

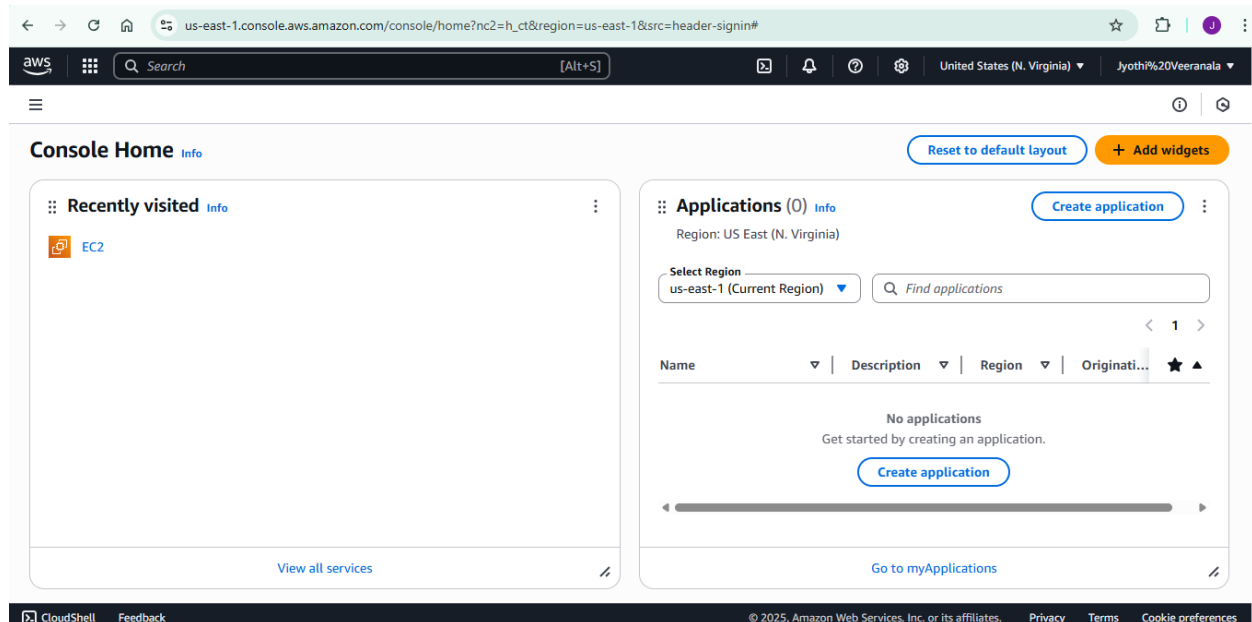
INSTANCE CREATION

INSTANCE(SERVER) Definition:

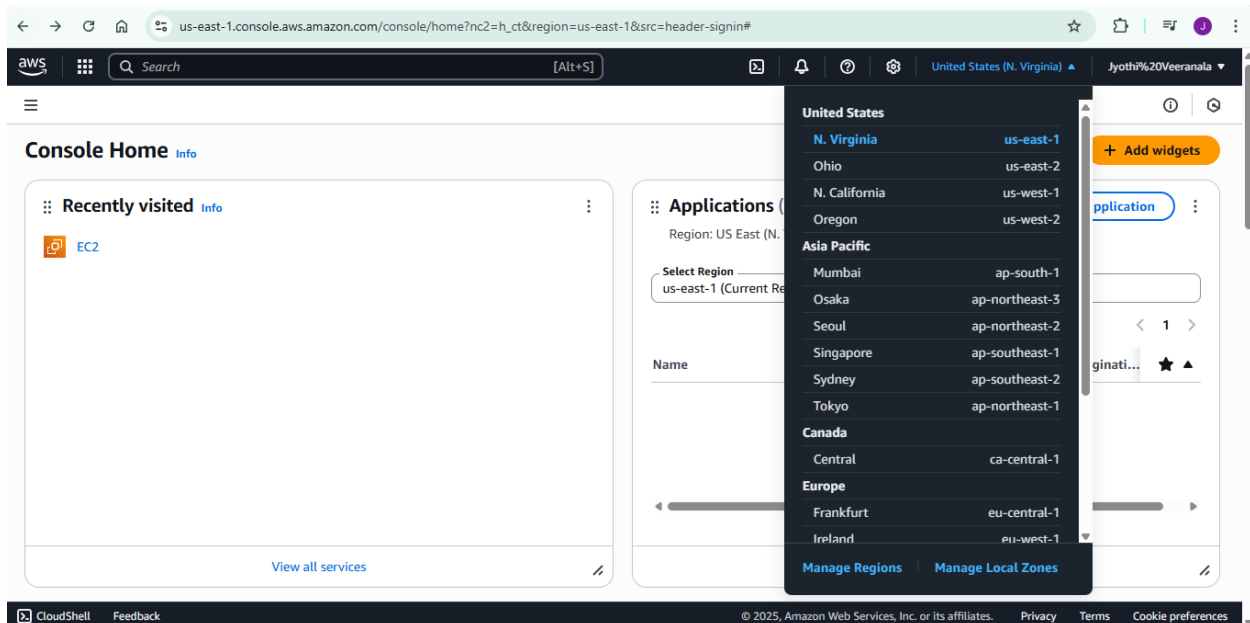
An instance is a virtualized environment that runs on AWS hardware, giving you the ability to use computing resources without needing physical servers.

