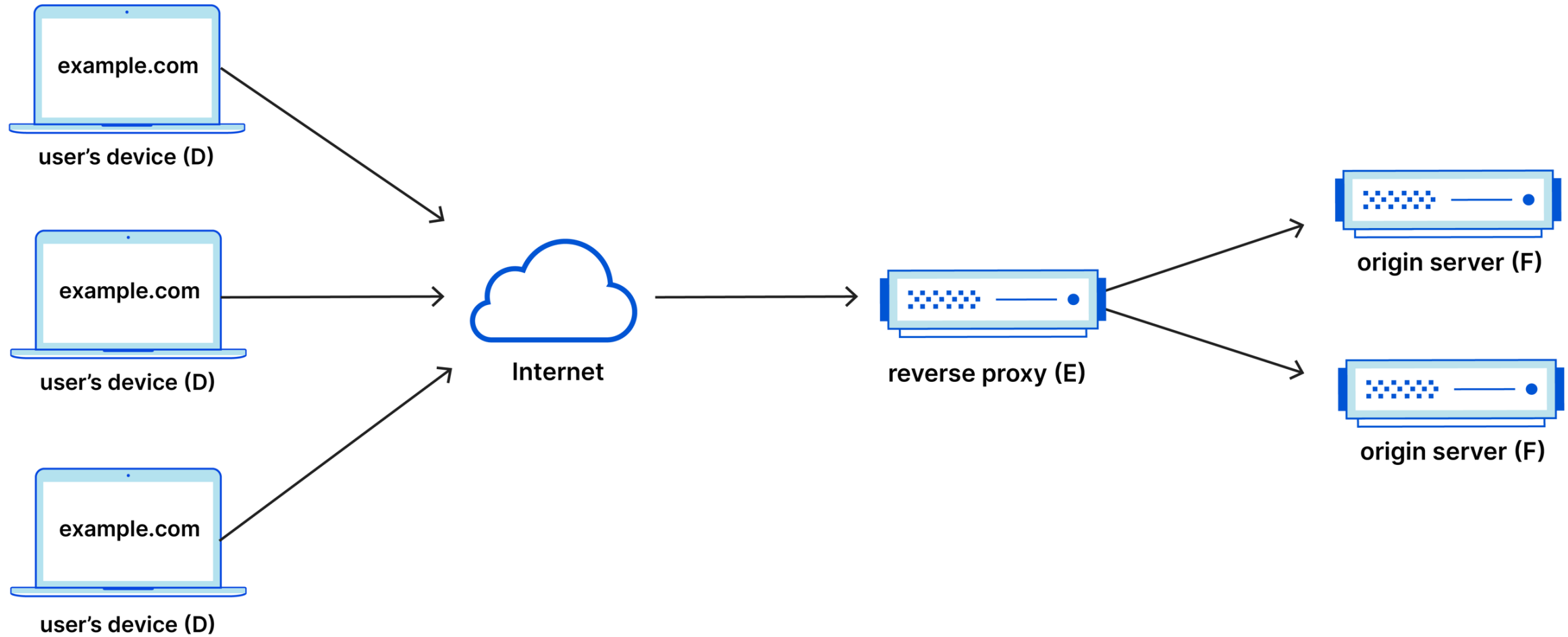


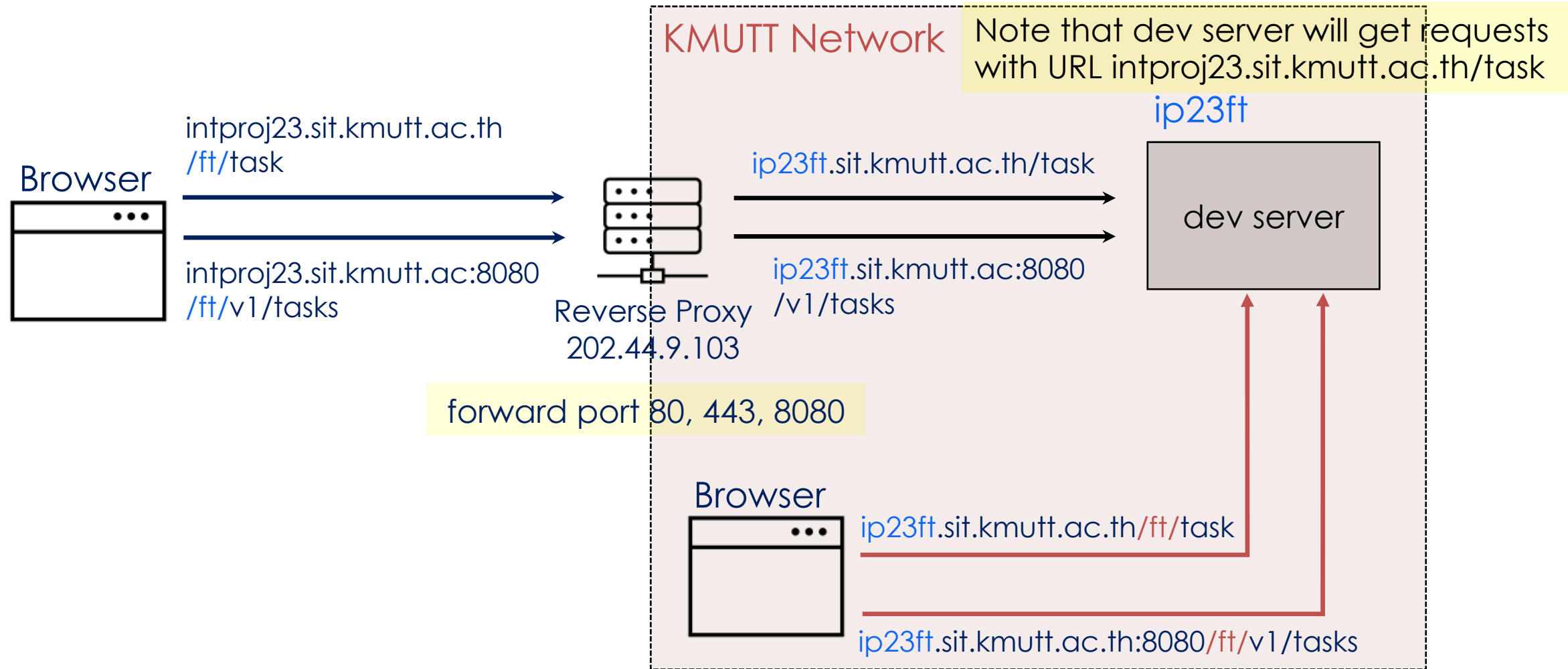
# **LAB-05**

## Reverse Proxy

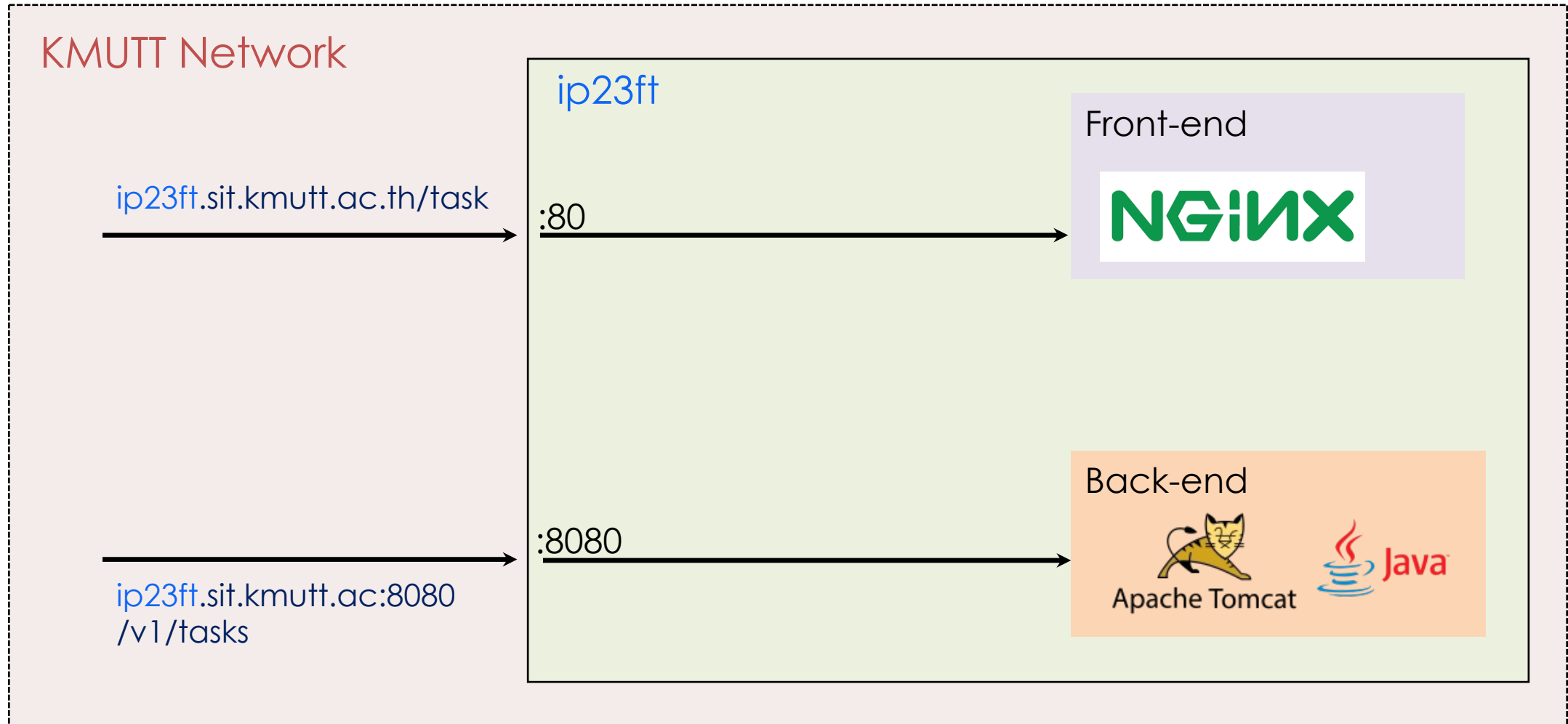
- A reverse proxy is a server that (transparently) forwards the client's requests to one or more web servers
- A reverse proxy sits in front of an origin server and ensures that no client ever communicates directly with that origin server
- Reverse proxies help increase scalability, performance, resilience, and security



