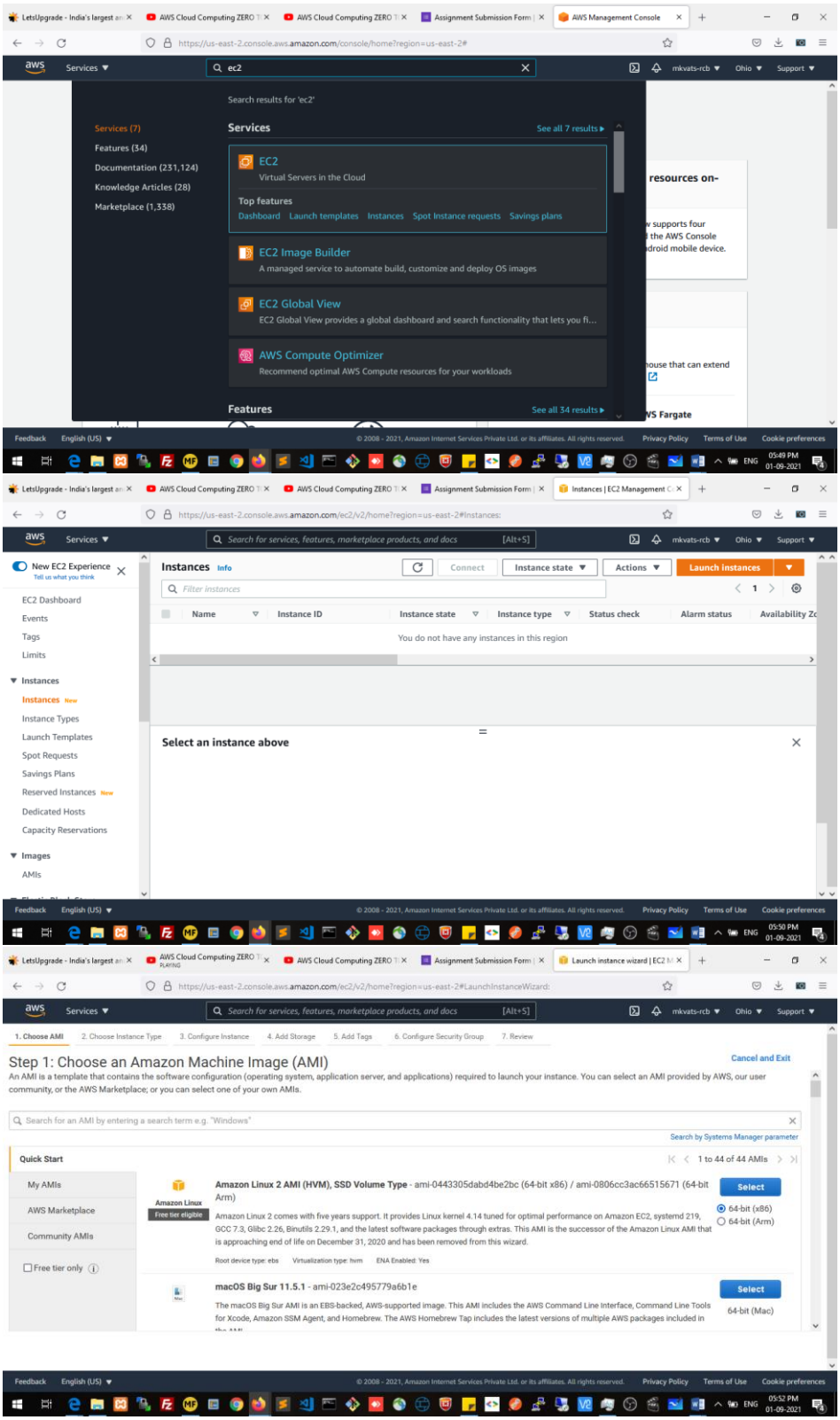
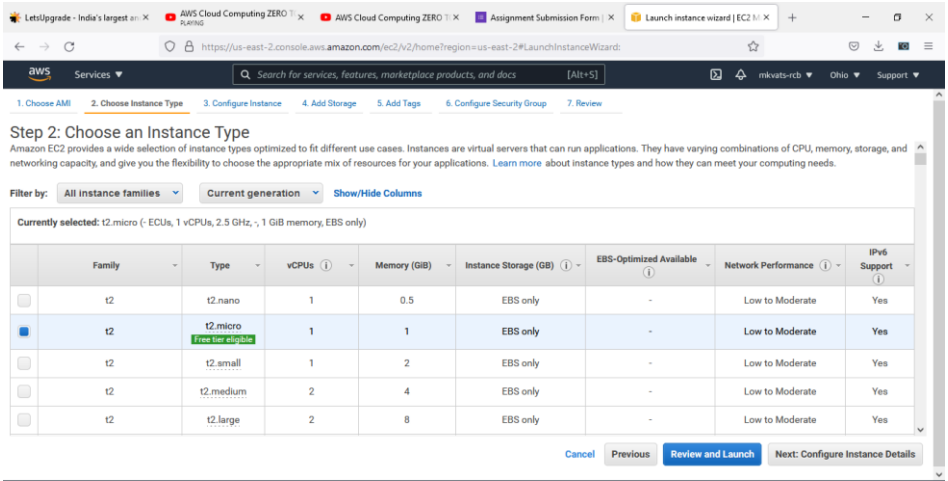
Assignment 2 – Working with EC2 Compute
(AWS Cloud Computing ZERO TO HERO - August 2021)

1. **Create an EC2 instance**




Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
Search for services, features, marketplace products, and docs [Alt+S]
mkvats-rcb
Ohio
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 2: Choose an Instance Type
Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. Learn more about instance types and how they can meet your computing needs.
