

AWS Day5 Hands-on Assignment

Create a vpc

The screenshot shows the AWS VPC dashboard. In the left sidebar, under 'Virtual private cloud', 'Your VPCs' is selected. The main area displays a table titled 'Your VPCs (1) Info'. The table has columns: Name, VPC ID, State, IPv4 CIDR, IPv6 CIDR, DHCP option set, and Main. One row is listed: Name is empty, VPC ID is 'vpc-031a983d5066ebe3b', State is 'Available', IPv4 CIDR is '172.31.0.0/16', IPv6 CIDR is empty, DHCP option set is 'dopt-07907883180a85...', and Main is 'rtb-0'. A yellow box highlights the 'Create VPC' button in the top right corner of the table header.

The screenshot shows the 'Create VPC' configuration page. The top navigation bar includes 'VPC > Your VPCs > Create VPC'. The main section is titled 'Create VPC Info'. It starts with a 'VPC settings' heading. Under 'Resources to create', there are two radio buttons: 'VPC only' (selected) and 'VPC and more'. Below this is a 'Name tag - optional' field containing 'dev-vpc'. The next section is 'IPv4 CIDR block' with a manual input field containing '10.0.0.0/16'. The 'IPv6 CIDR block' section contains four radio button options: 'No IPv6 CIDR block' (selected), 'IPAM-allocated IPv6 CIDR block', 'Amazon-provided IPv6 CIDR block', and 'IPv6 CIDR owned by me'. At the bottom, there are 'CloudShell' and 'Feedback' buttons, and a search bar with the placeholder 'Type here to search'.

aws Services Search [Alt+S]

IPv4 CIDR manual input
 IPAM-allocated IPv4 CIDR block

IPv4 CIDR

 CIDR block size must be between /16 and /28.

IPv6 CIDR block [Info](#)
 No IPv6 CIDR block
 IPAM-allocated IPv6 CIDR block
 Amazon-provided IPv6 CIDR block
 IPv6 CIDR owned by me

Tenancy [Info](#)

Tags
 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.

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="dev-vpc"/> X Remove tag

[Add tag](#)
 You can add 49 more tags

[Cancel](#) [Preview code](#) **Create VPC**

aws Services Search [Alt+S]

You successfully created vpc-05d55d9add05d3f20 / dev-vpc

VPC dashboard [Actions ▾](#)

EC2 Global View [Filter by VPC](#)

Virtual private cloud [Your VPCs](#)

Details [Info](#)

VPC ID vpc-05d55d9add05d3f20	State Available	DNS hostnames Disabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-07907883180a85cae	Main route table rtb-0d92bffff57b095	Main network ACL acl-01b1190ddd7cb092b
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 637423404772	

[Resource map](#) [CIDRs](#) [Flow logs](#) [Tags](#) [Integrations](#)

Resource map [Info](#)

VPC [Show details](#) Subnets (0) Route tables (1) Network connections (0)

Create 2 subnets

1 private subnet & 1 public subnet

You successfully created vpc-05d55d9add05d3f20 / dev-vpc

Subnets (6) Info						
<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	-	subnet-03346d1a18c4b9d0e	Available	vpc-031a983d5066be3b	172.31.64.0/20	-
<input type="checkbox"/>	-	subnet-0cffebc5272539bd	Available	vpc-031a983d5066be3b	172.31.16.0/20	-
<input type="checkbox"/>	-	subnet-0fa31e521fa3d99f5	Available	vpc-031a983d5066be3b	172.31.80.0/20	-
<input type="checkbox"/>	-	subnet-07065eca005e24774	Available	vpc-031a983d5066be3b	172.31.0.0/20	-
<input type="checkbox"/>	-	subnet-0c77b2633cc176fc	Available	vpc-031a983d5066be3b	172.31.32.0/20	-
<input type="checkbox"/>	-	subnet-0rf86c773caa2896b	Available	vpc-031a983d5066be3b	172.31.48.0/20	-

Select a subnet

VPC > Subnets > Create subnet

Create subnet [Info](#)

VPC

VPC ID
Create subnets in this VPC.

vpc-05d55d9add05d3f20 (dev-vpc)

Associated VPC CIDRs

IPv4 CIDRs
10.0.0.0/16

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
dev-public-subnet-1a

The name can be up to 256 characters long.

