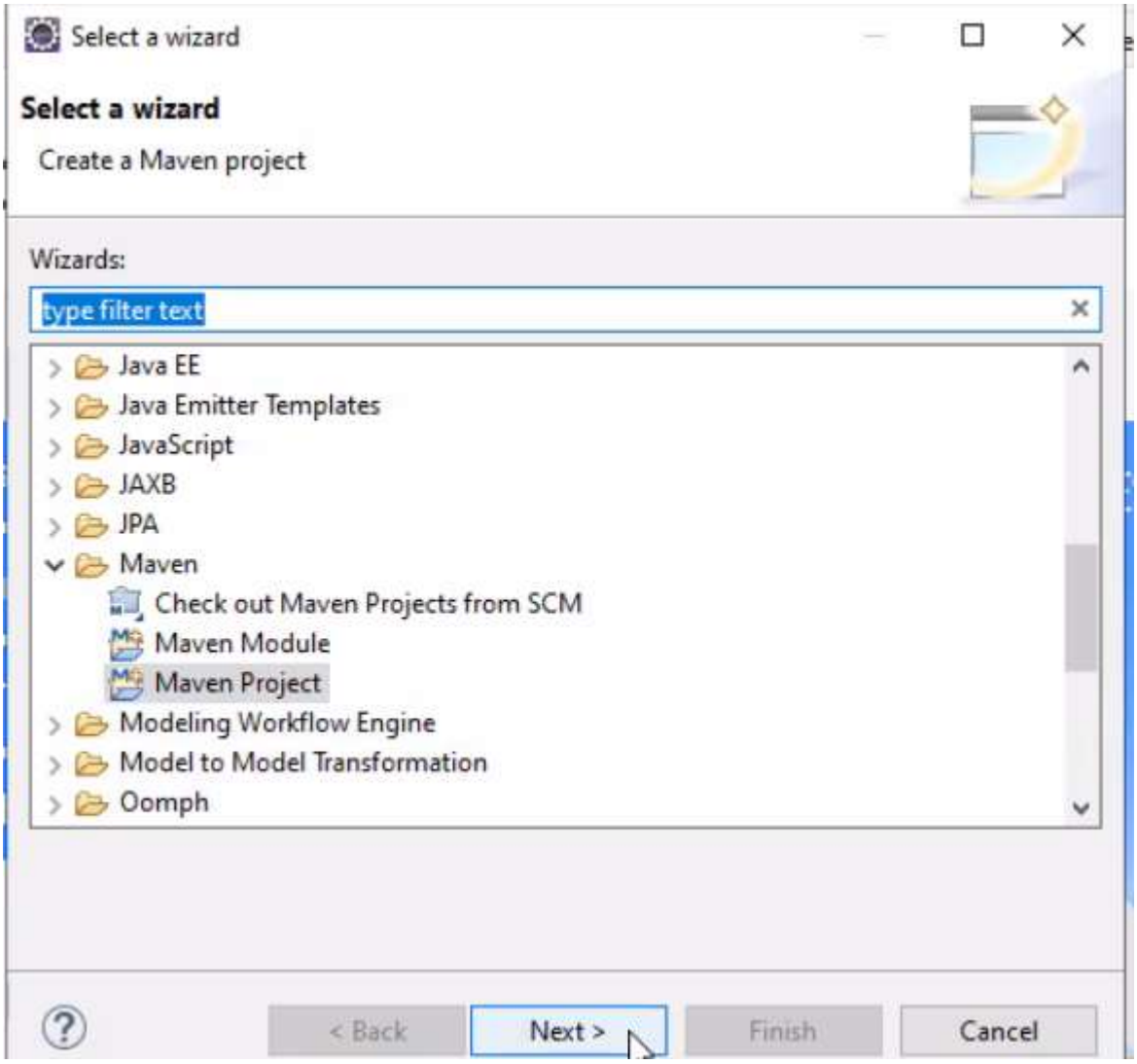
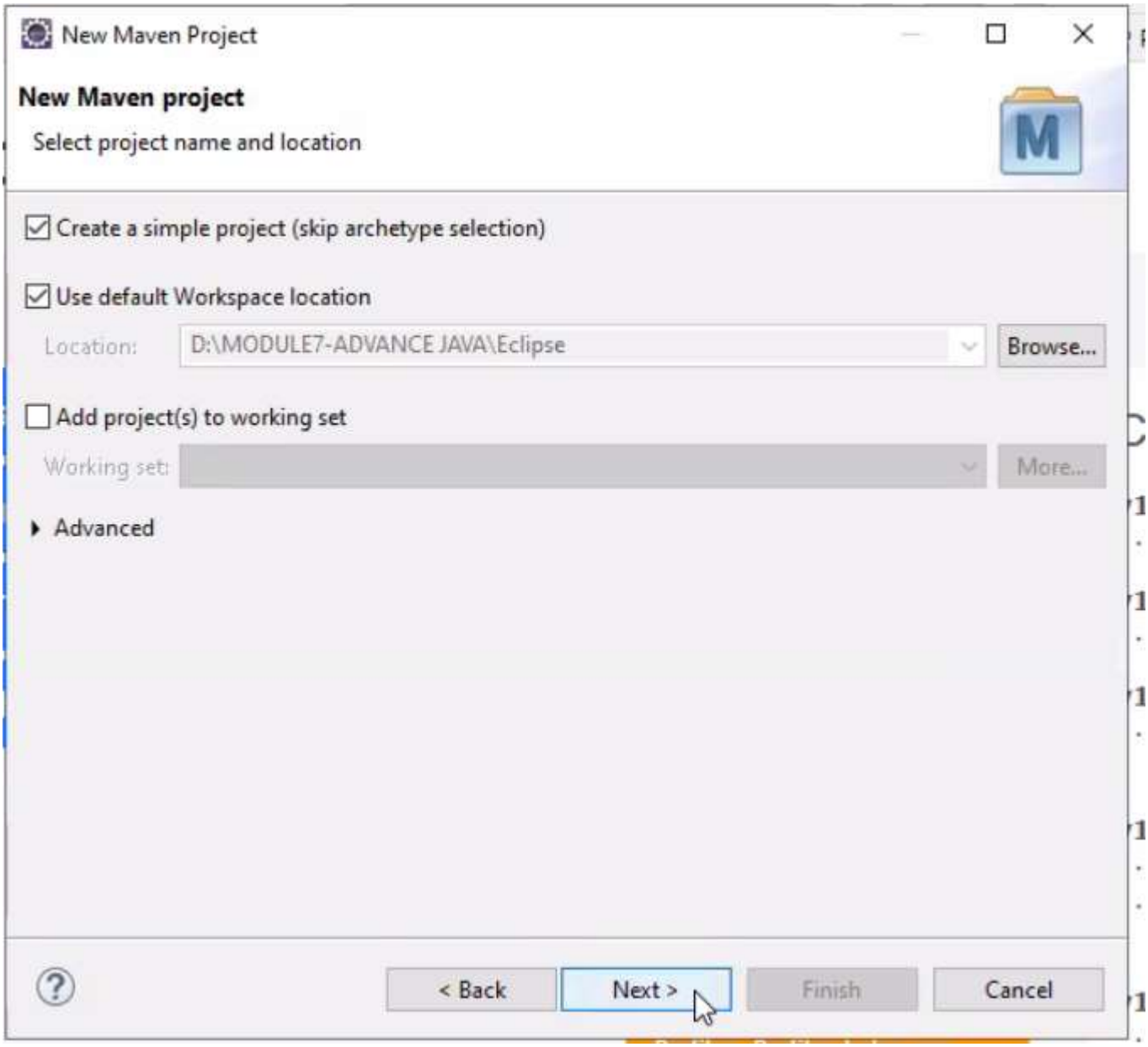
Note – This test is an open book test and you are allowed to use Internet/Google and class PDF files.

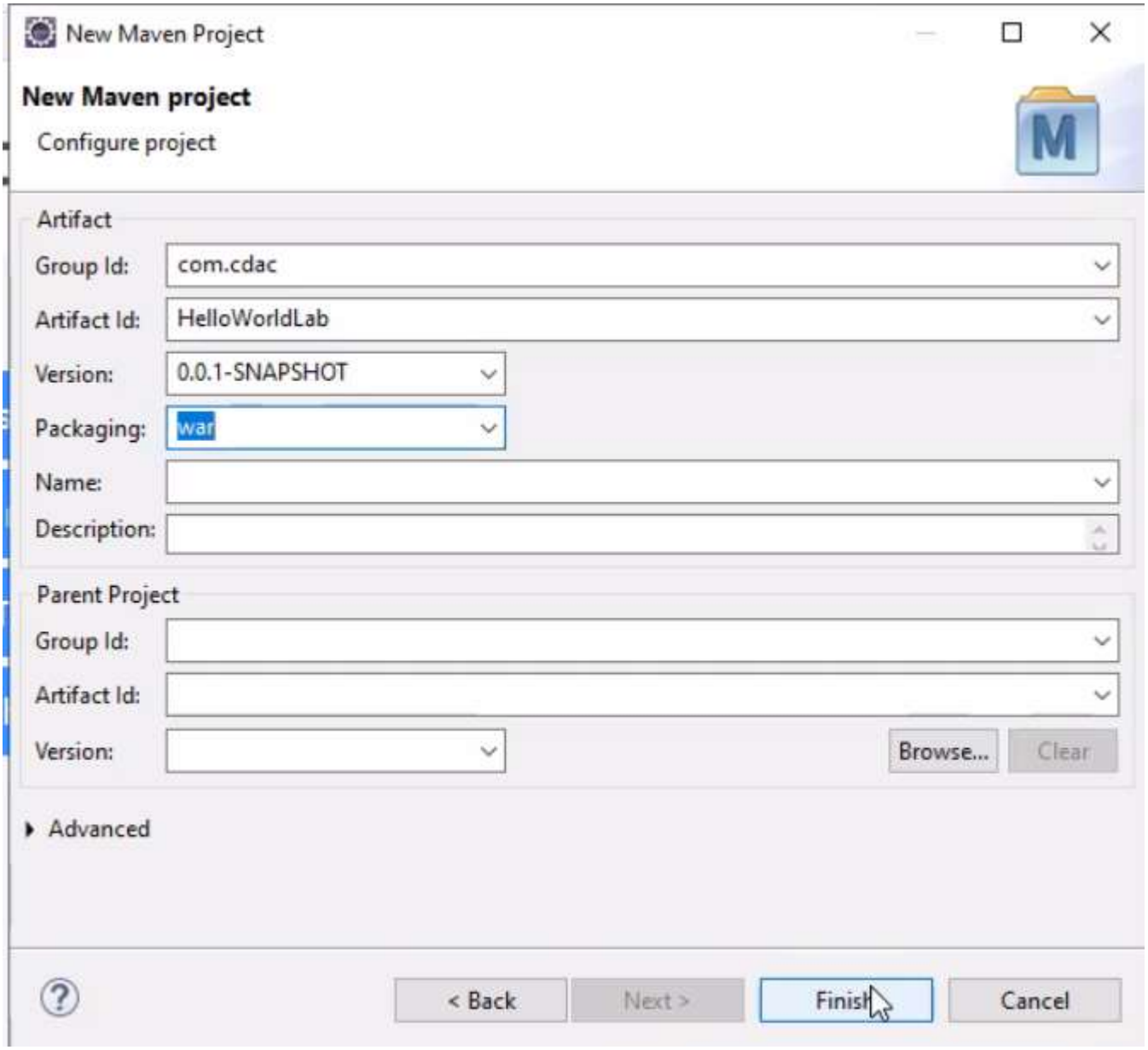
Question 1- Deploy java web application in container (Docker) in the aws cloud.

- Create a JSP page with below message **<0Marks>**
  " You passed today 's lab exam Cheers !"
- Create a war file of java web application. **<3Marks>**
- Create an EC2 in aws cloud with below configuration: **<5Marks>**
  - Instance size – t2.medium
  - Operating System – AWSLinux
- Upload WAR file of your java web application in ec-2 which you have created .(use your favorite option to upload the file in EC-2) **<2Marks>**
- Install the Docker Engine in EC2 **<5Marks>**
- Deploy your java web application (war file) in using docker/container. **<15Marks>**
  - Create a Dockerfile with tomcat server
  - Build Docker image with war file
  - Create and run container

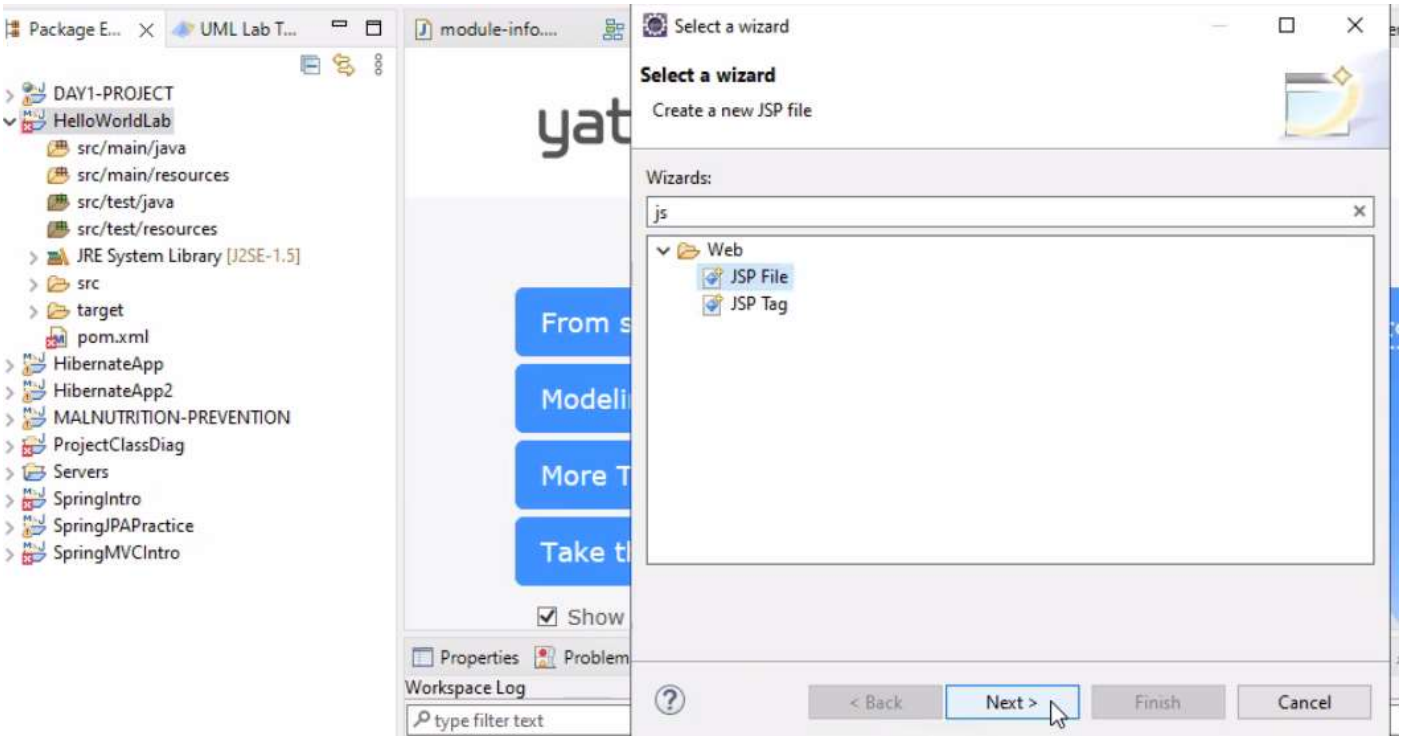
Create JSP

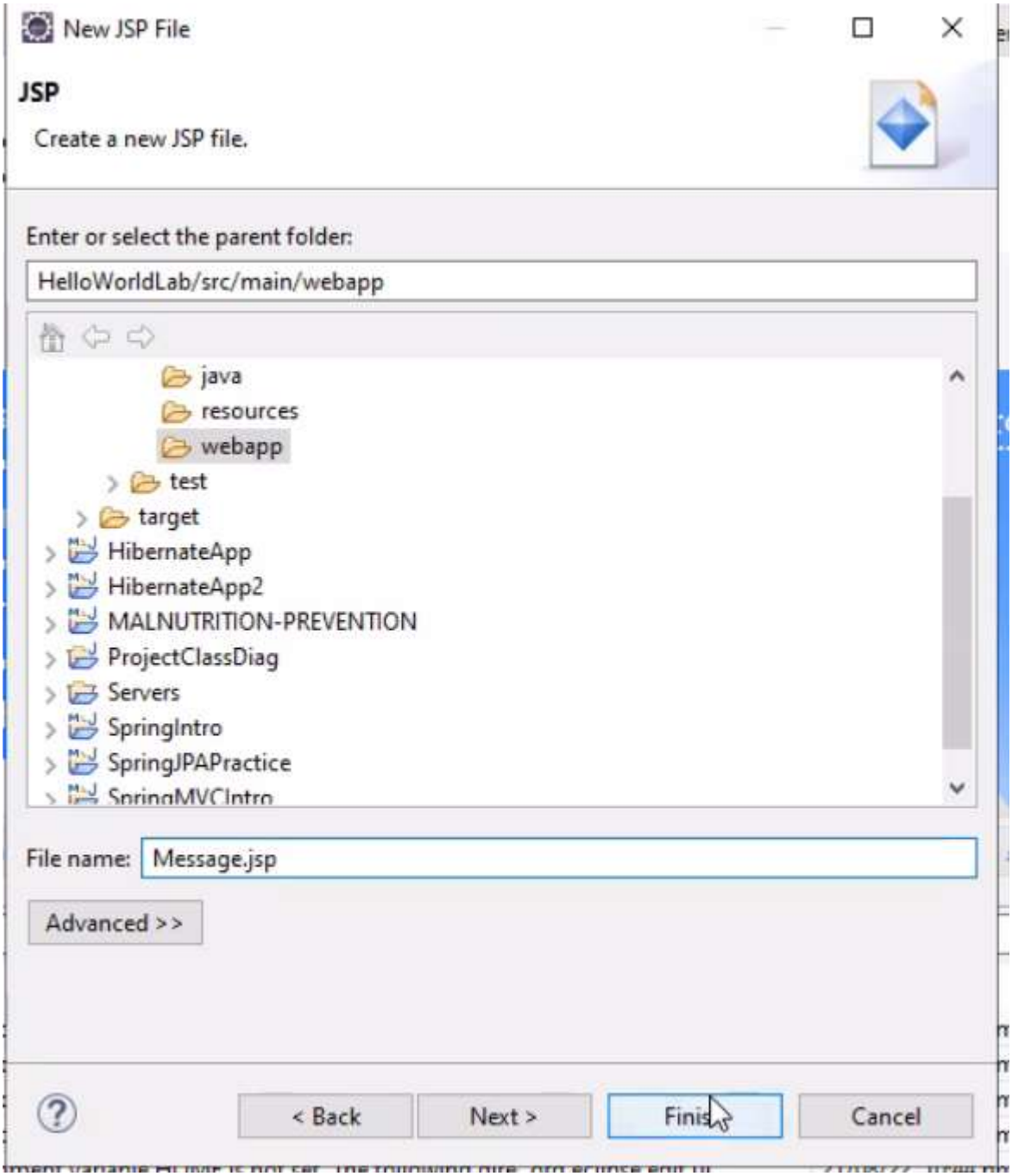

Select a wizard
Select a wizard
Create a Maven project
Wizards:
type filter text
Java EE
Java Emitter Templates
JavaScript
JAXB
JPA
Maven
Check out Maven Projects from SCM
Maven Module
Maven Project
Modeling Workflow Engine
Model to Model Transformation
Oomph
< Back
Next >
Finish
Cancel


New Maven Project
New Maven project
Select project name and location
Create a simple project (skip archetype selection)
Use default Workspace location
Location:
D:\MODULE7-ADVANCE JAVA\Eclipse
Browse...
Add project(s) to working set
Working set:
More...
Advanced
< Back
Next >
Finish
Cancel



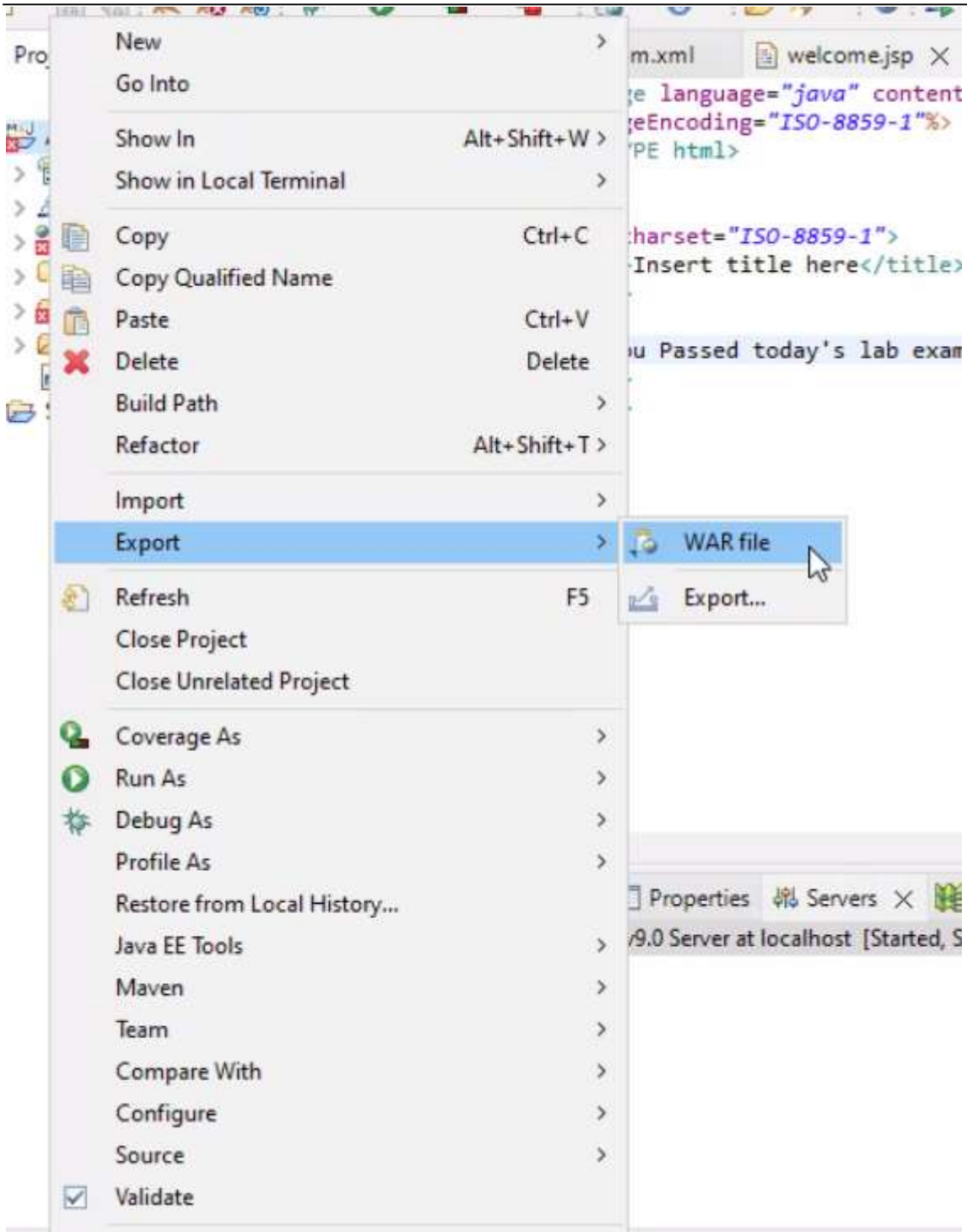
Write click jsp page

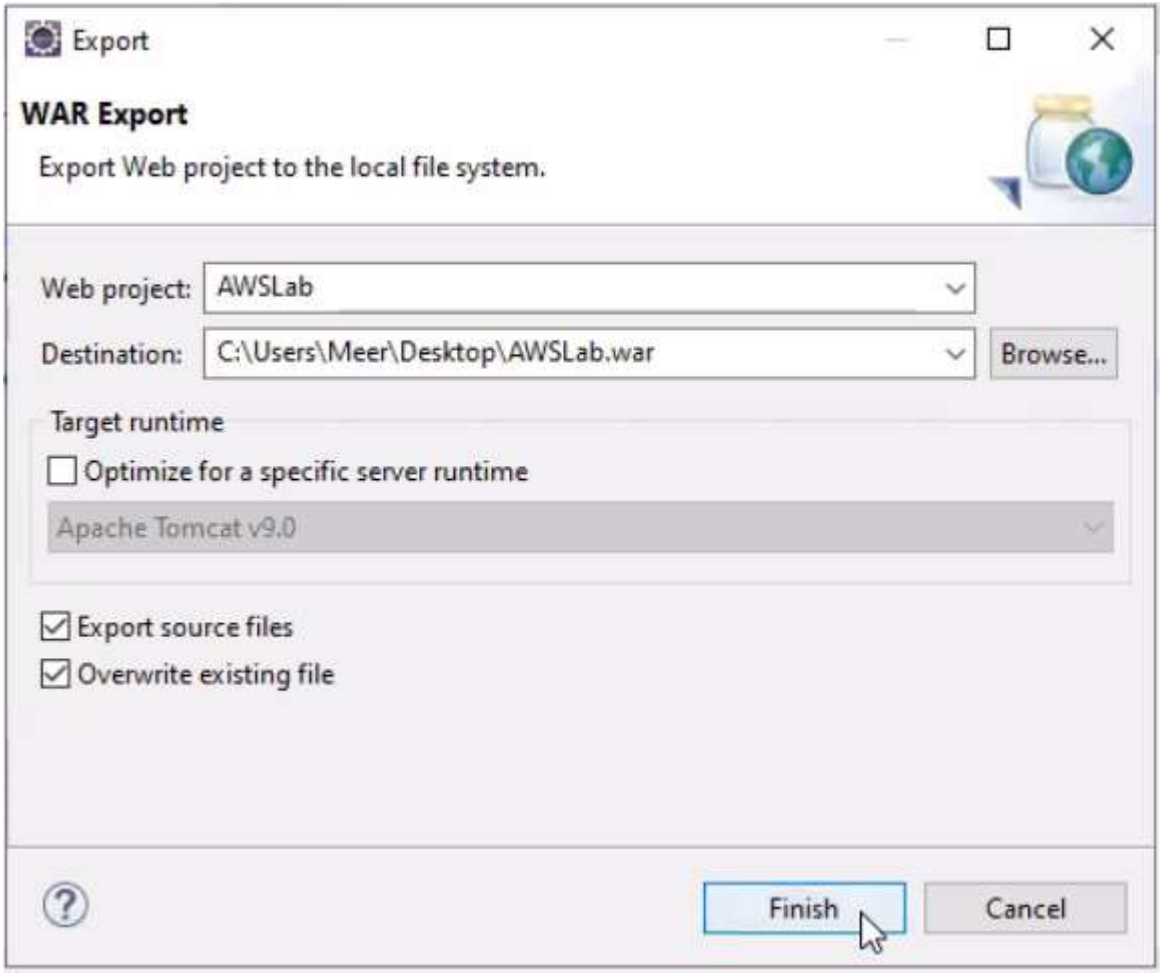



New JSP File
JSP
Create a new JSP file.
Enter or select the parent folder:
HelloWorldLab/src/main/webapp
java
resources
webapp
test
target
HibernateApp
HibernateApp2
MALNUTRITION-PREVENTION
ProjectClassDiag
Servers
SpringIntro
SpringJPAPractice
SpringMVCIntro
File name:
Message.jsp
Advanced >>
< Back
Next >
Finish
Cancel