Filter by:
All instance families
Current generation
Show/Hide Columns
Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)
Family
Type
vCPUs
Memory (GiB)
Instance Storage (GB)
EBS-Optimized Available
Network Performance
IPv6 Support
t2 t2.nano 1 0.5 EBS only - Low to Moderate Yes
t2 t2.micro Free tier eligible 1 1 EBS only - Low to Moderate Yes
t2 t2.small 1 2 EBS only - Low to Moderate Yes
t2 t2.medium 2 4 EBS only - Low to Moderate Yes
t2 t2.large 2 8 EBS only - Low to Moderate Yes
Cancel
Previous
Review and Launch
Next: Configure Instance Details
Feedback
English (US)
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ENG
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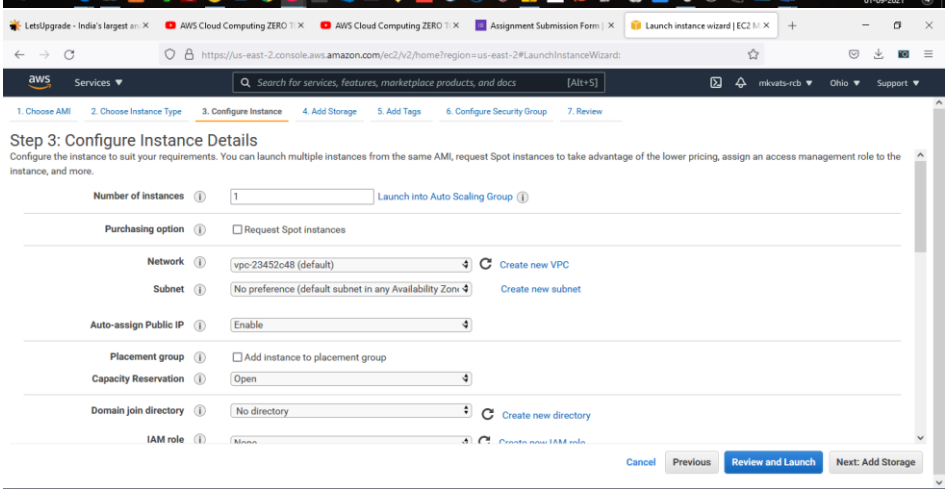
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
Search for services, features, marketplace products, and docs [Alt+S]
mkvats-rcb
Ohio
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Step 3: Configure Instance Details
Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.
Number of instances 1 Launch into Auto Scaling Group
Purchasing option Request Spot instances
Network vpc-23452c48 (default) Create new VPC
Subnet No preference (default subnet in any Availability Zone) Create new subnet
Auto-assign Public IP Enable
Placement group Add instance to placement group
Capacity Reservation Open
Domain join directory No directory Create new directory
IAM role None
Cancel
Previous
Review and Launch
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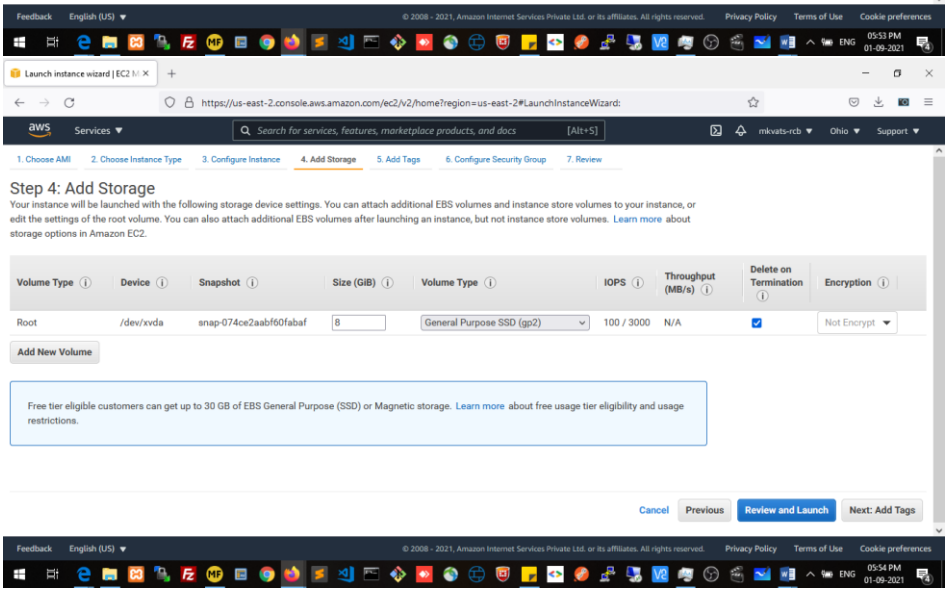
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
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Step 4: Add Storage
Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. Learn more about storage options in Amazon EC2.
Volume Type
Device
Snapshot
Size (GiB)
Volume Type
IOPS
Throughput (MB/s)
Delete on Termination
Encryption
Root /dev/xvda snap-074ce2aabf60fabaf 8 General Purpose SSD (gp2) 100 / 3000 N/A Not Encrypt
Add New Volume
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. Learn more about free usage tier eligibility and usage restrictions.
