Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

AY: 2023-24

Class:	TE	**Semester:**	VI
Course Code:	CSL605	**Course Name:**	Skill Based Lab course : Cloud Computing

Name of Student:	Soham Ajit Dahanukar
Roll No. :	13
Experiment No.:	2
Title of the Experiment:	To study and Implement Infrastructure as a Service using AWS EC2 by creating a Windows Virtual Machine through RDP protocol and change volume of attached storage.
Date of Performance:	
Date of Submission:	

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Performance	5	
Understanding	5	
Journal work and timely submission	10	
Total	20	

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Performance	4-5	2-3	1
Understanding	4-5	2-3	1
Journal work and timely submission	8-10	5-8	1-4

Checked by

Name of Faculty :

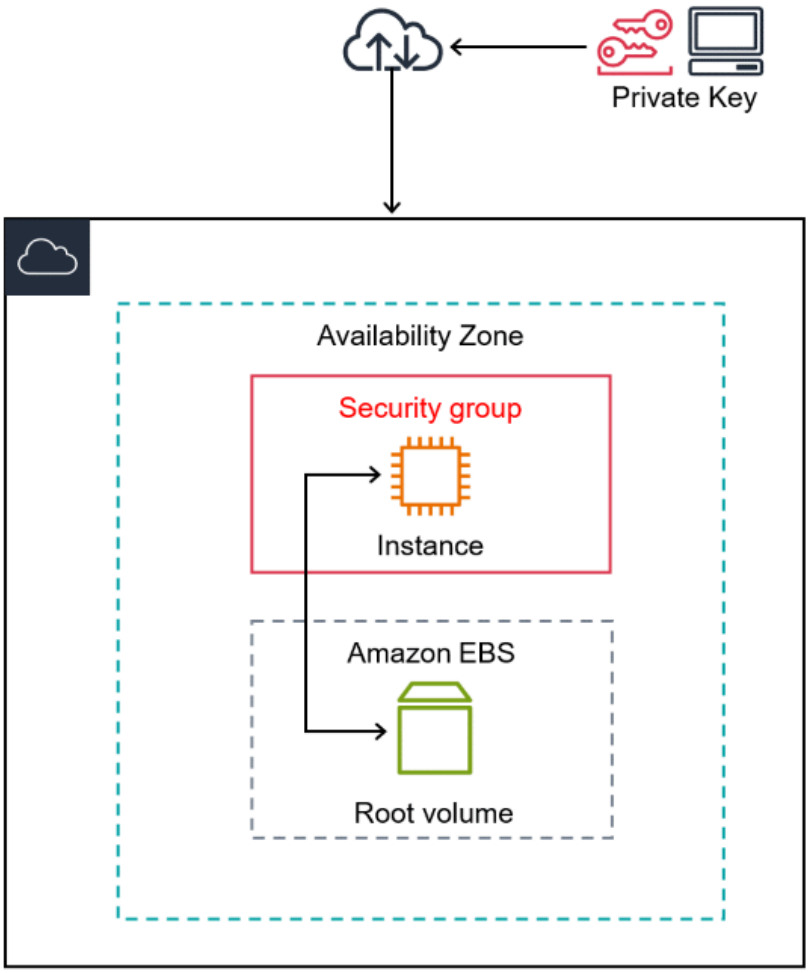
Signature :

Date

Experiment No. 2

Aim: To study and Implement Infrastructure as a Service using AWS EC2 by creating a Windows Virtual Machine through RDP protocol and change volume of attached storage.

Theory:
An *instance* is a virtual server in the AWS Cloud. With Amazon EC2, you can set up and configure the operating system and applications that run on your instance.
When you launch your instance, you secure it by specifying a key pair (to prove your identity) and a security group (which acts as a virtual firewall to control ingoing and outgoing traffic). When you connect to your instance, you must provide the private key of the key pair that you specified when you launched your instance.



