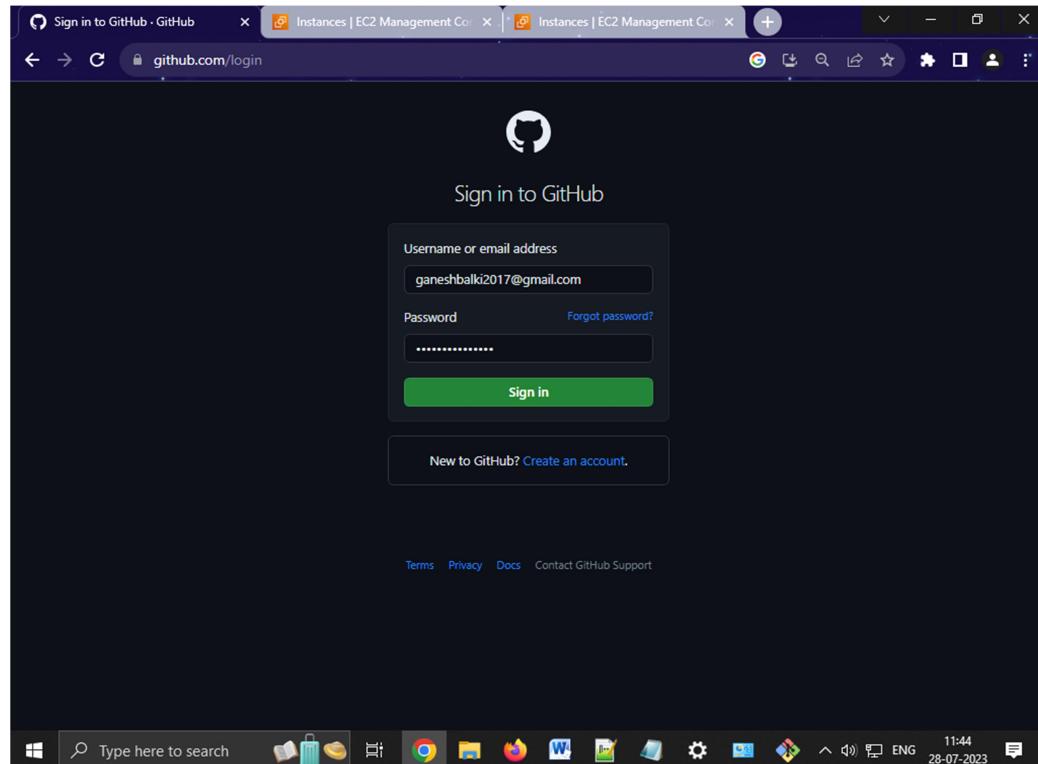


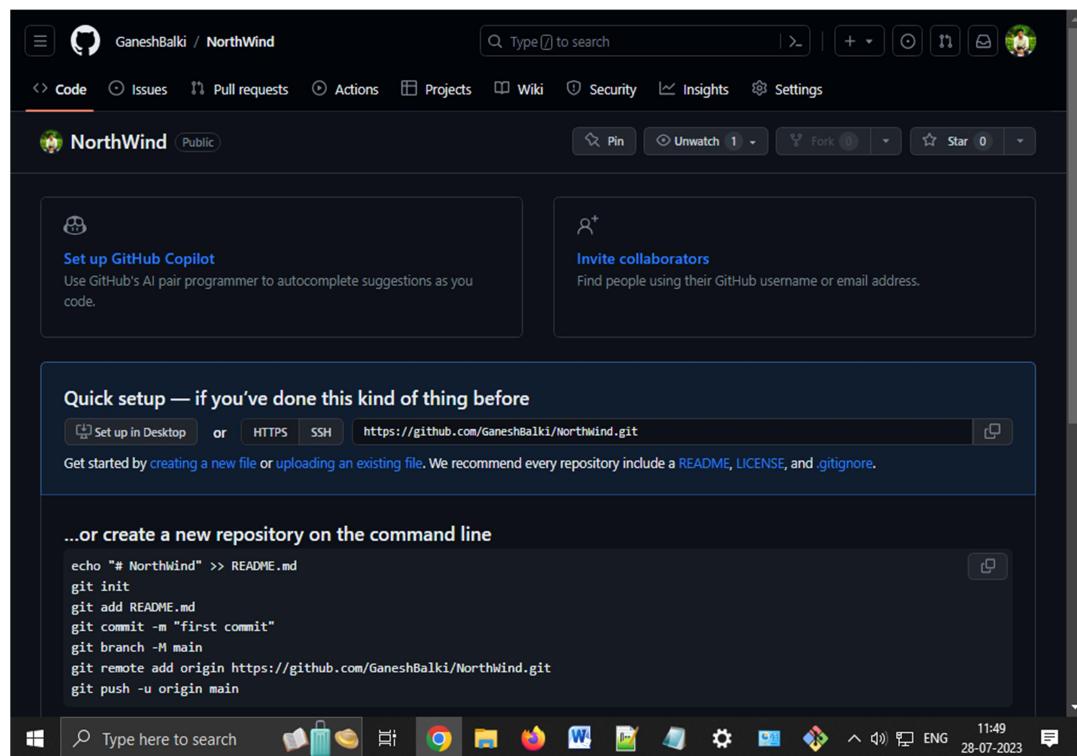
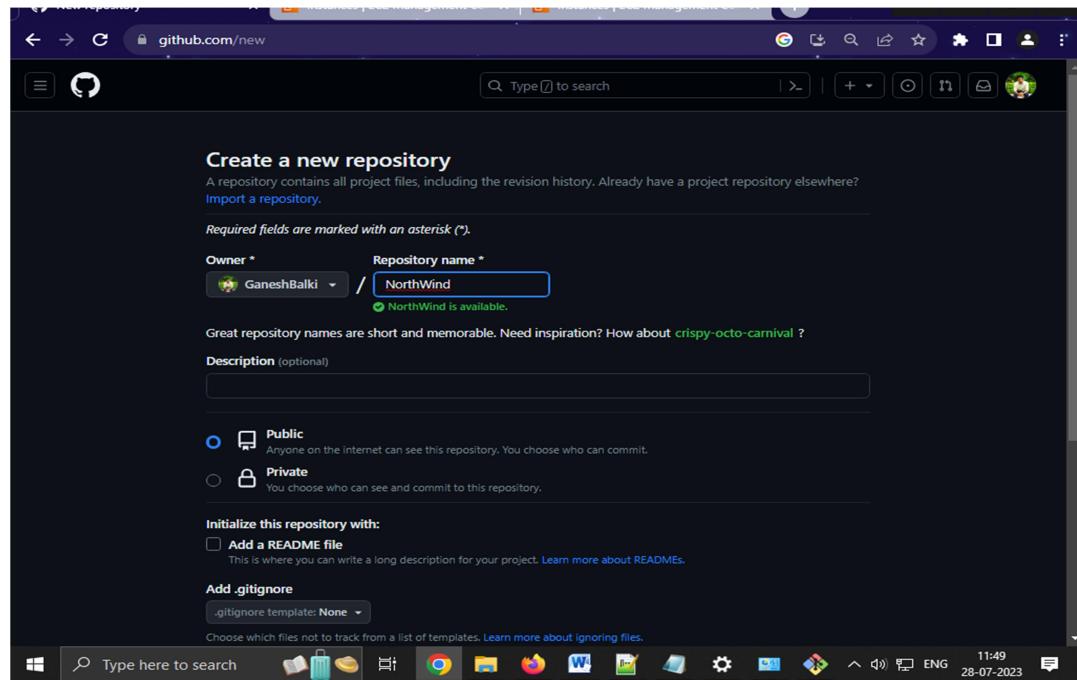
NAME : GANESH SAINATH BALKI