Cancel
Previous
Review and Launch
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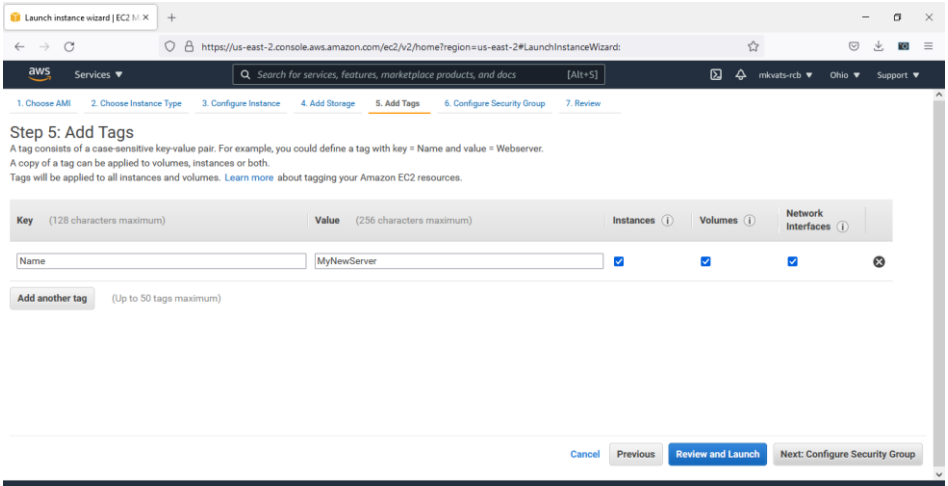
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
Search for services, features, marketplace products, and docs [Alt+S]
mkvats-rcb
Ohio
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1. Choose AMI
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Step 5: Add Tags
A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.
A copy of a tag can be applied to volumes, instances or both.
Tags will be applied to all instances and volumes. Learn more about tagging your Amazon EC2 resources.
Key (128 characters maximum)
Value (256 characters maximum)
Instances
Volumes
Network Interfaces
Name
MyNewServer
Add another tag
(Up to 50 tags maximum)
Cancel
Previous
Review and Launch
Next: Configure Security Group
Feedback
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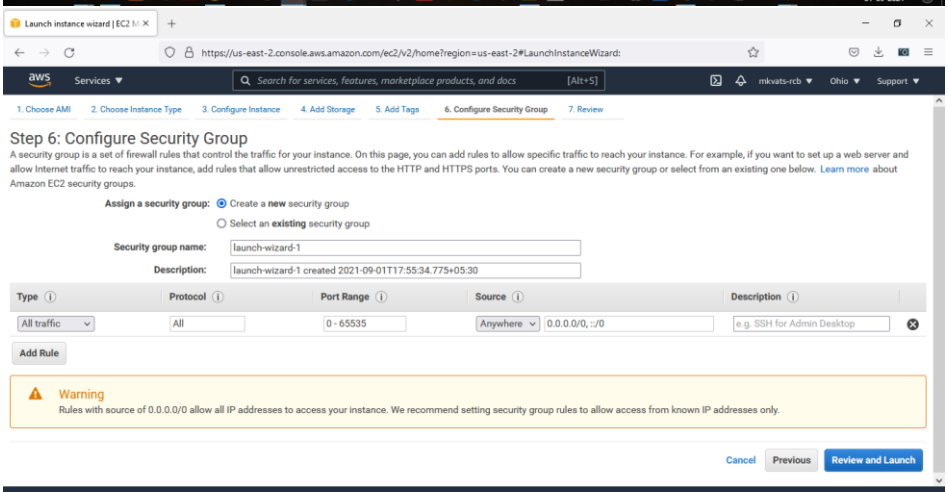
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
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Step 6: Configure Security Group
A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. Learn more about Amazon EC2 security groups.
Assign a security group: Create a new security group
Select an existing security group
Security group name: launch-wizard-1
Description: launch-wizard-1 created 2021-09-01T17:55:34.775+05:30
Type
Protocol
Port Range
Source
Description
All traffic
All
0 - 65535
Anywhere
0.0.0.0/0, ::/0
e.g. SSH for Admin Desktop
Add Rule
Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.
Cancel
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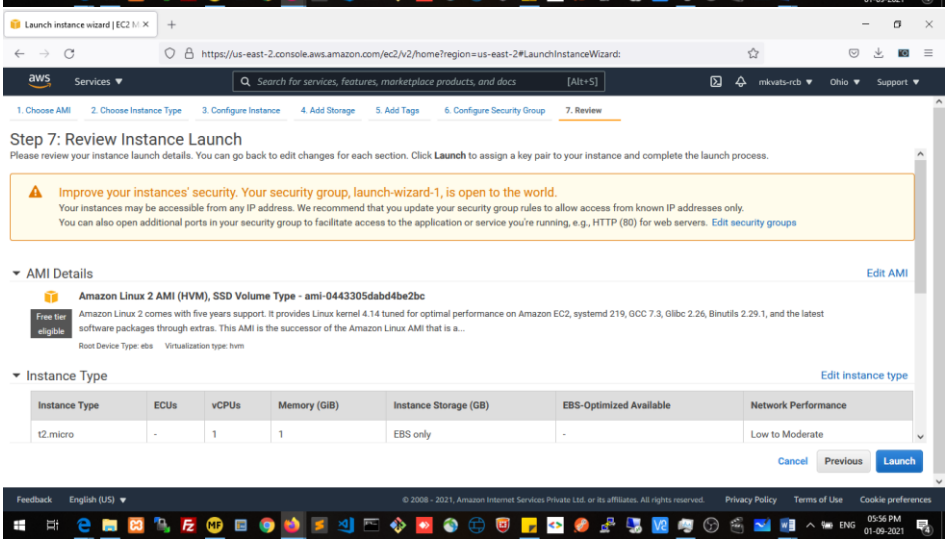
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
Search for services, features, marketplace products, and docs [Alt+S]
mkvats-rcb
Ohio
Support
1. Choose AMI
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5. Add Tags
6. Configure Security Group
7. Review
Step 7: Review Instance Launch
Please review your instance launch details. You can go back to edit changes for each section. Click Launch to assign a key pair to your instance and complete the launch process.