Steps:

To launch an instance

1. Open the Amazon EC2 console at https://console.aws.amazon.com/ec2/.
2. From the EC2 console dashboard, in the **Launch instance** box, choose **Launch instance**.
3. Under **Name and tags**, for **Name**, enter a descriptive name for your instance.
4. Under **Application and OS Images (Amazon Machine Image)**, do the following:
    a. Choose **Quick Start**, and then choose Windows. This is the operating system (OS) for your instance.
    b. From **Amazon Machine Image (AMI)**, select the AMI for Windows Server 2016 Base or later.. Notice that these AMIs are marked **Free Tier eligible**. An *Amazon Machine Image (AMI)* is a basic configuration that serves as a template for your instance.
    Note

    AL2023 is the successor to Amazon Linux 2. For more information, see Launching AL2023 using the Amazon EC2 console.
5. Under **Instance type**, from the **Instance type** list, you can select the hardware configuration for your instance. Choose the t2.micro instance type, which is selected by default. The t2.micro instance type is eligible for the Free Tier. In Regions where t2.micro is unavailable, you can use a t3.micro instance under the Free Tier. For more information, see AWS Free Tier.
6. Under **Key pair (login)**, for **Key pair name**, choose the key pair that you created when getting set up. Note that you must select an **RSA** key. **ED25519** keys are not supported for Windows instances.
    Warning

    Do not choose **Proceed without a key pair (Not recommended)**. If you launch your instance without a key pair, then you can't connect to it.
7. Next to **Network settings**, choose **Edit**. For **Security group name**, you'll see that the wizard created and selected a security group for you. You can use this security group, or alternatively you can select the security group that you created when getting set up using the following steps:
    a. Choose **Select existing security group**.
    b. From **Common security groups**, choose your security group from the list of existing security groups.
8. Keep the default selections for the other configuration settings for your instance.
9. Review a summary of your instance configuration in the **Summary** panel, and when you're ready, choose **Launch instance**.
10. A confirmation page lets you know that your instance is launching. Choose **View all instances** to close the confirmation page and return to the console.
11. On the **Instances** screen, you can view the status of the launch. It takes a short time for an instance to launch. When you launch an instance, its initial state is pending. After the instance starts, its state changes to running and it receives a public DNS name. If the **Public IPv4 DNS** column is hidden, choose the settings icon (⚙) in the top-right corner, toggle on **Public IPv4 DNS**, and choose **Confirm**.

12. It can take a few minutes for the instance to be ready for you to connect to it. Check that your instance has passed its status checks; you can view this information in the **Status check** column.

To connect to your Windows instance using an RDP client

1. Open the Amazon EC2 console at https://console.aws.amazon.com/ec2/.
2. In the navigation pane, choose **Instances**.
3. Select the instance and then choose **Connect**.
4. On the **Connect to instance** page, choose the **RDP client** tab.
5. For **Username**, choose the default username for the Administrator account. The username you choose must match the language of the operating system (OS) contained in the AMI that you used to launch your instance. If there is no username in the same language as your OS, choose **Administrator (Other)**.
6. Choose **Get password**.
7. On the **Get Windows password** page, do the following:

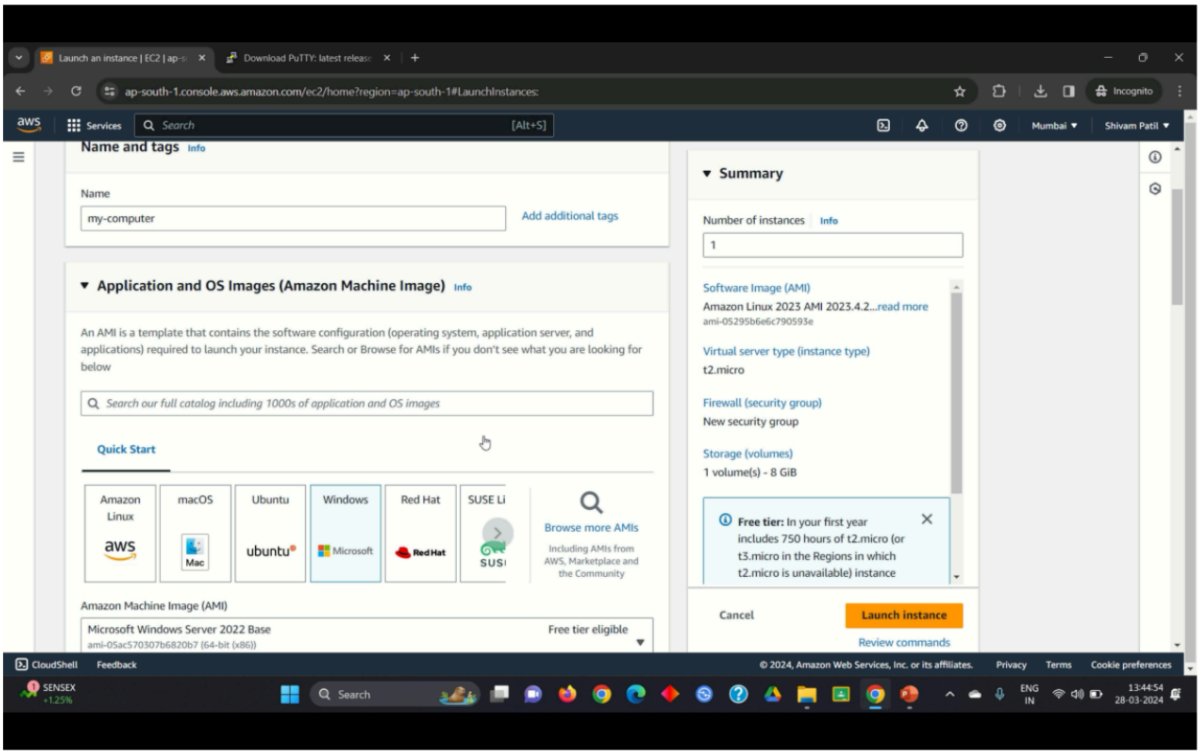
- Choose **Upload private key file** and navigate to the private key (.pem) file that you specified when you launched the instance. Select the file and choose **Open** to copy the entire contents of the file to this window.
- Choose **Decrypt password**. The **Get Windows password** page closes, and the default administrator password for the instance appears under **Password**, replacing the **Get password** link shown previously.
- Copy the password and save it in a safe place. This password is required to connect to the instance.

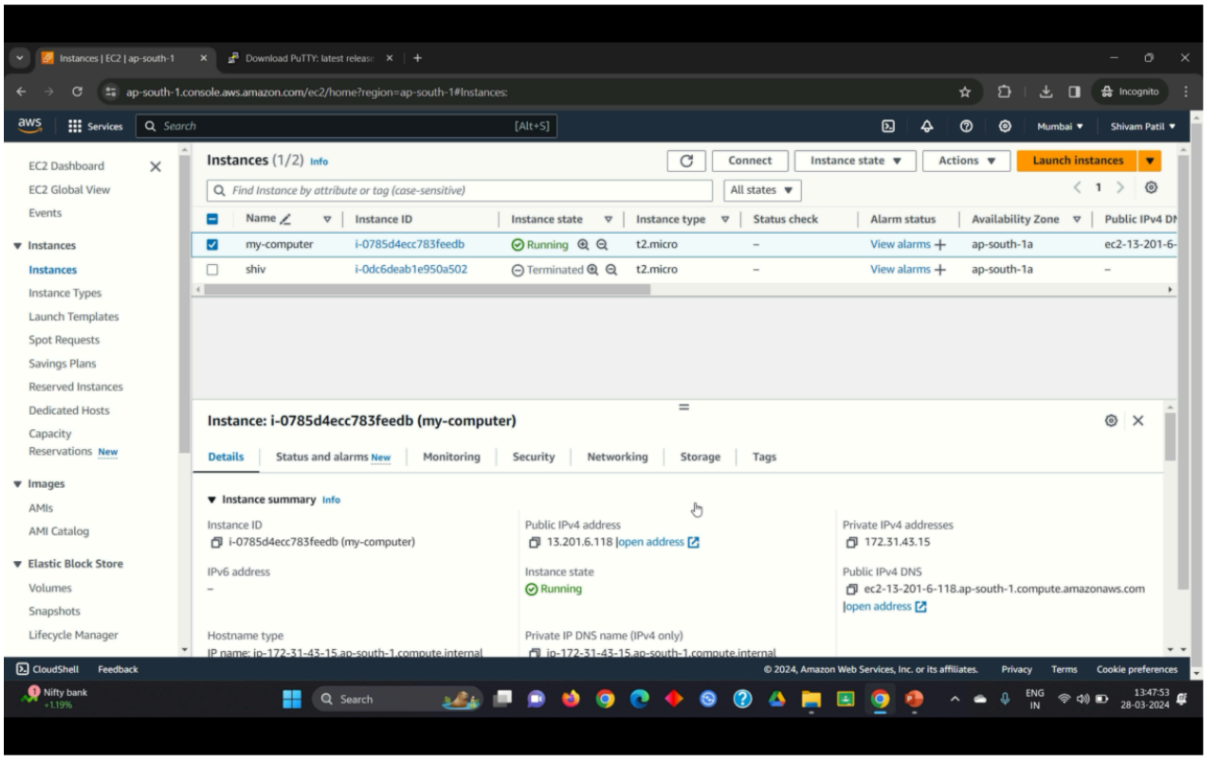
8. Choose **Download remote desktop file**. Your browser prompts you to either open or save the RDP shortcut file. When you have finished downloading the file, choose **Cancel** to return to the **Instances** page.
    1. If you opened the RDP file, you'll see the **Remote Desktop Connection** dialog box.
    2. If you saved the RDP file, navigate to your downloads directory, and open the RDP file to display the dialog box.
9. You might get a warning that the publisher of the remote connection is unknown. Choose **Connect** to continue to connect to your instance.
10. The administrator account is chosen by default. Paste the password that you copied previously, and then choose **Continue**.
11. Due to the nature of self-signed certificates, you might get a warning that the security certificate could not be authenticated. Use the following steps to verify the identity of the remote computer. Alternatively, if you trust the certificate, choose **Yes** (Windows) or **Continue** (Mac OS X) to skip the following steps.

