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|  | **BAHRIA UNIVERSITY, (Karachi Campus)**  *Department of Software Engineering*  **Assignment 1 - Spring 2025** |  |



COURSE TITLE: DevOps COURSE CODE: SEN-429

Class: **BSE-8 A & B** Shift: **Morning**

Course Instructor: Sohaib Ur RehmanTime Allowed:  **2 Week**

Submission Date: **6th April 2025** Max. Marks: **5 Marks**

**Name: Muhammad Shoaib Akhter Qadri Enrollment No: 02-131212-009**

**Assignment: VPC Peering Between N. Virginia and Ohio Regions** **[CLO3: 5 Marks] Objective**

Set up VPC Peering between two AWS regions:

1. **VPC 1** in **N. Virginia (us-east-1)**
2. **VPC 2** in **Ohio (us-east-2)**

Deploy the following instances:

* A **Windows EC2 instance** in the **public subnet** of the **N. Virginia VPC**
* A **Linux EC2 instance** in the **private subnet** of the **Ohio VPC**

Enable communication between the two instances over a private network via VPC Peering.

## ****Success Criteria:****

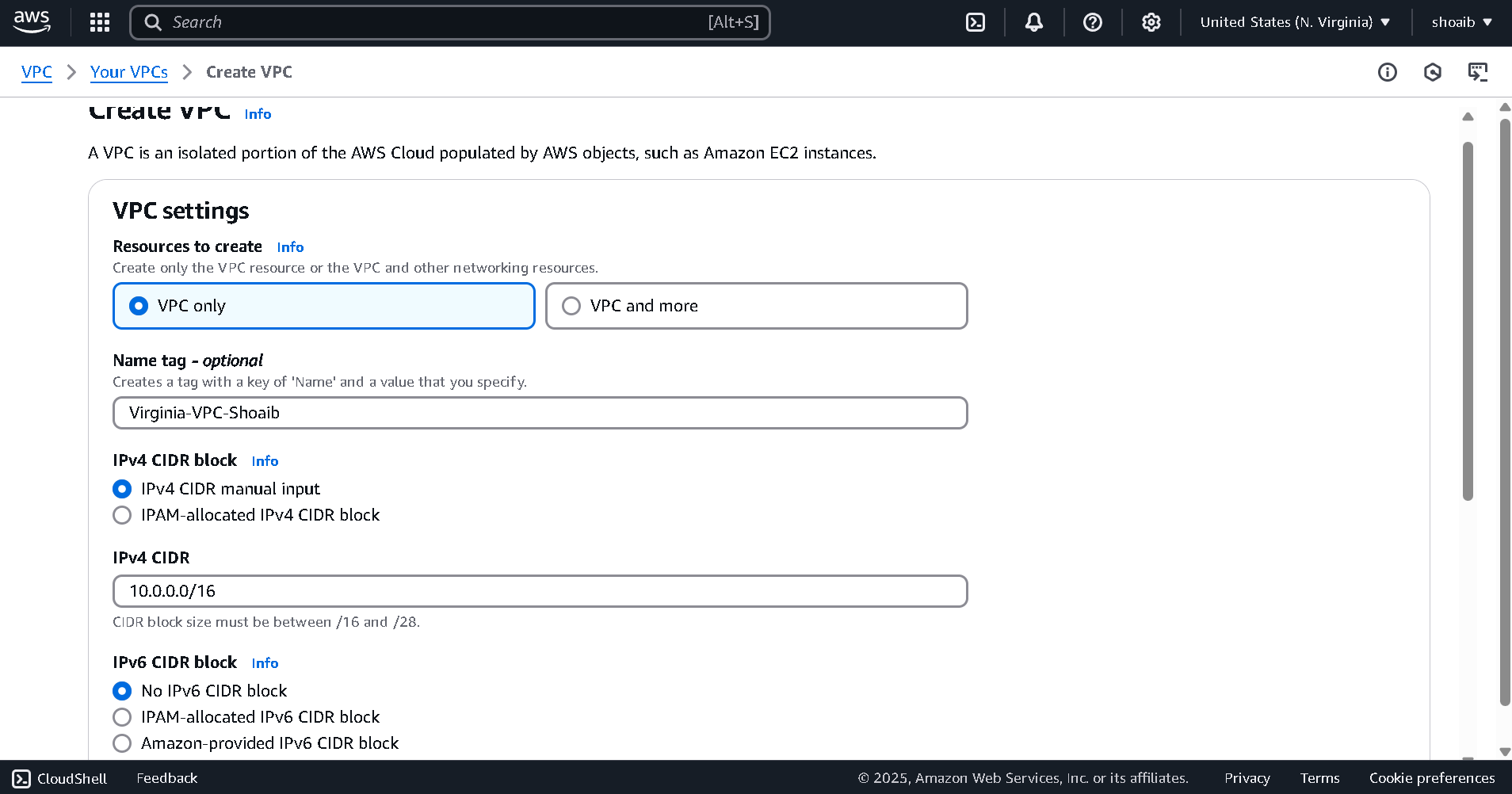
✅ **VPC Peering is established** between N. Virginia and Ohio  
✅ **Routing tables are correctly updated** for inter-VPC communication  
✅ **Windows EC2 (N. Virginia) is accessible via RDP** over public IP  
✅ **Linux EC2 (Ohio) is reachable from Windows EC2** using private IP  
✅ **Ping test between instances is successful**  
✅ **SSH connection from Windows to Linux over private IP works**

**Note:** Ensure to include detailed snapshots and step-by-step explanations for each stage of the setup to enhance clarity and understanding.

