

Cloud Computing weeks [sw] - 1 Aug 2025

ACA M7 → Creating Network environments

why we need network services

in cloud environment ? <sup>security Aspect</sup>

→ ต้องการ Isolated environment ที่ security ใกล้เคียง  
กับ AWS: Resources บน ส่วนนี้เรียกว่า [Private network]

→ ถ้า Performance ดีก็ ลองใช้กับ AWS Private Networks



VPC 7 AWS

- \* Addressing (assign IP)
- \* Forwarding (Routing)
- \* Network security

① VPC คือ Virtual Private Cloud Region ที่กำหนด

②  $\dot{x}, \dot{y}, \dot{z}$  и  $\dot{u}$  в  $\bar{a}$  VPC  $\dot{x}_0$

IP address Block  $\rightarrow$  Private IP range

10.0.0.0/8

172.16.0.0/12

192.16P.00 / 16

vvvvv IP Block ကို ပေးရန် အတွက် AWS support = /16  
 " " လျှော့ချ " " = /28  $2^4 - 2 = 14$

AWS Reserve IP 11bit = Block 5 620f

လိပ်စာ 1 → network address

လိပ်စာ 2 → gateway

လိပ်စာ 3 → DNS

လိပ်စာ 4 → Future use

လိပ်စာ 5 → Broadcast address.

AWS Best Practice ၇၀ assign address block

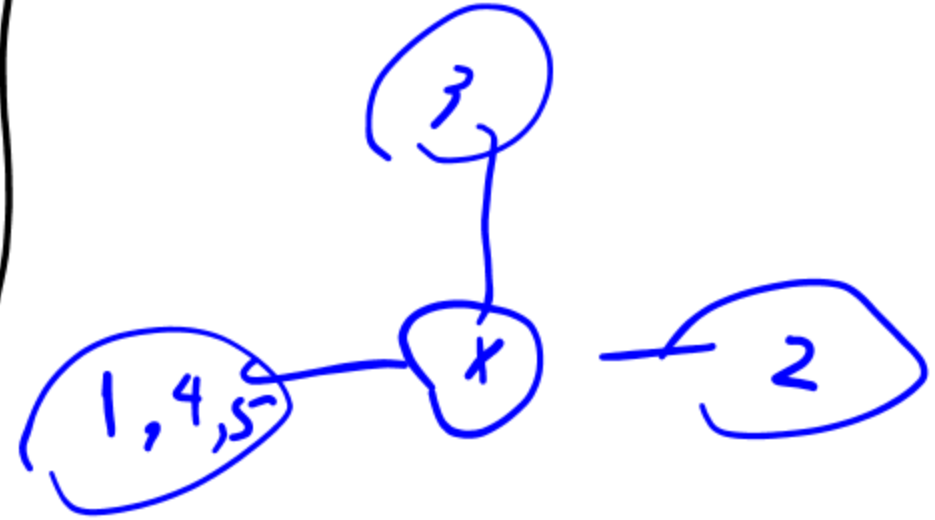
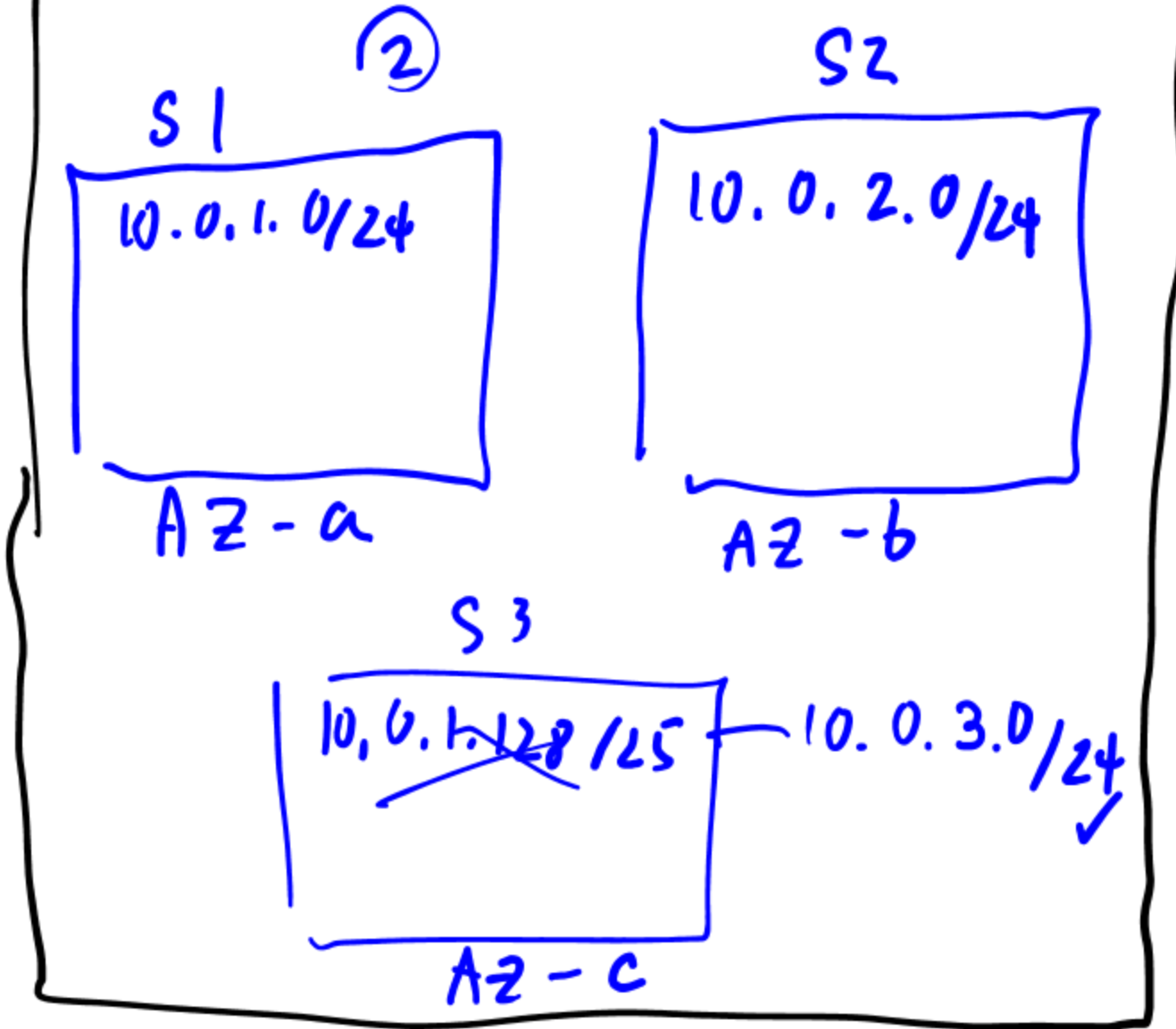
(CIDR Block of VPC) ၇၀ ဆက်စပ်ထားပြီး ၇၀/၇၀