Availability Zone [Info](#)

 Services [Alt+S]

Subnet settings

Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
 The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

IPv4 subnet CIDR block
 256 IPs
[!\[\]\(bcffafb3f4cecf90b3dfb2b1964c87a7_img.jpg\)](#) [!\[\]\(2c586d1ccf0fcdf377dd93b4120d3637_img.jpg\)](#) [!\[\]\(72b491700f31dc9f983ea7dde3dbb39a_img.jpg\)](#) [!\[\]\(a914af01539a1cc53f4a5d013c3dc4e7_img.jpg\)](#)

Tags - optional
Key Value - optional
 [Remove](#)
[Add new tag](#)
You can add 49 more tags

[CloudShell](#) [Feedback](#)



Subnet 2 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

IPv4 subnet CIDR block
 256 IPs
< > ^ v

Tags - optional

Key	Value - optional	Remove
<input type="text" value="Name"/> X	<input type="text" value="dev-private-subnet-1b"/> X	Remove

You can add 49 more tags.

CloudShell Feedback

Subnet ID	Subnet Name	Status	VPC ID	CIDR Block	Netmask
<input type="checkbox" value="dev-private-subnet-1b"/>	subnet-074f9fe97c5b45b19	Available	vpc-05d55d9add05d3f20 dev-vpc	10.0.2.0/24	-
<input type="checkbox" value="dev-public-subnet-1a"/>	subnet-0806fc147c8db6ab0	Available	vpc-05d55d9add05d3f20 dev-vpc	10.0.1.0/24	-

Create route tables

1 public and 1 private

Route tables (1) Info						
<input type="text"/> Find resources by attribute or tag						
Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d5066ebe3b	63742340...

VPC > [Route tables](#) > Create route table

Create route table [Info](#)

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.

VPC
The VPC to use for this route table.

Tags

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.

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="dev-public-RT"/>

[Add new tag](#)

You can add 49 more tags.

[Cancel](#) **Create route table**

AWS Services Search [Alt+S]

VPC > Route tables > Create route table

Create route table Info

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.

VPC
The VPC to use for this route table.

Tags
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.

Key	Value - <i>optional</i>
<input type="text" value="Name"/>	<input type="text" value="dev-private-RT"/> <input type="button" value="Remove"/>

You can add 49 more tags.

CloudShell Feedback

VPC dashboard X

Route table rtb-04fd16bc8fb42ca4f | dev-private-RT was created successfully.

Route tables (4) Info

Last updated less than a minute ago

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d5066ebe3b	63742340...
-	rtb-0d92bffff57b095	-	-	Yes	vpc-05d55d9add05d3f20 dev-...	63742340...
dev-public-RT	rtb-0aa0eddb5b4e82a1f6	-	-	No	vpc-05d55d9add05d3f20 dev-...	63742340...
dev-private-RT	rtb-04fd16bc8fb42ca4f	-	-	No	vpc-05d55d9add05d3f20 dev-...	63742340...

Select a route table

AWS Services Search [Alt+S]

VPC > Internet gateways > Create internet gateway

Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.

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.

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="dev-igw"/>

Add new tag
You can add 49 more tags.

Cancel **Create internet gateway**

AWS Services Search [Alt+S] N. Virginia MaheshKumar001989

The following Internet gateway was created: igw-010fb87f2fddcdc04 - dev-igw. You can now attach to a VPC to enable the VPC to communicate with the internet. Attach to a VPC

VPC dashboard > Internet gateways > igw-010fb87f2fddcdc04 / dev-igw

Details Info

Internet gateway ID	State	VPC ID
igw-010fb87f2fddcdc04	Detached	-

Tags

<input type="text" value="Search tags"/>	
Key	Value
Name	dev-igw

Actions

The following internet gateway was created: igw-010fb87f2fddcdc04 - dev-igw. You can now attach to a VPC to enable the VPC to communicate with the internet.

VPC > Internet gateways > Attach to VPC (igw-010fb87f2fddcdc04)

Attach to VPC (igw-010fb87f2fddcdc04) Info

VPC

Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs

Attach the internet gateway to this VPC.

