How to speed up the Angular build process

Asked 2 years ago   Active 24 days ago   Viewed 28k times

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After making some changes in my TypeScript files, each build takes over 20 minutes. I run this command: `ng build --output-path=..\..\static\angularjs .`

If I run it in Microsoft PowerShell, it needs 25 - 30 seconds. This is a lot of time.

Enviroment

- Windows 10
- 8 GB-Ram
- PyCharm 64
- MS PowerShell

How can I speed this up?

[angular] [angular-cli]

edited Apr 8 at 5:42   asked Jul 21 '17 at 16:29

gmds   michael-mammut
13.9k 3   11   38   **760** 2   13   30

Does `ng build` emit any output? Does it give you an indication of which steps are slow? – Mathias R. Jessen Jul 21 '17 at 16:40

the `output-path` is an alternative to the `dist` directory. there are no other indicators. – michael-mammut Jul 21 '17 at 16:49

That's how long mine takes, too. – msanford Jul 21 '17 at 17:48

5 Answers

▲

My app took 28secs to build, but I've reduced the time to 9secs. Usings this flag

24

```
ng build --source-map=false
```

you can see the difference in time comparing the time:

```
ng build --stats-json
```

```
ng build --stats-json --source-map=false
```

source map is intended only for debugging, Hope it helps

edited Feb 5 at 0:37	answered Jul 21 '17 at 19:43
Lonely Neuron	Mauricio De La Quintana
3,104 3 18 35	**1,153** 8 11

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7   If you remove any way to debug the TS files , this doesn't help a developer, does it? – Mark Langer Dec 22 '17 at 11:18

4   I'm a developer and this is extremely helpful. I don't need debug information 100% of the time (and I'll still get some errors that will be self explanatory). I expect this to save a lot of time when I'm actually *developing* new stuff. For me compile time for a full build went from 35 to 23 seconds. For an `ng serve` it went from 22 to 16 seconds. – Simon_Weaver May 9 '18 at 23:58

And having used this for a couple days I'm also realizing that usually having a single file to debug in chrome (main.js) is actually often much easier than many typescript files - especially if you want to set breakpoints. The speed increase for recompilation when a small change is made - down from 2-3 seconds to about half a second. The bottleneck now is the time it takes Chrome to parse and display the page - which hopefully will be much faster with the upcoming Ivy renderer. – Simon_Weaver May 12 '18 at 22:17

1   Wow, man. I owe you a beer! This also works with ng serve and speeds up refreshes. – gilm Sep 3 '18 at 7:02

1   @АртурГудиев this was for `ng build` , not `ng serve` – thynctank Feb 22 at 21:18

I've found that for me, this issue was solved by using the `watch` flag, i.e.

12

```
ng build --watch=true
```

This runs constantly, and automatically builds files only when saved. It has dropped my build time from 8 sec to <1 sec for small changes in code, since it only generates `.js` files for what actually changed.

From https://angular.io/guide/deployment

The `ng build` command generates output files just once and does not serve them.

The `ng build --watch` command will regenerate output files when source files change. This `--watch` flag is useful if you're building during development and are automatically re-deploying changes to another server.

You should probably use `ng build` with the necessary options when you are building for production so that the necessary optimizations are completed.

edited Aug 16 '18 at 13:18	answered Jul 4 '18 at 6:42
Stephen Turner	nivlac
5,244 1 33 61	**231** 2 7

I believe `watch` mode is not considered a build in this question. OP search for way to speed up overall build process for deployment, not in development. – Tomas Aug 8 '18 at 20:37

1   Thanks for the feedback Tomas. I added this answer because I could imagine someone else coming to this question, and this answer being just what they needed (like it was for me). Could you explain why you believe `watch` mode isn't considered a build? OP talked about "some changes in TypeScript Files" so I thought this would be a valuable answer. – nivlac Aug 16 '18 at 0:25 ✎

in `watch` mode Angular will rebuild only chunks of changed code, thus it's considerably faster, however does not reflect overall production build process, when all files need to be compiled, tree-shaked and bundled. Thus disabling `watch` will speed up development process (on local development each file change can be assigned to single chunk) of each subsequent build (but not the first one), it will completely not affect production build. But yeah, `some change` as OP mentions may indicate he refer to development (not releasing/building itself) process. – Tomas Aug 16 '18 at 10:34

Please just add a note in answer that this will affect development process build speed, not building deployment and I'll be happy to took back my down vote. – Tomas Aug 16 '18 at 10:36

Hi @Tomas, I've improved the answer for nivlac. Do you think this better answers the question? – Stephen Turner Aug 16 '18 at 13:23

According to https://github.com/angular/angular-cli/issues/6795 using `--build-optimizer=false` speeds up the build.

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answered Jan 12 '18 at 22:21
Chris Richner
2,446   2   22   35

While in dev mode you can change this flag for your development to

2

```
"buildOptimizer": false
```

This worked for me . Angular 7 .

This reduced my build time to 50%

0

```
"optimization": false,
"outputHashing": "none",
"sourceMap": false,
"extractCss": true,
"namedChunks": false,
"showCircularDependencies": false,
"aot": true,
"extractLicenses": false,
"statsJson": false,
"progress": true,
"vendorChunk": true,
"buildOptimizer": false,
```