

1) Explique os conceitos inerentes à implementação de um proxy reverso implementado com o NGINX.

O NGINX atuando como proxy reverso funciona como um intermediário entre os clientes (usuários na internet) e os servidores de aplicação (backend). Ele possui um Ponto de Entrada Único onde o cliente faz a requisição para o NGINX, e este decide para qual servidor interno encaminhar o tráfego. Sua segurança esconde a identidade e a estrutura da rede interna (os endereços IP reais dos servidores de aplicação não ficam expostos). Possui balanceamento de carga podendo distribuir as requisições entre vários servidores para evitar sobrecarga. E possui uma Terminação SSL/TLS, onde o NGINX pode lidar com a criptografia, aliviando o processamento do servidor de aplicação.

2) Descreva como funciona a configuração e arquivos envolvidos.

No NGINX em distribuições Linux comuns por exemplo, os arquivos principais são:

1. `/etc/nginx/nginx.conf`: O arquivo de configuração principal. Ele carrega as configurações globais.
2. `/etc/nginx/conf.d/`: Diretório onde geralmente colocamos nossas configurações personalizadas.
3. Diretiva `proxy_pass`: É a alma do proxy reverso. Ela diz ao NGINX para onde enviar a requisição recebida.

Implemente uma solução de proxy reverso usando a máquina virtual ou o play with docker. Faça print dos arquivos envolvendo a descrição dos conceitos e os arquivos de configuração. Faça print dos testes que demonstram o uso do Proxy reverso.

print 1

01:34:21

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.24
node1

d50utlc6_d50v7tol2o9000fdk3k0

IP
192.168.0.24

OPEN PORT

Memory
3.49% (139.6MiB / 3.906GiB)

CPU
0.14%

SSH
ssh ip172-18-0-14-d50utlc69q000bto3og@direct.labs.play

DELETE EDITOR

```
# !- MIGHTY! discouraged. Any consequences of doing so are #
# completely the user's responsibilities. #
# #
# The FWD team: #
##### #
[node1] (local) root@192.168.0.24 ~
$ docker network create rede-proxy
54ea40c4a0f3bd36ba39544bad808bca895670705caa5fcc00a315d158f077
[node1] (local) root@192.168.0.24 ~
$ docker run -d --name meu-backend --network rede-proxy httpd:alpine
Unable to find image 'httpd:alpine' locally
alpine: Pulling from library/httpd
014e36e61396: Pull complete
f6e461aef03a: Pull complete
0f22159a1665: Pull complete
4f4e8700ae554: Pull complete
23880f49eb05: Pull complete
38304b90149a: Pull complete
c52a979a748d: Pull complete
Digest: sha256:848960d0e4651af52942ee18bf260e967f8aa03b2f16543703ee24b737e7800
Status: Downloaded newer image for httpd:alpine
a7909b46e7e93a75af84552aabc7f9f93a5afa003e800198f0a85f182bd4da53a5
[node1] (local) root@192.168.0.24 ~
$ cat <<EOF > nginx.conf
> events {
>     http {
>     server {
>         listen 80;
>         location / {
>             proxy_pass http://meu-backend;
>         }
>     }
> }
> EOF
[node1] (local) root@192.168.0.24 ~
$
```

print 2

01:30:42

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.24
node1

d50utlc6_d50v7tol2o9000fdk3k0

IP
192.168.0.24

OPEN PORT
80

Memory
5.04% (201.7MiB / 3.906GiB)

CPU
0.17%

SSH
ssh ip172-18-0-14-d50utlc69q000bto3og@direct.labs.play

DELETE EDITOR

```
> }
> }
> }
[node1] (local) root@192.168.0.24 ~
$ docker run -d --name meu-nginx -p 80:80 --network rede-proxy -v $(pwd)/nginx.conf:/etc/nginx/nginx.conf:ro nginx:alpine
Unable to find image 'nginx:alpine' locally
alpine: Pulling from library/nginx
014e36e61396: Already exists
dfad290a3c5d: Pull complete
8f0cc344426d: Pull complete
abdece946203: Pull complete
d1c3049397c: Pull complete
a8b3c5d02cf: Pull complete
fc1332503d7: Pull complete
138bc69762d0: Pull complete
Digest: sha256:052b75a97f4c90f33debaa51c7e08d9b969a0447a133eb2b99cc905d918eb2b
Status: Downloaded newer image for nginx:alpine
fb31c7399d3268d608363ebba131caeefb23f4d9f4931f5e4d041521e7a9a6
[node1] (local) root@192.168.0.24 ~
$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED       STATUS       PORTS           NAMES
fb31c7399d32        nginx:alpine       "/docker-entrypoint..." 23 seconds ago Up 22 seconds 0.0.0.0:80->80/tcp meu-nginx
a7909b46e7e9        httpd:alpine       "httpd-foreground"       5 minutes ago Up 5 minutes  80/tcp          meu-backend
[node1] (local) root@192.168.0.24 ~
$ curl localhost
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
<html>
<head>
<title>It works! Apache httpd</title>
</head>
<body>
<p>It works!</p>
</body>
</html>
[node1] (local) root@192.168.0.24 ~
$
```