X

Use: "vpc-05d55d9add05d3f20"

vpc-05d55d9add05d3f20 - dev-vpc

Cancel Attach internet gateway

Internet gateway igw-010fb87f2fddcdc04 successfully attached to vpc-05d55d9add05d3f20

Details info

Internet gateway ID igw-010fb87f2fddcdc04	State Attached	VPC ID vpc-05d55d9add05d3f20 dev-vpc	Owner 637423404772
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Tags

Key	Value
Name	dev-igw

Actions ▾

Create NAT gateway

aws Services Search [Alt+S]

Elastic IP address 54.243.231.202 (eipalloc-08ca8e004652cec1f) allocated.

VPC > NAT gateways > Create NAT gateway

Create NAT gateway Info

A highly available, managed Network Address Translation (NAT) service that instances in private subnets can use to connect to services in other VPCs, on-premises networks, or the internet.

NAT gateway settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Subnet
Select a subnet in which to create the NAT gateway.

Connectivity type
Select a connectivity type for the NAT gateway.

Public

Private

Elastic IP allocation ID Info
Assign an Elastic IP address to the NAT gateway.

Allocate Elastic IP

▶ Additional settings Info

CloudShell Feedback

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NAT gateway nat-0d5041a29ea939774 | dev-ngw was created successfully.

VPC > NAT gateways > nat-0d5041a29ea939774 / dev-ngw Actions

Details

NAT gateway ID nat-0d5041a29ea939774	Connectivity type Public	State Pending	State message <small>Info</small> -
NAT gateway ARN arn:aws:ec2:us-east-1:657423404772:natgateway/nat-0d5041a29ea939774	Primary public IPv4 address -	Primary private IPv4 address -	Primary network interface ID -
VPC vpc-05d55d9add05d3f20 / dev-vpc	Subnet subnet-0806fc147c8db6ab0 / dev-public-subnet-1a	Created Tuesday, October 22, 2024 at 18:22:08 GMT+5:30	Deleted -

Secondary IPv4 addresses Monitoring Tags

Secondary IPv4 addresses are not available for this nat gateway.

Route table & subnet association

NAT gateway nat-0d5041a29ea959774 | dev-ngw was created successfully.

Route tables (1/4) Info

Name	Route table ID	Explicit subnet assoc...	Edge associations	Main	VPC	Owner ID
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d5066ebe3b	63742340...
-	rtb-0d92bffff57b095	-	-	Yes	vpc-05d55d9add05d3f20 dev...	63742340...
dev-public-RT	rtb-0aa8edd3b4e82a1f6	-	-	No	vpc-05d55d9add05d3f20 dev...	63742340...
dev-private-RT	rtb-04fd16bc8fb42ca4f	-	-	No	vpc-05d55d9add05d3f20 dev...	63742340...

rtb-0aa8edd3b4e82a1f6 / dev-public-RT

Details Routes Subnet associations Edge associations Route propagation Tags

Details

Route table ID rtb-0aa8edd3b4e82a1f6	Main No	Explicit subnet associations -	Edge associations -
VPC Owner ID			

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NAT gateway nat-0d5041a29ea959774 | dev-ngw was created successfully.

Route tables (1/4) Info

Name	Route table ID	Explicit subnet assoc...	Edge associations	Main	VPC	Owner ID
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d5066ebe3b	63742340...
-	rtb-0d92bffff57b095	-	-	Yes	vpc-05d55d9add05d3f20 dev...	63742340...
dev-public-RT	rtb-0aa8edd3b4e82a1f6	-	-	No	vpc-05d55d9add05d3f20 dev...	63742340...
dev-private-RT	rtb-04fd16bc8fb42ca4f	-	-	No	vpc-05d55d9add05d3f20 dev...	63742340...

rtb-0aa8edd3b4e82a1f6 / dev-public-RT

Details **Routes** Subnet associations Edge associations Route propagation Tags

Routes (1)

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

Both Edit routes

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VPC > Route tables > rtb-0aa8edd3b4e82a1f6 > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway igw-010fb87f2fdccdc04	-	No
	Use: "igw-010fb87f2fdccdc04" igw-010fb87f2fdccdc04 (dev-igw)		