**Solution:**

**1.1 Create the VPC (Non-Overlapping CIDR)**

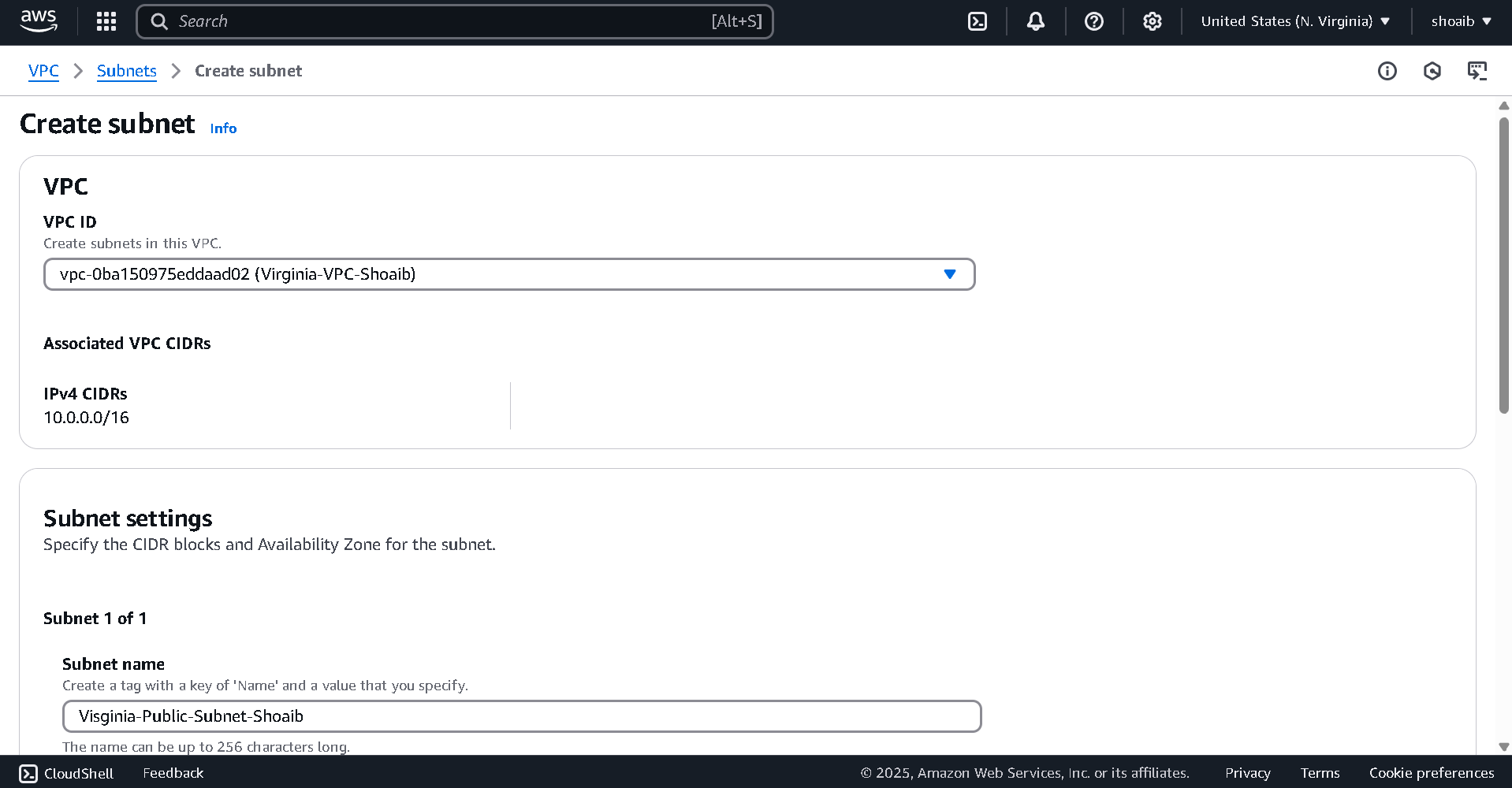
* **Region: N. Virginia (us-east-1)**
* **VPC Name: Virginia-VPC-Shoaib**
* **IPv4 CIDR: 10.0.0.0/16**