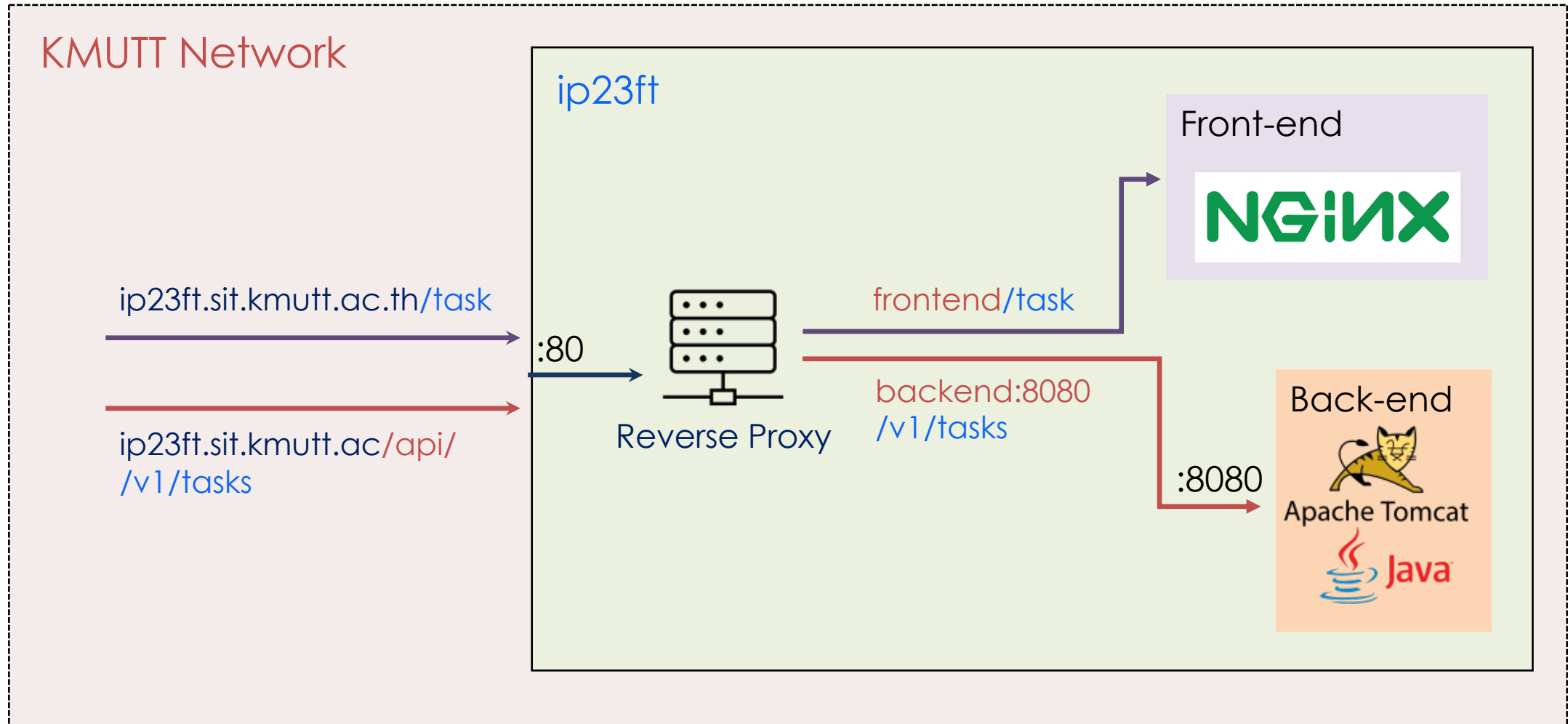
# SIT Web Reverse with nested path



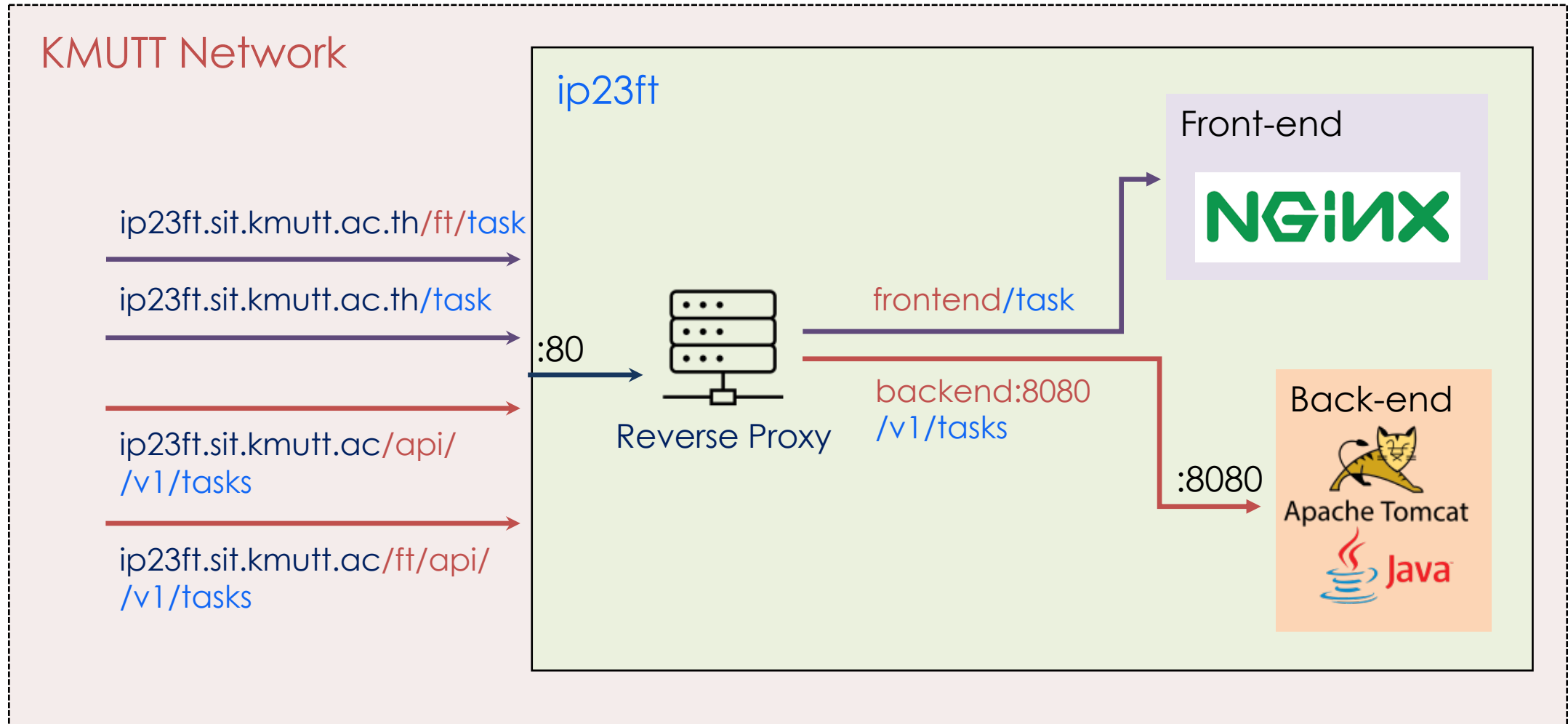
# Without Reverse Proxy

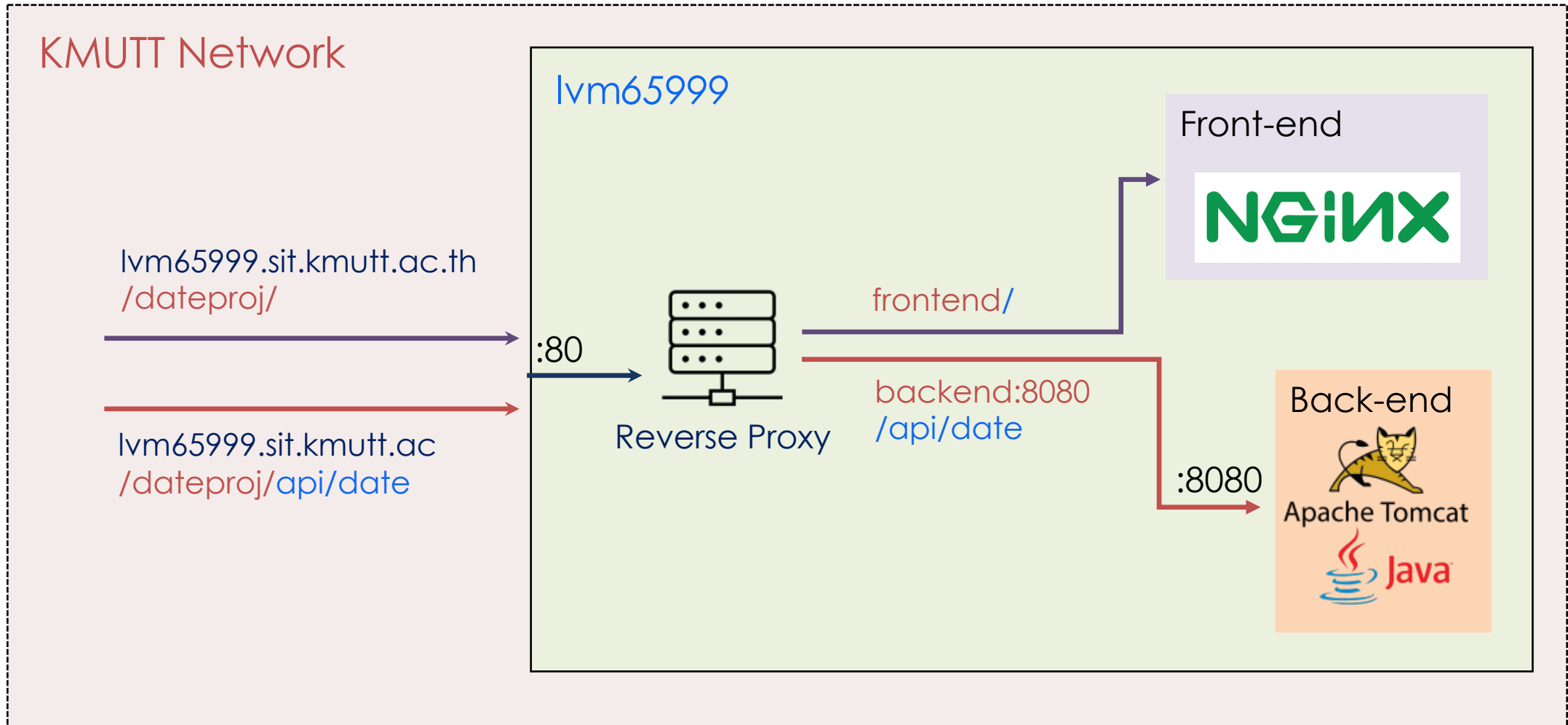


# Reverse Proxy : Private URL



# Private URL with Nested Path







# Sample Nginx Config File

dateproj.conf

```
server {  
    listen      80 default_server;  
    server_name lvm65999.sit.kmutt.ac.th;  
  
    location /dateproj/ {  
        proxy_pass http://dateproj-fe/;  
    }  
  
    location /dateproj/api/ {  
        proxy_pass http://dateproj-api:8080/api/;  
        # uses 8080/api/ since endpoint path is /api/date  
    }  
}
```

- Deploy fetchdate and dateapi with reverse proxy under /dateproj/ nested path on port 80