Add route Remove Cancel Preview Save changes

AWS Services Search [Alt+S] N. Virginia MaheshKumar001989

VPC dashboard > Updated routes for rtb-0aa8edd3b4e82a1f6 / dev-public-RT successfully

EC2 Global View Filter by VPC

Virtual private cloud Your VPCs Subnets **Route tables** Internet gateways Egress-only internet gateways Carrier gateways DHCP option sets Elastic IPs Managed prefix lists Endpoints Endpoint services NAT gateways Peering connections Security Network ACLs

VPC > Route tables > rtb-0aa8edd3b4e82a1f6 / dev-public-RT

Details

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-0aa8edd3b4e82a1f6	No	-	-
VPC	Owner ID		
vpc-05d55d9add05d3f20 dev-vpc	637423404772		

Routes Subnet associations Edge associations Route propagation Tags

Routes (2)

Destination	Target	Status	Propagated
0.0.0.0/0	igw-010fb87f2fdccdc04	Active	No
10.0.0.0/16	local	Active	No

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VPC dashboard > Updated routes for rtb-0aa8edd3b4e82a1f6 / dev-public-RT successfully

EC2 Global View Filter by VPC

Virtual private cloud Your VPCs Subnets **Route tables** Internet gateways Egress-only internet gateways Carrier gateways DHCP option sets Elastic IPs Managed prefix lists

VPC > Route tables > rtb-0aa8edd3b4e82a1f6 / dev-public-RT

Subnet associations

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
No subnet associations You do not have any subnet associations.			

Explicit subnet associations (0) Edit subnet associations

Subnets without explicit associations (2) Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2)					
Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID	
dev-private-subnet-1b	subnet-074f9fe97c5b45b19	10.0.2.0/24	-	Main (rtb-0d92bffff57b095)	
dev-public-subnet-1a	subnet-0806fc147c8db6ab0	10.0.1.0/24	-	Main (rtb-0d92bffff57b095)	

Selected subnets

subnet-0806fc147c8db6ab0 / dev-public-subnet-1a

Actions: Cancel **Save associations**

You have successfully updated subnet associations for rtb-0aa8edd3b4e82a1f6 / dev-public-RT.

Route tables (1/4) Info

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d5066ebe3b	63742340...
-	rtb-0d92bffff57b095	-	-	Yes	vpc-05d55d9add05d3f20 dev...	63742340...
dev-public-RT	rtb-0aa8edd3b4e82a1f6	subnet-0806fc147c8db6...	-	No	vpc-05d55d9add05d3f20 dev...	63742340...
dev-private-RT	rtb-04fd16bc8fb42ca4f	-	-	No	vpc-05d55d9add05d3f20 dev...	63742340...

rtb-04fd16bc8fb42ca4f / dev-private-RT

Details **Routes** **Subnet associations** **Edge associations** **Route propagation** **Tags**

You have successfully updated subnet associations for rtb-0aa8edd3b4e82a1f6 / dev-public-RT.

Route tables (1/4) Info

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d5066ebe3b	63742340...
-	rtb-0d92bffff57b095	-	-	Yes	vpc-05d55d9add05d3f20 dev...	63742340...
dev-public-RT	rtb-0aa8edd3b4e82a1f6	subnet-0806fc147c8db6...	-	No	vpc-05d55d9add05d3f20 dev...	63742340...
dev-private-RT	rtb-04fd16bc8fb42ca4f	-	-	No	vpc-05d55d9add05d3f20 dev...	63742340...

rtb-04fd16bc8fb42ca4f / dev-private-RT

Details **Routes** **Subnet associations** **Edge associations** **Route propagation** **Tags**

Routes (1)

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

Actions: Both **Edit routes**

Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	NAT Gateway	-	No
	nat-0d5041a29ea939774	-	
	nat-0d5041a29ea939774 (dev-rgw)	-	

Add route **Remove** **Cancel** **Preview** **Save changes**

Updated routes for rtb-04fd16bc8fb42ca4f / dev-private-RT successfully

Details

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-04fd16bc8fb42ca4f	No	-	-
VPC	Owner ID		
vpc-05d55d9add05d3f20 dev-vpc	657423404772		

Routes (2)

