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Graphics Feature Status

- Canvas: **Software only. Hardware acceleration disabled**
- Canvas out-of-process rasterization: **Disabled**
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- Multiple Raster Threads: **Disabled**
- OpenGL: **Disabled**
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- Raw Draw: **Disabled**
- Video Decode: **Software only. Hardware acceleration disabled**
- Video Encode: **Software only. Hardware acceleration disabled**
- Vulkan: **Disabled**
- WebGL: **Disabled**
- WebGL2: **Disabled**
- WebGPU: **Disabled**

Driver Bug Workarounds

- `clear_uniforms_before_first_program_use`
- `enable_webgl_timer_query_extensions`
- `exit_on_context_lost`
- `disabled_extension_GL_KHR_blend_equation_advanced`
- `disabled_extension_GL_KHR_blend_equation_advanced_coherent`
- `disabled_extension_GL_MESA_framebuffer_flip_y`

Problems Detected

- WebGPU has been disabled via blocklist or the command line.
*Disabled Features: **webgpu***
- Accelerated video encode has been disabled, either via blocklist, about:flags or the command line.
*Disabled Features: **video_encode***
- Gpu compositing has been disabled, either via blocklist, about:flags or the command line. The browser will fall back to software compositing and hardware acceleration will be unavailable.
*Disabled Features: **gpu_compositing***
- GPU process was unable to boot: GPU process crashed too many times with SwiftShader.
*Disabled Features: **all***
- Clear uniforms before first program use on all platforms: [124764](#), [349137](#)
*Applied Workarounds: **clear_uniforms_before_first_program_use***
- Disable KHR_blend_equation_advanced until cc shaders are updated: [661715](#)
*Applied Workarounds: **disable(GL_KHR_blend_equation_advanced)**, **disable(GL_KHR_blend_equation_advanced_coherent)***
- Expose WebGL's disjoint_timer_query extensions on platforms with site isolation: [808744](#), [870491](#)
*Applied Workarounds: **enable_webgl_timer_query_extensions***
- Some drivers can't recover after OUT_OF_MEM and context lost: [893177](#)
*Applied Workarounds: **exit_on_context_lost***
- Disable GL_MESA_framebuffer_flip_y for desktop GL: [964010](#)
*Applied Workarounds: **disable(GL_MESA_framebuffer_flip_y)***

DAWN Info

<CPU> Vulkan backend - SwiftShader Device (Subzero)

[WebGPU Status]

- Blocklisted

[Default Toggle Names]

- **lazy_clear_resource_on_first_use**: <https://crbug.com/dawn/145>: Clears resource to zero on first usage. This initializes the resource so that no dirty bits from recycled memory is present in the new resource.
- **use_temporary_buffer_in_texture_to_texture_copy**: <https://crbug.com/dawn/42>: Split texture-to-texture copy into two copies: copy from source texture into a temporary buffer, and copy from the temporary buffer into the destination texture when copying between compressed textures that don't have block-aligned sizes. This workaround is enabled by default on all Vulkan drivers to solve an issue in the Vulkan SPEC about the texture-to-texture copies with compressed formats. See #1005 (<https://github.com/KhronosGroup/Vulkan-Docs/issues/1005>) for more details.
- **vulkan_use_d32s8**: <https://crbug.com/dawn/286>: Vulkan mandates support of either D32_FLOAT_S8 or D24_UNORM_S8. When available the backend will use D32S8 (toggle to on) but setting the toggle to off will make it use the D24S8 format when possible.
- **vulkan_use_s8**: <https://crbug.com/dawn/666>: Vulkan has a pure stencil8 format but it is not universally available. When this toggle is on, the backend will use S8 for the stencil8 format, otherwise it will fallback to D32S8 or D24S8.
- **disallow_unsafe_apis**: <http://crbug.com/1138528>: Produces validation errors on API entry points or parameter combinations that aren't considered secure yet.
- **use_placeholder_fragment_in_vertex_only_pipeline**: <https://crbug.com/dawn/136>: Use a placeholder empty fragment shader in vertex only render pipeline. This toggle must be enabled for OpenGL ES backend, the Vulkan Backend, and serves as a workaround by default enabled on some Metal devices with Intel GPU to ensure the depth result is correct.
- **use_vulkan_zero_initialize_workgroup_memory_extension**: <https://crbug.com/dawn/1302>: Initialize workgroup memory with OpConstantNull on Vulkan when the Vulkan extension VK_KHR_zero_initialize_workgroup_memory is supported.

