CC:

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andrewxu@chromium.org Owner:

> rzanoni@google.com pbos@chromium.org elainechien@chromium.org xiy...@chromium.org skuhne@chromium.org U robliao@chromium.org kylixrd@chromium.org msw@chromium.org tbarzic@chromium.org ellyj...@chromium.org pkasting@chromium.org mmourgos@chromium.org

Status: Fixed (Closed)

Components: UI>Shell>Shelf Internals>Views

Modified: Jul 29, 2022

Backlog-Rank:

Editors:

EstimatedDays:

NextAction:

OS: Chrome, Lacros

Pri:

Type: **Bug-Security**

Hotlist-Merge-Review reward-2000

Security_Severity-Medium

allpublic

reward-inprocess

CVE_description-submitted

external_security_report

FoundIn-100

Security_Impact-Extended

merge-merged-4664

LTS-Merge-Merged-96

merge-merged-4951

merge-merged-101

Issue 1300561: Security: container-overflow in

ash::ScrollableShelfView::ShouldCountActivatedInkDrop

Reported by chrom...@gmail.com on Thu, Feb 24, 2022, 11:07 AM EST



VERSION

Chrome Version: 101.0.4907.0 Operating System: ChromeOS

./../ui/views/widget/root view.cc:418:9

REPRODUCTION CASE

I repro'd this crash twice when I closed Chromium browser through the shelf context menu. I don't have specific steps to repro it constantly, but still trying to figure it out. ==175475==ERROR: AddressSanitizer: container-overflow on address 0x6080002ca168 at pc 0x55f5a7c5a61c bp 0x7ffcc2c0b740 sp 0x7ffcc2c0b738 READ of size 8 at 0x6080002ca168 thread T0 (chrome) ==175475==WARNING: invalid path to external symbolizer! ==175475==WARNING: Failed to use and restart external symbolizer! #0 0x55f5a7c5a61b in ViewAtBase ./../../ui/views/view model.h:83:28 #1 0x55f5a7c5a61b in view at ./../../ui/views/view model.h:124:56 #2 0x55f5a7c5a61b in ash::ScrollableShelfView::ShouldCountActivatedInkDrop(views::View const*) const ./../ash/shelf/scrollable shelf view.cc:2134:41 #3 0x55f5a7c5a3f2 in ash::ScrollableShelfView::CreateScopedActiveInkDropCount(ash::ShelfButton const*) ./../ash/shelf/scrollable shelf view.cc:1018:8 #4 0x55f5a7c6f761 in ash::ShelfAppButton::SetInkDropAnimationStarted(bool) ./../ash/shelf/shelf_app_button.cc:950:48 #5 0x55f5a763797f in views::InkDrop::NotifyInkDropAnimationStarted() ./../.ui/views/animation/ink drop.cc:118:14 #6 0x55f5a73e6153 in Run ./../../base/callback.h:241:12 #7 0x55f5a73e6153 in CheckAllSequencesStarted ./../../ui/compositor/callback layer animation observer.cc:107:33 #8 0x55f5a73e6153 in ui::CallbackLayerAnimationObserver::SetActive() ./../ui/compositor/callback layer animation observer.cc:50:3 #9 0x55f5a76713d0 in views::ButtonController::OnMousePressed(ui::MouseEvent const&) ./../ui/views/controls/button/button controller.cc:30:28 #10 0x55f5a7c6da77 in ash::ShelfAppButton::OnMousePressed(ui::MouseEvent const&) ./../ash/shelf/shelf_app_button.cc:0:0 #11 0x55f5a77bf712 in views::View::ProcessMousePressed(ui::MouseEvent const&) ./../../ui/views/view.cc:3010:23 #12 0x55f5a77bf25d in views::View::OnMouseEvent(ui::MouseEvent*) ./../../ui/views/view.cc:1436:11 #13 0x55f5a763ec95 in ui::ScopedTargetHandler::OnEvent(ui::Event*) ./../../ui/events/scoped_target_handler.cc:28:24 #14 0x55f5a3bb45cb in ui::EventDispatcher::DispatchEvent(ui::EventHandler*, ui::Event*) ./../ui/events/event dispatcher.cc:190:12 #15 0x55f5a3bb3b90 in ui::EventDispatcher::ProcessEvent(ui::EventTarget*, ui::Event*) ./../ui/events/event_dispatcher.cc:139:5 #16 0x55f5a3bb3664 in ui::EventDispatcherDelegate::DispatchEventToTarget(ui::EventTarget*, ui::Event*) ./../ui/events/event dispatcher.cc:83:14 #17 0x55f5a3bb33d0 in ui::EventDispatcherDelegate::DispatchEvent(ui::EventTarget*, ui::Event*) ./../ui/events/event dispatcher.cc:55:15 #18 0x55f5a77dd360 in views::internal::RootView::OnMousePressed(ui::MouseEvent const&)

#19 0x55f5a77f2d3b in views::Widget::OnMouseEvent(ui::MouseEvent*) ./../.ui/views/widget/widget.cc:1520:35