Here, i will explain how to create instance(server).

First, login into your AWS account then the homepage looks as below.



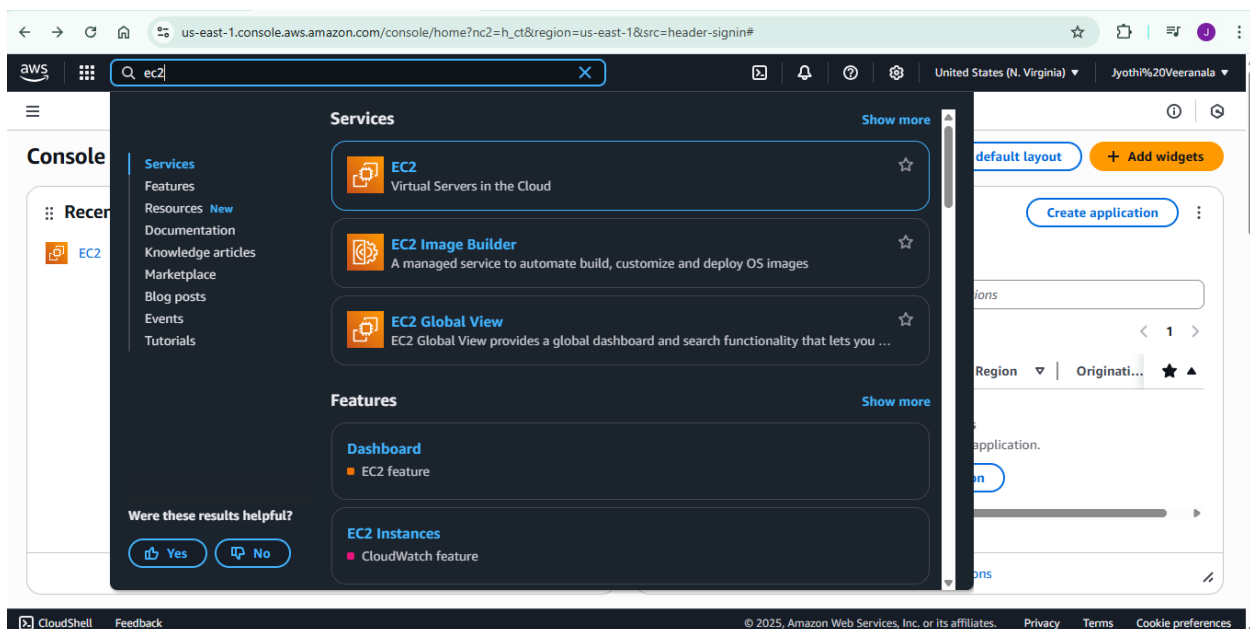
Choose region (Datacenters) as **N.Virginia us-east-1** this is free not chargeab



Ec2: Elastic Compute Cloud, is a web service it offers various hardware and software configurations, including different processors, storage, networking, and operating systems. It also provides options for scaling, storage, and security.

Search page search as ec2

you will be able to see Ec2 then click on it.



Click on **instance** and proceed.

The screenshot shows the Amazon EC2 console home page. The left sidebar contains navigation links for EC2, Dashboard, EC2 Global View, Events, Instances (with a sub-link for Instances), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, and AMI Catalog. The main content area has a dark header with 'Amazon Elastic Compute Cloud (EC2)' and the text 'Create, manage, and monitor virtual servers in the cloud.' Below this, there's a section for 'Benefits and features' stating 'EC2 offers ultimate scalability and control' and a 'Get started' section with a link to 'Launch a virtual server'. A 'Launch instance' button is prominently displayed.

