Kumar Gaurav 20122065

Lab_3 , Cloud computing

1. Describe the use cases each of EBS, S3, EFS Storage Services.

- AWS Elastic Block Store (EBS) is Amazon's block-level storage solution used with the EC2 cloud service to store persistent data. This means that the data is kept on the AWS EBS servers even when the EC2 instances are shut down.
- Amazon S3 provides object (file) storage through a web interface. It's built to store, protect and retrieve data from “buckets” at any time from anywhere on any device. As AWS describes it, an S3 environment is a flat structure. A user creates a bucket, and the bucket stores objects in the cloud.
- Amazon S3 has many use cases, including:

  Storage for Internet. ...

  Backup and Disaster Recovery. ...

  Analytics. ...

  Data Archiving. ...

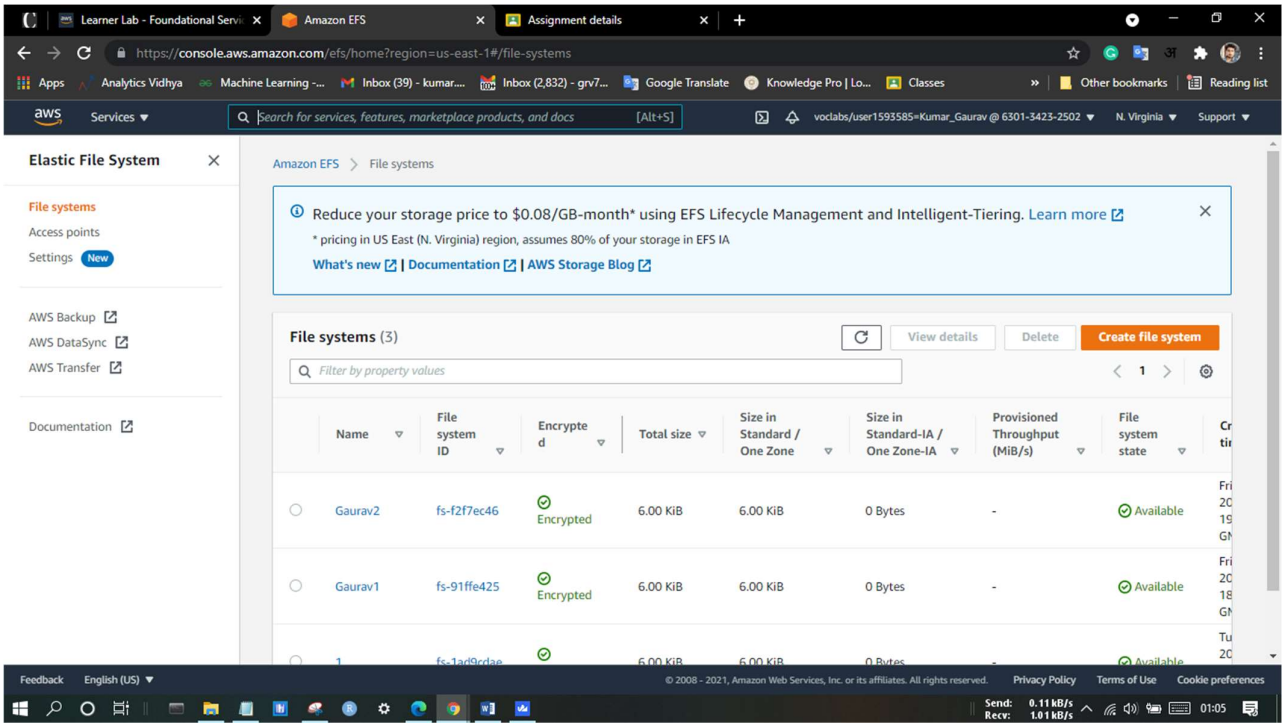
  Static Website Hosting. ...

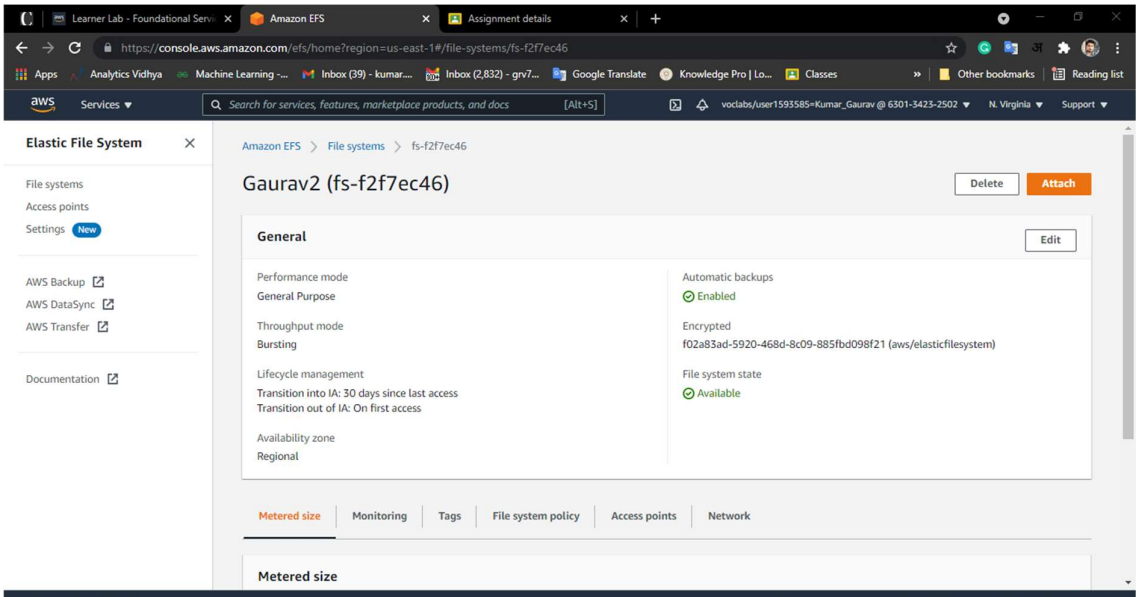
  Security and Compliance. ...

