

Experiment No. 9

Title: Categorizing Amazon Web Services (AWS) and Implementing Cloud Entities Using Cloud Toolbox Support

Objective:

To categorize and implement various cloud entities offered by Amazon Web Services (AWS) using its Cloud Toolbox support, understanding the diverse services available for cloud computing.

Tools used:

- Amazon Web Services (AWS) Console
- Cloud Toolbox

Prerequisite:

- An AWS account with necessary permissions and access
- Basic understanding of cloud computing concepts

Theory:

Amazon Web Services (AWS) is a comprehensive cloud computing platform offering a wide range of



services. These services are categorized into various types, including compute, storage, databases, networking, and more, providing flexibility and scalability for diverse computing needs.

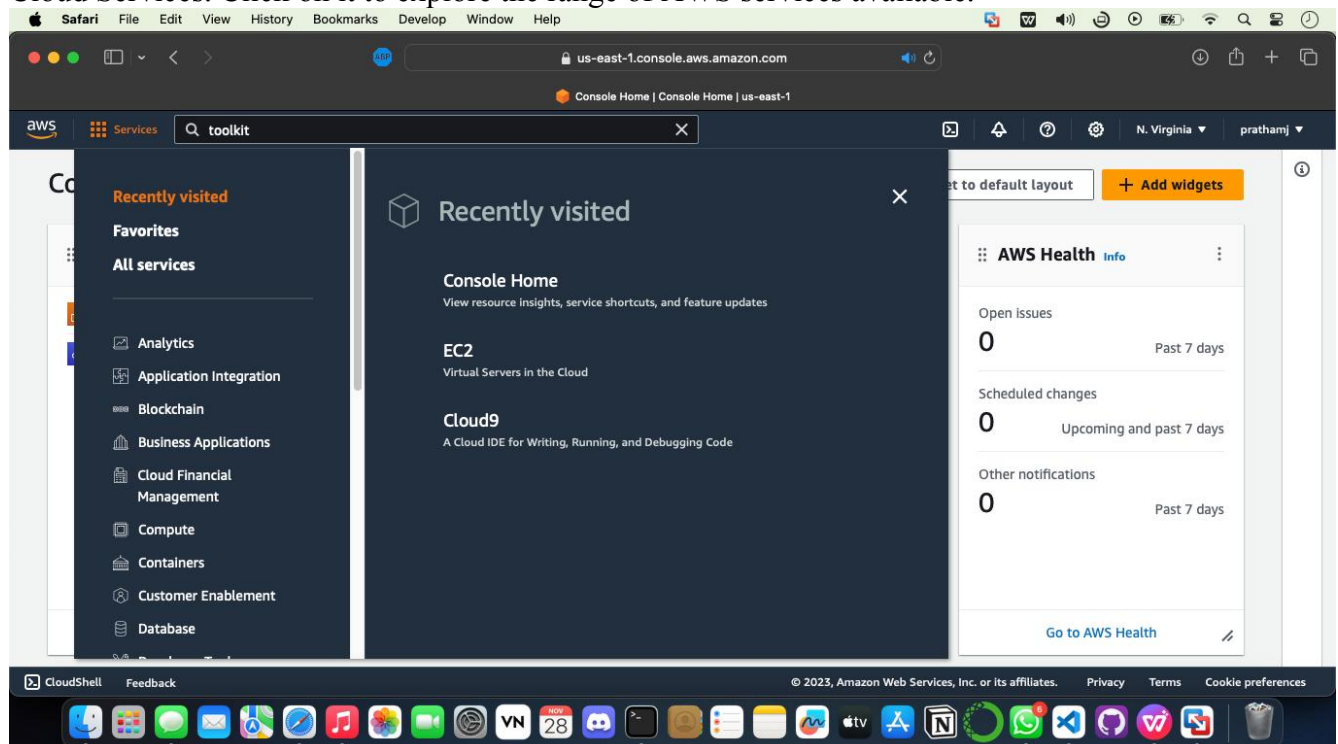
Steps to Categorize and Implement AWS Cloud Entities Using Cloud Toolbox Support:

Step 1: Access AWS Console

1. Visit the AWS Management Console: Open a web browser and go to <https://aws.amazon.com>
2. Login: Enter your credentials (username and password) to access the AWS Management Console.

