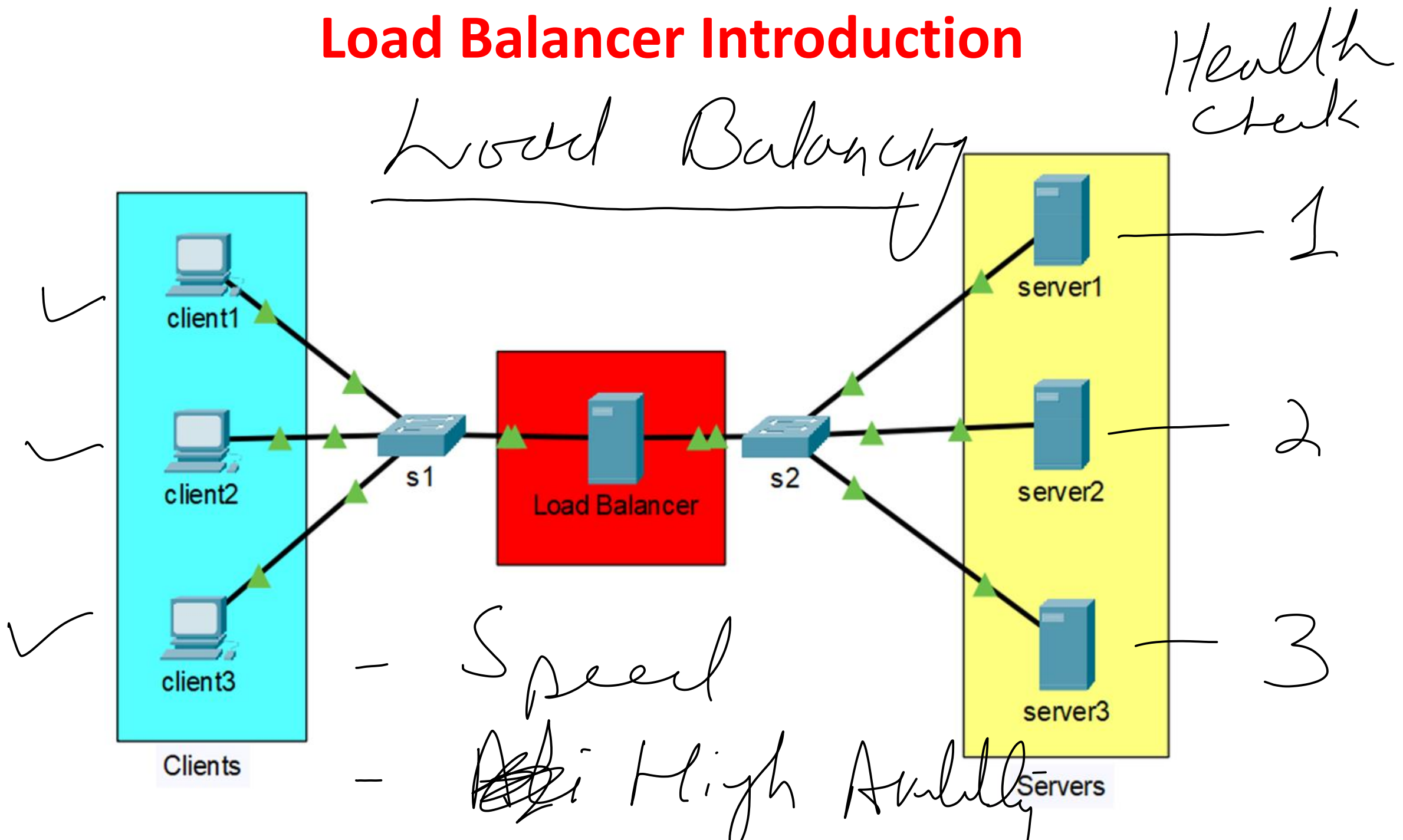