- Amazon S3 is object storage built to store and retrieve any amount of data from anywhere. It's a simple storage service that offers industry leading durability, availability, performance, security, and virtually unlimited scalability at very low costs

- Amazon Elastic File System (Amazon EFS) provides a simple, scalable, fully managed, elastic NFS file system for use with AWS Cloud services and on-premises resources. Amazon EFS is easy to use and offers a simple interface that allows you to create and configure file systems quickly and easily.

2. Create an EFS storage service and host a static web application in the webserver which can be access by multiple instances located in different Availability zone.




Learner Lab - Foundational Servi
Amazon EFS
Assignment details
https://console.aws.amazon.com/efs/home?region=us-east-1#/file-systems/fs-f2f7ec46
Apps
Analytics Vidhya
Machine Learning -...
Inbox (39) - kumar....
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AWS Backup
AWS DataSync
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File systems
fs-f2f7ec46
Gaurav2 (fs-f2f7ec46)
Delete
Attach
General
Edit
Performance mode
General Purpose
Throughput mode
Bursting
Lifecycle management
Transition into IA: 30 days since last access
Transition out of IA: On first access
Availability zone
Regional
Automatic backups
Enabled
Encrypted
f02a83ad-5920-468d-8c09-885fbd098f21 (aws/elasticfilesystem)
File system state
Available
Metered size
Monitoring
Tags
File system policy
Access points
Network
Metered size
Feedback
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Send: 6.41 kB/s
Recv: 12.23 kB/s
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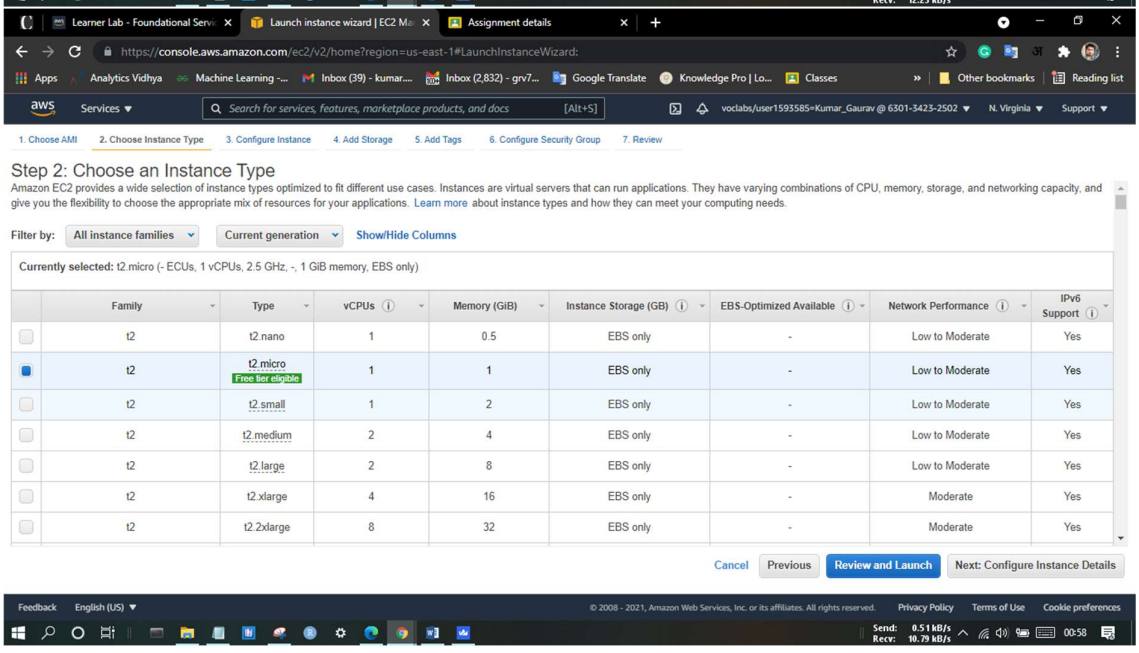
Learner Lab - Foundational Servi
Launch instance wizard | EC2 Ma
Assignment details
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
Apps
Analytics Vidhya
Machine Learning -...
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N. Virginia
Support
1. Choose AMI
2. Choose 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
t2 t2.xlarge 4 16 EBS only - Moderate Yes
t2 t2.2xlarge 8 32 EBS only - Moderate Yes
Cancel
Previous
Review and Launch
Next: Configure Instance Details
Feedback
English (US)
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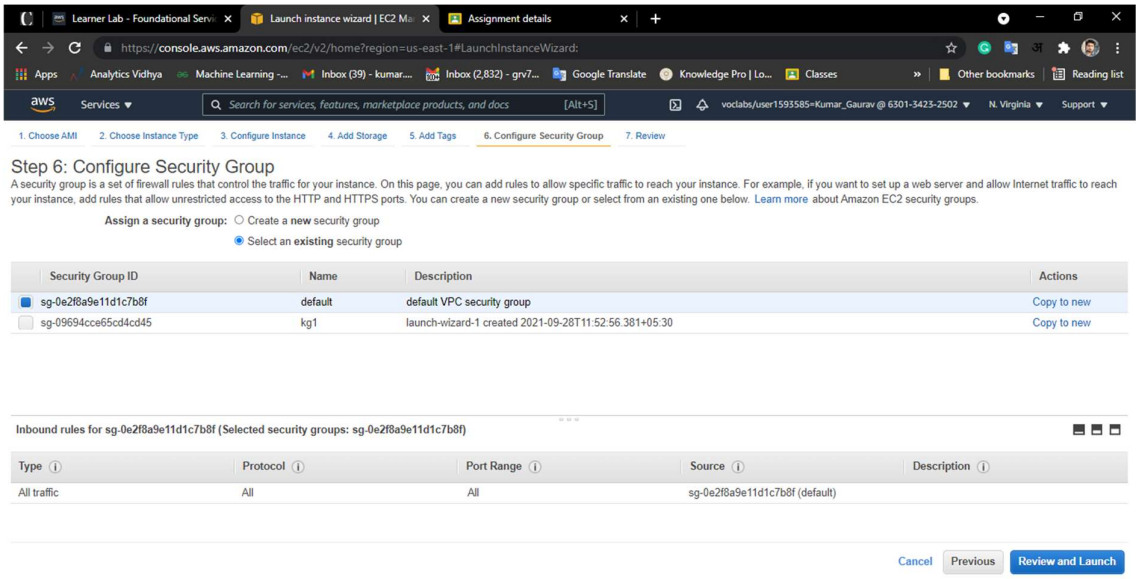
Send: 0.51 kB/s
Recv: 10.79 kB/s
00:58


