1. Добавил репозиторий через РРА

>history

- 2 apt-add-repository ppa:nginx/stable
- 19 cat etc/apt/sources.list.d/nginx-ubuntu-stable-bionic.list

```
root@ip-172-31-23-74:/# ll
 total 88
 drwxr-xr-x 23 root root 4096 May 27 14:43 ./
 drwxr-xr-x 23 root root 4096 May 27 14:43 ../
drwxr-xr-x 2 root root 4096 Apr 8 17:40 bin/
drwxr-xr-x 3 root root 4096 Apr 8 17:43 boot/
drwxr-xr-x 15 root root 2980 May 27 14:43 dev/
drwxr-xr-x 89 root root 4096 May 27 14:43 dev/
drwxr-xr-x 3 root root 4096 May 27 14:43 home/
lrwxrwxrwx 1 root root 31 Apr 8 17:43 initr
lrwxrwxrwx 1 root root 31 Apr 8 17:43 initrd.img -> boot/initrd.img-4.15.0-1065-aws
lrwxrwxrwx 1 root root 31 Apr 8 17:43 initrd.img.old -> boot/initrd.img-4.15.0-1065-aws
drwxr-xr-x 20 root root 4096 Apr 8 17:38 lib/
drwxr-xr-x 2 root root 4096 Apr 8 17:35 lib64/
drwxr-xr-x 2 root root 4096 Apr 8 17:41 lost+found/
drwxr-xr-x 2 root root 4096 Apr 8 17:35 media/
drwxr-xr-x 2 root root 4096 Apr 8 17:35 mnt/
drwxr-xr-x 2 root root 4096 Apr 8 17:35 opt/
dr-xr-xr-x 115 root root 0 May 27 14:43 proc/
drwx----- 4 root root 4096 May 27 14:43 root/

      drwx-----
      4 root root
      4896 May 27 14:43 root/

      drwxr-xr-x
      25 root root
      880 May 27 14:44 run/

      drwxr-xr-x
      2 root root
      4896 Apr 8 17:40 sbin/

      drwxr-xr-x
      5 root root
      4896 May 27 14:43 snap/

      drwxr-xr-x
      2 root root
      4896 Apr 8 17:35 srv/

      drwxr-xr-x
      13 root root
      9 May 27 15:80 sys/

      drwxr-xr-x
      10 root root
      4896 Apr 8 17:35 usr/

      drwxr-xr-x
      11 root root
      4896 Apr 8 17:35 usr/

      4896 Apr 8 17:43 var/

lrwxrwxrwx 1 root root 28 Apr 8 17:43 vmlinuz -> boot/vmlinuz-4.15.0-1065-aws lrwxrwxrwx 1 root root 28 Apr 8 17:43 vmlinuz.old -> boot/vmlinuz-4.15.0-1065
                                                                 28 Apr 8 17:43 vmlinuz.old -> boot/vmlinuz-4.15.0-1065-aws
[root@ip-172-31-23-74:/# cat etc/apt/sources.list.d/nginx-ubuntu-stable-bionic.list
 deb http://ppa.launchpad.net/nginx/stable/ubuntu bionic main
 # deb-src http://ppa.launchpad.net/nginx/stable/ubuntu bionic main
 root@ip-172-31-23-74:/#
```

2. Через snap установил nmap

>history

```
48 apt install nginx
49 dpkg -l | grep nginx
50 dpkg -r nginx
51 snap —help
```

```
nginx
                                      1.16.1-0+blonic1
                                                                              all
                                                                                             small, powerful, sca
able web/proxy server
i nginx-common
                                      1.16.1-0+bionic1
                                                                              all
                                                                                             small, powerful, sca
able web/proxy server - common files
                                      1.16.1-0+bionic1
i nginx-full
                                                                              amd64
                                                                                             nginx web/proxy serv
r (standard version)
oot@ip-172-31-23-74:/# dpkg -r nginx
Reading database ... 56940 files and directories currently installed.) emoving nginx (1.16.1-0+bionic1) ...
oot@ip-172-31-23-74:/#
```

```
52 snap install nmap
55 snap list
56 snap remove nmap
```

```
[root@ip-172-31-23-74:/# snap list
Name Version Rev Tracking Publisher Notes
amazon-ssm-agent 2.3.714.0 1566 latest/stable/_ aws/ classic
core 16-2.44.1 8935 latest/stable canonical/ core
core18 20200427 1754 latest/stable canonical/ base
nmap 7.80 823 latest/stable maxiberta -
[root@ip-172-31-23-74:/# snap remove nmap
nmap removed
root@ip-172-31-23-74:/#
```

3. Создал правило чтобы могли все подключаться только через 80 и 22 порты. Настроили проброс с локального порта 80 на локальный 8080

```
61 iptables -A INPUT -p tcp --dport 22 -j ACCEPT
62 iptables -A INPUT -p tcp --dport 80 -j ACCEPT
63 iptables -L

64 sysctl -w net.ipv4.ip_forward=1
65 iptables -A FORWARD -j ACCEPT
```

84 iptables -t nat -A PREROUTING -p tcp --dport 80 -j REDIRECT --to-port 8080

```
root@ip-172-31-23-74:/# iptables -L
Chain INPUT (policy ACCEPT)
target
        prot opt source
                                         destination
                                                               tcp dpt:http
ACCEPT
          tcp -- anywhere
tcp -- anywhere
                                         anywhere
ACCEPT
                                         anywhere
                                                               tcp dpt:ssh
Chain FORWARD (policy ACCEPT)
         prot opt source
                                         destination
target
ACCEPT
           all -- anywhere
                                         anywhere
Chain OUTPUT (policy ACCEPT)
          prot opt source
                                         destination
```

!!!!!!4. Не получилось настроить проброс с локального порта 8080 на внешний 80. ПОдумал том по идее такая операция относится к POSTROUTING, однако выдавал ошибку Invalid Arguments

```
124 iptables -t nat -A POSTROUTING -p tcp --dport 8080 -j REDIRECT --to-port 80
```