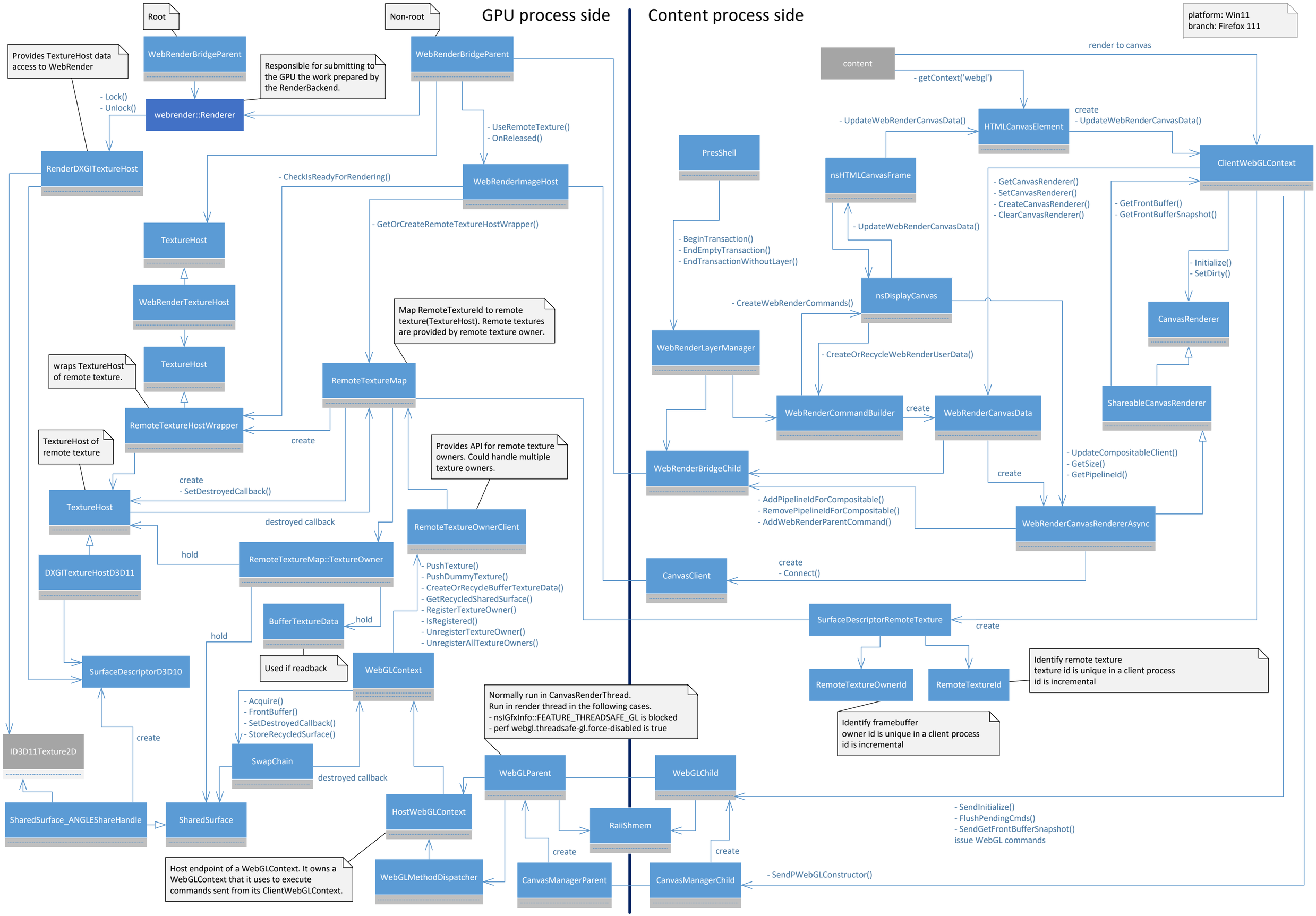
GPU process side
Content process side
platform: Win11
branch: Firefox 111
Root
Non-root
Provides TextureHost data access to WebRender
Responsible for submitting to the GPU the work prepared by the RenderBackend.
WebRenderBridgeParent
WebRenderBridgeParent
webrender::Renderer
- Lock()
- Unlock()
- UseRemoteTexture()
- OnReleased()
RenderDXGITextureHost
- CheckIsReadyForRendering()
WebRenderImageHost
- GetOrCreateRemoteTextureHostWrapper()
TextureHost
WebRenderTextureHost
TextureHost
Map RemoteTextureId to remote texture(TextureHost). Remote textures are provided by remote texture owner.
wraps TextureHost of remote texture.
RemoteTextureMap
RemoteTextureHostWrapper
create
TextureHost of remote texture
Provides API for remote texture owners. Could handle multiple texture owners.
create
- SetDestroyedCallback()
TextureHost
destroyed callback
RemoteTextureOwnerClient
hold
RemoteTextureMap::TextureOwner
DXGITextureHostD3D11
- PushTexture()
- PushDummyTexture()
- CreateOrRecycleBufferTextureData()
- GetRecycledSharedSurface()
- RegisterTextureOwner()
- IsRegistered()
- UnregisterTextureOwner()
- UnregisterAllTextureOwners()
BufferTextureData
hold
hold
Used if readback
SurfaceDescriptorD3D10
WebGLContext
- Acquire()
- FrontBuffer()
- SetDestroyedCallback()
- StoreRecycledSurface()
create
ID3D11Texture2D
SwapChain
destroyed callback
SharedSurface_ANGLEShareHandle
SharedSurface
HostWebGLContext
Host endpoint of a WebGLContext. It owns a WebGLContext that it uses to execute commands sent from its ClientWebGLContext.
WebGLMethodDispatcher
Normally run in CanvasRenderThread.
Run in render thread in the following cases.
- nsIGfxInfo::FEATURE_THREADSAFE_GL is blocked
- perf webgl.threadsafe-gl.force-disabled is true
WebGLParent
WebGLChild
RaiiShmem
create
CanvasManagerParent
create
CanvasManagerChild
- SendPWebGLConstructor()
- SendInitialize()
- FlushPendingCmds()
- SendGetFrontBufferSnapshot()
issue WebGL commands
content
render to canvas
- getContext('webgl')
HTMLCanvasElement
create
- UpdateWebRenderCanvasData()
- UpdateWebRenderCanvasData()
PresShell
nsHTMLCanvasFrame
ClientWebGLContext
- GetCanvasRenderer()
- SetCanvasRenderer()
- CreateCanvasRenderer()
- ClearCanvasRenderer()
- GetFrontBuffer()
- GetFrontBufferSnapshot()
- UpdateWebRenderCanvasData()
- BeginTransaction()
- EndEmptyTransaction()
- EndTransactionWithoutLayer()
- Initialize()
- SetDirty()
nsDisplayCanvas
- CreateWebRenderCommands()
CanvasRenderer
WebRenderLayerManager
- CreateOrRecycleWebRenderUserData()
WebRenderCommandBuilder
create
WebRenderCanvasData
ShareableCanvasRenderer
- UpdateCompositableClient()
- GetSize()
- GetPipelineId()
WebRenderBridgeChild
create
- AddPipelineIdForCompositable()
- RemovePipelineIdForCompositable()
- AddWebRenderParentCommand()
WebRenderCanvasRendererAsync
CanvasClient
create
- Connect()
SurfaceDescriptorRemoteTexture
create
RemoteTextureOwnerId
RemoteTextureId
Identify remote texture
texture id is unique in a client process
id is incremental
Identify framebuffer
owner id is unique in a client process
id is incremental