Learner Lab - Foundational Servi
Launch instance wizard | EC2 Ma
Assignment details
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstanceWizard:
Apps
Analytics Vidhya
Machine Learning -...
Inbox (39) - kumar....
Inbox (2,832) - grv7...
Google Translate
Knowledge Pro | Lo...
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aws
Services
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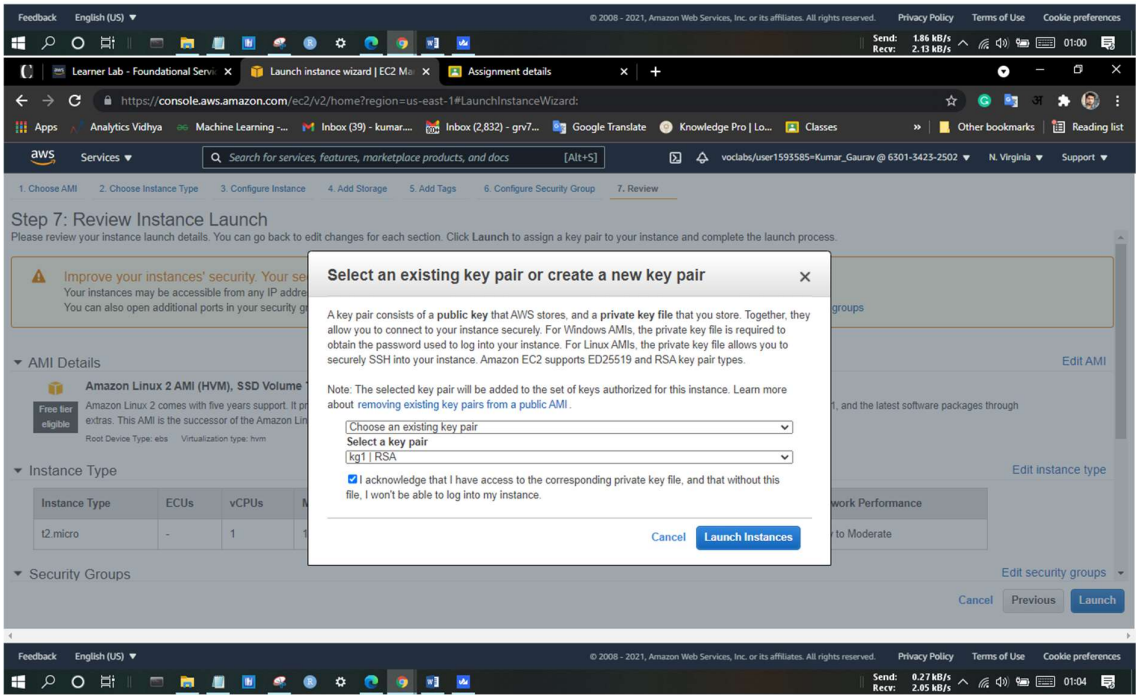
N. Virginia
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 6: Configure Security Group
A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to 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 ID
Name
Description
Actions
sg-0e2f8a9e11d1c7b8f
default
default VPC security group
Copy to new
sg-09694cce65cd4cd45
kg1
launch-wizard-1 created 2021-09-28T11:52:56.381+05:30
Copy to new
Inbound rules for sg-0e2f8a9e11d1c7b8f (Selected security groups: sg-0e2f8a9e11d1c7b8f)
Type
Protocol
Port Range
Source
Description
All traffic
All
All
sg-0e2f8a9e11d1c7b8f (default)
Cancel
Previous
Review and Launch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Assignment details
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voclabs/user1593585=Kumar_Gaurav @ 6301-3423-2502
N. Virginia
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
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 se
Your instances may be accessible from any IP addre
You can also open additional ports in your security g
groups
AMI Details
Edit AMI
Amazon Linux 2 AMI (HVM), SSD Volume
Free tier eligible
Amazon Linux 2 comes with five years support. It pr