Step 2: Navigate to Cloud Toolbox

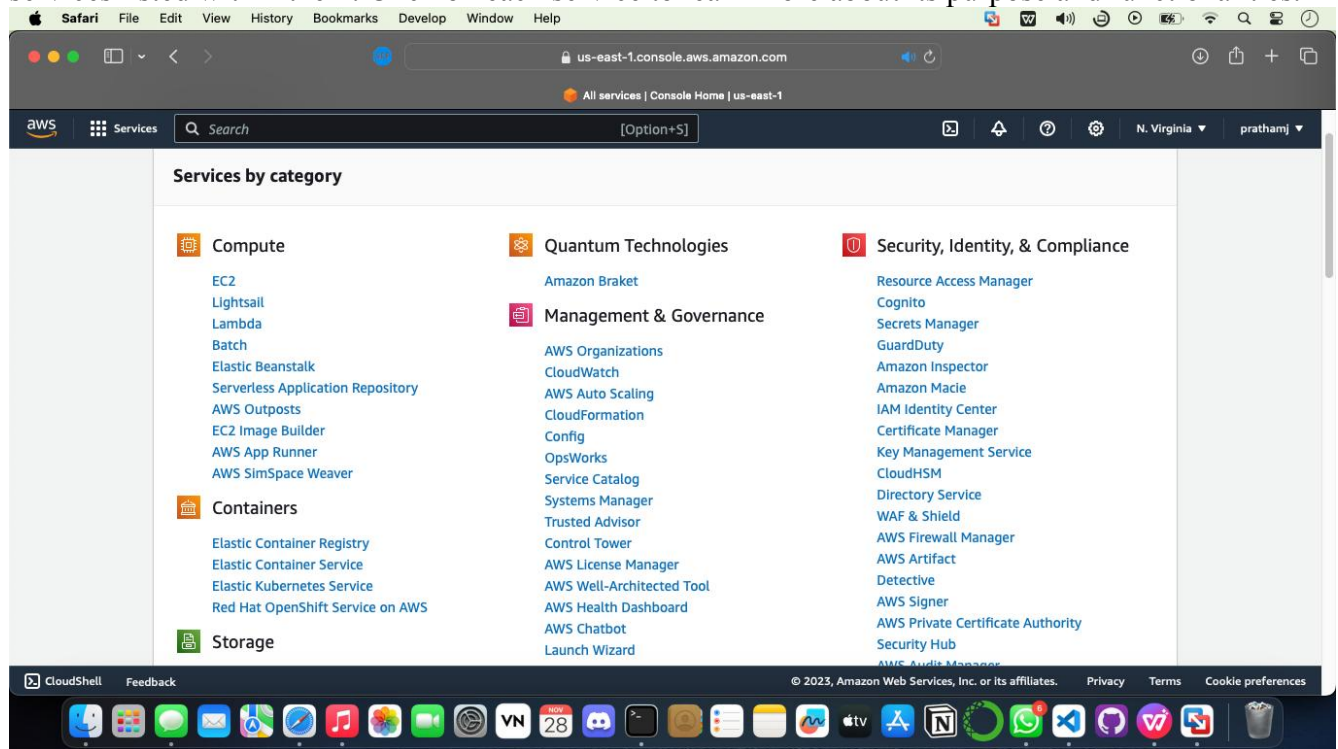
1. Explore Services: Once logged in, you'll land on the AWS Management Console dashboard. Look for the navigation menu on the top-left or top-right corner.
2. Locate Cloud Services: Find the section labeled "Services," which houses the Cloud Toolbox or Cloud Services. Click on it to explore the range of AWS services available.



