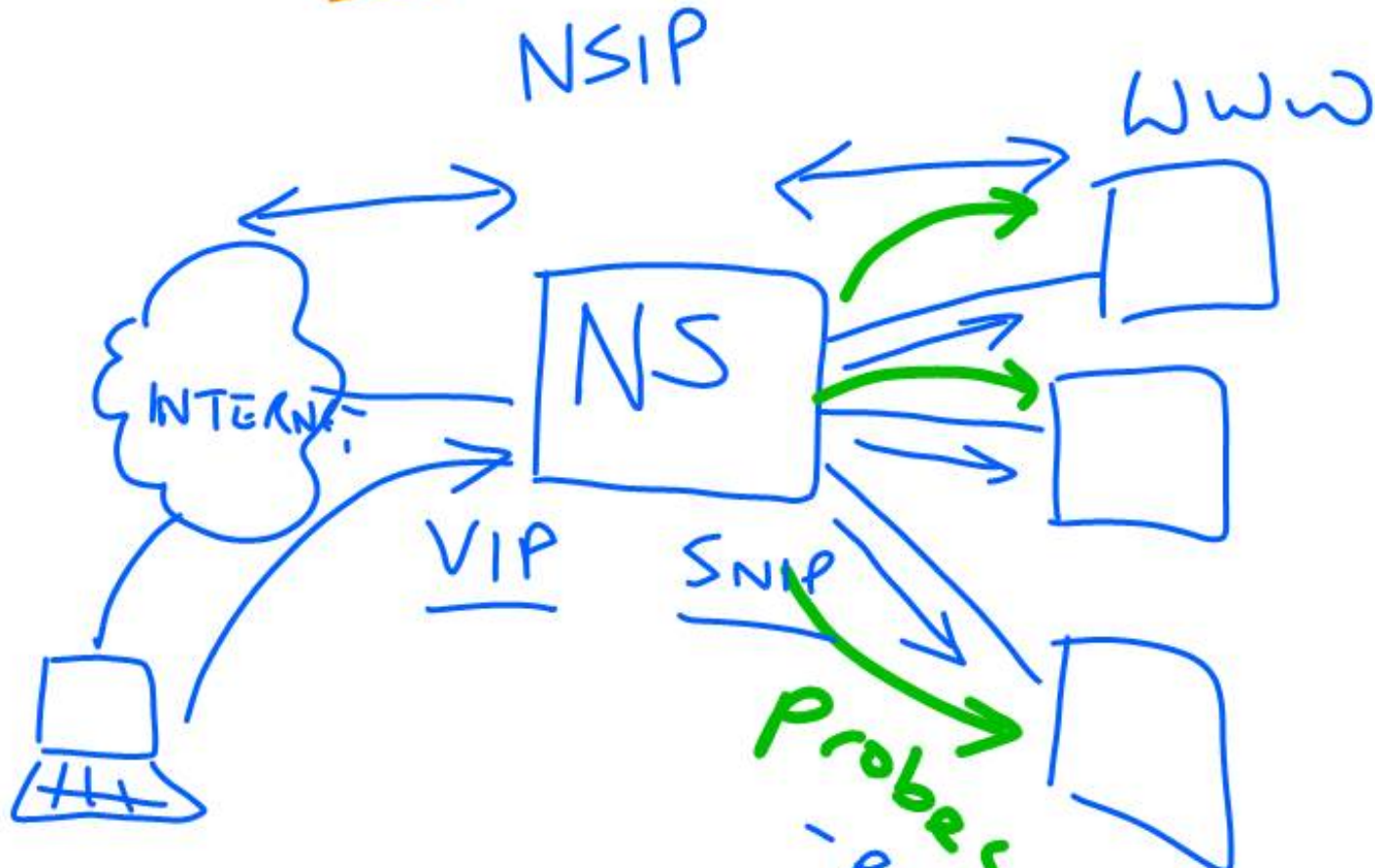


# LOAD BALANCING



http://www.xyz.com

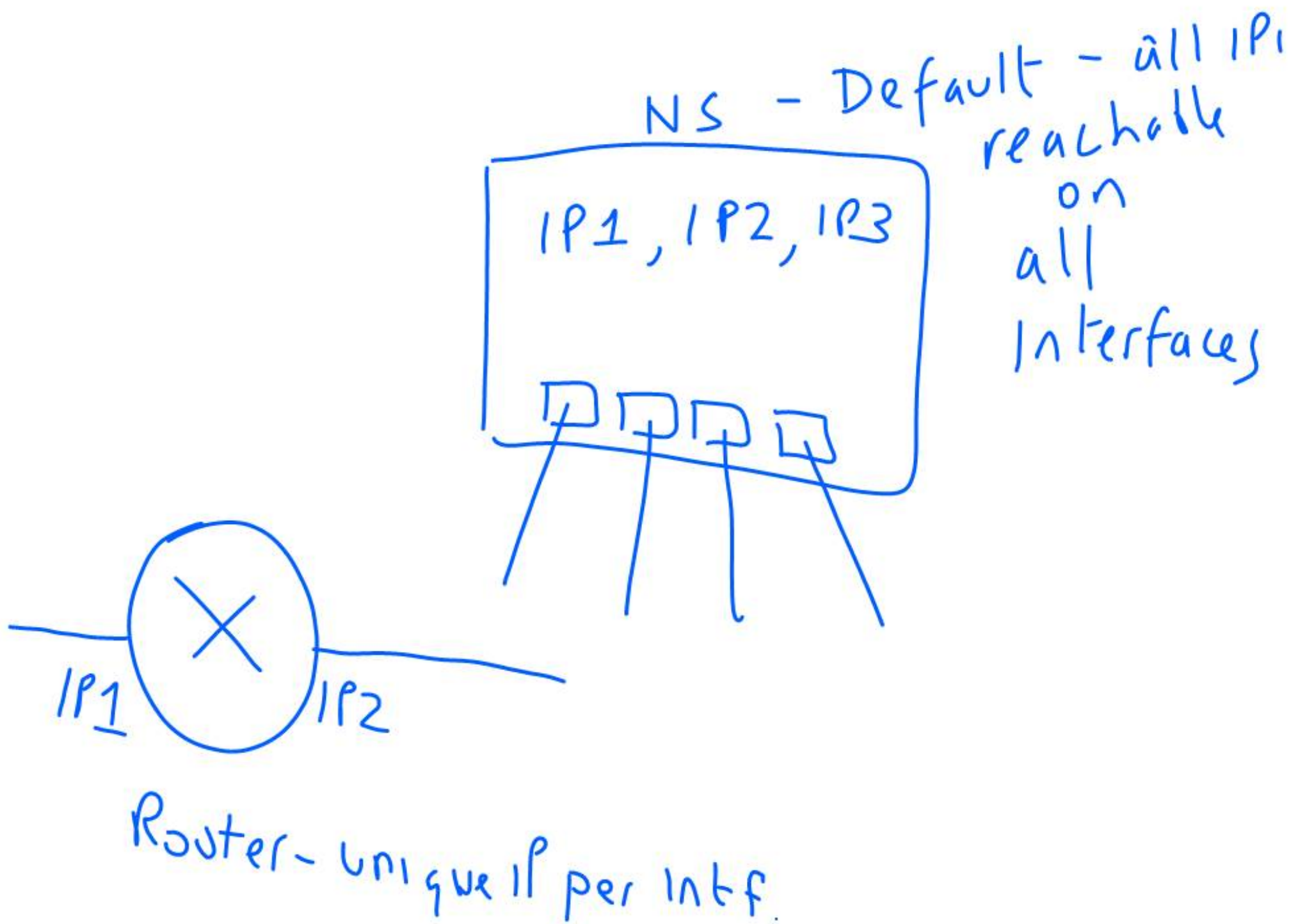
Probes  
-port HTTP

ssh Quick config backup

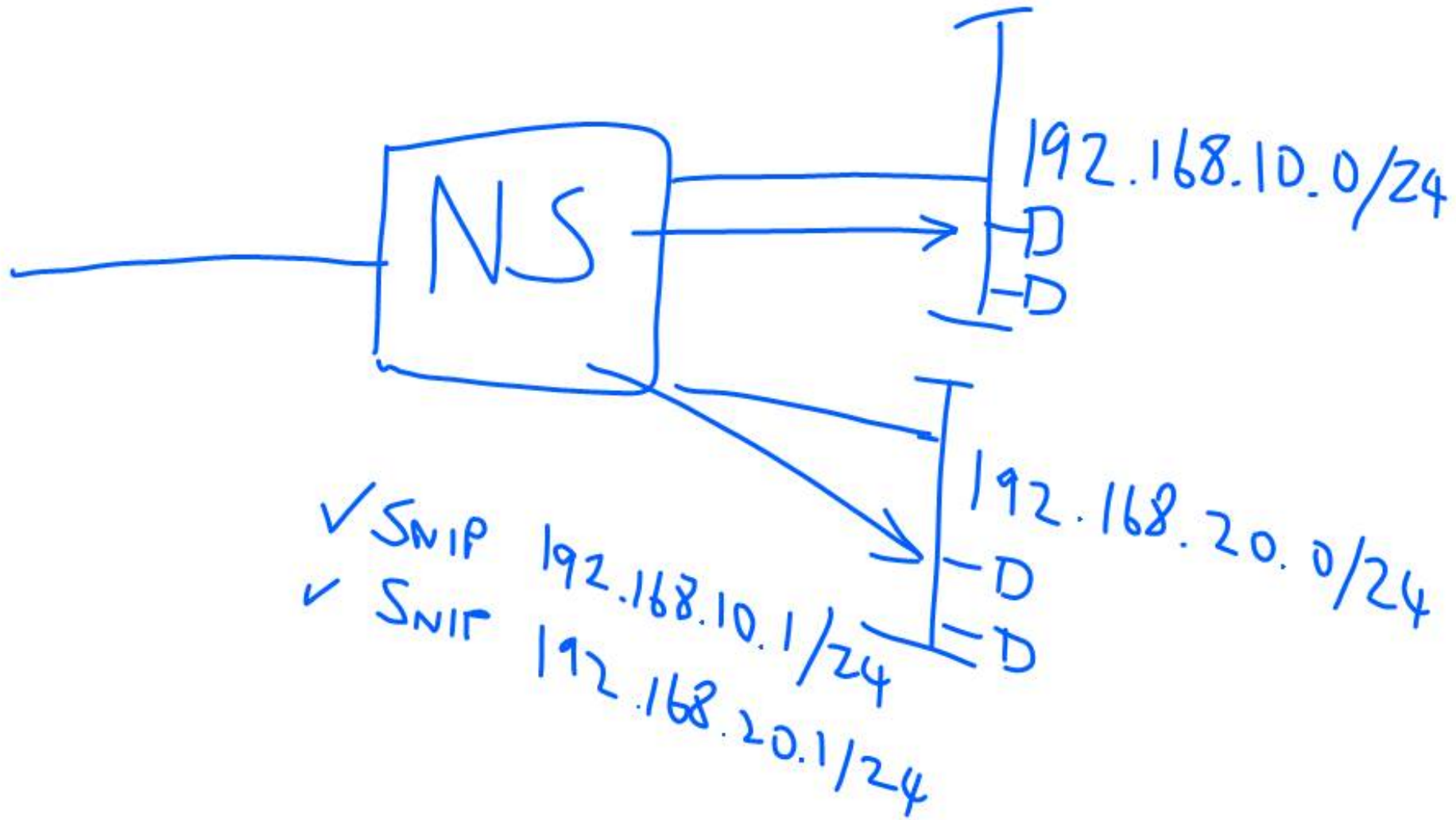
shell

cd /nsconfig

cp ns.conf ns.conf.afterlab1

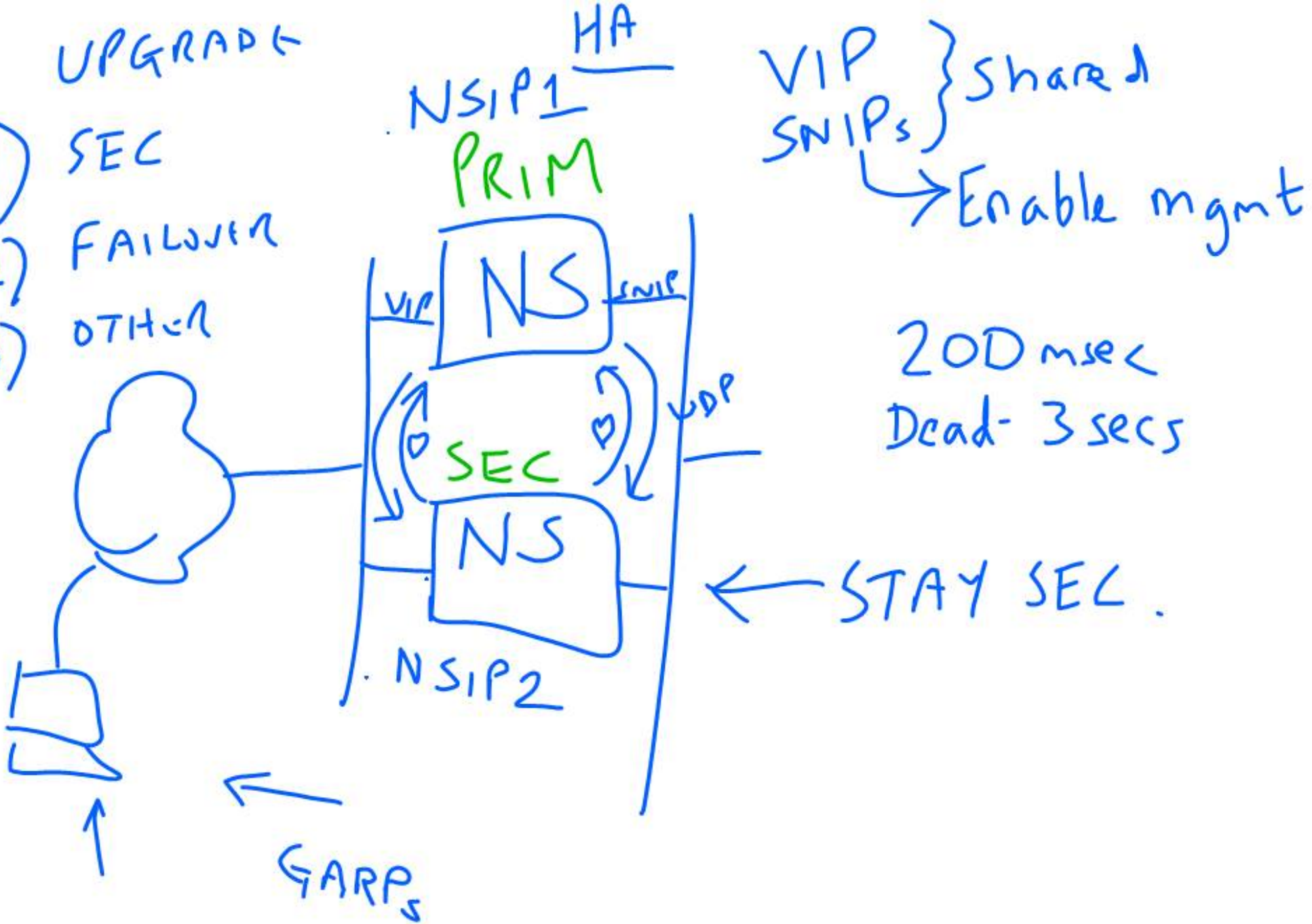


SNIP per directly attached subnet