↳ ၇၀/၇၀ / 16

1၀၀၀ assign ၁၁၀၀ ၁၁၀၀၀၀၀၀

VPC-IT

10.0.0.0/16



mission VPC ID Network ID

→ mission Subnet

① 1 subnet associated 1 AZ in V

② CIDR Block and subnet are mutually subset  
and CIDR Block and VPC

↳ must not overlap with  
subnet in VPC and other

LAN

LAN

LAN

WAN

WAN

→ Throughput / delay

→ LAN

→ AZ

VPC - IT

CIDR Block via VPC

10.0.0.0/16

subnet 1

10.0.0.0/24



10.0.0.100/24

az-a

subnet 2

10.0.1.0/24



10.0.1.100/24

az-b

Main Route table

dst	target
10.0.0.0/16	Local

Associate my route table

Region TH





AWS routing (Best Practice) ใน AWS

custom Route table สำหรับ Requirements  
การ Forwarding

Template ใน AWS มี 2 แบบ

Public Forwarding [ Forward 7] ไปยัง

↳ Public Route Table

ที่อยู่ AWS = VPC หรือ  
อยู่ ใน Public Internet)

Private Forwarding [ Forward 7] ไปยังที่อยู่  
↳ Private Route Table VPC เท่านั้น ]

## How to create Public Subnet in AWS

- ① Create an Internet Gateway (IGW) in VPC
- ② add route 0.0.0.0/0 to IGW in Public Route-table
- ③ associate Route table to Public Subnet
- ④ assign Public IP to Resources in Public Subnet

निम्न, Private subnet

- ① Associate Route table in VPC  
entry with VPC (Private Route table)

# Basic Network Security Tools on AWS

2. 2 016 11/11/2016 10:10:10

↳ Traffic Filtering

① Security Group → Traffic Filtering  
tại End point

② Network ACL → Traffic Filtering  
tại Subnet

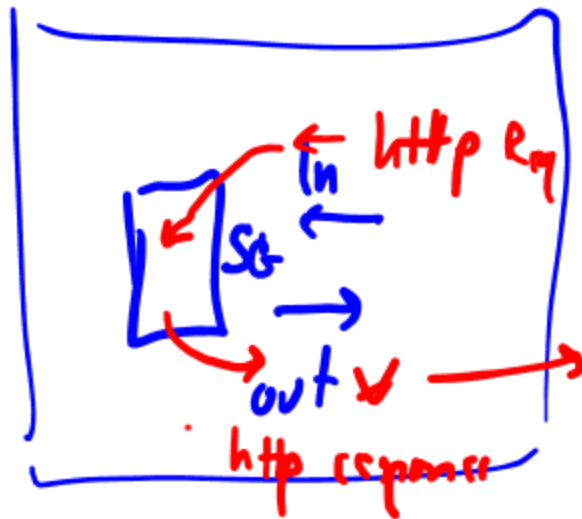
# Security group

→ ~ Personal Firewall

→ Allow rule in vni (Inbound)

vd. vnoan (outbound)

