

Ozone-Wayland Support in Chromium

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GENIVI Browser Requirements

- Should use Chromium
- Should have **no user interface**
- Should provide D-Bus API
 - Vendors will create derivative browsers utilizing the D-Bus API

- D-Bus
- Chromium
- Ozone
- Wayland
- Ozone-Wayland

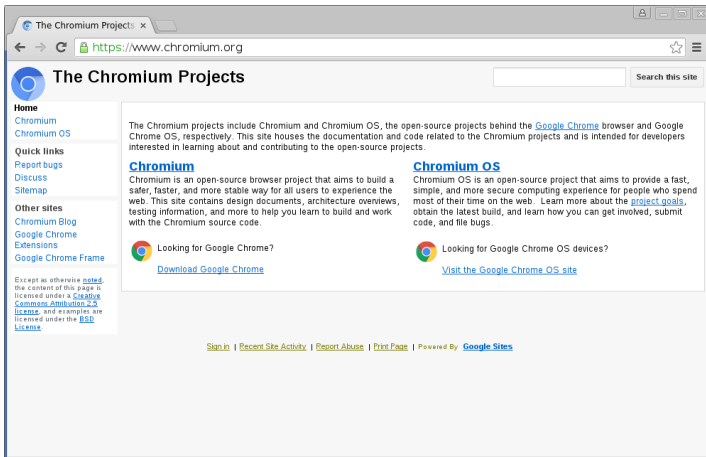
- Dominant IPC framework on GNU/Linux
- Exposes objects with signals and methods
- Intended for UNIX sockets (but can run over TCP too!)

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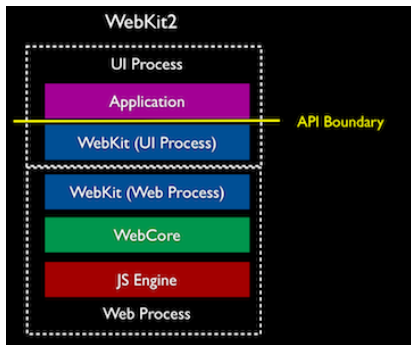
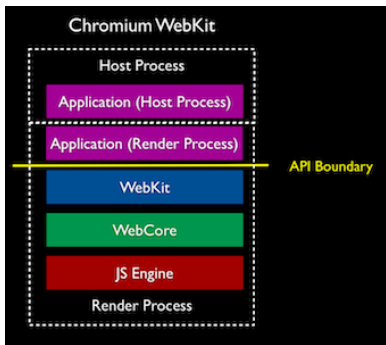
What is Chromium?



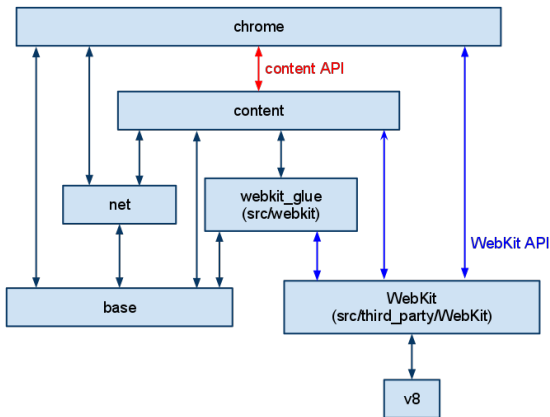
- Open source web browser and **operating system**
- Basis for proprietary Google Chrome browser
- Chromium is a **project**, not a **product**



- WebKit fork
- More specifically, fork of WebCore



- Content API sits below UI layer
- Handles **multiprocess** management of web views
- Roughly equivalent to WebKit2 API



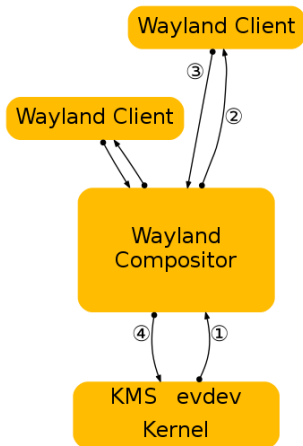
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- Platform abstraction layer for Chromium
- APIs to encapsulate platform-specific details
- Implementations: libcaca, GBM, Wayland

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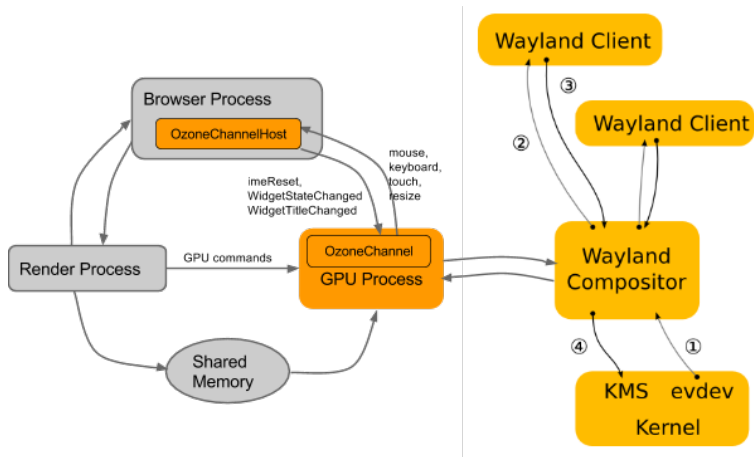
What is Wayland?

- Modern replacement for X
- Dramatically simpler
- Applications can be untrusted



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Ozone-Wayland Architecture



- Most things work
- Pages render well
- Many things need implemented
- Still generally unstable

Ozone-Wayland: What Needs Implemented?

- Fontconfig integration
- Multiseat
- Window resizing
- Window movement
- Minimize
- Drag-and-drop
- Copy/paste
- Text selection
- More!

Building a Browser on Ozone-Wayland

- One Wayland connection per application; Ozone-Wayland owns the connection
- Derivative browsers should implement **nested compositor** approach

- Ozone-Wayland is needed for any Chromium-based browser.
- Ozone-Wayland is **incomplete** and will require additional development effort.
- Ozone-Wayland requires **long-term maintenance investment**.