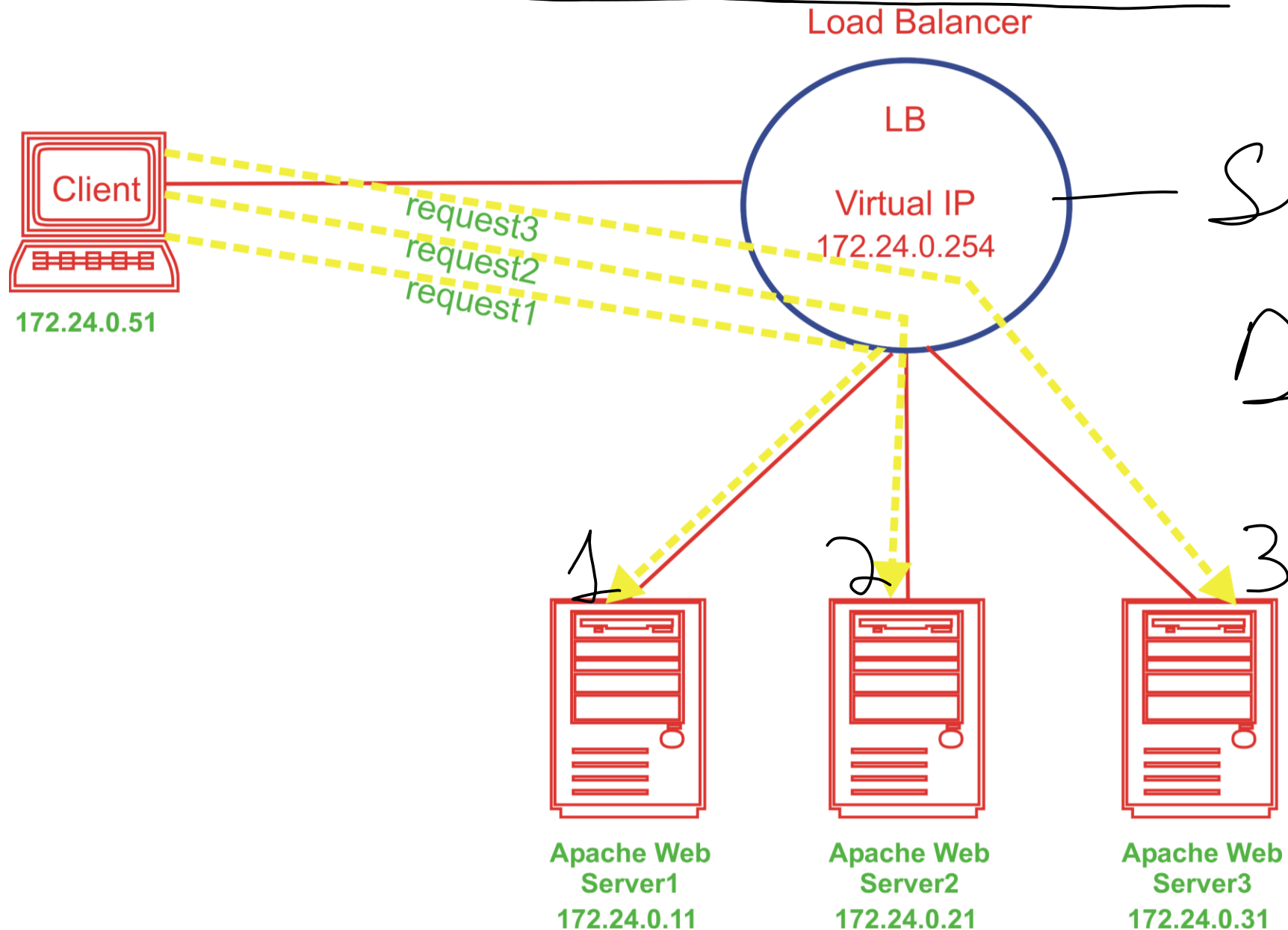# Load Balancer Introduction