#20 Overfee 2hh / Ech in wiw Event Dieneteham Dieneteh Event / viw Event landler* viw Event*)

```
#ZU UX55T5a3pp45cp in ui::EventDispatcner::Dispatcnevent(ui::EventHandier", ui::Event")
./../ui/events/event dispatcher.cc:190:12
  #21 0x55f5a3bb3b90 in ui::EventDispatcher::ProcessEvent(ui::EventTarget*, ui::Event*)
./../ui/events/event dispatcher.cc:139:5
  #22 0x55f5a3bb3664 in ui::EventDispatcherDelegate::DispatchEventToTarget(ui::EventTarget*, ui::Event*)
./../ui/events/event dispatcher.cc:83:14
  #23 0x55f5a3bb33d0 in ui::EventDispatcherDelegate::DispatchEvent(ui::EventTarget*, ui::Event*)
./../ui/events/event dispatcher.cc:55:15
  #24 0x55f5a73bb0cf in ui::EventProcessor::OnEventFromSource(ui::Event*) ./../.ui/events/event processor.cc:49:17
  #25 0x55f5a3bb7b9e in ui::EventSource::DeliverEventToSink(ui::Event*) ./../ui/events/event source.cc:118:16
  #26 0x55f5a3bb8096 in ui::EventSource::EventRewriterContinuationImpl::SendEvent(ui::Event const*)
./../ui/events/event source.cc:66:14
  #27 0x55f5a3bb67bb in ui::EventRewriter::SendEvent(base::WeakPtr<ui::EventRewriterContinuation>, ui::Event const*)
./../ui/events/event rewriter.cc:88:39
  #28 0x55f59796a565 in ui::EventRewriterChromeOS::RewriteMouseButtonEvent(ui::MouseEvent const&,
base::WeakPtr<ui::EventRewriterContinuation>) ./../../ui/chromeos/events/event rewriter chromeos.cc:1274:12
  #29 0x55f59796aaa5 in ui::EventRewriterChromeOS::RewriteEvent(ui::Event const&,
base::WeakPtr<ui::EventRewriterContinuation>) ./../.ui/chromeos/events/event rewriter chromeos.cc:758:12
  #30 0x55f5a3bb8046 in ui::EventSource::EventRewriterContinuationImpl::SendEvent(ui::Event const*)
./../ui/events/event source.cc:67:32
  #31 0x55f5a3bb67bb in ui::EventRewriter::SendEvent(base::WeakPtr<ui::EventRewriterContinuation>, ui::Event const*)
./../../ui/events/event rewriter.cc:88:39
  #32 0x55f5a7a73f20 in ash::KeyboardDrivenEventRewriter::RewriteEvent(ui::Event const&,
base::WeakPtr<ui::EventRewriterContinuation>) ./../../ash/events/keyboard_driven_event_rewriter.cc:31:12
  #33 0x55f5a3bb8046 in ui::EventSource::EventRewriterContinuationImpl::SendEvent(ui::Event const*)
./../ui/events/event source.cc:67:32
  #34 0x55f5a3bb67bb in ui::EventRewriter::SendEvent(base::WeakPtr<ui::EventRewriterContinuation>, ui::Event const*)
./../ui/events/event rewriter.cc:88:39
  #35 0x55f5a7a6fb94 in ash::AccessibilityEventRewriter::RewriteEvent(ui::Event const&,
base::WeakPtr<ui::EventRewriterContinuation>) ./../../ash/events/accessibility_event_rewriter.cc:0:0
  #36 0x55f5a3bb8046 in ui::EventSource::EventRewriterContinuationImpl::SendEvent(ui::Event const*)
./../ui/events/event source.cc:67:32
  #37 0x55f5a3bb67bb in ui::EventRewriter::SendEvent(base::WeakPtr<ui::EventRewriterContinuation>, ui::Event const*)
./../ui/events/event rewriter.cc:88:39
  #38 0x55f5a787f19e in ash::Autoclick
  gEventRewriter::RewriteEvent(ui::Event const&, base::WeakPtr<ui::EventRewriterContinuation>)
./../ash/accessibility/autoclick/autoclick_drag_event_rewriter.cc:0:0
  #39 0x55f5a3bb8046 in ui::EventSource::EventRewriterContinuationImpl::SendEvent(ui::Event const*)
./../ui/events/event source.cc:67:32
  #40 0x55f5a3bb67bb in ui::EventRewriter::SendEvent(base::WeakPtr<ui::EventRewriterContinuation>, ui::Event const*)
./../ui/events/event rewriter.cc:88:39
  #41 0x55f5a78a2c19 in ash::FullscreenMagnifierController::RewriteEvent(ui::Event const&,
base::WeakPtr<ui::EventRewriterContinuation>) ./../ash/accessibility/magnifier/fullscreen_magnifier_controller.cc:0:0
  #42 0x55f5a3bb7846 in ui::EventSource::SendEventToSinkFromRewriter(ui::Event const*, ui::EventRewriter const*)
./../ui/events/event source.cc:144:29
  #43 0x55f5a7aa91c3 in aura::WindowTreeHostPlatform::DispatchEvent(ui::Event*)
./../ui/aura/window tree host platform.cc:231:38
  #44 0x55f5a7ab032e in ash::AshWindowTreeHostPlatform::DispatchEvent(ui::Event*)
./../.ash/host/ash_window_tree_host_platform.cc:184:40
  #45 0x55f5a3bc2367 in Run ./../../base/callback.h:142:12
  #46 0x55f5a3bc2367 in ui::DispatchEventFromNativeUiEvent(ui::Event* const&, base::OnceCallback<void (ui::Event*)>)
./../ui/events/ozone/events ozone.cc:36:25
  #47 0x55f594ebf57d in ui::X11Window::DispatchUiEvent(ui::Event*, x11::Event const&)
/ / /:i/a-ana/hlaffarm/v/14/v/14 window aa/120E/2
```

```
