New in Chrome 65

By Pete LePage

Pete is a Developer Advocate

- The CSS Paint API allows you to programmatically generate an image.
- The Server Timing API allows web servers to provide performance timing information via HTTP headers.
- the new CSS `display: contents` property can make boxes disappear!

And there's plenty more!

I'm Pete LePage. Let's dive in and see what's new for developers in Chrome 65!

Note: Want the full list of changes? Check out the Chromium source repository change list.

CSS Paint API

The CSS Paint API allows you to programmatically generate an image for CSS properties like `background-image` or `border-image`.

Instead of referencing an image, you can use the new paint function to draw the image - much like a canvas element.

```
<style>
  .myElem { background-image: paint(checkerboard); }
</style>
<script>
```

```
  CSS.paintWorklet.addModule('checkerboard.js');
</script>
```

For example, instead of adding extra DOM elements to create the ripple effect on a material styled button, you could use the paint API.

It's also a powerful method of polyfilling CSS features that aren't supported in a browser yet.

Surma has a great post with several demos in his explainer.

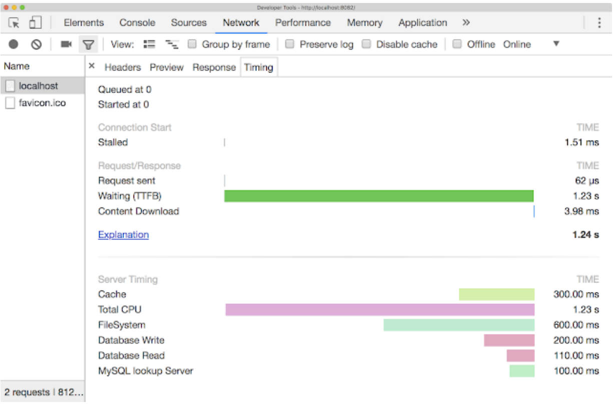
Server Timing API

Hopefully you're using the navigation and resource timing APIs to track the performance of your site for real users. Until now, there hasn't been an easy way for the server to report its performance timing.

The new Server Timing API allows your server to pass timing information to the browser; giving you a better picture of your overall performance.

You can track as many metrics as you want: database read times, start-up time, or whatever is important to you, by adding a `Server-Timing` header to your response:

```
'Server-Timing': 'su=42;"Start-up",db-read=142;"Database Read"'
```



Queued at 0
Started at 0

Connection Start	TIME
Stalled	1.51 ms

Request/Response	TIME
Request sent	62 µs
Waiting (TTFB)	1.23 s
Content Download	3.98 ms
Explanation	1.24 s

Server Timing	TIME
Cache	300.00 ms
Total CPU	1.23 s
FileSystem	600.00 ms
Database Write	200.00 ms
Database Read	110.00 ms
MySQL lookup Server	100.00 ms

They're shown in Chrome DevTools, or you can pull them out of the response header and save them with your other performance analytics.

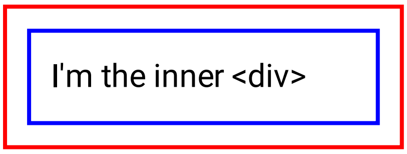
`display: contents`

The new CSS `display: contents` property is pretty slick!

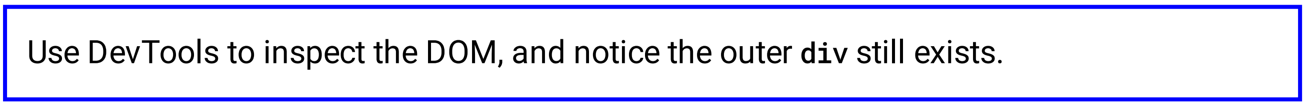
When added to a container element, any children take its place in the DOM, and it essentially disappears. Let's say I've got two `div`'s, one inside the other. My outer `div` has a red border, a gray background and I've set a width of 200 pixels. The inner `div` has a blue border, and a light blue background.

```
.disp-contents-outer {
  border: 2px solid red;
  background-color: #ccc;
  padding: 10px;
  width: 200px;
}
.disp-contents-inner {
  border: 2px solid blue;
  background-color: lightblue;
  padding: 10px;
}
```

By default, the inner `div` is contained in the outer `div`.


I'm the inner <div>

Adding `display: contents` to the outer div, makes the outer `div` disappear and its constraints are no longer applied to the inner `div`. The inner `div` is now 100% width.


Use DevTools to inspect the DOM, and notice the outer `div` still exists.

There are plenty of cases where this might be helpful, but the most common one is with flexbox. With flexbox, only the immediate children of a flex container become flex items.

But, once you apply `display: contents` to a child, its children become flex items and are laid out using the same rules that would have been applied to their parent.

Check out Rachel Andrew's excellent post Vanishing boxes with display contents for more details and other examples.

And more!

These are just a few of the changes in Chrome 65 for developers, of course, there's plenty more.

- The syntax for specifying `HSL` and `HSLA`, and `RGB` and `RGBA` coordinates for the color property now match the CSS Color 4 spec.
- There's a new feature policy that allows you to control synchronous XHRs through an HTTP header or the iframe `allow` attribute.

Be sure to check out New in Chrome DevTools, to learn what's new in for DevTools in Chrome 65. And, if you're interested in Progressive Web Apps, check out the new PWA Roadshow video series. Then, click the subscribe button on our YouTube channel, and you'll get an email notification whenever we launch a new video, or add our RSS feed to your feed reader.

I'm Pete LePage, and as soon as Chrome 66 is released, I'll be right here to tell you – what's new in Chrome!

Last updated July 2, 2018.