extras. This AMI is the successor of the Amazon Lin
Root Device Type: ebs
Virtualization type: hvm
1, and the latest software packages through
Instance Type
Edit instance type
Instance Type
ECUs
vCPUs
work Performance
t2.micro
-
1
to Moderate
Security Groups
Edit security groups
Cancel
Previous
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.
Choose an existing key pair
Select a key pair
kg1 | RSA
I acknowledge that I have access to the corresponding private key file, and that without this file, I won't be able to log into my instance.
Cancel
Launch Instances
Feedback
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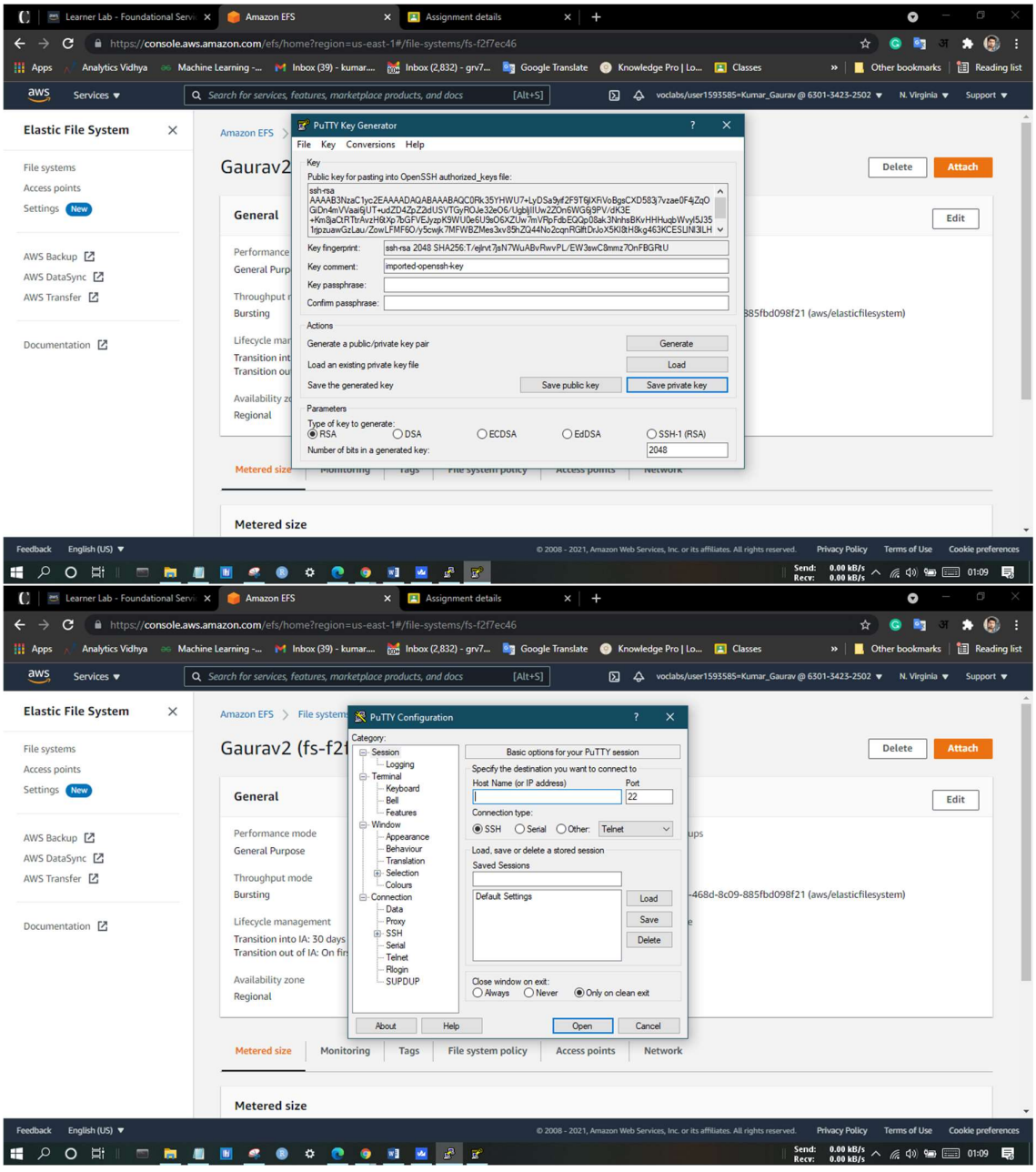
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Amazon EFS
Assignment details
https://console.aws.amazon.com/efs/home?region=us-east-1#/file-systems/fs-f2f7ec46
Elastic File System
File systems
Access points
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New
AWS Backup
AWS DataSync
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Documentation
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Gaurav2
Delete
Attach
General
Edit
Performance mode
General Purpose
Throughput mode
Bursting
Lifecycle management
Availability zone
Regional
PuTTY Key Generator
File Key Conversions Help
Key
Public key for pasting into OpenSSH authorized_keys file:
Key fingerprint:
ssh-rsa 2048 SHA256:T/ejlrvt7jsN7WuABvRwvPL/EW3swC8mmz7OnFBGRtU
Key comment:
imported-openssh-key
Key passphrase:
Confirm passphrase:
Actions
Generate a public/private key pair
Generate
Load an existing private key file
Load
Save the generated key
Save public key