Improve your instances' security. Your security group, launch-wizard-1, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.
You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. Edit security groups
AMI Details
Edit AMI
Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0443305dabd4be2bc
Free tier eligible
Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is a...
Root Device Type: ebs
Virtualization type: hvm
Instance Type
Edit instance type
Instance Type
ECUs
vCPUs
Memory (GiB)
Instance Storage (GB)
EBS-Optimized Available
Network Performance
t2.micro
-
1
1
EBS only
-
Low to Moderate
Cancel
Previous
Launch
Feedback
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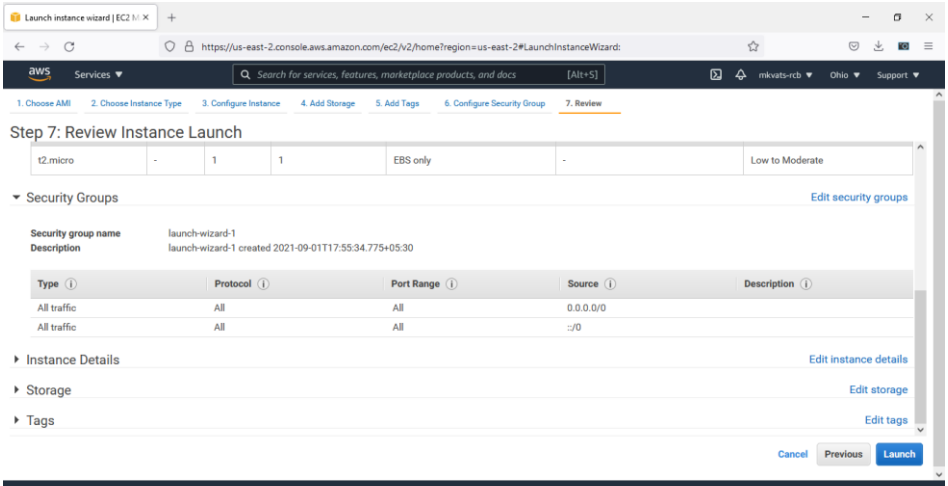
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
Search for services, features, marketplace products, and docs [Alt+S]
mkvats-rcb
Ohio
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5. Add Tags
6. Configure Security Group
7. Review
Step 7: Review Instance Launch
t2.micro
EBS only
Low to Moderate
Security Groups
Edit security groups
Security group name launch-wizard-1
Description launch-wizard-1 created 2021-09-01T17:55:34.775+05:30
Type
Protocol
Port Range
Source
Description
All traffic
All
0.0.0.0/0
::/0
Instance Details
Edit instance details
Storage
Edit storage
Tags
Edit tags
Cancel
Previous
Launch
Feedback
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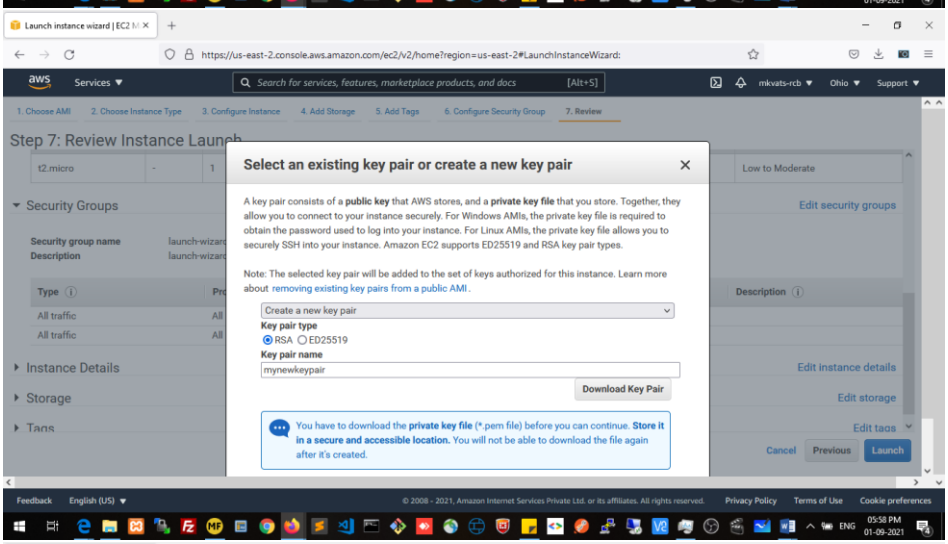
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Step 7: Review Instance Launch
Select an existing key pair or create a new key pair
A key pair consists of a public key that AWS stores, and a private key file that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.
Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.
Create a new key pair
Key pair type
RSA
ED25519
Key pair name
mynewkeypair
Download Key Pair
You have to download the private key file (*.pem file) before you can continue. Store it in a secure and accessible location. You will not be able to download the file again after it's created.