./../../ul/ozone/platform/XTT/XTT_window.cc:T3U5:3
  #48 0x55f594ebedd3 in ui::X11Window::DispatchEvent(ui::Event* const&)
./../ui/ozone/platform/x11/x11 window.cc:1258:3
  #49 0x55f594ebf8ce in non-virtual thunk to ui::X11Window::DispatchEvent(ui::Event* const&)
./../../ui/ozone/platform/x11/x11 window.cc:0:0
  #50 0x55f5a3b787b1 in ui::PlatformEventSource::DispatchEvent(ui::Event*)
./../ui/events/platform/platform event source.cc:98:29
  #51 0x55f5a426d033 in ui::X11EventSource::OnEvent(x11::Event const&)
./../ui/events/platform/x11/x11 event source.cc:287:5
  #52 0x55f594b0dc47 in x11::Connection::DispatchEvent(x11::Event const&) ./../../ui/qfx/x/connection.cc:469:14
  #53 0x55f594b0d971 in x11::Connection::ProcessNextEvent() ./../../ui/gfx/x/connection.cc:520:3
  #54 0x55f594b0d437 in x11::Connection::Dispatch() ./../ui/gfx/x/connection.cc:0:0
  #55 0x55f594b0da22 in x11::Connection::DispatchAll() ./../../ui/gfx/x/connection.cc:457:12
  #56 0x55f5a1b2f8a5 in base::MessagePumpLibevent::OnLibeventNotification(int, short, void*)
./../.base/message loop/message pump libevent.cc:0:0
  #57 0x55f5a1eaab4c in event process active ./../../base/third party/libevent/event.c:381:4
  #58 0x55f5a1eaab4c in event base loop ./../../base/third party/libevent/event.c:521:4
  #59 0x55f5a1b303b9 in base::MessagePumpLibevent::Run(base::MessagePump::Delegate*)
./../../base/message loop/message pump libevent.cc:246:5
  #60 0x55f5a19ef88a in base::sequence_manager::internal::ThreadControllerWithMessagePumpImpl::Run(bool,
base::TimeDelta) ./.././base/task/sequence manager/thread controller with message pump impl.cc:497:12
  #61 0x55f5a192695c in base::RunLoop::Run(base::Location const&) ./.././base/run loop.cc:141:14
  #62 0x55f5983b79ea in content::BrowserMainLoop::RunMainMessageLoop()
./../content/browser/browser main loop.cc:1073:18
  #63 0x55f5983bc161 in content::BrowserMainRunnerImpl::Run()
./../.content/browser/browser main runner impl.cc:155:15
  #64 0x55f5983b1bfa in content::BrowserMain(content::MainFunctionParams)
./../content/browser/browser main.cc:30:28
  #65 0x55f5a17046af in content::RunBrowserProcessMain(content::MainFunctionParams, content::ContentMainDelegate*)
./../content/app/content main runner impl.cc:642:10
  #66 0x55f5a17071f8 in content::ContentMainRunnerImpl::RunBrowser(content::MainFunctionParams, bool)
./../content/app/content main runner impl.cc:1175:10
  #67 0x55f5a1706648 in content::ContentMainRunnerImpl::Run() ./../.content/app/content_main_runner_impl.cc:1042:12
  #68 0x55f5a1700e29 in content::RunContentProcess(content::ContentMainParams, content::ContentMainRunner*)
./../../content/app/content main.cc:401:36
  #69 0x55f5a17014a5 in content::ContentMain(content::ContentMainParams) ./../../content/app/content main.cc:429:10
  #70 0x55f59376a9aa in ChromeMain ./../.chrome/app/chrome main.cc:176:12
  #71 0x7feb5de700b2 in libc start main /build/glibc-eX1tMB/glibc-2.31/csu/../csu/libc-start.c:308:16
0x6080002ca168 is located 72 bytes inside of 96-byte region [0x6080002ca120,0x6080002ca180)
allocated by thread T0 (chrome) here:
  #0 0x55f59376818d in operator new(unsigned long) _asan_rtl_:3
  #1 0x55f5a77d68b1 in __libcpp_operator_new<unsigned long> ./../../buildtools/third_party/libc++/trunk/include/new:235:10
  #2 0x55f5a77d68b1 in __libcpp_allocate ./../../buildtools/third_party/libc++/trunk/include/new:261:10
  #3 0x55f5a77d68b1 in allocate ./.././buildtools/third party/libc++/trunk/include/ memory/allocator.h:82:38
  #4 0x55f5a77d68b1 in allocate ./.././buildtools/third party/libc++/trunk/include/ memory/allocator traits.h:261:20
  #5 0x55f5a77d68b1 in std:: 1:: split buffer<views::ViewModelBase::Entry,
std::__1::allocator<views::ViewModelBase::Entry>&>::__split_buffer(unsigned long, unsigned long,
std::__1::allocator<views::ViewModelBase::Entry>&) ./../.buildtools/third_party/libc++/trunk/include/__split_buffer:314:29
  #6 0x55f5a77d5af2 in std:: 1::vector<views::ViewModelBase::Entry, std:: 1::allocator<views::ViewModelBase::Entry>
>::insert(std:: 1:: wrap iter<views::ViewModelBase::Entry const*>, views::ViewModelBase::Entry const&)
./../../buildtools/third_party/libc++/trunk/include/vector:1794:53
  #7 0x55f5a77d65c2 in views::ViewModelBase::AddUnsafe(views::View*, int) ./../ui/views/view model.cc:74:12
```