PNR : 230345920032

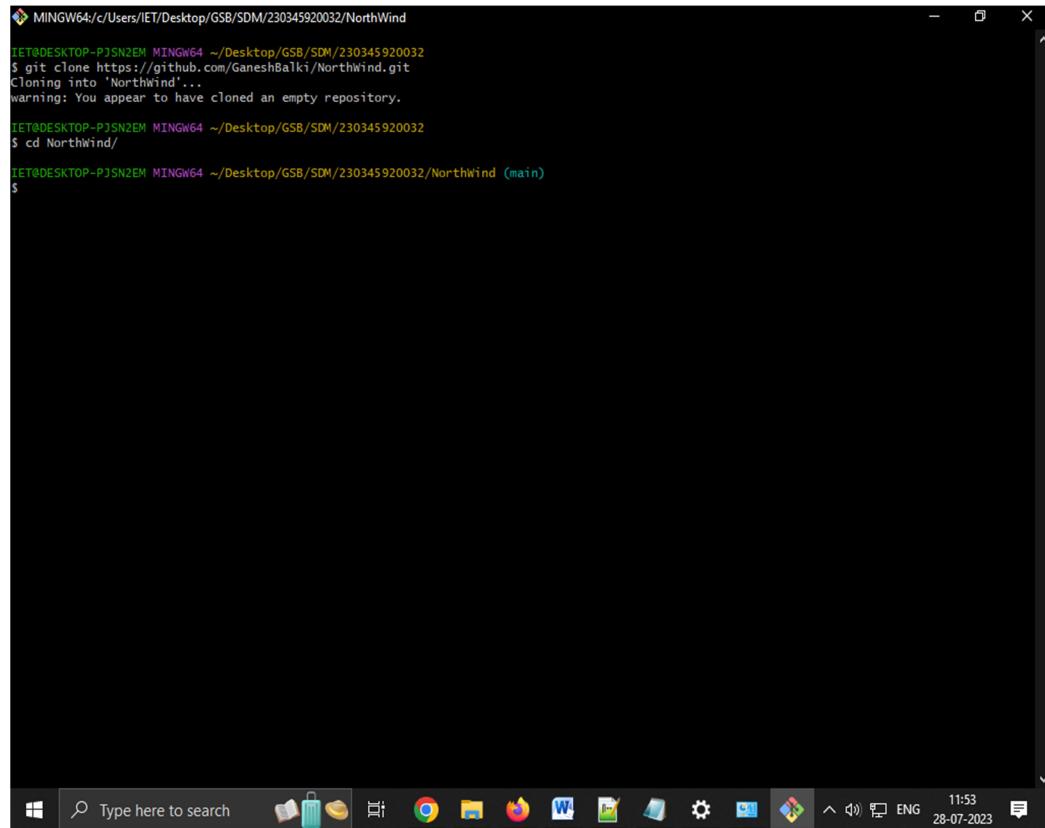
1. LOGIN INTO YOUR GITHUB ACCOUNT USING GITHUB CREDENTIALS.