Cancel
Previous
Launch
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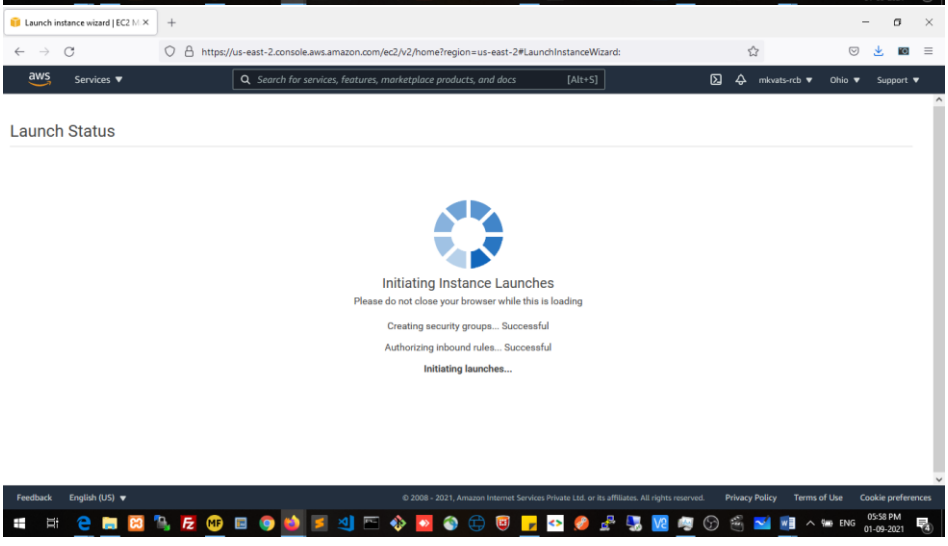
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Launch Status
Initiating Instance Launches
Please do not close your browser while this is loading
Creating security groups... Successful
Authorizing inbound rules... Successful
Initiating launches...
05:58 PM
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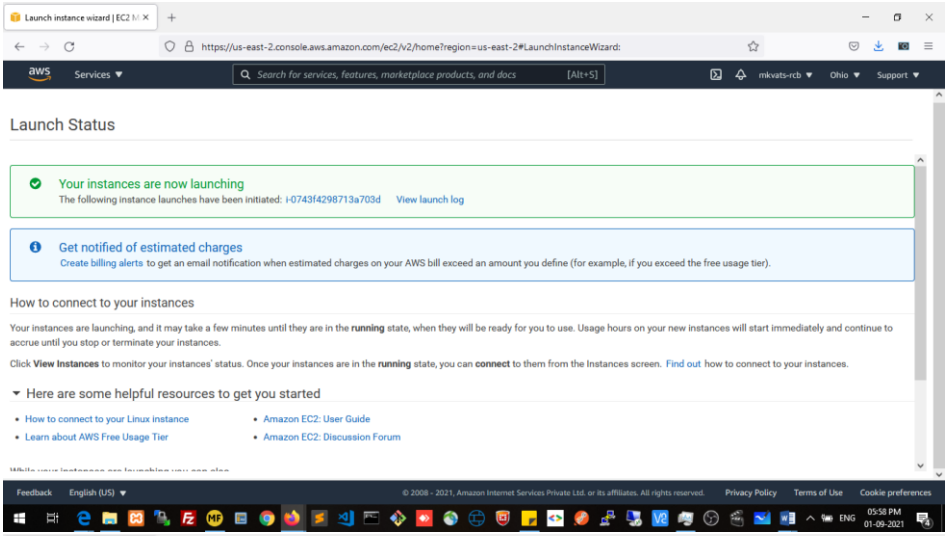
Launch instance wizard | EC2
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:
Services
Search for services, features, marketplace products, and docs [Alt+S]
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Ohio
Support
Launch Status
Your instances are now launching
The following instance launches have been initiated: i-0743f4298713a703d View launch log
Get notified of estimated charges