#0 Overfragond Odf in Add / / hishiawahiaw model bi 101:04

```
#8 UX55T5a7 CCG9TT IN AGG ./../../UI/VIEWS/VIEW MOGEI.N:TZT:34
  #9 0x55f5a7ccd91f in ash::ShelfView::ShelfItemAdded(int) ./../.ash/shelf/shelf view.cc:2057:16
  #10 0x55f5a832f1e8 in ash::ShelfModel::AddAt(int, ash::ShelfItem const&, std:: 1::unique ptr<ash::ShelfItemDelegate,
std:: 1::default delete<ash::ShelfItemDelegate>>) ./../ash/public/cpp/shelf model.cc:159:14
  #11 0x55f5ae17a65e in ChromeShelfController::InsertAppItem(std:: 1::unique ptr<ash::ShelfItemDelegate,
std:: 1::default delete<ash::ShelfItemDelegate>>, ash::ShelfItemStatus, int, ash::ShelfItemType,
std:: 1::basic string<char16 t, std:: 1::char traits<char16 t>, std:: 1::allocator<char16 t> > const&)
./../.chrome/browser/ui/ash/shelf/chrome shelf controller.cc:1371:11
  #12 0x55f5ae1822cf in ChromeShelfController::EnsureAppPinnedInModelAtIndex(std:: 1::basic string<char,
std:: 1::char traits<char>, std:: 1::allocator<char> > const&, int, int)
./../../chrome/browser/ui/ash/shelf/chrome shelf controller.cc:1308:3
  #13 0x55f5ae179f22 in ChromeShelfController::UpdatePinnedAppsFromSync()
./../.chrome/browser/ui/ash/shelf/chrome shelf controller.cc:1253:30
  #14 0x55f5ae180f7c in ChromeShelfController::OnAppInstalled(content::BrowserContext*, std:: 1::basic string<char,
std:: 1::char traits<char>, std:: 1::allocator<char> > const&)
./../../chrome/browser/ui/ash/shelf/chrome shelf controller.cc:904:3
  #15 0x55f5a884d66d in apps::AppRegistryCache::DoOnApps(std:: 1::vector<mojo::StructPtr<apps::mojom::App>,
std:: 1::allocator<mojo::StructPtr<apps::mojom::App> > >)
./../.components/services/app_service/public/cpp/app_registry_cache.cc:153:13
  #16 0x55f5a884cc12 in apps::AppRegistryCache::OnApps(std:: 1::vector<mojo::StructPtr<apps::mojom::App>,
std::__1::allocator<mojo::StructPtr<apps::mojom::App> > >, apps::mojom::AppType, bool)
./../components/services/app service/public/cpp/app registry cache.cc:76:3
  #17 0x55f5a9717d40 in apps::AppServiceProxyBase::OnApps(std:: 1::vector<mojo::StructPtr<apps::mojom::App>,
std:: 1::allocator<mojo::StructPtr<apps::mojom::App> > >, apps::mojom::AppType, bool)
./../.chrome/browser/apps/app_service/app_service_proxy_base.cc:674:23
  #18 0x55f59722da14 in apps::mojom::SubscriberStubDispatch::Accept(apps::mojom::Subscriber*, mojo::Message*)
./gen/components/services/app service/public/mojom/app service.mojom.cc:5742:13
  #19 0x55f5a31886ea in mojo::InterfaceEndpointClient::HandleValidatedMessage(mojo::Message*)
./../mojo/public/cpp/bindings/lib/interface endpoint client.cc:901:54
  #20 0x55f5a319b3b2 in mojo::MessageDispatcher::Accept(mojo::Message*)
./../mojo/public/cpp/bindings/lib/message_dispatcher.cc:48:24
  #21 0x55f5a318b5b6 in mojo::InterfaceEndpointClient::HandleIncomingMessage(mojo::Message*)
./../mojo/public/cpp/bindings/lib/interface_endpoint_client.cc:658:20
  #22 0x55f5a31a4e3c in
mojo::internal::MultiplexRouter::ProcessIncomingMessage(mojo::internal::MultiplexRouter::MessageWrapper*,
mojo::internal::MultiplexRouter::ClientCallBehavior, base::SequencedTaskRunner*)
./../.mojo/public/cpp/bindings/lib/multiplex_router.cc:1096:42
  #23 0x55f5a31a3db3 in mojo::internal::MultiplexRouter::Accept(mojo::Message*)
./../.mojo/public/cpp/bindings/lib/multiplex router.cc:716:7
  #24 0x55f5a319b497 in mojo::MessageDispatcher::Accept(mojo::Message*)
./../mojo/public/cpp/bindings/lib/message dispatcher.cc:43:19
  #25 0x55f5a31805f5 in mojo::Connector::DispatchMessage(mojo::ScopedHandleBase<mojo::MessageHandle>)
./../mojo/public/cpp/bindings/lib/connector.cc:559:49
  #26 0x55f5a3181e10 in mojo::Connector::ReadAllAvailableMessages()
./../mojo/public/cpp/bindings/lib/connector.cc:616:14
  #27 0x55f5a316cbc6 in Run ./../../base/callback.h:241:12
  #28 0x55f5a316cbc6 in mojo::SimpleWatcher::OnHandleReady(int, unsigned int, mojo::HandleSignalsState const&)
./../mojo/public/cpp/system/simple_watcher.cc:278:14
  #29 0x55f5a19ac8e6 in Run ./../../base/callback.h:142:12
  #30 0x55f5a19ac8e6 in base::TaskAnnotator::RunTaskImpl(base::PendingTask&)
./../../base/task/common/task annotator.cc:135:32
  #31 0x55f5a19ee537 in RunTask<(lambda at
../../base/task/sequence_manager/thread_controller_with_message_pump_impl.cc:387:29)>
/ / /bass/task/samman/task, annatator b.74.E
```