2. CREATE PUBLIC GITHUB REPOSITORY WITH NAME NORTHWIND TO YOUR GITHUB SUBSCRIPTION.



3. CLONE GITHUB NORTHWIND CODE REPOSITORY TO YOUR DEVELOPER MACHINE USING GIT COMMANDS.



```
MINGW64:/c/Users/IET/Desktop/GSB/SDM/230345920032/NorthWind
IET@DESKTOP-PJSN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032
$ git clone https://github.com/GaneshBalki/NorthWind.git
Cloning into 'NorthWind'...
warning: You appear to have cloned an empty repository.

IET@DESKTOP-PJSN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032/NorthWind (main)
$
```

4. UPLOAD DOCKERFILE,PACKAGE.JSON AND SERVER.JS FROM LOCAL REPO TO GITHUB NORTHWIND REPOSITORY

```
IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032
$ git clone https://github.com/GaneshBalki/NorthWind.git
Cloning into 'NorthWind'...
warning: You appear to have cloned an empty repository.

IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032
$ cd NorthWind/
IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032/NorthWind (main)
$ ls
Dockerfile README.md package-lock.json package.json public/ server.js

IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032/NorthWind (main)
$ git add .

IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032/NorthWind (main)
$ git commit -m "NorthWind"
[main (root-commit) 3e81f7f] NorthWind
 8 files changed, 1104 insertions(+)
create mode 100644 .gitignore
create mode 100644 Dockerfile
create mode 100644 README.md
create mode 100644 package-lock.json
create mode 100644 package.json
create mode 100644 public/about.html
create mode 100644 public/index.html
create mode 100644 server.js

IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032/NorthWind (main)
$ git status
On branch main
Your branch is based on 'origin/main', but the upstream is gone.
  (use "git branch --unset-upstream" to fixup)

nothing to commit, working tree clean

IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032/NorthWind (main)
$ git push
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 4 threads
Compressing objects: 100% (9/9), done.
Writing objects: 100% (11/11), 8.39 KiB | 2.80 MiB/s, done.
Total 11 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/GaneshBalki/NorthWind.git
 * [new branch]      main -> main

IET@DESKTOP-P3SN2EM MINGW64 ~/Desktop/GSB/SDM/230345920032/NorthWind (main)
$
```



5. CREATE LINUX AMAZON VIRTUAL SERVER USING YOUR FREE TRIAL AWS SUBSCRIPTION

The screenshot shows two consecutive pages from the AWS EC2 console.

Page 1: Launch an instance

This page is titled "Launch an instance" and provides instructions for creating virtual machines. It includes fields for "Name and tags" (with "NorthWind" entered) and a search bar for "Application and OS Images (Amazon Machine Image)".

Page 2: AMI Selection

This page lists various Amazon Machine Images (AMI) options:

- Amazon Linux
- macOS
- Ubuntu (selected)
- Windows
- Red Hat
- SUSE Linux

A "Browse more AMIs" link is available. The selected Ubuntu Server 22.04 LTS (HVM) AMI is shown with details:
Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
ami-0f5ee92e2d63afc18 (64-bit (x86)) / ami-077053fb4029de92f (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

The "Free tier eligible" status is indicated.

Common UI Elements:

- CloudShell, Feedback, Language buttons at the top.
- Privacy, Terms, Cookie preferences links at the top right.
- Search bar and navigation icons at the bottom.
- System tray icons (Windows, browser, file explorer, etc.) at the bottom right.

The screenshot shows the AWS CloudShell interface. At the top, the AWS logo, Services menu, and a search bar are visible. The user is in the Mumbai region, signed in as Ganesh Balki.

Instance type dropdown (selected): t2.micro

- Family: t2
- 1 vCPU
- 1 GiB Memory
- Current generation: true
- Free tier eligible

On-Demand Linux pricing: 0.0124 USD per Hour
On-Demand Windows pricing: 0.017 USD per Hour
On-Demand RHEL pricing: 0.0724 USD per Hour
On-Demand SUSE pricing: 0.0124 USD per Hour

All generations

[Compare instance types](#)

Key pair (login) dropdown (selected): NorthWind

[Create new key pair](#)

