TUGAS 2 SISTEM TERDISTRIBUSI

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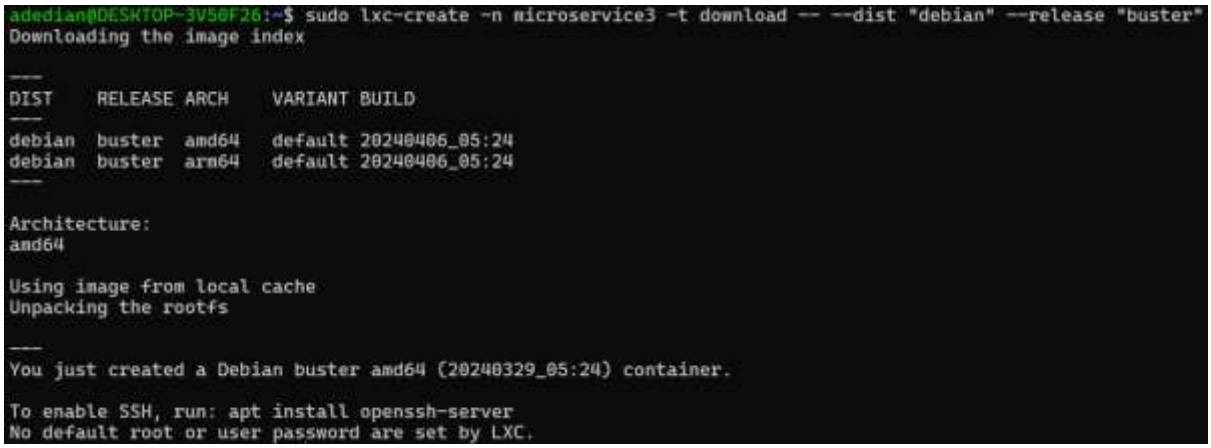
Load Balancing dengan Round Robin

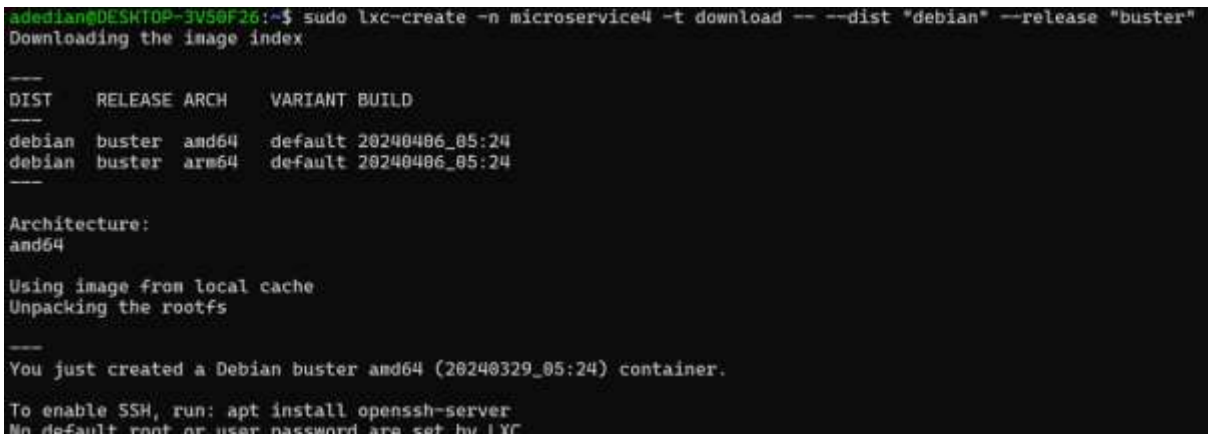
1. Create microservice3

```
# sudo lxc-create -n microservice3 -t download -- --dist "debian" --release
"buster"
```