Destination	Target	Status	Propagated
0.0.0.0/0	nat-0d5041a29ea939774	Active	No
10.0.0.0/16	local	Active	No

Actions

VPC dashboard > Virtual private cloud > Route tables > rtb-04fd16bc8fb42ca4f / dev-private-RT successfully > Details

Route table ID: rtb-04fd16bc8fb42ca4f
Main: No
VPC: vpc-05d55d9add05d3f20 | dev-vpc
Owner ID: 637423404772

Routes Subnet associations Edge associations Route propagation Tags

Explicit subnet associations (0)

No subnet associations

Subnets without explicit associations (1)

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
dev-private-subnet-1b	subnet-074f9fe97c5b45b19	10.0.2.0/24	-	Main (rtb-0d92bffff57b095)

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VPC > Route tables > rtb-04fd16bc8fb42ca4f > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2)

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input checked="" type="checkbox"/> dev-private-subnet-1b	subnet-074f9fe97c5b45b19	10.0.2.0/24	-	Main (rtb-0d92bffff57b095)
<input type="checkbox"/> dev-public-subnet-1a	subnet-0806fc147c8db6ab0	10.0.1.0/24	-	rtb-0aa8edd3b4e82a1f6 / dev-public-RT

Selected subnets

subnet-074f9fe97c5b45b19 / dev-private-subnet-1b	X
--	---

Cancel Save associations

Launch an EC2 Machine

The screenshot shows the AWS EC2 Dashboard. On the left, a sidebar lists various EC2 services: Instances, Images, Elastic Block Store, and Network & Security. The main area displays 'Resources' for the US East (N. Virginia) Region, showing 0 running instances, 1 elastic IP, and 0 volumes. A yellow box highlights the 'Launch instance' button. Below this, there's a note about launching instances in the N. Virginia Region, an 'Instance alarms' section, and a 'Service health' panel. To the right, the 'Account attributes' section includes settings for data protection, zones, and EC2 console preferences. An 'Explore AWS' sidebar offers links to save on EC2 with Spot Instances, Amazon GuardDuty Malware Protection, and Best Price-Performance with AWS Graviton2.

The screenshot shows the 'Launch an instance' wizard. The current step is 'Name and tags'. It features a 'Name' input field containing 'dev-ec2', which is highlighted with a yellow box. There is also a link to 'Add additional tags'. Below this, a section titled 'Application and OS Images (Amazon Machine Image)' is expanded, showing a search bar and a list of recent AMIs: Amazon, macOS, Ubuntu, Windows, Red Hat, and SUSE Linux. The 'Quick Start' tab is selected.

Screenshot of the AWS CloudFormation console showing the creation of a new stack.

Summary

Number of instances: 1

Software Image (AMI): Red Hat Enterprise Linux 9 (HVM), SSD Volume Type (ami-0583d8c7a9c35822c)

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)

Launch instance

Description: Red Hat Enterprise Linux version 9 (HVM), EBS General Purpose (SSD) Volume Type

Provided by Red Hat, Inc.

Architecture: 64-bit (x86)

AMI ID: ami-0583d8c7a9c35822c

Username: ec2-user

Verified provider

Instance type

CloudShell Feedback

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Screenshot of the AWS CloudFormation console showing the creation of a new stack.

Summary

Number of instances: 1

Software Image (AMI): Red Hat Enterprise Linux 9 (HVM), SSD Volume Type (ami-0583d8c7a9c35822c)

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)

Launch instance

Instance type

t2.micro

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

On-Demand Windows base pricing: 0.0162 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

Key pair (login)

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: AWS

Create new key pair

Network settings

CloudShell Feedback

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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 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

All generations Compare instance types

Additional costs apply for AMIs with pre-installed software

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 AWS Create new key pair

Network settings Info

CloudShell Feedback

Summary

Number of instances Info 1

Software Image (AMI)
Provided by Red Hat, Inc.
ami-0583d8c7a9c35822c

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)

Cancel Launch instance Preview code

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aws Services Search [Alt+S] Network settings Info