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./../../pase/task/common/task annotator.n:/4:5
 #32 0x55f5a19ee537 in
base::sequence manager::internal::ThreadControllerWithMessagePumpImpl::DoWorkImpl(base::sequence manager::Lazy
Now*) ./../.base/task/sequence manager/thread controller with message pump impl.cc:385:21
 #33 0x55f5a19edc37 in base::sequence manager::internal::ThreadControllerWithMessagePumpImpl::DoWork()
./../.base/task/sequence manager/thread controller with message pump impl.cc:290:41
 #34 0x55f5a19ef1d1 in non-virtual thunk to
base::sequence manager::internal::ThreadControllerWithMessagePumpImpl::DoWork()
./../base/task/sequence manager/thread controller with message pump impl.cc:0:0
 #35 0x55f5a1b2fffd in base::MessagePumpLibevent::Run(base::MessagePump::Delegate*)
./../../base/message loop/message pump libevent.cc:195:55
 #36 0x55f5a19ef88a in base::sequence manager::internal::ThreadControllerWithMessagePumpImpl::Run(bool,
base::TimeDelta) ./.././base/task/sequence manager/thread controller with message pump impl.cc:497:12
 #37 0x55f5a192695c in base::RunLoop::Run(base::Location const&) ./../../base/run loop.cc:141:14
HINT: if you don't care about these errors you may set ASAN OPTIONS=detect container overflow=0.
If you suspect a false positive see also: https://github.com/google/sanitizers/wiki/AddressSanitizerContainerOverflow.
SUMMARY: AddressSanitizer: container-overflow (/home/lbstyle/Desktop/asan-linux-release-974333/chrome+0x2234361b)
(BuildId: 3ccb8d222add99c3)
Shadow bytes around the buggy address:
0x0c10800513d0: fa fa fa fa fd fa
0x0c10800513e0: fa fa fa fd fd
 0x0c10800513f0: fa fa fa fa fd fa
 0x0c1080051410: fa fa fa fa 00 00 00 00 00 00 00 00 00 00 fa
=>0x0c1080051420: fa fa fa fa 00 00 00 00 00 00 00 00 00 fc]fc fc
 Shadow byte legend (one shadow byte represents 8 application bytes):
Addressable:
                 00
Partially addressable: 01 02 03 04 05 06 07
Heap left redzone:
Freed heap region:
                    fd
 Stack left redzone:
                   f1
 Stack mid redzone:
                    f2
                    f3
 Stack right redzone:
 Stack after return:
                  f5
 Stack use after scope: f8
 Global redzone:
                   f9
 Global init order:
                  f6
Poisoned by user:
                    f7
 Container overflow:
                    fc
Array cookie:
                  ac
Intra object redzone:
                    bb
ASan internal:
                  fe
Left alloca redzone:
Right alloca redzone:
==175475==ABORTING
```

Comment 1 by sheriffbot on Thu, Feb 24, 2022, 11:08 AM EST

Project Member

Labels: external_security_report

_ - - -

Comment 2 by danakj@chromium.org on Thu, Feb 24, 2022, 12:28 PM EST Project Member

Summary: Security: container-overflow in ash::ScrollableShelfView::ShouldCountActivatedInkDrop (was: Security: Heap-

use-after-free in ash::ScrollableShelfView::ShouldCountActivatedInkDrop)

Status: Assigned (was: Unconfirmed)

Owner: skuhne@chromium.org

Cc: pbos@chromium.org pkasting@chromium.org msw@chromium.org tbarzic@chromium.org skuhne@chromium.org

xiy...@chromium.org ellyj...@chromium.org

Labels: Security_Severity-Medium OS-Chrome OS-Lacros Pri-1

Components: UI>Shell Internals>Views

It seems the last_tappable_app_index_ is wrong.

Can

https://source.chromium.org/chromium/chromium/src/+/main:ui/views/view_model.h;drc=d3a5b84f152932d25c0d42d345567c6c40bd768e;l=95 check index() be made into production CHECKs?

Normally critical for OOB in the browser process, but (1) we don't have a consistent repro, and (2) it's during shutdown so hard to weaponize, so I will lower the security impact to lighten the load on release TPMs.

Unable to verify a FoundIn- label since we don't have a repro, perhaps if we can root cause it.

Comment 3 by xiy...@chromium.org on Thu, Feb 24, 2022, 12:54 PM EST Project Member

Owner: andrewxu@chromium.org Components: -UI>Shell UI>Shell>Shelf

andrewxu@, could you investigate?

Comment 4 by adetaylor@google.com on Thu, Mar 10, 2022, 11:27 AM EST Project Member

Cc: robliao@chromium.org

Comment 5 by andrewxu@chromium.org on Thu, Mar 10, 2022, 11:28 AM EST Project Member

Status: Started (was: Assigned)

On my radar now

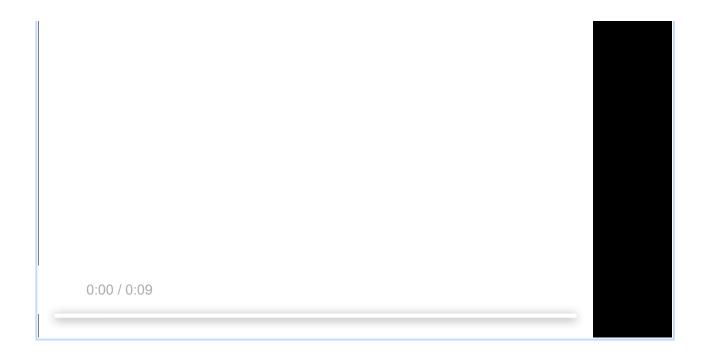
Comment 6 by chrom...@gmail.com on Wed, Mar 16, 2022, 9:33 PM EDT

You can reproduce this with the following:

- 1) Click on 'Files' icon and Open any downloaded file
- 2) Close the opened file through the shelf context menu and try to click on 'File' icon quickly.

screen.webm

2.6 MB View Download



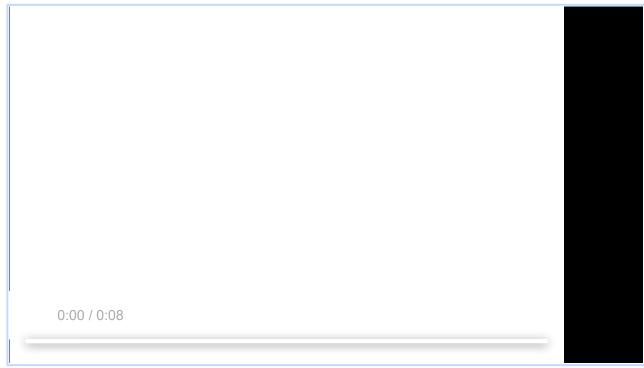
Comment 7 by chrom...@gmail.com on Wed, Mar 16, 2022, 9:45 PM EDT Or:

- 1) Right-click on 'chromium' icon and select 'App info'
- 2) Close the 'App info' page and try to click on 'chromium' icon quickly.

Comment 8 by chrom...@gmail.com on Wed, Mar 16, 2022, 9:46 PM EDT

screen.webm

1.7 MB View Download



recent regression?

Comment 10 by andrewxu@chromium.org on Thu, Mar 17, 2022, 11:36 AM EDT

Project Member

Work on it right now.

Comment 11 by andrewxu@chromium.org on Thu, Mar 17, 2022, 12:19 PM EDT Project Member

Reply to comment 6: it is weird since I added a browser test for this scenario before [1]

I guess the cause of the bug is that: when closing an **unpinned** app through the shelf item context menu, somehow the shelf item of the app is removed before `ScrollableShelfView::ShouldCountActivatedInkDrop()` is hit. It is why the view index is out of range. Cannot reproduce it on my Linux emulator with ASAN flag. Still investigating it.

[1]:

https://source.chromium.org/chromium/chromium/src/+/main:chrome/browser/ui/ash/shelf/chrome_shelf_controller_browser/test.cc;l=2216;bpv=1;bpt=0;drc=91f953687242dc390ccda891d09bf7e3a04fd068

Comment 12 by andrewxu@chromium.org on Thu, Mar 17, 2022, 12:31 PM EDT Project Member

Good news. I can reproduce it now. Making more progress.

Comment 13 by andrewxu@chromium.org on Thu, Mar 17, 2022, 12:55 PM EDT Project Member

The root cause of the bug:

Here is how `ScrollableShelfView::last tappable app index ` [1] updates when a shelf item is removed.

ash::ScrollableShelfView::UpdateTappableIconIndices()

ash::ScrollableShelfView::ViewHierarchyChanged(views::ViewHierarchyChangedDetails const&)

views::View::ViewHierarchyChangedImpl(views::ViewHierarchyChangedDetails const&)