Save private key
Parameters
Type of key to generate:
RSA
DSA
ECDSA
EdDSA
SSH-1 (RSA)
Number of bits in a generated key:
2048
Metered size
Monitoring
Tags
File system policy
Access points
Network
Feedback
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Recv: 0.00 kB/s
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Amazon EFS
Assignment details
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Elastic File System
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Access points
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AWS DataSync
AWS Transfer
Documentation
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Gaurav2 (fs-f2f
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Performance mode
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Throughput mode
Bursting
Lifecycle management
Transition into IA: 30 days
Availability zone
Regional
PuTTY Configuration
Category:
Session
Logging
Terminal
Keyboard
Bell
Features
Window
Appearance
Behaviour
Translation
Selection
Colours
Connection
Data
Proxy
SSH
Serial
Telnet
Rlogin
SUPDUP
Basic options for your PuTTY session
Specify the destination you want to connect to
Host Name (or IP address)
Port
22
Connection type:
SSH
Serial
Other:
Telnet
Load, save or delete a stored session
Saved Sessions
Default Settings
Load
Save
Delete
Close window on exit:
Always
Never
Only on clean exit
About
Help
Open
Cancel
Metered size
Monitoring
Tags
File system policy
Access points
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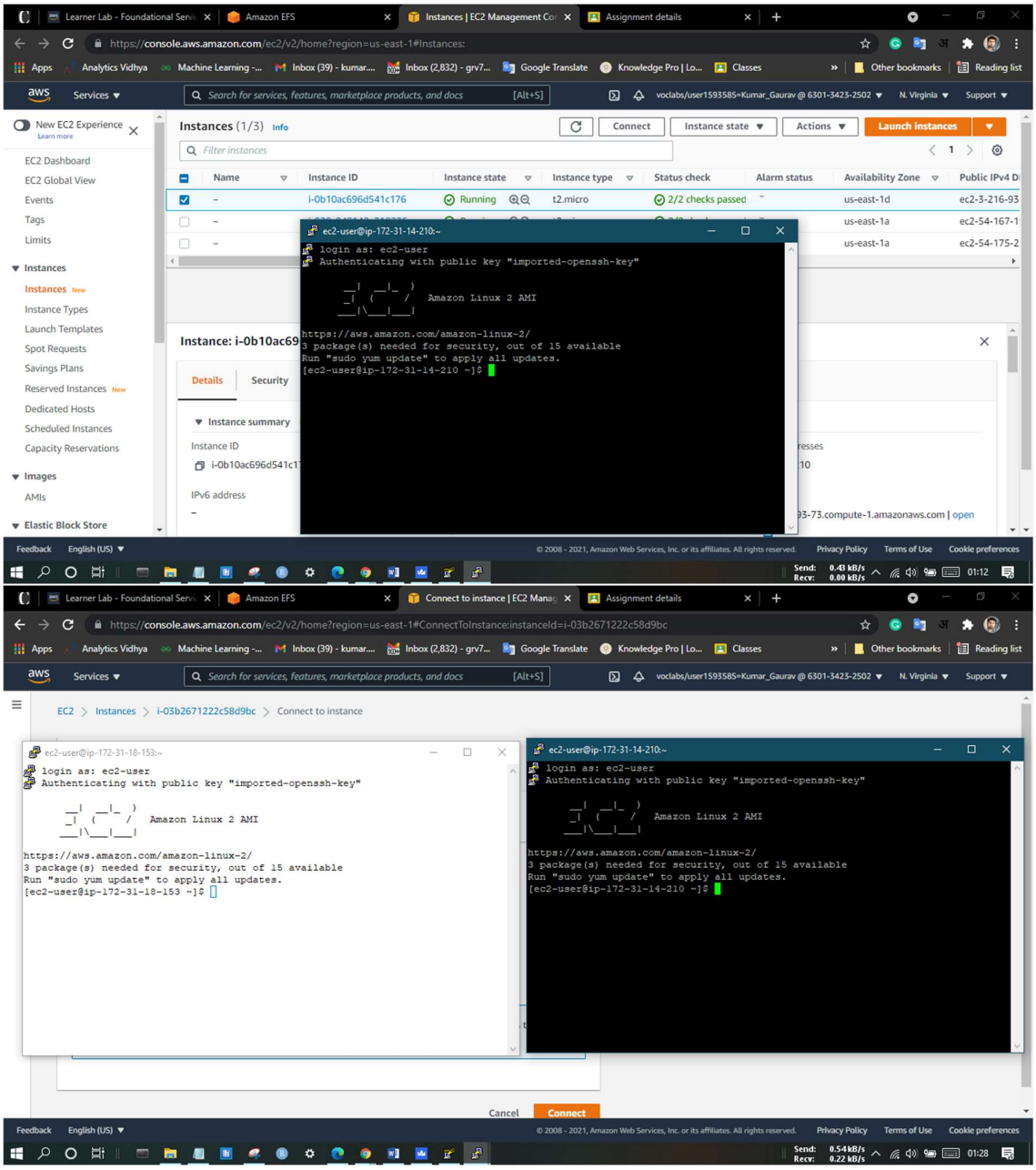
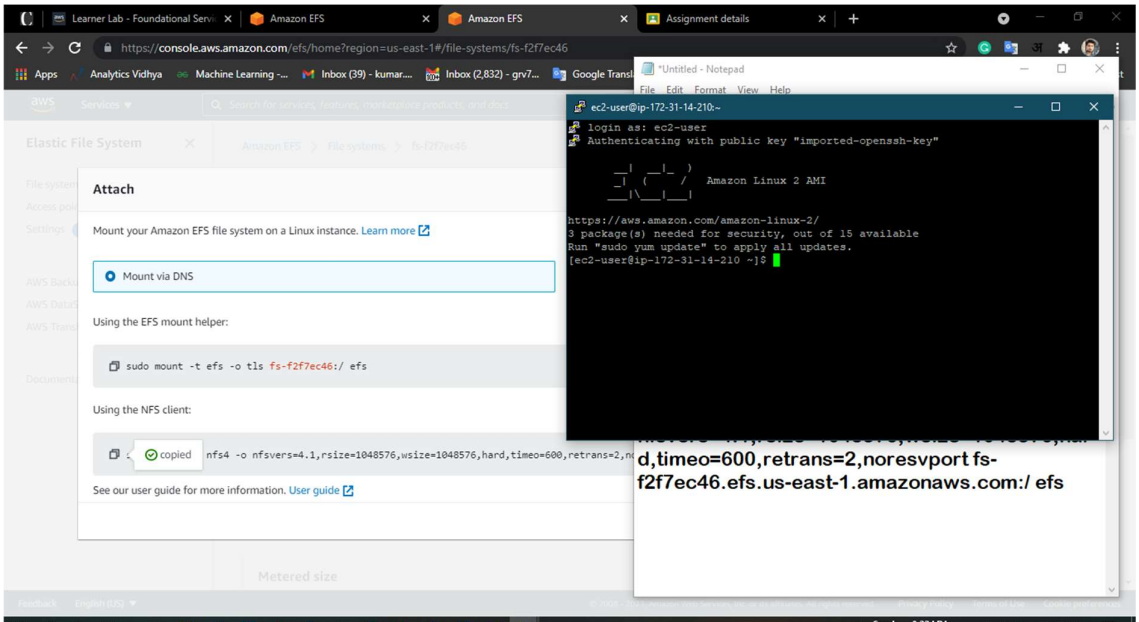

