

VPC

(Virtual Private Cloud)



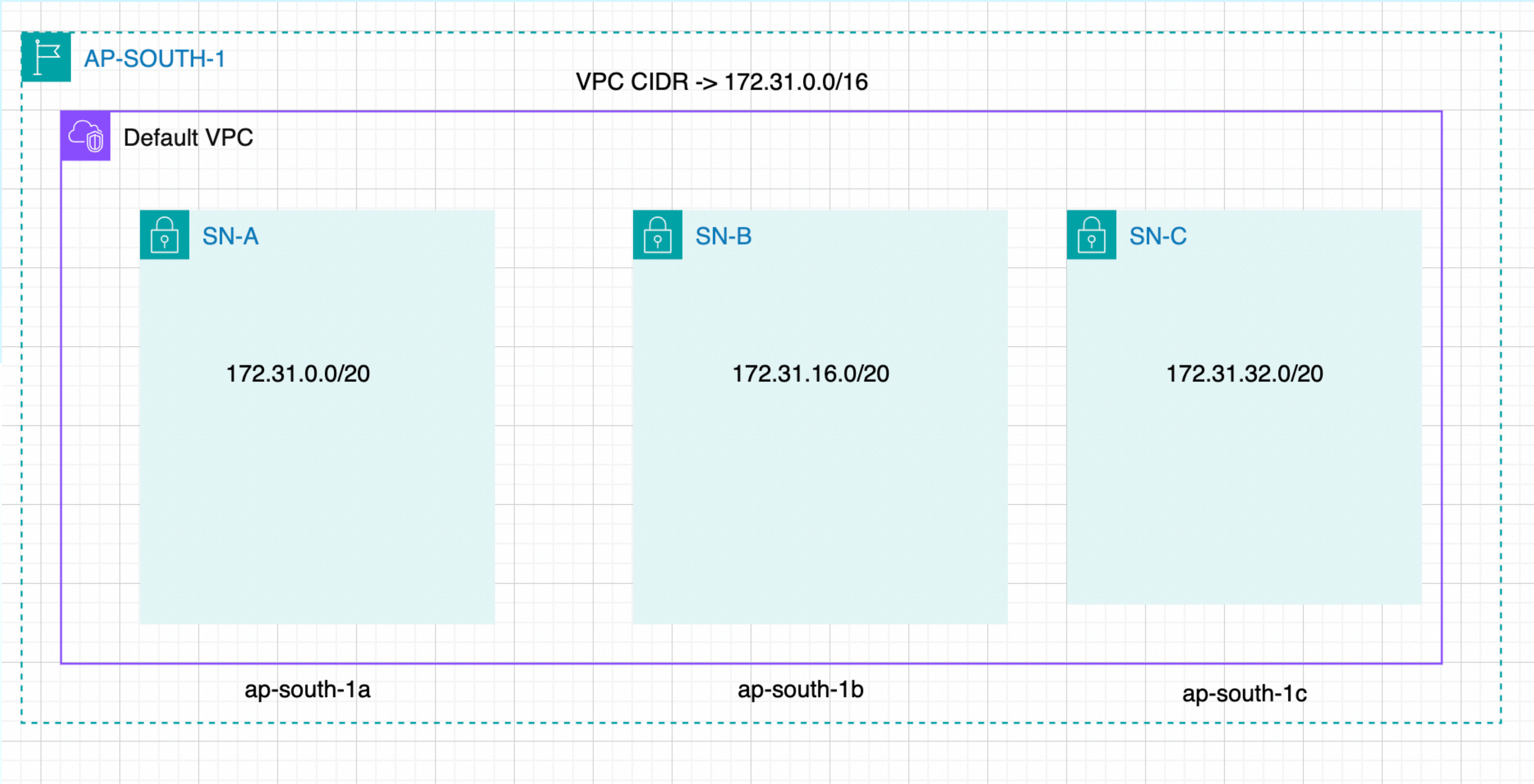
Today's Agenda

- What is VPC?
- What is Network and Internet
- What is IP address
- How to convert decimal to binary
- Default VPC
- Default Subnets
- Internet Gateway
- Security Groups and NACL

VPC Basics

- VPC = A Virtual Network Inside AWS
- A VPC is regional based
- It is Private and Isolated until we decided to change
- Two types - Default VPC and Custom VPC
- One Default VPC per region - can be removed and recreated
- Default VPC CIDR is always 172.31.0.0/16
- /20 Subnet in each AZ in the region
- Internet gateway (IGW), Security Group (SG) & NACL
- Subnets Assigns public IPv4 addresses

Default VPC in AWS



Binary to Decimal Conversion

IP Address: 142.250.199.142

Binary format: 10001110.11111010.11000111.10001110

Example Conversion of binary to decimal

10001110

$$2^0 = 1 \times 1 = 1$$

$$2^1 = 2 \times 1 = 2$$

$$2^2 = 4 \times 1 = 4$$

$$2^3 = 8 \times 1 = 8$$

$$2^4 = 16 \times 0 = 0$$

$$2^5 = 32 \times 0 = 0$$

$$2^6 = 64 \times 0 = 0$$

$$2^7 = 128 \times 1 = 128$$

$$128+8+4+2+0+0+0+0 = 142$$

Reference Resource

- Web site to understand the CIDR - <https://cidr.xyz/>
- IP to Binary convertor - <https://www.browserling.com/tools/ip-to-bin>
- Public and Private IP addresses - <https://www.youtube.com/watch?v=po8ZFG0Xc4Q>
- How to create subnets - https://www.youtube.com/watch?v=s_Ntt6eTn94

QUIZ TIME

Q & A