Step 3: Categorize AWS Services

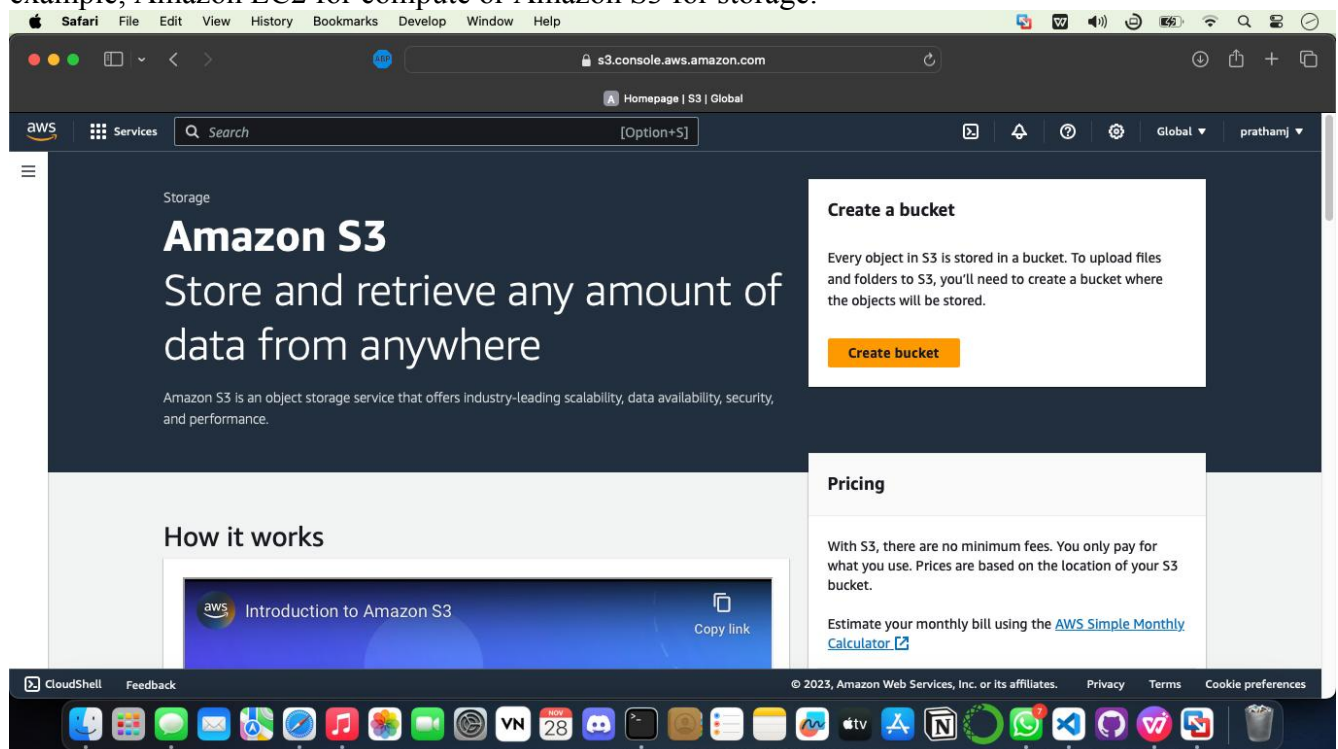
1. Understand Functional Categories: AWS services are grouped into categories based on their functions such as compute, storage, databases, networking, etc.

2. Explore Categories: Navigate through each category (e.g., Compute, Storage, Database) to see the services listed within them. Click on each service to learn more about its purpose and functionalities.



Step 4: Implement Cloud Entities

1. Choose Services for Use Case: Select a service (or multiple) based on your intended use case. For example, Amazon EC2 for compute or Amazon S3 for storage.