- [Windows] Choose **View certificate**.
    1. [Mac OS X] Choose **Show Certificate**.
- [Windows] Choose the **Details** tab, and scroll down to **Thumbprint**.
    1. [Mac OS X] Expand **Details**, and scroll down to **SHA1 Fingerprints**.
    2. This is the unique identifier for the remote computer's security certificate.

- In the Amazon EC2 console, select the instance, and then choose **Actions**, **Monitor and troubleshoot**, **Get system log**.
- In the system log output, look for RDPCERTIFICATE-THUMBPRINT. If this value matches the thumbprint (Windows) or fingerprint (Mac OS X) of the certificate, you have verified the identity of the remote computer.
- [Windows] Return to the **Certificate** dialog box and choose **OK**.
    1. [Mac OS X computer] Return to the **Verify Certificate** dialog box and choose **Continue**.
- [Windows] Choose **Yes** in the **Remote Desktop Connection** window to connect to your instance.

Output /Observation:




Instances | EC2 | ap-south-1
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ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#Instances:
Incognito
Services
Search
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Mumbai
Shivam Patil
EC2 Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations New
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Instances (1/2) Info
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4 DN
my-computer
i-0785d4ecc783feedb
Running
t2.micro
View alarms
ap-south-1a
ec2-13-201-6-
shiv
i-0dc6deab1e950a502
Terminated
t2.micro
View alarms
ap-south-1a
Instance: i-0785d4ecc783feedb (my-computer)
Details
Status and alarms New
Monitoring
Security
Networking
Storage
Tags
Instance summary Info
Instance ID
i-0785d4ecc783feedb (my-computer)
Public IPv4 address
13.201.6.118 |open address
Private IPv4 addresses
172.31.43.15
IPv6 address
Instance state
Running
Public IPv4 DNS
ec2-13-201-6-118.ap-south-1.compute.amazonaws.com |open address
Hostname type
Private IP DNS name (IPv4 only)
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
Nifty bank
Search
ENG
IN
13:47:53
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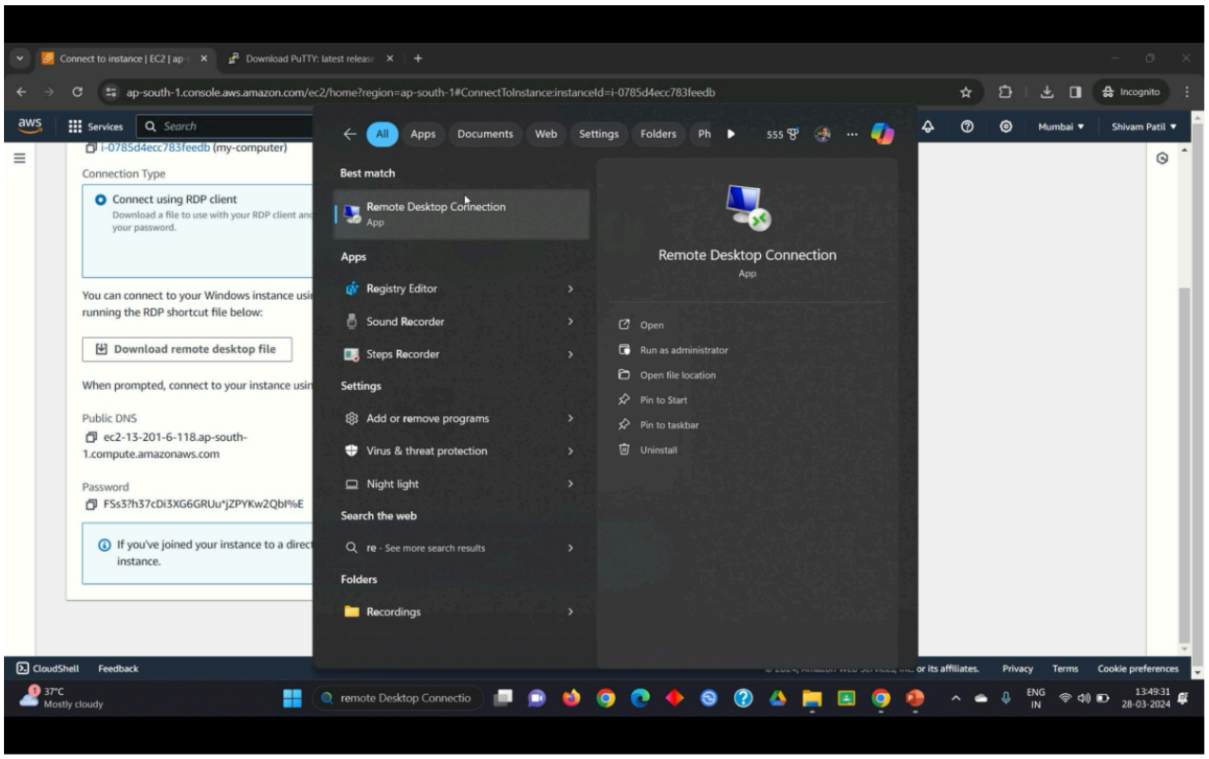
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ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ConnectToInstance:instanceId=i-0785d4ecc783feedb
Incognito
Services