Round Robin LB Strategy

Load Balancer

LB

Virtual IP
172.24.0.254

Strategy Defined

Client

172.24.0.51

request3
request2
request1

1 2 3

Apache Web
Server1
172.24.0.11

Apache Web
Server2
172.24.0.21

Apache Web
Server3
172.24.0.31

Random LB Strategy

Load Balancer

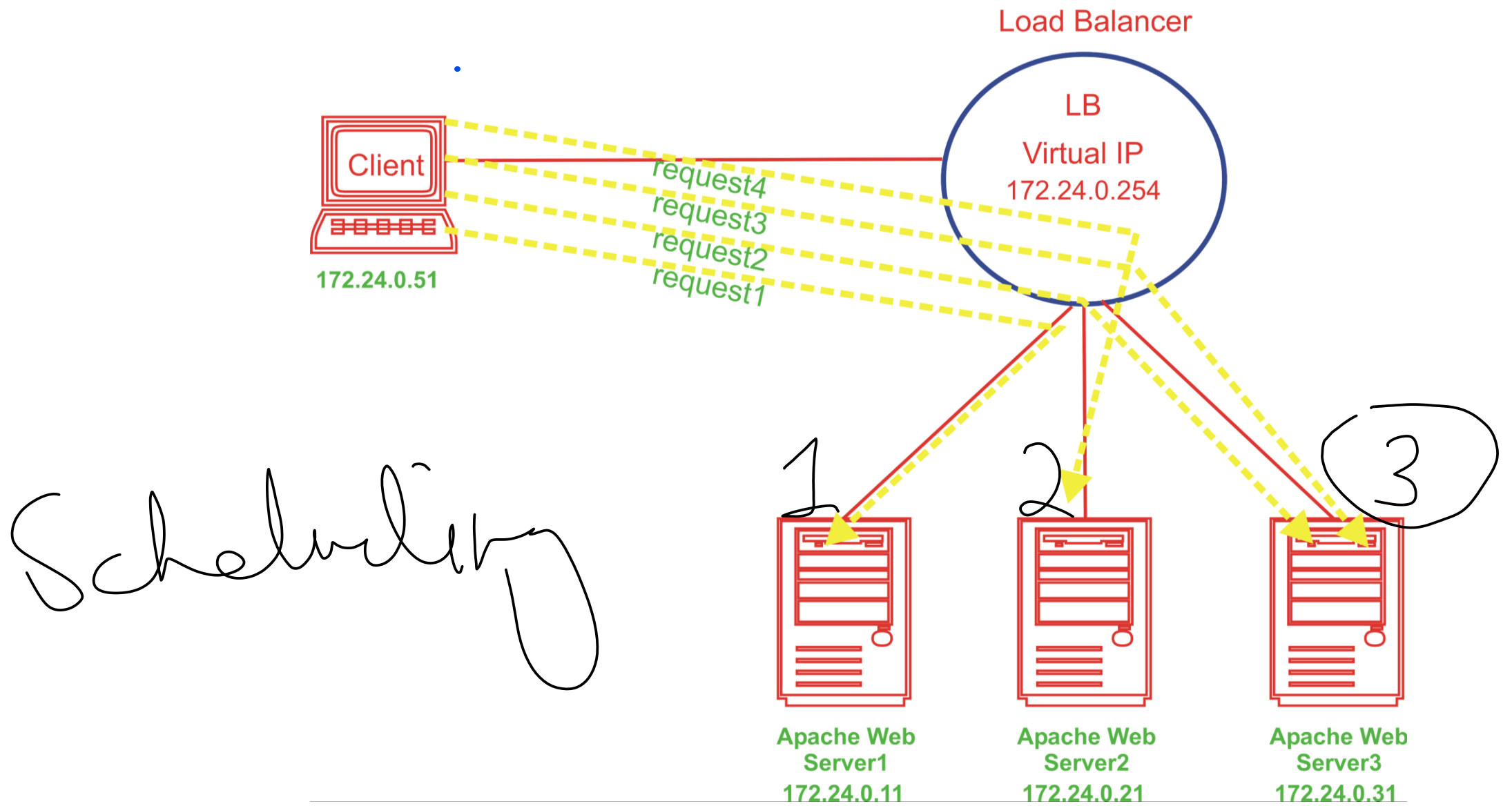Client

172.24.0.51

LB

Virtual IP

172.24.0.254

request4

request3

request2

request1

Scheduling

1

2

3

Apache Web
Server1

172.24.0.11

Apache Web
Server2

172.24.0.21

Apache Web
Server3

172.24.0.31
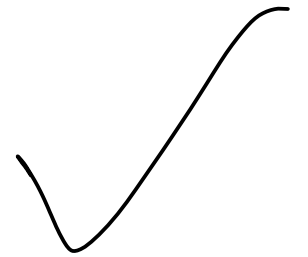
Server Connections LB Strategy