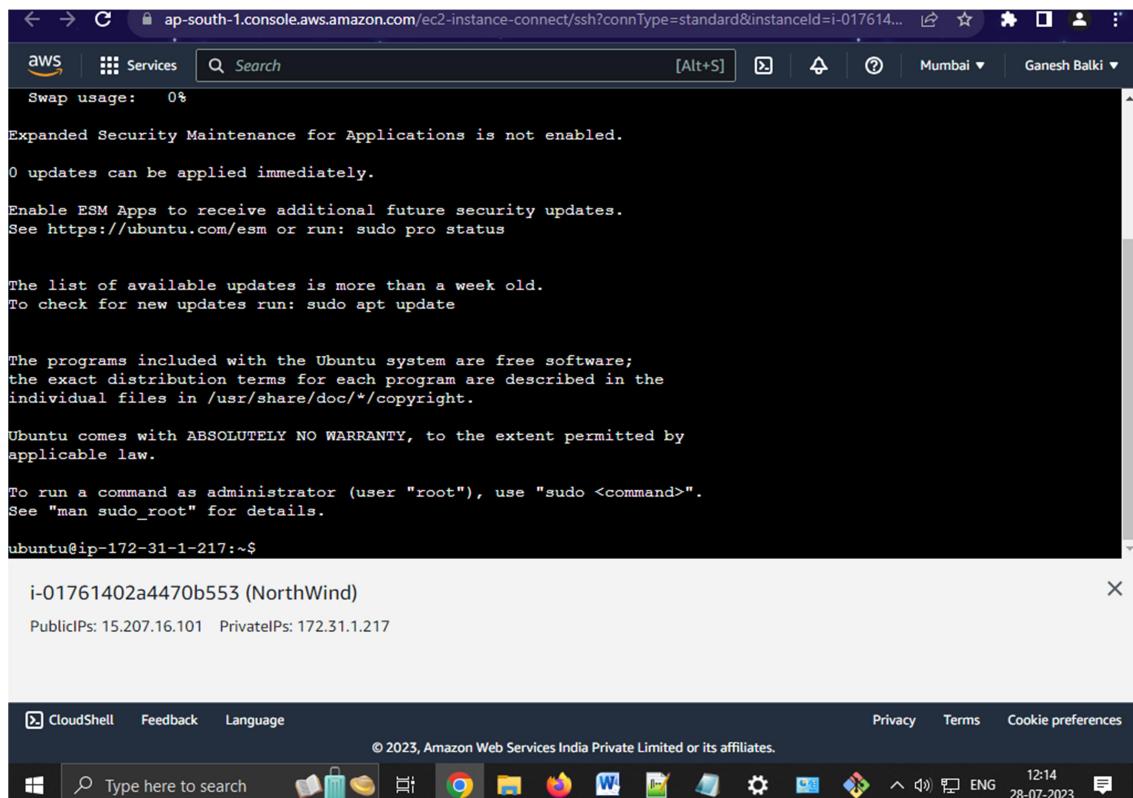
CloudShell Feedback Language © 2023, Amazon Web Services India Private Limited or its affiliates. Privacy Terms Cookie preferences

NorthWind.ppk

Type here to search

Windows taskbar icons: File Explorer, Edge, Chrome, Firefox, Word, Excel, Paint, Settings, Task View, Start button, and system status.

6. ACCESS VIRTUAL SERVER OF LINUX CREATED IN AWS USING LINUX SHELL



The screenshot shows a terminal window titled "CloudShell" from the AWS console. The URL in the address bar is "ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-017614...". The window displays a Linux shell session on an Ubuntu system. The session output includes:

```
Swap usage: 0%
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

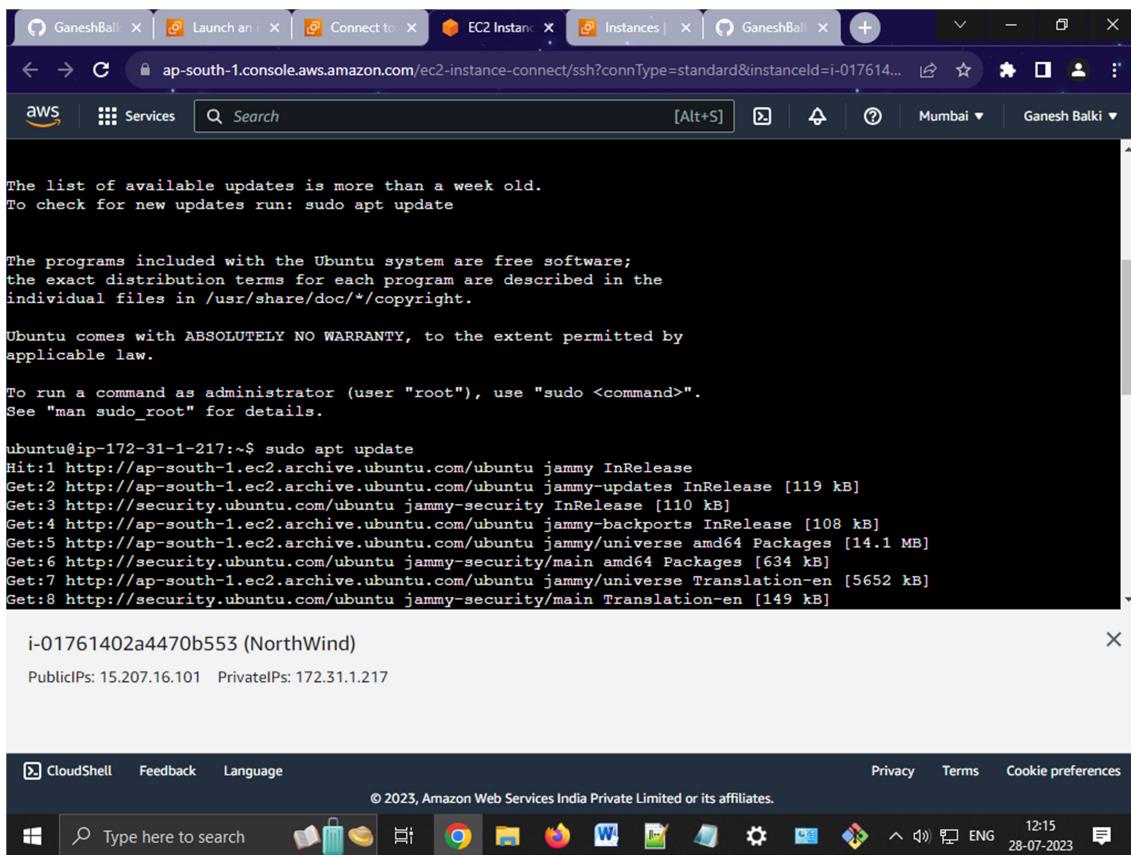
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-1-217:~$
```

Below the terminal, the AWS CloudShell interface is visible, including a search bar, a toolbar with icons for file operations, and a status bar at the bottom showing "CloudShell", "Feedback", "Language", "Privacy", "Terms", "Cookie preferences", the date "© 2023, Amazon Web Services India Private Limited or its affiliates.", and the time "12:14 28-07-2023".

