappeared now, but it seems the code works incorrectly.

Pressing Escape has no visible effect, and the boolean escPressed just flips on and off.

Please compare the behavior with the terminal client. If you find differences post your test case.

Do you mean I should compare two FWD ChUI native mode?

I see no differences.

Also: after the Escape was pressed, the new key press is ignored. This holds both for Swing and native modes.

#15 - 08/23/2023 01:01 PM - Hynek Cihlar

Vladimir Tsichevski wrote:

> I see no differences.
>
> Also: after the Escape was pressed, the new key press is ignored. This holds both for Swing and native modes.

How does native OE behave?

#16 - 08/23/2023 01:05 PM - Vladimir Tsichevski

Hynek Cihlar wrote:

> Vladimir Tsichevski wrote:
>
> > I see no differences.
> >
> > Also: after the Escape was pressed, the new key press is ignored. This holds both for Swing and native modes.
>
> How does native OE behave?

Procedure complete. Press space bar to continue.

#17 - 08/23/2023 01:11 PM - Hynek Cihlar

Vladimir Tsichevski wrote:

> Hynek Cihlar wrote:
>
> > Vladimir Tsichevski wrote:
> >
> > > I see no differences.
> > >
> > > Also: after the Escape was pressed, the new key press is ignored. This holds both for Swing and native modes.
> >
> > How does native OE behave?
>
> Procedure complete. Press space bar to continue.

This is different from the original issue. I will check how 6667e behaves and how does it resolve this regression.

#18 - 08/23/2023 01:11 PM - Hynek Cihlar

- Status changed from Review to WIP

- % Done changed from 100 to 80

#19 - 08/23/2023 01:54 PM - Eric Faulhaber

- vendor_id set to GCD

- Assignee changed from Eric Faulhaber to Hynek Cihlar