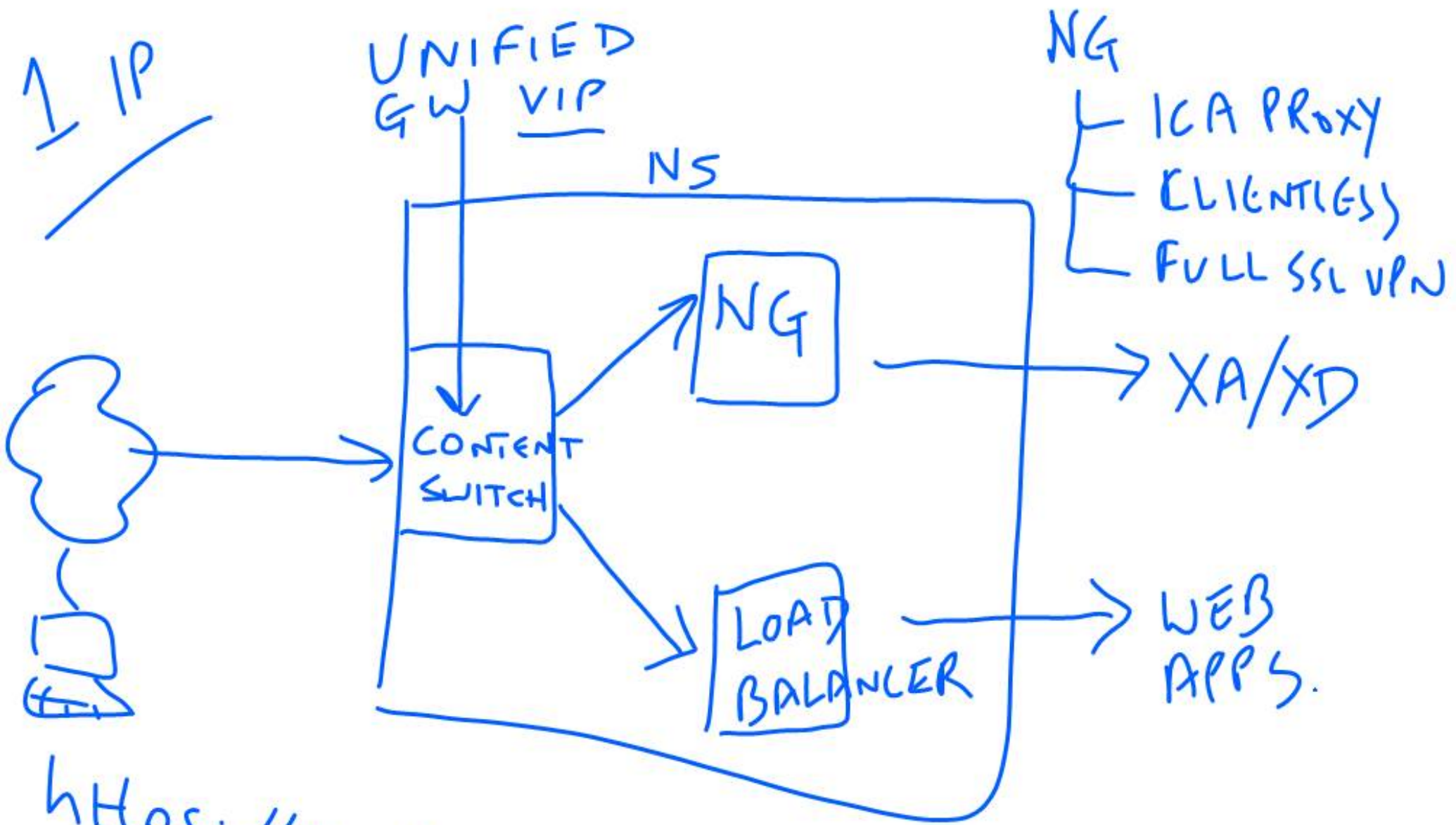


# UPGRADE

- 1) SEC
- 2) FAILOVER
- 3) OTHER

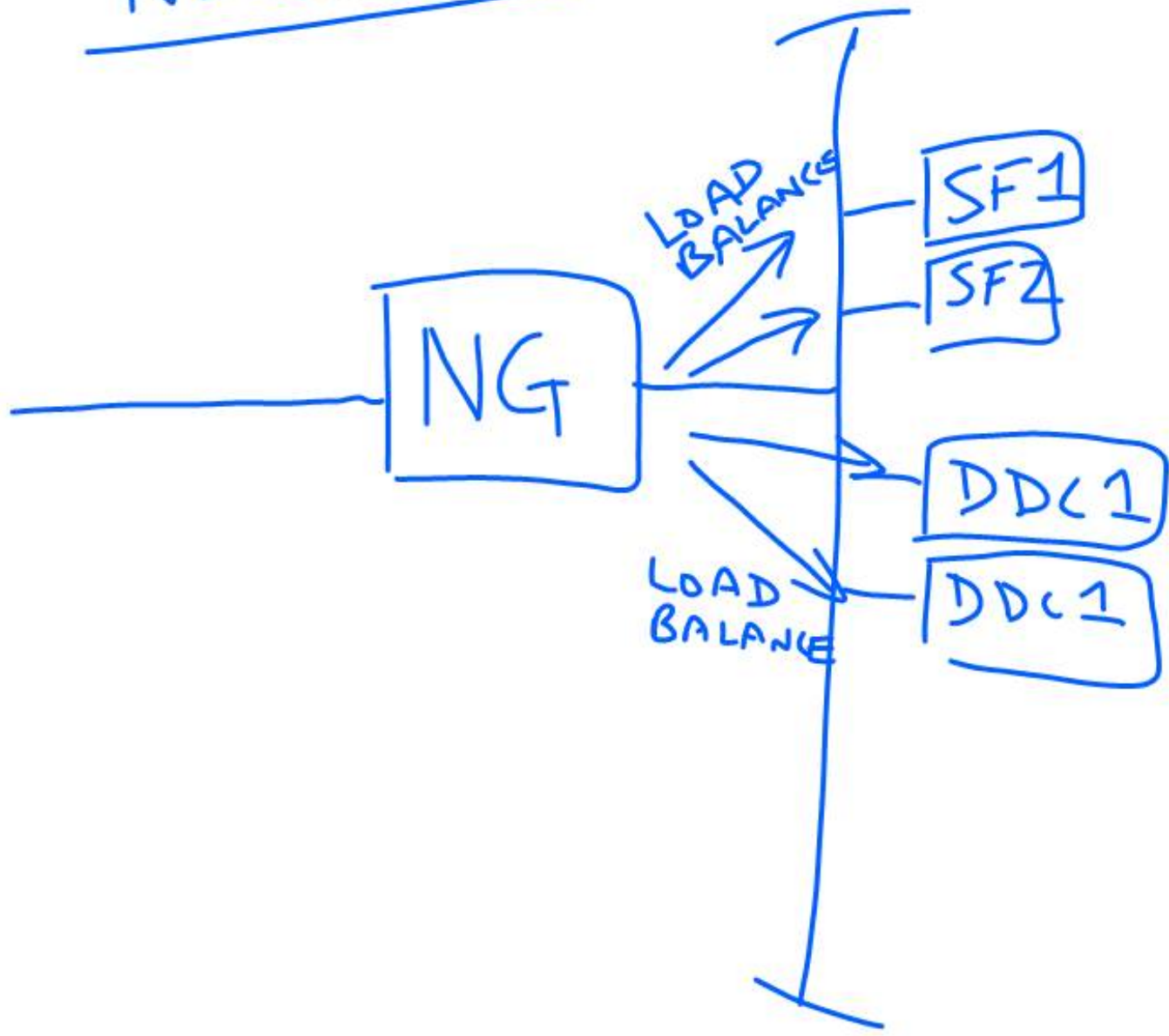


GARPs



<https://ugwtraining.lab> → VIP

# NS can Load balance SF & XD







http://www.xyz.com/home.php

↑  
PROT

hostname path

GET /home.php

GET /

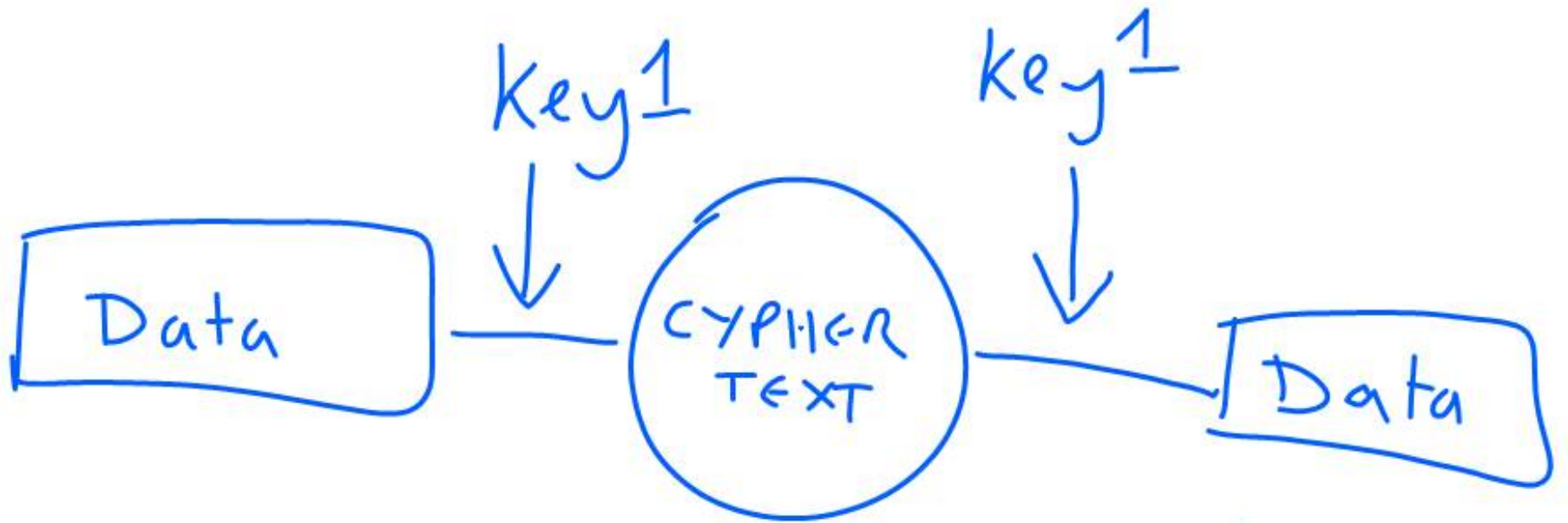
Success OK (200)