views::View::PropagateRemoveNotifications(views::View*, views::View*, bool)

views::View::PropagateRemoveNotifications(views::View*, views::View*, bool)

views::View::DoRemoveChildView(views::View*, bool, bool, views::View*)

RemoveChildView ./../../ui/views/view.cc:323:3

views::View::~View() ./../../ui/views/view.cc:228:14

ash::ShelfAppButton::~ShelfAppButton() ./../../ash/shelf/shelf_app_button.cc:340:35

operator() ./../../buildtools/third party/libc++/trunk/include/ memory/unique ptr.h:54:5

reset ./../../buildtools/third_party/libc++/trunk/include/__memory/unique_ptr.h:315:7

ash::ShelfView::FadeOutAnimationDelegate::AnimationEnded(gfx::Animation const*) ./../../ash/shelf/shelf view.cc:338:11

`last_tappable_app_index_` updates at the end of the fade out animation.

The crash can be reproduced by:

- (1) Add N items to shelf (N \geq 2)
- (2) Remove Nth item
- (3) Before the fade out animation completes, click at N-1th item

Reply to comment 9: based on the analysis, this bug should exist since the code was written. Yes, it affects M98.

Comment 14 by adetaylor@google.com on Mon, Mar 21, 2022, 7:48 PM EDT Project Member

Cc: kylixrd@chromium.org

(auto-cc on security bug)

·-----

Comment 15 by Git Watcher on Mon, Mar 21, 2022, 9:42 PM EDT Project Member

The following revision refers to this bug:

https://chromium.googlesource.com/chromium/src/+/7412ebc71d3b83b77812ebfcc5207bf482700273

commit 7412ebc71d3b83b77812ebfcc5207bf482700273

Author: Andrew Xu <andrewxu@chromium.org>

Date: Tue Mar 22 01:41:41 2022

[Shelf] Fix temporarily incorrect index value during item fade out

When a shelf item is removed, `ScrollableShelfView::last_tappable_app_index_` updates when the shelf button view is removed from the view hierarchy. However, removing view from view hierarchy is performed at the end of the fade out animation while the view is removed from the view model at the beginning of animation. This discrepancy could cause subtle issues when users interact with shelf during the fade out animation.

Ideally, removing the view from view model should be postponed to the end of the fade out animation as well. But this change will bring the side effect that the item view to be removed is interactive during the animation. See `ShelfItemForView` used in `ShelfView::OnMenuClosed` and other places. This side effect may be hard to eliminate (for example, in `ShelfView`, `view_model_` is used in many places).

This CL performs a quick fixing by notifying `ScrollableShelfView` of shelf item removal before the fade out animation starts. Then `ScrollableShelfView` can decrease `last_tappable_app_index_` instantly.

Bug: 1300561

Change-Id: I812d919185fbac4e9447904cce6f59d54df3f476

Reviewed-on: https://chromium-review.googlesource.com/c/chromium/src/+/3532928

Reviewed-by: Toni Barzic <tbarzic@chromium.org>
Commit-Queue: Andrew Xu <andrewxu@chromium.org>
Cr-Commit-Position: refs/heads/main@{#983601}

[modify] https://crrev.com/7412ebc71d3b83b77812ebfcc5207bf482700273/ash/shelf/scrollable_shelf_view.h

[modify] https://crrev.com/7412ebc71d3b83b77812ebfcc5207bf482700273/ash/shelf/scrollable_shelf_view.cc

[modify] https://crrev.com/7412ebc71d3b83b77812ebfcc5207bf482700273/ash/shelf/scrollable shelf view unittest.cc

[modify] https://crrev.com/7412ebc71d3b83b77812ebfcc5207bf482700273/ash/shelf/shelf_view.cc

[modify] https://crrev.com/7412ebc71d3b83b77812ebfcc5207bf482700273/ash/shelf/shelf button delegate.h

Comment 16 by chrom...@gmail.com on Tue, Mar 22, 2022, 2:31 PM EDT

it no longer reproduces. Fixed.

Comment 17 by andrewxu@chromium.org on Tue, Mar 22, 2022, 2:41 PM EDT Project Member

Status: Fixed (was: Started)

Comment 18 by sheriffbot on Tue, Mar 22, 2022, 2:44 PM EDT Project Member

Status: Assigned (was: Fixed)

Dear owner, thanks for fixing this bug. We've reopened it because security bugs need Security_Severity and FoundIn labels set, which will enable the bots to request merges to the correct branches (as well as helping out our vulnerability reward and CVE processes). Please consult with any Chrome security contact (security@chromium.org) to arrange to set these labels and then this bug can be marked closed again. Thank you! Severity guidelines:

https://chromium.googlesource.com/chromium/src/+/refs/heads/main/docs/security/severity-guidelines.md#severity-guidelines-for-security-issues FoundIn guidelines:

https://chromium.googlesource.com/chromium/src/+/main/docs/security/security-labels.md#labels-relevant-for-any-type bug security Thanks for your time!

For more details visit https://www.chromium.org/issue-tracking/autotriage - Your friendly Sheriffbot

Comment 19 by kylixrd@chromium.org on Mon, Mar 28, 2022, 2:31 PM EDT Project Member

Cc: elainechien@chromium.org

Comment 20 by chrom...@gmail.com on Mon, Apr 4, 2022, 12:07 PM EDT

Friendly ping:)

Comment 21 by adetaylor@google.com on Mon, Apr 4, 2022, 12:17 PM EDT Project Member

Status: Fixed (was: Assigned)

Labels: FoundIn-100

andrewxu@ confirms that this bug has existed since M100 and likely much before, so labelling up to keep the bots happy.

Comment 22 by sheriffbot on Mon, Apr 4, 2022, 12:23 PM EDT Project Member

Status: Assigned (was: Fixed)

Dear owner, thanks for fixing this bug. We've reopened it because security bugs need Security_Severity and FoundIn labels set, which will enable the bots to request merges to the correct branches (as well as helping out our vulnerability reward and CVE processes). Please consult with any Chrome security contact (security@chromium.org) to arrange to set these labels and then this bug can be marked closed again. Thank you! Severity guidelines:

https://chromium.googlesource.com/chromium/src/+/refs/heads/main/docs/security/severity-guidelines.md#severity-guidelines-for-security-issues FoundIn guidelines:

https://chromium.googlesource.com/chromium/src/+/main/docs/security/security-labels.md#labels-relevant-for-any-type_bug_security Thanks for your time!

For more details visit https://www.chromium.org/issue-tracking/autotriage - Your friendly Sheriffbot

Comment 23 by sheriffbot on Mon, Apr 4, 2022, 12:23 PM EDT Project Member

Labels: Security_Impact-Extended

Comment 24 by adetaylor@google.com on Mon, Apr 4, 2022, 12:32 PM EDT Project Member

Status: Fixed (was: Assigned)