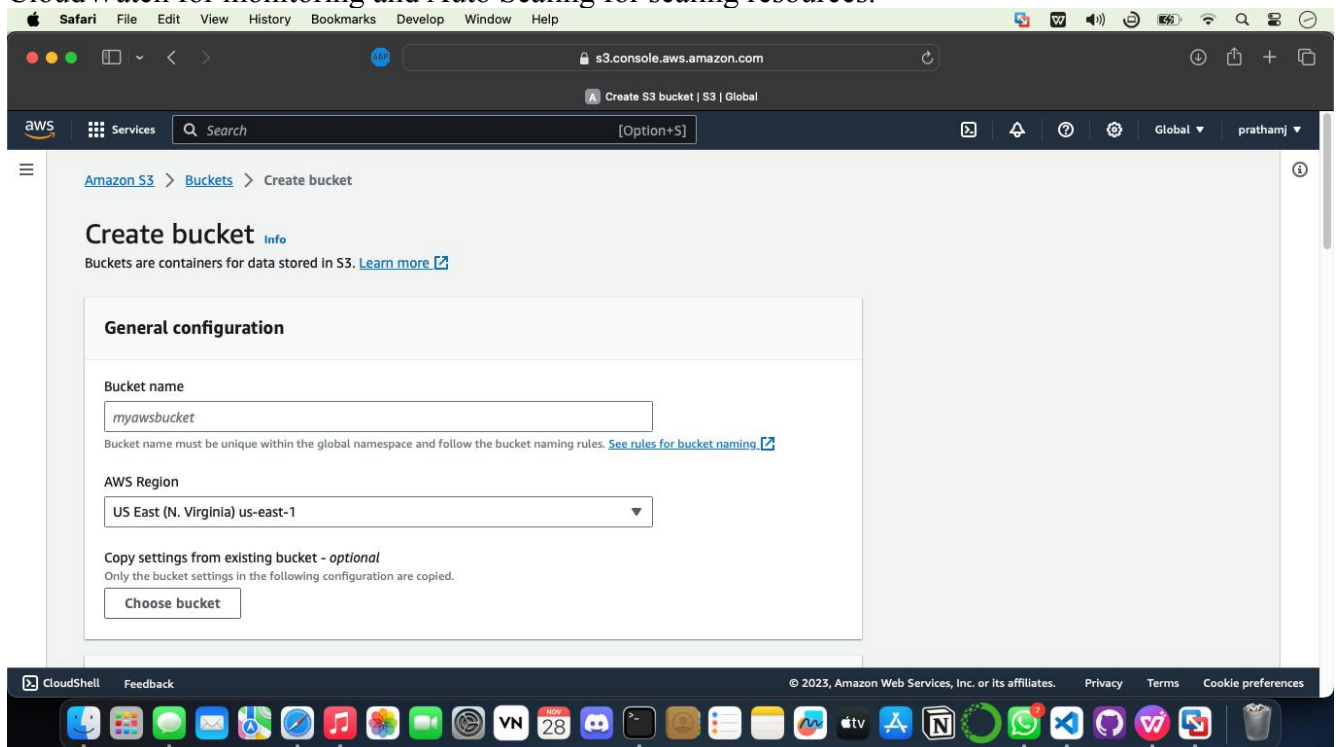


2. Access Service Interface: Click on the chosen service within the AWS Console to access its interface or wizard.

3. Create and Configure: Follow the service's interface or wizard to create and configure the cloud entity. This might involve specifying settings, such as instance type, storage options, security configurations, etc.