Launch Instance Click

The screenshot shows the 'Instances' page in the Amazon EC2 console. The left sidebar is the same as the previous screenshot. The main content area has a header with 'Instances Info' and a 'Launch instances' button. Below this, there's a search bar and a table with columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability. The table is currently empty, with a message stating 'No instances. You do not have any instances in this region.' and a 'Launch instances' button. At the bottom, there's a 'Select an instance' section.

Name your instance(server) here I named it **abcd**

The screenshot shows the AWS Management Console 'Launch an instance' page. The 'Name and tags' section has a text input for the instance name, which is 'Abcda'. The 'Application and OS Images' section shows the 'Quick Start' tab with 'Amazon Linux' selected. The 'Summary' section shows 1 instance, Amazon Linux 2023.7.2 AMI, t2.micro instance type, new security group, and 8 GiB storage. The 'Launch instance' button is visible.

Machine image/Os image I am selecting in **Quick Start AMIs** and selecting **Amazon Linux 2023 AMI** which is not chargeable.

The screenshot shows the AWS Management Console 'Search results' page for AMIs. The 'Quick Start AMIs (45)' tab is selected. The 'All products (45 filtered, 45 unfiltered)' section shows the 'Amazon Linux 2023 AMI' selected. The 'Refine results' section shows filters for OS category and architecture.

Instance type is choosing as **t3.micro** which is sufficient for me to as practice purpose

▼ **Instance type** [Info](#) | [Get advice](#)

Instance type

t2.micro Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Windows base pricing: 0.0162 USD per Hour

On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour

On-Demand SUSE base pricing: 0.0116 USD per Hour

On-Demand RHEL base pricing: 0.026 USD per Hour

On-Demand Linux base pricing: 0.0116 USD per Hour

[Additional costs apply for AMIs with pre-installed software](#)

☐ All generations [Compare instance types](#)

Number of instances
1

Software
Amazon Linux 2
Ubuntu 20.04 LTS
Red Hat Enterprise Linux 8
SUSE Linux Enterprise Server 15 SP3

In key-pair we need to add public key I was explained how import public in at end of this document pls check it out.

Here, Already add public key file select it.

▼ **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

daws-82

[Create new key pair](#)

Search

Proceed without a key pair (Not recommended) Default value

daws-82 Type: rsa ✓

[Edit](#)

vpc-04536f964080b6473

Network Setting I explained at the bottom of document.

I am providing access for all **allow-all**

▼ Network settings

Info

Edit

Network

Info

vpc-04536f964080b6473

Subnet

Info

No preference (Default subnet in any availability zone)

Auto-assign public IP

Info

Enable

☐ allow-all

VPC: vpc-04536f964080b6473
 sg-07d08d95aad2bbe0a

☐ default

VPC: vpc-04536f964080b6473
 sg-091126c0995240724

Select security groups

▲

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

configure storage I chosen 8gb after that click on **Launch instance**.

Now, your instance is ready.

Search results

▼ Configure storage

Info

Advanced

1x

8

GIB

gp3

Root volume, 3000 IOPS, Not encrypted

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

×

Add new volume

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

↻

0 x File systems

Edit

► Advanced details

Info

Virtual server type (instance type)

t3.micro

Firewall (security group)

allow-all

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of...

×

Cancel

Launch instance

Preview code

Copy the **public Ip**

The screenshot displays the AWS Management Console interface for EC2 instances. At the top, there's a header with 'Instances (1/1)' and an 'Info' link. Below this is a search bar and a table of instances. The table has columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability. One instance is listed: 'Linuxx' with ID 'i-032f6c84da1900c5a', state 'Running', type 't3.micro', and status 'Initializing'. Below the table, the details for the selected instance 'i-032f6c84da1900c5a (Linuxx)' are shown. These details include the Instance ID, Public IPv4 address (98.81.5.167), Private IPv4 addresses (172.31.40.170), Instance state (Running), and Public DNS (ec2-98-81-5-167.compute-1.amazonaws.com).

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
Linuxx	i-032f6c84da1900c5a	Running	t3.micro	Initializing	View alarms +	us-east-1a

i-032f6c84da1900c5a (Linuxx)		
Instance ID i-032f6c84da1900c5a	Public IPv4 address 98.81.5.167 open address	Private IPv4 addresses 172.31.40.170
IPv6 address -	Instance state Running	Public DNS ec2-98-81-5-167.compute-1.amazonaws.com open address

Connecting to the server

>> open gitbash and go to the path where we created private key.