VPC - required Info
vpc-05d55d9add05d3f20 (dev-vpc) 10.0.0.0/16

Subnet Info
subnet-0806fc147c8db6ab0 dev-public-subnet-1a
VPC: vpc-05d55d9add05d3f20 Owner: 637423404772 Availability Zone: us-east-1a Zone type: Availability Zone IP addresses available: 250 CIDR: 10.0.1.0/24 Create new subnet

Auto-assign public IP Info
Enable Additional charges apply when outside of free tier allowance

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

Security group name - required dev-sg
This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _-:/()#:@[]+=&{}\$*

Description - required Info
launch-wizard-9 created 2024-10-22T12:56:43.394Z

Inbound Security Group Rules

Summary

Number of instances Info 1

Software Image (AMI)
Provided by Red Hat, Inc.
ami-0583d8c7a9c35822c

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)

Cancel Launch instance Preview code

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This security group allows traffic from anywhere to port 22 and 80.

Inbound Security Group Rules

- Security group rule 1 (TCP, 22, 0.0.0.0/0)**
 - Type: ssh
 - Protocol: TCP
 - Port range: 22
 - Source type: Anywhere
 - Description: e.g. SSH for admin desktop
- Security group rule 2 (TCP, 80, 0.0.0.0/0)**
 - Type: HTTP
 - Protocol: TCP
 - Port range: 80
 - Source type: Anywhere
 - Description: e.g. SSH for admin desktop

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend changing the source to a specific IP address or CIDR range.

Summary

Number of instances: 1

Software Image (AMI): Provided by Red Hat, Inc. ami-0583d8c7a9c35822c

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)

Launch instance

CloudShell Feedback © 2024, Amazon Web Services

Metadata response hop limit: 2

Allow tags in metadata: Select

User data - optional: #!/bin/bash
yum install nginx -y
systemctl enable nginx
systemctl start nginx

User data has already been base64 encoded

Summary

Number of instances: 1

Software Image (AMI): Provided by Red Hat, Inc. ami-0583d8c7a9c35822c

Virtual server type (instance type): t2.micro

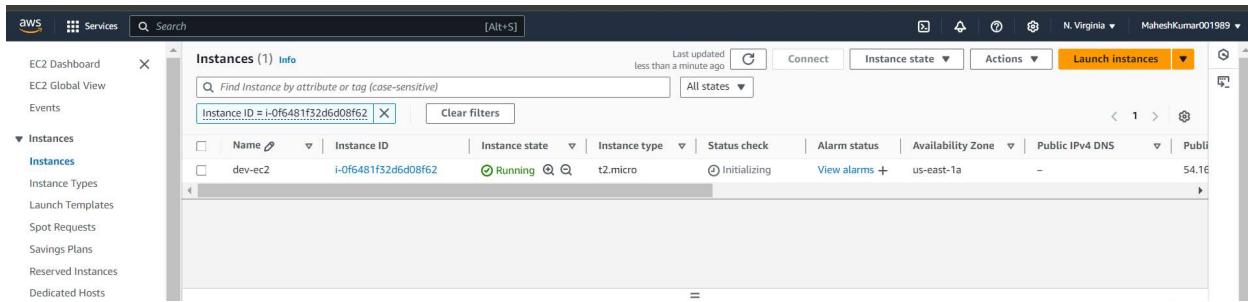
Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)

Launch instance

CloudShell Feedback © 2024, Amazon Web Services



Connect to the ec2 server

```
ec2-user@ip-10-0-1-74:~  
AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~  
$ cd downloads  
  
AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~/downloads  
$ ssh -i "aws.pem" ec2-user@54.209.60.91  
The authenticity of host '54.209.60.91 (54.209.60.91)' can't be established.  
ED25519 key fingerprint is SHA256:jrsx3WiepohbmyUA8DAc82kVTYLNbyG3m9B7w/kY1Dc.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added '54.209.60.91' (ED25519) to the list of known hosts.  
Register this system with Red Hat Insights: insights-client --register  
Create an account or view all your systems at https://red.ht/insights-dashboard  
[ec2-user@ip-10-0-1-74 ~]$ |
```

Checking nginx status

Create another vpc

aws Services Search [Alt+S]

VPC > Your VPCs > Create VPC

Create VPC Info

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

VPC settings

Resources to create Info
Create only the VPC resource or the VPC and other networking resources.