Gah, #c22 is a known sheriffbot bug. This might just have annoyed me enough to fix it this time round...

Comment 25 by sheriffbot on Mon, Apr 4, 2022, 12:42 PM EDT Project Member

Labels: reward-topanel

Comment 26 by sheriffbot on Mon, Apr 4, 2022, 1:40 PM EDT Project Member

Labels: -Restrict-View-SecurityTeam Restrict-View-SecurityNotify

Comment 27 by amyressler@chromium.org on Mon, Apr 11, 2022, 6:50 PM EDT Project Member

Labels: Merge-Request-101

the fix commit does not appear to have made it into 101 so manually adding merge-request label as the bot is sleeping on the job when it comes to some medium severity bugs

Comment 28 by sheriffbot on Mon, Apr 11, 2022, 8:16 PM EDT Project Member

Labels: -Merge-Request-101 Merge-Review-101 Hotlist-Merge-Review

Merge review required: M101 is already shipping to beta.

Please answer the following questions so that we can safely process your merge request:

- 1. Why does your merge fit within the merge criteria for these milestones?
- Chrome Browser: https://chromiumdash.appspot.com/branches
- Chrome OS: https://goto.google.com/cros-release-branch-merge-guidelines
- 2. What changes specifically would you like to merge? Please link to Gerrit.
- 3. Have the changes been released and tested on canary?
- 4. Is this a new feature? If yes, is it behind a Finch flag and are experiments active in any release channels?
- 5. [Chrome OS only]: Was the change reviewed and approved by the Eng Prod Representative? https://goto.google.com/cros-engprodcomponents
- 6. If this merge addresses a major issue in the stable channel, does it require manual verification by the test team? If so, please describe required testing.

Please contact the milestone owner if you have questions.

Owners: benmason (Android), harrysouders (iOS), matthewjoseph (ChromeOS), pbommana (Desktop)

For more details visit https://www.chromium.org/issue-tracking/autotriage - Your friendly Sheriffbot

Comment 29 by andrewxu@chromium.org on Mon, Apr 11, 2022, 8:32 PM EDT Project Member

If I understand comment 27 correctly, adding the label seems to bypass some mechanism of the bot? But I still would like to make it clear that the fixing CL should not be merged back into 101.

Comment 30 by andrewxu@chromium.org on Tue, Apr 12, 2022, 12:25 PM EDT Project Member

Just talked with amyressler@ offline. My reasoning for comment 29 is: this issue existed for a long time (maybe one year) before fixing so I thought it is not worthwhile to merge the fixing back. But there is the policy to fix the security bug regardless how long the bug has existed. Therefore I agree to merge the fixing back into 101 now

Comment 31 by amyressler@chromium.org on Tue, Apr 12, 2022, 1:46 PM EDT Project Member

Labels: -Merge-Review-101 Merge-Approved-101

thank you Andrew, as this is consistent with the merge review triage process for security bugs [1] also based on that conversation, this appears to be indeed safe to merge, so approving for merge to M101, please merge to branch 4951 at your earliest availability to do so.

[1] https://chromium.googlesource.com/chromium/src/+/HEAD/docs/process/merge_request.md#Security-merge-triage

Comment 32 by Git Watcher on Tue, Apr 12, 2022, 5:59 PM EDT Project Member

Labels: -merge-approved-101 merge-merged-4951 merge-merged-101

The following revision refers to this bug:

https://chromium.googlesource.com/chromium/src/+/df6fec5fdb03df9e6cfcf2e6eb522ac70b885773

commit df6fec5fdb03df9e6cfcf2e6eb522ac70b885773

Author: Andrew Xu <andrewxu@chromium.org>

Date: Tue Apr 12 21:58:03 2022

[Merge to M-101][Shelf] Fix temporarily incorrect index value during item fade out

When a shelf item is removed, `ScrollableShelfView::last_tappable_app_index_` updates when the shelf button view is removed from the view hierarchy. However, removing view from view hierarchy is performed at the end of the fade out animation while the view is removed from the view model at the beginning of animation. This discrepancy could cause subtle issues when users interact with shelf during the fade out animation.

Ideally, removing the view from view model should be postponed to the end of the fade out animation as well. But this change will bring the side effect that the item view to be removed is interactive during the animation. See `ShelfItemForView` used in `ShelfView::OnMenuClosed` and other places. This side effect may be hard to eliminate (for example, in `ShelfView`, `view_model_` is used in many places).

This CL performs a quick fixing by notifying `ScrollableShelfView` of shelf item removal before the fade out animation starts. Then `ScrollableShelfView` can decrease `last_tappable_app_index_` instantly.

(cherry picked from commit 7412ebc71d3b83b77812ebfcc5207bf482700273)

Bug: 1300561

Change-Id: I812d919185fbac4e9447904cce6f59d54df3f476

Reviewed-on: https://chromium-review.googlesource.com/c/chromium/src/+/3532928

Reviewed-by: Toni Barzic <tbarzic@chromium.org>
Commit-Queue: Andrew Xu <andrewxu@chromium.org>
Cr-Original-Commit-Position: refs/heads/main@{#983601}

Reviewed-on: https://chromium-review.googlesource.com/c/chromium/src/+/3584271

Cr-Commit-Position: refs/branch-heads/4951@{#705}

Cr-Branched-From: 27de6227ca357da0d57ae2c7b18da170c4651438-refs/heads/main@{#982481}

[modify] https://crrev.com/df6fec5fdb03df9e6cfcf2e6eb522ac70b885773/ash/shelf/scrollable_shelf_view.h

[modify] https://crrev.com/df6fec5fdb03df9e6cfcf2e6eb522ac70b885773/ash/shelf/scrollable shelf view.cc

[modify] https://crrev.com/df6fec5fdb03df9e6cfcf2e6eb522ac70b885773/ash/shelf/shelf_view.cc

[modify] https://crrev.com/df6fec5fdb03df9e6cfcf2e6eb522ac70b885773/ash/shelf/scrollable_shelf_view_unittest.cc

[modify] https://crrev.com/df6fec5fdb03df9e6cfcf2e6eb522ac70b885773/ash/shelf/shelf_button_delegate.h

Comment 33 by amyressler@google.com on Thu, Apr 21, 2022, 8:40 PM EDT Project Member

Labels: -reward-topanel reward-unpaid reward-2000

*** Boilerplate reminders! ***

Please do NOT publicly disclose details until a fix has been released to all our users. Early public disclosure may cancel the provisional reward. Also, please be considerate about disclosure when the bug affects a core library that may be used by other products. Please do NOT share this information with third parties who are not directly involved in fixing the bug. Doing so may cancel the provisional reward. Please be honest if you have already disclosed anything publicly or to third parties.