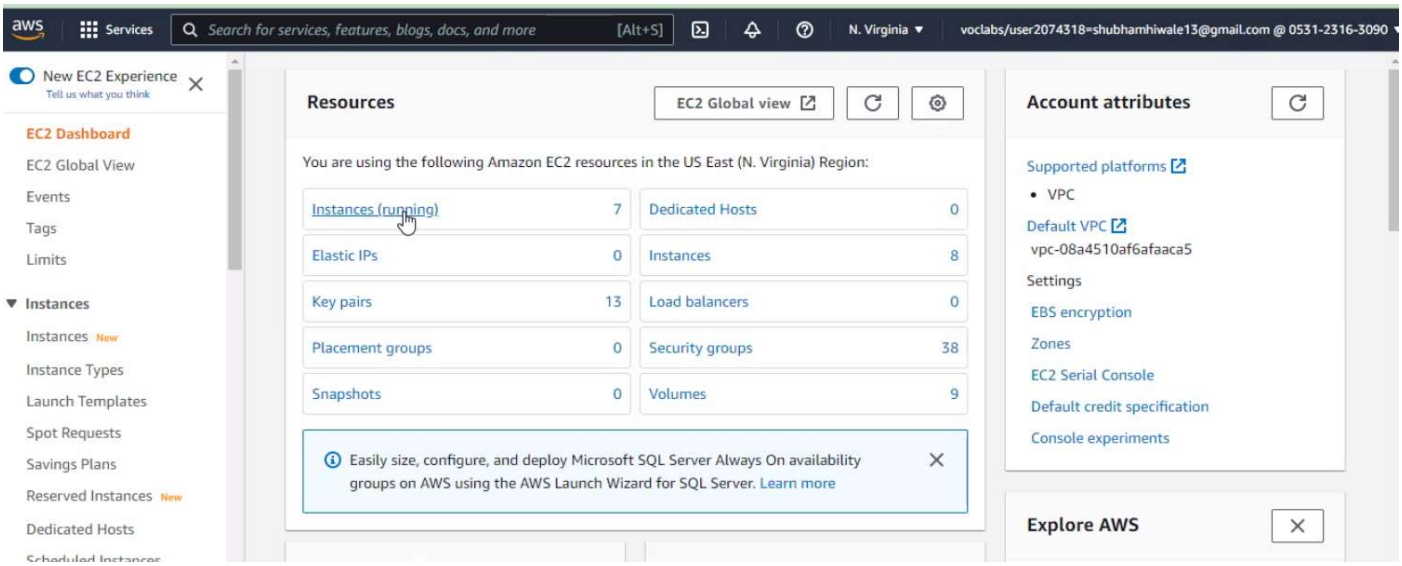
module-info.... ProjectClas... ProjectClas... ProjectClas... Proj

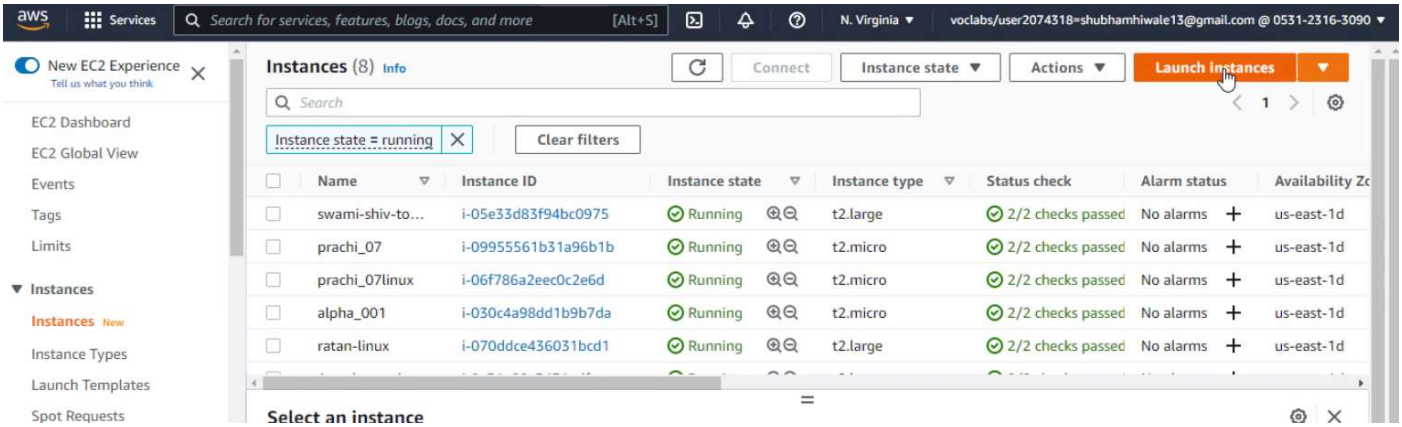
```
1  <%@ page language="java" contentType="text/html; charse
2      pageEncoding="ISO-8859-1"%>
3  <!DOCTYPE html>
4  <html>
5  <head>
6  <meta charset="ISO-8859-1">
7  <title>Insert title here</title>
8  </head>
9  <body>
10 <h1>You passed today 's lab exam Cheers !</h1>
11
12 </body>
13 </html>
```

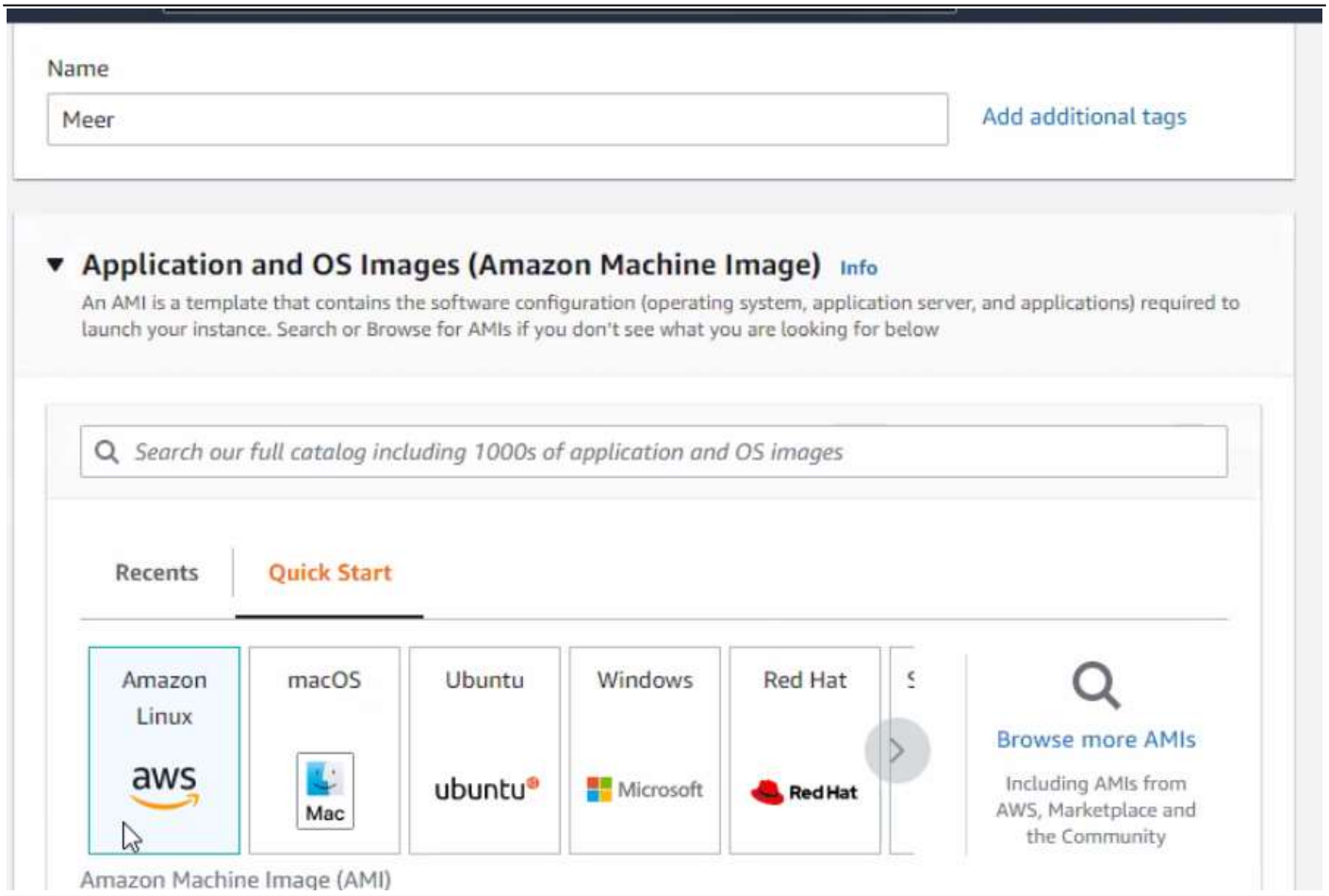

New
Go Into
Show In Alt+Shift+W
Show in Local Terminal
Copy Ctrl+C
Copy Qualified Name
Paste Ctrl+V
Delete Delete
Build Path
Refactor Alt+Shift+T
Import
Export
Refresh F5
Close Project
Close Unrelated Project
Coverage As
Run As
Debug As
Profile As
Restore from Local History...
Java EE Tools
Maven
Team
Compare With
Configure
Source
Validate
WAR file
Export...
m.xml
welcome.jsp
language="java" content
eEncoding="ISO-8859-1"%>
PE html>
harset="ISO-8859-1">
Insert title here</title>
u Passed today's lab exam
Properties
Servers
9.0 Server at localhost [Started,

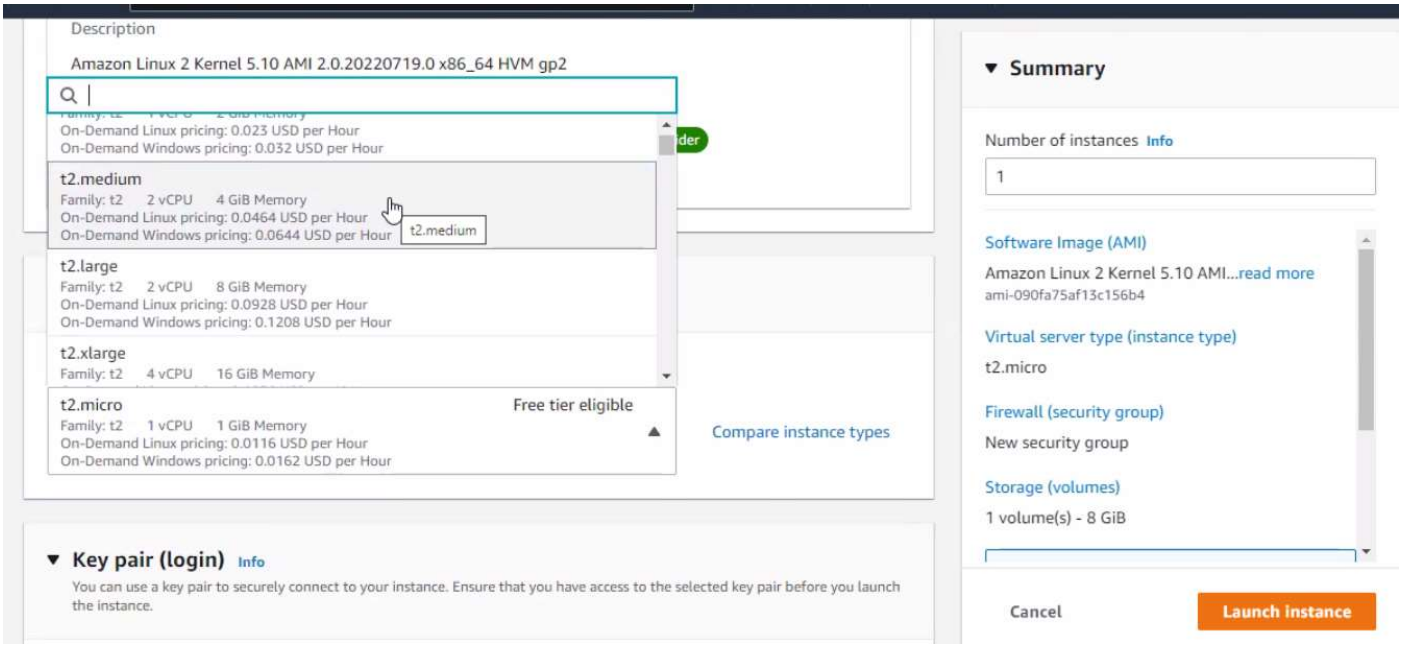

Export
WAR Export
Export Web project to the local file system.
Web project:
AWSLab
Destination:
C:\Users\Meer\Desktop\AWSLab.war
Browse...
Target runtime
Optimize for a specific server runtime
Apache Tomcat v9.0
Export source files
Overwrite existing file
Finish
Cancel

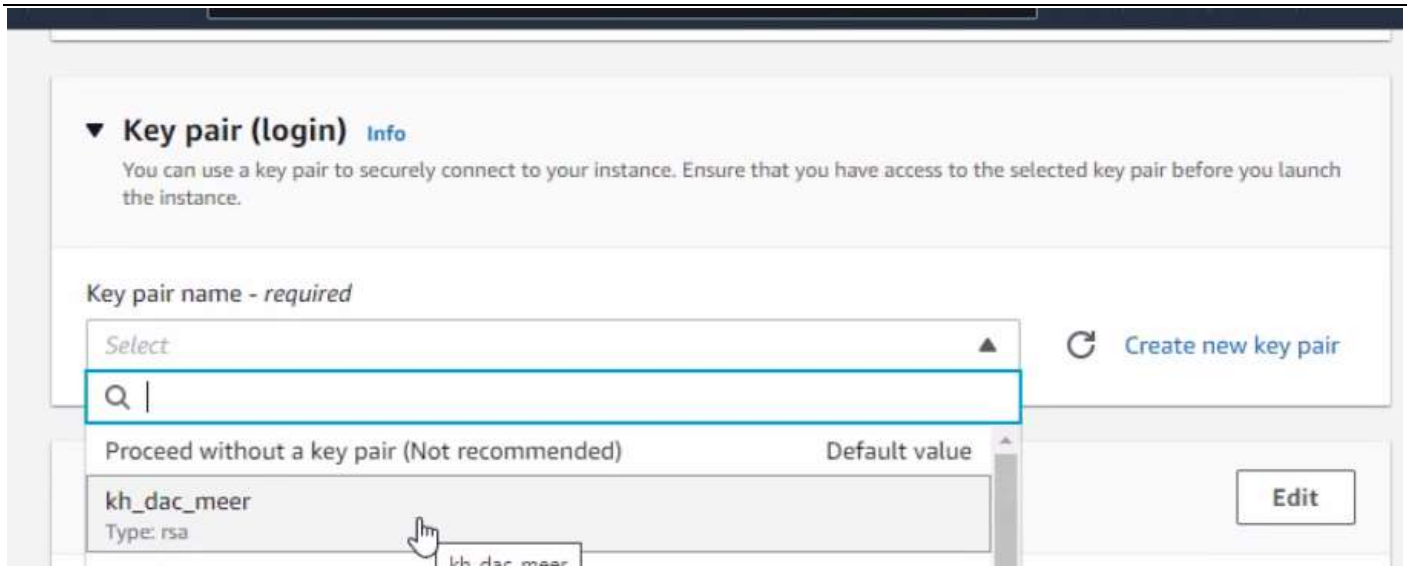
Open aws

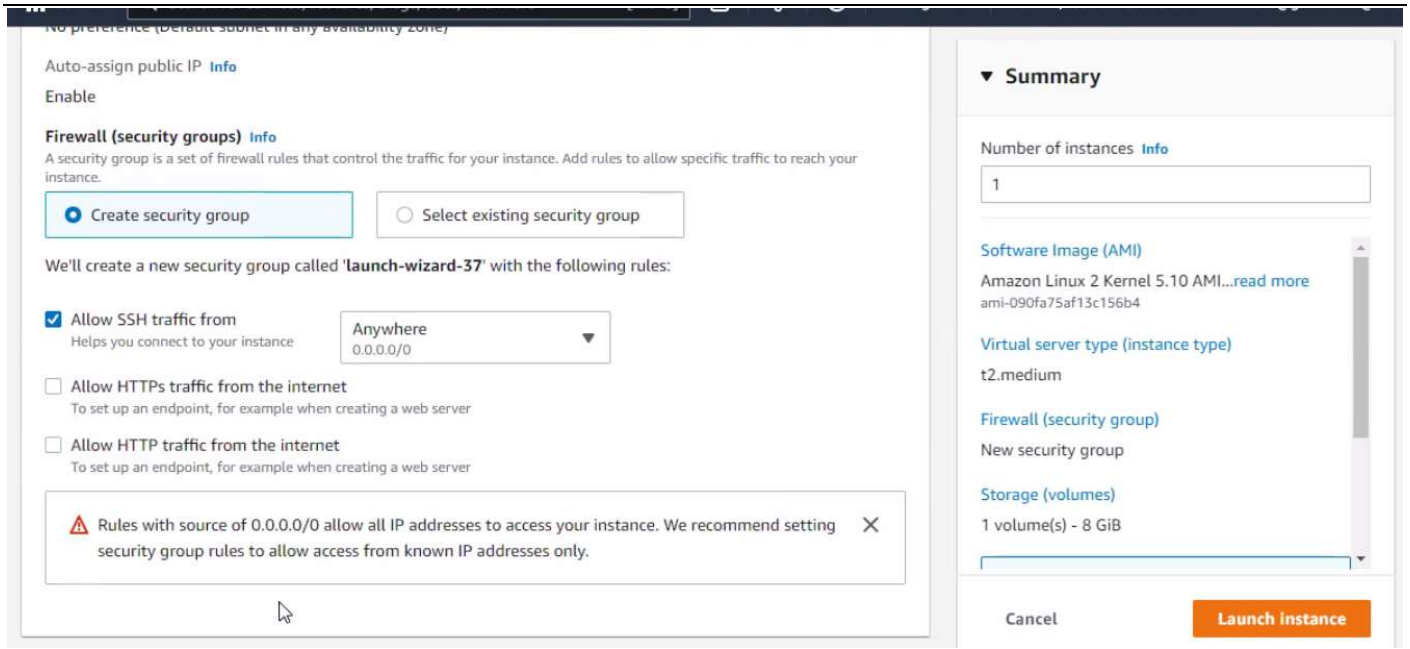

aws
Services
Search for services, features, blogs, docs, and more
[Alt+S]
N. Virginia
voclabs/user2074318=shubhamhiwale13@gmail.com @ 0531-2316-3090
New EC2 Experience
Tell us what you think
EC2 Dashboard
EC2 Global View
Events
Tags
Limits
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Resources
EC2 Global view
You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:
Instances (running) 7
Dedicated Hosts 0
Elastic IPs 0
Instances 8
Key pairs 13
Load balancers 0
Placement groups 0
Security groups 38
Snapshots 0
Volumes 9
Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. Learn more
Account attributes
Supported platforms
VPC
Default VPC
vpc-08a4510af6afaaca5
Settings
EBS encryption
Zones
EC2 Serial Console
Default credit specification
Console experiments
Explore AWS

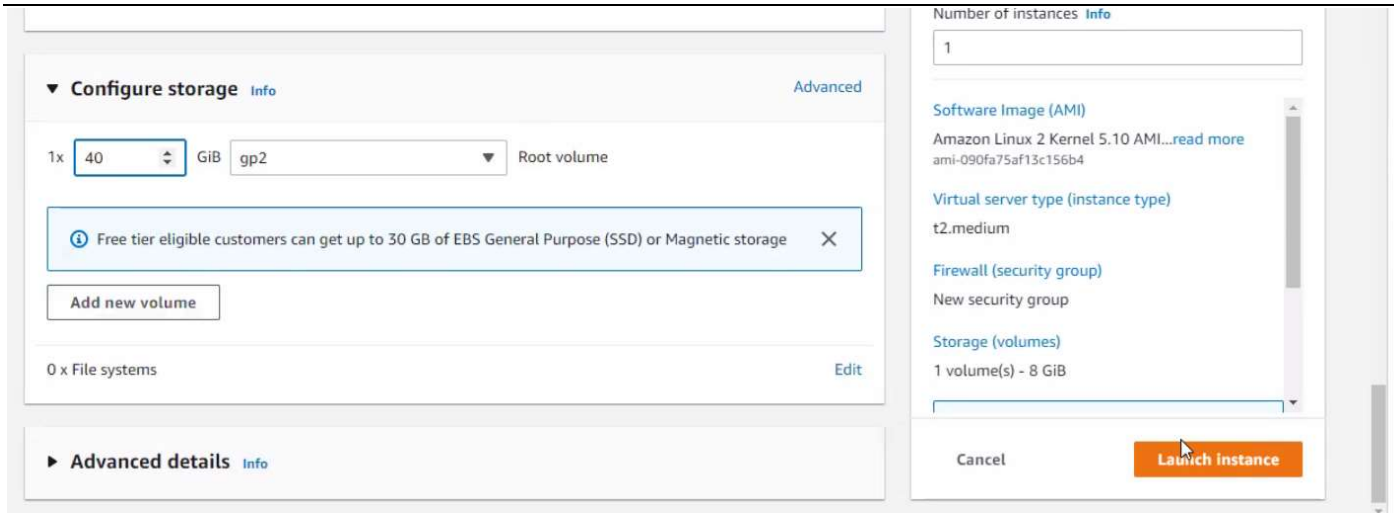

Services
Search for services, features, blogs, docs, and more [Alt+S]
N. Virginia
voclabs/user2074318=shubhamhiwale13@gmail.com @ 0531-2316-3090
New EC2 Experience
Tell us what you think
EC2 Dashboard
EC2 Global View
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Instances (8) Info
Connect
Instance state
Actions
Launch instances
Search
Instance state = running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zo
swami-shiv-to...
i-05e33d83f94bc0975
Running
t2.large
2/2 checks passed
No alarms
us-east-1d
prachi_07
i-09955561b31a96b1b
Running
t2.micro
2/2 checks passed
No alarms
us-east-1d
prachi_07linux
i-06f786a2eec0c2e6d
Running
t2.micro
2/2 checks passed
No alarms
us-east-1d
alpha_001
i-030c4a98dd1b9b7da
Running
t2.micro
2/2 checks passed
No alarms
us-east-1d
ratan-linux
i-070ddce436031bcd1
Running
t2.large
2/2 checks passed
No alarms
us-east-1d
Select an instance

