What does upstream mean in nginx?

Asked 13 years, 11 months ago   Modified 3 years, 6 months ago   Viewed 261k times

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```
upstream app_front_static {
    server 192.168.206.105:80;
}
```

Never seen it before, anyone knows, what it means?

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nginx   configuration

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edited Feb 17, 2016 at 16:01

automatix
14.6k ● 31 ● 118 ● 245

asked May 4, 2011 at 2:47

gdb
7,819 ● 13 ● 41 ● 37

3 Answers

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It's used for proxying requests to other servers.

An example from http://wiki.nginx.org/LoadBalanceExample is:

```
http {
  upstream myproject {
    server 127.0.0.1:8000 weight=3;
    server 127.0.0.1:8001;
    server 127.0.0.1:8002;
    server 127.0.0.1:8003;
  }

  server {
    listen 80;
    server_name www.domain.com;
    location / {
      proxy_pass http://myproject;
    }
  }
}
```

This means all requests for / go to the any of the servers listed under upstream XXX, with a preference for port 8000.

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edited Mar 27, 2017 at 16:10

answered May 4, 2011 at 2:56

[Bahrom](#)
4,872 ● 34 ● 44

[Phil Lello](#)
8,639 ● 2 ● 27 ● 36

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3   why do you precise `http {}` ? My conf has not this and it works. Just wondering – [Olivier Pons](#) Jun 16, 2017 at 7:56

14   @OlivierPons maybe your config is `/etc/nginx/conf.d/default.conf` that is included in `/etc/nginx/nginx.conf` , which HAS `http {}` – [srghma](#) Mar 15, 2018 at 19:47

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`upstream` [defines a cluster that you can proxy requests to](#). It's commonly used for defining either a web server cluster for load balancing, or an app server cluster for routing / load balancing.

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edited Feb 2, 2017 at 13:42
[mikemaccana](#)
124k ● 110 ● 432 ● 534

answered May 4, 2011 at 2:49
[Ben Taitelbaum](#)
7,413 ● 3 ● 27 ● 45

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If we have a single server we can directly include it in the `proxy_pass` directive. For example:

```
server {
  ...
  location / {
    proxy_pass http://192.168.206.105:80;
    ...
  }
}
```

But in case if we have many servers we use upstream to maintain the servers. `Nginx` will load-balance based on the incoming traffic, as shown in this [answer](#).

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edited Sep 22, 2021 at 10:35
[McLan](#)
2,698 ● 9 ● 55 ● 91

answered Oct 14, 2020 at 13:32
[satyanarayana](#)
467 ● 4 ● 4

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2   Thanks. I was trying to `upstream` for one backend server, got too many open file errors etc. This is what I wanted for a test setup proxying towards Mojolicious. – [Hugh Barnard](#) May 13, 2021 at 8:40

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