[WebGPU Forced Toggles - enabled]

- **disallow_spirv**: <https://crbug.com/1214923>: Disallow usage of SPIR-V completely so that only WGSL is used for shader modules. This is useful to prevent a Chromium renderer process from successfully sending SPIR-V code to be compiled in the GPU process.

[Supported Features]

- texture-compression-bc
- texture-compression-etc2
- texture-compression-astc

- timestamp-query
- timestamp-query-inside-passes
- depth-clip-control
- depth32float-stencil8
- indirect-first-instance
- rg11b10ufloat-renderable
- bgra8unorm-storage
- dawn-internal-usages
- dawn-native

Version Information

Data exported	2023-05-04T14:38:31.666Z
Chrome version	Chrome/113.0.5672.63
Operating system	Linux 6.1.27-1-lts
Software rendering list URL	https://chromium.googlesource.com/chromium/src/+0e1a4471d5ae5bf128b1bd8f4d627c8cbd55f70c/gpu/c
Driver bug list URL	https://chromium.googlesource.com/chromium/src/+0e1a4471d5ae5bf128b1bd8f4d627c8cbd55f70c/gpu/c
ANGLE commit id	unknown hash
2D graphics backend	Skia/113 1195e70d671947af02a6a5b0ddc65806b9645252
Command Line	/usr/lib/chromium/chromium --disable-gpu --flag-switches-begin --flag-switches-end

Driver Information

Initialization time	0
In-process GPU	false
Passthrough Command Decoder	true
Sandboxed	false
GPU0	VENDOR= 0x0000, DEVICE=0x0000
Optimus	false
AMD switchable	false
GPU CUDA compute capability major version	0
Pixel shader version	
Vertex shader version	
Max. MSAA samples	
Machine model name	
Machine model version	
GL implementation parts	(gl=disabled,angle=none)
Display type	
GL_VENDOR	Disabled
GL_RENDERER	Disabled
GL_VERSION	Disabled
GL_EXTENSIONS	
Disabled Extensions	GL_KHR_blend_equation_advanced GL_KHR_blend_equation_advanced_coherent GL_MESA_framebuffer_flip_y
Disabled WebGL Extensions	
Window system binding vendor	
Window system binding version	
Window system binding extensions	
XDG_CURRENT_DESKTOP	KDE
XDG_SESSION_TYPE	x11
Ozone platform	x11
Direct rendering version	unknown
Reset notification strategy	0x0000
GPU process crash count	0
gfx::BufferFormats supported for allocation and texturing	R_8: not supported, R_16: not supported, RG_88: not supported, RG_1616: not supported, BGR_565: not supported, RGBA_4444: not supported, RGBX_8888: not supported, RGBA_8888: not supported, BGRX_8888: not supported, BGRA_1010102: not supported, RGBA_1010102: not supported, BGRA_8888: not supported, RGBA_F16: not supported, YVU_420: not supported, YUV_420_BIPLANAR: not supported, YUVA_420_TRIPLANAR: not supported, P010: not supported

Compositor Information

Tile Update Mode	One-copy
Partial Raster	Enabled

GpuMemoryBuffers Status

R_8	Software only
R_16	Software only
RG_88	Software only
RG_1616	Software only
BGR_565	Software only
RGBA_4444	Software only
RGBX_8888	Software only
RGBA_8888	Software only
BGRX_8888	Software only
BGRA_1010102	Software only
RGBA_1010102	Software only
BGRA_8888	Software only
RGBA_F16	Software only

YVU_420	Software only
YUV_420_BIPLANAR	Software only
YUVA_420_TRIPLANAR	Software only
P010	Software only