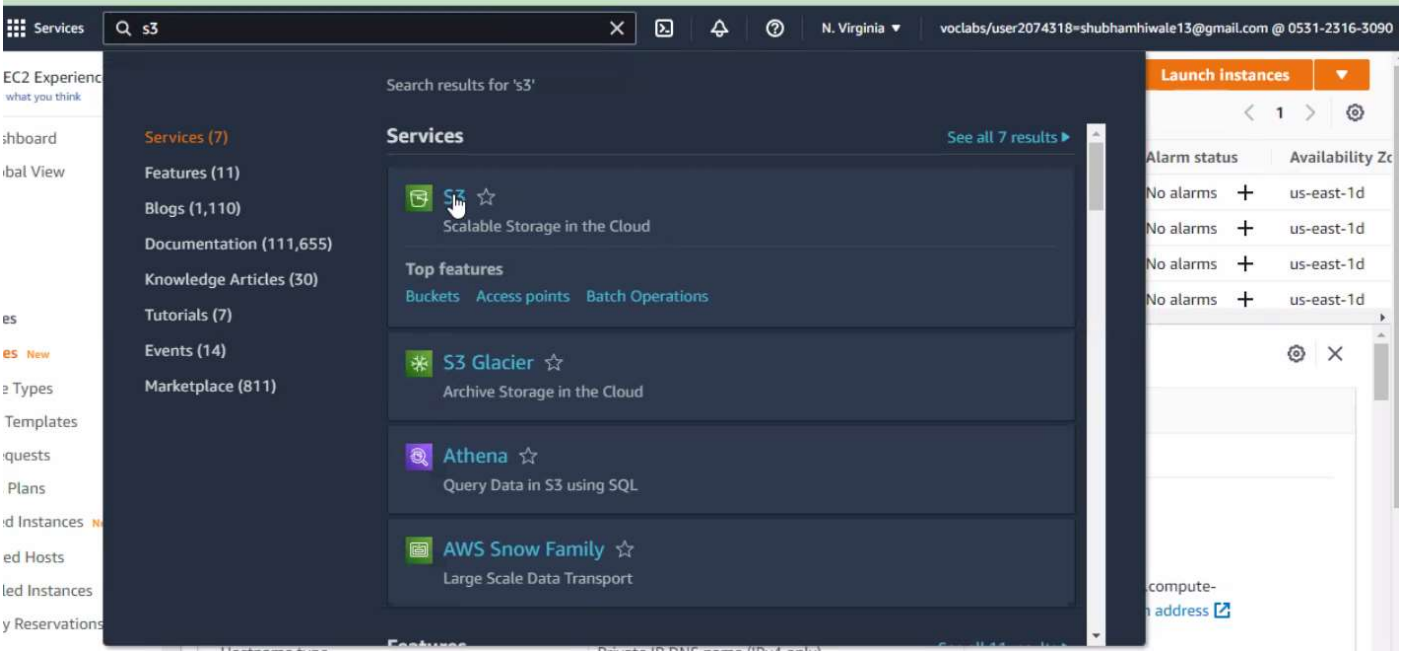

Name
Meer
Add additional tags
Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Amazon Linux
macOS
Mac
Ubuntu
ubuntu
Windows
Microsoft
Red Hat
Red Hat
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)

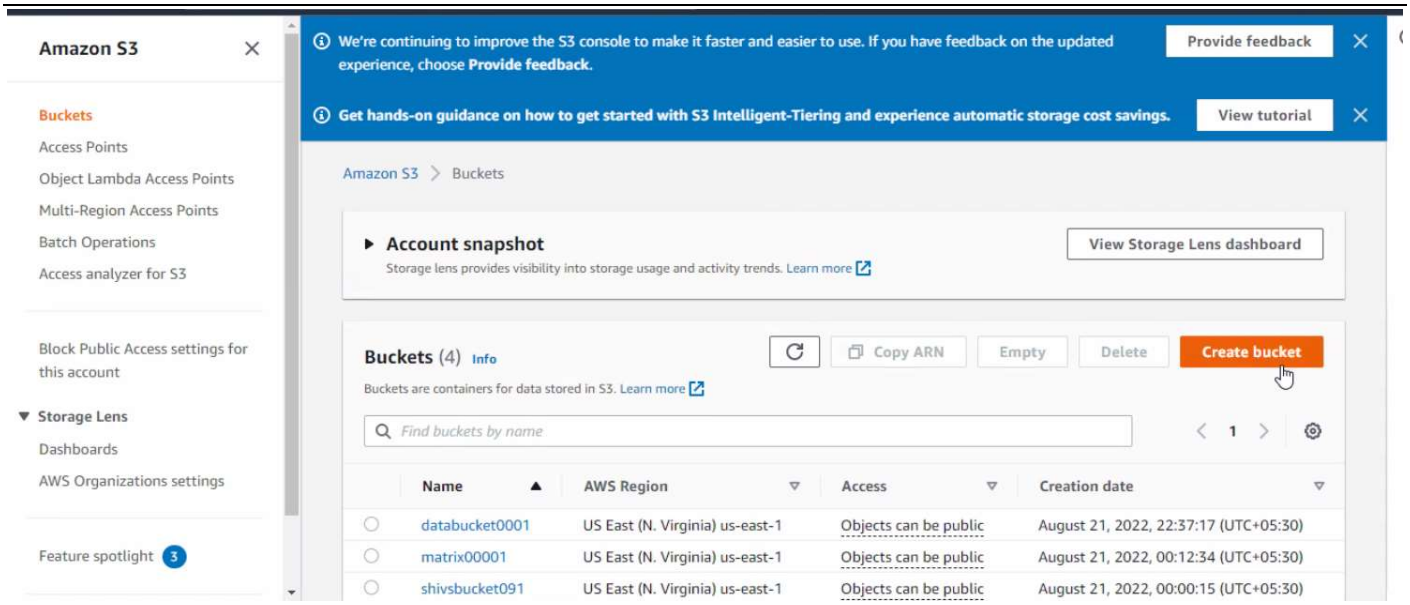

Description
Amazon Linux 2 Kernel 5.10 AMI 2.0.20220719.0 x86_64 HVM gp2
On-Demand Linux pricing: 0.023 USD per Hour
On-Demand Windows pricing: 0.032 USD per Hour
t2.medium
Family: t2 2 vCPU 4 GiB Memory
On-Demand Linux pricing: 0.0464 USD per Hour
On-Demand Windows pricing: 0.0644 USD per Hour
t2.medium
t2.large
Family: t2 2 vCPU 8 GiB Memory
On-Demand Linux pricing: 0.0928 USD per Hour
On-Demand Windows pricing: 0.1208 USD per Hour
t2.xlarge
Family: t2 4 vCPU 16 GiB Memory
t2.micro
Free tier eligible
Family: t2 1 vCPU 1 GiB Memory
On-Demand Linux pricing: 0.0116 USD per Hour
On-Demand Windows pricing: 0.0162 USD per Hour
Compare instance types
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI...read more
ami-090fa75af13c156b4
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance

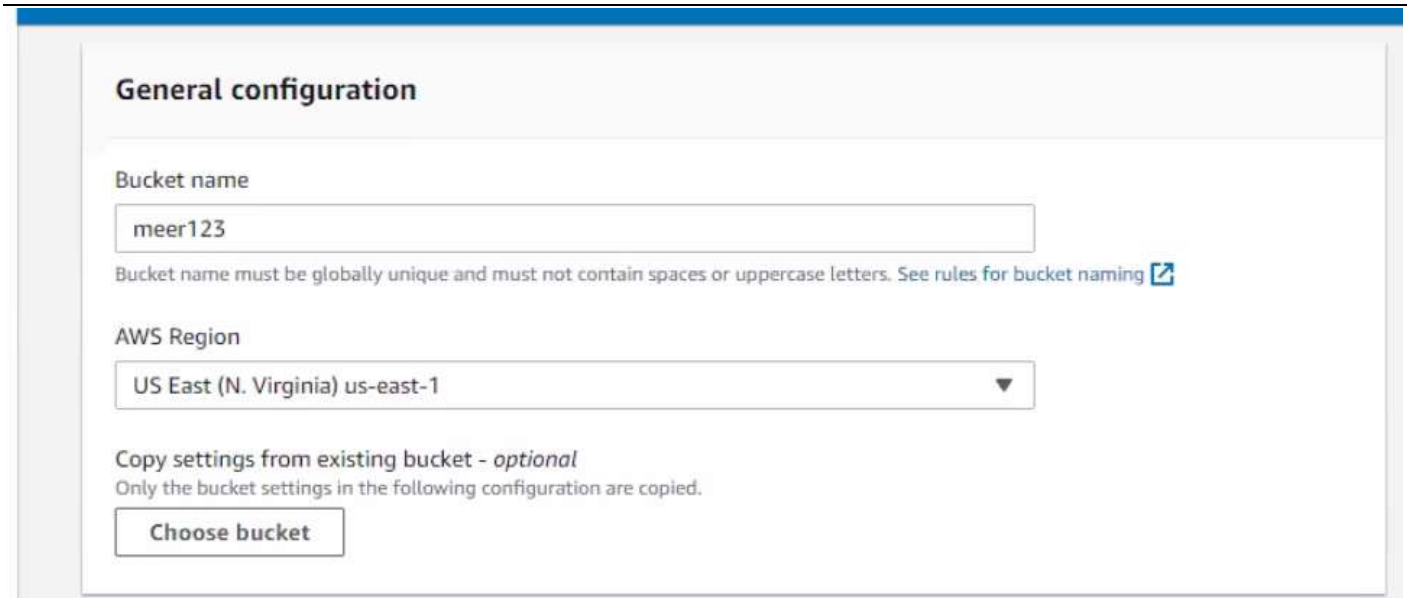

Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name - required
Select
Create new key pair
Proceed without a key pair (Not recommended)
Default value
kh_dac_meer
Type: rsa
Edit

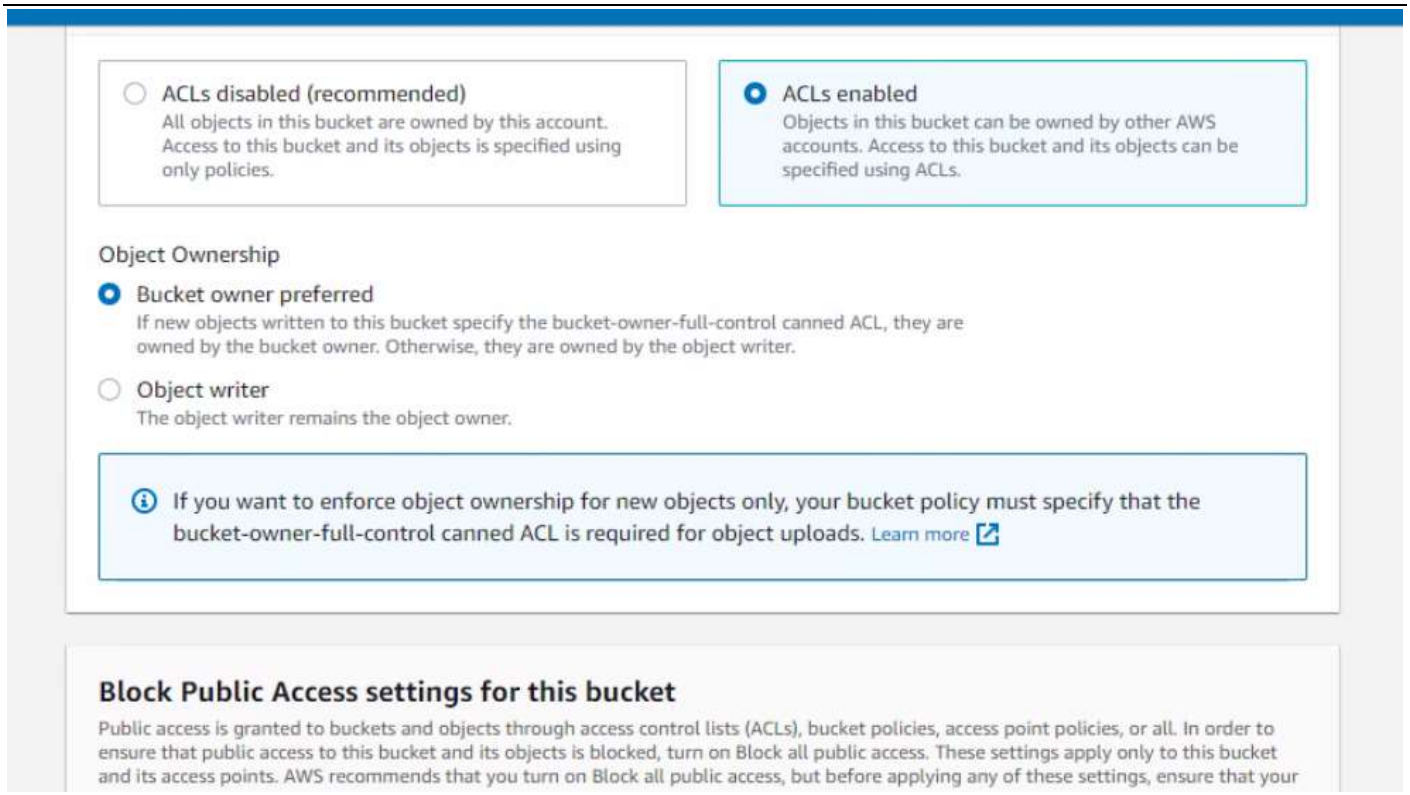

Auto-assign public IP Info
Enable
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
We'll create a new security group called 'launch-wizard-37' with the following rules:
Allow SSH traffic from
Helps you connect to your instance
Anywhere
0.0.0.0/0
Allow HTTPs traffic from the internet
To set up an endpoint, for example when creating a web server
Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server
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.
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI...read more
ami-090fa75af13c156b4
Virtual server type (instance type)
t2.medium
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance


Number of instances Info
1
Configure storage Info
Advanced
1x 40 GiB gp2 Root volume
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage
Add new volume
0 x File systems
Edit
Advanced details Info
Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI...read more
ami-090fa75af13c156b4
Virtual server type (instance type)
t2.medium
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance


Services
s3
N. Virginia
voclabs/user2074318=shubhamhiwale13@gmail.com @ 0531-2316-3090
Search results for 's3'
Services (7)
Features (11)
Blogs (1,110)
Documentation (111,655)
Knowledge Articles (30)
Tutorials (7)
Events (14)
Marketplace (811)
Services
See all 7 results
S3
Scalable Storage in the Cloud
Top features
Buckets Access points Batch Operations
S3 Glacier
Archive Storage in the Cloud
Athena
Query Data in S3 using SQL
AWS Snow Family
Large Scale Data Transport
Launch instances
Alarm status
No alarms
us-east-1d


Amazon S3
Buckets
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
Access analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
AWS Organizations settings
Feature spotlight 3
We're continuing to improve the S3 console to make it faster and easier to use. If you have feedback on the updated experience, choose Provide feedback.
Provide feedback
Get hands-on guidance on how to get started with S3 Intelligent-Tiering and experience automatic storage cost savings.
View tutorial
Amazon S3 > Buckets
Account snapshot
Storage lens provides visibility into storage usage and activity trends. Learn more
View Storage Lens dashboard
Buckets (4) Info
Buckets are containers for data stored in S3. Learn more
Copy ARN
Empty
Delete
Create bucket
Find buckets by name
Name
AWS Region
Access
Creation date
databucket0001
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 22:37:17 (UTC+05:30)
matrix00001
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 00:12:34 (UTC+05:30)
shivsbucket091
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 00:00:15 (UTC+05:30)


General configuration
Bucket name
meer123
Bucket name must be globally unique and must not contain spaces or uppercase letters. See rules for bucket naming
AWS Region
US East (N. Virginia) us-east-1
Copy settings from existing bucket - optional
Only the bucket settings in the following configuration are copied.
Choose bucket


ACLs disabled (recommended)
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.
ACLs enabled
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.
Object Ownership
Bucket owner preferred
If new objects written to this bucket specify the bucket-owner-full-control canned ACL, they are owned by the bucket owner. Otherwise, they are owned by the object writer.
Object writer
The object writer remains the object owner.
If you want to enforce object ownership for new objects only, your bucket policy must specify that the bucket-owner-full-control canned ACL is required for object uploads. Learn more
Block Public Access settings for this bucket
Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your

Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. Learn more

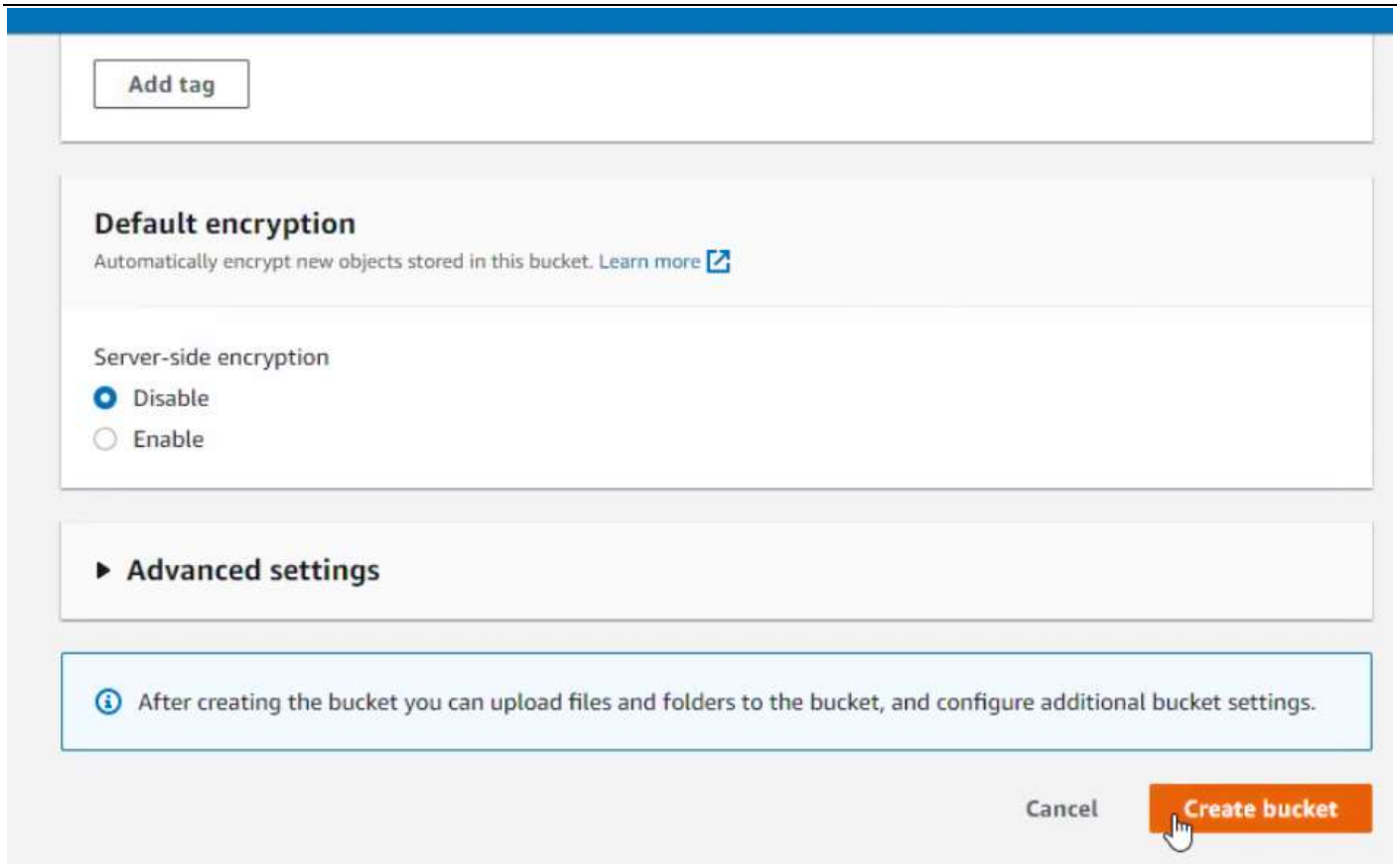
- [ ] **Block *all* public access**
  Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.
  - [ ] **Block public access to buckets and objects granted through *new* access control lists (ACLs)**
    S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
  - [ ] **Block public access to buckets and objects granted through *any* access control lists (ACLs)**
    S3 will ignore all ACLs that grant public access to buckets and objects.
  - [ ] **Block public access to buckets and objects granted through *new* public bucket or access point policies**
    S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
  - [ ] **Block public and cross-account access to buckets and objects through *any* public bucket or access point policies**
    S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

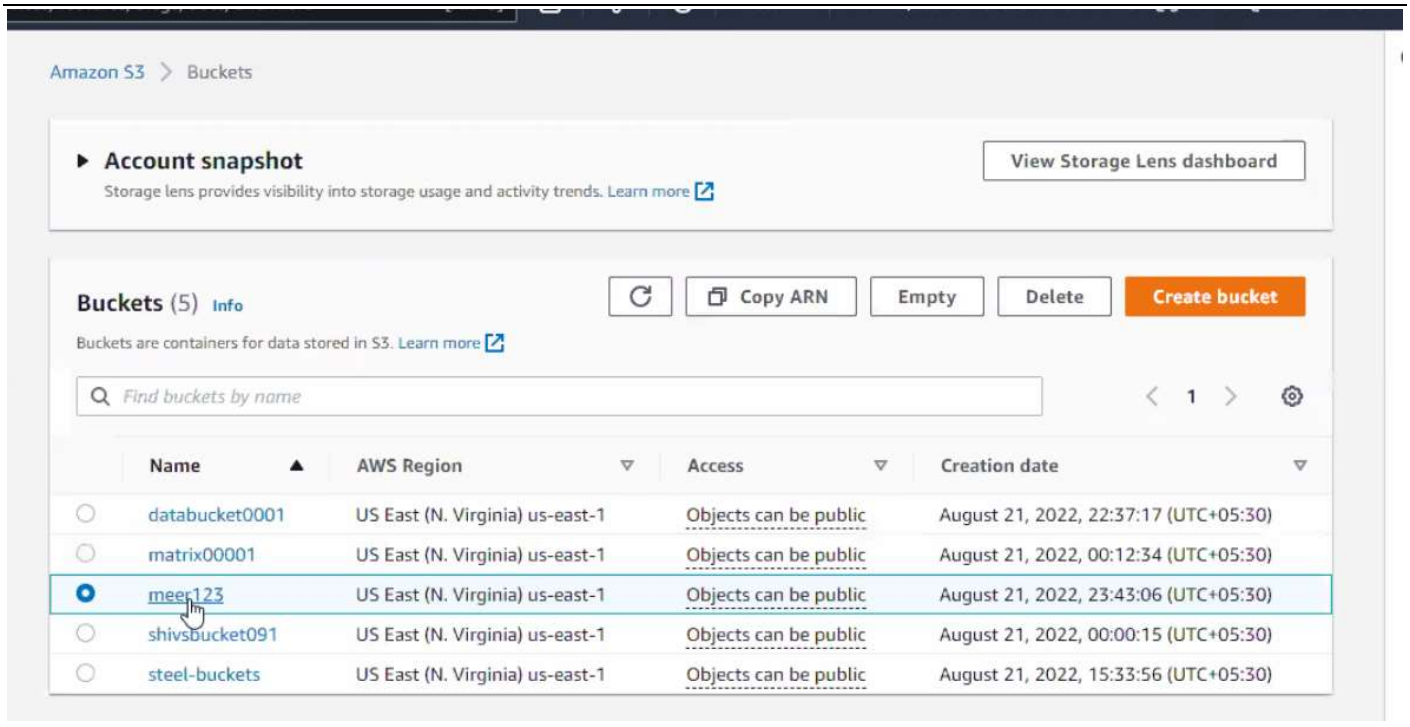
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

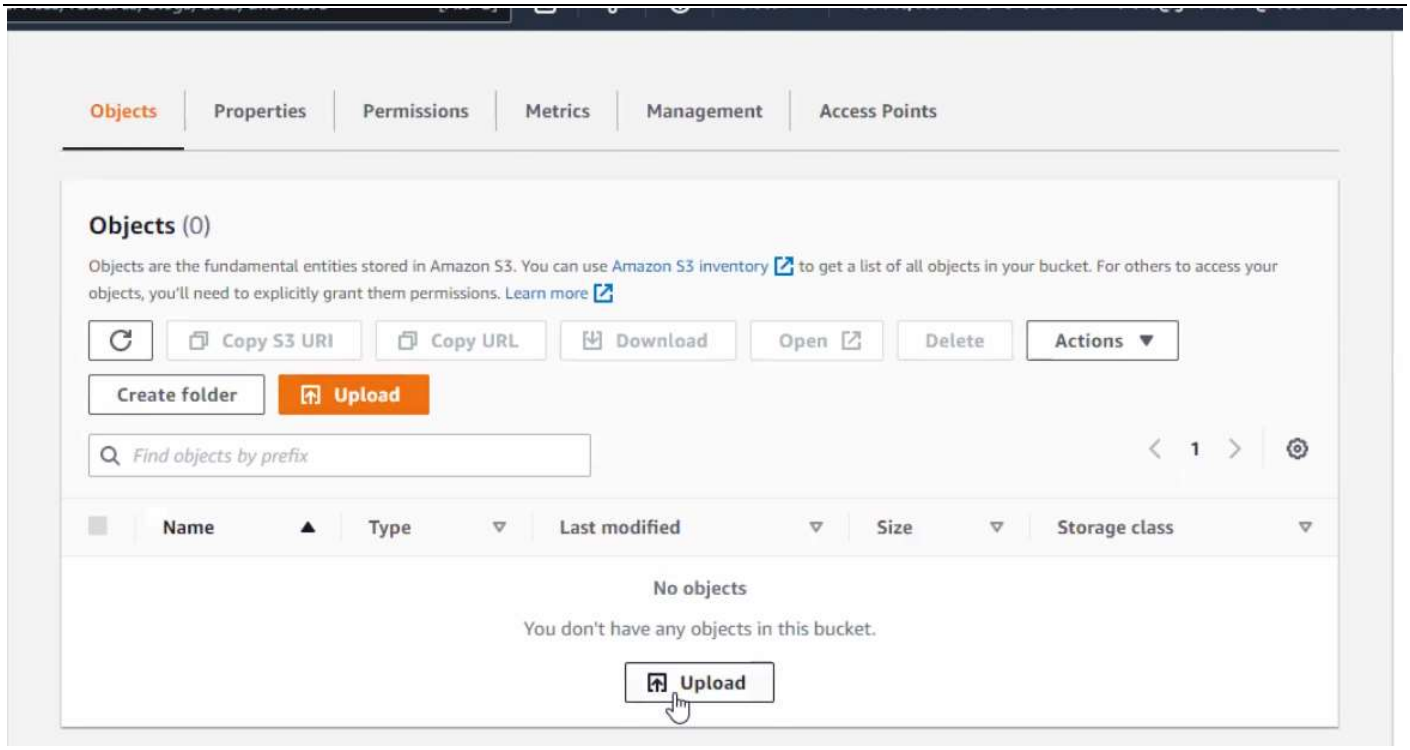
- [ ] **Block public and cross-account access to buckets and objects through *any* public bucket or access point policies**
  S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