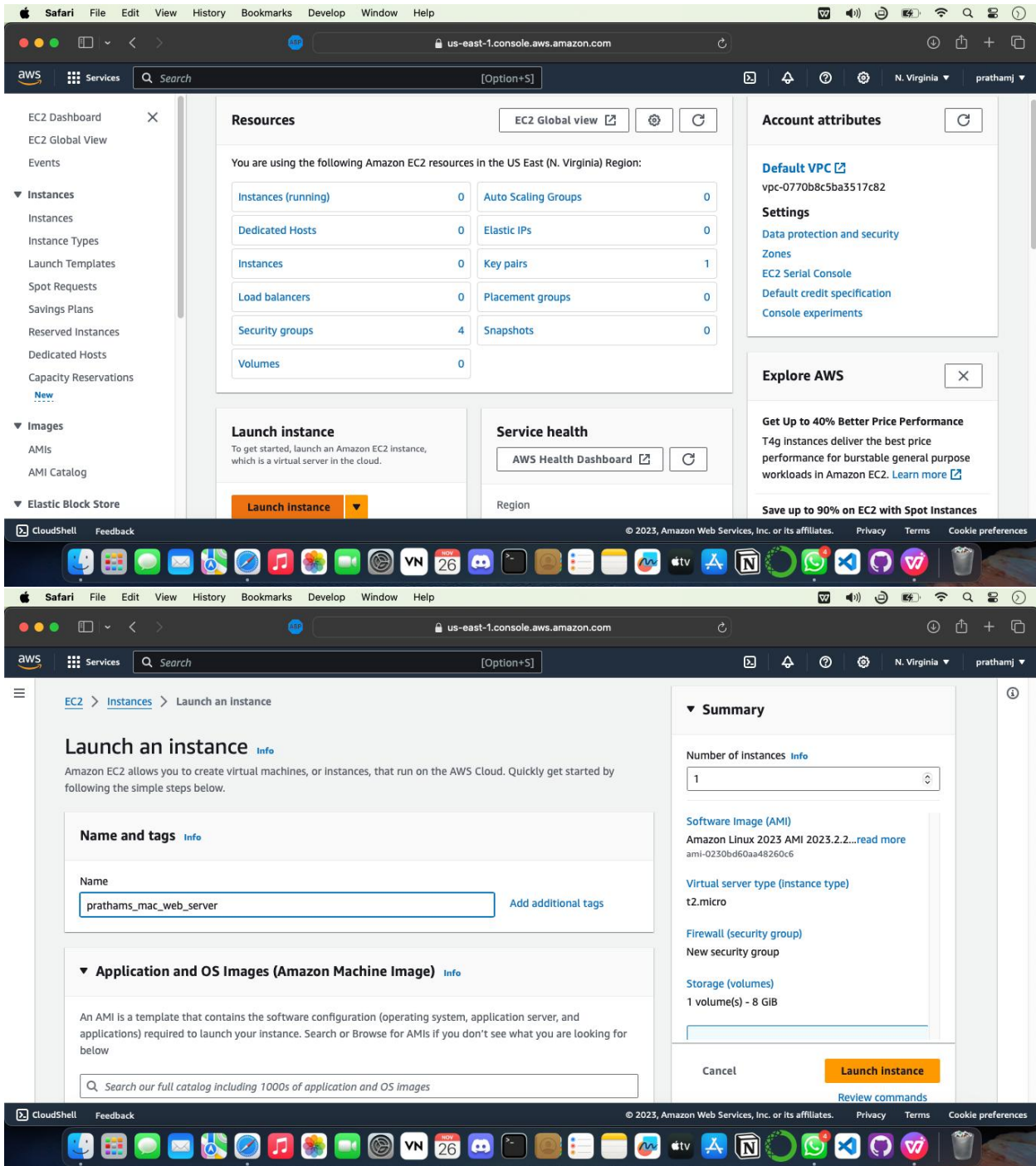
Step 5: Explore Integration and Management

1. Understand Integration: Learn how different AWS services can work together by exploring their integration capabilities. For instance, how EC2 instances can connect to an RDS database or how S3 can be used with Lambda functions.
2. Management Options: Explore the management features within the AWS Console. Look for tools related to monitoring, scaling, and maintaining the created cloud entities. This includes services like CloudWatch for monitoring and Auto Scaling for scaling resources.



Step 6: Experiment with Cloud Services

1. Hands-on Experimentation: Create test instances or resources within the AWS Console to gain hands-on experience with different services.
2. Test Capabilities: Experiment with various functionalities and capabilities offered by the services. For instance, create a test EC2 instance, configure an S3 bucket, set up a simple database using RDS, etc.