2. Create microservice4

```
# sudo lxc-create -n microservice4 -t download -- --dist "debian" --release
"buster"
```



3. Create microservice5

```
sudo lxc-create -n microservice5 -t download -- --dist "debian" --release
"buster"
```

```
adedian@DESKTOP-3V50F26:~$ sudo lxc-create -n microservice5 -t download -- --dist "debian" --release "buster"
Downloading the image index

---
DIST    RELEASE ARCH    VARIANT BUILD
---
debian  buster  amd64   default 20240406_05:24
debian  buster  arm64   default 20240406_05:24
---

Architecture:
amd64

Using image from local cache
Unpacking the rootfs

---
You just created a Debian buster amd64 (20240329_05:24) container.

To enable SSH, run: apt install openssh-server
No default root or user password are set by LXC.
```

4. Jalankan semua microservice yang telah di buat.

```
sudo lxc-start -n microservice3

sudo lxc-start -n microservice4

sudo lxc-start -n microservice5
```

sudo lxc-ls -f

```
adedian@DESKTOP-3V50F26:~$ sudo lxc-start -n microservice3
adedian@DESKTOP-3V50F26:~$ sudo lxc-start -n microservice4
adedian@DESKTOP-3V50F26:~$ sudo lxc-start -n microservice5
adedian@DESKTOP-3V50F26:~$ sudo lxc-ls -f
NAME           STATE   AUTOSTART GROUPS IPV4       IPV6 UNPRIVILEGED
microservice3  RUNNING 0         -      10.0.3.94  -    false
microservice4  RUNNING 0         -      10.0.3.121 -    false
microservice5  RUNNING 0         -      10.0.3.155 -    false
microservice_1 RUNNING 0         -      10.0.3.39  -    false
microservice_2 RUNNING 0         -      10.0.3.142 -    false
```

Konfigurasi microservice3

1. Update dan Install nginx

```
sudo lxc-attach microservice3

apt update

apt install nginx nginx-extras nano
```

```
adedian@DESKTOP-3V50F26:~$ sudo lxc-attach microservice3
root@microservice3:/# apt update
Hit:1 http://deb.debian.org/debian buster InRelease
Hit:2 http://deb.debian.org/debian buster-updates InRelease
Get:3 http://deb.debian.org/debian-security buster/updates InRelease [34.8 kB]
Get:4 http://deb.debian.org/debian-security buster/updates/main amd64 Packages [592 kB]
Get:5 http://deb.debian.org/debian-security buster/updates/main Translation-en [321 kB]
Fetched 948 kB in 1s (905 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
root@microservice3:/# apt install nginx nginx-extras
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core geoip-database libfontconfig1 libfreetype6 libgd3 lib
  libicu63 libjbig0 libjpeg62-turbo libluajit-5.1-2 libluajit-5.1-common libnginx-mod-http-
  libnginx-mod-http-dav-ext libnginx-mod-http-echo libnginx-mod-http-fancyindex libnginx-mo
  libnginx-mod-http-image-filter libnginx-mod-http-lua libnginx-mod-http-ndk libnginx-mod-h
  libnginx-mod-http-uploadprogress libnginx-mod-http-upstream-fair libnginx-mod-http-xslt-f
  libnginx-mod-stream libperl5.28 libpng16-16 libtiff5 libwebp6 libxml2 libxpm4 libxslt1.1
  ucf
Suggested packages:
  libgd-tools gdbm-l10n geoip-bin fcgiwrap nginx-doc ssl-cert perl-doc libterm-readline-gnu
  libb-debug-perl liblocale-codes-perl
```

```
nano /etc/hosts
```

```
adedian@DESKTOP-3V50F26:
  GNU nano 3.2

127.0.1.1       microservice3
127.0.0.1       localhost
127.0.0.1       micro3.dev
::1             localhost ip6-localhost ip6-loopback
ff02::1         ip6-allnodes
ff02::2         ip6-allrouters
```

```
exit
```