Search
Mumbai
Shivam Patil
i-0785d4ecc783feedb (my-computer)
Connection Type
Connect using RDP client
Download a file to use with your RDP client and your password.
You can connect to your Windows instance usi
running the RDP shortcut file below:
Download remote desktop file
When prompted, connect to your instance usi
Public DNS
ec2-13-201-6-118.ap-south-1.compute.amazonaws.com
Password
FSs37h37cDi3XG6GRUu*jZPYKw2QbI%E
If you've joined your instance to a direc
instance.
All
Apps
Documents
Web
Settings
Folders
Ph
555
Best match
Remote Desktop Connection
App
Apps
Registry Editor
Sound Recorder
Steps Recorder
Settings
Add or remove programs
Virus & threat protection
Night light
Search the web
re - See more search results
Folders
Recordings
Remote Desktop Connection
App
Open
Run as administrator
Open file location
Pin to Start
Pin to taskbar
Uninstall
CloudShell
Feedback
or its affiliates.
Privacy
Terms
Cookie preferences
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Mostly cloudy
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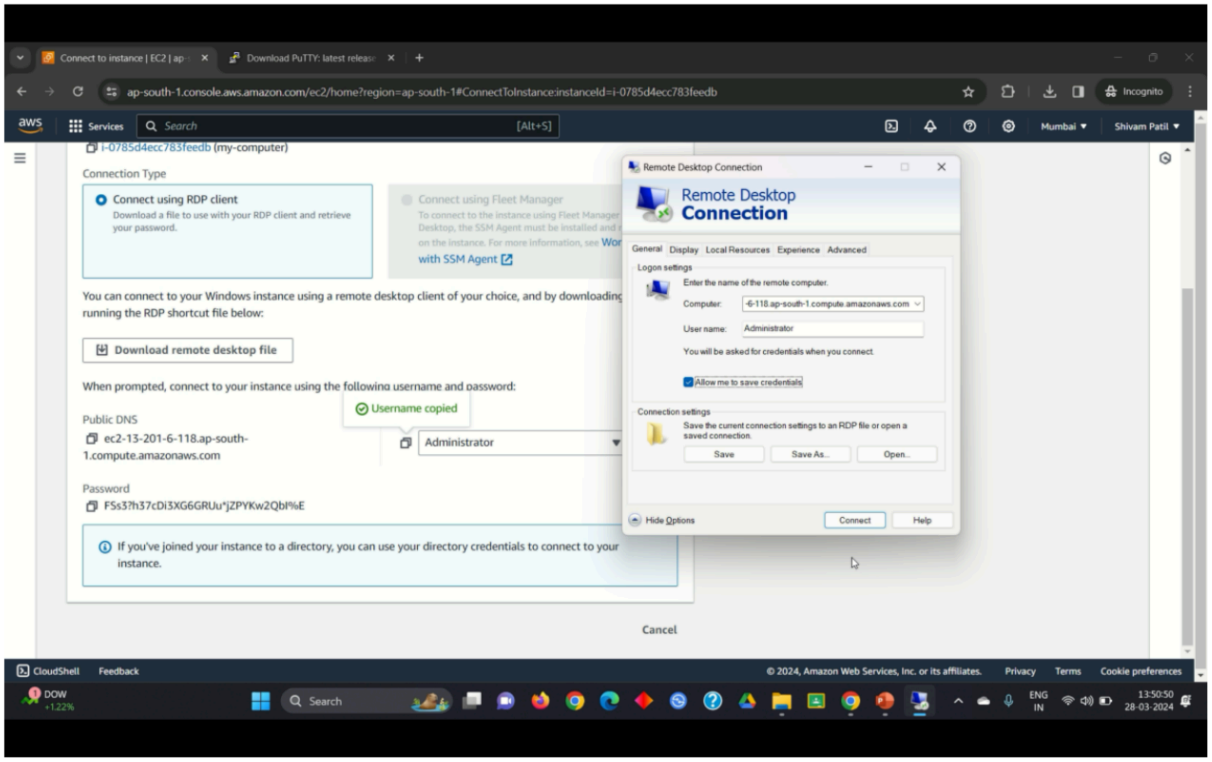
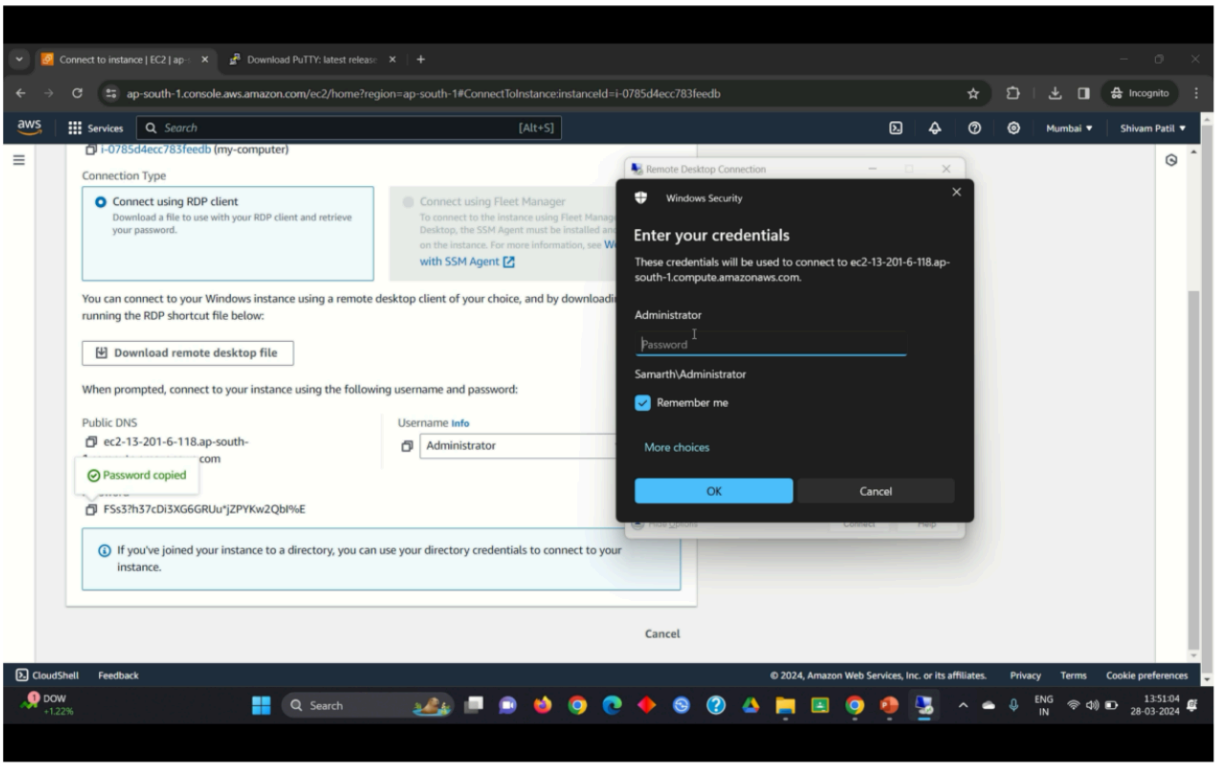
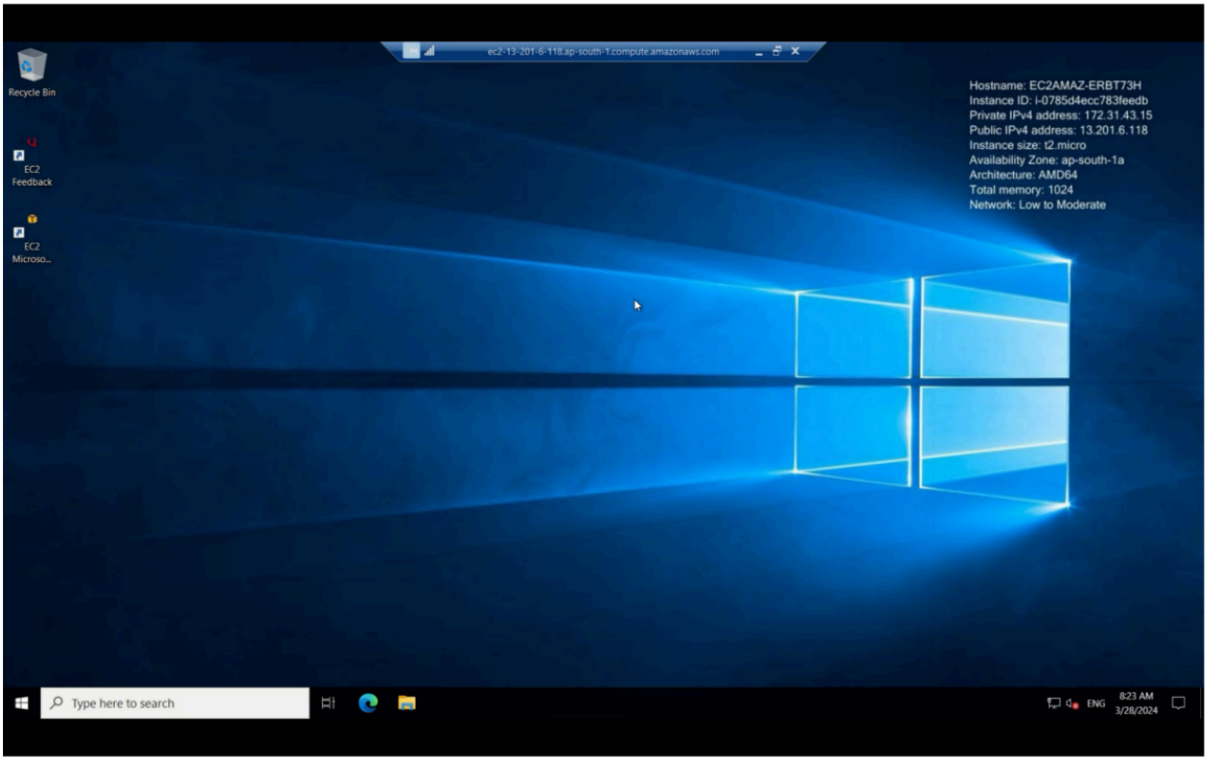

