Network Access Control List (NACLs)

An (optional) layer of security that acts
As a **firewall** for controlling traffic **in and out of subnet(s)**

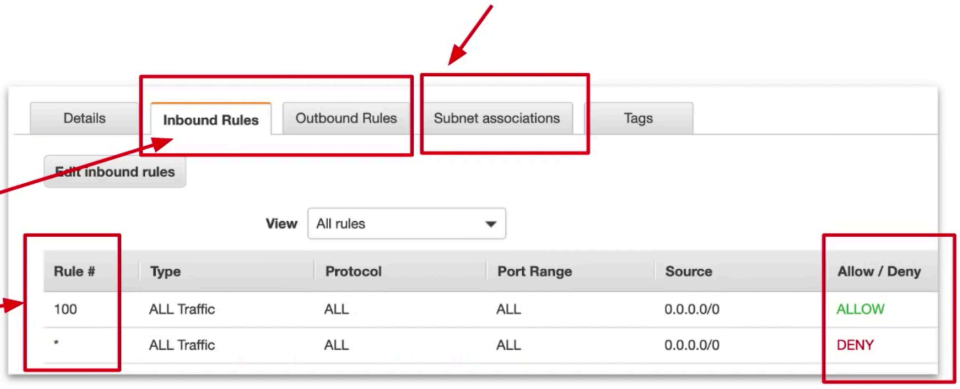
NACLs - Introduction

NACLs acts as a **virtual firewall** at the subnet level

VPCs automatically get a default NACL

Subnets are associated with NACLs. Subnets can only belong to a single NACL.

Each NACL contains a set of rules that can **allow** or **deny** traffic **into (inbound) and out of (outbound) subnets**



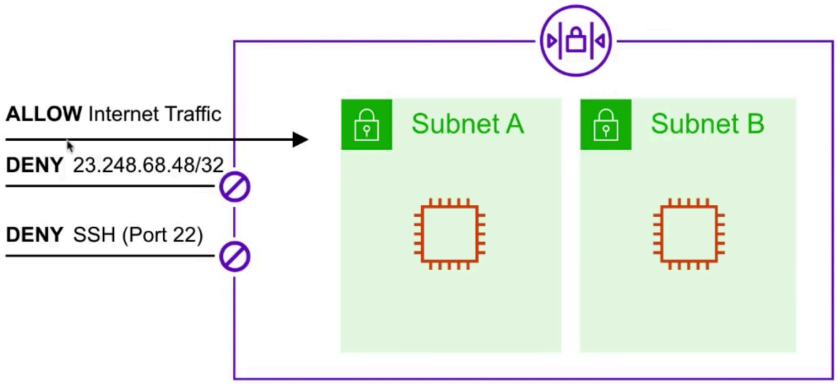
Rule # determines the **order of evaluation**. From lowest to highest. The highest rule # can be 32766 and its recommended to work in 10 or 100 increments.

You can allow or deny traffic. You **could block a single IP address** (You can't do this with Security Groups)

NACLs - Use Case

We determine there is a malicious actor at a specific IP address is trying to access our instances so we block their IP

We never need to SSH into instances so we add a DENY for these subnets. This is just an additional measure in case our Security Groups SSH port was left open.



NACLs *CheatSheet*

- Network Access Control List is commonly known as NACL
- VPCs are automatically given a default NACL which allows **all** outbound and inbound traffic.
- Each subnet within a VPC must be associated with a NACL
- Subnets can only be associated with 1 NACL at a time. Associating a subnet with a new NACL will remove the previous association.
- If a NACL is not explicitly associated with a subnet, the subnet will automatically be associated with the default NACL.
- NACL has inbound and outbound rules (just like Security Groups).
- Rule can either **allow** or **deny** traffic. (unlike Security Groups which can only allow)
- NACLs are STATELESS (any allowed inbound traffic is also allowed outbound)
- When you create a NACLs it will deny all traffic by default
- NACLs contain a numbered list of rules that gets evaluated in order from lowest to highest.
- If you needed to block a single IP address you could via NACLs (Security Groups cannot deny)