

# Debugging

## The Chrome DevTools

The Vewd Core, being based on the Chromium browser, can use the some of the same technologies including the [Chrome DevTools](#). It allows you to see everything about your web app from the HTML/JavaScript/CSS code, to where the different elements end up on the screen, to profiling your code (memory, performance, and network), and to modifying JavaScript code to test and live debug your TV app.

This page outlines what you need to do to connect a local browser running on your computer to the Vewd TV Emulator 4.x and start debugging your app using DevTools. For more information on Chrome DevTools, and a list of helpful articles, see *Further Reading* below.

## Connecting to the TV Emulator using DevTools



### Compatibility Notice for TV Emulator 4.13 and lower

Due to changes in web standards, the most recent versions of Chromium-based desktop browsers are not compatible with DevTools on older releases of the Vewd TV Emulator. This does not affect the current released of Vewd TV Emulator.

You can download an older version of the Chromium browser prior to M80 from [chromium.org](http://chromium.org).

For Chromium 79.0.3945.0 developer builds (browser snapshot #706915), download `chrome-<platform>.zip`

- [Linux \(x64\)](#)
- [macOS](#)
- [Windows \(x64\)](#)

To connect to the emulator, follow these steps:

1. Start up the Vewd TV Emulator. For details, see [Running your app](#).
2. Open up a local browser on your computer (must be Chromium based, e.g. Chrome).
3. In the browser, go to <http://localhost:9222>.
4. In the page that opens up, under **Inspectable WebContents**, you should see your web app in the list.
5. Click the link to open up DevTools for your app.
6. If all goes well, you should see a screen like this:

Developer Tools - https: x

localhost:9222/devtools/inspector.html?ws=localhost:9222/devtools/page/91FE4176-1C7B-477D-8384-E14924497A1C

Elements Console Sources Network Timeline Profiles Resources Security Audits

```

<!DOCTYPE html>
<html lang="en" data-cast-api-enabled="true" class="guide-pinned show-guide content-snap-width-1 no-focus-outline">
  <head>...</head>
  <body dir="ltr" id="body" class="ltr webkit webkit-537 exp-responsive exp-scrollable-guide site-center-aligned site-as-giant-card sitewide-consent-visible guide-pinning-enabled visibility-logging-enabled not-nirvana-dogfont-yt-legacy-css flex-width-enabled flex-width-enabled-snap-page-loaded" data-spf-name="other">...
  </body>
</html>

```

Styles Computed Event Listeners

Filter :hov .cls

element.style { }

body, input, button, www-core-vflslYulJ.css:1  
 textarea, select {  
 font-family: Roboto,arial,sans-serif;  
 font-size: 13px;  
 }

body { www-core-vflslYulJ.css:1  
 background-color: #fff1f1;  
 }

html, body, #body, www-core-vflslYulJ.css:1  
 container {  
 height: 100%;  
 }

body { www-core-vflslYulJ.css:1  
 word-wrap: break-word;  
 margin: 0;  
 padding: 0;  
 font-size: 12px Roboto,arial,sans-serif;  
 }

body { www-core-vflslYulJ.css:1  
 border: 0;  
 }

body { www-core-vflslYulJ.css:1  
 line-height: 1;  
 text-align: left;  
 text-align: start;  
 }

body[Attributes Style] {  
 direction: ltr;  
 unicode-bidi: isolate;  
 }

body { user agent stylesheet  
 display: block;  
 margin: 8px;  
 }

Inherited from html.guide-pinned.show-guide.C...  
 hr, html, i, iframe, www-core-vflslYulJ.css:1  
 img, ins, kbd, label, legend, li, menu,  
 object, ol, p, pre, q, s, samp, small, span,  
 strike, strong, sub {  
 margin: 0;  
 padding: 0;  
 border: 0;  
 font-size: 100%;  
 background-color: transparent;  
 }

... #body

## Further Reading

The following articles may be helpful to learn more about using Chromium DevTools to debug your app:

- [Introduction to Chrome Developer Tools](#)
- [Improving Web App Performance with the DevTools Timeline and Profile](#)
- [Debugging Javascript using DevTools](#)
- [Improve Rendering Performance using DevTools](#)
- [High Performance Animations](#)
- [DevTools Trips & Tricks](#)