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).
How to connect to your instances
Your instances are launching, and it may take a few minutes until they are in the running state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.
Click View Instances to monitor your instances' status. Once your instances are in the running state, you can connect to them from the Instances screen. Find out how to connect to your instances.
Here are some helpful resources to get you started
How to connect to your Linux instance
Learn about AWS Free Usage Tier
Amazon EC2: User Guide
Amazon EC2: Discussion Forum
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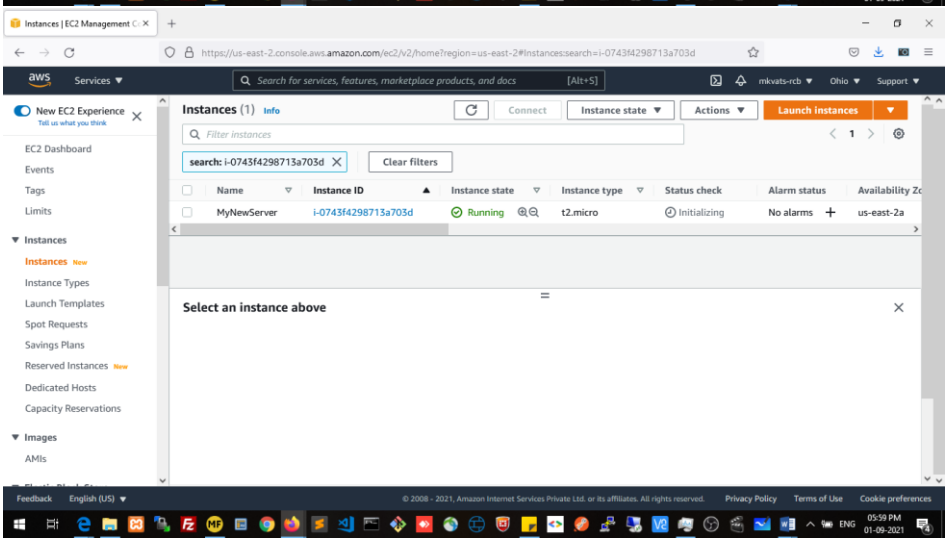
Instances | EC2 Management
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#Instances:search=i-0743f4298713a703d
Services
Search for services, features, marketplace products, and docs [Alt+S]