Display(s) Information

Info	Display[4693084222679892] bounds=[0,0 1920x1080], workarea=[0,0 1920x1040], scale=1, rotation=0, panel_rotation=0 external.
Color space (all)	{primaries:BT709, transfer:SRGB, matrix:RGB, range:FULL}
Buffer format (all)	BGRA_8888
Color volume	{name:'srgb', r:[0.6400, 0.3300], g:[0.3000, 0.6000], b:[0.1500, 0.3300], w:[0.3127, 0.3290]}
SDR white level in nits	203
HDR relative maximum luminance	1
Bits per color component	8
Bits per pixel	24
Refresh Rate in Hz	60

Video Acceleration Information

Decoding	
Encoding	

Vulkan Information

Device Performance Information

Driver Information for Hardware GPU

Initialization time	0
In-process GPU	false
Passthrough Command Decoder	true
Sandboxed	false
GPU0	VENDOR= 0x0000, DEVICE=0x0000
Optimus	false
AMD switchable	false
GPU CUDA compute capability major version	0
Pixel shader version	
Vertex shader version	
Max. MSAA samples	
Machine model name	
Machine model version	
GL implementation parts	(gl=disabled,angle=none)
Display type	
GL_VENDOR	Disabled
GL_RENDERER	Disabled
GL_VERSION	Disabled
GL_EXTENSIONS	
Disabled Extensions	
Disabled WebGL Extensions	
Window system binding vendor	
Window system binding version	
Window system binding extensions	
XDG_CURRENT_DESKTOP	KDE
XDG_SESSION_TYPE	x11
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Log Messages

- GpuProcessHost: The GPU process exited normally. Everything is okay.
- GpuProcessHost: The GPU process exited normally. Everything is okay.
- [21657:21657:0504/163720.683518:ERROR:angle_platform_impl.cc(43)] : Display.cpp:1019 (initialize): ANGLE Display::initialize error 0: Internal Vulkan error (-3): Initialization of an object could not be completed for implementation-specific reasons, in ../../third_party/angle/src/libANGLE/renderer/vulkan/RendererVk.cpp, initialize:1481.
- [21657:21657:0504/163720.683775:ERROR:gl_display.cc(504)] : EGL Driver message (Critical) eglInitialize: Internal Vulkan error (-3): Initialization of an object could not be completed for implementation-specific reasons, in ../../third_party/angle/src/libANGLE/renderer/vulkan/RendererVk.cpp, initialize:1481.
- [21657:21657:0504/163720.683874:ERROR:gl_display.cc(771)] : eglInitialize SwANGLE failed with error EGL_NOT_INITIALIZED
- [21657:21657:0504/163720.683960:ERROR:gl_display.cc(805)] : Initialization of all EGL display types failed.
- [21657:21657:0504/163720.684041:ERROR:gl_ozone_egl.cc(26)] : GLDisplayEGL::Initialize failed.
- [21657:21657:0504/163720.684426:ERROR:angle_platform_impl.cc(43)] : Display.cpp:1019 (initialize): ANGLE Display::initialize error 0: Internal Vulkan error (-3): Initialization of an object could not be completed for implementation-specific reasons, in ../../third_party/angle/src/libANGLE/renderer/vulkan/RendererVk.cpp, initialize:1481.
- [21657:21657:0504/163720.684625:ERROR:gl_display.cc(504)] : EGL Driver message (Critical) eglInitialize: Internal Vulkan error (-3): Initialization of an object could not be completed for implementation-specific reasons, in ../../third_party/angle/src/libANGLE/renderer/vulkan/RendererVk.cpp, initialize:1481.
- [21657:21657:0504/163720.684718:ERROR:gl_display.cc(771)] : eglInitialize SwANGLE failed with error EGL_NOT_INITIALIZED
- [21657:21657:0504/163720.684801:ERROR:gl_display.cc(805)] : Initialization of all EGL display types failed.
- [21657:21657:0504/163720.684883:ERROR:gl_ozone_egl.cc(26)] : GLDisplayEGL::Initialize failed.
- [21657:21657:0504/163720.687755:ERROR:viz_main_impl.cc(186)] : Exiting GPU process due to errors during initialization
- GpuProcessHost: The GPU process exited normally. Everything is okay.
- [21679:21679:0504/163720.699496:WARNING:vaapi_wrapper.cc(805)] : VA-API video acceleration not available for disabled
- [21679:21679:0504/163720.699775:WARNING:sandbox_linux.cc(393)] : InitializeSandbox() called with multiple threads in process gpu-process.