Load Balancer

LB

Virtual IP
172.24.0.254

Server1:10
Server2:15
Server3:20

Client

172.24.0.51

request1

1

2

3

Apache Web
Server1
172.24.0.11
connections:10

Apache Web
Server2
172.24.0.21
connections:15

Apache Web
Server3
172.24.0.31
connections:20
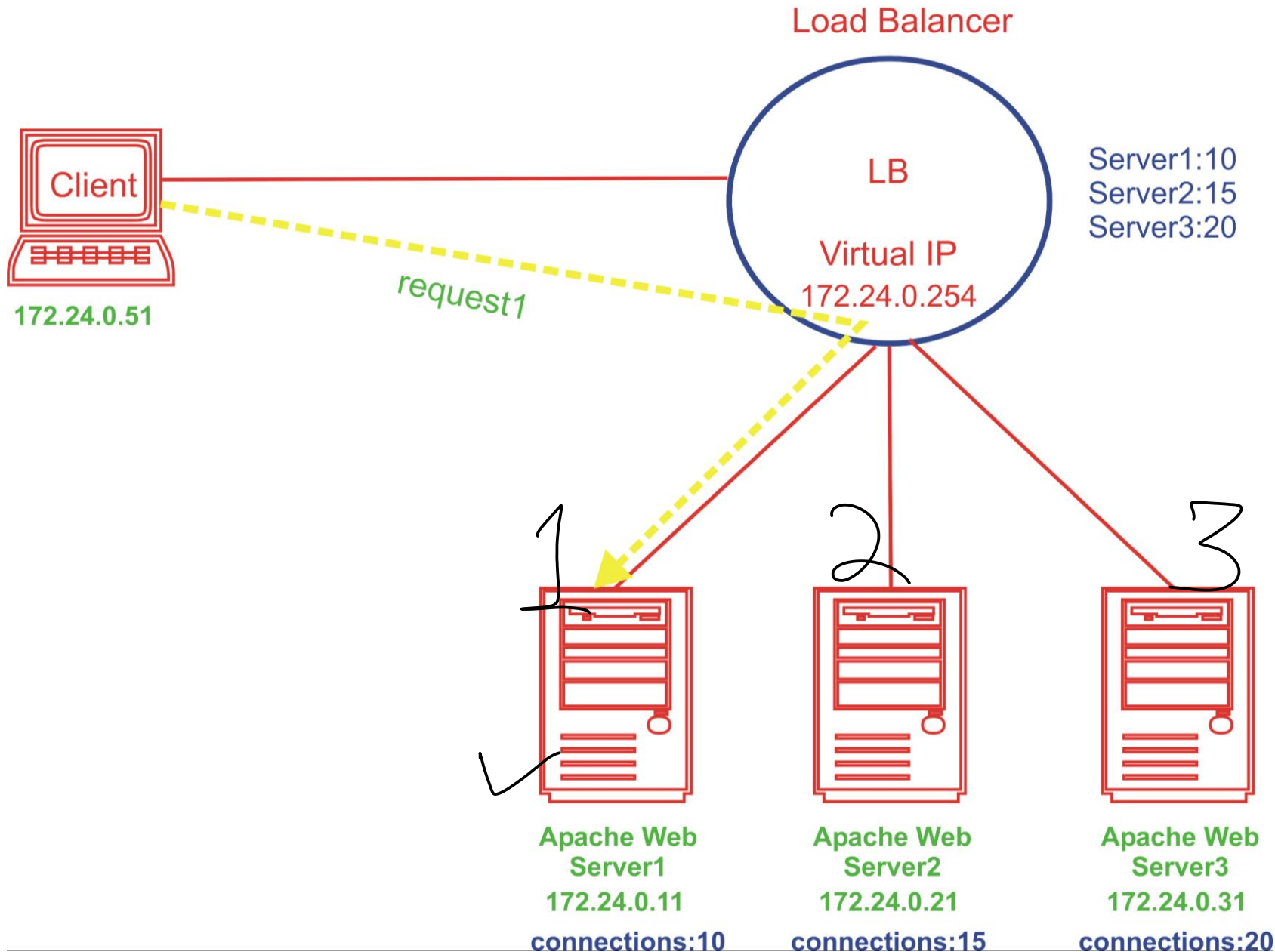
Server Load LB Strategy

Health
Monitor

Monitoring

SNS

Cloud Watch

CPU Utilization ≥ 5%

Load Balancer

Client
172.24.0.51

request1

LB

Virtual IP
172.24.0.254

Server1:35%
Server2:25%
Server3:15%

Apache Web
Server1
172.24.0.11
load:35%

Apache Web
Server2
172.24.0.21
load:25%

Apache Web
Server3
172.24.0.31
load:15%

5 Path Based Routing ✓

Load Balancer

LB

Virtual IP

172.24.0.254

target group 1: /
target group 2: /demo

Client

172.24.0.51

http://172.24.0.254/demo

http://172.24.0.254

http://172.24.0.254

Group-1 /

Group 2 /demo/

target group 1

target group 2

Apache Web Server1
172.24.0.11

Apache Web Server2
172.24.0.21

Apache Web Server3
172.24.0.31

Week-7-a

Load Balancers

(1) **ALB**
Application Load Balancer
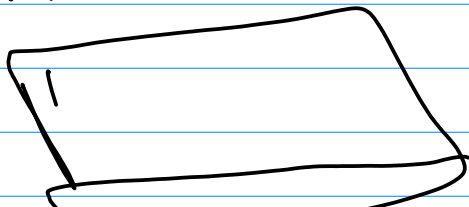
(2) **NLB**
Network Level Balancer

