

nginx as cache proxy not caching anything

Asked 11 years, 3 months ago Modified 1 year ago Viewed 48k times



25



I'm trying to cache static content which are basically inside the paths below in virtual server configuration. For some reason files are not being cached. I see several folders and files inside the cache dir but its always something like 20mb no higher no lower. If it were caching images for example would take at least 500mb of space.

Here is the nginx.conf cache part:

```
** nginx.conf **
proxy_cache_path /usr/share/nginx/www/cache levels=1:2 keys_zone=static$
proxy_temp_path /usr/share/nginx/www/tmp;
proxy_read_timeout 300s;
```

Heres the default virtual server.

```
**sites-available/default**
server {
    listen 80;

    root /usr/share/nginx/www;
    server_name myserver;
    access_log /var/log/nginx/myserver.log main;
    error_log /var/log/nginx/error.log;

    proxy_set_header Host $host;
    proxy_set_header X-Real-IP $remote_addr;
    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;

    location ~* ^/(thumbs|images|css|js|pubimg)/(.*)$ {
        proxy_pass http://backend;
        proxy_cache static;
        proxy_cache_min_uses 1;
        proxy_cache_valid 200 301 302 120m;
        proxy_cache_valid 404 1m;
        expires max;
    }

    location / {
        proxy_pass http://backend;
    }
}
```

linux

caching

proxy

nginx

reverse-proxy

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edited Oct 1, 2015 at 20:25



Morgan Thrapp

9,666 ● 3 ● 46 ● 66

asked Feb 10, 2012 at 16:07



Bruno Faria

5,180 ● 3 ● 24 ● 27

Have you tried to turn on error logging? – [André Perazzi](#) Feb 10, 2012 at 17:47 ✎

1 yes. nothing conclusive. – [Bruno Faria](#) Feb 10, 2012 at 18:07

5 Answers

Sorted by:

Highest score (default) ▾



55



Make sure your backend does not return `Set-Cookie` header. If Nginx sees it, it disables caching.

If this is your case, the best option is to fix your backend. When fixing the backend is not an option, it's possible to instruct Nginx to ignore `Set-Cookie` header

```
proxy_ignore_headers "Set-Cookie";  
proxy_hide_header "Set-Cookie";
```

See the [documentation](#)

`proxy_ignore_header` will ensure that the caching takes place. `proxy_hide_header` will ensure the Cookie payload is not included in the cached payload. This is important to avoid leaking cookies via the NGINX cache.

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edited May 22, 2015 at 6:01



[Sam Saffron](#)

128k ● 78 ● 326 ● 505

answered Feb 10, 2012 at 18:20



[Alexander Azarov](#)

12.9k ● 2 ● 49 ● 54

9 actually it was not set-cookie but cache-control. I found out that IIS was actually caching static files and the response to nginx was to not cache those files proly because it was already caching it. Once i removed those files from iis cache it worked. :) – [Bruno Faria](#) Feb 10, 2012 at 19:14

This worked for me on nginx in front of a django backend. Otherwise it wasn't caching at all – [dlrust](#) Feb 26, 2014 at 18:49

8 If I understand correctly then you almost always want to also set `proxy_hide_header "Set-Cookie"` or you will be serving all your visitors the cookies that were generated for the first user who requested the resource. – [Amr Mostafa](#) Mar 12, 2014 at 15:38 ✎

5 @alexander I updated your answer, proxy_ignore_headers without proxy_hide_header is a huge security risk. – [Sam Saffron](#) May 22, 2015 at 6:01

8 in case someone else has the same problem i had: `proxy_buffering off;` will prevent caching – [Kaworu](#) Oct 1, 2015 at 14:51 ✎



21



I would like to add that multiple configuration options and combinations can disable proxy caching in Nginx. Unfortunately this is poorly documented.



In my configuration I set `proxy_buffering on` and it enabled caching as expected.

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answered Oct 6, 2015 at 20:11



Overbryd

4,502 ● 2 ● 32 ● 33

-
- 2 So, how is `proxy_buffering on` related, may you explain please? – Meglio Mar 18, 2016 at 8:01
-
- 3 I was looking for some official documentation on the relation between proxy buffering and proxy caching, but I could not find any good resources to cite here. I added this answer, because switching `proxy_buffering` off simply disables any configured caching behaviour, without a warning or anything else. My guess is that without buffering the nginx has no way to store and thus cache a response from the server it is proxying to. This answer hints some things, maybe even ask Tero Kilkanen who gave the answer: serverfault.com/a/692585/144118 – Overbryd Mar 18, 2016 at 10:57 ✎
-
- 1 Made my day. I've spent 3 days! To figure out what the **** wrong with our config. Big, great thank you @Overbryd , from bottom of my heart. – dr.dimitru Apr 3, 2016 at 13:37 ✎
-
- @Overbryd gj! was fighting nginx for 2 days, and your answers is freaking awesome!
– Bubonic Pestilence Dec 7, 2016 at 10:47
-
- 2 Opened ticket to document this crap: trac.nginx.org/nginx/ticket/2048 – pva Sep 22, 2020 at 12:17
-

after going through multiple answers and comments, i found this configuration finally works:

15

`10m = 10mb` key cache, `max_size` to 2GB, `inactive=120m` (refresh from source after 120minutes of inactive), `use_temp_path=off` (to reduce io)

`proxy_cache_valid` - cache status of `200` and `302` for 60 minutes

```
proxy_cache_path /tmp/cache levels=1:2 keys_zone=default_cache:10m max_size=2g
                    inactive=120m use_temp_path=off;
proxy_cache_key "$scheme$request_method$host$request_uri";
proxy_cache_valid 200 302 60m;

server {
    listen      80;
    server_name example.com;

    # https://www.nginx.com/blog/nginx-caching-guide
    location / {
        proxy_cache default_cache;
        proxy_buffering on;
        proxy_ignore_headers Expires;
        proxy_ignore_headers X-Accel-Expires;
        proxy_ignore_headers Cache-Control;
        proxy_ignore_headers Set-Cookie;

        proxy_hide_header X-Accel-Expires;
        proxy_hide_header Expires;
        proxy_hide_header Cache-Control;
        proxy_hide_header Pragma;

        add_header X-Proxy-Cache $upstream_cache_status;
```

```

    proxy_pass http://ip-of-host:80;

    #set          $memcached_key "$uri?$args";
    #memcached_pass 127.0.0.1:11211;
    # error_page   404 502 504 = @fallback;
}
}

```

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edited Jan 29, 2020 at 19:27

answered Sep 17, 2017 at 15:56



Eje
354 ● 4 ● 8



James Tan
1,316 ● 1 ● 14 ● 32

2 Good and clear answer. I followed and fixed my issues. – [Hoang](#) Mar 26, 2021 at 10:32 ✎

In my case my upstream server was setting Cache-Control private. "By default, NGINX respects other directives in the Cache-Control header: it does not cache responses when the header includes the Private, No-Cache, or No-Store directive". I was able to remove "private" and did not need to use proxy_hide_header but this answer led me to the right place – [Debby Mendez](#) Mar 13 at 18:23



1



Another cause which i just ran into is with **the nginx server system clock being in the future** (or has too much drift into the future against the clock of the origin server that is defining the Expire headers), it will just consider content not to be cached since it is already expired (according to it's own time reference). The server was not syncing against NTP...

From <https://www.nginx.com/blog/nginx-caching-guide/> :

NGINX caches a response **only if the origin server includes either the Expires header with a date and time in the future**, or the Cache-Control header with the max-age directive set to a non-zero value.

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answered May 4, 2022 at 13:49



Florent Thiery
299 ● 1 ● 10



0



For what it's worth, my experience is that nginx does not always cache things where you tell it to.

For example, on centos7, with the configuration option

```

proxy_cache_path /tmp/my_nginx_cache levels=1:2 keys_zone=my_zone:10m inactive=24h
max_size=1g;

```

nginx actually caches the files at:

```

/tmp/systemd-private-phJlFG/tmp/my_nginx_cache

```

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answered Apr 15, 2016 at 11:38



Russell

1,946



1



16



14

2 That could possibly be systemd, or a patch from RedHat. Try `systemctl cat nginx.service` and see if there is an option in there to give chroot it or something similar – [Jason](#) Apr 19, 2016 at 12:35

1 Most probably you have to specify `proxy_cache_path /tmp/my_nginx_cache use_temp_path=off ...`, otherwise nginx appends as prefix `proxy_temp_path`, which is set to `/tmp/systemd-private-phJLfG/` in your case. – [antonbormotov](#) May 23, 2017 at 11:36

Confirmed - 'PrivateTmp=true' in the nginx.service systemd unit file from RHEL nginx rpm. If you put your cache under /tmp, it won't be persistent in this setup (restart of nginx will result in it getting a fresh new cache dir). – [Joshua Miller](#) Nov 19, 2017 at 21:39

There seems to be a known issue with Centos 7 and Nginx caching – [TrojanName](#) Jun 7, 2018 at 13:42

@JoshuaMiller so how did you solve this issue? I have the same issue. – [Khom Nazid](#) Oct 27, 2018 at 13:06