Instances (1/3) Info
Connect
Instance state
Actions
Launch instances
i-0b10ac696d541c176
Running
t2.micro
2/2 checks passed
us-east-1d
ec2-user@ip-172-31-14-210:~
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
3 package(s) needed for security, out of 15 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-14-210 ~]$
Instance: i-0b10ac69
Details
Security
Instance summary
Instance ID
IPv6 address

EC2 > Instances > i-03b2671222c58d9bc > Connect to instance
ec2-user@ip-172-31-18-153:~
ec2-user@ip-172-31-14-210:~
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
3 package(s) needed for security, out of 15 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-18-153 ~]$
[ec2-user@ip-172-31-14-210 ~]$
Cancel
Connect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Amazon EFS
Amazon EFS
Assignment details
https://console.aws.amazon.com/efs/home?region=us-east-1#/file-systems/fs-f2f7ec46
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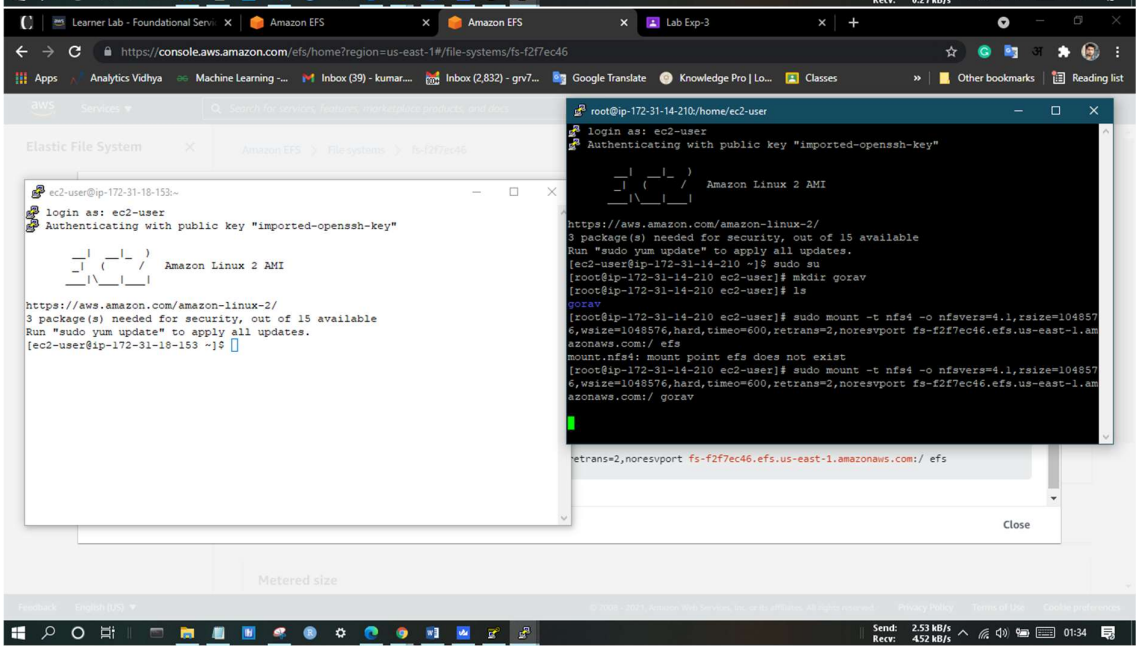
Inbox (39) - kumar....
Inbox (2,832) - grv7...
Google Transl
Elastic File System
Attach
Mount your Amazon EFS file system on a Linux instance. Learn more
Mount via DNS
Using the EFS mount helper:
sudo mount -t efs -o tls fs-f2f7ec46:/ efs
Using the NFS client:
copied
nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,n
See our user guide for more information. User guide
Metered size
*Untitled - Notepad
File Edit Format View Help
d,timeo=600,retrans=2,noresvport fs-
f2f7ec46.efs.us-east-1.amazonaws.com:/ efs
ec2-user@ip-172-31-14-210:~
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
3 package(s) needed for security, out of 15 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-14-210 ~]$
Send: 0.23 kB/s
Recv: 0.27 kB/s
01:30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Amazon EFS
Lab Exp-3
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Elastic File System
ec2-user@ip-172-31-18-153:~
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