**1.2 Create Subnets**

**Public Subnet (for Windows EC2)**

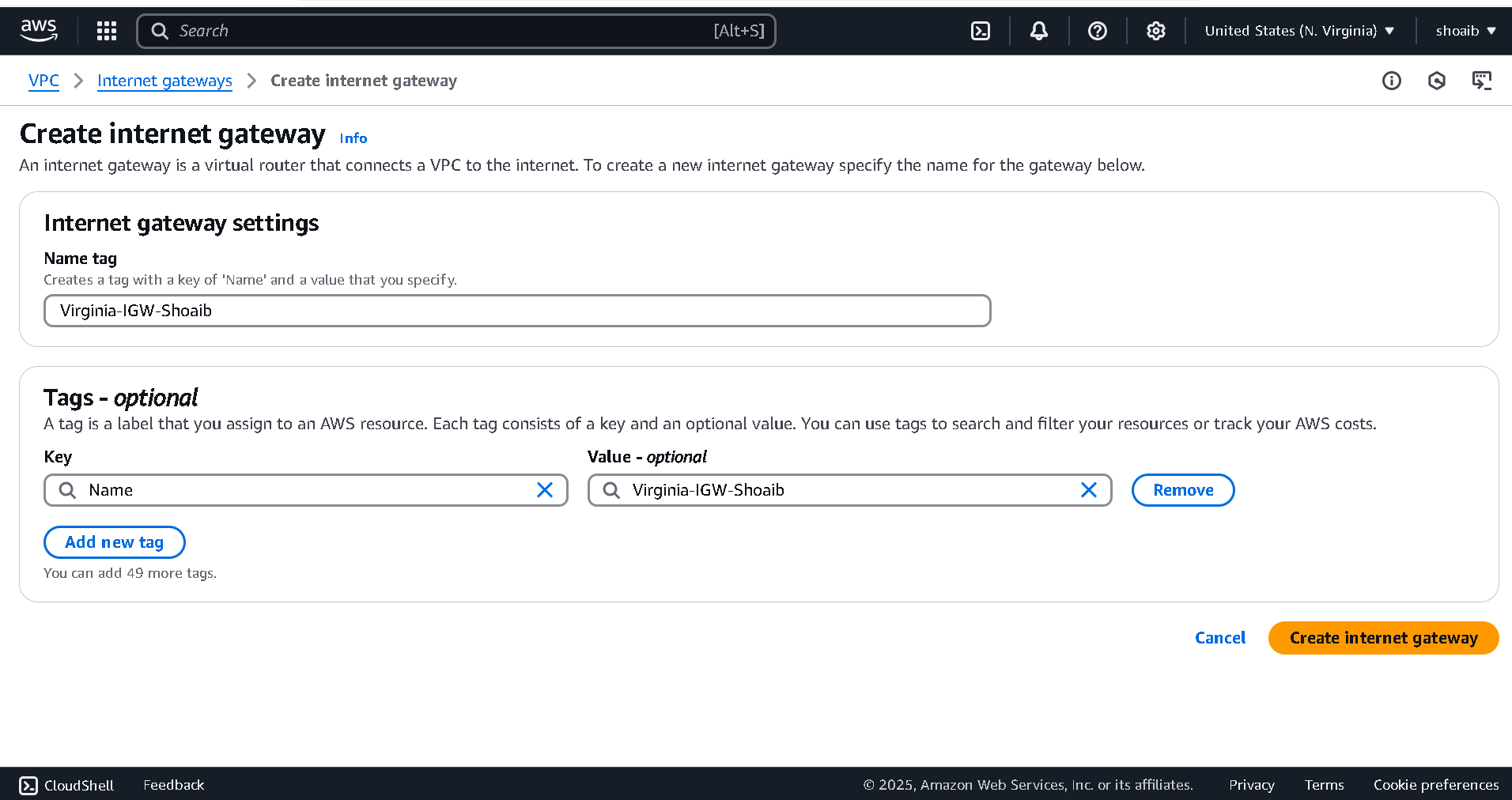
* **Name:** Virginia-Public-Subnet-Shoaib
* **VPC:** Virginia-VPC-Shoaib
* **Availability Zone:** us-east-1a
* **CIDR:** 10.0.1.0/16

A screenshot of a computer

AI-generated content may be incorrect.