OSI Model

Application
ALB
Layer # 7

HTTP / HTTPS

www.alb.com

N L B
Layer # 4

Transport

TCP, UDP

- High Performance
- Low Latency

Online Shopping System

abc

abc
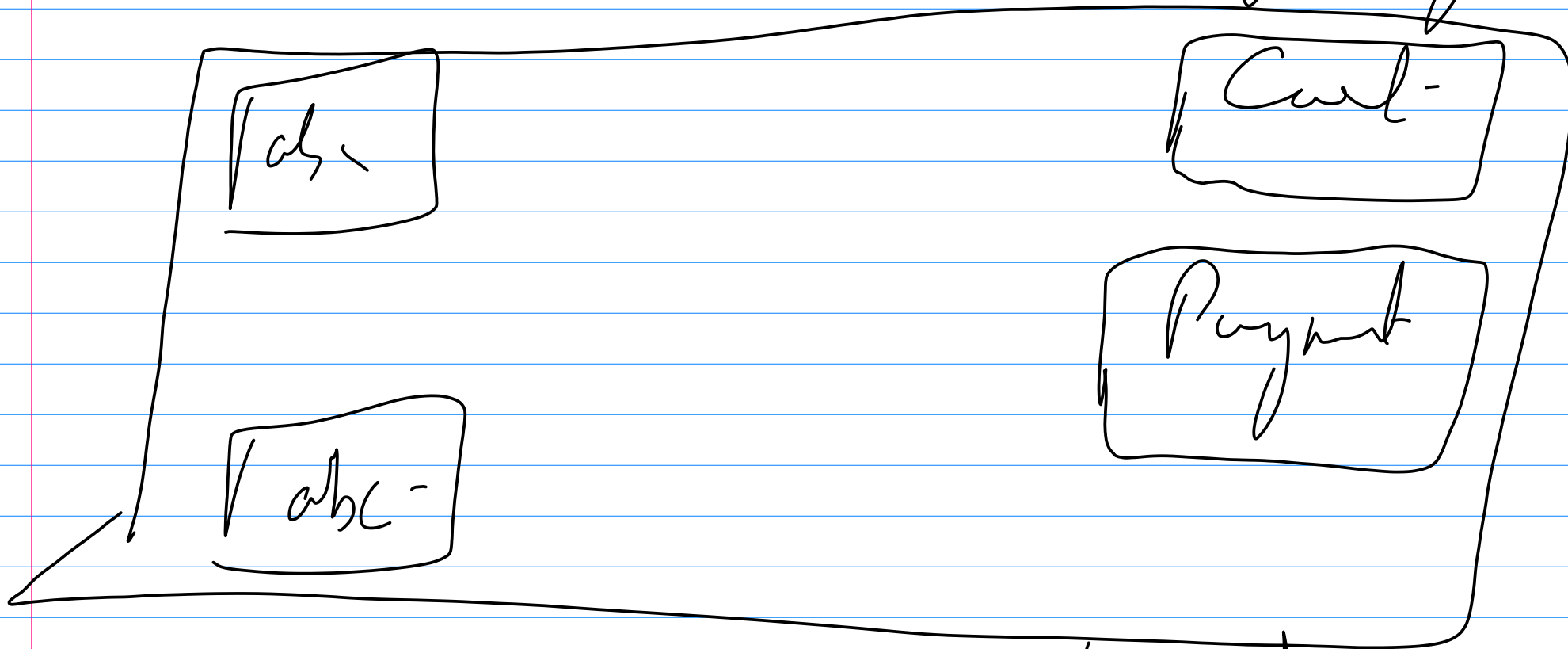
Cart

Payment

nnn - abc.com / cart

nnn - abc.com / payment

Week - 7 - b ✓

Previous Class ⟶ Load
Balance
Eq
Types

Today Class

↳ ALB , NLB

Path - Based Routing

Health Check

LB

S1 — Healthy

S2 — Un-healthy

S3

ping

ping

a
c2
c3
c4