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When running “ng serve --watch” how does the browser know when to refresh when there is any change to the sources?

Asked 1 year, 7 months ago Active 1 year, 7 months ago Viewed 3k times



I'm using angular-cli 1.6.5 node 6.9.1. I'm running my app using the following command:

4

```
ng serve --watch
```



When I make changes to my typescript or HTML sources (e.g. app.component.ts), the browser automatically refreshes.



My question is, how does the browser know when to refresh? I don't see any requests being sent out from the browser to the app and vice versa. And I couldn't see network traffic on my browser other than when the page refreshes.

For clarity, my question is not about how Angular detects changes on DOM elements or model objects bound to it.



angular-cli

asked Feb 4 '18 at 6:39



[supertonsky](#)

1,119 2 22 48

1 I would assume it uses web sockets – [CUGreen](#) Feb 4 '18 at 6:43

@CUGreen, you're right. I just check every response and there's one with instruction to switch to websocket. – [supertonsky](#) Feb 4 '18 at 6:54

1 Answer



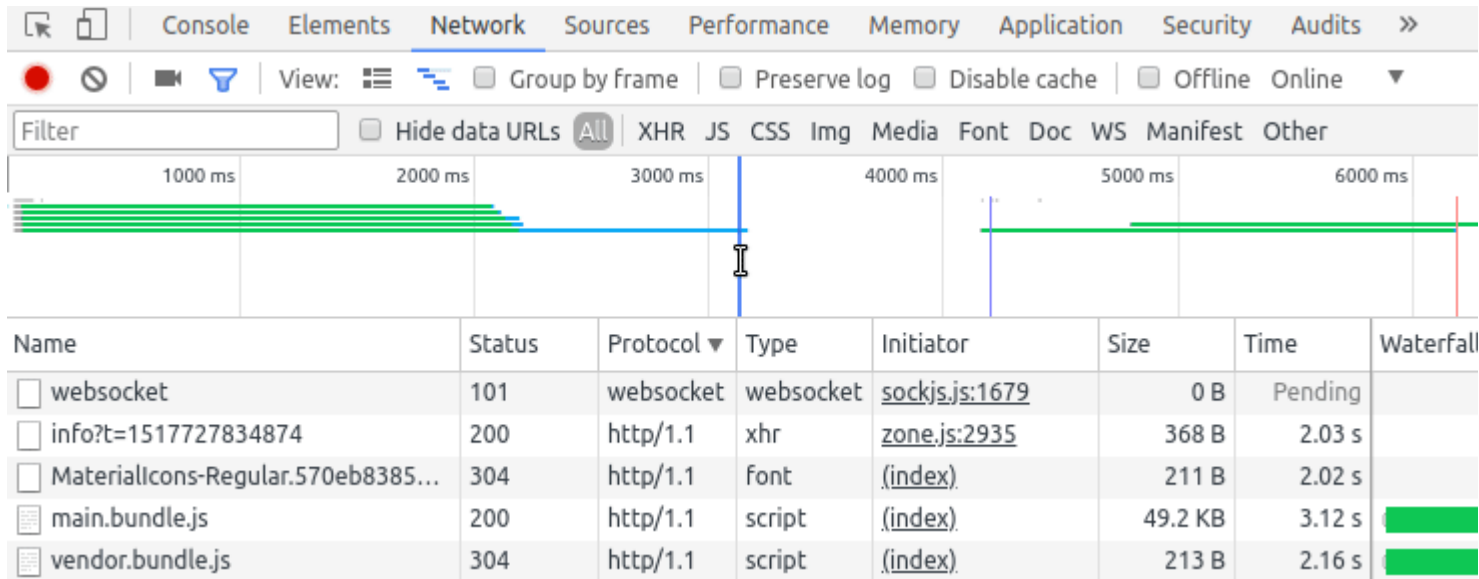
Web Sockets.



angular - When running "ng serve --watch" how does the browser know when to refresh when there is any change to the sources? - Stack Overflow

ng serve starts a server which watches for file changes and sends a web socket message to the client with a new hash.

By making the network slower in chrome dev tools we will be able to see the websocket messages as they are sent to the browser:



Make a file change:

The screenshot shows a code editor on the left with a file change in `file-select.component.html`. The change is in the `fileInput` section, where a `file` input is defined with a `data-multiple-caption` attribute. The code is as follows:

```

<input
  id="file"
  data-multiple-caption="{count}"
  files_selected"
  multiple
  hidden
  #fileInput
/>
<label for="file">
  <button mat-button (click)
    ="fileInput.click()">Choose a
    file</button><span> or drag it
    here</span>.
  </label>
</form>

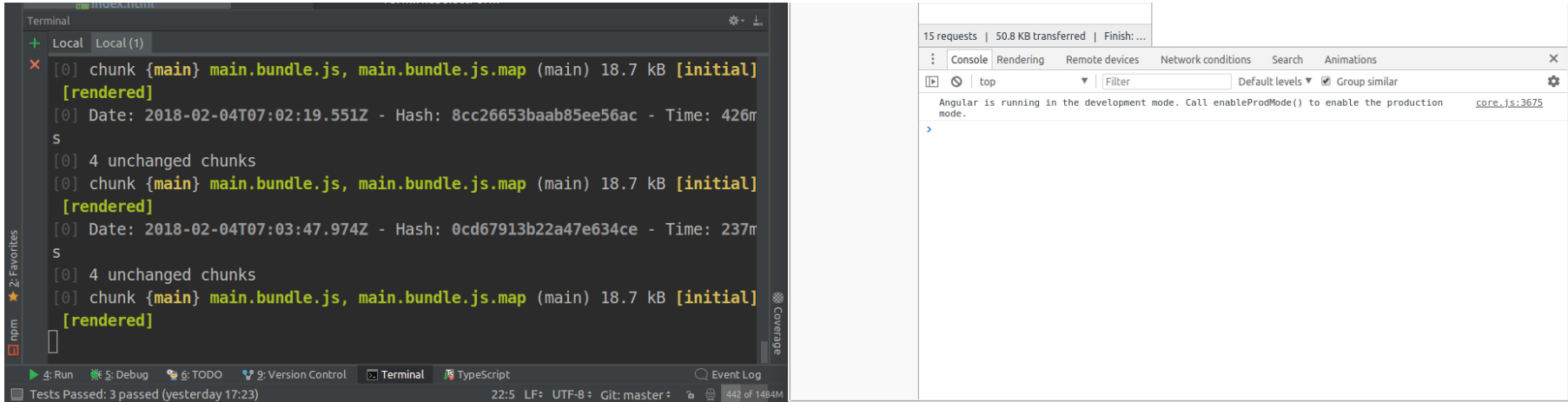
```

On the right, the Chrome DevTools Network tab shows the websocket connection. The message received is:

```

{"type":"overlay","data":{"errors":{"true":"warnings":{"false"}}}}

```



answered Feb 4 '18 at 7:10

Tom

1,5261327

1 Cool! More than what I needed! – supertonsky Feb 4 '18 at 9:34

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