



Stetho: using Dev Tools for native app debugging

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Chrome Dev Tools (aka F12) ?

The screenshot displays the Chrome DevTools interface for the website <https://www.meetup.com/gdg-melbourne/>. The browser window shows the site's header with the GDG Melbourne logo and navigation links. The main content area features a 'Google Developers Melbourne & more!' section with a 'Shine Solutions' spotlight and a list of 'Recent Meetups'.

The DevTools interface is open, showing the following panels:

- Elements:** Displays the DOM tree. The selected element is `h3.text--reset.flush--bottom` with a bounding box of `166x20`. The HTML structure shows a complex set of conditional comments for different browser versions (IE7, IE8, IE9, IE10).
- Console:** Shows several error messages: `Failed to load resource: net::ERR_BLOCKED_BY_CLIENT`. These errors are related to Google Analytics tracking scripts.
- Styles:** Displays the CSS rules for the selected element. The 'Computed' tab shows the final styles, including `font-size: 16px` and `font-weight: 400`.

What is Stetho ?

- ★ Android library project from Facebook
- ★ Implements Chrome DevTools Protocol

(<https://chromedevtools.github.io/devtools-protocol/>)

Adding Stetho

- ★ Add to build.gradle deps (`debugCompile`)
- ★ Create debug source set (`app/src/debug`)
- ★ Create Application singleton overriding existing one
- ★ Create new AndroidManifest.xml pointing to new Application class (copy-paste 🙄)

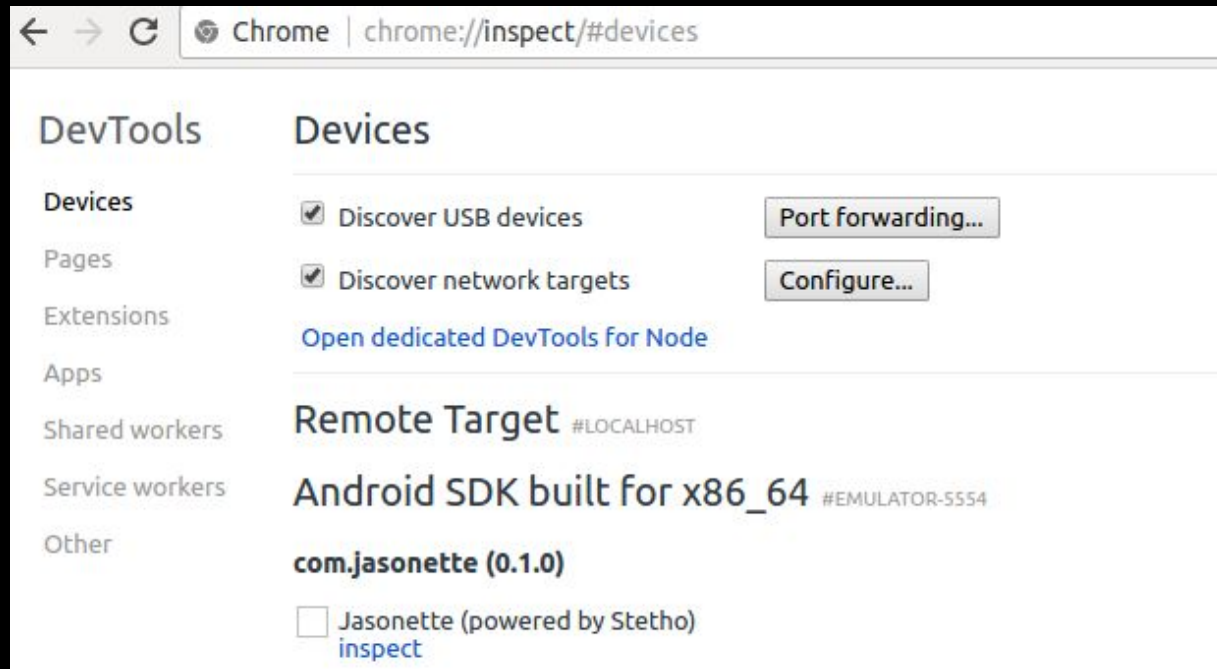
Adding Stetho - Config gotcha

In AndroidManifest.xml need:

tools:replace="android:name"

Run it !