Konfigurasi microservice4

1. Update dan Install nginx

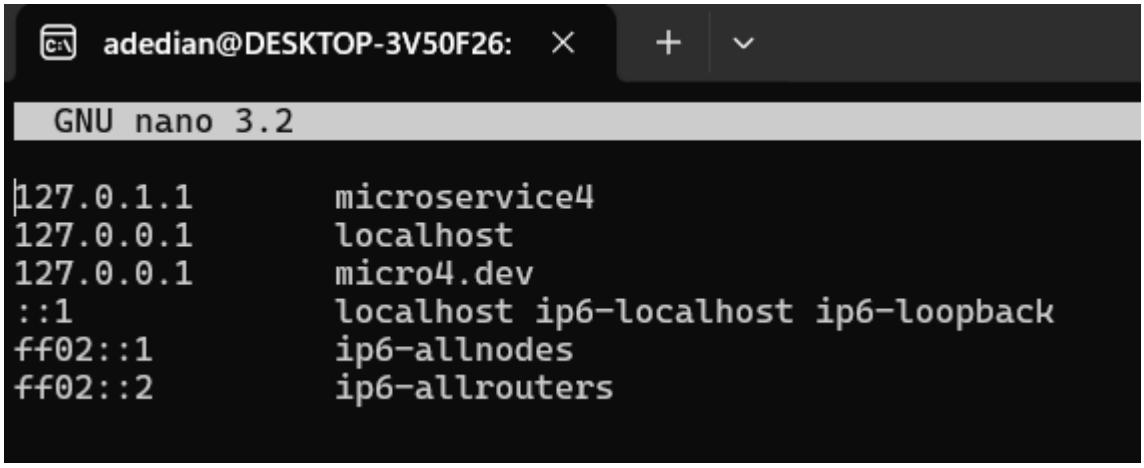
```
sudo lxc-attach microservice4
```

```
apt update
```

```
apt install nginx nginx-extras nano net-tools curl
```

```
adedian@DESKTOP-3V50F26:~$ sudo lxc-attach microservice4
root@microservice4:/# apt update
Hit:1 http://deb.debian.org/debian buster InRelease
Hit:2 http://deb.debian.org/debian buster-updates InRelease
Get:3 http://deb.debian.org/debian-security buster/updates InRelease [34.8 kB]
Get:4 http://deb.debian.org/debian-security buster/updates/main amd64 Packages [592 kB]
Get:5 http://deb.debian.org/debian-security buster/updates/main Translation-en [321 kB]
Fetched 948 kB in 1s (1133 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
root@microservice4:/# apt install nginx nginx-extras nano
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core geoip-database libfontconfig1 libfreetype6 libgd3 libg
  libicu63 libjbig0 libjpeg62-turbo libluajit-5.1-2 libluajit-5.1-common libnginx-mod-http-a
  libnginx-mod-http-dav-ext libnginx-mod-http-echo libnginx-mod-http-fancyindex libnginx-mod
  libnginx-mod-http-image-filter libnginx-mod-http-lua libnginx-mod-http-ndk libnginx-mod-ht
  libnginx-mod-http-uploadprogress libnginx-mod-http-upstream-fair libnginx-mod-http-xslt-fi
  libnginx-mod-stream libperl5.28 libpng16-16 libtiff5 libwebp6 libxml2 libxpm4 libxslt1.1 n
  ucf
Suggested packages:
```