VPC only VPC and more

Name tag - *optional*
Creates a tag with a key of 'Name' and a value that you specify.
aws-vpc

IPv4 CIDR block Info
 IPv4 CIDR manual input IPAM-allocated IPv4 CIDR block

IPv4 CIDR
172.10.0.0/16
CIDR block size must be between /16 and /28.

IPv6 CIDR block Info
 No IPv6 CIDR block IPAM-allocated IPv6 CIDR block Amazon-provided IPv6 CIDR block IPv6 CIDR owned by me

CloudShell Feedback

aws Services Search [Alt+S]

VPC dashboard > You successfully created vpc-034b60b291269a920 / aws-vpc

VPC > Your VPCs > vpc-034b60b291269a920 / aws-vpc

Actions ▾

Details <small>Info</small>	
VPC ID	vpc-034b60b291269a920
Tenancy	State Available
Default	DHCP option set dopt-07907883180a85cae
Default VPC	IPv4 CIDR 172.10.0.0/16
Network Address Usage metrics	Route 53 Resolver DNS Firewall rule groups -
Disabled	Owner ID 637423404772
DNS hostnames Disabled	
Main route table rtb-0977b9f95bd75588d	
IPv6 pool -	
DNS resolution Enabled	
Main network ACL acl-0adcdb8af09f7a05e1	
IPv6 CIDR (Network border group) -	

Resource map Info

VPC Show details Your AWS virtual network

Subnets (0) Subnets within this VPC

Route tables (1) Route network traffic to resources

Network connections (0) Connections to other networks

Create 1 public & 1 private subnet

The screenshot shows the AWS VPC Create Subnet wizard. At the top, there's a navigation bar with the AWS logo, Services, a search bar, and a [Alt+S] keyboard shortcut. Below the navigation bar, the path is shown as VPC > Subnets > Create subnet. The main title is "Create subnet" with an "Info" link.

VPC

VPC ID
Create subnets in this VPC.
vpc-034b60b291269a920 (aws-vpc)

Associated VPC CIDRs

IPv4 CIDRs
172.10.0.0/16

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
aws-public-subnet-1a

The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
US East (N. Virginia) / us-east-1a

IPv4 VPC CIDR block [Info](#)

CloudShell Feedback

IPv4 VPC CIDR block [Info](#)

Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

▼

IPv4 subnet CIDR block

256 IPs

< > ^ v

▼ Tags - optional

Key

Value - optional

 X X

Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

aws Services Search [Alt+S]

Remove

Subnet 2 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
aws-private-subnet-1b

The name can be up to 256 characters long.

Availability Zone **Info**
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
US East (N. Virginia) / us-east-1b

IPv4 VPC CIDR block **Info**
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.
172.10.0.0/16

IPv4 subnet CIDR block
172.10.2.0/24 256 IPs

Tags - optional

Key	Value - optional
Q Name	Q aws-private-subnet-1b

Add new tag
You can add 49 more tags.
Remove

Add new subnet



You have successfully created 2 subnets: subnet-0ae55717cc028d002, subnet-0c38c22e9215eee75

Subnets (2) **Info**

Last updated less than a minute ago Actions **Create subnet**

Find resources by attribute or tag

Subnet ID: **subnet-0ae55717cc028d002** **Subnet ID**: **subnet-0c38c22e9215eee75** **Clear filters**

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR
<input type="checkbox"/>	aws-public-subnet-1a	subnet-0ae55717cc028d002	Available	vpc-034b60b291269a920 aws-vpc	172.10.1.0/24	-	-
<input type="checkbox"/>	aws-private-subnet-1b	subnet-0c38c22e9215eee75	Available	vpc-034b60b291269a920 aws-vpc	172.10.2.0/24	-	-

Create route tables

1private and 1 public

aws Services Search [Alt+S]

VPC > Route tables > Create route table

Create route table Info

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.

aws-public-RT

VPC
The VPC to use for this route table.

vpc-034b60b291269a920 (aws-vpc)

Tags
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.

Key	Value - <i>optional</i>
<input type="text" value="Name"/> <input type="button" value="X"/>	<input type="text" value="aws-public-RT"/> <input type="button" value="X"/> <input type="button" value="Remove"/>

Add new tag

You can add 49 more tags.

