

Tugas 2 Sistem Terdistribusi

1. Create microservice3

sudo lxc-create -n microservice3 -t download -- --dist "debian" --release "buster" --arch amd64

```
faishall00@MSI:~$ sudo lxc-create -n microservice3 -t download -- --dist "debian" --release "buster" --arch amd64
Downloading the image index
Downloading the rootfs
Downloading the metadata
The image cache is now ready
Unpacking the rootfs

---
You just created a Debian buster amd64 (20240519_05:24) container.

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

2. Create microservice4

sudo lxc-create -n microservice4 -t download -- --dist "debian" --release "buster" --arch amd64

```
faishall00@MSI:~$ sudo lxc-create -n microservice4 -t download -- --dist "debian" --release "bullseye" --arch amd64
Downloading the image index
Downloading the rootfs
Downloading the metadata
The image cache is now ready
Unpacking the rootfs

---
You just created a Debian bullseye amd64 (20240520_05:24) container.

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

3. Create microservice5

sudo lxc-create -n microservice5 -t download -- --dist "debian" --release "buster" --arch amd64

```
faishall00@MSI:~$ sudo lxc-create -n microservice5 -t download -- --dist "debian" --release "buster" --arch amd64
Using image from local cache
Unpacking the rootfs

---
You just created a Debian buster amd64 (20240519_05:24) container.

To enable SSH, run: apt install openssh-server
```

4. Jalankan semua microservice yang telah di buat.

lxc-start -n microservice3

lxc-start -n microservice4

lxc-start -n microservice5

```
faishall00@MSI:~$ sudo lxc-start -n microservice3
faishall00@MSI:~$ sudo lxc-start -n microservice4
faishall00@MSI:~$ sudo lxc-start -n microservice5
```

Konfigurasi microservice3

1. Update dan Install nginx

lxc-attach microservice3

apt update

apt install nginx nano

```
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]
Fetched 34.8 kB in 0s (70.1 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
```

nano /etc/hosts

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

Konfigurasi microservice4

1. Update dan Install nginx

apt update

apt install nginx nano

```
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]
Fetched 34.8 kB in 0s (85.4 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
```

nano /etc/hosts

```
127.0.1.1      microservice4
127.0.0.1      localhost
::1           localhost ip6-localhost ip6-loopback
ff02::1       ip6-allnodes
ff02::2       ip6-allrouters
```

Konfigurasi microservice5 2. Update dan Install nginx

apt update

apt install nginx nano

```
root@microservice5:/# 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]
Fetched 34.8 kB in 0s (93.9 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
All packages are up to date.
root@microservice5:/# apt install nginx nano
Reading package lists... Done
Building dependency tree
nano /etc/hosts
```

```
127.0.1.1      microservice5
127.0.0.1      localhost
::1           localhost ip6-localhost ip6-loopback
ff02::1       ip6-allnodes
ff02::2       ip6-allrouters
```

Exit

Konfigurasi Hosts wsl

nano /etc/hosts

```
# This file was automatically generated by WSL. To stop automa
# [network]
# generateHosts = false
127.0.0.1      localhost
127.0.1.1      MSI.      MSI
127.0.1.1      sister.local
127.0.1.1      app.sister.local

10.0.3.220     microservice1
10.0.3.211     microservice2
10.0.3.196     microservice3
10.0.3.247     microservice4
10.0.3.47      microservice5
# The following lines are desirable for IPv6 capable hosts
::1           ip6-localhost ip6-loopback
fe00::0       ip6-localnet
ff00::0       ip6-mcastprefix
ff02::1       ip6-allnodes
ff02::2       ip6-allrouters
```

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

```

log_format upstreamlog '$remote_addr - $remote_user [$time_local] "$request" '
                        'upstream: $upstream_addr '
                        'status: $status '
                        'bytes_sent: $body_bytes_sent '
                        'referer: "$http_referer" '
                        'user_agent: "$http_user_agent" '
                        'upstream_response_time: $upstream_response_time '
                        'request_time: $request_time';

upstream microservices {
    server microservice3.dev;
    server microservice4.dev;
    server microservice5.dev;
}
server {
    listen 80;
    listen [::]:80;

    server_name sister.local;
    server_name app.sister.local;

    root /var/www/html;
    index index.html;

    access_log /var/log/nginx/app.sister.local-access.log;|
    location /blog {
        rewrite /blog/?(.*)$ /$1 break;
        proxy_pass http://microservice1.dev;
    }
    location /aboutus {
        rewrite /aboutus/?(.*)$ /$1 break;
        proxy_pass http://microservice2.dev;
    }
    location / {
        proxy_pass http://microservices;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header X-Forwarded-Proto $scheme;
    }
}

```

nginx -t

nginx -s reload

```

nginx: [alert] could not open error log file: open() "/var/log/n
ginx/error.log" failed (13: Permission denied)
2024/05/20 16:54:56 [warn] 52712#52712: the "user" directive mak
es sense only if the master process runs with super-user privile
ges, ignored in /etc/nginx/nginx.conf:1
2024/05/20 16:54:56 [emerg] 52712#52712: unknown directive "log_
formatupstreamlog" in /etc/nginx/sites-enabled/sister.local:8

```

```
faishall00@MSI:~$ curl -i app.sister.local
HTTP/1.1 200 OK
Server: nginx/1.18.0 (Ubuntu)
Date: Mon, 20 May 2024 09:55:22 GMT
Content-Type: text/html
Content-Length: 612
Last-Modified: Tue, 07 May 2024 07:41:48 GMT
Connection: keep-alive
ETag: "6639db3c-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 in
stalled 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
```

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

```
127.0.0.1 - - [07/May/2024:14:39:10 +0700] "GET / HTTP/1.1" 403
162 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:14:41:54 +0700] "GET / HTTP/1.1" 200
612 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:14:44:46 +0700] "GET /blog HTTP/1.1"
200 612 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:14:44:54 +0700] "GET /aboutus HTTP/1.
1" 404 162 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:14:48:56 +0700] "GET /blog HTTP/1.1"
200 612 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:14:49:13 +0700] "GET /aboutus HTTP/1.
1" 404 162 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:14:50:12 +0700] "GET /aboutus HTTP/1.
1" 404 162 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:14:52:00 +0700] "GET /blog HTTP/1.1"
200 612 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:15:06:35 +0700] "GET /blog HTTP/1.1"
200 632 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:15:06:51 +0700] "GET /aboutus HTTP/1.
1" 404 162 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:15:09:22 +0700] "GET /aboutus HTTP/1.
1" 404 162 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:15:10:08 +0700] "GET / HTTP/1.1" 200
612 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:15:10:13 +0700] "GET /aboutus HTTP/1.
1" 404 162 "-" "curl/7.81.0"
127.0.0.1 - - [07/May/2024:15:12:58 +0700] "GET / HTTP/1.1" 200
612 "-" "curl/7.81.0"
```