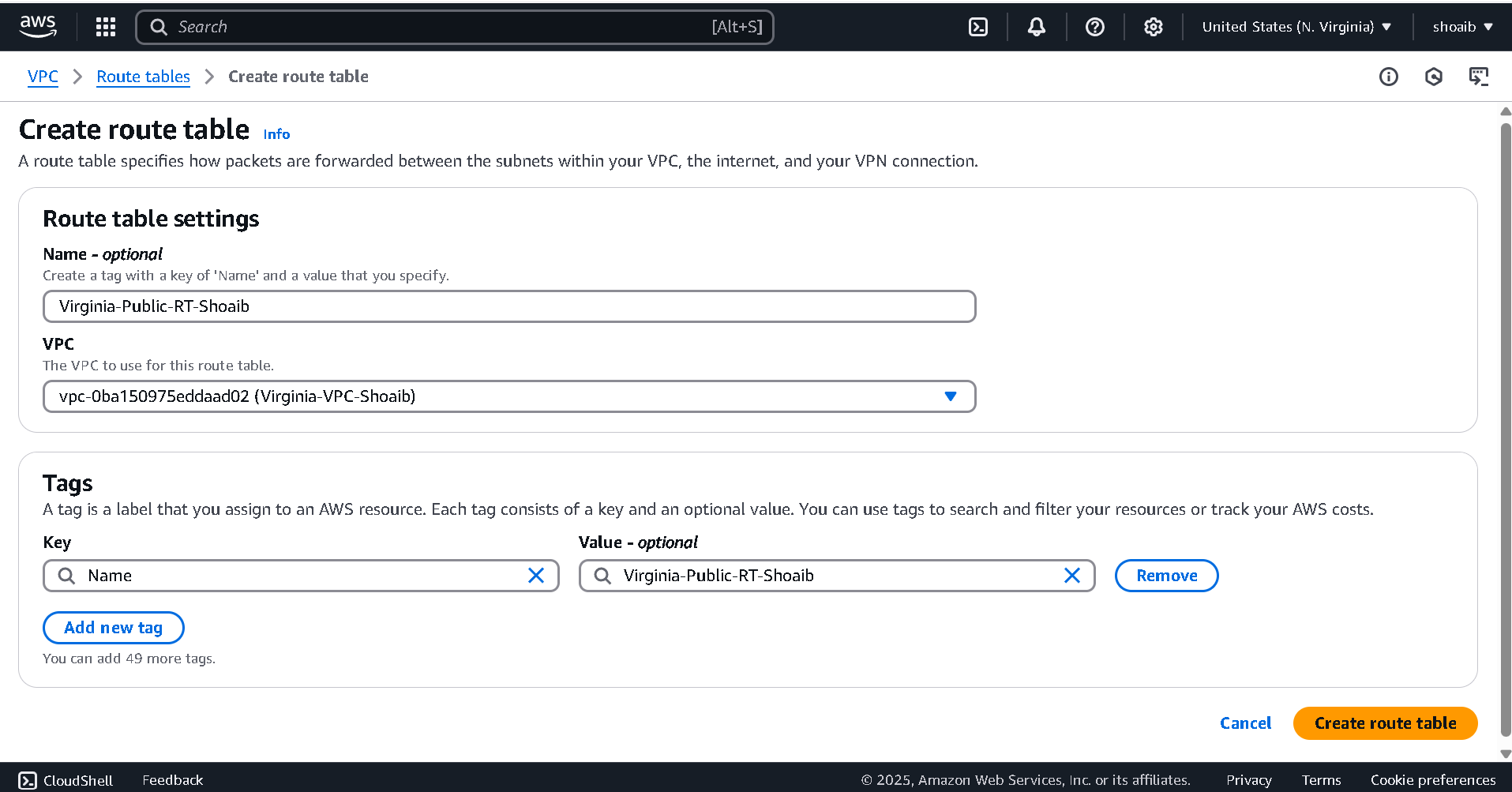
**1.3 Create Internet Gateway (IGW)**

* **Name:** Virginia-IGW-Shoaib



Now attached IGW with VPC  
  
A screenshot of a computer

AI-generated content may be incorrect.

Create Route Table  


Now click Edit Route and assigned new IP and select Internet Gateway and select your IGW.  
A screenshot of a computer

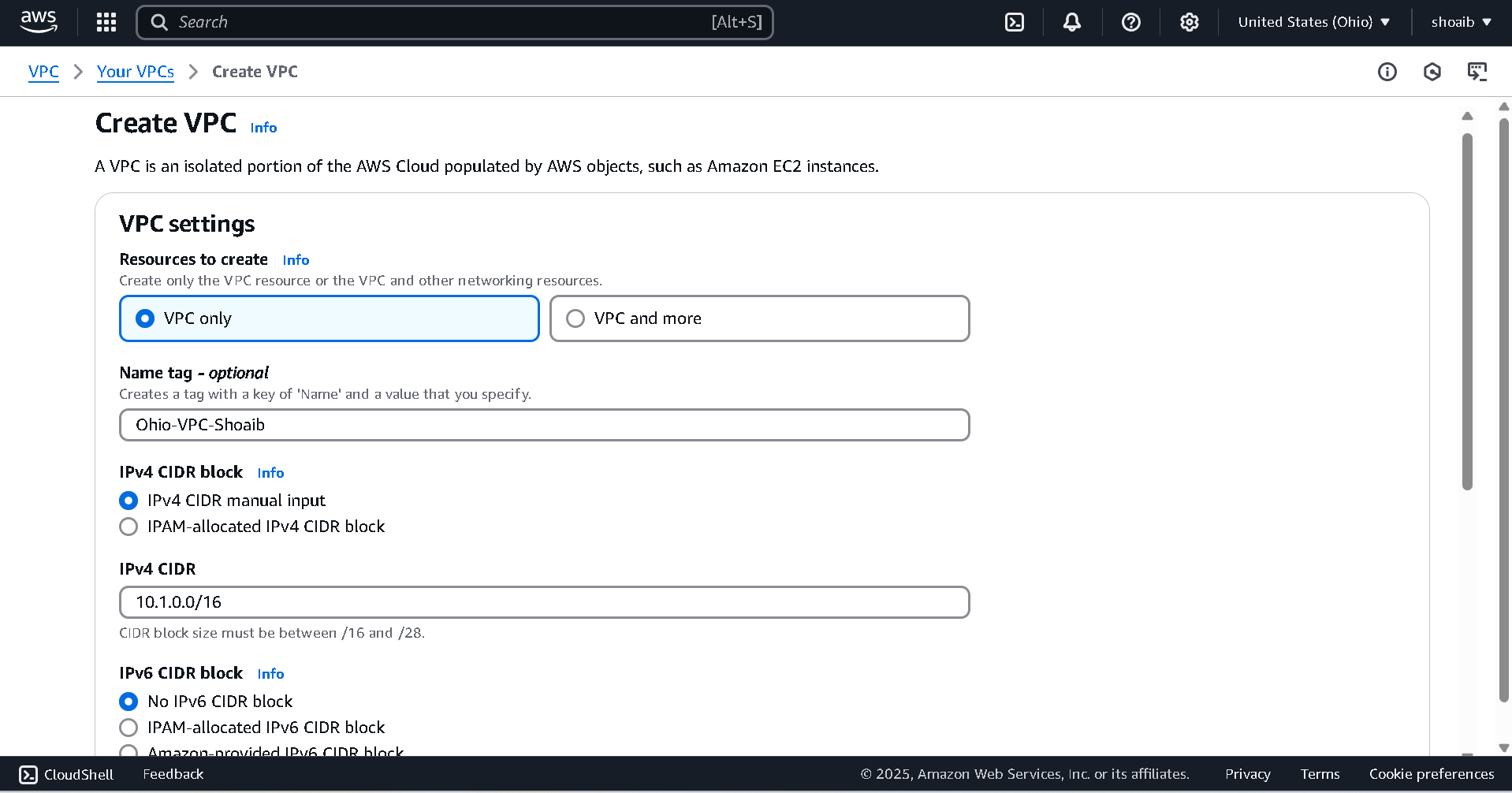
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Now do subnet associations