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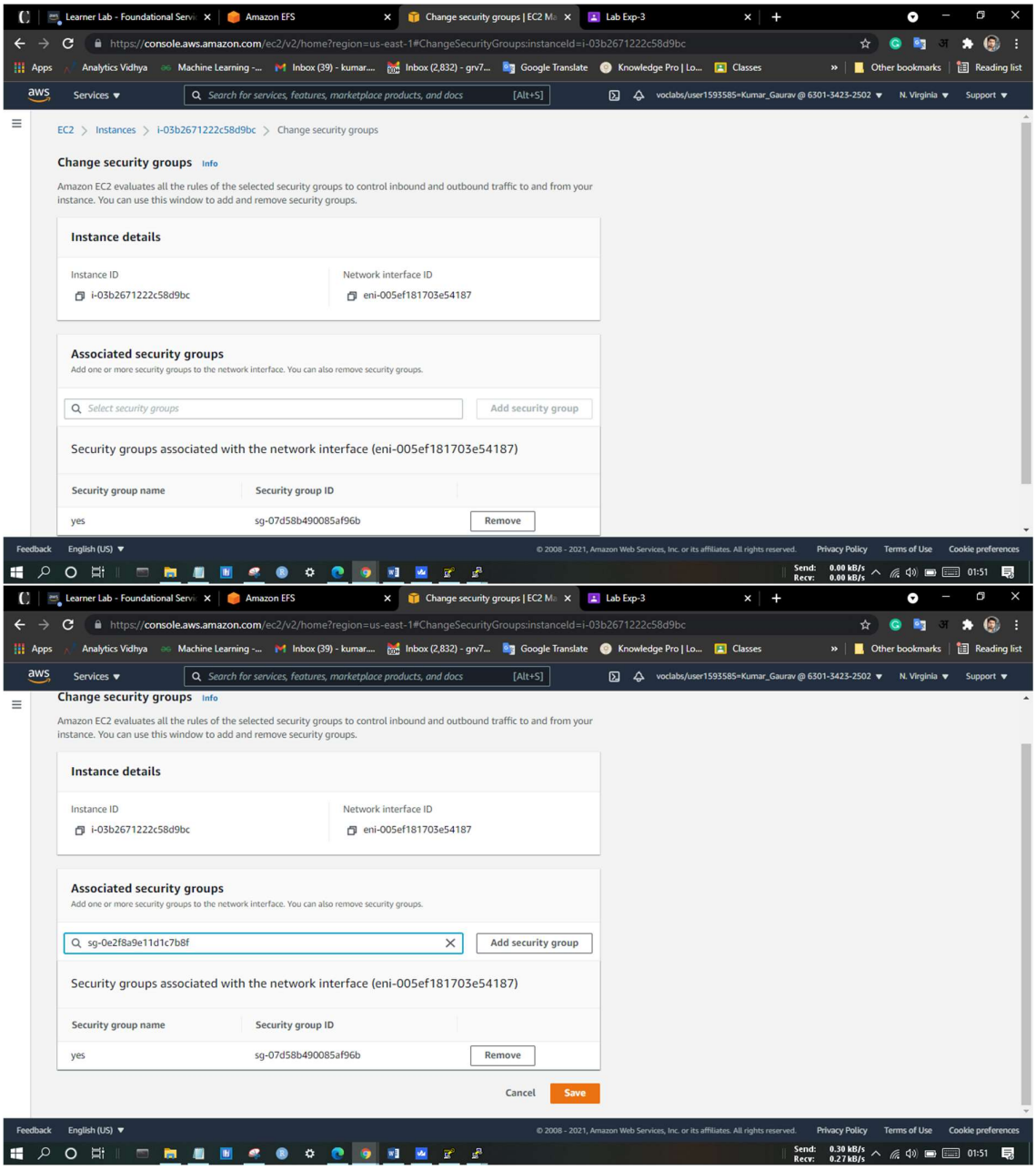
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-18-153 ~]$
root@ip-172-31-14-210:/home/ec2-user
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
3 package(s) needed for security, out of 15 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-14-210 ~]$ sudo su
[root@ip-172-31-14-210 ec2-user]# mkdir gorav
[root@ip-172-31-14-210 ec2-user]# ls
gorav
[root@ip-172-31-14-210 ec2-user]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=104857
6,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-f2f7ec46.efs.us-east-1.am
azonaws.com:/ efs
mount.nfs4: mount point efs does not exist
[root@ip-172-31-14-210 ec2-user]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=104857
6,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-f2f7ec46.efs.us-east-1.am
azonaws.com:/ gorav
etrans=2,noresvport fs-f2f7ec46.efs.us-east-1.amazonaws.com:/ efs
Close
Metered size
Send: 2.53 kB/s
Recv: 4.52 kB/s
01:34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Amazon EFS
Change security groups | EC2 Ma
Lab Exp-3
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#ChangeSecurityGroups:instanceId=i-03b2671222c58d9bc
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voclabs/user1593585=Kumar_Gaurav @ 6301-3423-2502
N. Virginia
Support
EC2 > Instances > i-03b2671222c58d9bc > Change security groups
Change security groups Info
Amazon EC2 evaluates all the rules of the selected security groups to control inbound and outbound traffic to and from your instance. You can use this window to add and remove security groups.
Instance details
Instance ID
i-03b2671222c58d9bc
Network interface ID
eni-005ef181703e54187
Associated security groups
Add one or more security groups to the network interface. You can also remove security groups.
Select security groups
Add security group
Security groups associated with the network interface (eni-005ef181703e54187)
Security group name
Security group ID