7. UPDATE LINUX WITH LATEST PATCH



The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-31-1-217:~$ sudo apt update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [108 kB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [634 kB]
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [149 kB]
```

i-01761402a4470b553 (NorthWind)

PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

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8. INSTALL GIT CLIENT IN LINUX VIRTUAL SERVER

The screenshot shows a terminal window within an AWS CloudShell interface. The terminal is executing a series of apt commands to install and upgrade the Git package on an Ubuntu system. The output of the commands is displayed, including the download of various package files from security.ubuntu.com and the final confirmation that git is already the newest version.

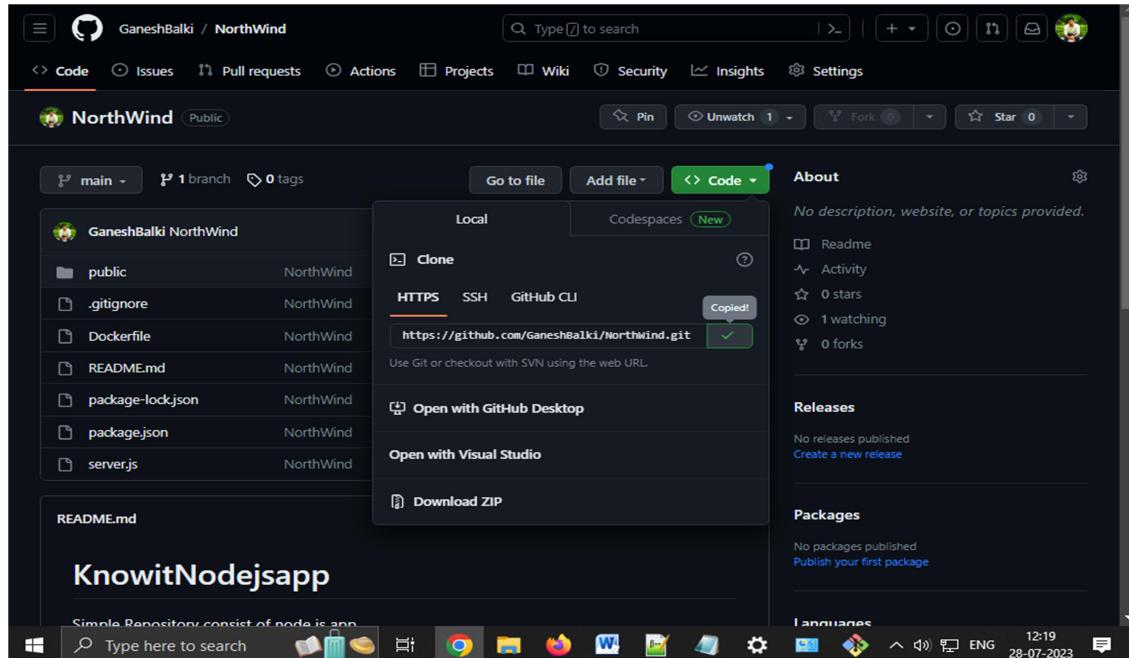
```
Get:31 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.3 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [36.5 kB]
Get:33 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [40.9 kB]
Get:34 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [10.2 kB]
Get:35 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:36 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:37 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [22.2 kB]
Get:38 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [15.4 kB]
Get:39 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [580 B]
Get:40 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7060 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 26.4 MB in 5s (5003 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
88 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-1-217:~$ sudo apt-get install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1lubuntu1.9).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 88 not upgraded.
ubuntu@ip-172-31-1-217:~$
```

i-01761402a4470b553 (NorthWind)

PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

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9. CLONE NORTHWIND PUBLIC CODE REPOSITORY TO VIRTUAL SERVER



The screenshot shows the AWS CloudShell interface. The terminal window displays the output of a 'git clone' command:

```
Get:38 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [15.4 kB]
Get:39 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [580 B]
Get:40 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7060 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 26.4 MB in 5s (5003 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
88 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-1-217:~$ sudo apt-get install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.9).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 88 not upgraded.
ubuntu@ip-172-31-1-217:~$ git clone https://github.com/GaneshBalki/NorthWind.git
Cloning into 'NorthWind'...
remote: Enumerating objects: 11, done.
remote: Counting objects: 100% (11/11), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 11 (delta 0), reused 11 (delta 0), pack-reused 0
Receiving objects: 100% (11/11), 8.39 KiB | 1.20 MiB/s, done.
ubuntu@ip-172-31-1-217:~$
```

Below the terminal, the CloudShell interface shows the repository details: 'i-01761402a4470b553 (NorthWind)', 'PublicIPs: 15.207.16.101', and 'PrivateIPs: 172.31.1.217'. At the bottom, there are links for 'CloudShell', 'Feedback', 'Language', 'Privacy', 'Terms', and 'Cookie preferences', along with a copyright notice for '© 2023, Amazon Web Services India Private Limited or its affiliates.' The taskbar at the very bottom is identical to the one in the GitHub screenshot.

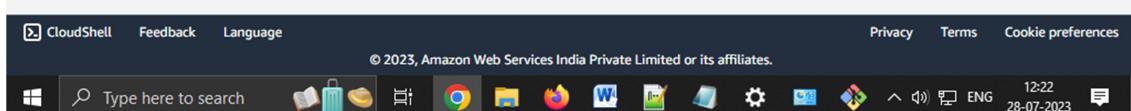
10. INSTALL DOCKER TO LINUX VIRTUAL SERVER

```
aws Services Search [Alt+S] Mumbai Ganesh Balki
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.9).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 88 not upgraded.
ubuntu@ip-172-31-1-217:~$ git clone https://github.com/GaneshBalki/NorthWind.git
Cloning into 'NorthWind'...
remote: Enumerating objects: 11, done.
remote: Counting objects: 100% (11/11), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 11 (delta 0), reused 11 (delta 0), pack-reused 0
Receiving objects: 100% (11/11), 8.39 KiB | 1.20 MiB/s, done.
ubuntu@ip-172-31-1-217:~$ sudo apt install docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io pigz runc ubuntu-fan
0 upgraded, 8 newly installed, 0 to remove and 88 not upgraded.
Need to get 72.4 MB of archives.
After this operation, 287 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

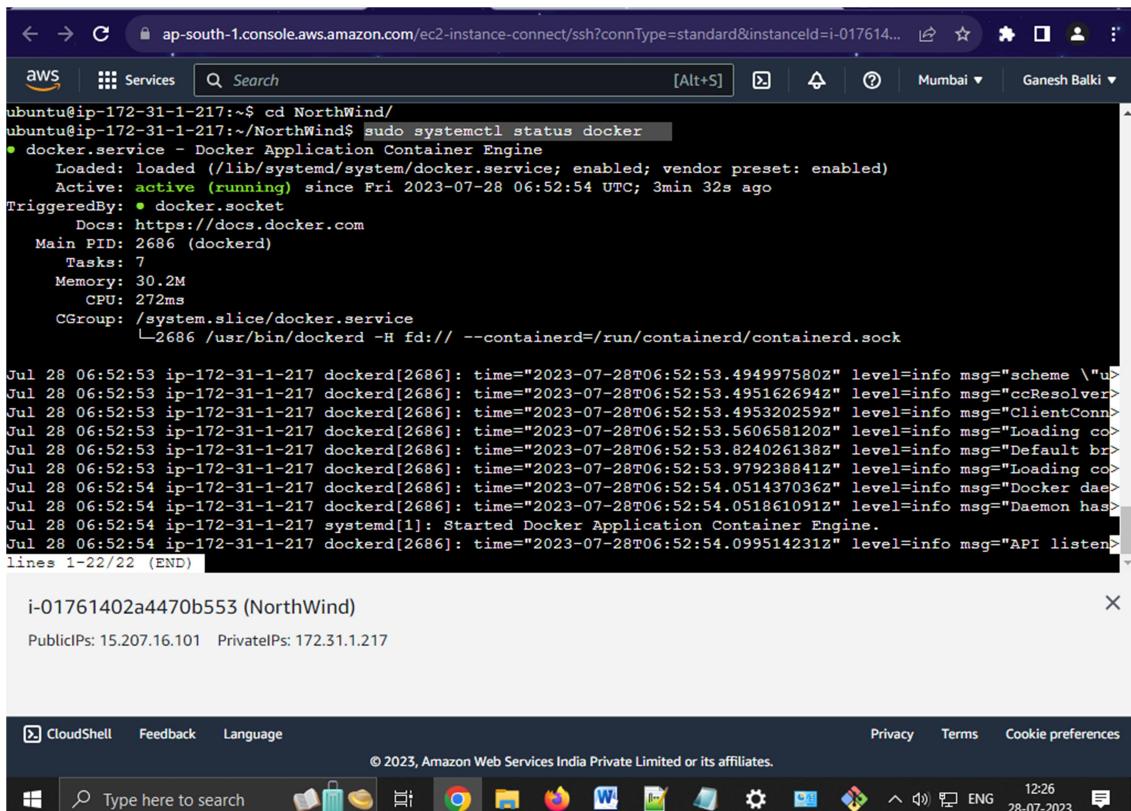
i-01761402a4470b553 (NorthWind)
PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

```
aws Services Search [Alt+S] Mumbai Ganesh Balki
remote: Counting objects: 100% (11/11), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 11 (delta 0), reused 11 (delta 0), pack-reused 0
Receiving objects: 100% (11/11), 8.39 KiB | 1.20 MiB/s, done.
ubuntu@ip-172-31-1-217:~$ sudo apt install docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io pigz runc ubuntu-fan
0 upgraded, 8 newly installed, 0 to remove and 88 not upgraded.
Need to get 72.4 MB of archives.
After this operation, 287 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 pigz amd64 2.6-1 [63.6 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3 [34.4 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 runc amd64 1.1.4-0ubuntu1~22.04.3 [4244 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 containerd amd64 1.6.12-0ubuntu1~22.04.3 [34.4 MB]
19% [4 containerd 6196 kB/34.4 MB 18%]
```

i-01761402a4470b553 (NorthWind)
PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217