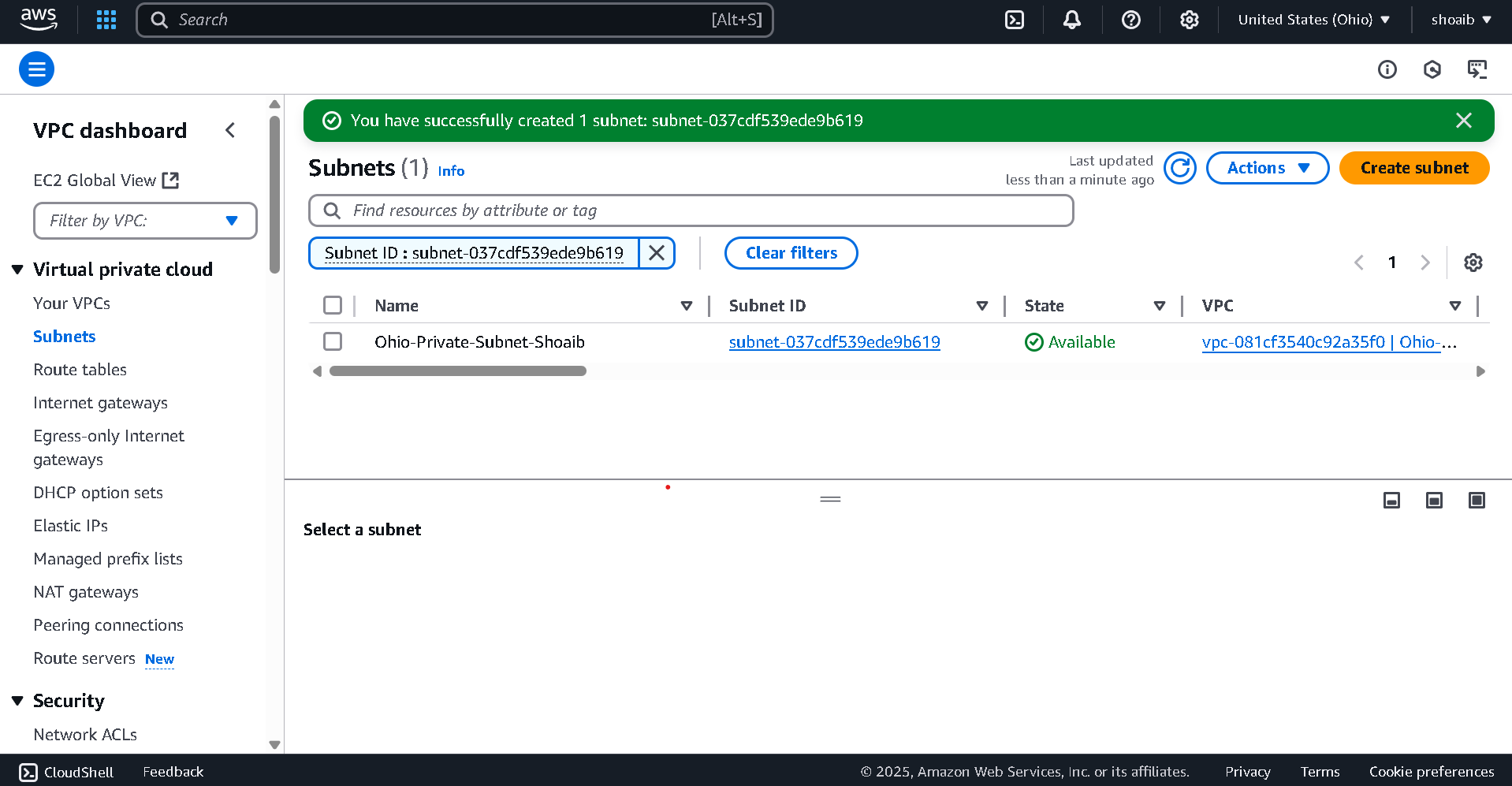
A screenshot of a computer

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Now create second vpc under ohio region



Create Subnet



Create Route Table  
  
A screenshot of a computer

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Edit Subnet Association  
  
A screenshot of a computer

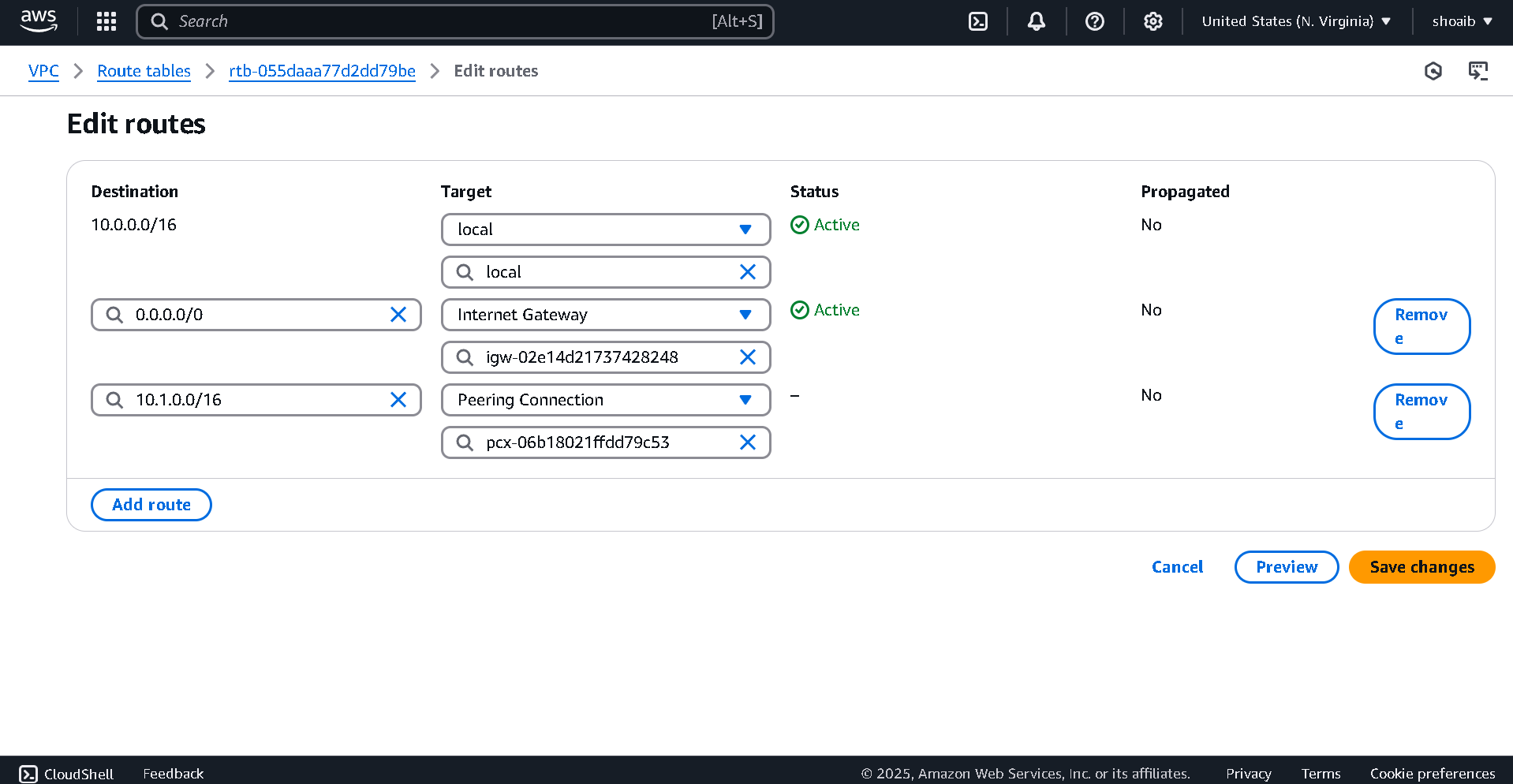
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Create Peering Connection under Virginia region  
  