ECV - can look for string

web page

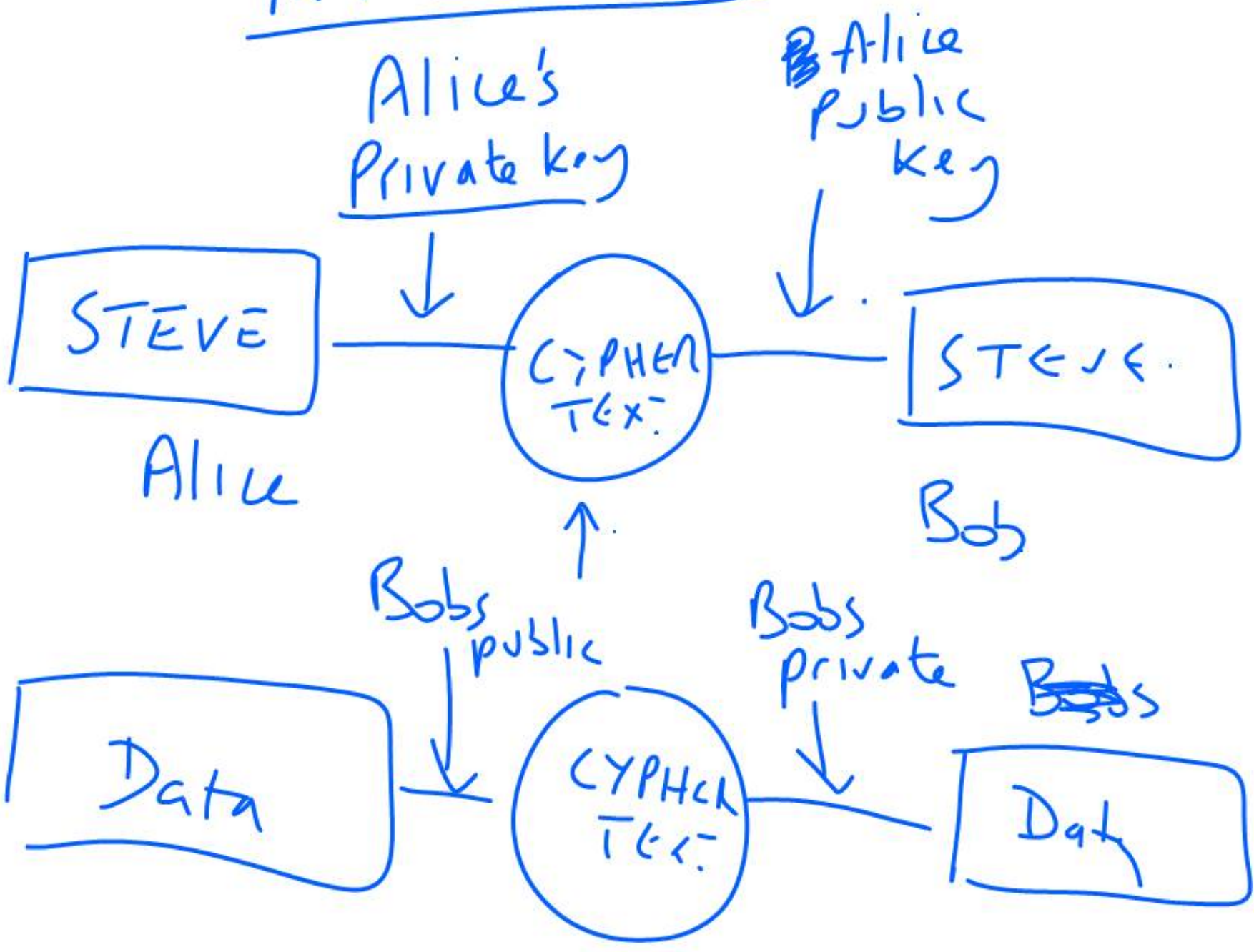
SQL: OK

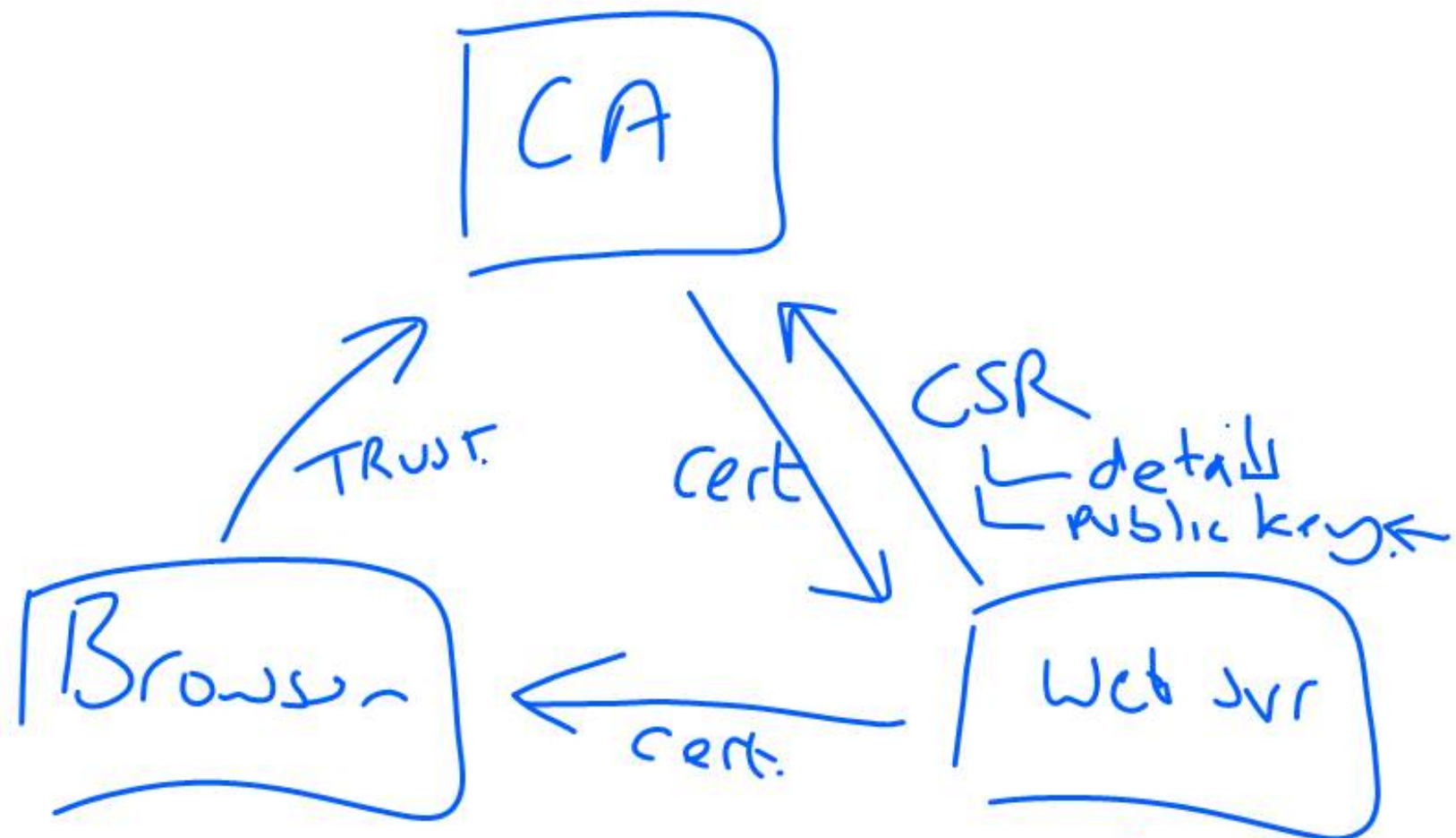
# SYMMETRIC



Cavium chips

# ASYMMETRIC





create pub/priv.  
FQDN  
PUBLIC KEY

The Process

Key file

/nsconfig/ssl  
FILE

CSR

FILE

submit to CA

CERT

FILE

SSL-LB  
VSUR 443

CERT, KEY PAIR  
OBJECT

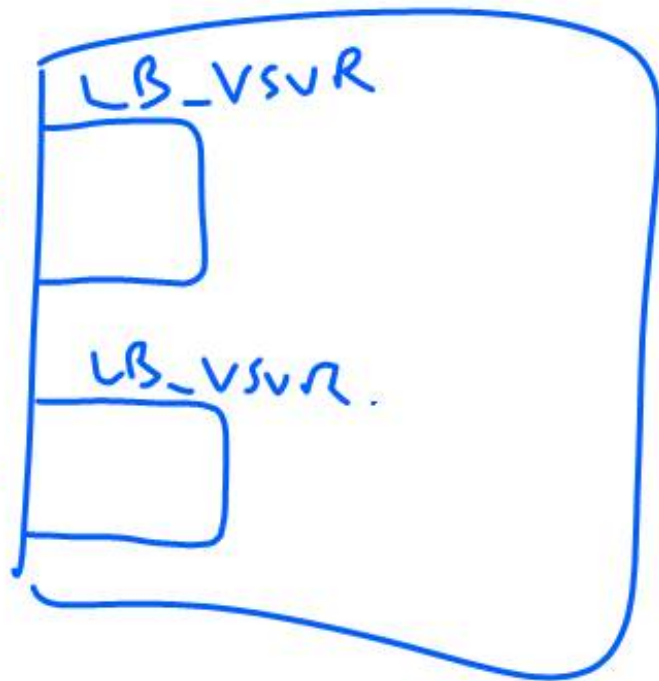
Bind

Can have multiple vsvrs on same IP  
if ports unique

NS

VIP 172.16.0.15  
PROT/PORT  
HTTP 80

172.16.0.15  
HTTPS/443

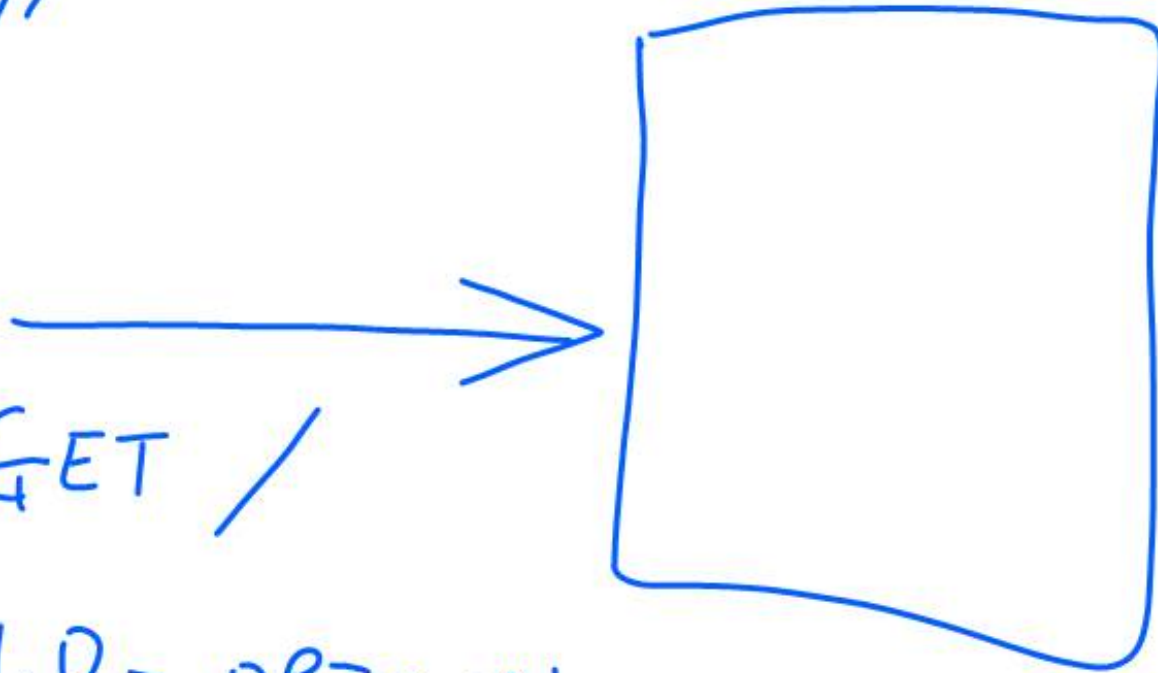


Use of host-headers

IP

WWW

http://www.abc.com



www.abc.com  
www.xyz.com

GET /

