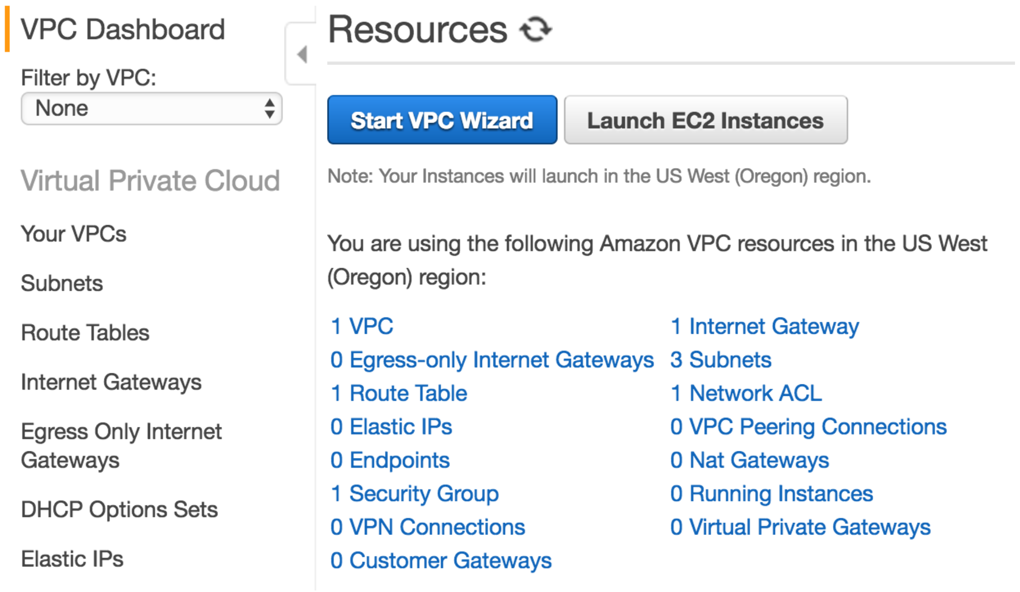
Overview:

In the Amazon Web Services console, open the Virtual Private Cloud (VPC) console which contains all of the default security groups and custom security groups. Set restrictions on all the inbound traffic, the restrictions can control the traffic based on type, the protocol used, and the port numbers. All the ports are allowed inbound, although that isn't necessarily the best practice. A better way would be to support a limited number of ports and deploy the window system. The user **should know what ports they need** when they are building the instance.

Below is an image of the VPC Dashboard



Note: Your Instances will launch in the US West (Oregon) region.

You are using the following Amazon VPC resources in the US West (Oregon) region:

1 VPC	1 Internet Gateway
0 Egress-only Internet Gateways	3 Subnets
1 Route Table	1 Network ACL
0 Elastic IPs	0 VPC Peering Connections
0 Endpoints	0 Nat Gateways
1 Security Group	0 Running Instances
0 VPN Connections	0 Virtual Private Gateways
0 Customer Gateways	

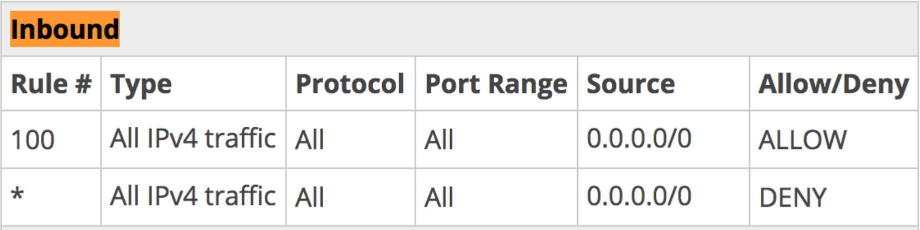
Discovery:

In the Virtual Private Cloud (VPC) Console, make sure to view the security groups and determine if the instances are correctly being restricted. Rules can be added to each security group to distinguish the differences for each instance and allow traffic to and from its associated instances. These rules can be modified at anytime.