A screenshot of a computer

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Accept Request under Ohio Region  
A screenshot of a computer

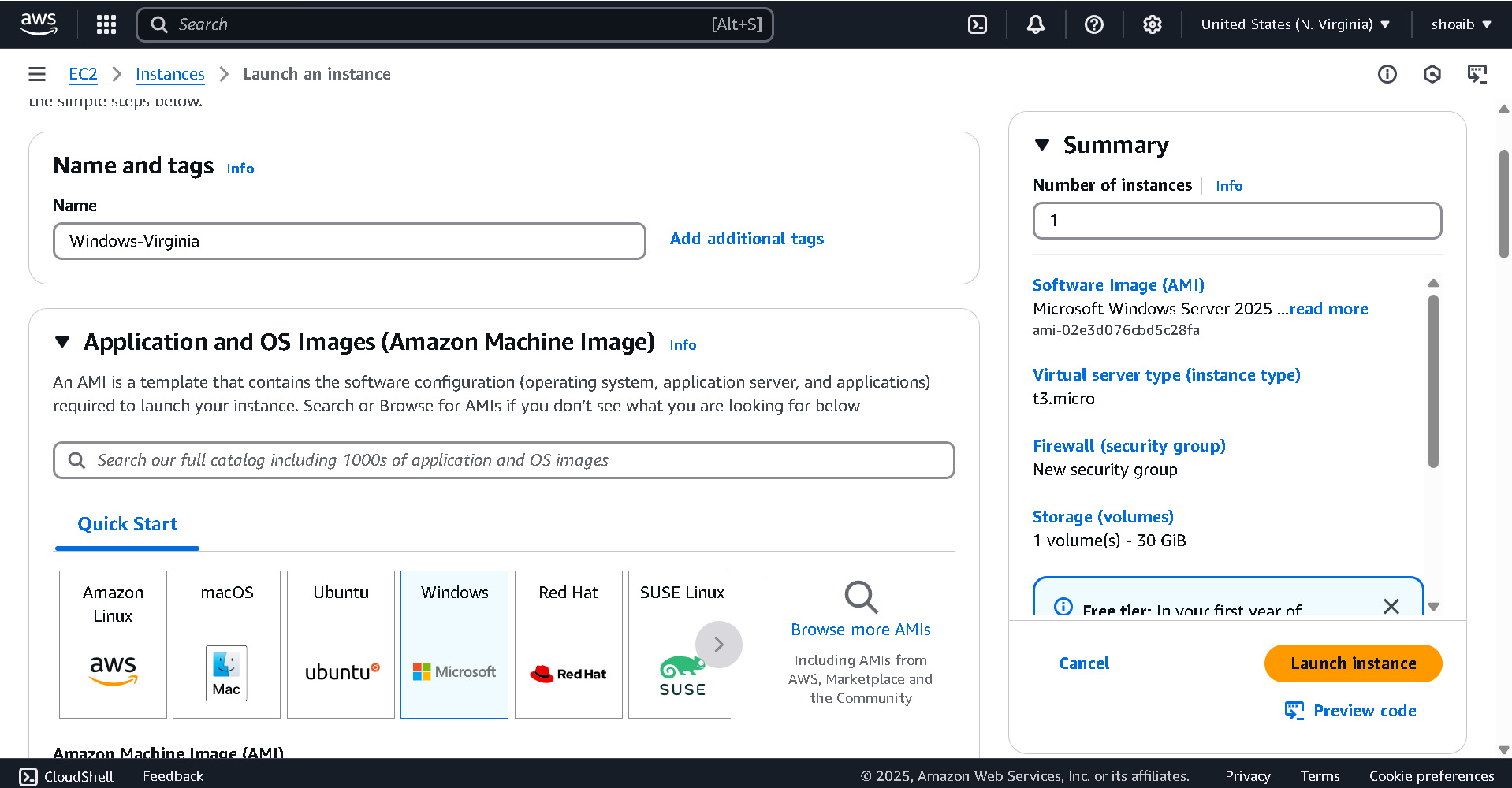
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Edit Route under Virginia  
  


Edit Route under Ohio Region

A screenshot of a computer

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Add Instance in EC2 under Virginia Region  
  


A screenshot of a computer

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Add Instance in EC2 under Ohio Region

A screenshot of a computer

AI-generated content may be incorrect.