`nano /etc/hosts`



`exit`

Konfigurasi microservice5

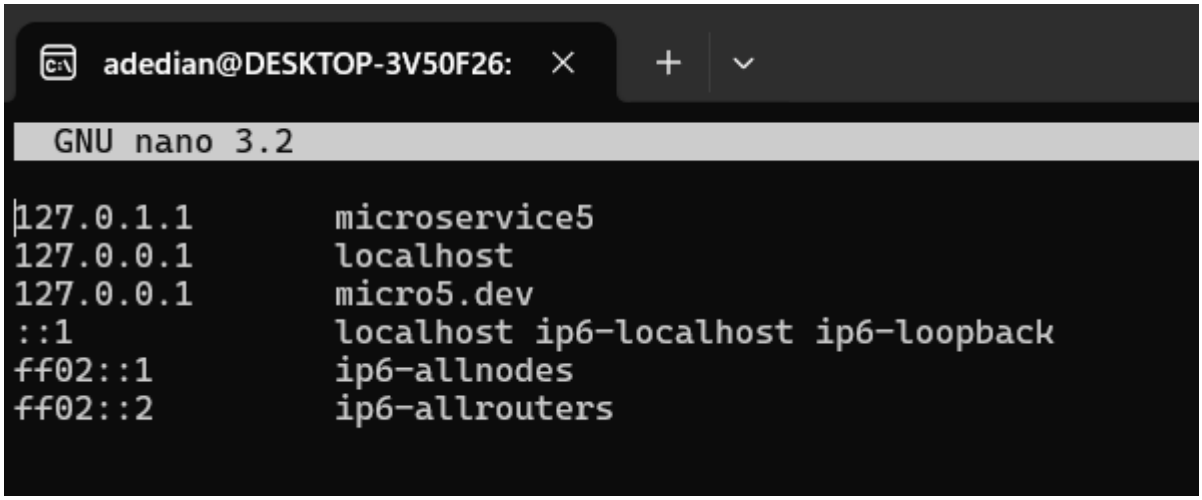
2. Update dan Install nginx

`sudo lxc-attach microservice5`

`apt update && apt install nginx nginx-extras nano -y`

```
adedian@DESKTOP-3V50F26:~$ sudo lxc-attach microservice5
root@microservice5:/# apt update && apt install nginx nginx-extras nano -y
Hit:1 http://deb.debian.org/debian buster InRelease
Hit:2 http://deb.debian.org/debian buster-updates InRelease
Get:3 http://deb.debian.org/debian-security buster/updates InRelease [34.8 kB]
Get:4 http://deb.debian.org/debian-security buster/updates/main amd64 Packages [592 kB]
Get:5 http://deb.debian.org/debian-security buster/updates/main Translation-en [321 kB]
Fetched 948 kB in 1s (957 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core geoip-database libfontconfig1 libfreetype6 libgd3 libgdb
  libicu63 libjbig0 libjpeg62-turbo libluajit-5.1-2 libluajit-5.1-common libnginx-mod-http-aut
  libnginx-mod-http-dav-ext libnginx-mod-http-echo libnginx-mod-http-fancyindex libnginx-mod-h
  libnginx-mod-http-image-filter libnginx-mod-http-lua libnginx-mod-http-ndk libnginx-mod-http
  libnginx-mod-http-uploadprogress libnginx-mod-http-upstream-fair libnginx-mod-http-xslt-filt
  libnginx-mod-stream libperl5.28 libpng16-16 libtiff5 libwebp6 libxml2 libxpm4 libxslt1.1 ngi
  ucf
Suggested packages:
```