HTTP 1.0 - OPTIONAL  
HTTP HEADER

HOST

www.abc.com --

HTTP 1.1 - MANDATORY



SSL 1.0<sup>x</sup> 2.0<sup>x</sup> 3.0<sup>x</sup>

→ TLS 1.0 1.1 1.2

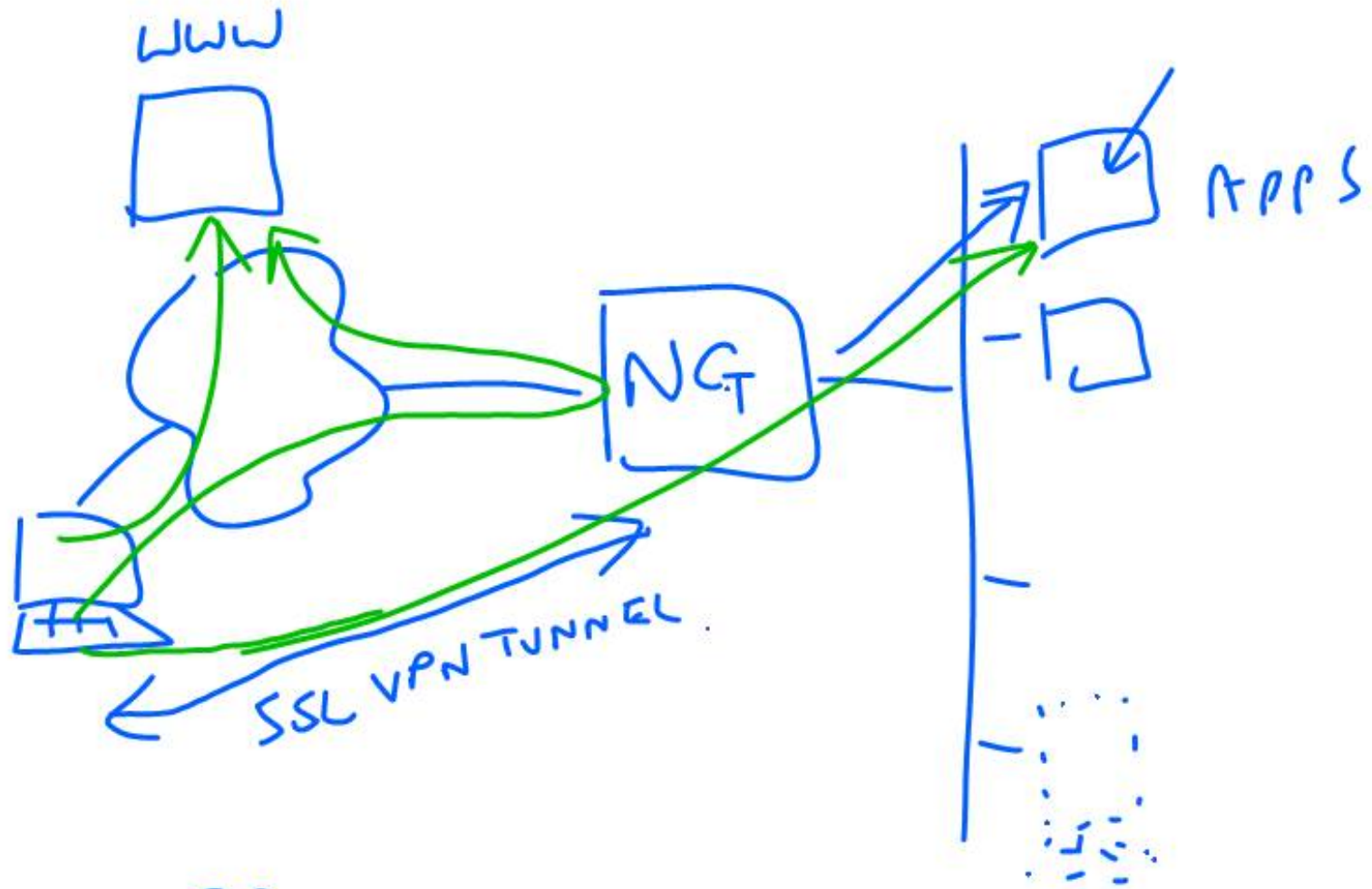
↑  
?

Debatable

x = Not rec

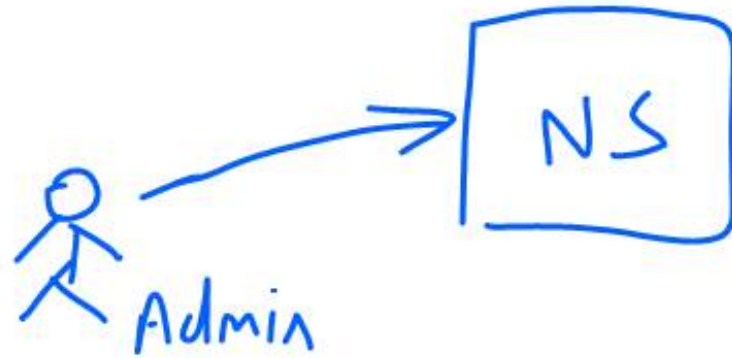
✓ = OK

# SPLIT TUNNEL - OFTEN NOT REL



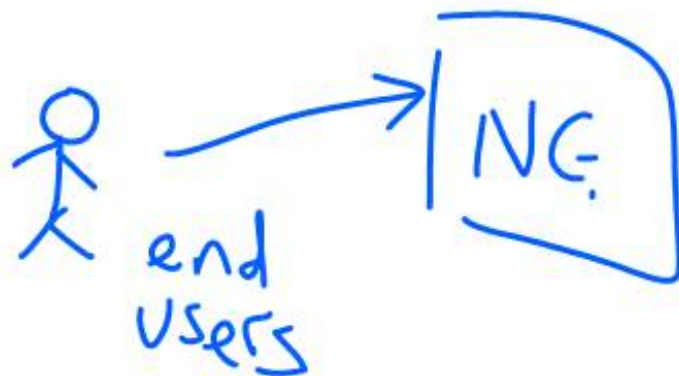
SPLIT TUNNEL

# SYSTEM

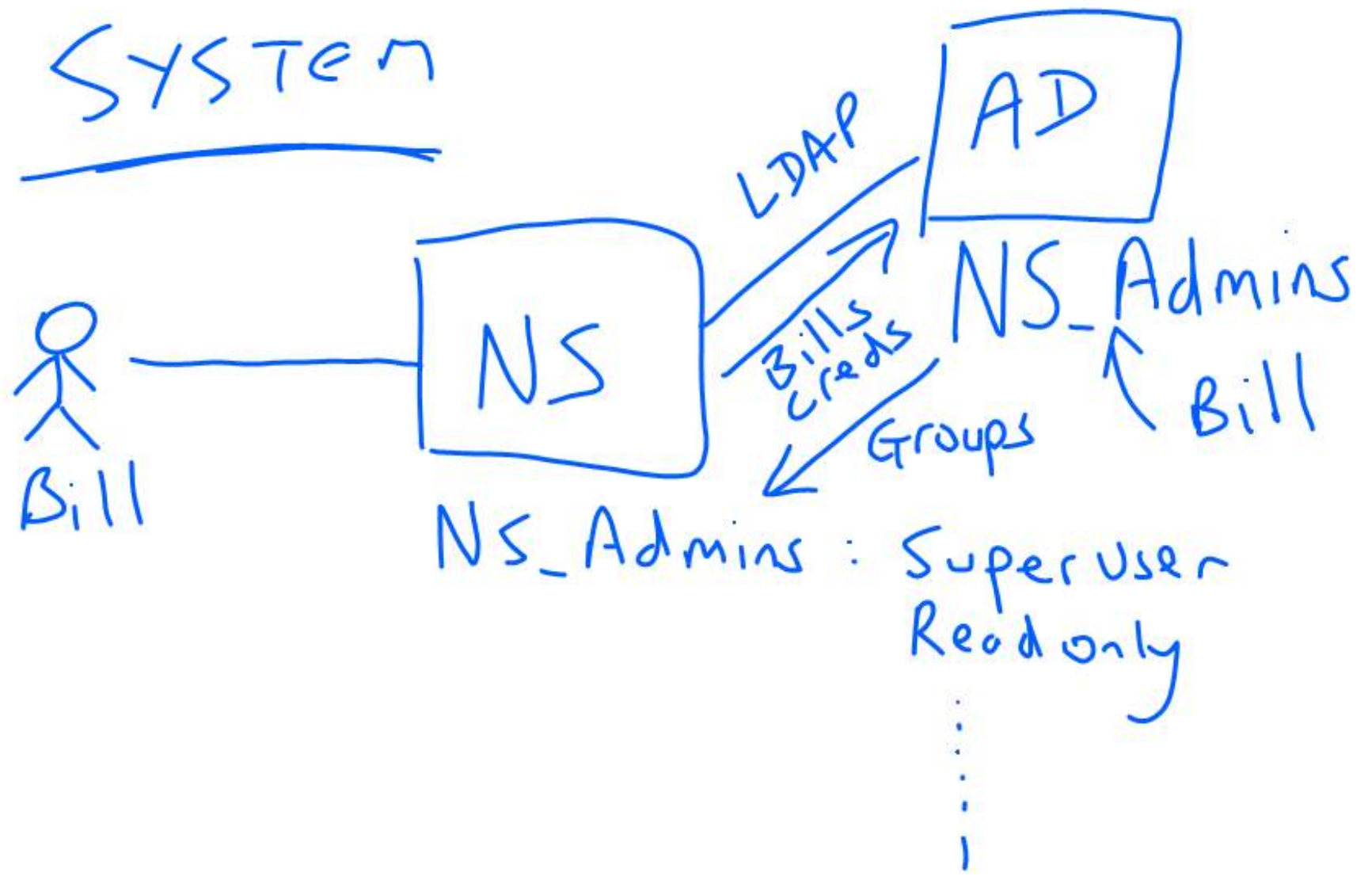


2 uses  
of  
authentication

# AAA



# SYSTEM



# Reg Exp

$\wedge$  Fred

matches "Fred is here"  
but not "I am Fred"

$\wedge$  123

matches 123 not 321

1\*

matches

1 or 11 or 111 ""

1+

"

1 11 but ""  
not

- Any char.