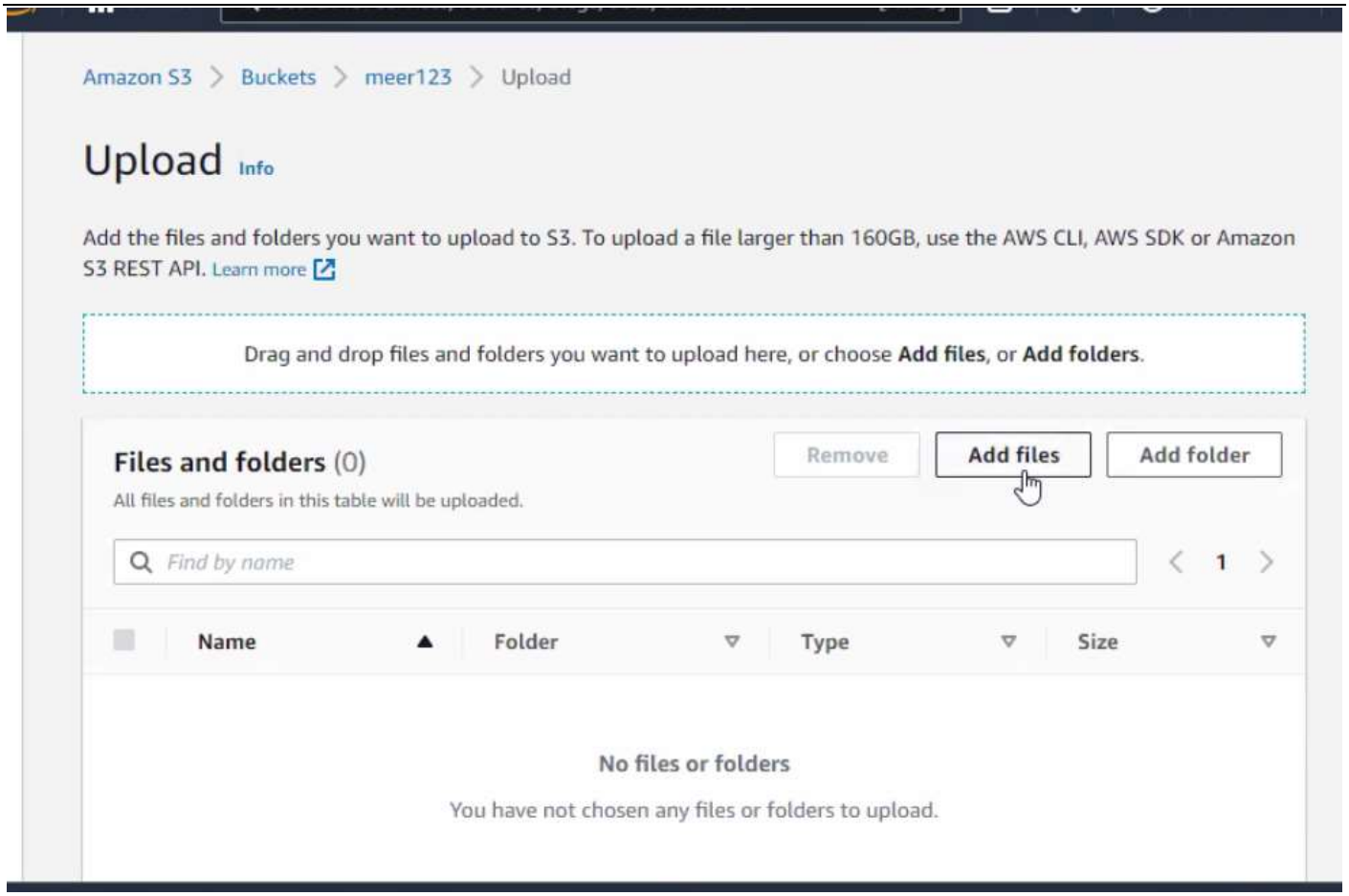
Turning off block all public access might result in this bucket and the objects within becoming public
AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.

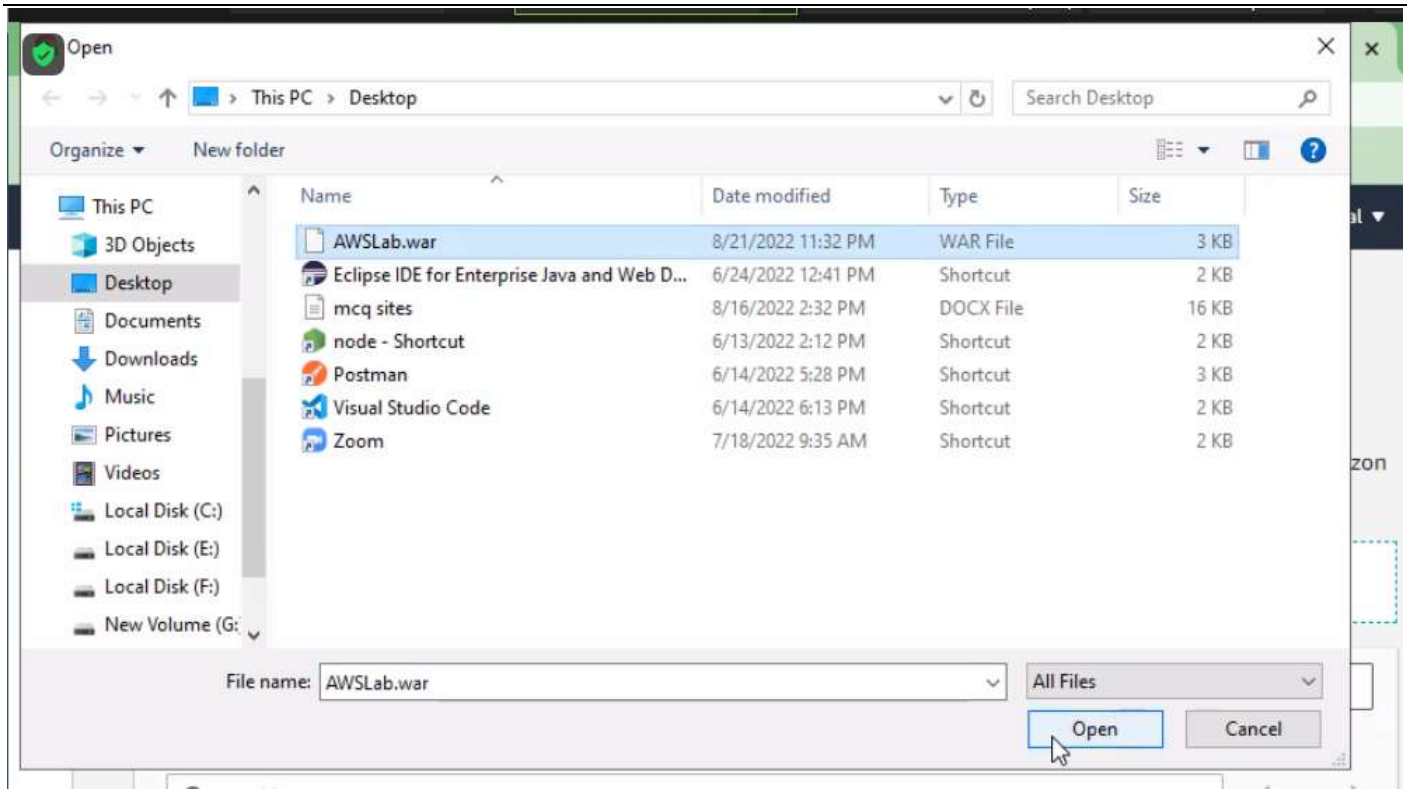
- [ ] I acknowledge that the current settings might result in this bucket and the objects within becoming public.

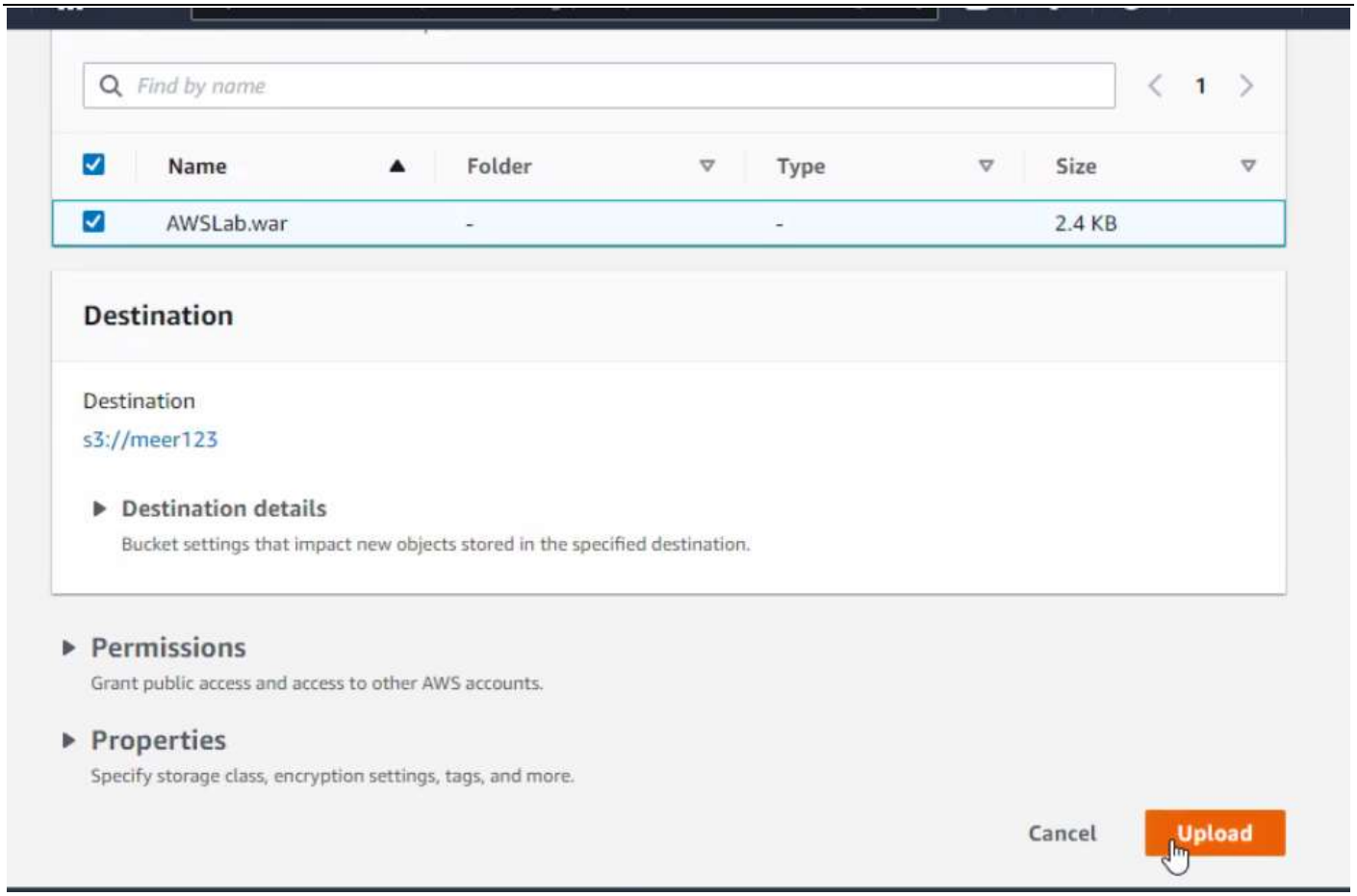

Add tag
Default encryption
Automatically encrypt new objects stored in this bucket. Learn more
Server-side encryption
Disable
Enable
Advanced settings
After creating the bucket you can upload files and folders to the bucket, and configure additional bucket settings.
Cancel
Create bucket

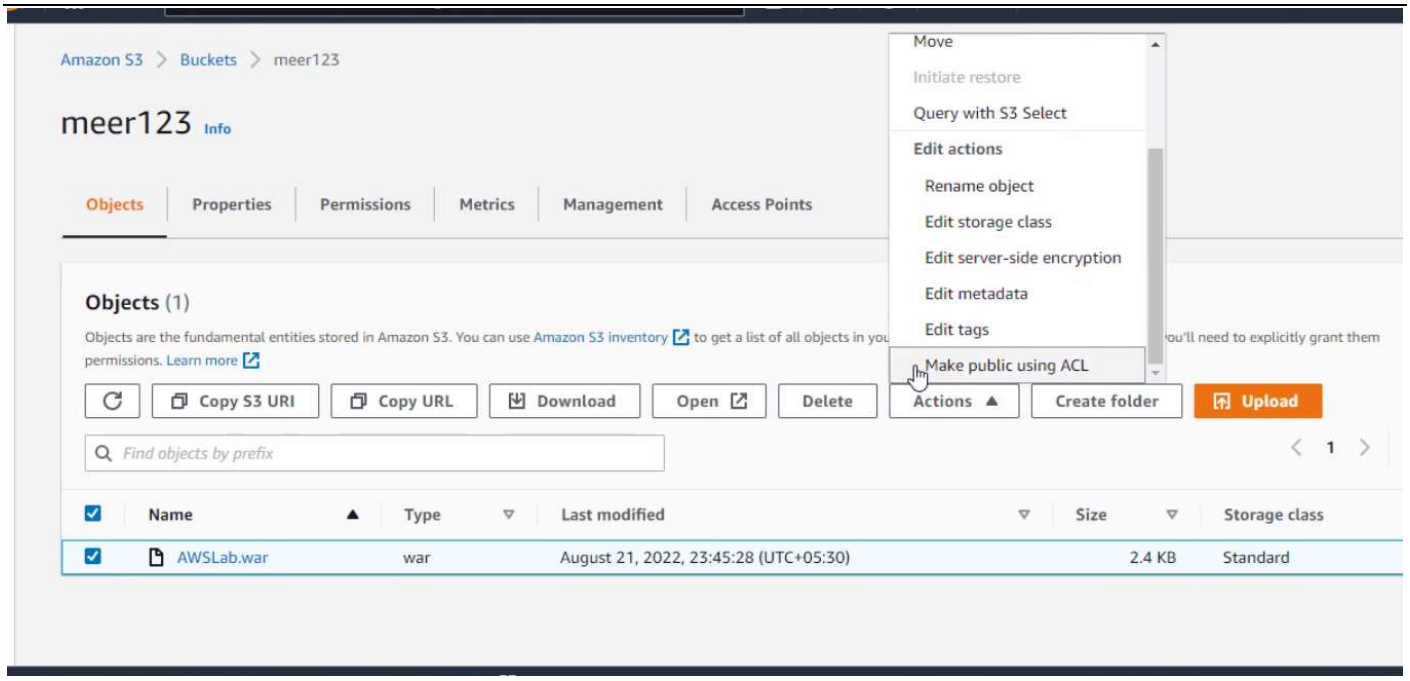

Amazon S3 > Buckets
Account snapshot
Storage lens provides visibility into storage usage and activity trends. Learn more
View Storage Lens dashboard
Buckets (5) Info
Copy ARN
Empty
Delete
Create bucket
Buckets are containers for data stored in S3. Learn more
Find buckets by name
1
Name
AWS Region
Access
Creation date
databucket0001 US East (N. Virginia) us-east-1 Objects can be public August 21, 2022, 22:37:17 (UTC+05:30)
matrix00001 US East (N. Virginia) us-east-1 Objects can be public August 21, 2022, 00:12:34 (UTC+05:30)
meer123 US East (N. Virginia) us-east-1 Objects can be public August 21, 2022, 23:43:06 (UTC+05:30)
shivsbucket091 US East (N. Virginia) us-east-1 Objects can be public August 21, 2022, 00:00:15 (UTC+05:30)
steel-buckets US East (N. Virginia) us-east-1 Objects can be public August 21, 2022, 15:33:56 (UTC+05:30)

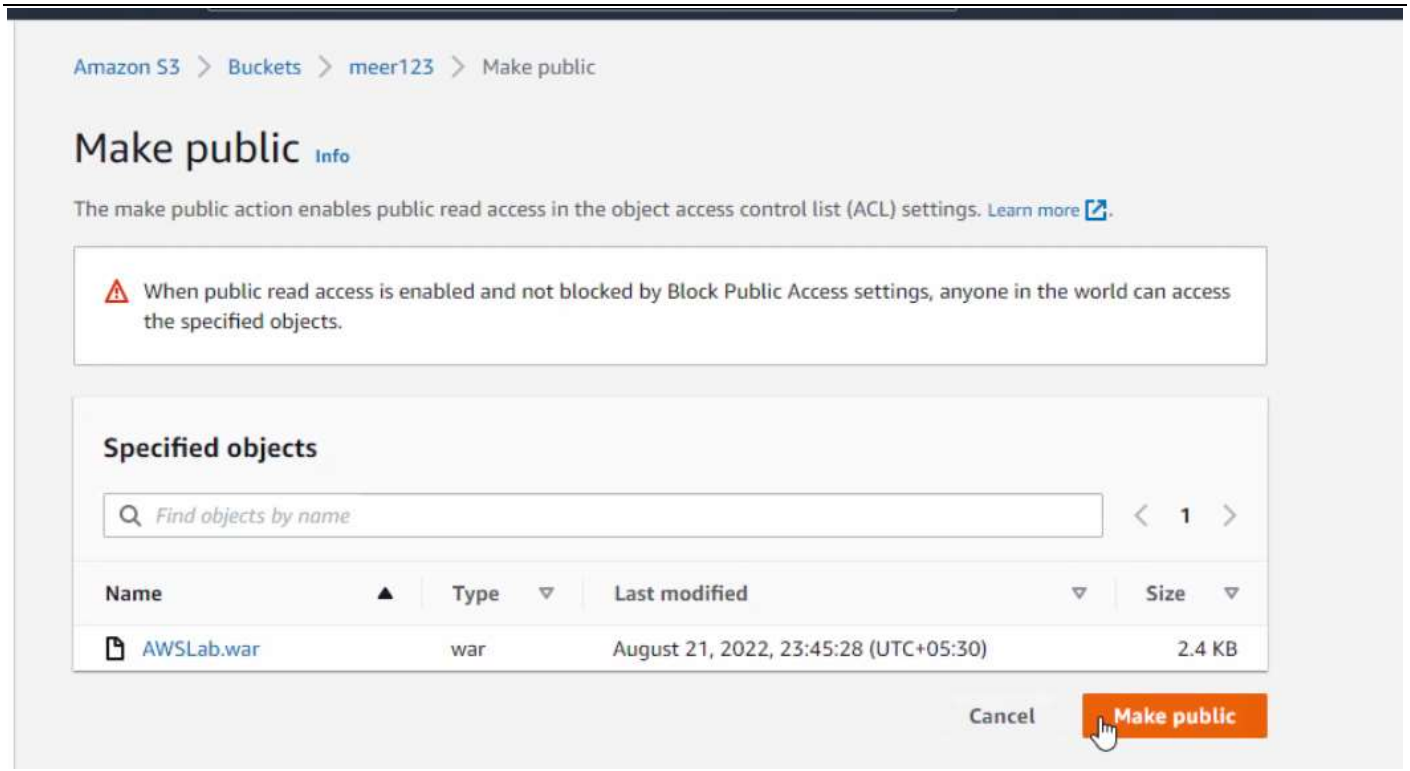

Objects
Properties
Permissions
Metrics
Management
Access Points
Objects (0)
Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. Learn more
Copy S3 URI
Copy URL
Download
Open
Delete
Actions
Create folder
Upload
Find objects by prefix
1
Name
Type
Last modified
Size
Storage class
No objects
You don't have any objects in this bucket.
Upload

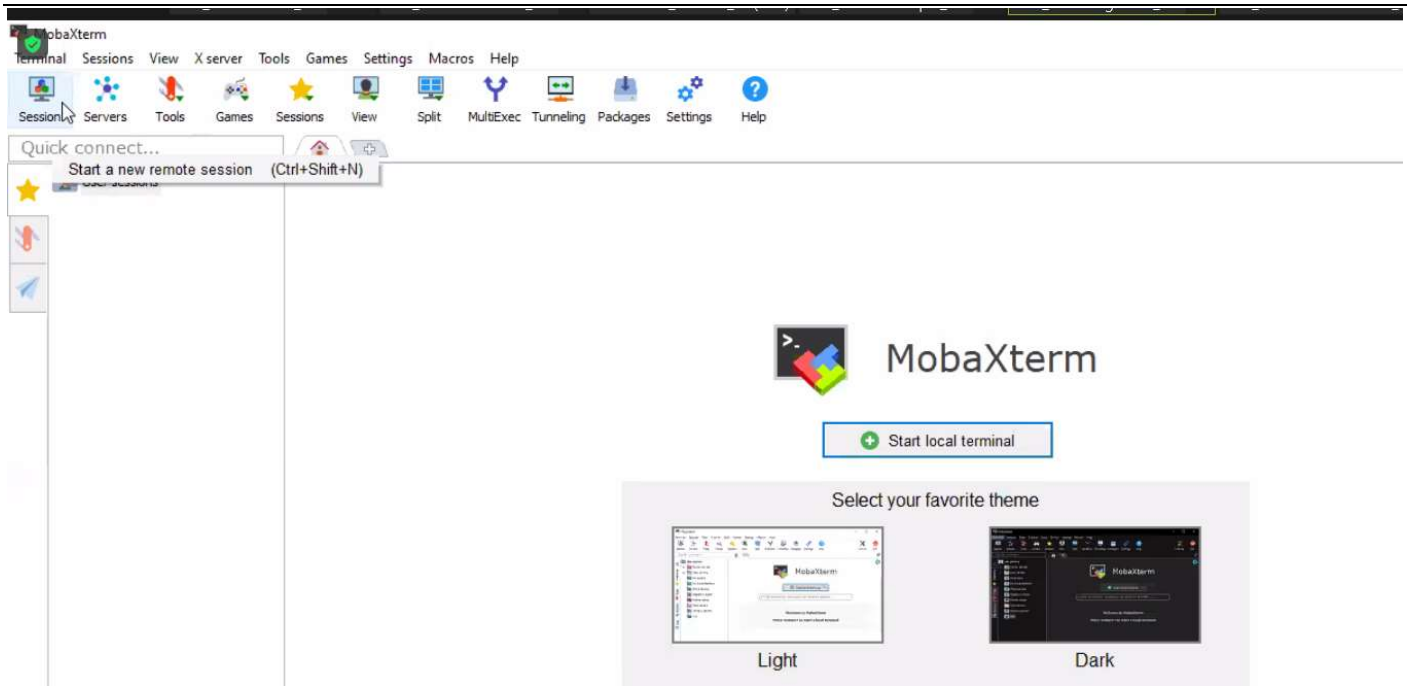

Amazon S3 > Buckets > meer123 > Upload
Upload Info
Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. Learn more
Drag and drop files and folders you want to upload here, or choose Add files, or Add folders.
Files and folders (0)
All files and folders in this table will be uploaded.
Remove
Add files
Add folder
Find by name
1
Name
Folder
Type
Size
No files or folders
You have not chosen any files or folders to upload.