Then use below command

```
ssh -i <privatekeyfile name> ec2-user@<public Ip>
```

ec2-user@ip-172-31-40-170:~

INDIA+2187510@01HW2059470 MINGW64 ~ (master)

\$ cd /c/devopspractise/Devp

INDIA+2187510@01HW2059470 MINGW64 /c/devopspractise/Devp

\$ ls -l

total 18

```
-rw-r--r-- 1 INDIA+2187510 4096 2610 May 19 16:13 Devp.pem
-rw-r--r-- 1 INDIA+2187510 4096 579 May 19 16:13 Devp.pub
-rw-r--r-- 1 INDIA+2187510 4096 2610 May 21 18:12 jyothi.pem
-rw-r--r-- 1 INDIA+2187510 4096 579 May 21 18:12 jyothi.pub
-rw-r--r-- 1 INDIA+2187510 4096 2610 May 21 18:11 suresh
-rw-r--r-- 1 INDIA+2187510 4096 579 May 21 18:11 suresh.pub
```

INDIA+2187510@01HW2059470 MINGW64 /c/devopspractise/Devp

\$ ssh -i Devp.pem ec2-user@98.81.5.167

```

#_
~\  #####_      Amazon Linux 2023
~~ \#####\
~~  \###|
~~   \#/_____ https://aws.amazon.com/linux/amazon-linux-2023
~~    V~' '->
~~~~
~~~.-.-
~~  /  /  /
~~ /m/ ' /
```

Last login: Wed May 21 12:47:52 2025 from 167.103.20.252

[ec2-user@ip-172-31-40-170 ~]\$ |

Network setting

=====

Before starting instance create do these 2 steps

Go to **Security Groups**> Click on **Create Security Group**

The screenshot shows the AWS Management Console for the us-east-1 region. The left-hand navigation pane is expanded to 'Network & Security', with 'Security Groups' selected. The main content area displays the 'Benefits and features' section for EC2, highlighting its scalability and control. A list of benefits includes: highest level of control, widest variety of server size options, widest availability of operating systems, and global scalability. A link to 'Find out more about EC2' is provided at the bottom of the section.

The screenshot shows the 'Security Groups (1/2)' page in the AWS Management Console. The table lists two security groups: 'default' (sg-091126c0995240724) and 'allow-all' (sg-07d08d95aad2bbe0a). The 'default' group is selected, and its details are shown below. The details section includes tabs for 'Details', 'Inbound rules', 'Outbound rules', 'Sharing - new', 'VPC associations - new', and 'Tags'. The 'Details' tab is active, showing the group's name, ID, and VPC ID.

Name	Security group ID	Security group name	VPC ID
-	sg-091126c0995240724	default	vpc-04536f964080b6473
-	sg-07d08d95aad2bbe0a	allow-all	vpc-04536f964080b6473

sg-091126c0995240724 - default

Details | Inbound rules | Outbound rules | Sharing - new | VPC associations - new | Tags

Provide your security name here i named i as allow-all and Description same.

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateSecurityGroup:

aws [Search] [Alt+S]

EC2 > Security Groups > Create security group

Create security group [Info](#)

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Basic details

Security group name [Info](#)

Name cannot be edited after creation.

Description [Info](#)

VPC [Info](#)

Inbound rules [Info](#)

This security group has no inbound rules.

[Add rule](#)

Inbound rules I gave it as **All traffic** bcoz i want to give access to all same as well for **outbound rules**.

Inbound--> Incoming traffic

Outbound--> Outgoing trafficking

0.0.0.0/0 means access for every computer in the internet.

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateSecurityGroup:

aws [Search] [Alt+S]

United States (N. Virginia) Jyothi Veeranal

EC2 > Security Groups > Create security group

vpc-04536f964080b6473

Inbound rules [Info](#)

Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info	
Custom TCP	TCP	0	Cus...		Delete
<input type="text" value="Q "/>					
Custom TCP					
Custom UDP					
Custom ICMP - IPv4					
Custom Protocol					
All TCP					
All UDP					
All ICMP - IPv4					
All ICMP - IPv6					
All traffic					

Rules with destination 0.0.0.0/0 or ::/0 allow your instances to send traffic to any IPv4 or IPv6 address. We recommend setting security group rules to be more restrictive and to only allow traffic to specific known IP addresses.