/s white space

# NG POLICIES



PRIORITIES <sup>OVERRIDE</sup>  
BIND POINTS

LOWEST WINS.

	<u>PRIORITY</u>
POL 1	10
POL 2	20

ICA PROXY : ON  
CLIENTLESS : ON  
FULL SSL VPN - NULL PROFILE

```
graph TD; Beats --> ICA_PROXY[ICA PROXY : ON]; Beats --> CLIENTLESS[CLIENTLESS : ON]; Beats --> FULL_SSL_VPN[FULL SSL VPN - NULL PROFILE];
```

CLIENT CHOICES : ON or OFF

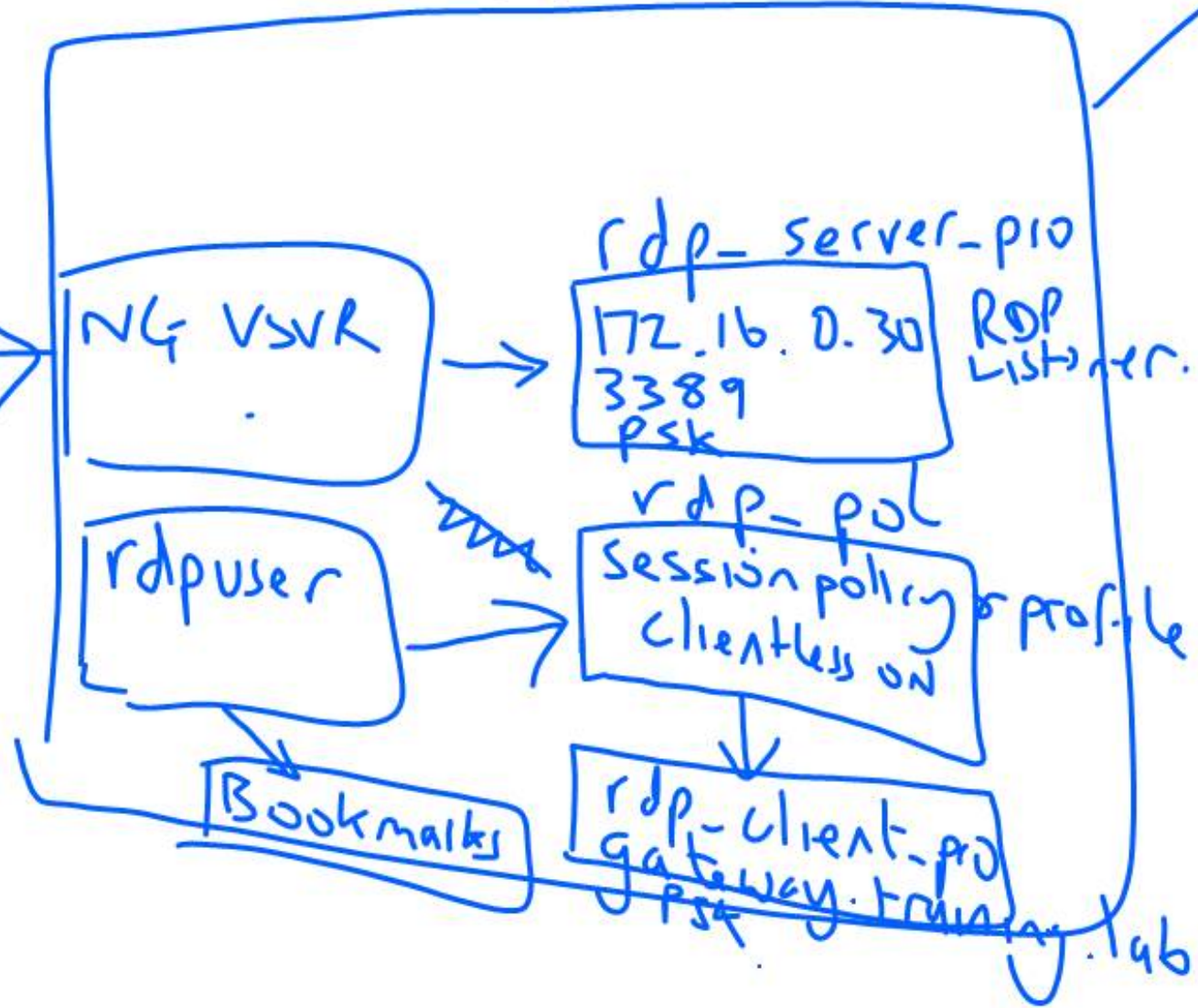


# RDP Proxy

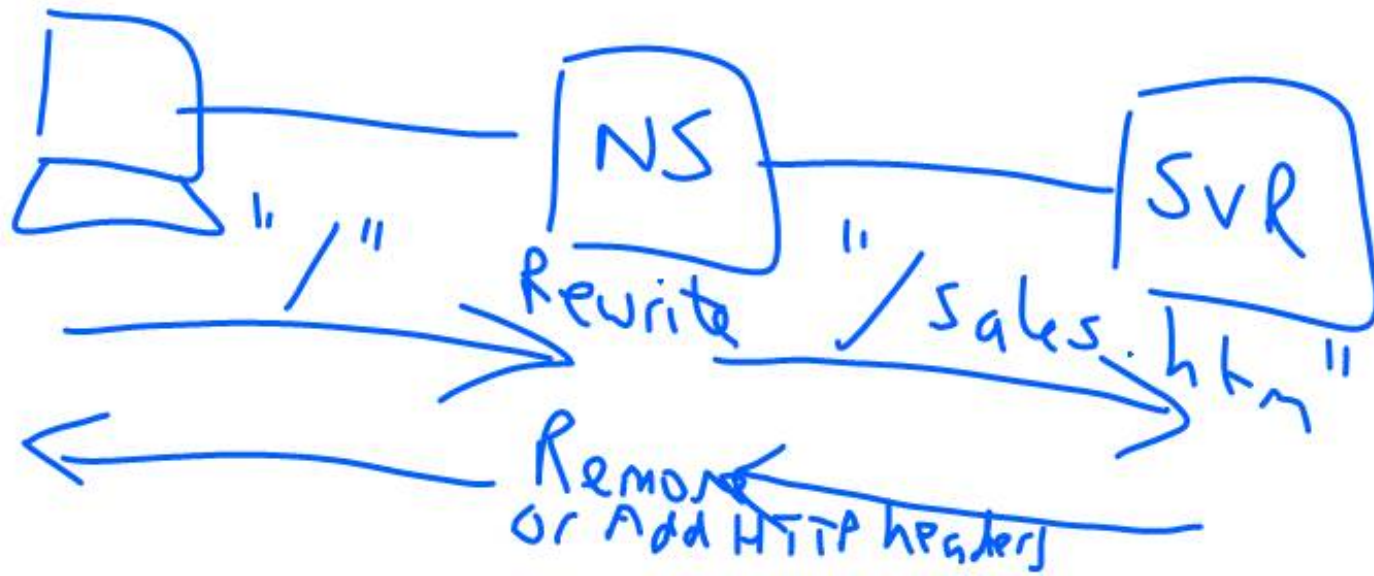
NS

AD

  
Citrixrdp



# Responder



# Binding

Netscaler  
policy  
bindings.