mkvats-rcb
Ohio
Support
New EC2 Experience
Tell us what you think
EC2 Dashboard
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances New
Dedicated Hosts
Capacity Reservations
Images
AMIs
Instances (1) Info
Connect
Instance state
Actions
Launch instances
Filter instances
search: i-0743f4298713a703d
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zo
MyNewServer
i-0743f4298713a703d
Running
t2.micro
Initializing
No alarms
us-east-2a
Select an instance above
Feedback
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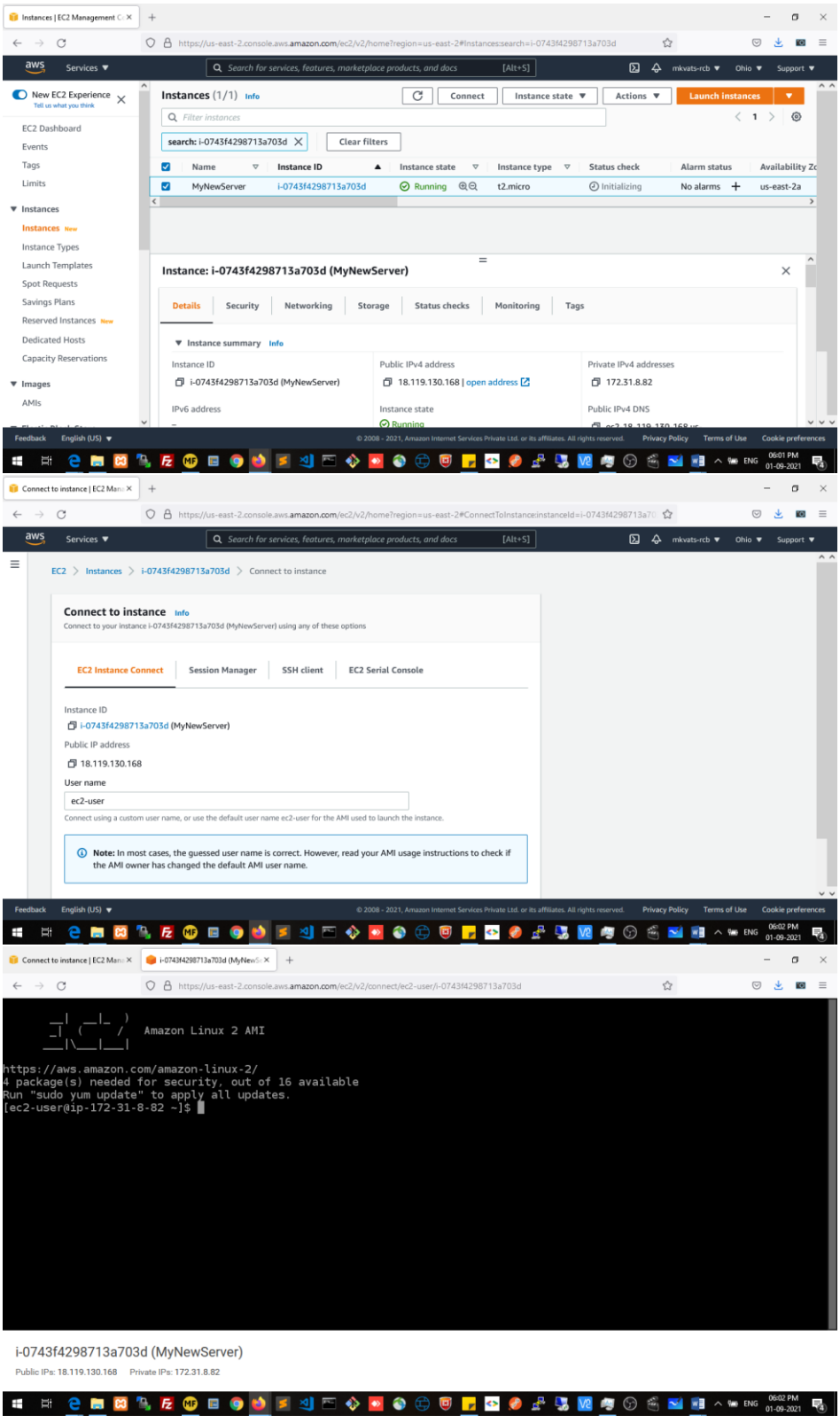
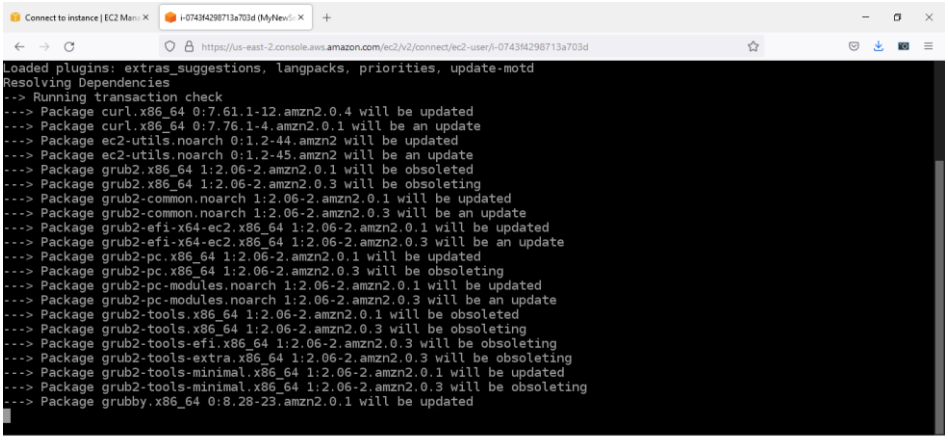
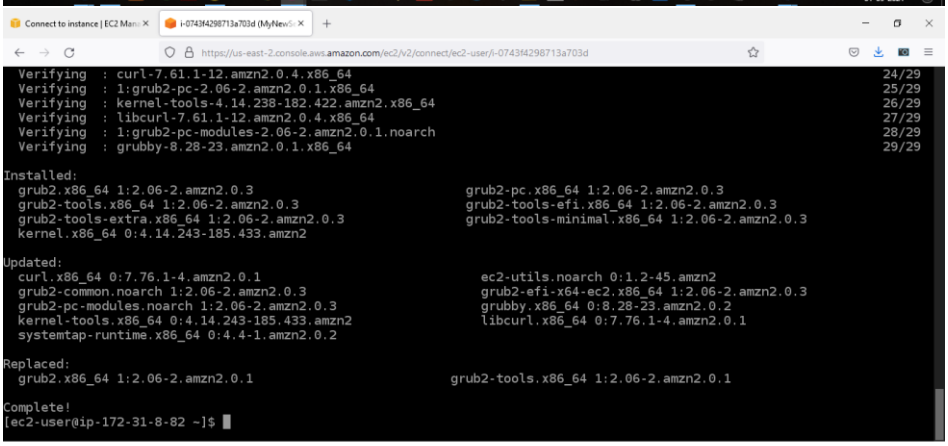
2. Connect to an instance and run a system update





i-0743f4298713a703d (MyNewServer)

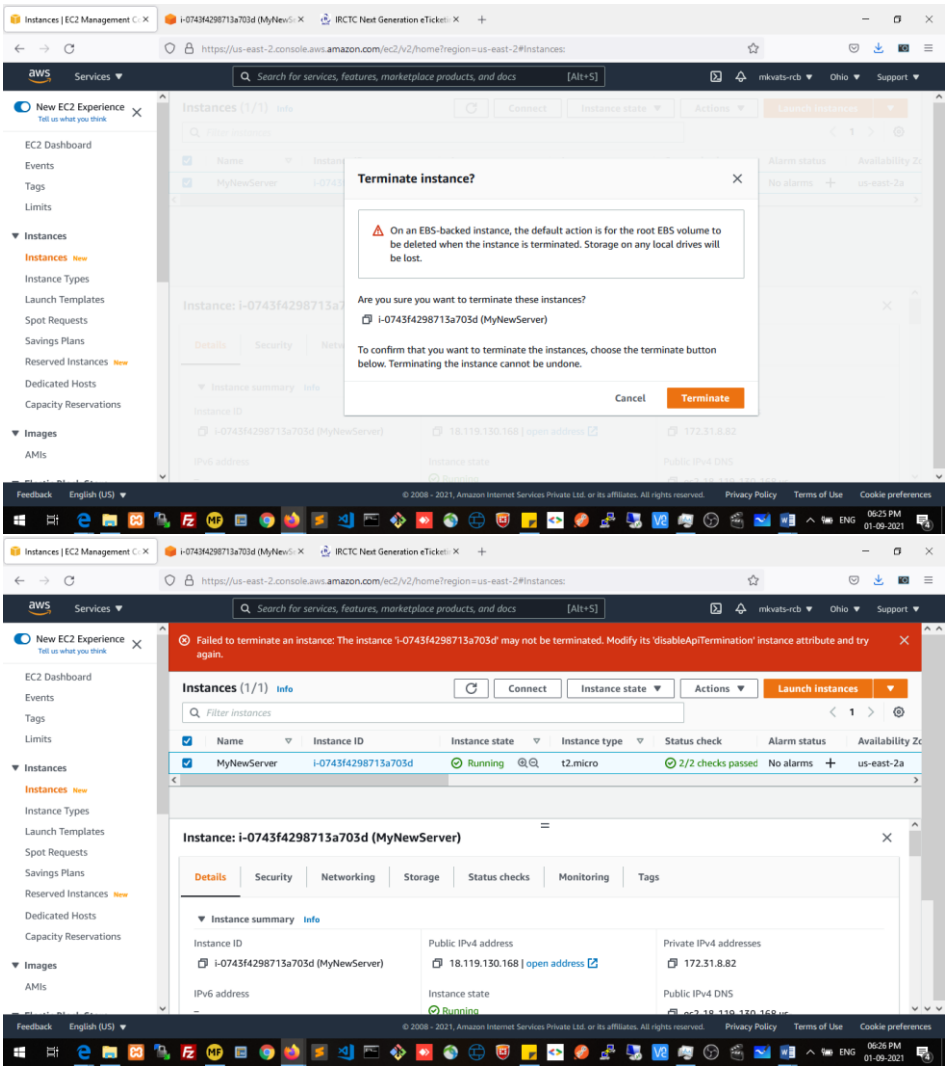
Public IPs: 18.119.130.168 Private IPs: 172.31.8.82