Subnet 1



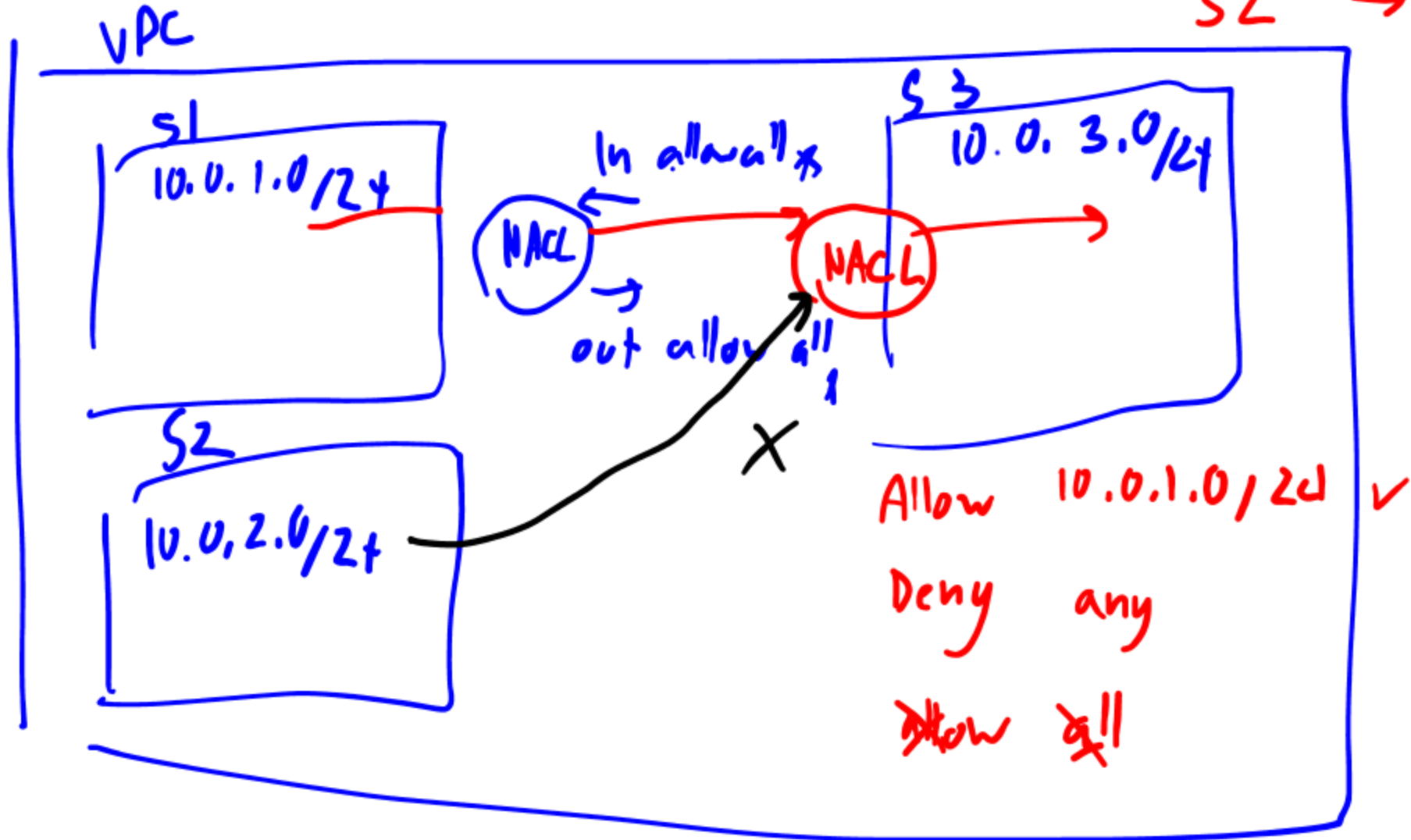
→ stateful Firewall

In	allow	http	✓
	deny	any	
out	deny	all	
	deny	any	

→ 757a11n Allow rule

# Network ACL

overline S1 → S3 ✓  
S2 → S3 X



Default VPC      No VPC      in      aws

similarly in account      for      0-2

1 default VPC      in      1 Region



main route table זה Last option

ישנו subnet da מיוחסת לו associate to  
route table da עובד על main route table

זהו Forwarding