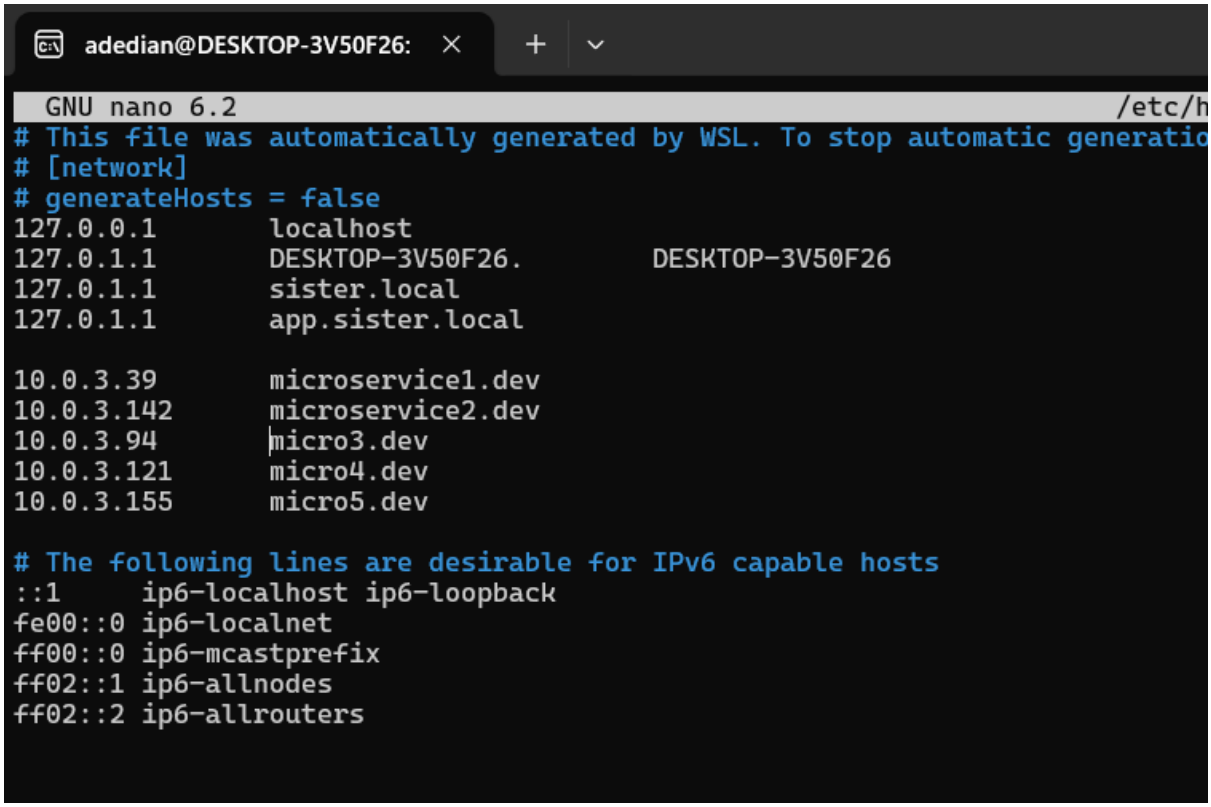
```
nano /etc/hosts
```



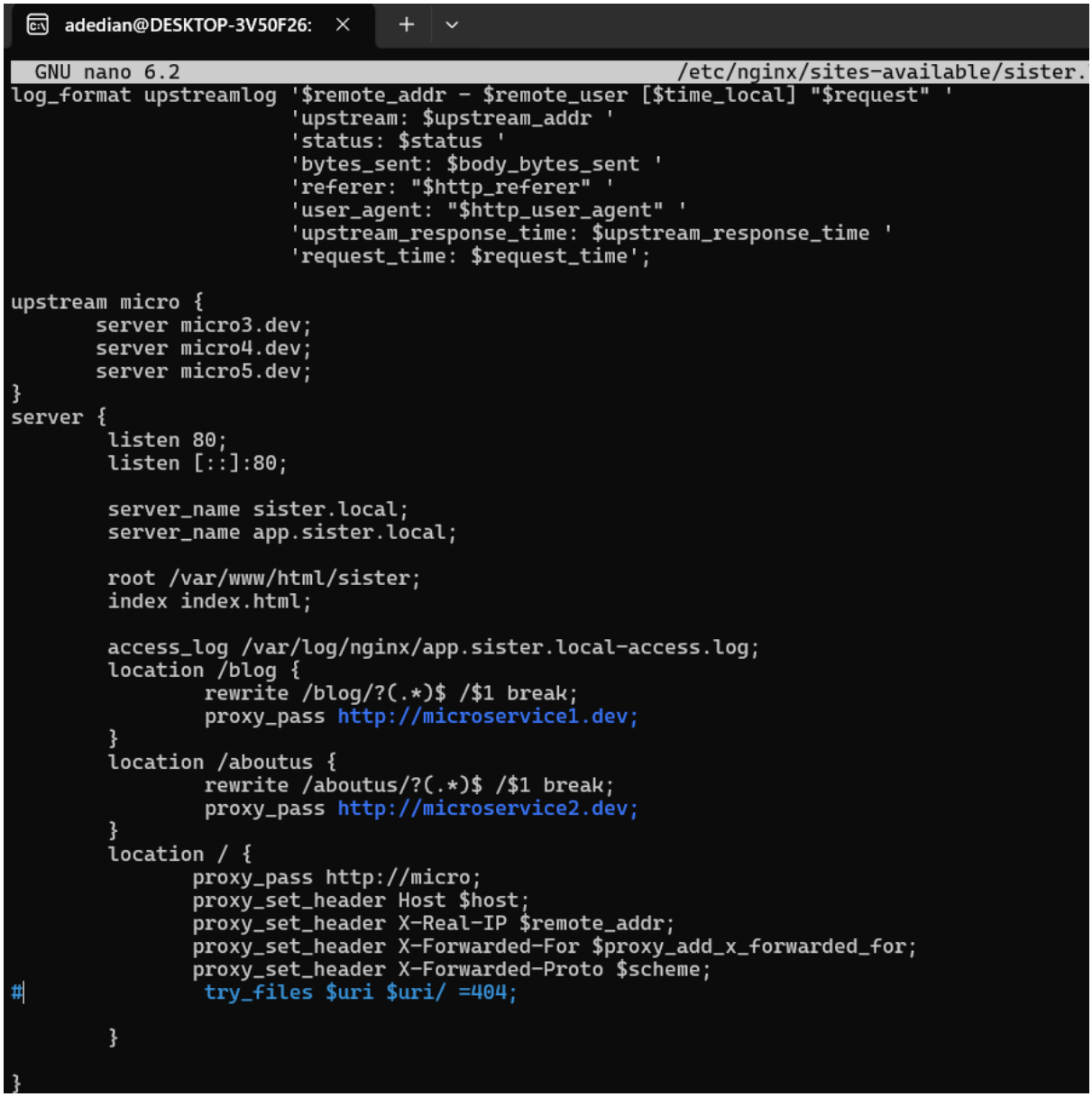

```
exit
```

Konfigurasi Hosts ubuntu 22.04 wsl

```
sudo nano /etc/hosts
```



sudo nano /etc/nginx/sites-available/sister.local



Sudo nginx -t

Sudo nginx -s reload

curl -i app.sister.local sebanyak x 3

```
adedian@DESKTOP-3V50F26:~$ curl -i http://app.sister.local
HTTP/1.1 200 OK
Server: nginx/1.18.0 (Ubuntu)
Date: Sat, 06 Apr 2024 13:19:43 GMT
Content-Type: text/html
Content-Length: 612
Connection: keep-alive
Last-Modified: Sat, 06 Apr 2024 13:13:52 GMT
ETag: "66114a90-264"
Accept-Ranges: bytes

<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
```

sudo tail -f /var/log/nginx/app.sister.local-access.log

```