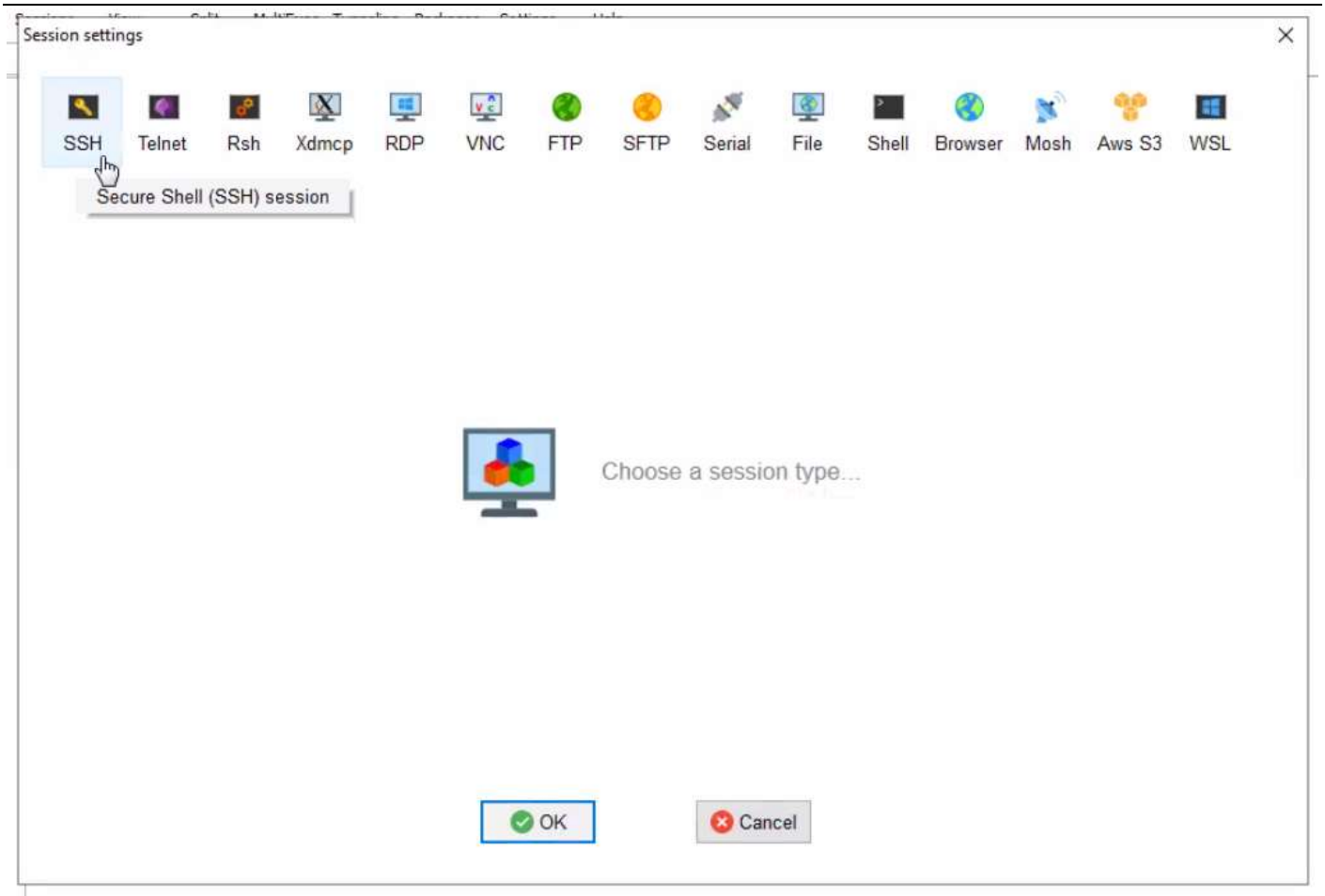

Open
This PC › Desktop
Search Desktop
Organize
New folder
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Local Disk (E:)
Local Disk (F:)
New Volume (G:
Name
Date modified
Type
Size
AWSLab.war 8/21/2022 11:32 PM WAR File 3 KB
Eclipse IDE for Enterprise Java and Web D... 6/24/2022 12:41 PM Shortcut 2 KB
mcq sites 8/16/2022 2:32 PM DOCX File 16 KB
node - Shortcut 6/13/2022 2:12 PM Shortcut 2 KB
Postman 6/14/2022 5:28 PM Shortcut 3 KB
Visual Studio Code 6/14/2022 6:13 PM Shortcut 2 KB
Zoom 7/18/2022 9:35 AM Shortcut 2 KB
File name: AWSLab.war
All Files
Open
Cancel

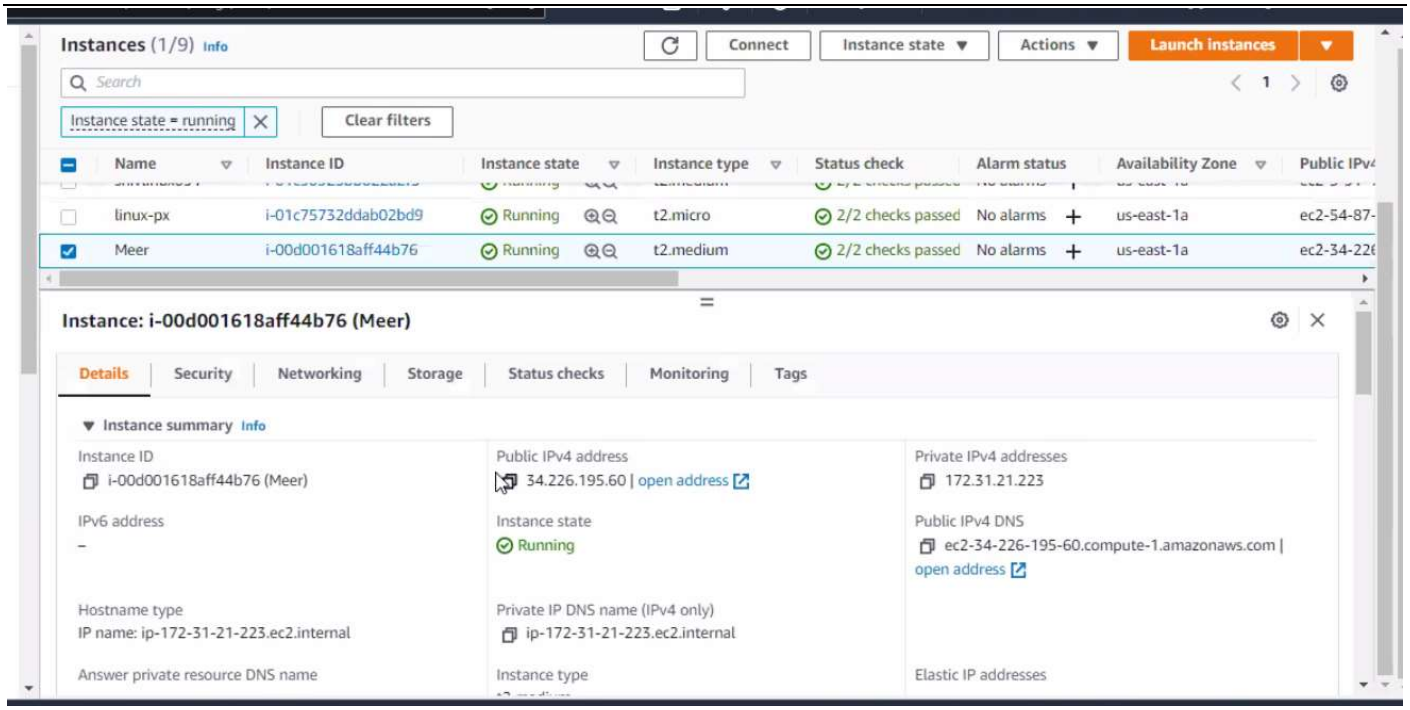

Find by name
1
Name
Folder
Type
Size
AWSLab.war - - 2.4 KB
Destination
Destination
s3://meer123
Destination details
Bucket settings that impact new objects stored in the specified destination.
Permissions
Grant public access and access to other AWS accounts.
Properties
Specify storage class, encryption settings, tags, and more.
Cancel
Upload

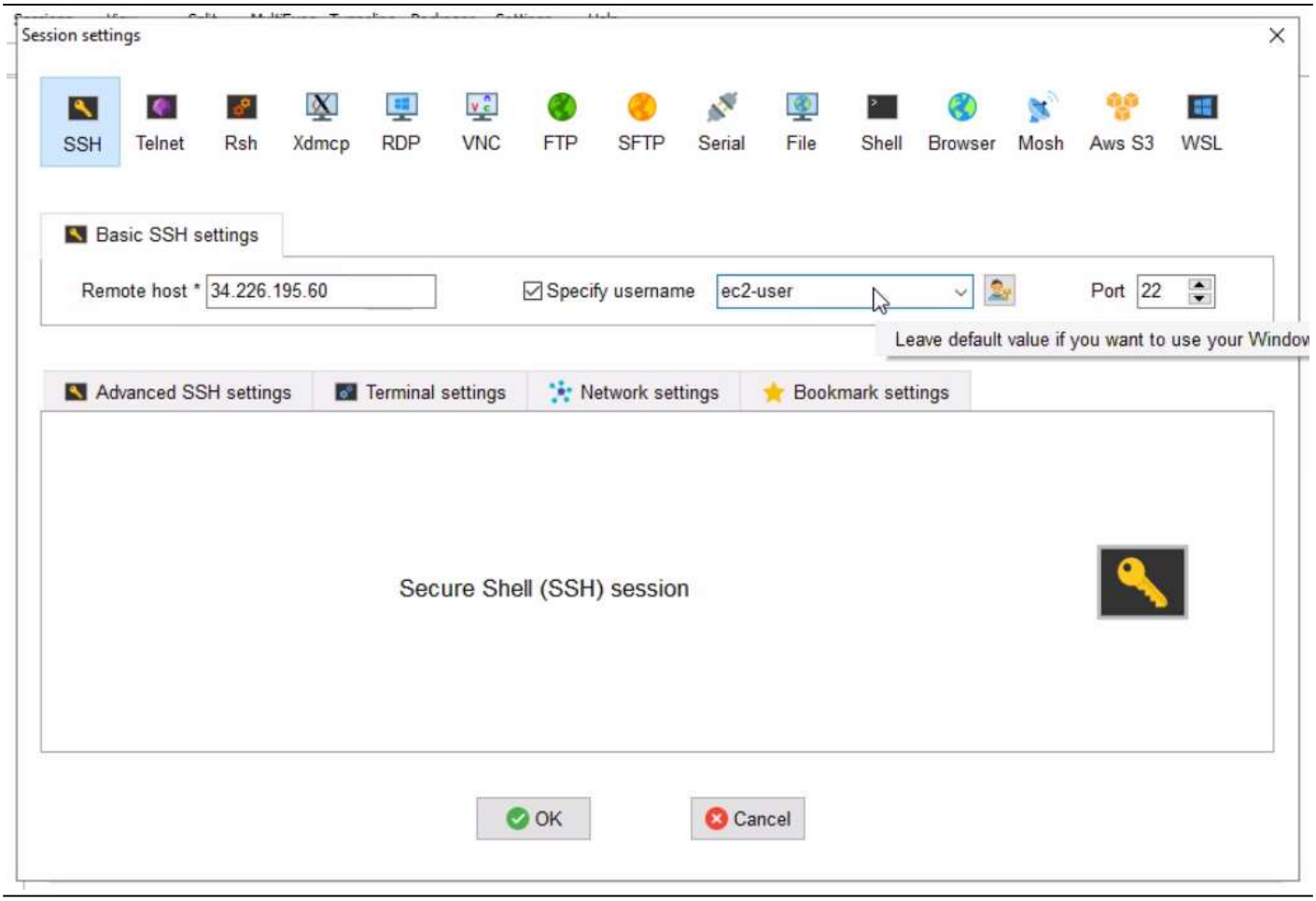

Amazon S3 > Buckets > meer123
meer123 Info
Objects
Properties
Permissions
Metrics
Management
Access Points
Move
Initiate restore
Query with S3 Select
Edit actions
Rename object
Edit storage class
Edit server-side encryption
Edit metadata
Edit tags
Make public using ACL
Objects (1)
Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory to get a list of all objects in you
permissions. Learn more
Copy S3 URI
Copy URL
Download
Open
Delete
Actions
Create folder
Upload
Find objects by prefix
1
Name
Type
Last modified
Size
Storage class
AWSLab.war
war
August 21, 2022, 23:45:28 (UTC+05:30)
2.4 KB
Standard

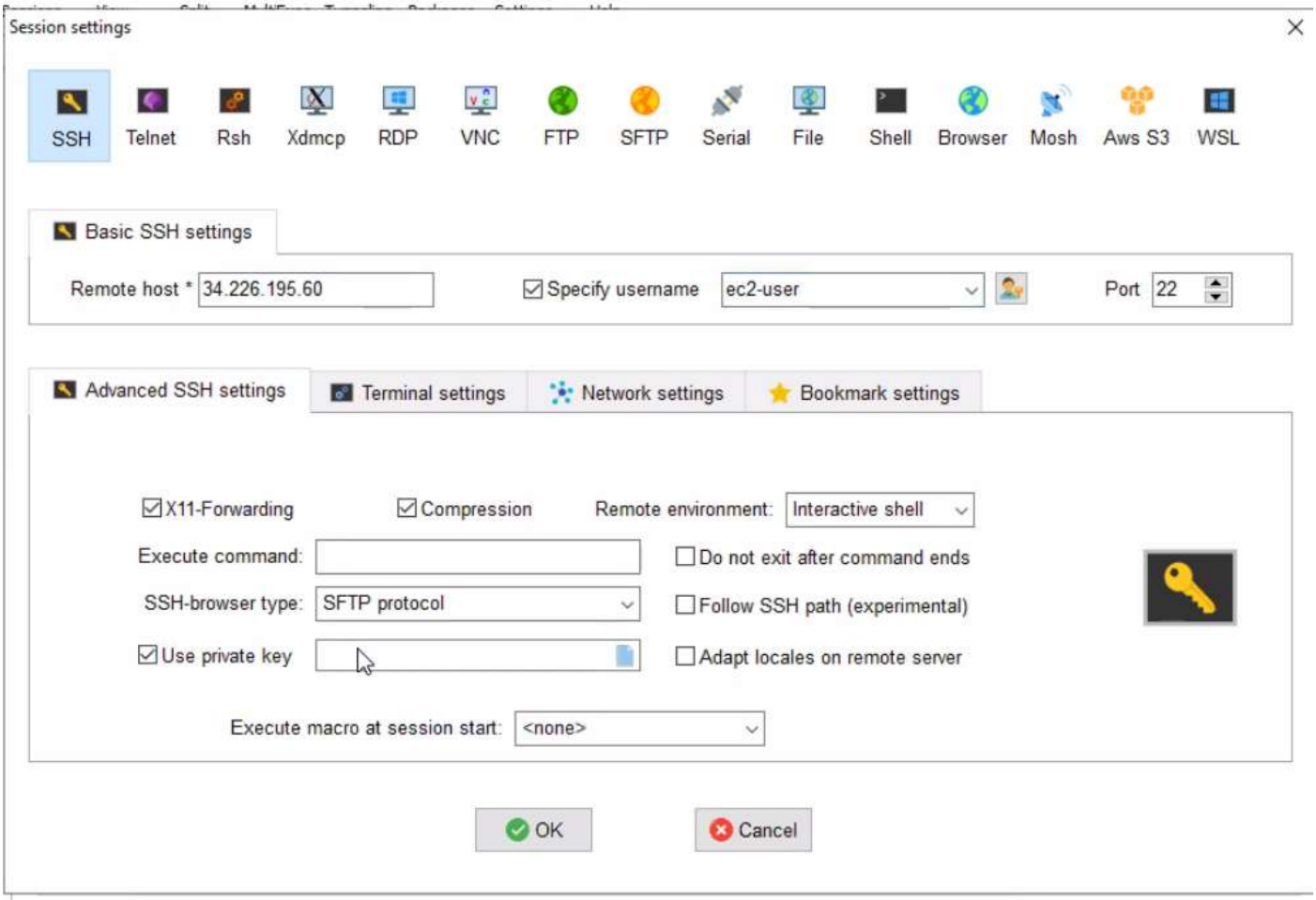

Amazon S3 > Buckets > meer123 > Make public
Make public Info
The make public action enables public read access in the object access control list (ACL) settings. Learn more.
When public read access is enabled and not blocked by Block Public Access settings, anyone in the world can access the specified objects.
Specified objects
Find objects by name
1
Name
Type
Last modified
Size
AWSLab.war
war
August 21, 2022, 23:45:28 (UTC+05:30)
2.4 KB
Cancel
Make public

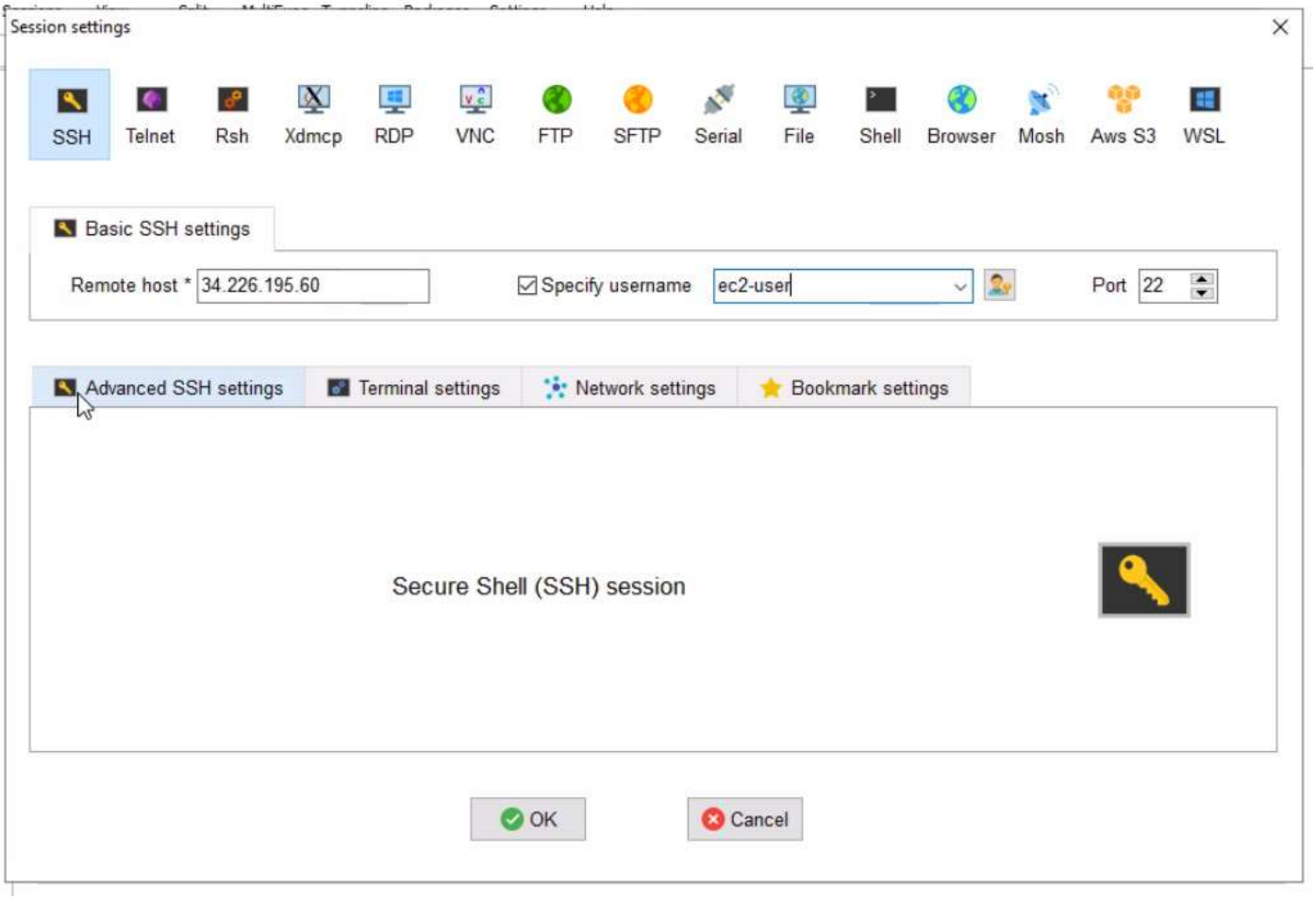

MobaXterm
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
Start a new remote session (Ctrl+Shift+N)
MobaXterm
Start local terminal
Select your favorite theme
Light
Dark

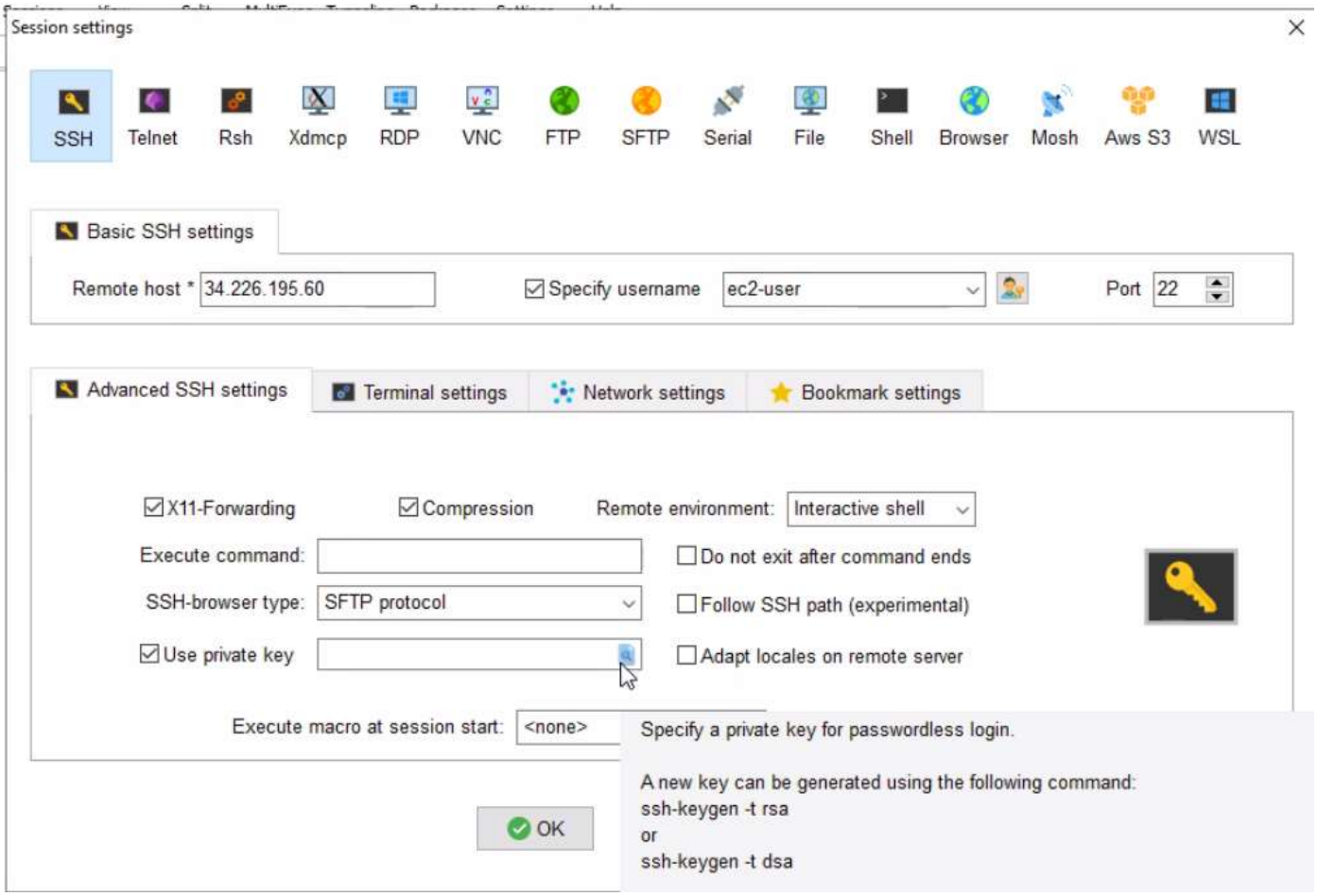

Session settings
SSH Telnet Rsh Xdmcp RDP VNC FTP SFTP Serial File Shell Browser Mosh Aws S3 WSL
Secure Shell (SSH) session
Choose a session type...
OK
Cancel

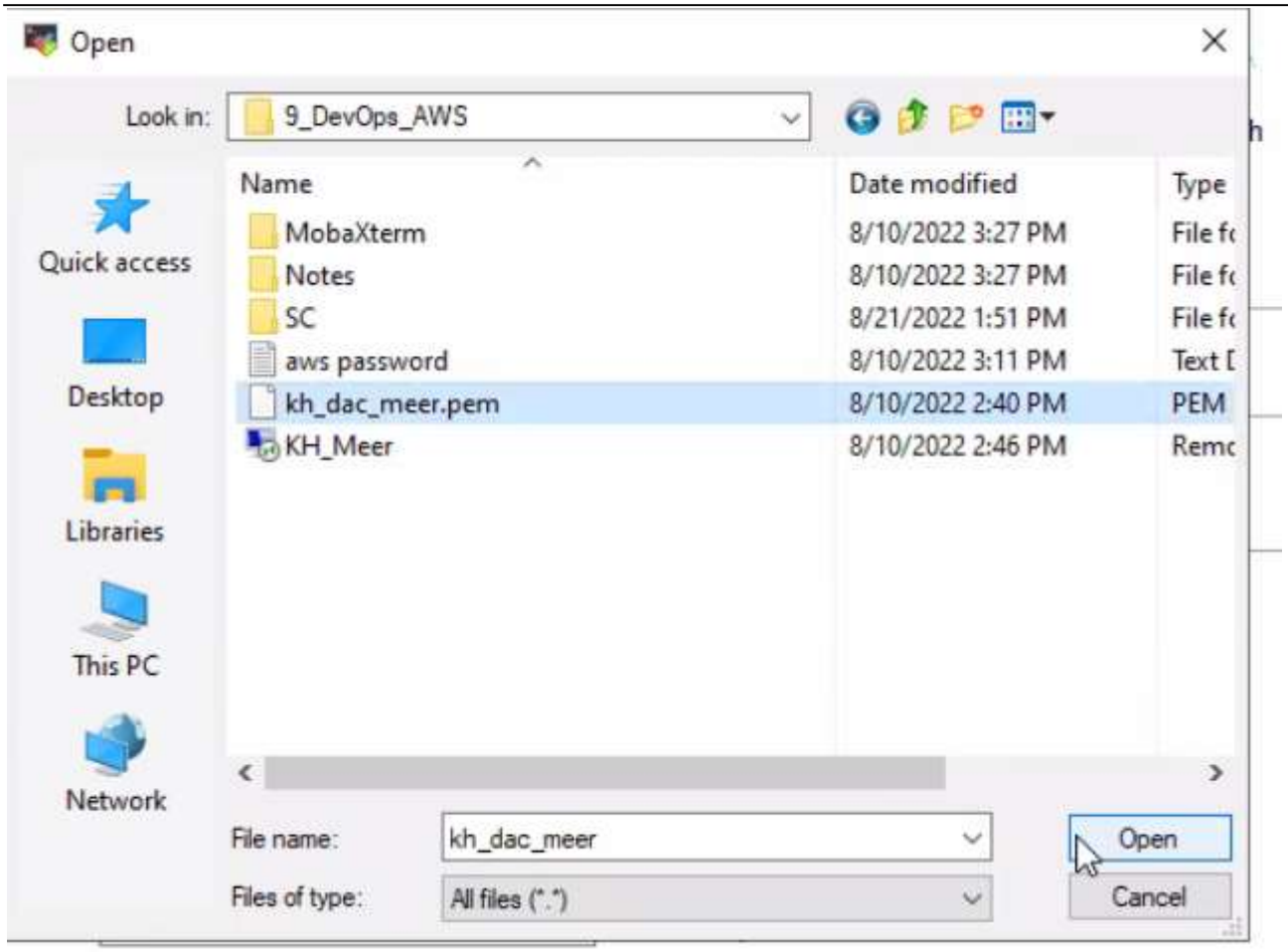

Instances (1/9) Info
Connect
Instance state
Actions
Launch instances
Search
Instance state = running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4
linux-px
i-01c75732ddab02bd9
Running
t2.micro
2/2 checks passed
No alarms
us-east-1a
Meer
i-00d001618aff44b76
Running
t2.medium
2/2 checks passed
No alarms
us-east-1a
Instance: i-00d001618aff44b76 (Meer)
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary Info
Instance ID
i-00d001618aff44b76 (Meer)
Public IPv4 address
34.226.195.60 | open address
Private IPv4 addresses
172.31.21.223
IPv6 address
–
Instance state
Running
Public IPv4 DNS
ec2-34-226-195-60.compute-1.amazonaws.com | open address
Hostname type
IP name: ip-172-31-21-223.ec2.internal
Private IP DNS name (IPv4 only)
ip-172-31-21-223.ec2.internal
Answer private resource DNS name
Instance type
Elastic IP addresses

