The "Error starting GDM with your graphics card" splash screen is not displayed with Tails 4.0

10/29/2019 12:23 PM - goupille

### Status
Resolved

### Priority
Normal

### Assignee:

### Category:
Hardware support

### Target version:
Tails_4.1

### Feature Branch:
bugfix/17200-gdm-failed-to-start

### Type of work:
Research

### Blueprint:

### Description
since the latest release, we had no reports from users being displayed our custom error message in case of gdm not working. we usually have some of them after each release. However we received a few reports about graphics issues, with the greeter being in a loop for example (#17199) and, I may be wrong, but I think that those users should have triggered the error message.

### Associated revisions

**Revision 699028e4 - 11/11/2019 08:33 AM - intrigeri**
Fix the "GDM failed to start" splash screen functionality (refs: #17200)

The previous version of this script waited until the fifth failure before triggering the error handling code, which would never happen on Buster, whose GDM only tries to start /usr/lib/gdm3/gdm-x-session once.

**Revision 162aa5e3 - 11/13/2019 07:32 PM - segfault**
Merge branch 'bugfix/17200-gdm-failed-to-start' into stable (Closes: #17200)

**History**

**#1 - 10/31/2019 11:28 AM - intrigeri**
- Blocks Feature #16209: Core work: Foundations Team added

**#2 - 10/31/2019 11:30 AM - intrigeri**
- Category set to Hardware support
- Status changed from New to Confirmed
- Assignee deleted (intrigeri)
- Target version set to Tails_4.1

I suspect that the memory saving stuff I implemented in 4.0 (killing the Greeter's GNOME session during the login process) broke this :/

**#3 - 11/11/2019 06:48 AM - intrigeri**
goupille wrote:

since the latest release, we had no reports from users being displayed our custom error message in case of gdm not working. we usually have some of them after each release.
I've seen one such bug report that included that error message.

However we received a few reports about graphics issues, with the greeter being in a loop for example (#17199) and, I may be wrong, but I think that those users should have triggered the error message.

I don't know about the other reports you're referring to, but in #17199 the (GDM) Greeter does start so it's expected that the error message does not show up: "only" logging in fails and returns to the Greeter.

Next research step: forcibly trigger the error condition that yields this error splash screen and see what happens. In passing, it would be a good time to tweak config/chroot_local-includes/usr/lib/gdm3/gdm-x-session.tails so that when a certain debugging command line option is passed (e.g., force_gdm_startup_failure), it does not even try to start /usr/lib/gdm3/gdm-x-session.real, and instead directly triggers the failure handling code.

#4 - 11/11/2019 08:03 AM - intrigeri
- Assignee set to intrigeri

I'll give this a try: this feature is a key piece of our user/hardware support feedback loop.

#5 - 11/11/2019 08:04 AM - intrigeri
- Subject changed from the custom error message linking to the gpu known issues is not displayed with tails 4.0 to The "Error starting GDM with your graphics card" splash screen is not displayed with Tails 4.0
- Feature Branch set to bugfix/17200-gdm-failed-to-start

#6 - 11/11/2019 08:34 AM - intrigeri

I confirm this is broken: I've passed xorg-driver=nouveau on a computer that has an Intel GPU, which of course breaks GDM startup. All I see is the text console with, on the last line, "Started GNOME Display Manager". tty5 (where this splash screen is supposed to be displayed) is empty.

tails-gdm-failed-to-start.service was not started. gdm.service is seen as running, with one single process: /usr/sbin/gdm3.
Manually starting tails-gdm-failed-to-start.service yields the expected splash screen. I think I understood why and am testing a fix.

In passing, it would be a good time to tweak […]

Forget it: this would not help debug this sort of issues, because bypassing GDM X session entirely has side effects; and there's a better way to test this (see above), which I've documented on my branch.
This branch fixes the problem for me on bare metal (ThinkPad X200, Lenovo EliteBook 840G1) and libvirt/QEMU (QXL). Tested with xorg-driver=nouveau.

But it does not work on libvirt/QEMU with virtio graphics with 3D accel: once X.Org fails to start, all I see is a black screen with a blinking cursor in the top left corner; I suspect that's a virtio + 3D accel problem and I would bet it was the same on Tails 3.x, so I'll ignore this: X.Org does start in such VMs, as long as one does not intentionally break it for debugging purposes.

Applied in changeset tails|162aa5e35acb82ece29190c8b6d11736f20d5d8a.