Connect to instance | EC2 | ap
Download PuTTY: latest releas
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ConnectToInstance:instanceId=i-0785d4ecc783feedb
Incognito
aws
Services
Search
[Alt+S]
Mumbai
Shivam Patil
i-0785d4ecc783feedb (my-computer)
Connection Type
Connect using RDP client
Download a file to use with your RDP client and retrieve your password.
Connect using Fleet Manager
with SSM Agent
You can connect to your Windows instance using a remote desktop client of your choice, and by downloading running the RDP shortcut file below:
Download remote desktop file
When prompted, connect to your instance using the following username and password:
Public DNS
ec2-13-201-6-118.ap-south-1.compute.amazonaws.com
Username copied
Administrator
Password
FSs37h37cDi3XG6GRUu*jZPYKw2QbI%E
If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.
Cancel
Remote Desktop Connection
Remote Desktop Connection
General
Display
Local Resources
Experience
Advanced
Logon settings
Enter the name of the remote computer.
Computer:
6-118.ap-south-1.compute.amazonaws.com
User name:
Administrator
You will be asked for credentials when you connect.
Allow me to save credentials
Connection settings
Save the current connection settings to an RDP file or open a saved connection.
Save
Save As...
Open...
Hide Options
Connect
Help
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
DOW
+1.22%
Search
ENG
IN
13:50:50
28-03-2024