- ★ Run your app on Emu or Device
- ★ In Chrome go to: `chrome://inspect`



Developer Tools -

ElementsNetworkSourcesTimelineProfilesResourcesAuditsConsole

<com.jasonette.seed.launcher.debuglauncher>
 <com.jasonette.seed.core.jasonviewactivity>
 <com.android.internal.policy.phonewindow>
 <com.android.internal.policy.decorview>
 <linearlayout>
 <view_id="@android:id/navigationBarBackground"></view>
 <view_id="@android:id/statusBarBackground"></view>
 </com.android.internal.policy.decorview>
 </com.android.internal.policy.phonewindow>
 </com.jasonette.seed.core.jasonviewactivity>
 </com.jasonette.seed.launcher.debuglauncher>

view#@android:id/navigationBarBackground

StylesComputedEventListeners»

Accessibility Properties {
 ignored: true;
 ignored-reasons: View is not actionable
 and has no description.;
 focusable: false;
}

<this_view> {
 alpha: 1.0;
 baseline: -1;
 bottom: 1920;
 elevation: 0.0;
 filter-touches-when-obscured: false;
 fits-system-windows: false;
 has-focus: false;
 has-overlapping-rendering: true;
 has-shadow: false;
 has-transient-state: false;
 height: 126;
 id: @android:id/navigationBarBackground;
 important-for-accessibility: 0 (auto);
 is-activated: false;
 is-clickable: false;
 is-drawing-cache-enabled: false;
 is-enabled: true;
 is-focusable: false;
 is-focusable-in-touch-mode: false;
 is-focused: false;
 is-haptic-feedback-enabled: true;
 is-hardware-accelerated: true;
 is-hovered: false;
 is-in-touch-mode: true;
 is-layout-rtl: false;
 is-opaque: true;
 is-pressed: false;
 is-selected: false;
 is-sound-effects-enabled: true;
 label-for: -1;
 layer-type: 0 (NONE);
 layout-direction: 0
 (RESOLVED_DIRECTION_LTR);
 layout-gravity: 80;
 margin-bottom: 0;
 margin-left: 0;
 margin-right: 0;
 margin-top: 0;
 layout-height: 126 (<no mapping>);
 layout-width: -1 (MATCH_PARENT);
 left: 0;
 measured-height: 126;
 measured-height-and-state: 126 (<no
 mapping>);
 measured-width: 1080;
 measured-width-and-state: 1080 (<no
 mapping>);
 min-height: 0;
 min-width: 0;
 padding-bottom: 0;
 padding-left: 0;
 padding-right: 0;
 padding-top: 0;
 pivot-x: 540.0;
 pivot-y: 63.0;
 private-flags: 0x1808830 (DRAWN);
 raw-layout-direction: 2 (INHERIT);
 raw-text-alignment: 1 (GRAVITY);

Find in Styles

What do you get?

- ★ UI Element Inspection (with usual blue highlight) with “styles”
- ★ Network Inspection (OkHttp & HttpURLConnection)
- ★ Shared Prefs, Sqlite DB Inspection/Editing
- ★ Log.x console output
- ★ Js console into app runtime - go wild!
- ★ Custom “DumpApp” plugins

Missing Piece: Re-loading



Missing Piece: Re-loading

Disconnect on each app restart (eg update)

So **BYO** live re-loading:

- ★ Jasonette
- ★ React Native
- ★ AS Instant Run

But wait there's more!

★ For your friends:

- iOS: Pony Debugger
- Node.js: Built-in (v6.3.0+)
- Lua: Mare
- Go: go-debugger-devtools



// TODO:

- ★ Stetho-timber Tree with Tag support (duh!)

PR still outstanding



Thank You!

Questions?

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Credits

Jigsaw: <https://flic.kr/p/Srs57F> (CC 2.0)

Tim Shaw: <http://www.timshaw.com.au/aboutus.html>