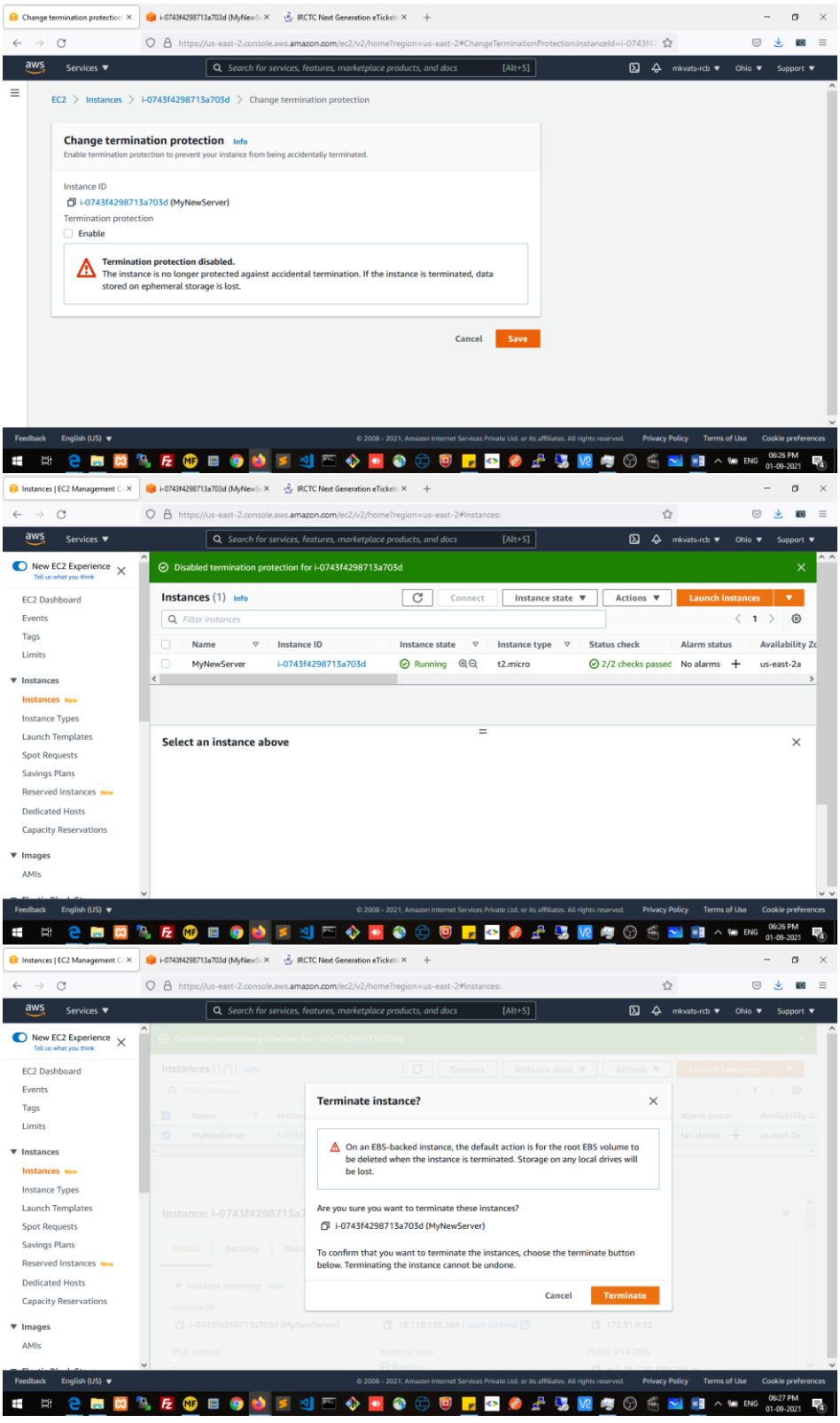
i-0743f4298713a703d (MyNewServer)

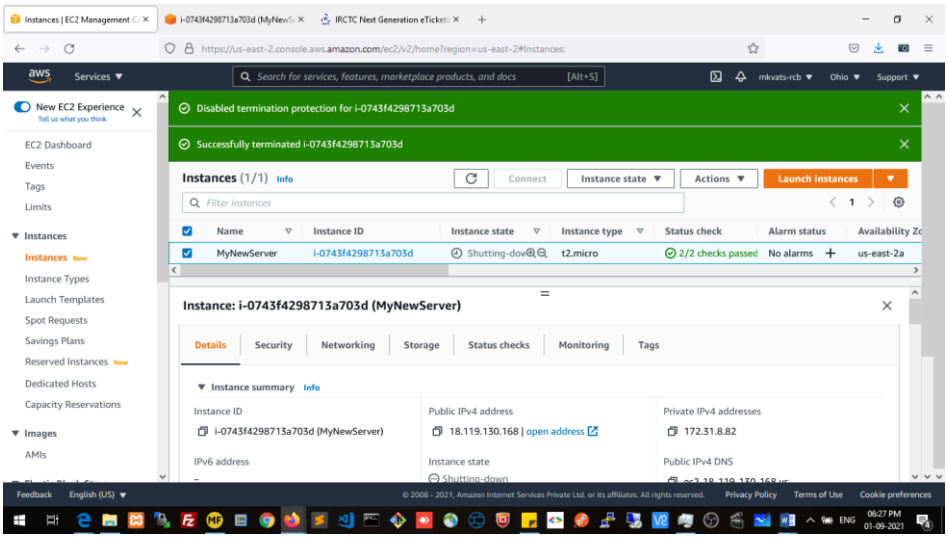
Public IPs: 18.119.130.168 Private IPs: 172.31.8.82

3. **Enable termination protection and check how it works**



4. Disable termination protection and terminate the instance




Disabled termination protection for i-0743f4298713a703d
Successfully terminated i-0743f4298713a703d
Instances (1/1) Info
Connect
Instance state
Actions
Launch instances
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
MyNewServer
i-0743f4298713a703d
t2.micro
2/2 checks passed
No alarms
us-east-2a
Instance: i-0743f4298713a703d (MyNewServer)
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary Info
Instance ID
i-0743f4298713a703d (MyNewServer)
Public IPv4 address
18.119.130.168 | open address
Private IPv4 addresses
172.31.8.82
IPv6 address
Instance state
Public IPv4 DNS