REQ

Override GLOBAL

LB vsur

CS vsur

GLOBAL

- 10 POL 1
- 20 POL 2
- 30 POL 3

END/NEXT  
GO TO 30

RESP

Override global

LB vsur

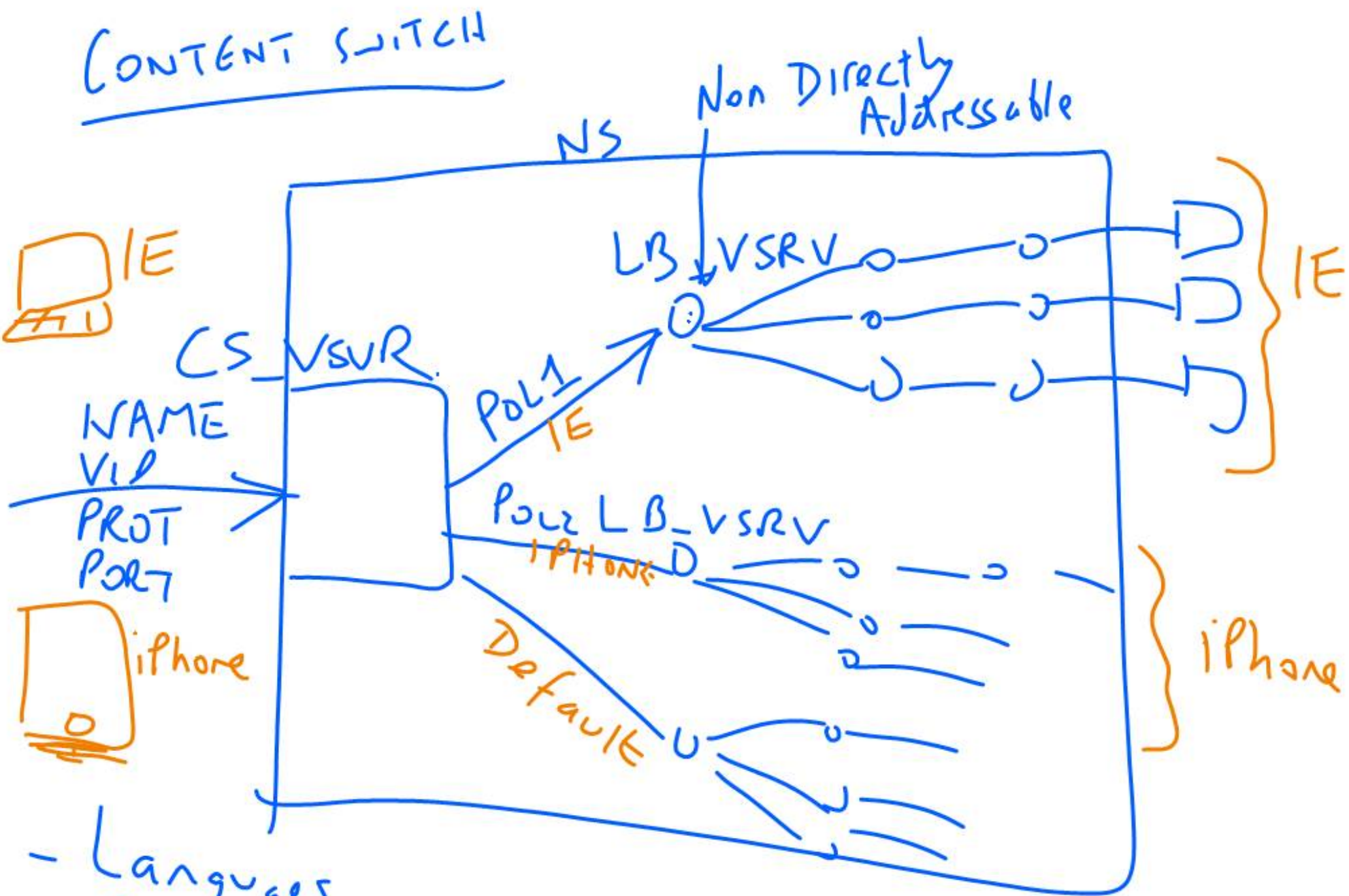
CS vsur

Global

## POLICY LABEL

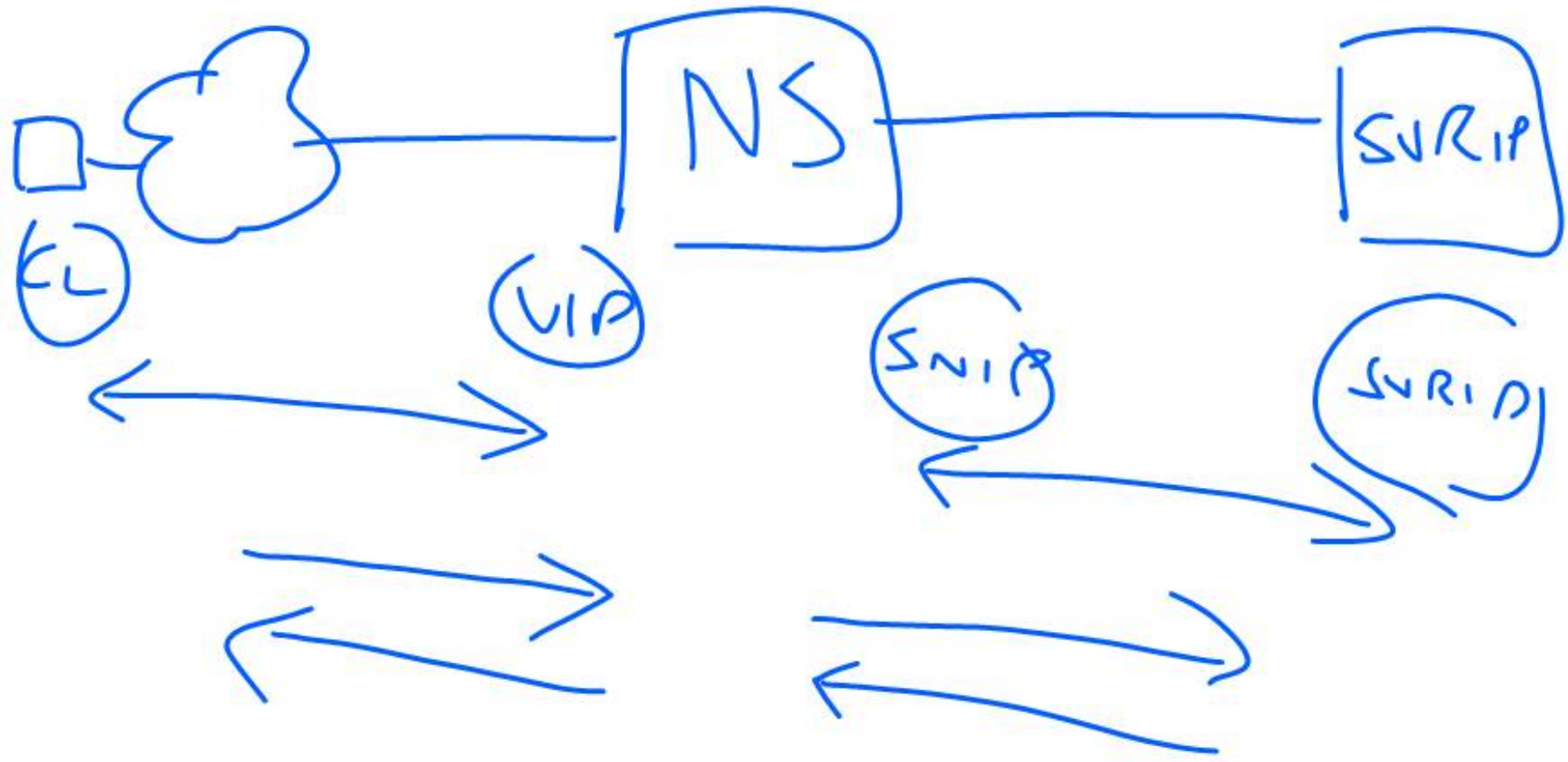
- 10 POL 1
- 20 POL 2
- 30 POL 3

# CONTENT SWITCH



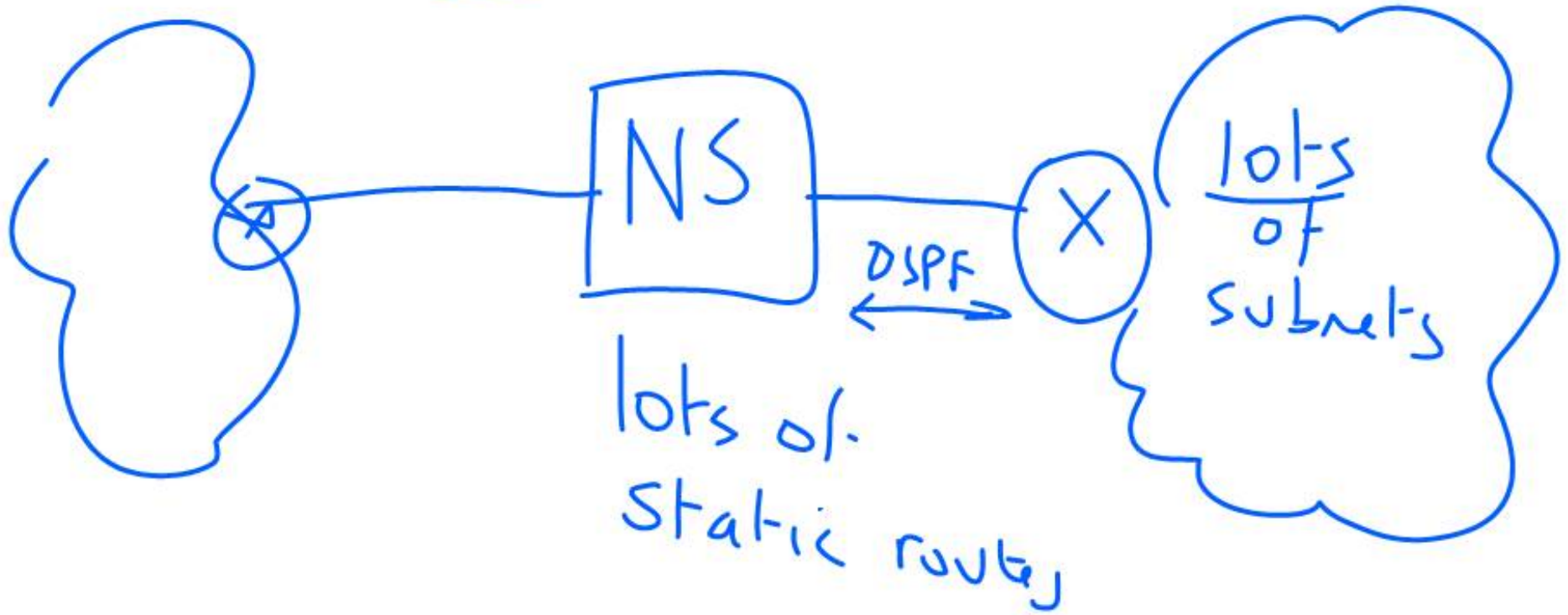