Connect to instance | EC2 | ap
Download PuTTY: latest releas
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ConnectToInstance:instanceId=i-0785d4ecc783feedb
Incognito
aws
Services
Search
[Alt+S]
Mumbai
Shivam Patil
i-0785d4ecc783feedb (my-computer)
Connection Type
Connect using RDP client
Download a file to use with your RDP client and retrieve your password.
Connect using Fleet Manager
with SSM Agent
You can connect to your Windows instance using a remote desktop client of your choice, and by downloadi running the RDP shortcut file below:
Download remote desktop file
When prompted, connect to your instance using the following username and password:
Public DNS
ec2-13-201-6-118.ap-south-
com
Password copied
Username Info
Administrator
FSs37h37cDi3XG6GRUu*jZPYKw2QbI%E
If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.
Cancel
Remote Desktop Connection
Windows Security
Enter your credentials
These credentials will be used to connect to ec2-13-201-6-118.ap-south-1.compute.amazonaws.com.
Administrator
Password
Samarth\Administrator
Remember me
More choices
OK
Cancel
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
DOW
+1.22%
Search
ENG
IN
13:51:04
28-03-2024



Conclusion:

The RDP (Remote Desktop Protocol) facilitates remote access and control of Windows virtual machines, enabling seamless interaction with graphical user interfaces (GUIs) and applications. It allows users to remotely connect to Windows VMs, access files, run programs, and perform administrative tasks, enhancing productivity and flexibility in managing virtualized environments. Additionally, RDP ensures secure communication between client and server, with encryption and authentication mechanisms safeguarding data integrity and confidentiality.