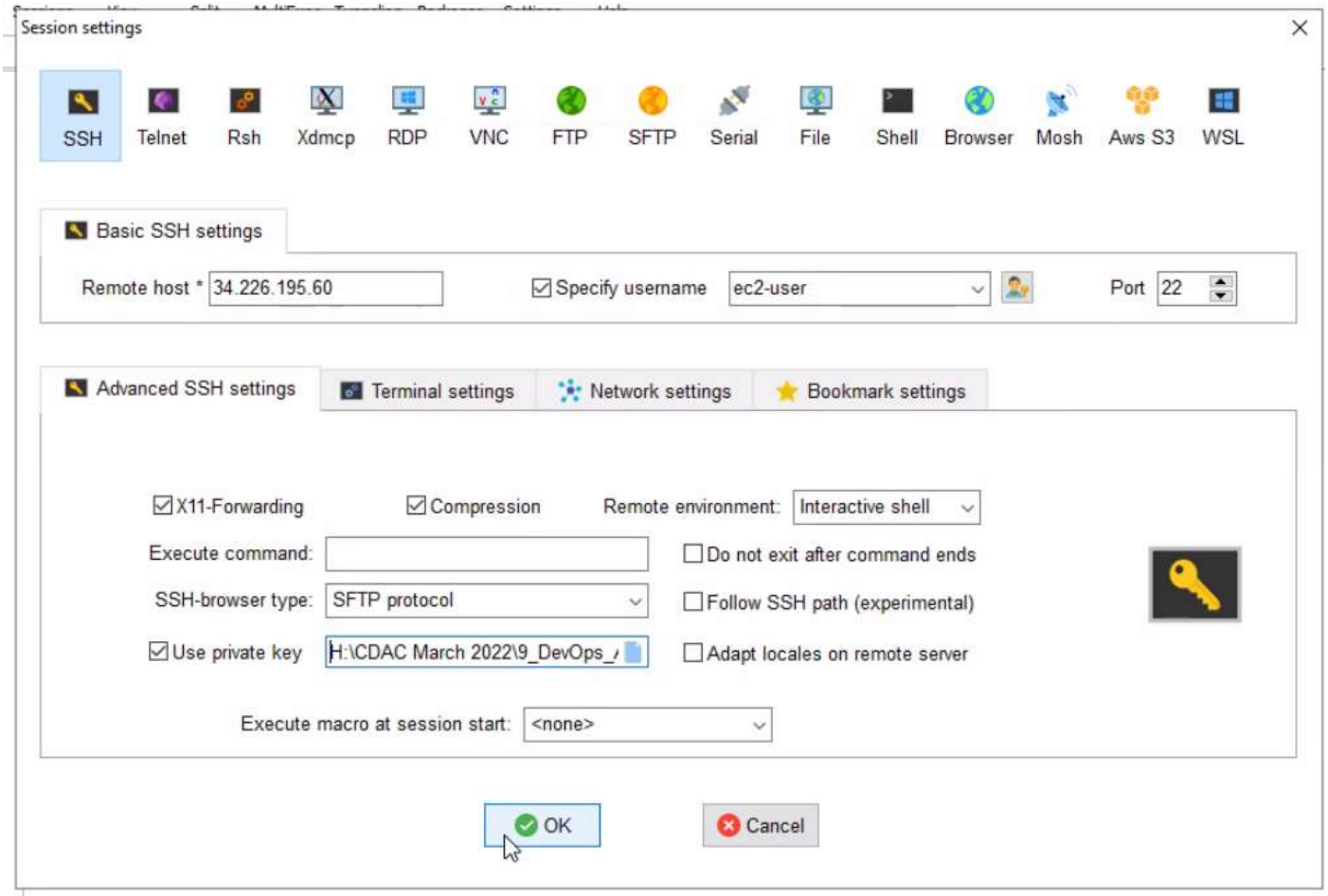

Session settings
SSH
Telnet
Rsh
Xdmcp
RDP
VNC
FTP
SFTP
Serial
File
Shell
Browser
Mosh
Aws S3
WSL
Basic SSH settings
Remote host * 34.226.195.60
Specify username
ec2-user
Port 22
Leave default value if you want to use your Windo
Advanced SSH settings
Terminal settings
Network settings
Bookmark settings
Secure Shell (SSH) session
OK
Cancel

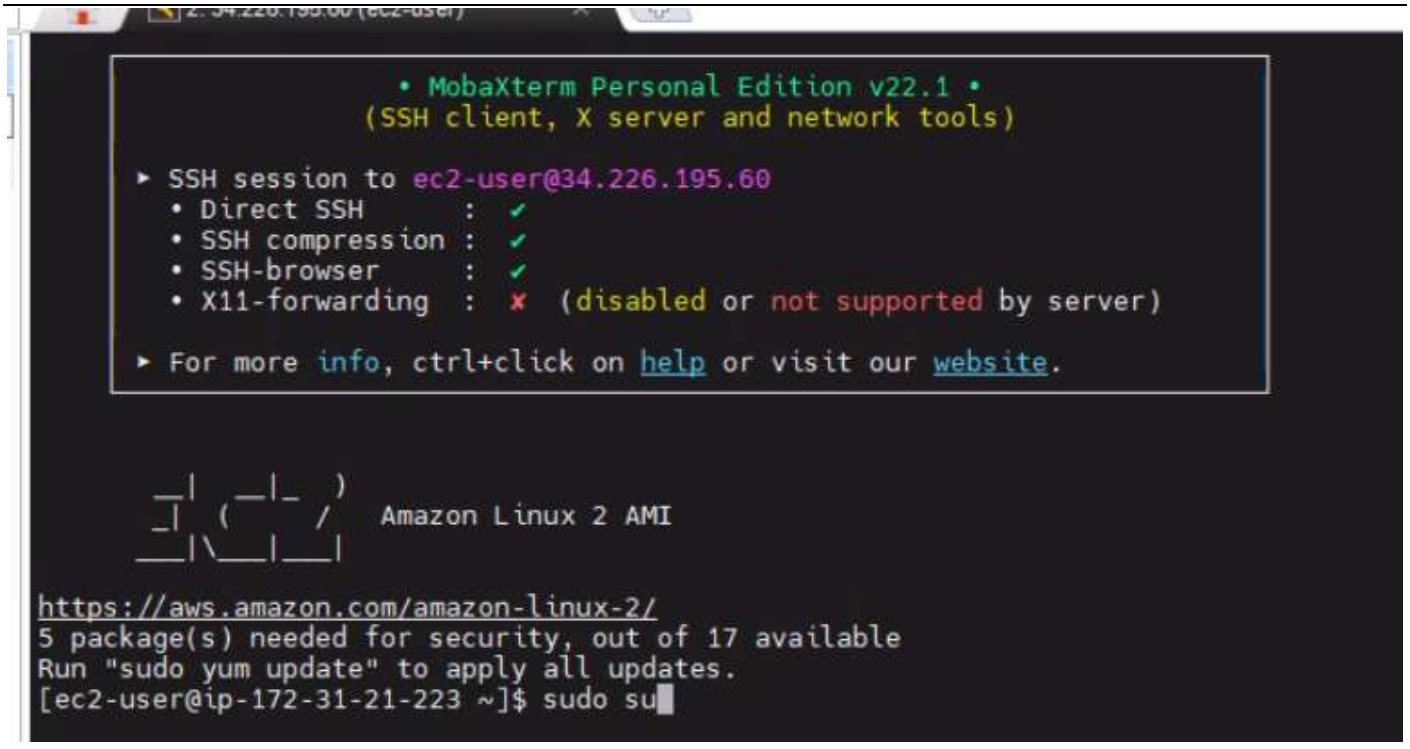

Session settings
SSH
Telnet
Rsh
Xdmcp
RDP
VNC
FTP
SFTP
Serial
File
Shell
Browser
Mosh
Aws S3
WSL
Basic SSH settings
Remote host * 34.226.195.60
Specify username
ec2-user
Port 22
Advanced SSH settings
Terminal settings
Network settings
Bookmark settings
X11-Forwarding
Compression
Remote environment: Interactive shell
Execute command:
Do not exit after command ends
SSH-browser type: SFTP protocol
Follow SSH path (experimental)
Use private key
Adapt locales on remote server
Execute macro at session start: <none>
OK
Cancel

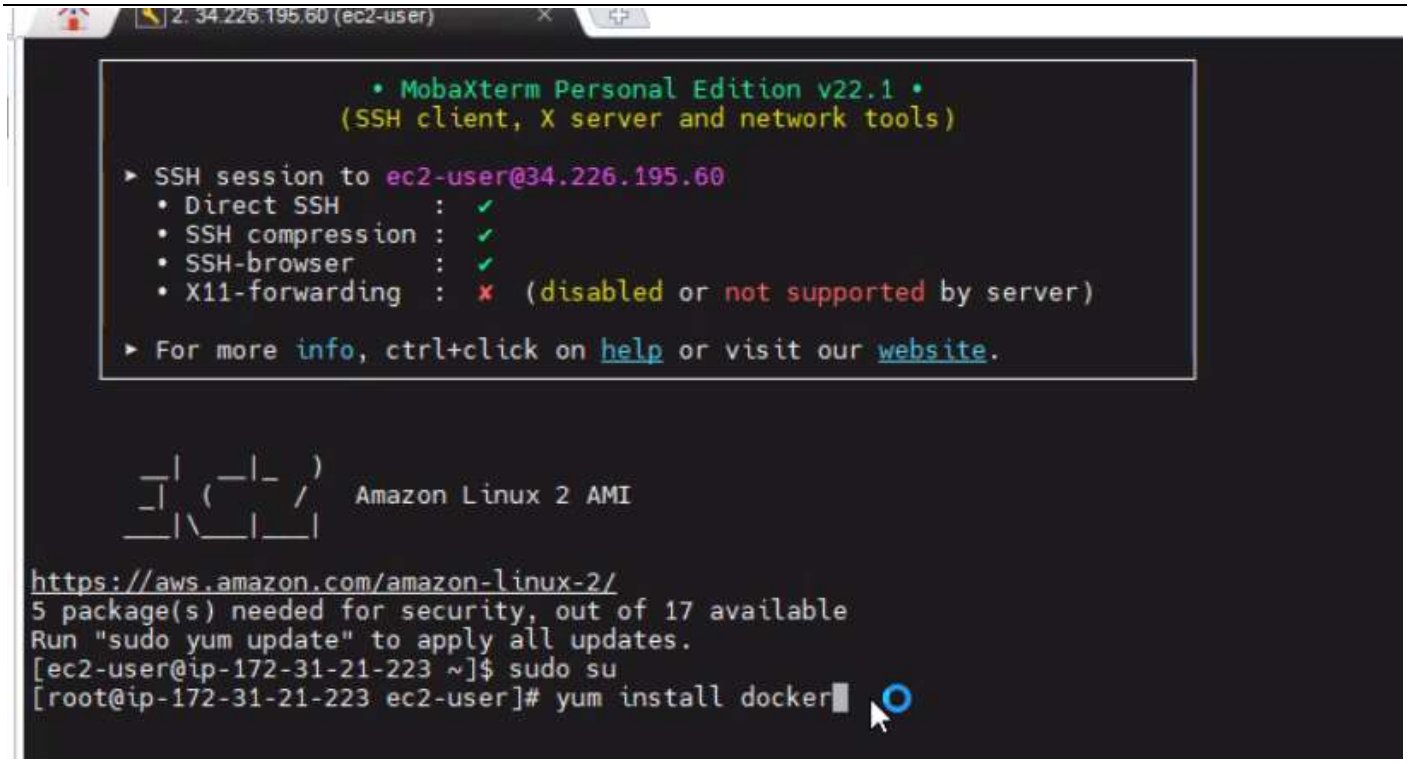

Session settings
SSH
Telnet
Rsh
Xdmcp
RDP
VNC
FTP
SFTP
Serial
File
Shell
Browser
Mosh
Aws S3
WSL
Basic SSH settings
Remote host * 34.226.195.60
Specify username
ec2-user
Port 22
Advanced SSH settings
Terminal settings
Network settings
Bookmark settings
Secure Shell (SSH) session
OK
Cancel

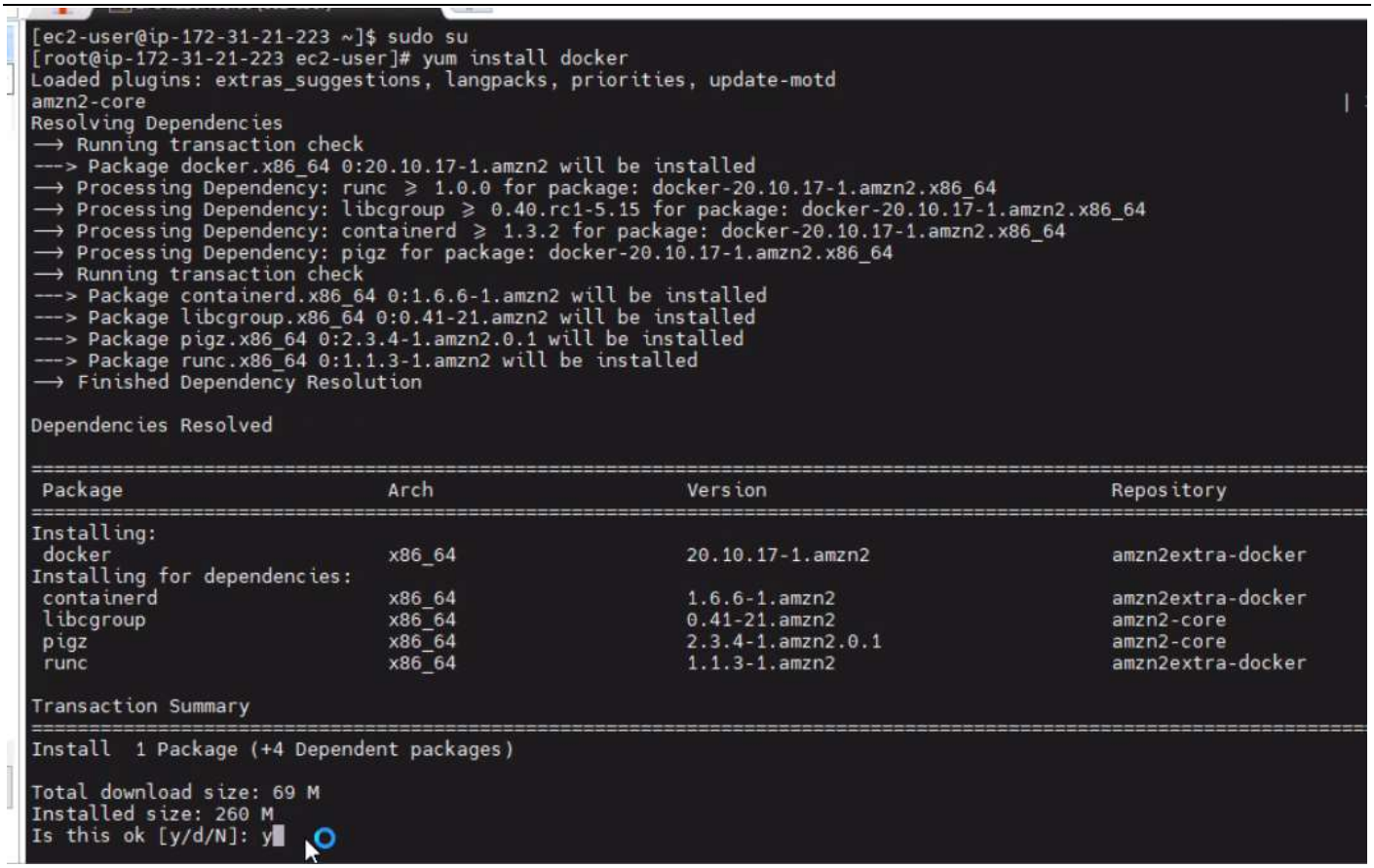

Session settings
SSH
Telnet
Rsh
Xdmcp
RDP
VNC
FTP
SFTP
Serial
File
Shell
Browser
Mosh
Aws S3
WSL
Basic SSH settings
Remote host * 34.226.195.60
Specify username
ec2-user
Port 22
Advanced SSH settings
Terminal settings
Network settings
Bookmark settings
X11-Forwarding
Compression
Remote environment: Interactive shell
Execute command:
Do not exit after command ends
SSH-browser type: SFTP protocol
Follow SSH path (experimental)
Use private key
Adapt locales on remote server
Execute macro at session start: <none>
Specify a private key for passwordless login.
A new key can be generated using the following command:
ssh-keygen -t rsa
or
ssh-keygen -t dsa
OK


Open
Look in: 9_DevOps_AWS
Quick access
Desktop
Libraries
This PC
Network
Name
Date modified
Type
MobaXterm
8/10/2022 3:27 PM
Notes
8/10/2022 3:27 PM
SC
8/21/2022 1:51 PM
aws password
8/10/2022 3:11 PM
kh_dac_meer.pem
8/10/2022 2:40 PM
PEM
KH_Meer
8/10/2022 2:46 PM
File name: kh_dac_meer
Files of type: All files (*.*)
Open
Cancel


Session settings
SSH
Telnet
Rsh
Xdmcp
RDP
VNC
FTP
SFTP
Serial
File
Shell
Browser
Mosh
Aws S3
WSL
Basic SSH settings
Remote host * 34.226.195.60
Specify username
ec2-user
Port 22
Advanced SSH settings
Terminal settings
Network settings
Bookmark settings
X11-Forwarding
Compression
Remote environment: Interactive shell
Execute command:
Do not exit after command ends
SSH-browser type: SFTP protocol
Follow SSH path (experimental)
Use private key
H:\CDAC March 2022\9_DevOps_
Adapt locales on remote server
Execute macro at session start: <none>
OK
Cancel


• MobaXterm Personal Edition v22.1 •
(SSH client, X server and network tools)
▸ SSH session to ec2-user@34.226.195.60
• Direct SSH : ✔
• SSH compression : ✔
• SSH-browser : ✔
• X11-forwarding : ✘ (disabled or not supported by server)
▸ For more info, ctrl+click on help or visit our website.
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
5 package(s) needed for security, out of 17 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-21-223 ~]$ sudo su


2. 34.226.195.60 (ec2-user)
• MobaXterm Personal Edition v22.1 •
(SSH client, X server and network tools)
▸ SSH session to ec2-user@34.226.195.60
• Direct SSH : ✔
• SSH compression : ✔
• SSH-browser : ✔
• X11-forwarding : ✘ (disabled or not supported by server)
▸ For more info, ctrl+click on help or visit our website.
Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
5 package(s) needed for security, out of 17 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-21-223 ~]$ sudo su
[root@ip-172-31-21-223 ec2-user]# yum install docker


[ec2-user@ip-172-31-21-223 ~]$ sudo su
[root@ip-172-31-21-223 ec2-user]# yum install docker
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
---> Package docker.x86_64 0:20.10.17-1.amzn2 will be installed
--> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.17-1.amzn2.x86_64
--> Processing Dependency: libcgroup >= 0.40.rc1-5.15 for package: docker-20.10.17-1.amzn2.x86_64
--> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.17-1.amzn2.x86_64
--> Processing Dependency: pigz for package: docker-20.10.17-1.amzn2.x86_64
--> Running transaction check
---> Package containerd.x86_64 0:1.6.6-1.amzn2 will be installed
---> Package libcgroup.x86_64 0:0.41-21.amzn2 will be installed
---> Package pigz.x86_64 0:2.3.4-1.amzn2.0.1 will be installed
---> Package runc.x86_64 0:1.1.3-1.amzn2 will be installed
--> Finished Dependency Resolution
Dependencies Resolved
Package Arch Version Repository
Installing:
docker x86_64 20.10.17-1.amzn2 amzn2extra-docker
Installing for dependencies:
containerd x86_64 1.6.6-1.amzn2 amzn2extra-docker
libcgroup x86_64 0.41-21.amzn2 amzn2-core
pigz x86_64 2.3.4-1.amzn2.0.1 amzn2-core
runc x86_64 1.1.3-1.amzn2 amzn2extra-docker
Transaction Summary
Install 1 Package (+4 Dependent packages)
Total download size: 69 M
Installed size: 260 M
Is this ok [y/d/N]: y

```
Transaction Summary
================================================================================
Install  1 Package (+4 Dependent packages)

Total download size: 69 M
Installed size: 260 M
Is this ok [y/d/N]: y
Downloading packages:
(1/5): libcgroup-0.41-21.amzn2.x86_64.rpm
(2/5): pigz-2.3.4-1.amzn2.0.1.x86_64.rpm
(3/5): containerd-1.6.6-1.amzn2.x86_64.rpm
(4/5): runc-1.1.3-1.amzn2.x86_64.rpm
(5/5): docker-20.10.17-1.amzn2.x86_64.rpm
--------------------------------------------------------------------------------
Total                                                              105 MB/
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : runc-1.1.3-1.amzn2.x86_64
  Installing : containerd-1.6.6-1.amzn2.x86_64
  Installing : libcgroup-0.41-21.amzn2.x86_64
  Installing : pigz-2.3.4-1.amzn2.0.1.x86_64
  Installing : docker-20.10.17-1.amzn2.x86_64
  Verifying  : docker-20.10.17-1.amzn2.x86_64
  Verifying  : runc-1.1.3-1.amzn2.x86_64
  Verifying  : pigz-2.3.4-1.amzn2.0.1.x86_64
  Verifying  : containerd-1.6.6-1.amzn2.x86_64
  Verifying  : libcgroup-0.41-21.amzn2.x86_64

Installed:
  docker.x86_64 0:20.10.17-1.amzn2

Dependency Installed:
  containerd.x86_64 0:1.6.6-1.amzn2   libcgroup.x86_64 0:0.41-21.amzn2   pigz.x86_64 0:2.3.4-1.amzn2.0.1   runc.

Complete!
[root@ip-172-31-21-223 ec2-user]# service docker start
```

```
Install  1 Package (+4 Dependent packages)

Total download size: 69 M
Installed size: 260 M
Is this ok [y/d/N]: y
Downloading packages:
(1/5): libcgroup-0.41-21.amzn2.x86_64.rpm                          |  66 kB  00
(2/5): pigz-2.3.4-1.amzn2.0.1.x86_64.rpm                           |  81 kB  00
(3/5): containerd-1.6.6-1.amzn2.x86_64.rpm                         |  27 MB  00
(4/5): runc-1.1.3-1.amzn2.x86_64.rpm                               | 2.9 MB  00
(5/5): docker-20.10.17-1.amzn2.x86_64.rpm                          |  39 MB  00
--------------------------------------------------------------------------------
Total                                              105 MB/s |  69 MB  00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : runc-1.1.3-1.amzn2.x86_64
  Installing : containerd-1.6.6-1.amzn2.x86_64
  Installing : libcgroup-0.41-21.amzn2.x86_64
  Installing : pigz-2.3.4-1.amzn2.0.1.x86_64
  Installing : docker-20.10.17-1.amzn2.x86_64
  Verifying  : docker-20.10.17-1.amzn2.x86_64
  Verifying  : runc-1.1.3-1.amzn2.x86_64
  Verifying  : pigz-2.3.4-1.amzn2.0.1.x86_64
  Verifying  : containerd-1.6.6-1.amzn2.x86_64
  Verifying  : libcgroup-0.41-21.amzn2.x86_64

Installed:
  docker.x86_64 0:20.10.17-1.amzn2

Dependency Installed:
  containerd.x86_64 0:1.6.6-1.amzn2   libcgroup.x86_64 0:0.41-21.amzn2   pigz.x86_64 0:2.3.4-1.amzn2.0.1   runc.x86_64 0:1.1.3

Complete!
[root@ip-172-31-21-223 ec2-user]# service docker start
Redirecting to /bin/systemctl start docker.service
[root@ip-172-31-21-223 ec2-user]# mkdir demodocker
```

```
Installed:
  docker.x86_64 0:20.10.17-1.amzn2

Dependency Installed:
  containerd.x86_64 0:1.6.6-1.amzn2   libcgroup.x86_64 0:0.41-21.

Complete!
[root@ip-172-31-21-223 ec2-user]# service docker start
Redirecting to /bin/systemctl start docker.service
[root@ip-172-31-21-223 ec2-user]# mkdir demodocker
[root@ip-172-31-21-223 ec2-user]# cd demodocker
```

```
Dependency Installed:
  containerd.x86_64 0:1.6.6-1.amzn2   libcgroup.x86_64 0:0.41-21.amzn2   pigz.x86_64 0:2.3

Complete!
[root@ip-172-31-21-223 ec2-user]# service docker start
Redirecting to /bin/systemctl start docker.service
[root@ip-172-31-21-223 ec2-user]# mkdir demodocker
[root@ip-172-31-21-223 ec2-user]# cd demodocker
[root@ip-172-31-21-223 demodocker]# vi Dockerfile
```

```
from tomcat
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
```