11. SHOW THE STATUS OF DOCKER AS RUNNING



The screenshot shows a terminal window within an AWS CloudShell interface. The terminal is running on an Ubuntu instance (ip-172-31-1-217) and displays the output of the command `sudo systemctl status docker`. The Docker service is listed as active (running). The terminal also shows several log entries from the dockerd daemon, indicating its startup and initial configuration.

```
ubuntu@ip-172-31-1-217:~$ cd NorthWind/
ubuntu@ip-172-31-1-217:~/NorthWind$ sudo systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2023-07-28 06:52:54 UTC; 3min 32s ago
     TriggeredBy: ● docker.socket
     Docs: https://docs.docker.com
   Main PID: 2686 (dockerd)
     Tasks: 7
    Memory: 30.2M
      CPU: 272ms
     CGroup: /system.slice/docker.service
             └─2686 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.494997580Z" level=info msg="scheme \"u"
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.495162694Z" level=info msg="ccResolver>
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.495320259Z" level=info msg="ClientConn<
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.560658120Z" level=info msg="Loading co>
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.824026138Z" level=info msg="Default br>
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.979238841Z" level=info msg="Loading co>
Jul 28 06:52:54 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:54.051437036Z" level=info msg="Docker dae>
Jul 28 06:52:54 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:54.051861091Z" level=info msg="Daemon has>
Jul 28 06:52:54 ip-172-31-1-217 systemd[1]: Started Docker Application Container Engine.
Jul 28 06:52:54 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:54.099514231Z" level=info msg="API listen>
lines 1-22/22 (END)
```

i-01761402a4470b553 (NorthWind)

PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

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12. BUILD DOCKER CONTAINER IMAGE FOR NARTHWIND APPLICATION WHICH IS CLONED TO VIRTUAL SERVER

The screenshot shows a terminal window within an AWS CloudShell interface. The terminal displays log output from a Docker daemon and a command-line session for building a Docker image.

```
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.494997580Z" level=info msg="scheme \"u"
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.495162694Z" level=info msg="ccResolver>
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.495320259Z" level=info msg="ClientConn>
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.560658120Z" level=info msg="Loading co>
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.824026138Z" level=info msg="Default br>
Jul 28 06:52:53 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:53.979238841Z" level=info msg="Loading co>
Jul 28 06:52:54 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:54.051437036Z" level=info msg="Docker dae>
Jul 28 06:52:54 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:54.051861091Z" level=info msg="Daemon has>
Jul 28 06:52:54 ip-172-31-1-217 systemd[1]: Started Docker Application Container Engine.
Jul 28 06:52:54 ip-172-31-1-217 dockerd[2686]: time="2023-07-28T06:52:54.099514231Z" level=info msg="API listen>
lines 1-22/22 (END)
ubuntu@ip-172-31-1-217:~/NorthWind$ sudo docker build -t northwind .
Sending build context to Docker daemon 115.7kB
Step 1/7 : FROM node:18
18: Pulling from library/node
d52e4f012db1: Extracting [=====] 11.53MB/49.55MB
7dd206bea61f: Download complete
2320f9be4a9c: Download complete
6e5565e0ba8d: Download complete
5f1526a28cf9: Download complete
c382c04dfe30: Download complete
52a071bcbeb4b: Download complete
ac9c06f919c0: Download complete
```

i-01761402a4470b553 (NorthWind)
PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

CloudShell Feedback Language Privacy Terms Cookie preferences © 2023, Amazon Web Services India Private Limited or its affiliates. Type here to search 12:27 28-07-2023

13. ENSURE DOCKER CONTAINER IMAGES ARE DOWNLOADED TO VIRTUAL SERVER

The screenshot shows a terminal window within an AWS CloudShell interface. The terminal displays the output of a Docker build command:

```
found 0 vulnerabilities
npm notice
npm notice New minor version of npm available! 9.6.7 -> 9.8.1
npm notice Changelog: <https://github.com/npm/cli/releases/tag/v9.8.1>
npm notice Run `npm install -g npm@9.8.1` to update!
npm notice
Removing intermediate container dcc93767a1e8
--> 46330a2d4877
Step 5/7 : COPY . /app
--> 2f024a1874b2
Step 6/7 : CMD node server.js
--> Running in bb1de9057bac
Removing intermediate container bb1de9057bac
--> 7feb0f0b14a7
Step 7/7 : EXPOSE 7667
--> Running in c65fa3b253b8
Removing intermediate container c65fa3b253b8
--> aac51dccdd18
Successfully built aac51dccdd18
Successfully tagged northwind:latest
ubuntu@ip-172-31-1-217:~/NorthWind$ sudo docker images
REPOSITORY      TAG          IMAGE ID      CREATED       SIZE
northwind        latest       aac51dccdd18  About a minute ago  1.1GB
node            18           0f9df951673d  8 days ago   1.09GB
ubuntu@ip-172-31-1-217:~/NorthWind$
```

Below the terminal, the session summary is displayed:

i-01761402a4470b553 (NorthWind)
PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

The bottom of the screen shows the Windows taskbar with various pinned icons.