print 3

01:28:42

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.24
node1

d50utlc6_d50v7tol2o9000fkd3k0

IP

192.168.0.24

OPEN PORT

80

Memory

5.21% (208.2MiB / 3.906GiB)

CPU

0.20%

SSH

ssh ip172-18-0-14-d50utlc69qi000bto3og#d50utlc6_d50v7tol2o9000fkd3k0

DELETE

EDITOR

fb51e7399d92 nginx:alpine "/docker-entrypoint..." 23 seconds ago Up 22 seconds 0.0.0.0:80->80/tcp meu-nginx

6790b6467e9 httpd:alpine "httpd-foreground" 5 minutes ago Up 5 minutes 80/tcp meu-backend

[root] [local] root@192.168.0.24 ~

\$ curl localhost

<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">

<html>

<head>

<title>It works! Apache httpd</title>

</head>

<body>

>>It works!</p>

</body>

</html>

[root] [local] root@192.168.0.24 ~

\$ docker logs -f meu-nginx

/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration

/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/

/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh

10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf

10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf

/docker-entrypoint.sh: Launching /docker-entrypoint.d/15-local-resolvers.envsh

/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh

/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh

/docker-entrypoint.sh: Configuration complete; ready for start up

172.20.0.1 - - [17/Dec/2025:00:13:34 +0000] "GET / HTTP/1.1" 200 191 "-" "curl/8.10.1"

172.18.0.1 - - [17/Dec/2025:00:15:20 +0000] "GET / HTTP/1.1" 200 191 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/143.0.0.0 Saf

172.18.0.1 - - [17/Dec/2025:00:15:20 +0000] "GET /favicon.ico HTTP/1.1" 404 236 "http://ip172-18-0-14-d50utlc69qi000bto3og-80.direct.labs.play-with-docker.com/" "Mozilla/5.0 (

Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/143.0.0.0 Safari/537.36"

172.18.0.1 - - [17/Dec/2025:00:15:22 +0000] "\x16\x03\x01\x07\x00\x07\x03\x03\x04\x16d\x8e*-o\x1d\x89f7\x32\xad\xad\x91\x8b\xca\x8c\x3b\xfb\xk1a\x84" 400 157 "-" "-"

172.18.0.1 - - [17/Dec/2025:00:15:23 +0000] "\x16\x03\x01\x07\x00\x07\x03\x03\x04\x16d\x8e*-o\x1d\x89f7\x32\xad\xad\x91\x8b\xca\x8c\x3b\xfb\xk1a\x84" 400 157 "-" "-"

172.18.0.1 - - [17/Dec/2025:00:15:23 +0000] "\x16\x03\x01\x06\xef\x01\x00\x06\x8e\x03\x03\x13\x97\x80\x47\x00\x8b\xca\x8c\x3b\xfb\xk1a\x84" 400 157 "-" "-"

172.18.0.1 - - [17/Dec/2025:00:15:23 +0000] "\x16\x03\x01\x07\x00\x07\x03\x03\x04\x16d\x8e*-o\x1d\x89f7\x32\xad\xad\x91\x8b\xca\x8c\x3b\xfb\xk1a\x84" 400 157 "-" "-"

13\x97\x09\xfb\x8f7\xad\x81\x82\x1c-\xc6\xc7\x86\x82\x8a\x8a\x8a\x00\x00\x8f\x82" 400 157 "-" "-"

13\x00\x14\x00\x9c\x00\x9d\x00\x05\x01\x00\x06\x82\x8a\x8a\x8a\x00\x00\x8f\x82" 400 157 "-" "-"

print 4

Docker Playground

It works! Apache httpd

labs.play-with-docker.com/p/d50utlc69qi000bto3og#d50utlc6_d50v7tol2o9000fkd3k0

Não seguro ip172-18-0-14-d50utlc69qi000bto3og-80.direct.labs.play-with-docker.com

Andrimas (2)

It works!

Google Gemini - Google

It works! Apache httpd

21:35
16/12/2025