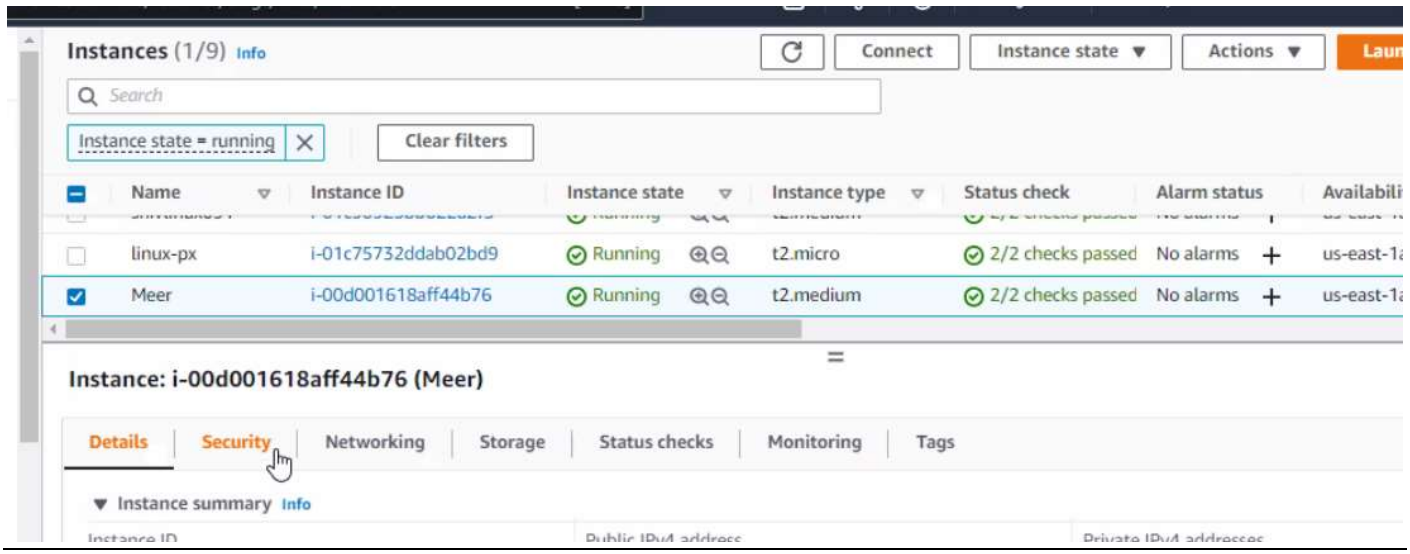
Esc :wq

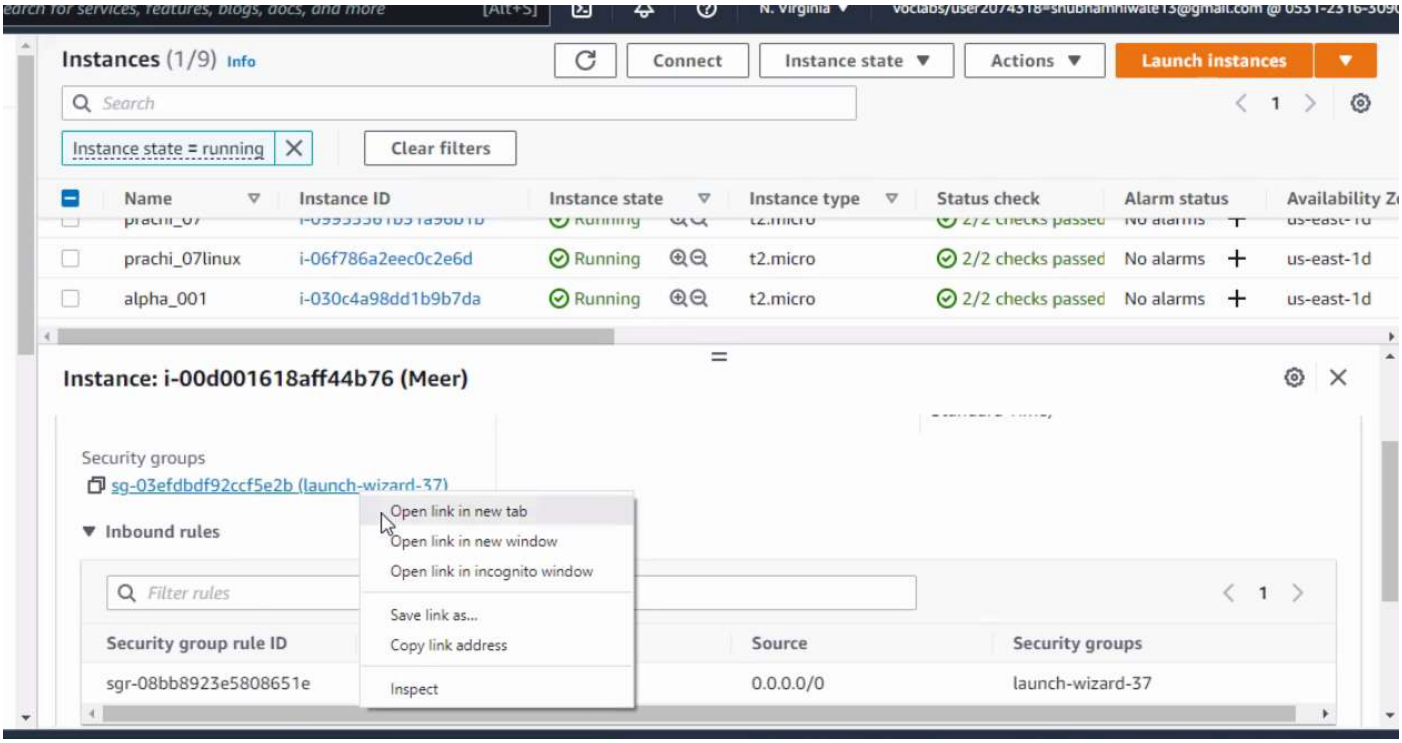
```
Dependency Installed:
  containerd.x86_64 0:1.6.6-1.amzn2   libcgroup.x86_64 0:0.41-21.amzn2   pigz.x8

Complete!
[root@ip-172-31-21-223 ec2-user]# service docker start
Redirecting to /bin/systemctl start docker.service
[root@ip-172-31-21-223 ec2-user]# mkdir demodocker
[root@ip-172-31-21-223 ec2-user]# cd demodocker
[root@ip-172-31-21-223 demodocker]# vi Dockerfile
[root@ip-172-31-21-223 demodocker]# ls
Dockerfile
[root@ip-172-31-21-223 demodocker]# docker build -t tomcat_1.0 .
```

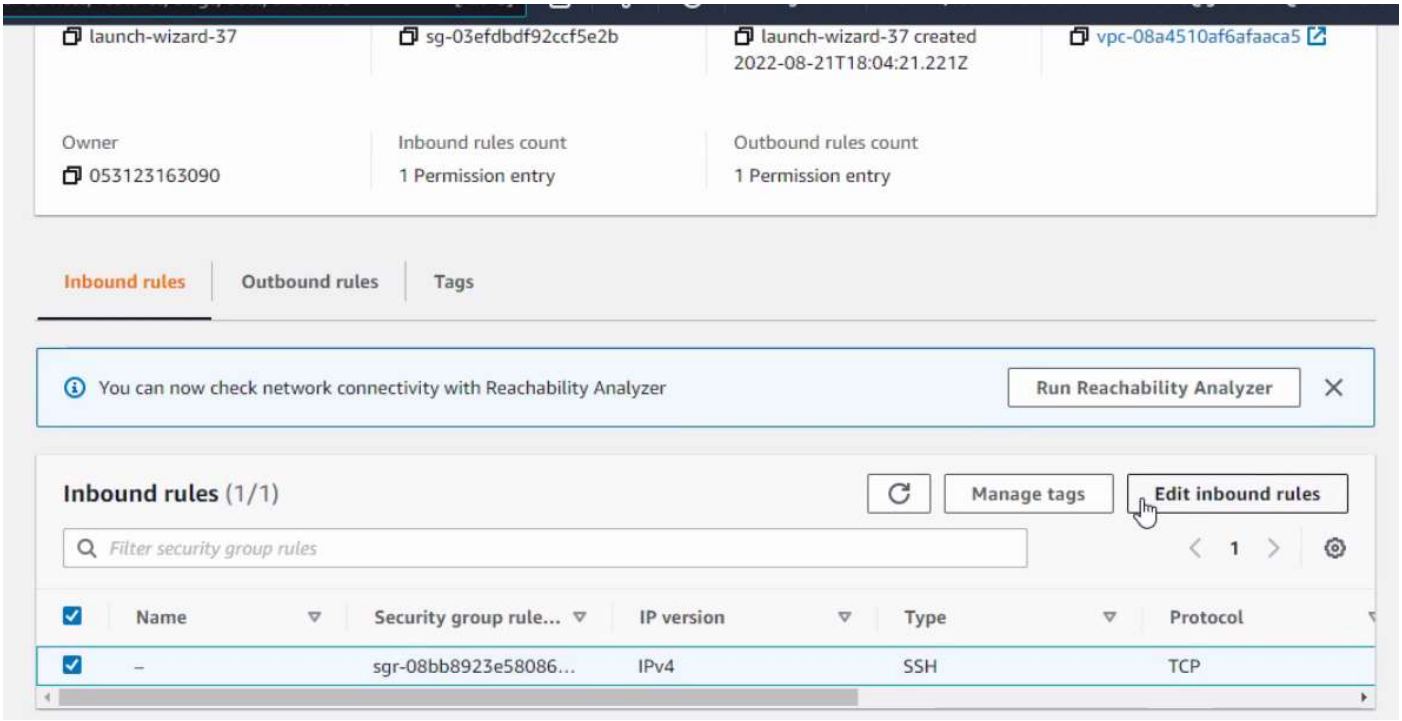
```
[root@ip-172-31-21-223 demodocker]# docker image ls
```

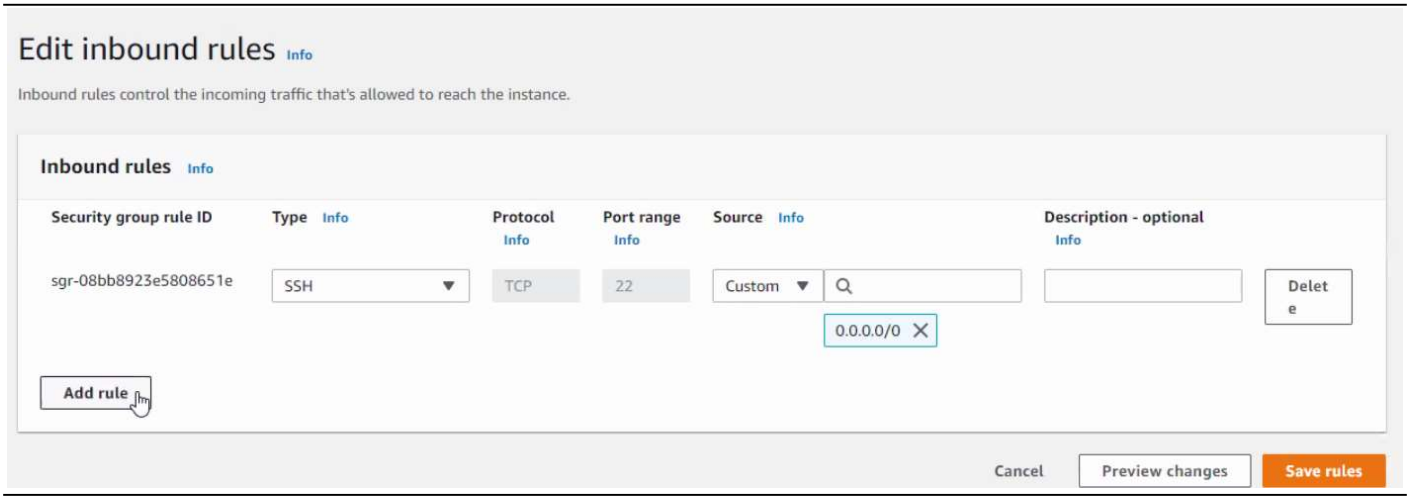
```
[root@ip-172-31-21-223 demodocker]# docker run -d -p 8080:8080 tomcat_1.0
```

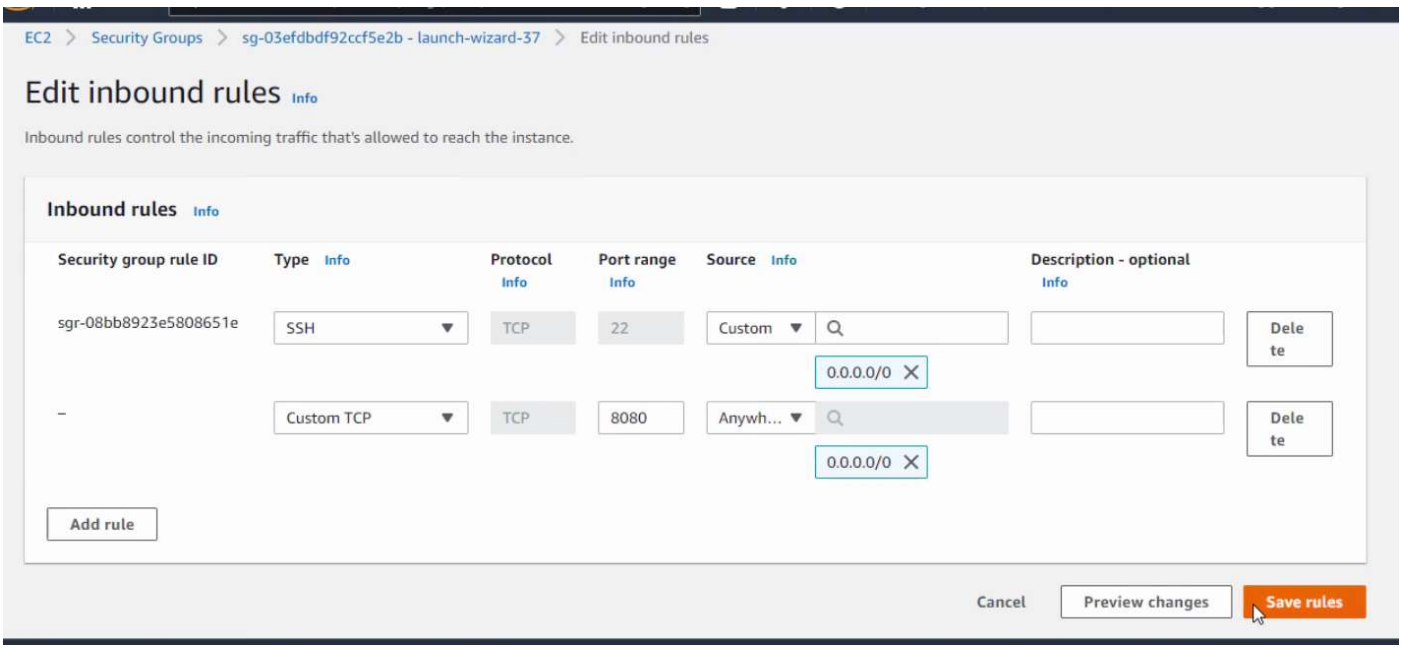
```
[root@ip-172-31-21-223 demodocker]# docker ps
```

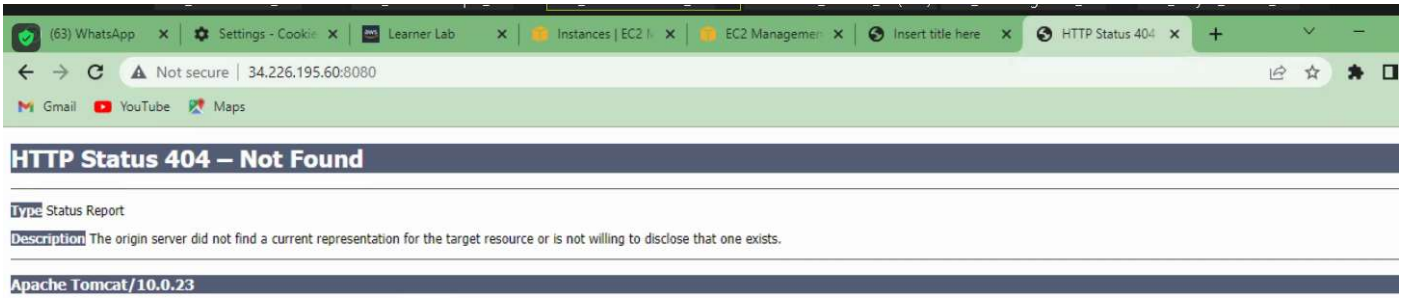

Instances (1/9) Info
Connect
Instance state
Actions
Search
Instance state = running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
linux-px
i-01c75732ddab02bd9
Running
t2.micro
2/2 checks passed
No alarms
Meer
i-00d001618aff44b76
Running
t2.medium
2/2 checks passed
No alarms
Instance: i-00d001618aff44b76 (Meer)
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary Info


Instances (1/9) Info
Connect
Instance state
Actions
Launch instances
Search
Instance state = running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
prachi_07linux
i-06f786a2eec0c2e6d
Running
t2.micro
2/2 checks passed
No alarms
us-east-1d
alpha_001
i-030c4a98dd1b9b7da
Running
t2.micro
2/2 checks passed
No alarms
us-east-1d
Instance: i-00d001618aff44b76 (Meer)
Security groups
sg-03efdbdf92ccf5e2b (launch-wizard-37)
Open link in new tab
Open link in new window
Open link in incognito window
Save link as...
Copy link address
Inspect
Inbound rules
Filter rules
Security group rule ID
Source
Security groups
sgr-08bb8923e5808651e
0.0.0.0/0
launch-wizard-37


launch-wizard-37
sg-03efdbdf92ccf5e2b
launch-wizard-37 created 2022-08-21T18:04:21.221Z
vpc-08a4510af6afaaca5
Owner
053123163090
Inbound rules count
1 Permission entry
Outbound rules count
1 Permission entry
Inbound rules
Outbound rules
Tags
You can now check network connectivity with Reachability Analyzer
Run Reachability Analyzer
Inbound rules (1/1)
Manage tags
Edit inbound rules
Filter security group rules
1
Name
Security group rule...
IP version
Type
Protocol
–
sgr-08bb8923e58086...
IPv4
SSH
TCP


Edit inbound rules Info
Inbound rules control the incoming traffic that's allowed to reach the instance.
Inbound rules Info
Security group rule ID
Type Info
Protocol Info
Port range Info
Source Info
Description - optional Info
sgr-08bb8923e5808651e
SSH
TCP
22
Custom
0.0.0.0/0
Delete
Add rule
Cancel
Preview changes
Save rules


EC2 > Security Groups > sg-03efdbdf92ccf5e2b - launch-wizard-37 > Edit inbound rules
Edit inbound rules Info
Inbound rules control the incoming traffic that's allowed to reach the instance.
Inbound rules Info
Security group rule ID
Type Info
Protocol Info
Port range Info
Source Info
Description - optional Info
sgr-08bb8923e5808651e
SSH
TCP
22
Custom
0.0.0.0/0
Delete
–
Custom TCP
TCP
8080
Anywh...
0.0.0.0/0
Delete
Add rule
Cancel
Preview changes
Save rules

