LAB2 - Network Security

In this Lab you will configure Security Group for your Internet-facing server, and break DDoS attack to your server.

Step 1 - Install Apache in your EC2

- Connect to your EC2 over SSH.
- Install all updates: sudo yum update -y
- Install Apache: sudo yum install httpd -y
- Start a htttpd service: sudo service httpd start

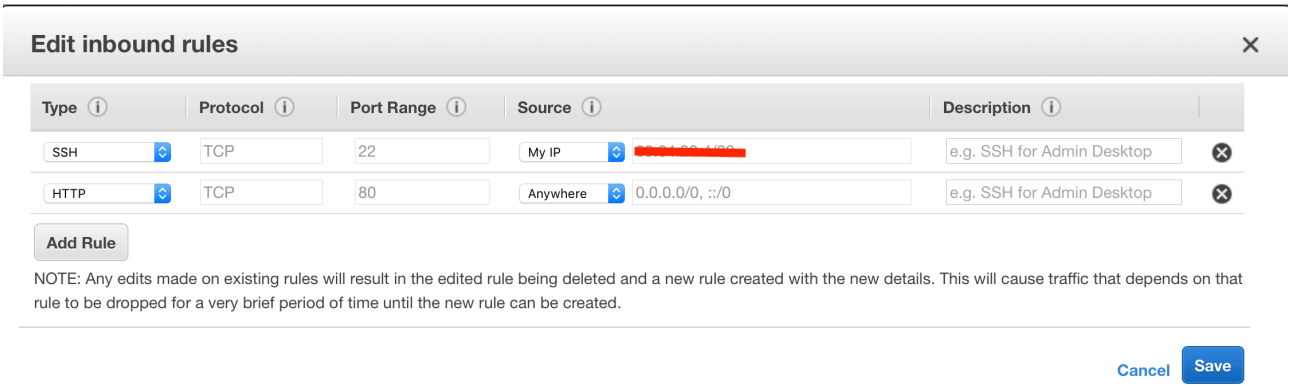
Step 2 - Check your Website from the Internet

- In AWS GUI go to your EC2 instance.
- In the Description tab look for Public DNS (IPv4)
- Copy the name to the clipboard.
- Open Web Browser on your computer and paste the address (connection should fail)

Step 3 - Configure EC2 instance's Security Group

- In the Description tab of your EC2 look for Security Groups.
- Press "view inbound rules".
- Click on your security group name

- Go to Inbound tab and press Edit -> Add Rule
- Add new rule:
  - Type: HTTP
  - Source: Anywhere
- Press Save



- Switch back to your web browser and connect to your URL.

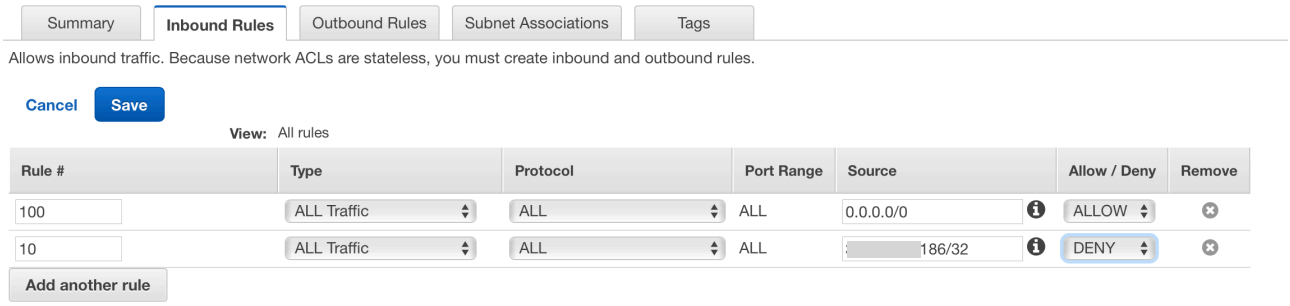
Step 4 - Block DDoS

Imagine situation, where your website is under DDoS attack. You need to act fast. You need to find IP of the attacker and block him.

- Jump into ssh console of your EC2
- Install tcpdump: sudo yum install tcpdump -y
- Check network interface id to listen on: ifconfig
- Listen for all incoming packages on port 80: tcpdump -i eth0 'port 80'
- Try to find attacker IP address
- Do not brake a tcpdump.

Step 5 - Block traffic from IP address of attacker

- Go to Services -> EC2
- Select your EC2 instance
- In Description tab look for Subnet ID and copy the value
- Go to Services VPC -> Subnets
- In search filed paste subnet ID
- Select your subnet and go to Network ACL tab
- Click on Network ACL name (you will be forward to ACLs sections)
- Select your ACL and Inbound Rules tab
- Press Edit and Add another rule
  - Rule: Number must be lower then Allow All rule.
  - Type: All traffic
  - Protocol: All
  - Source: IP address that need to be blocked. (with /32 at the end)
  - Allow/Deny: DENY
- Press Save



- Go back ssh console and verify is traffic from attacker is blocked.
- (The connections flood should be stopped now).