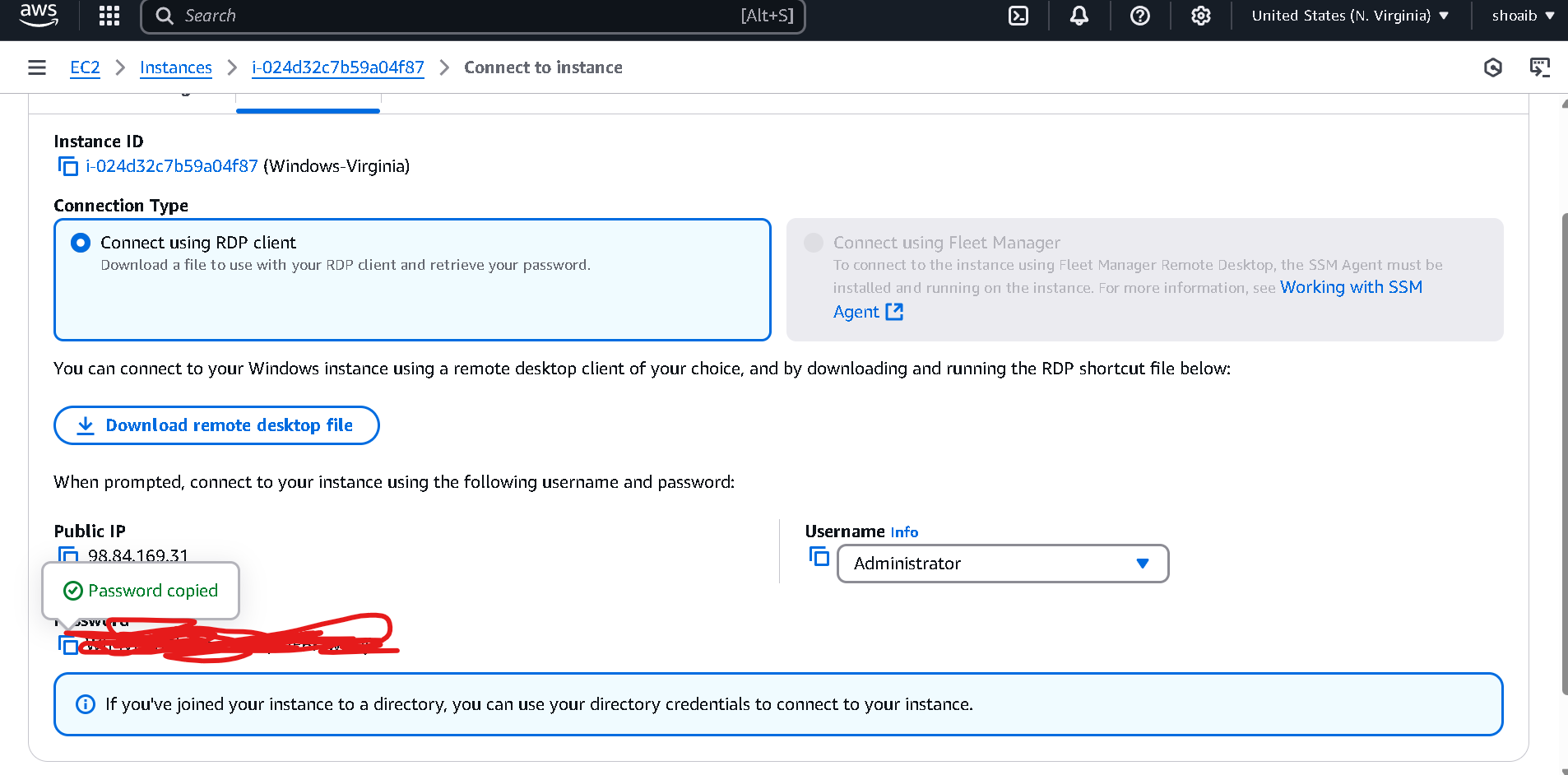
Add Security Rules

A screenshot of a computer

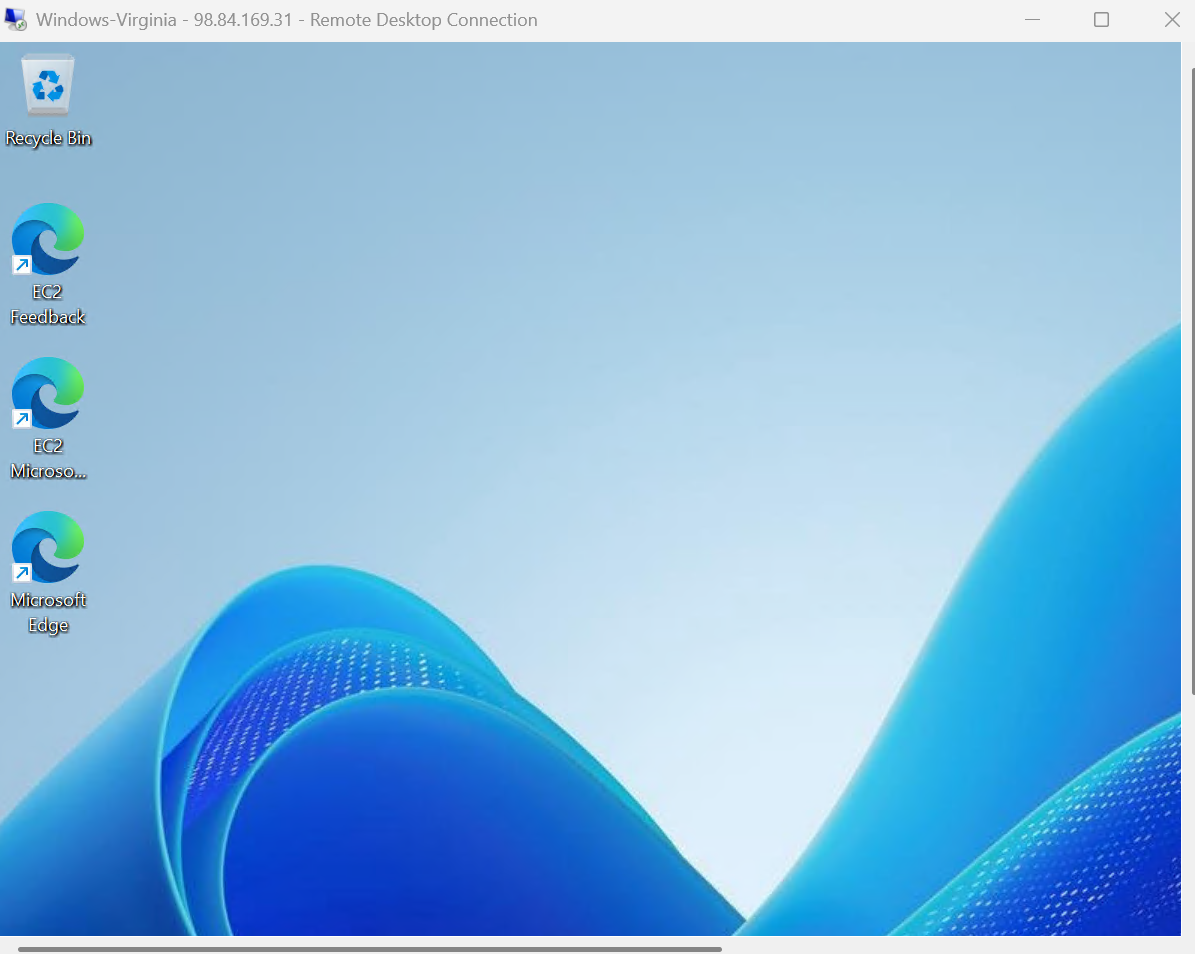
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A screenshot of a computer

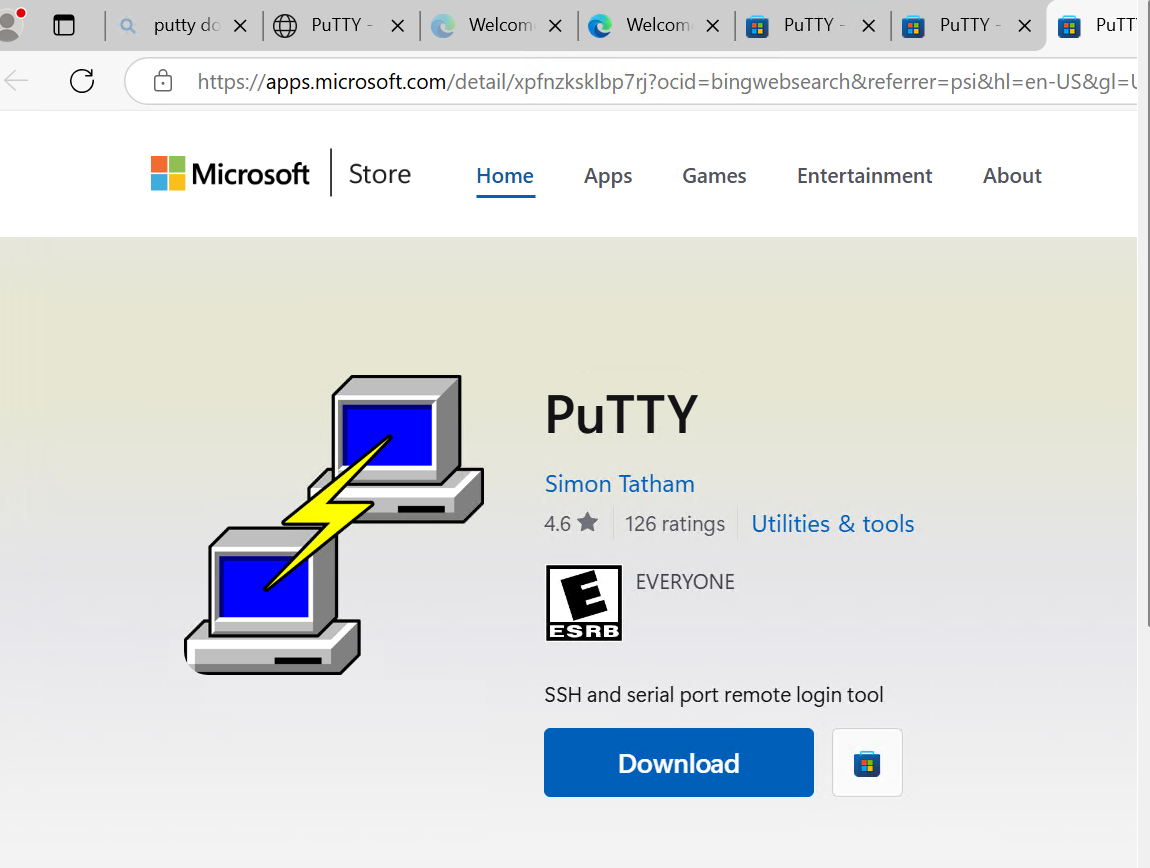
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Now created AWS Screen



Download Putty Configuration



A screenshot of a computer

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A screenshot of a computer

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A computer screen shot of a black screen

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