[X](#)

Source as **Anywhere Ipv4** same for outbound rules

aws Search [Alt+S] United States (N. Virginia) Jyothi Veeranala

EC2 > Security Groups > Create security group

vpc-04536f964080b6473

Inbound rules

Type	Protocol	Port range	Source	Description - optional
All traffic	All	All	An... 0.0.0.0/0	
Add rule				

Custom 0.0.0.0/0 X

Anywhere-Ipv4 ✓

Anywhere-Ipv4

My IP

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instances. We recommend setting security group rules to allow access from known IP addresses only.

Outbound rules

Type	Protocol	Port range	Destination	Description - optional
All traffic	All	All	Cus... 0.0.0.0/0 X	
Add rule				

Rules with destination of 0.0.0.0/0 or ::/0 allow your instances to send traffic to any IPv4 or IPv6 address. We recommend setting security group rules to be more restrictive and to only allow traffic to specific known IP addresses.

Tags - optional

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

No tags associated with the resource.

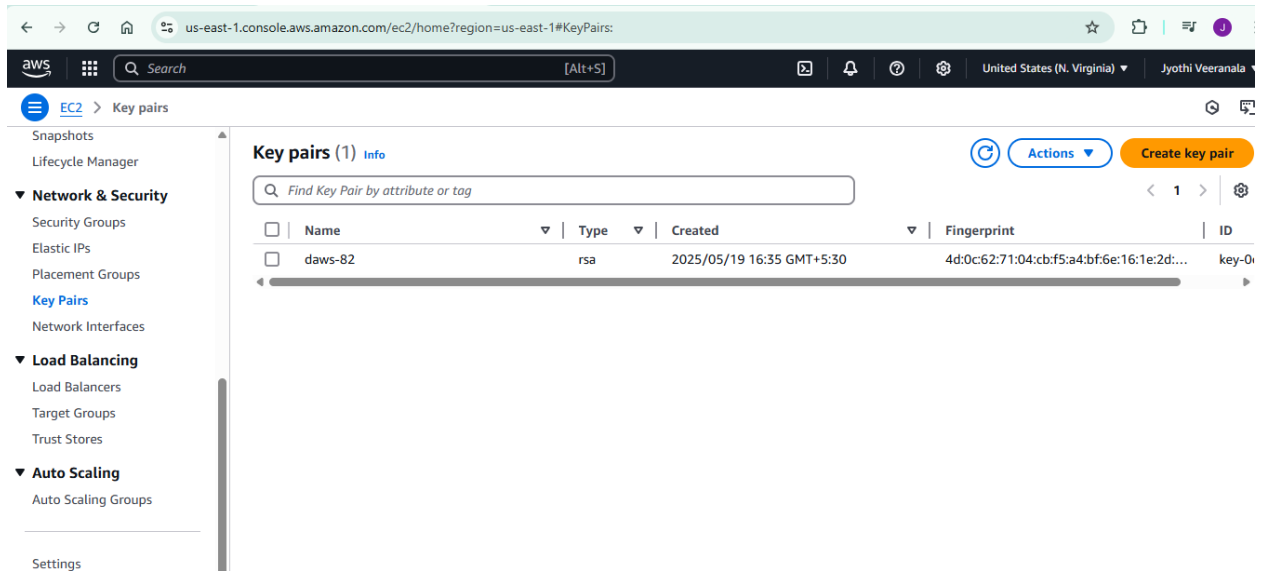
Add new tag

You can add up to 50 more tags

Cancel **Create security group**

KEY PAIR SETTING:

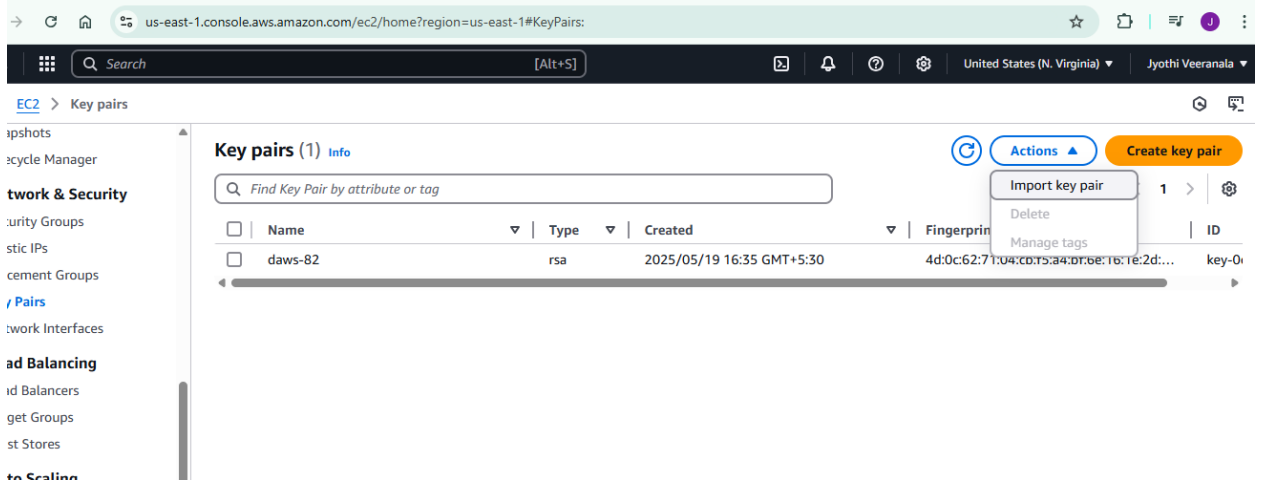
To set your public key Go to **key pairs** and then in Action choose **Import key pairs**



The screenshot shows the AWS Management Console for the 'Key pairs' section. The left sidebar contains navigation links for Snapshots, Lifecycle Manager, Network & Security (Security Groups, Elastic IPs, Placement Groups, Key Pairs, Network Interfaces), Load Balancing (Load Balancers, Target Groups, Trust Stores), Auto Scaling (Auto Scaling Groups), and Settings. The main content area is titled 'Key pairs (1) Info' and includes a search bar 'Find Key Pair by attribute or tag'. Below the search bar is a table with the following data:

<input type="checkbox"/>	Name	Type	Created	Fingerprint	ID
<input type="checkbox"/>	daws-82	rsa	2025/05/19 16:35 GMT+5:30	4d0c6271:04:cb:f5:a4:bf:6e:16:1e:2d:...	key-0

The 'Actions' dropdown menu is open, showing the following options: 'Import key pair', 'Delete', and 'Manage tags'. The 'Create key pair' button is also visible.



This screenshot is identical to the one above, showing the AWS Management Console for the 'Key pairs' section. The left sidebar contains navigation links for Snapshots, Lifecycle Manager, Network & Security (Security Groups, Elastic IPs, Placement Groups, Key Pairs, Network Interfaces), Load Balancing (Load Balancers, Target Groups, Trust Stores), Auto Scaling (Auto Scaling Groups), and Settings. The main content area is titled 'Key pairs (1) Info' and includes a search bar 'Find Key Pair by attribute or tag'. Below the search bar is a table with the following data:

<input type="checkbox"/>	Name	Type	Created	Fingerprint	ID
<input type="checkbox"/>	daws-82	rsa	2025/05/19 16:35 GMT+5:30	4d0c6271:04:cb:f5:a4:bf:6e:16:1e:2d:...	key-0

The 'Actions' dropdown menu is open, showing the following options: 'Import key pair', 'Delete', and 'Manage tags'. The 'Create key pair' button is also visible.

Name your file and provide your **public key** without spaces after that click on Update your keypair

EC2 > Key pairs > Import key pair

Import settings

Name

daws

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair file

⬆️ Browse

Choose **Browse** and navigate to your public key. You may change the name of your key. Alternatively, paste the contents of your public key into the **Public key contents** text box.

ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQGCdKIEHtHSB4mkkQAzNgID9cekYhp4H+Z2V5ZPnigOUUWZ0m1b8YBwkYqDFp7kGTLI
UIMSx7bVEgFI4C72e+FlpqyP0+HXzX2Ns1Ov15vPBRFm9AyPabPLS1cQOX0m/JH1+PlxsORfQI82lhwk62rx17C7XxFibkxtuVXzPB
zXxat6OlmycveMhwO4kArHXDjKwxAs1WB0b3ujH3VbTivb9cvHMuO+m4mNDMbD2RbrN98wMVKQgPRbLpgcau2XDxa62w7GV
WUSfhfGuQpOTY4Xtk0+gx44NhKyZVGkXh67+6+oD/dNS3o7A9RdjPw9P5pfOGMDoS80/5+

Tags - optional

No tags associated with the resource.

Add new tag