Connection Tracking

- Security groups use connection tracking to track all the information to and from the instances. The rules are applied depending on the state of the connection of the traffic. The rules allow and deny the traffic from entering and leaving the instance.

Below is a list of the Inbound Rules



Inbound

Rule #	Type	Protocol	Port Range	Source	Allow/Deny
100	All IPv4 traffic	All	All	0.0.0.0/0	ALLOW
*	All IPv4 traffic	All	All	0.0.0.0/0	DENY

For more information about VPC:
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html

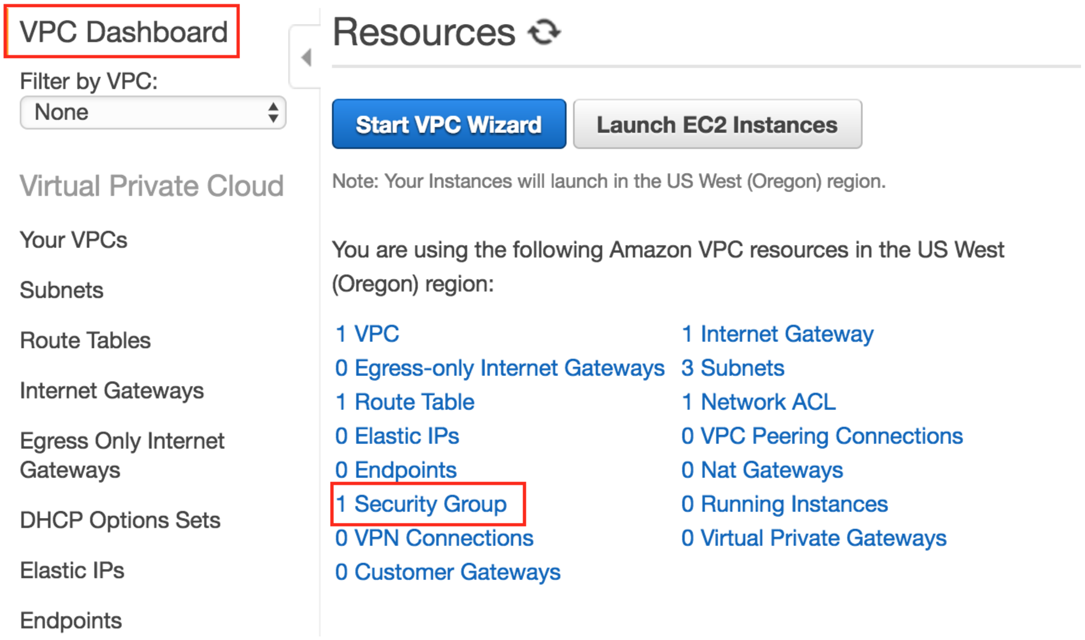
For more information about Connection Tracking:
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html#security-group-connection-tracking

Remediation:

To remediate open inbound port access attacks, go to the VPC Console in the Amazon Web Services Console. Visit all of the security groups and assign strict rules using the inbound rules tab. Set the access rules that will disallow the instance from being attacked again.

Go to the Security Group page through the VPC Dashboard

- Change the inbound and outbound rules for each of the individual security groups



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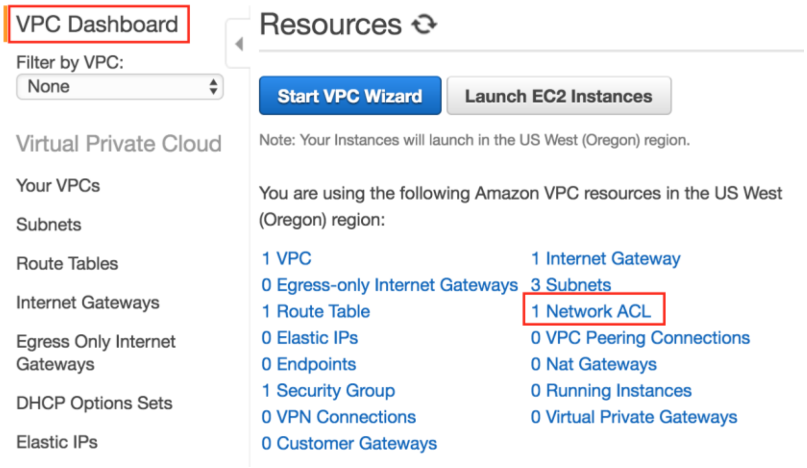
Prevention:

Amazon S3 Access Control Lists (ACLs) enables the user to manage access to the buckets and objects. Each bucket and object has an ACl attached to its subresources. When a request is received against a resource, Amazon S3 checks the corresponding ACL to verify the requester has the necessary access permissions. ACLs limit the amount of people with capabilities to edit security groups and stand up instances on a network. The security groups will restrict permissions and capabilities of each of the instances.

Go to the Network ACL Page



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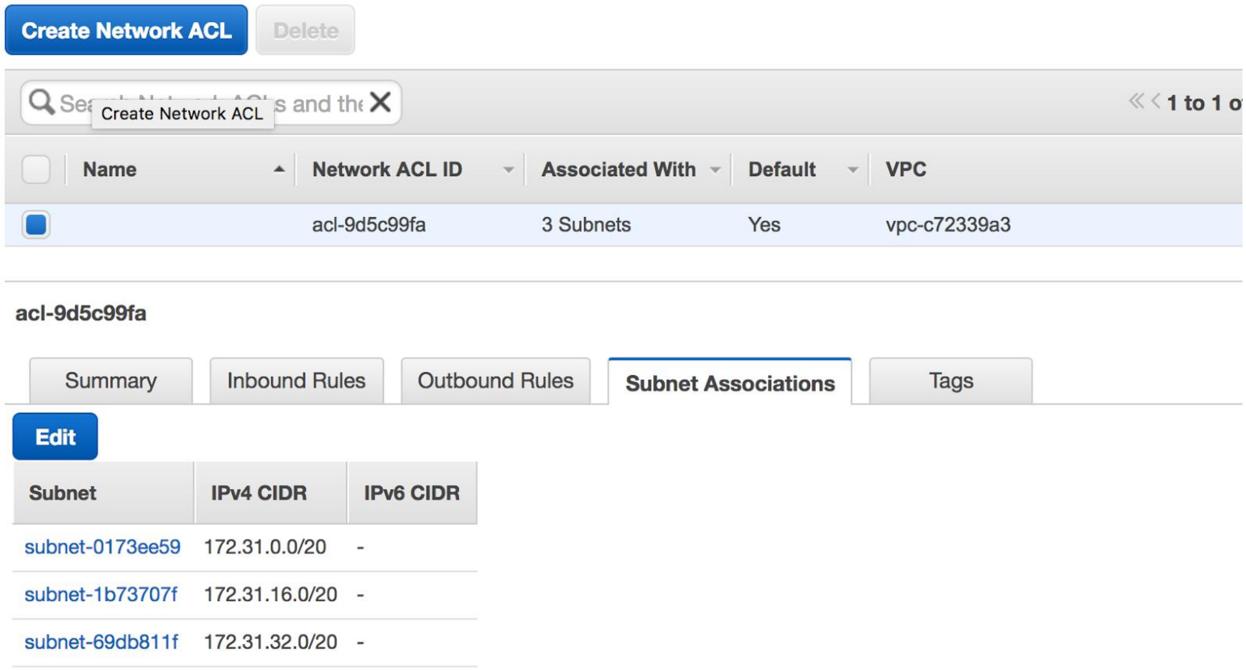
Change the inbound and outbound rules to make them more secure



	Name	Network ACL ID	Associated With	Default	VPC
☐					
■		acl-9d5c99fa	3 Subnets	Yes	vpc-c72339a3

acl-9d5c99fa

Subnet	IPv4 CIDR	IPv6 CIDR
subnet-0173ee59	172.31.0.0/20	-
subnet-1b73707f	172.31.16.0/20	-
subnet-69db811f	172.31.32.0/20	-