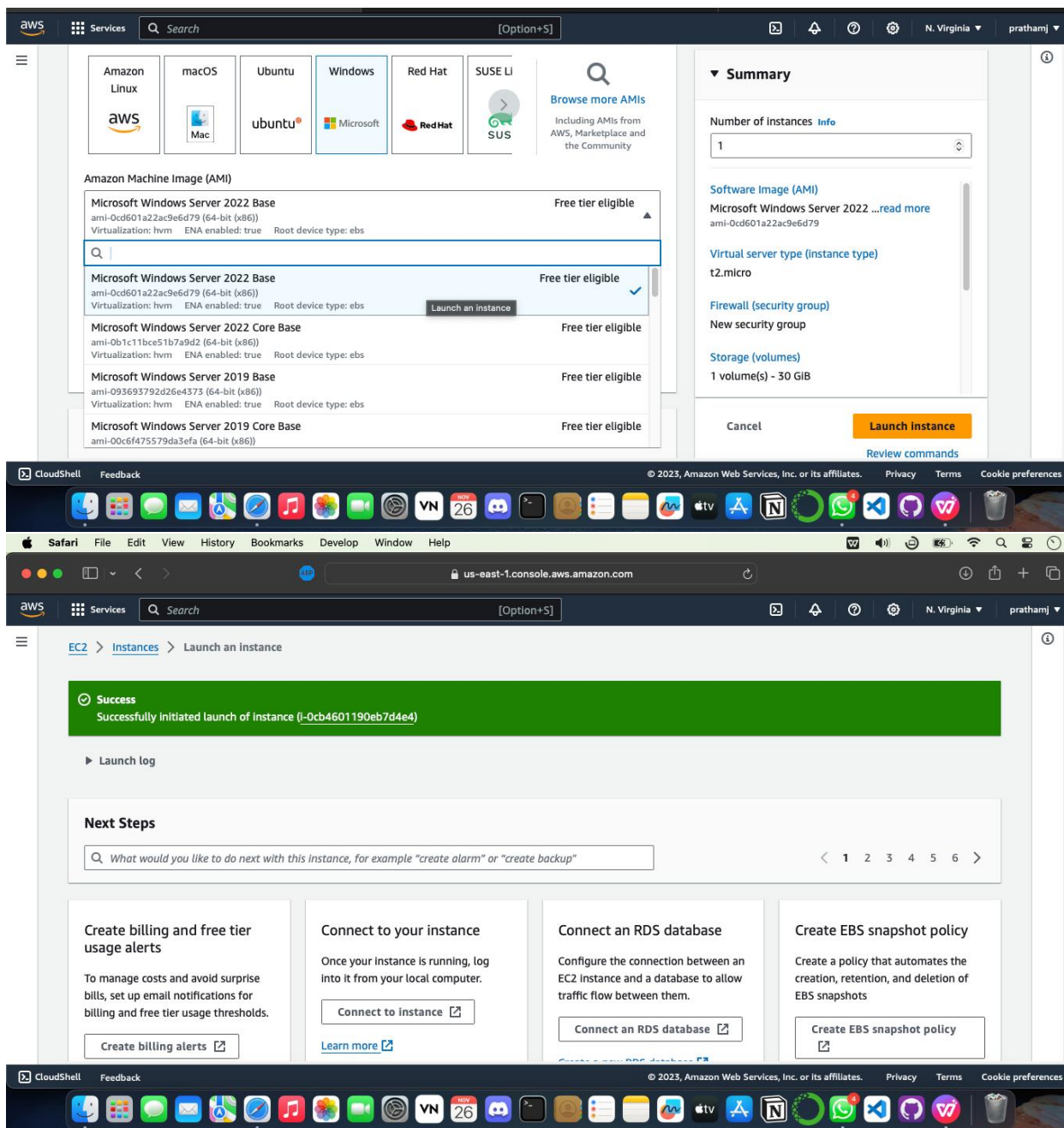


The screenshot displays the AWS Management Console in a Safari browser window. The top navigation bar shows the AWS logo, a search bar, and the current region (N. Virginia) and user (prathamj). The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, and Elastic Block Store.

The main content area is divided into several sections:

- Resources:** A table showing the number of resources used in the US East (N. Virginia) Region. The table includes columns for resource type and count.
- Launch instance:** A section with a description and a 'Launch Instance' button.
- Service health:** A section with a link to the AWS Health Dashboard.
- Account attributes:** A section showing the Default VPC and various settings.
- Explore AWS:** A section with promotional text about T4g instances and Spot Instances.

The bottom section of the screenshot shows the 'Launch an instance' wizard. The 'Name and tags' section has a text input field with the value 'prathams_mac_web_server'. The 'Application and OS Images (Amazon Machine Image)' section has a search bar and a list of AMIs. The 'Summary' section on the right shows the configuration details for the instance, including the number of instances (1), the software image (AMI), the virtual server type (t2.micro), the firewall (security group), and the storage (volumes).



The screenshot displays the AWS Management Console interface for launching an EC2 instance. The top navigation bar shows the AWS logo, search bar, and user profile. The main content area is divided into two panels. The left panel, titled 'Amazon Machine Image (AMI)', lists various operating systems and their corresponding AMIs. The 'Microsoft Windows Server 2022 Base' AMI is selected, and the 'Launch an instance' button is visible. The right panel, titled 'Summary', shows the configuration details for the instance, including the number of instances, software image, virtual server type, firewall, and storage. The bottom panel shows the 'Launch an Instance' confirmation screen with a green success message and 'Next Steps' for managing the instance.

Conclusion:

Successfully categorized Amazon Web Services (AWS) into different functional categories and implemented various cloud entities using the Cloud Toolbox support. This experiment demonstrated the diverse range of services offered by AWS, showcasing their functionalities and how they can be utilized to build and manage scalable cloud solutions for different applications and workloads.