```
# create network for dateproj
docker network create dateproj-net
mkdir 209lab5; cd 209lab5
git clone https://github.com/olarnr/int210-dateproj.git dateproj
cd dateproj
```

## dateproj-api

```
cd dateproj-api
./mvnw clean package
docker run --name dateproj-api -d --network dateproj-net -v ./target:/app openjdk:17-jdk-alpine sh -c "java -jar /app/*.jar"
```

## dateproj-fe

```
cd ../dateproj-fe
npm install
# change API_URL to `/dateproj/api/date`
nano src/App.vue
# change "build": "vite build --base=/dateproj/",
nano package.json
npm run build
docker run --name dateproj-fe -d --network dateproj-net -v
./default.conf:/etc/nginx/conf.d/default.conf -v ./dist:/dist/ nginx:alpine
```

dateproj-fe/default.conf

```
server {  
    listen 80;  
  
    server_name _;  
  
    root /dist;  
    index index.html;  
  
    location / {  
        try_files $uri $uri/ =404;  
    }  
}
```

dateproj-proxy

```
cd ../dateproj-proxy  
# use config file shown in slide #9  
nana dateproj.conf  
docker run --name dateproj-proxy -d -p 80:80 --network dateproj-net -v  
./dateproj.conf:/etc/nginx/conf.d/dateproj.conf nginx:alpine
```

1. Run 'proxy' container that publish port 80 as intermediate reverse proxy server
2. Create 2 nginx config files, one for 'ip23xxx' and another for 'intproj23'
3. The 'ip23xxx.conf' should forward requests with '/xxx/' base path
4. Config in .env.production the API\_URL to '/xxx/api/v1'