- Languages
- Prod/Test

Wireshark

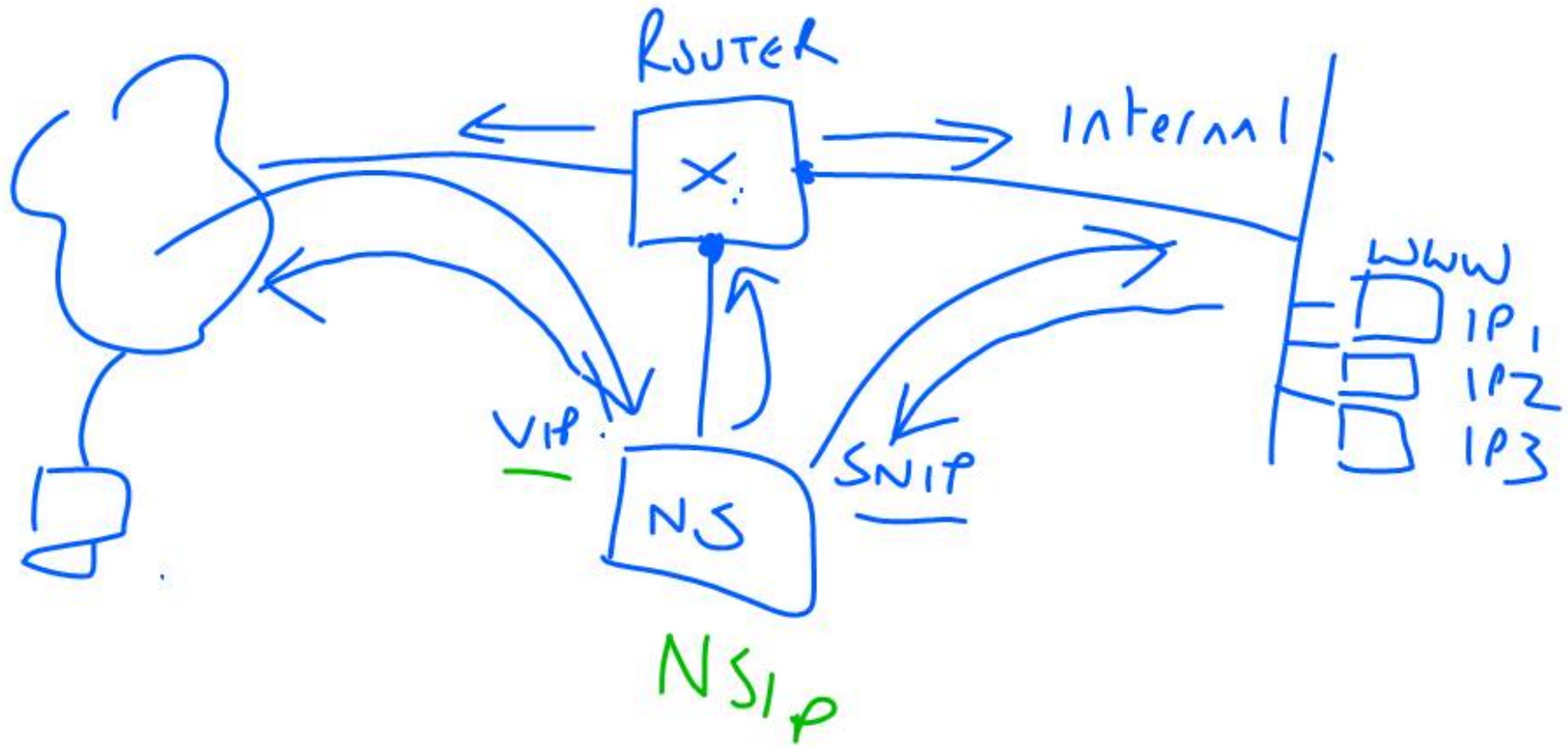


Sorry  
- out of order

# Dynamic Routes

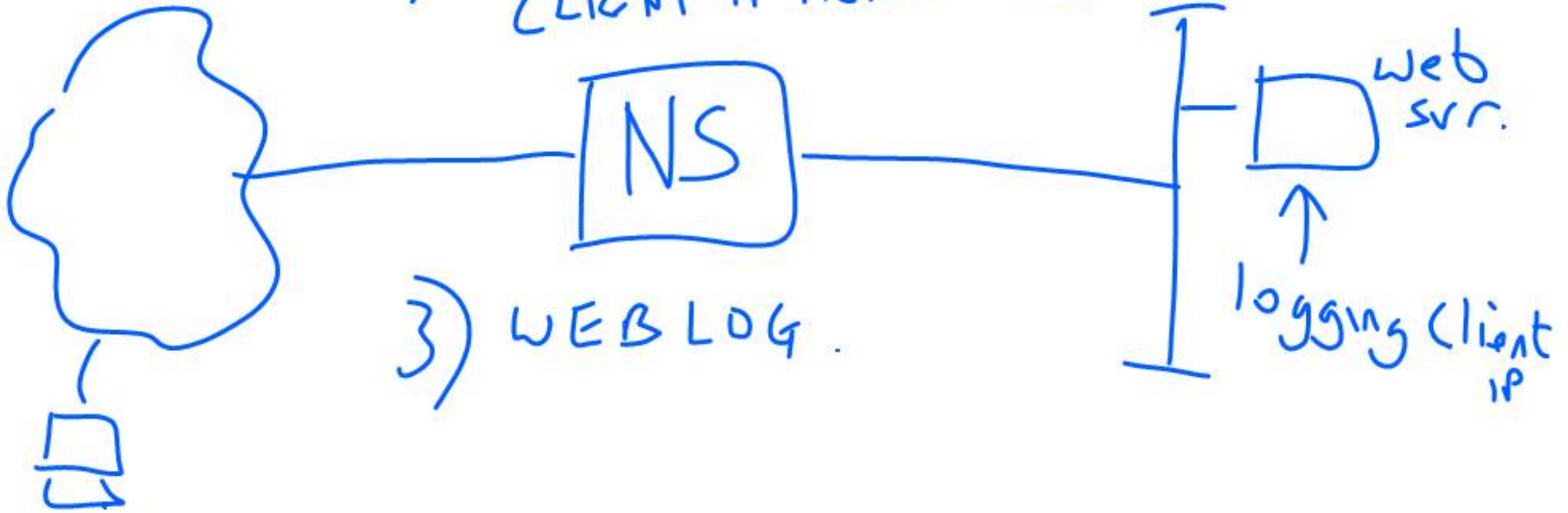


1 ARM



1) USIP mode (not rec)

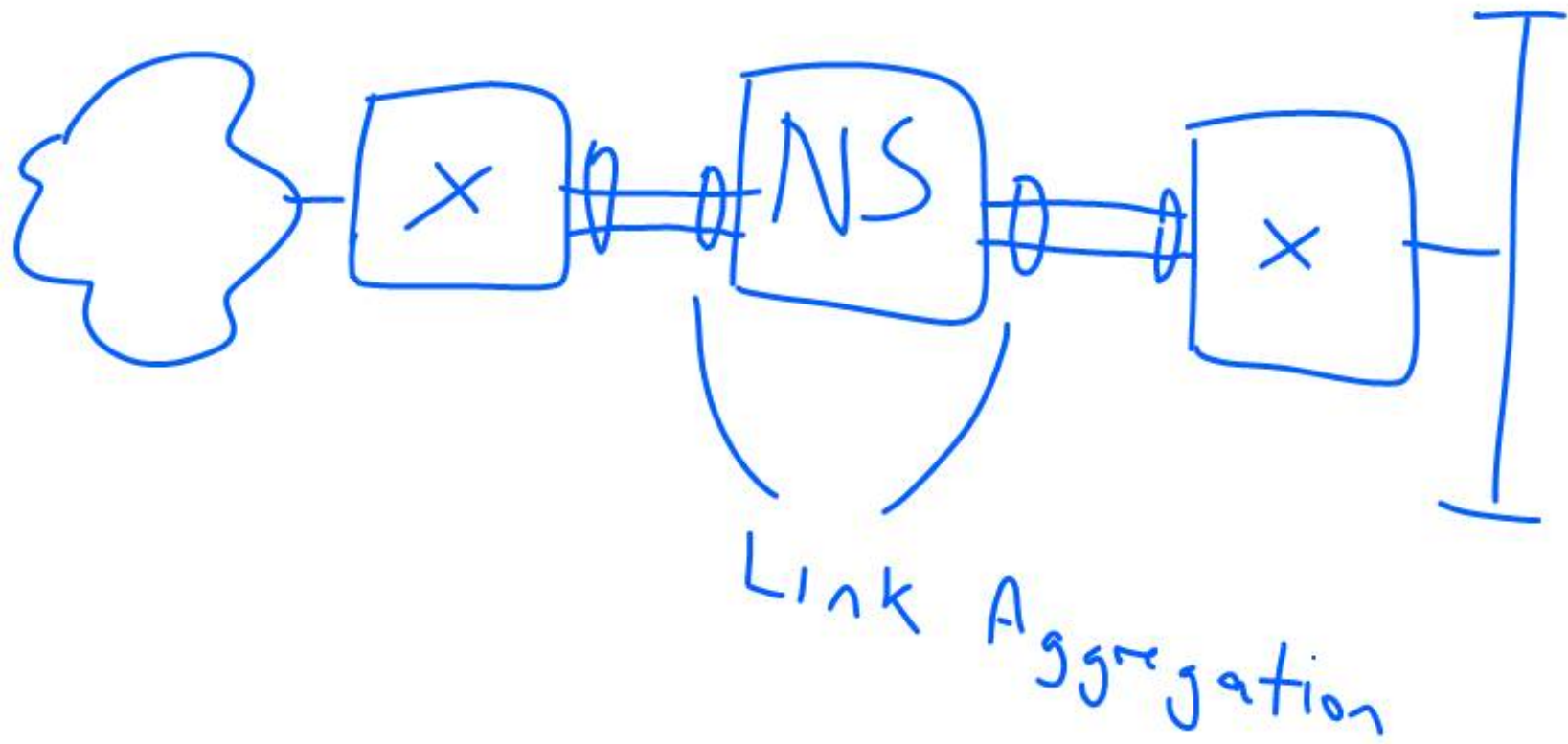
2) HTTP HEADER: CLIENT-IP=<CLIP>  
CLIENT IP HEADER INSERTION



3) WEBLOG.