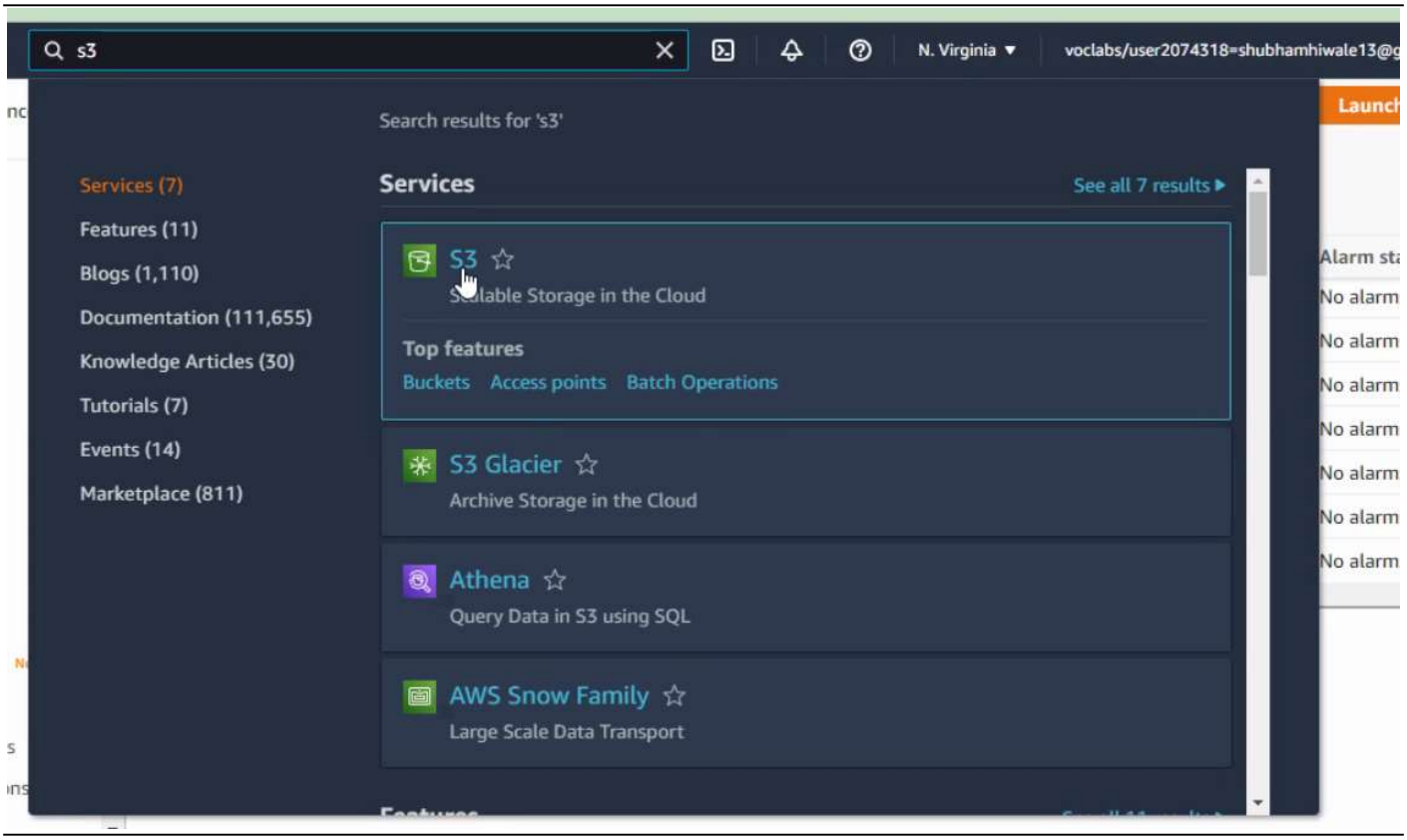


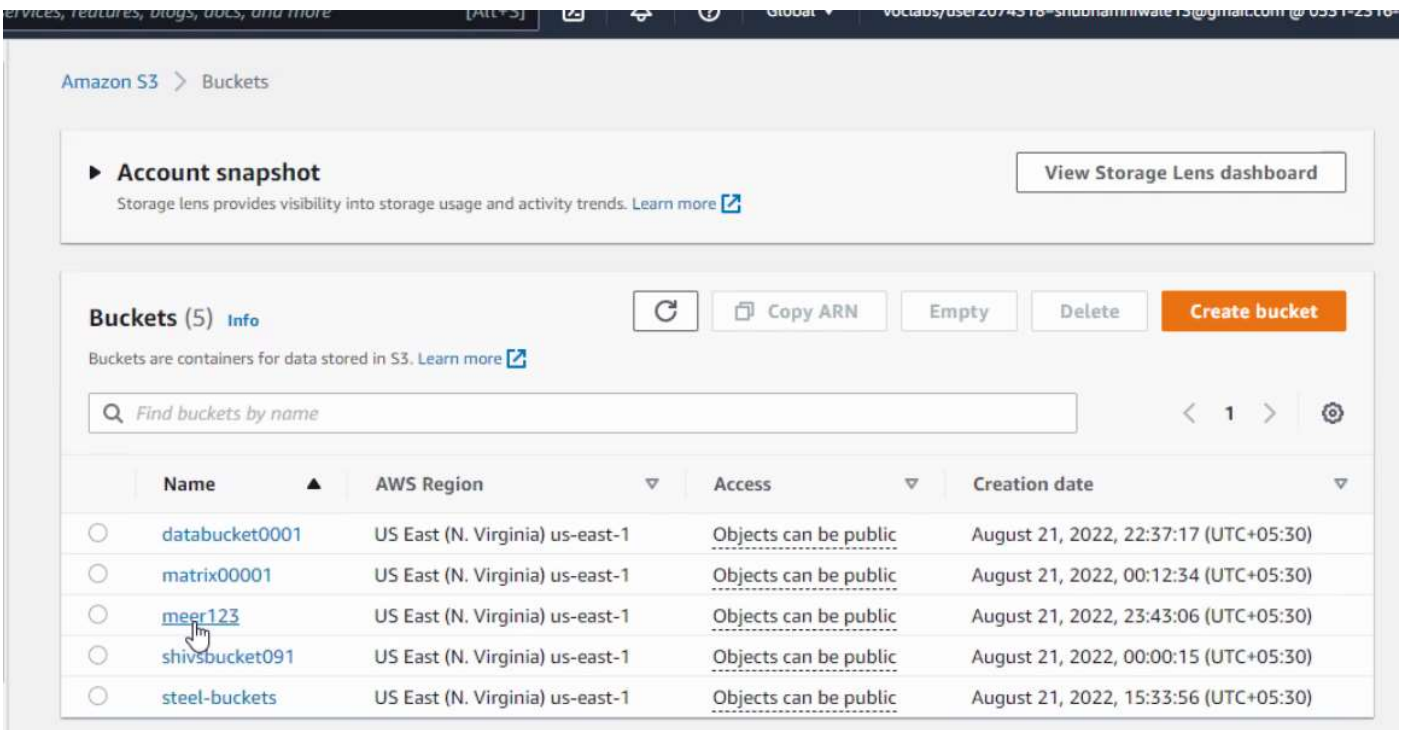
ERROR page

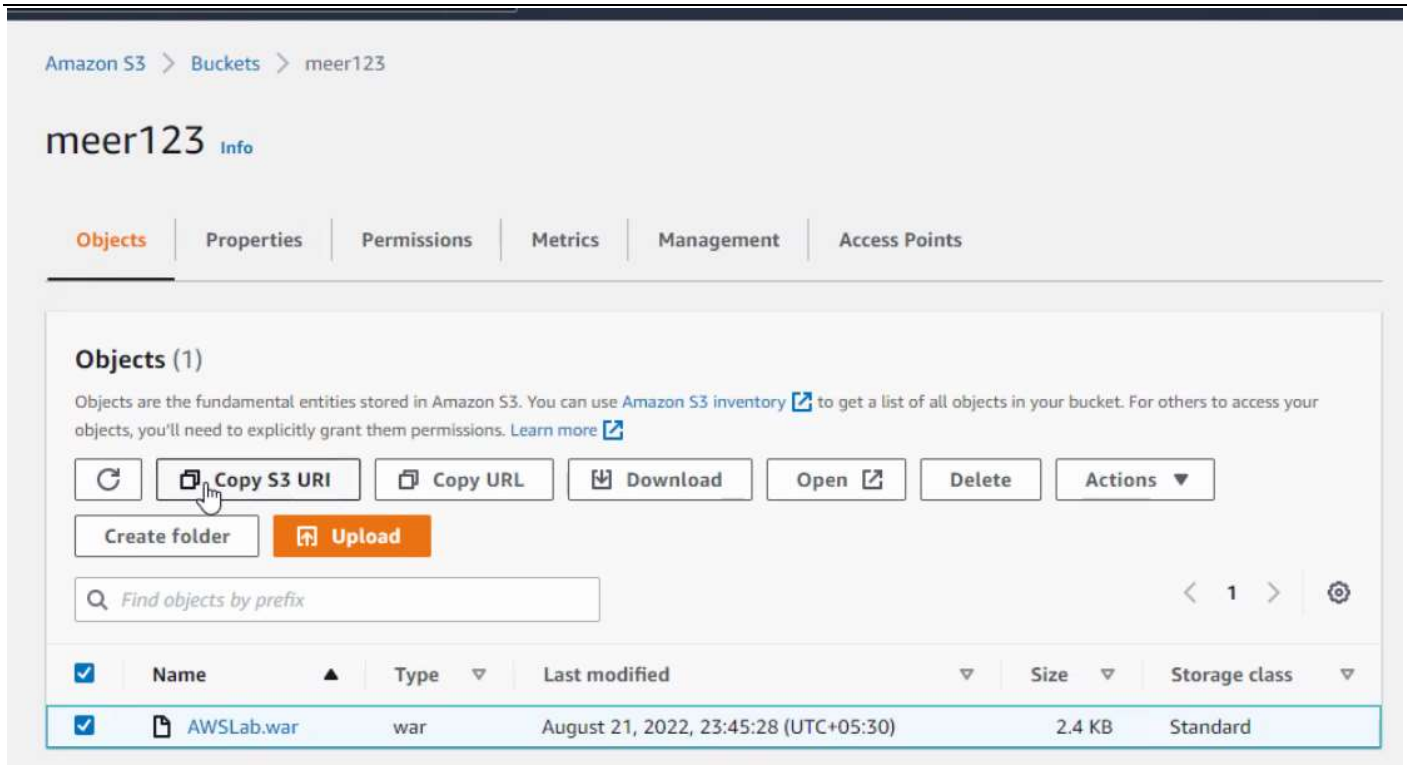
```
https://aws.amazon.com/amazon-linux-2/
5 package(s) needed for security, out of 17 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-21-223 ~]$ sudo su
[root@ip-172-31-21-223 ec2-user]# ls
demodocker
[root@ip-172-31-21-223 ec2-user]# cd demodocker
[root@ip-172-31-21-223 demodocker]# ls
Dockerfile
[root@ip-172-31-21-223 demodocker]# docker ps
CONTAINER ID   IMAGE         COMMAND             CREATED          STATUS
70c084042a8b   tomcat_1.0    "catalina.sh run"   12 minutes ago   Up 12 minutes
an
[root@ip-172-31-21-223 demodocker]# docker stop 70c084042a8b
70c084042a8b
[root@ip-172-31-21-223 demodocker]#
```

Continue

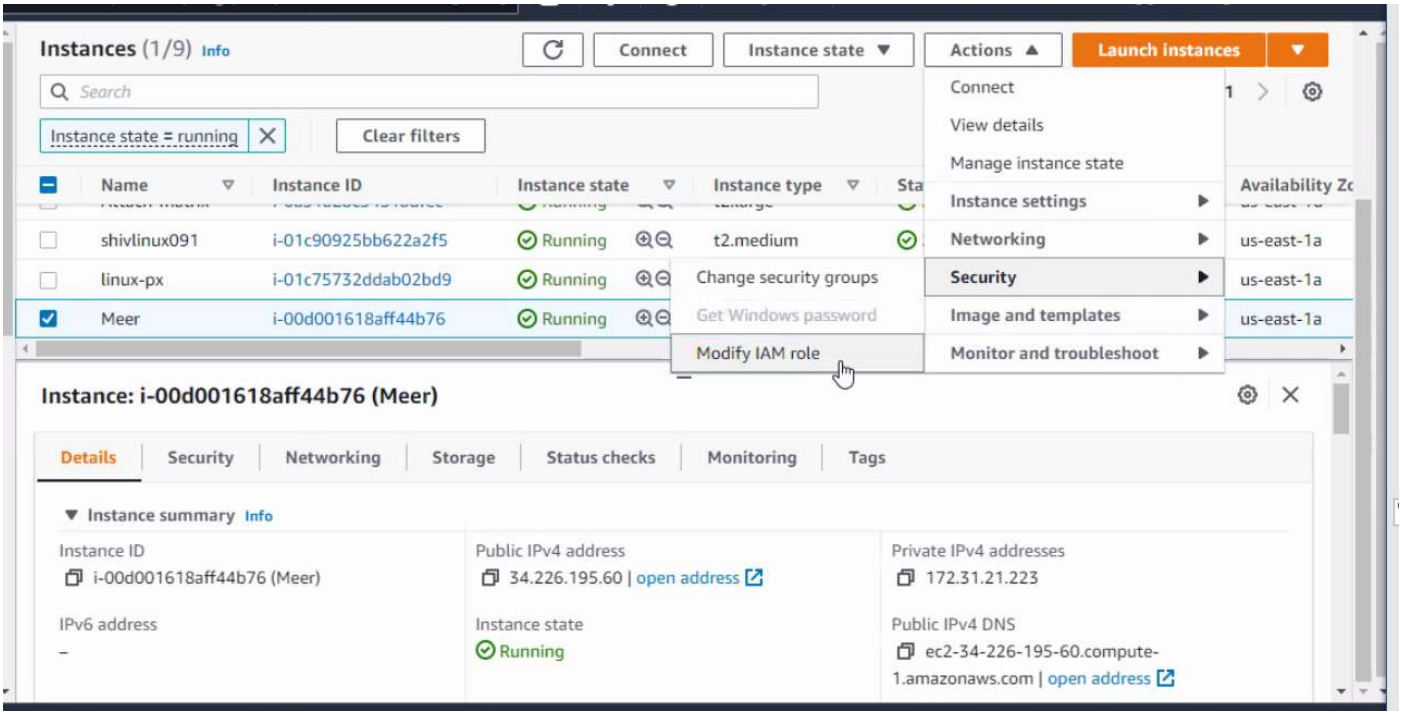
```
[root@ip-172-31-21-223 demodocker]# docker stop 70c084042a8b
70c084042a8b
[root@ip-172-31-21-223 demodocker]# ls
Dockerfile
[root@ip-172-31-21-223 demodocker]# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
[root@ip-172-31-21-223 demodocker]#
```

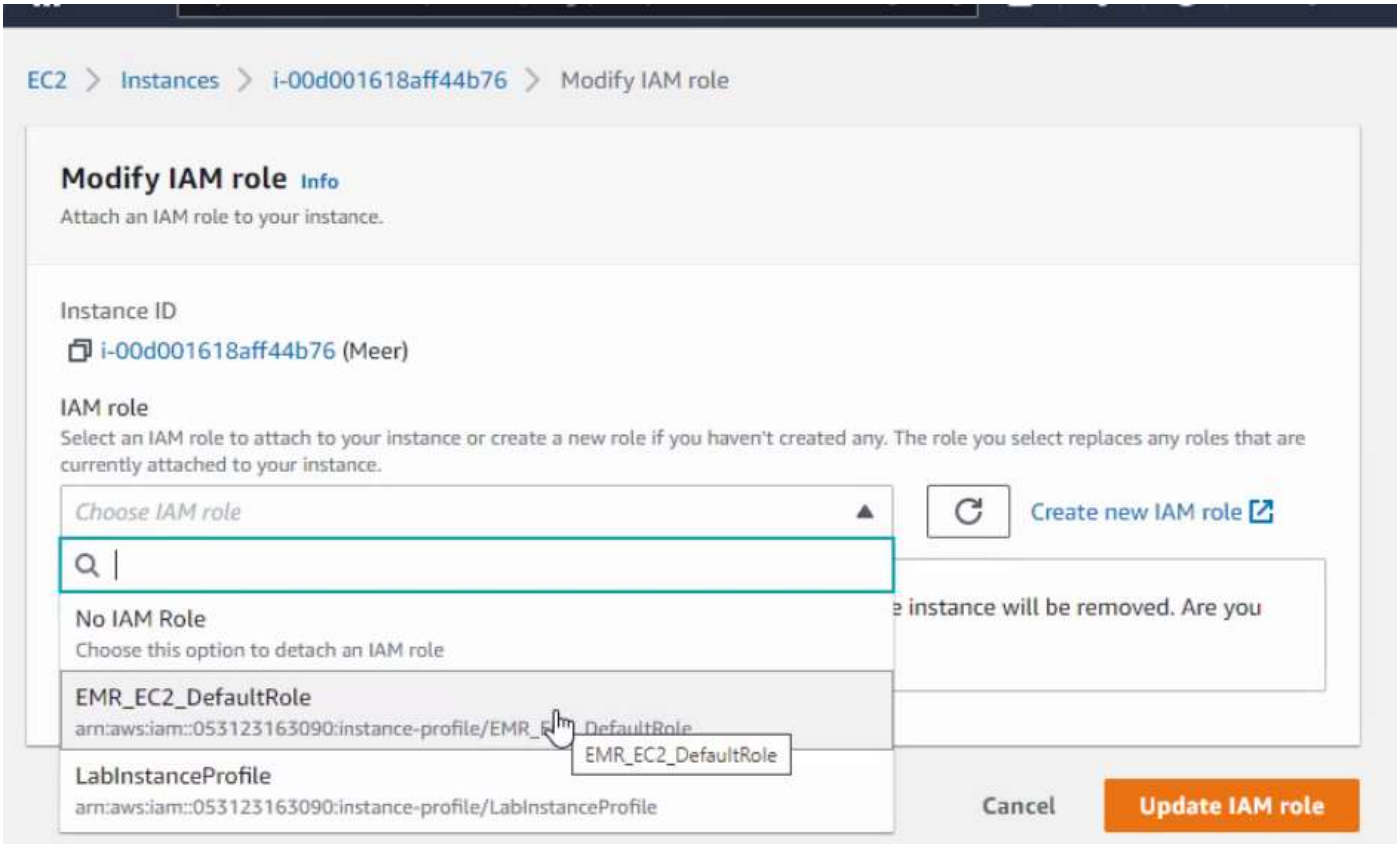

s3
N. Virginia
voclabs/user2074318=shubhamhiwale13@g
Search results for 's3'
Services (7)
Features (11)
Blogs (1,110)
Documentation (111,655)
Knowledge Articles (30)
Tutorials (7)
Events (14)
Marketplace (811)
Services
See all 7 results
S3
Scalable Storage in the Cloud
Top features
Buckets
Access points
Batch Operations
S3 Glacier
Archive Storage in the Cloud
Athena
Query Data in S3 using SQL
AWS Snow Family
Large Scale Data Transport
Launch
Alarm sta
No alarm
No alarm
No alarm
No alarm
No alarm
No alarm
No alarm

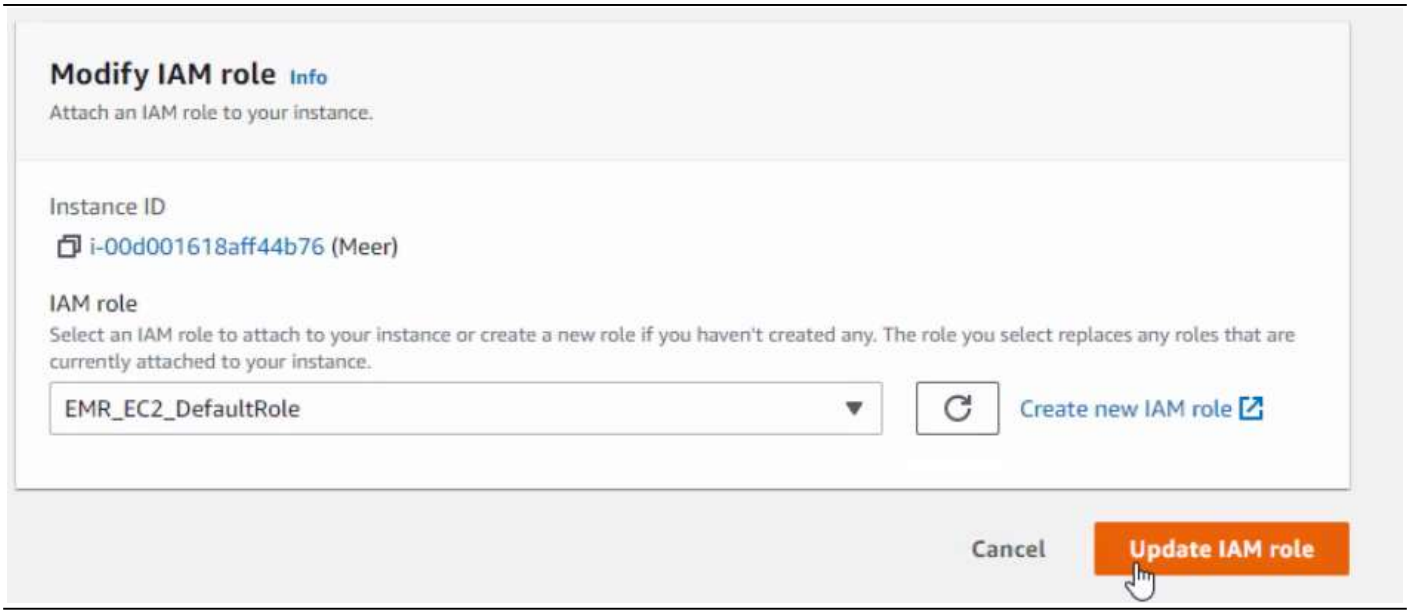

Amazon S3
Buckets
Account snapshot
Storage lens provides visibility into storage usage and activity trends. Learn more
View Storage Lens dashboard
Buckets (5) Info
Copy ARN
Empty
Delete
Create bucket
Buckets are containers for data stored in S3. Learn more
Find buckets by name
1
Name
AWS Region
Access
Creation date
databucket0001
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 22:37:17 (UTC+05:30)
matrix00001
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 00:12:34 (UTC+05:30)
meer123
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 23:43:06 (UTC+05:30)
shivsbucket091
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 00:00:15 (UTC+05:30)
steel-buckets
US East (N. Virginia) us-east-1
Objects can be public
August 21, 2022, 15:33:56 (UTC+05:30)




```
[root@ip-172-31-21-223 demodocker]# aws s3 cp s3://meer123/AWSLab.war .
```





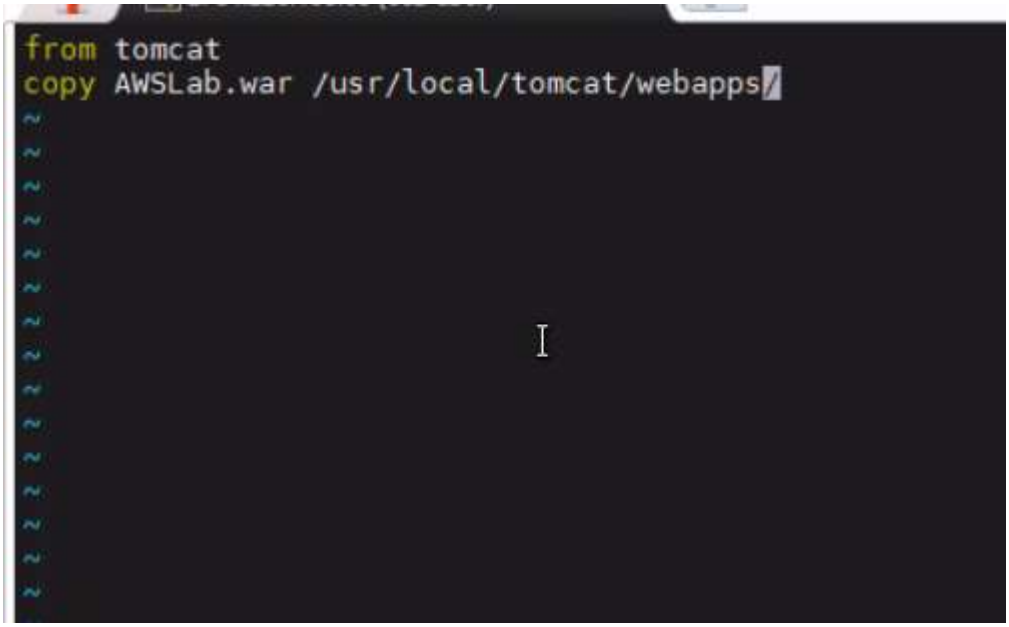


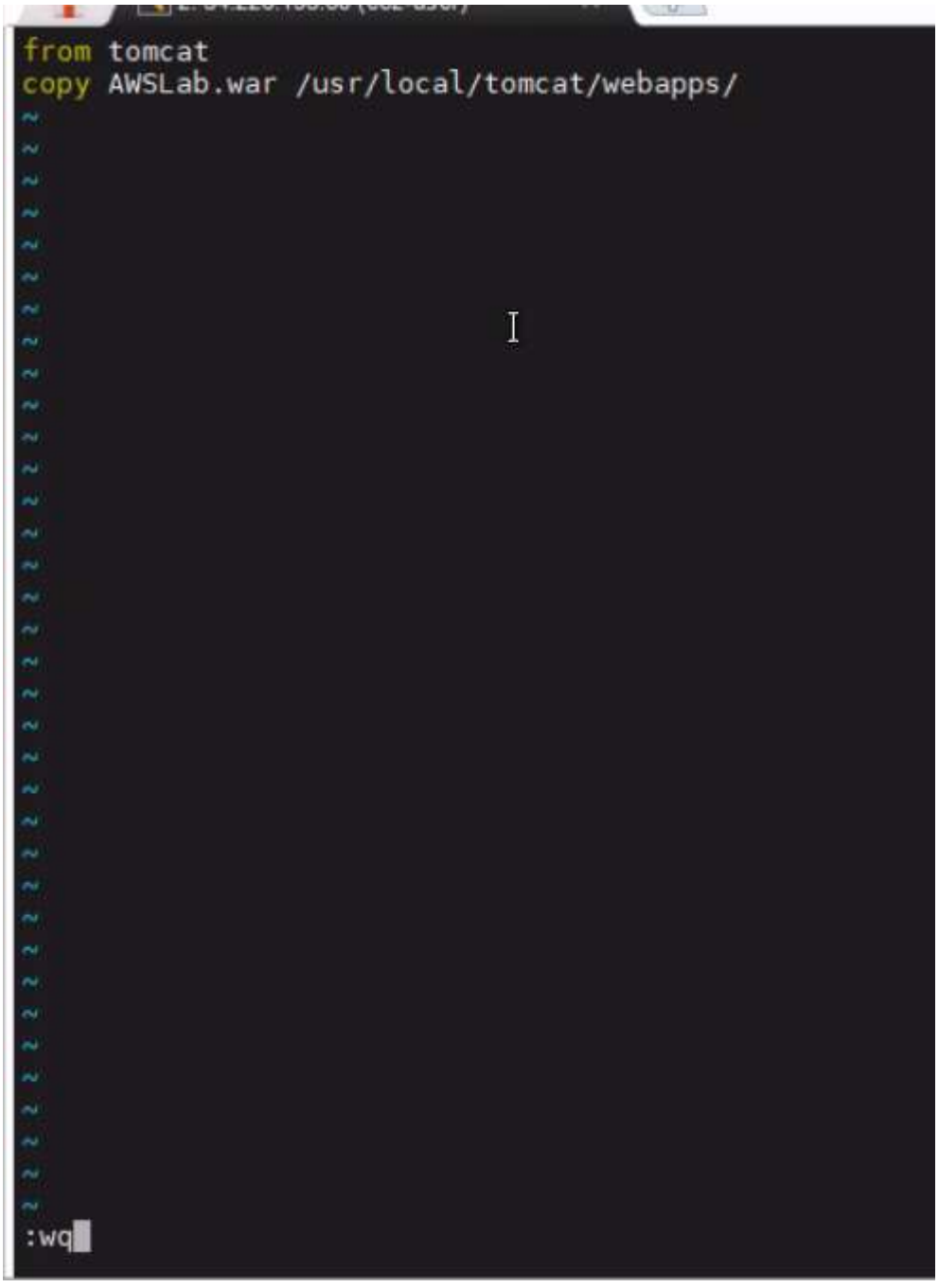

```
[root@ip-172-31-21-223 demodocker]# aws s3 cp s3://meer123/AWSLab.war .
```

To check

```
[root@ip-172-31-21-223 demodocker]# ls
AWSLab.war  Dockerfile
[root@ip-172-31-21-223 demodocker]#
```

```
[root@ip-172-31-21-223 demodocker]# vi Dockerfile
```


from tomcat
copy AWSLab.war /usr/local/tomcat/webapps/


from tomcat
copy AWSLab.war /usr/local/tomcat/webapps/
:wq

```
[root@ip-172-31-21-223 demodocker]# docker build -t awslab_1.0 .
```

Success msg will coe like this.

```
Successfully built e6bf83298de3
Successfully tagged awslab_1.0:latest
[root@ip-172-31-21-223 demodocker]#
```

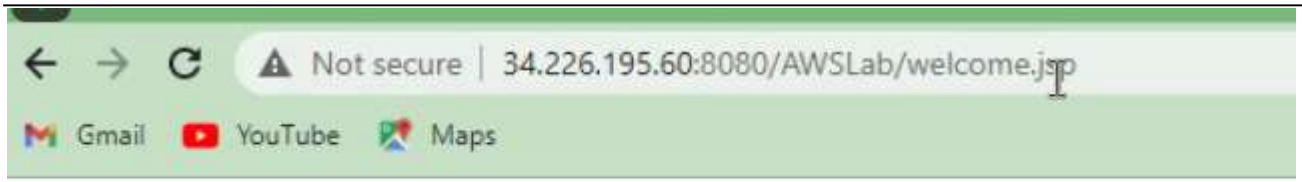
To check

```
[root@ip-172-31-21-223 demodocker]# docker image ls
REPOSITORY   TAG       IMAGE ID       CREATED          SIZE
awslab_1.0   latest    e6bf83298de3   30 seconds ago   475MB
tomcat       latest    bf4d7a00e8fd   8 days ago       475MB
tomcat_1.0   latest    bf4d7a00e8fd   8 days ago       475MB
[root@ip-172-31-21-223 demodocker]#
```

```
[root@ip-172-31-21-223 demodocker]# docker run -d -p 8080:8080 awslab_1.0
```

To check

```
[root@ip-172-31-21-223 demodocker]# docker ps
CONTAINER ID   IMAGE        COMMAND             CREATED              STATUS              PORTS                                       NAME
S
ad2c7276753f   awslab_1.0   "catalina.sh run"   About a minute ago   Up About a minute   0.0.0.0:8080→8080/tcp, :::8080→8080/tcp     fros
ty_brown
[root@ip-172-31-21-223 demodocker]#
```



You Passed today's lab exam Cheers !