yes
sg-07d58b490085af96b
Remove
Feedback
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Send: 0.00 kB/s
Recv: 0.00 kB/s
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Change security groups | EC2 Ma
Lab Exp-3
https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#ChangeSecurityGroups:instanceId=i-03b2671222c58d9bc
Apps
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voclabs/user1593585=Kumar_Gaurav @ 6301-3423-2502
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Change security groups Info
Amazon EC2 evaluates all the rules of the selected security groups to control inbound and outbound traffic to and from your instance. You can use this window to add and remove security groups.
Instance details
Instance ID
i-03b2671222c58d9bc
Network interface ID
eni-005ef181703e54187
Associated security groups
Add one or more security groups to the network interface. You can also remove security groups.
sg-0e2f8a9e11d1c7b8f
Add security group
Security groups associated with the network interface (eni-005ef181703e54187)
Security group name
Security group ID
yes
sg-07d58b490085af96b
Remove
Cancel
Save
Feedback
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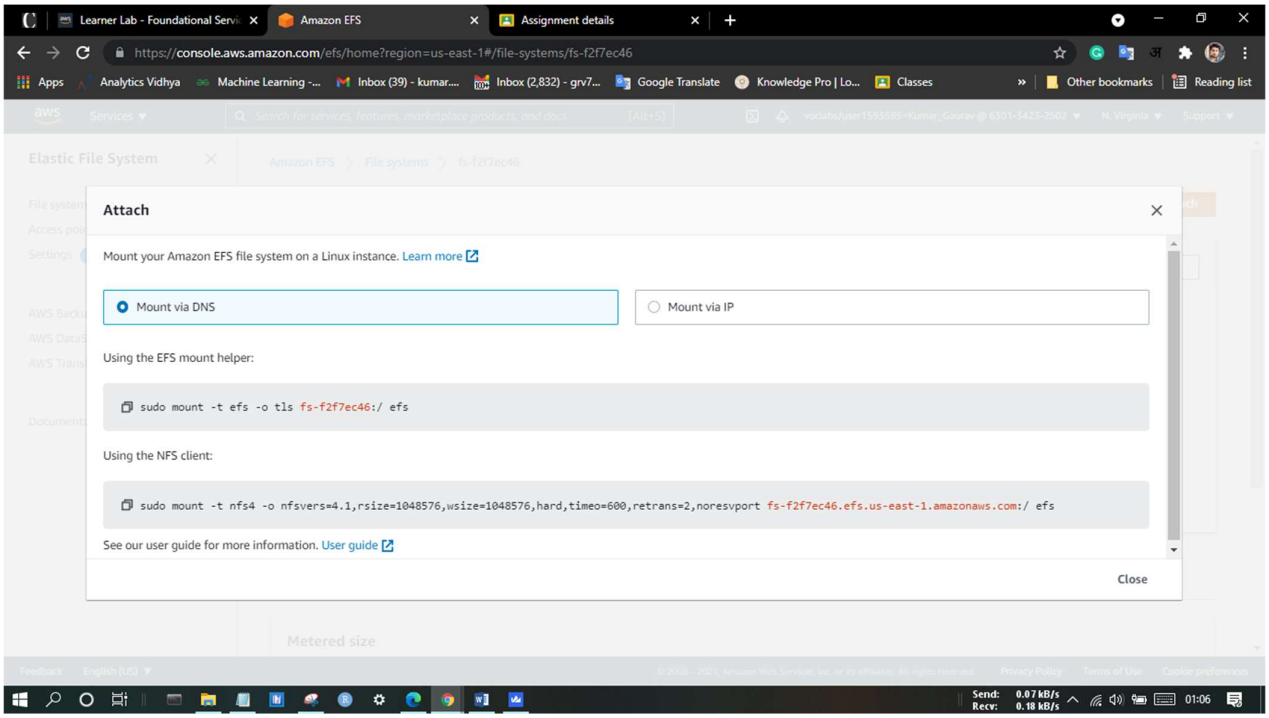
Send: 0.30 kB/s
Recv: 0.27 kB/s
01:51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Amazon EFS
Assignment details
https://console.aws.amazon.com/efs/home?region=us-east-1#/file-systems/fs-f2f7ec46
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Inbox (2,832) - grv7...
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Elastic File System
Attach
Mount your Amazon EFS file system on a Linux instance. Learn more
Mount via DNS
Mount via IP
Using the EFS mount helper:
sudo mount -t efs -o tls fs-f2f7ec46:/ efs
Using the NFS client:
sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-f2f7ec46.efs.us-east-1.amazonaws.com:/ efs
See our user guide for more information. User guide
Close
Metered size
Send: 0.07 kB/s
Recv: 0.18 kB/s
01:06