adedian@DESKTOP-3V50F26:~$ sudo tail -f /var/log/nginx/app.sister.local-access.log
127.0.0.1 - - [06/Apr/2024:18:02:20 +0700] "GET / HTTP/1.1" 200 612 "-" "curl/7.81.0"
127.0.0.1 - - [06/Apr/2024:18:02:23 +0700] "GET / HTTP/1.1" 200 612 "-" "curl/7.81.0"
127.0.0.1 - - [06/Apr/2024:18:02:24 +0700] "GET / HTTP/1.1" 200 612 "-" "curl/7.81.0"
127.0.0.1 - - [06/Apr/2024:19:52:45 +0700] "GET / HTTP/1.1" 200 76673 "-" "curl/7.81.0"
127.0.0.1 - - [06/Apr/2024:19:53:29 +0700] "GET / HTTP/1.1" 200 76673 "-" "curl/7.81.0"
127.0.0.1 - - [06/Apr/2024:20:19:38 +0700] "GET / HTTP/1.1" 200 612 "-" "curl/7.81.0"
127.0.0.1 - - [06/Apr/2024:20:19:42 +0700] "GET / HTTP/1.1" 200 612 "-" "curl/7.81.0"
127.0.0.1 - - [06/Apr/2024:20:19:43 +0700] "GET / HTTP/1.1" 200 612 "-" "curl/7.81.0"
```