nother we understand that come of view are not interested in manner Ma affor the antion to denote view reward to an alimible

Lastly, we understand that some of you are not interested in money. We offer the option to donate your reward to an eligible charity. If you prefer this option, let us know and we will also match your donation - subject to our discretion. Any rewards that are unclaimed after 12 months will be donated to a charity of our choosing.

Please contact security-vrp@chromium.org with any questions.

Comment 34 by amyressler@chromium.org on Thu, Apr 21, 2022, 9:44 PM EDT Project Member

Congratulations, Khalil! The VRP Panel has decided to award you \$2,000 for this report. While this issue does result in browser process memory corruption, it is significantly mitigated by user interaction and its reliance on ash shutdown to trigger, providing limited attacker control and much lower exploitability potential. We appreciate your efforts and reporting this issue to us!

Comment 35 by amyressler@google.com on Mon, Apr 25, 2022, 4:26 PM EDT Project Member

Labels: -reward-unpaid reward-inprocess

Comment 36 by amyressler@chromium.org on Mon, Apr 25, 2022, 8:38 PM EDT Project Member

Labels: Release-0-M101

Comment 37 by amyressler@google.com on Tue, Apr 26, 2022, 4:31 PM EDT Project Member

Labels: CVE-2022-1489 CVE description-missing

Comment 38 by gmpritchard@google.com on Mon, May 2, 2022, 1:45 PM EDT Project Member

Labels: LTS-Merge-Candidate

Comment 39 by rzanoni@google.com on Tue, May 3, 2022, 9:16 AM EDT Project Member

Cc: rzanoni@google.com **Labels:** LTS-Evaluating-96

Comment 40 by rzanoni@google.com on Tue, May 3, 2022, 12:46 PM EDT Project Member

Labels: -LTS-Evaluating-96 LTS-Merge-Request-96

Comment 41 by sheriffbot on Tue, May 3, 2022, 12:46 PM EDT Project Member

Labels: -LTS-Merge-Request-96 LTS-Merge-Review-96

This issue requires additional review before it can be merged to the LTS channel. Please answer the following questions to help us evaluate this merge:

- 1. Number of CLs needed for this fix and links to them.
- 2. Level of complexity (High, Medium, Low Explain)
- 3. Has this been merged to a stable release? beta release?
- 4. Overall Recommendation (Yes, No)

For more details visit https://www.chromium.org/issue-tracking/autotriage - Your friendly Sheriffbot

Comment 42 by rzanoni@google.com on Tue, May 3, 2022, 12:52 PM EDT Project Member

2. Low, no conflicts

3.101

4. Yes

Comment 43 by gmpritchard@google.com on Mon, May 9, 2022, 11:03 AM EDT Project Member

Labels: -LTS-Merge-Candidate -LTS-Merge-Review-96 LTS-Merge-Approved-96

Comment 44 by Git Watcher on Mon, May 9, 2022, 4:25 PM EDT Project Member

Labels: merge-merged-4664

The following revision refers to this bug:

https://chromium.googlesource.com/chromium/src/+/1e0398484250809563aa782c9c5c2dbc2abe7252

commit 1e0398484250809563aa782c9c5c2dbc2abe7252

Author: Andrew Xu <andrewxu@chromium.org>

Date: Mon May 09 20:24:33 2022

[M96-LTS][Shelf] Fix temporarily incorrect index value during item fade out

When a shelf item is removed, `ScrollableShelfView::last_tappable_app__index_` updates when the shelf button view is removed from the view hierarchy. However, removing view from view hierarchy is performed at the end of the fade out animation while the view is removed from the view model at the beginning of animation. This discrepancy could cause subtle issues when users interact with shelf during the fade out animation.

Ideally, removing the view from view model should be postponed to the end of the fade out animation as well. But this change will bring the side effect that the item view to be removed is interactive during the animation. See `ShelfItemForView` used in `ShelfView::OnMenuClosed` and other places. This side effect may be hard to eliminate (for example, in `ShelfView`, `view_model_` is used in many places).

This CL performs a quick fixing by notifying `ScrollableShelfView` of shelf item removal before the fade out animation starts. Then `ScrollableShelfView` can decrease `last tappable app_index `instantly.

(cherry picked from commit 7412ebc71d3b83b77812ebfcc5207bf482700273)

Bug: 1300561

Change-Id: I812d919185fbac4e9447904cce6f59d54df3f476

Reviewed-on: https://chromium-review.googlesource.com/c/chromium/src/+/3532928

Commit-Queue: Andrew Xu <andrewxu@chromium.org>
Cr-Original-Commit-Position: refs/heads/main@{#983601}

Reviewed-on: https://chromium-review.googlesource.com/c/chromium/src/+/3623278

Commit-Queue: Roger Felipe Zanoni da Silva <rzanoni@google.com>
Auto-Submit: Roger Felipe Zanoni da Silva <rzanoni@google.com>

Owners-Override: Oleh Lamzin lamzin@google.com> Reviewed-by: Andrew Xu andrewxu@chromium.org>

Reviewed-by: Oleh Lamzin lamzin@google.com Cr-Commit-Position: refs/branch-heads/4664@{#1628}

Or Proposed From: 24da4667E604620d200d42600264272646007267 refe/beada/main@(#020E42)

[modify] https://crrev.com/1e0398484250809563aa782c9c5c2dbc2abe7252/ash/shelf/scrollable_shelf_view.h

[modify] https://crrev.com/1e0398484250809563aa782c9c5c2dbc2abe7252/ash/shelf/scrollable_shelf_view.cc

[modify] https://crrev.com/1e0398484250809563aa782c9c5c2dbc2abe7252/ash/shelf/shelf_view.cc

[modify] https://crrev.com/1e0398484250809563aa782c9c5c2dbc2abe7252/ash/shelf/scrollable_shelf_view_unittest.cc

[modify] https://crrev.com/1e0398484250809563aa782c9c5c2dbc2abe7252/ash/shelf/shelf_button_delegate.h

Comment 45 by rzanoni@google.com on Mon, May 9, 2022, 4:28 PM EDT Project Member

Labels: -LTS-Merge-Approved-96 LTS-Merge-Merged-96

Comment 46 by sheriffbot on Tue, Jul 12, 2022, 1:31 PM EDT Project Member

Labels: -Restrict-View-SecurityNotify allpublic

This bug has been closed for more than 14 weeks. Removing security view restrictions.

For more details visit https://www.chromium.org/issue-tracking/autotriage - Your friendly Sheriffbot

Comment 47 by amyressler@google.com on Tue, Jul 26, 2022, 5:37 PM EDT Project Member

Labels: CVE description-submitted -CVE description-missing

Comment 48 by amyressler@chromium.org on Fri, Jul 29, 2022, 5:26 PM EDT Project Member

Labels: -CVE description-missing --CVE description-missing

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