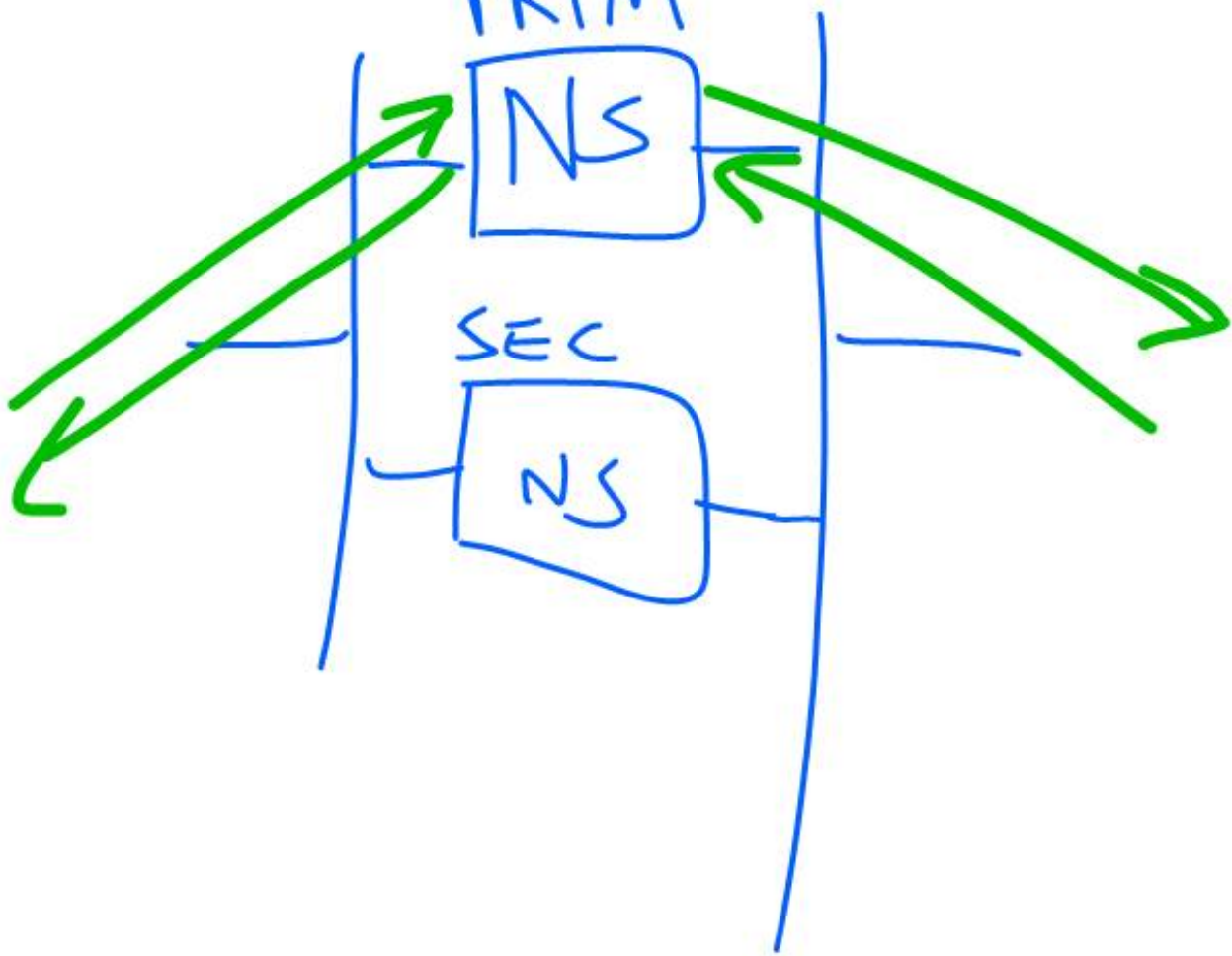
HA

PRIM

NS

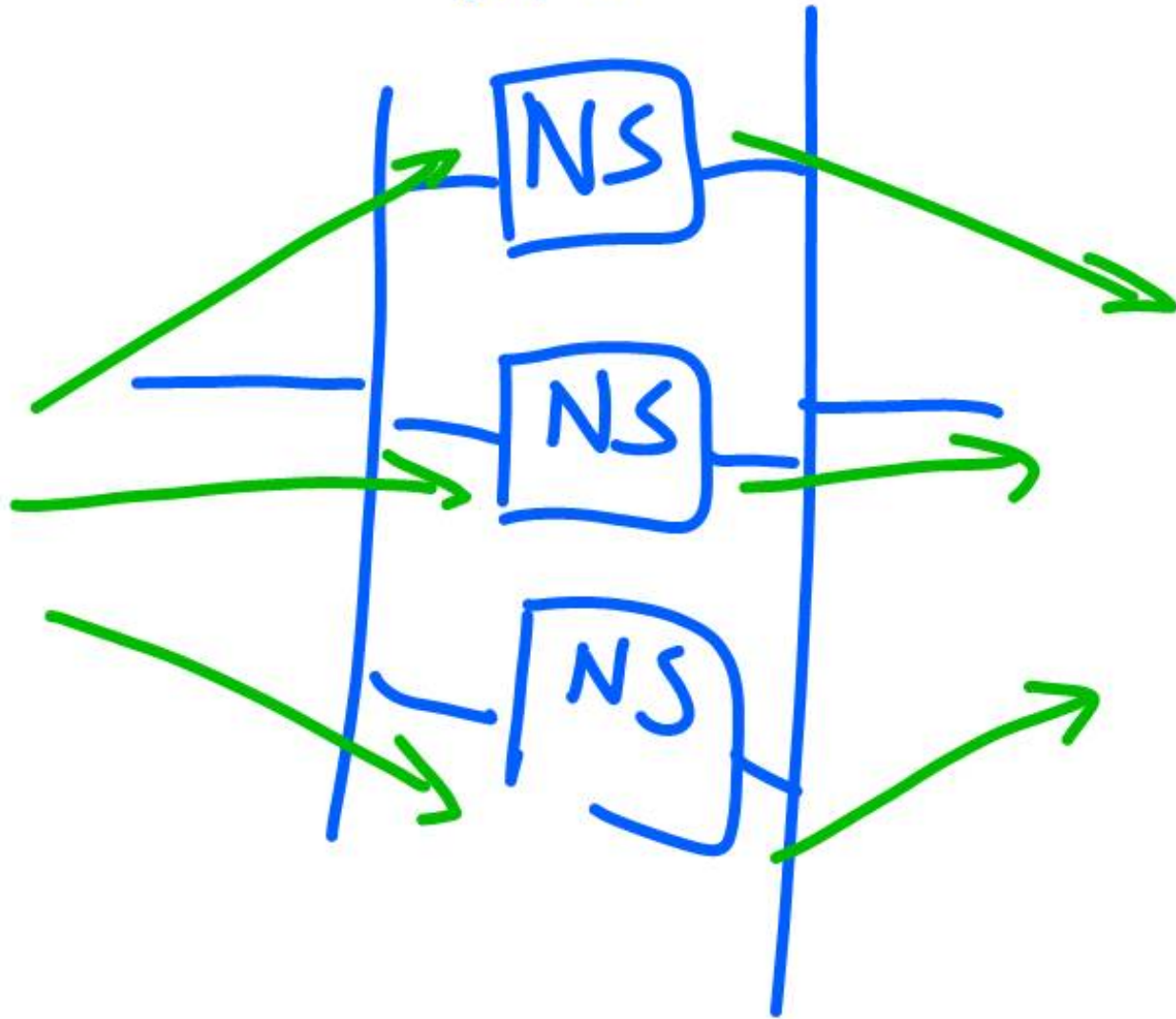
SEC

NS

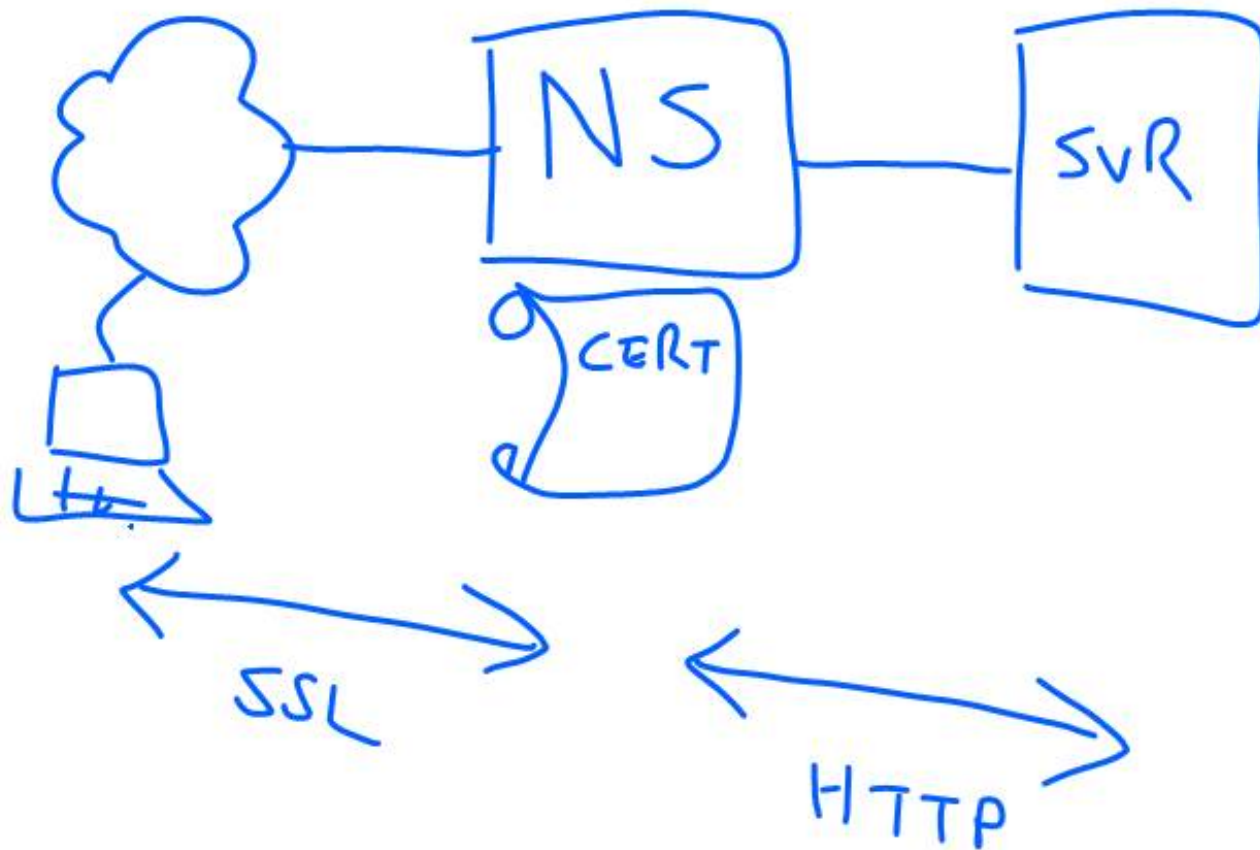


# CLUSTER

all Active



# SSL OFFLOAD



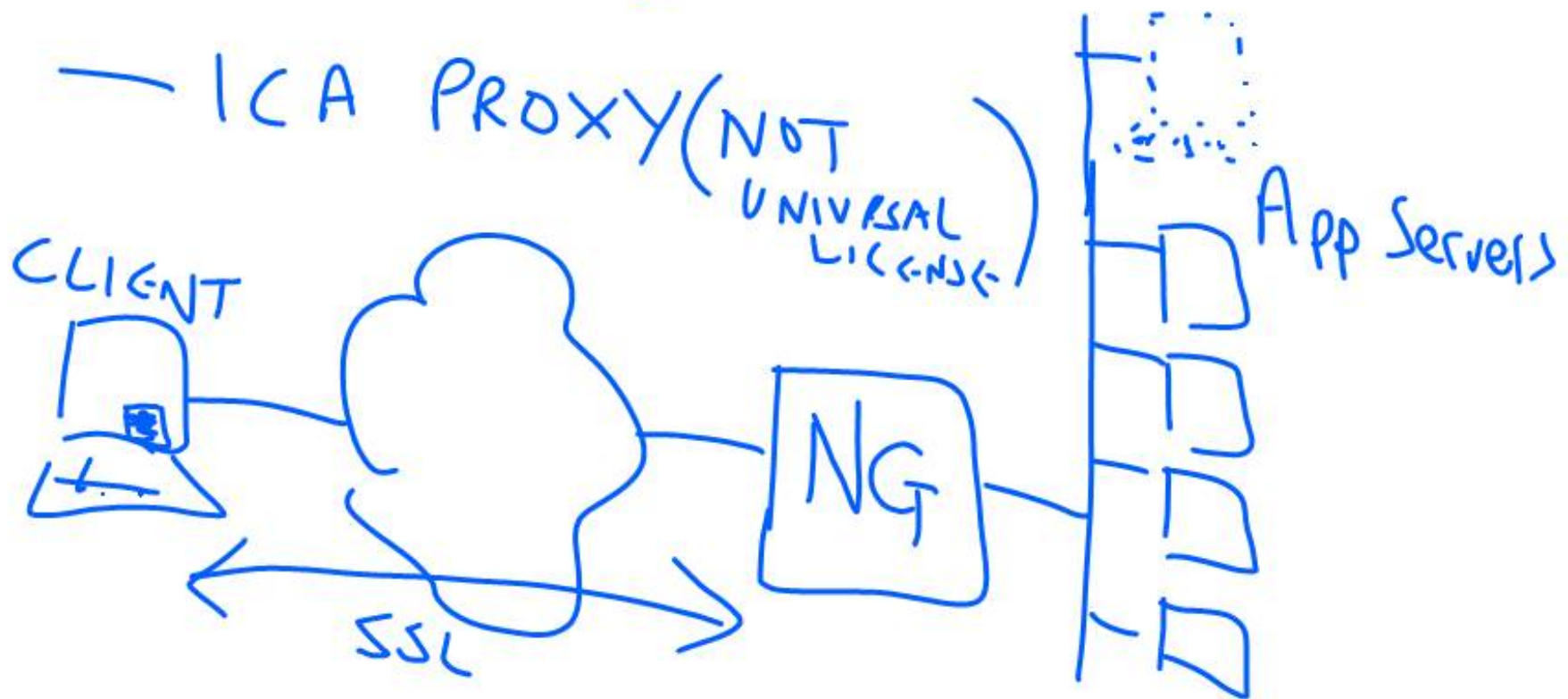
+

# UNIVERSAL LICENSE - CCU

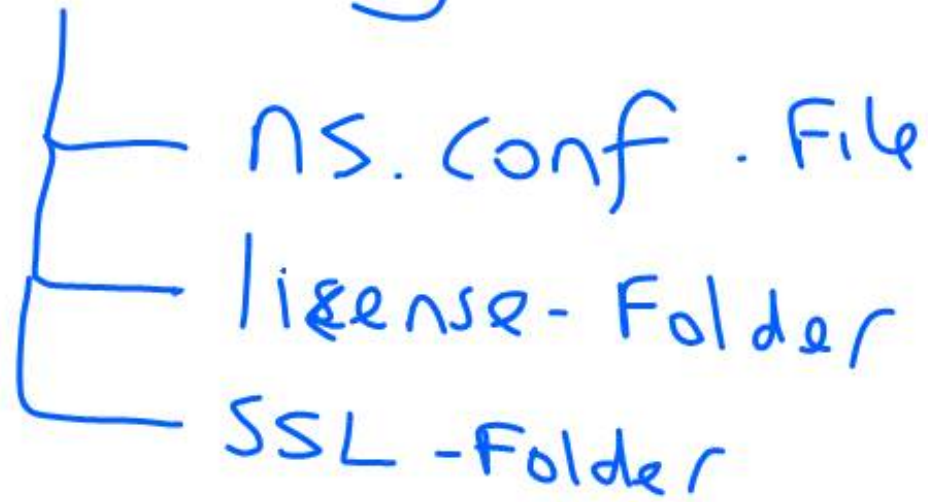
## NG 3 MAIN ACCESS TYPES

---

- FULL SSL VPN - REQUIRES NG PLUGIN
- CLIENTLESS - WEB APPS + FILE SHARES
- ICA PROXY (NOT UNIVERSAL LICENSE)



/flash/nsconfig



/var/log



> (Netscaler cli)

> shell

# (BSD shell)

# exit to >

# PLATFORM LICENSE





# Multiplexing