14. RUN CONTAINER INSTANCE OF NORTHWIND USING DOCKER COMMAND

The screenshot shows a terminal session in an AWS CloudShell window. The user is building a Docker image and running it as a container.

```
npm notice New minor version of npm available! 9.6.7 -> 9.8.1
npm notice Changelog: <https://github.com/npm/cli/releases/tag/v9.8.1>
npm notice Run `npm install -g npm@9.8.1` to update!
npm notice
Removing intermediate container dcc93767a1e8
--> 46330a2d4877
Step 5/7 : COPY . /app
--> 2f024a1874b2
Step 6/7 : CMD node server.js
--> Running in bb1de9057bac
Removing intermediate container bb1de9057bac
--> 7feb0f0b14a7
Step 7/7 : EXPOSE 7667
--> Running in c65fa3b253b8
Removing intermediate container c65fa3b253b8
--> aac51dccdd18
Successfully built aac51dccdd18
Successfully tagged northwind:latest
ubuntu@ip-172-31-1-217:~/NorthWind$ sudo docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
northwind latest aac51dccdd18 About a minute ago 1.1GB
node 18 0f9df951673d 8 days ago 1.09GB
ubuntu@ip-172-31-1-217:~/NorthWind$ sudo docker run -d -p 7667:7667 northwind
a8712175e4a2ae17391b65d040cdbe81e7fe5cceef5c00c2b8259316741bd5d1
ubuntu@ip-172-31-1-217:~/NorthWind$
```

i-01761402a4470b553 (NorthWind)

PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

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15. LIST DOWN CONTAINER INSTANCES RUNNING DOCKER ON LINUX VIRUAL SERVER

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```
ubuntu@ip-172-31-1-217:~/NorthWind$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
 NAMES
a8712175e4a2 northwind "docker-entrypoint.s..." 11 minutes ago Up 11 minutes 0.0.0.0:7667->7667/tcp, ::1:7667->7667/tcp youthful_mirzakhan
ubuntu@ip-172-31-1-217:~/NorthWind$
```

i-01761402a4470b553 (NorthWind) X

PublicIPs: 15.207.16.101 PrivateIPs: 172.31.1.217

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16. ALLOW ALL TRAFFIC TO ACCEPTED BY SETTING FIREWALL INCOMING RULE.

The screenshot shows the AWS EC2 Instances page for an instance named 'i-0176140...'. The 'Security' tab is selected, displaying the IAM Role (unset), Subnet ID (subnet-Oce97d1413549e8ec), and Auto Scaling Group name (unset). Under 'Security details', it shows the Owner ID (399284574984) and Launch time (Fri Jul 28 2023 12:10:23 GMT+0530 (India Standard Time)). The 'Security groups' section lists 'sg-061f7c1de152f3cd2 (launch-wizard-8)'. The 'Inbound rules' section is collapsed.

The screenshot shows the 'ModifyInboundSecurityGroupRules' page for the security group 'sg-02a2f4885f5606a26'. It displays an 'Inbound rule 2' configuration. The 'Type' dropdown is set to 'All traffic', 'Protocol' to 'All', and 'Source type' to 'Anywhere-IPv4'. The 'Source' field contains '0.0.0.0/0'. Below the rule, there is a 'Description - optional' input field and a 'Delete' button. At the bottom, there are 'Cancel', 'Preview changes', and 'Save rules' buttons.

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#SecurityGroup:group-id=sg-061f7c1de152f3cd2...

New EC2 Experience Tell us what you think

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Inbound security group rules successfully modified on security group (sg-061f7c1de152f3cd2) [launch-wizard-8]

Details

EC2 > Security Groups > sg-061f7c1de152f3cd2 - launch-wizard-8

sg-061f7c1de152f3cd2 - launch-wizard-8 Actions ▾

Details

Security group name	Security group ID	Description	VPC ID
launch-wizard-8	sg-061f7c1de152f3cd2	launch-wizard-8 created 2023-07-28T06:39:35.957Z	vpc-00ad7fe3e033c509a
Owner	Inbound rules count	Outbound rules count	
399284574984	1 Permission entry	1 Permission entry	

Inbound rules Outbound rules Tags

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The screenshot shows the AWS EC2 Security Groups interface. A success message at the top indicates that inbound security group rules were successfully modified on the security group 'sg-061f7c1de152f3cd2' [launch-wizard-8]. The main view displays the details for this security group, including its name, ID, description, owner, and rule counts. Below the details, there are tabs for Inbound rules, Outbound rules, and Tags. The bottom of the screen shows the AWS navigation bar with CloudShell, Feedback, Language, and other account information.

17. ACCESS HOSTED WEBSITE USING YOUR BROWSER AND SHOW PAGE OF WEBSITE.

The screenshot shows a web browser window with the following details:

- Address Bar:** Not secure | 15.207.16.101:7667
- Title Bar:** NorthWind Multinational Company
- Content Area:**
 - This is Intranet Portal for Employee
 - [Home](#) | [About us](#)
 - 1. About us
2. Best Employees
3. Safety Programms
4. Employee Social Activities Club
5.
 - Input fields:
 - Enter Employee ID
 - Enter Password
 - Button: Login



The screenshot shows a web browser window with the following details:

- Address Bar:** Not secure | 15.207.16.101:7667/about.html
- Title Bar:** Welocme to NorthWind
- Content Area:** This page is currently empty.