Cancel

CloudShell Feedback

AWS Services Search [Alt+S]

VPC > Route tables > Create route table

Create route table Info

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.

VPC
The VPC to use for this route table.

Tags

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.

Key	Value - <i>optional</i>	Remove
<input type="text" value="Name"/>	<input type="text" value="aws-private-RT"/>	<input type="button" value="Remove"/>

You can add 49 more tags.

Cancel

Route table ID	Route table name	State	Associations	Internet gateway	Last modified
<input type="checkbox"/>	aws-public-RT	rtb-0a9a18b6d9ee6fbdf	-	-	No vpc-034b60b291269a920 aws... 637423404772
<input type="checkbox"/>	-	rtb-0977b5f95bd75588d	-	-	Yes vpc-034b60b291269a920 aws... 637423404772
<input type="checkbox"/>	aws-private-RT	rtb-063f65c14e6eee3d1	-	-	No vpc-034b60b291269a920 aws... 637423404772

Select a route table

AWS Services Search [Alt+S]

VPC > Internet gateways > Create internet gateway

Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.

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.

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="aws-igw"/> X Remove

Add new tag You can add 49 more tags.

Cancel Create internet gateway

The following internet gateway was created: igw-0dd58122e7c5fef9d - aws-igw. You can now attach to a VPC to enable the VPC to communicate with the internet.

VPC dashboard EC2 Global View Filter by VPC Virtual private cloud Your VPCs Subnets Route tables Internet gateways Egress-only internet gateways Carrier gateways DHCP option sets Elastic IPs Managed prefix lists Endpoints

Internet gateways / igw-0dd58122e7c5fef9d / aws-igw

Details info Internet gateway ID: igw-0dd58122e7c5fef9d State: Detached VPC ID: Owner: 637423404772

Tags Manage tags Key: Value: Name: aws-igw

Skip to main content

The following internet gateway was created: igw-0dd58122e7c5fef9d - aws-igw. You can now attach to a VPC to enable the VPC to communicate with the internet.

VPC > Internet gateways > Attach to VPC (igw-0dd58122e7c5fef9d) [Info](#)

VPC

Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs

Attach the internet gateway to this VPC.

vpc-034b60b291269a920

Use: "vpc-034b60b291269a920"

vpc-034b60b291269a920 - aws-vpc

Cancel **Attach internet gateway**

Create NAT gateway

aws Services Search [Alt+S]

Elastic IP address 3.210.144.136 (eipalloc-0af2e93c69a59d9d4) allocated.

VPC > NAT gateways > Create NAT gateway

Create NAT gateway Info

A highly available, managed Network Address Translation (NAT) service that instances in private subnets can use to connect to services in other VPCs, on-premises networks, or the internet.

NAT gateway settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Subnet
Select a subnet in which to create the NAT gateway.

Connectivity type
Select a connectivity type for the NAT gateway.
 Public
 Private

Elastic IP allocation ID Info
Assign an Elastic IP address to the NAT gateway.

► Additional settings Info

NAT gateway nat-0618f6505f2a3934f | aws-ngw was created successfully.

VPC dashboard

NAT gateway nat-0618f6505f2a3934f / aws-ngw

Details			
NAT gateway ID <input type="text" value="nat-0618f6505f2a3934f"/>	Connectivity type <input type="radio"/> Public	State <input type="radio"/> Pending	State message <small>Info</small> -
NAT gateway ARN <input type="text" value="arn:aws:ec2:us-east-1:637423404772:natgateway/nat-0618f6505f2a3934f"/>	Primary public IPv4 address -	Primary private IPv4 address -	Primary network interface ID -
VPC <input type="text" value="vpc-034b60b291269a920 / aws-vpc"/>	Subnet <input type="text" value="subnet-0ae55717cc028d002 / aws-public-subnet-1a"/>	Created <input type="text" value="Tuesday, October 22, 2024 at 18:48:26 GMT+5:30"/>	Deleted -

Secondary IPv4 addresses

Private IPv4 address	Network interface ID	Status	Failure message
Secondary IPv4 addresses are not available for this nat gateway.			

Route table & subnet association

NAT gateway nat-0618f6505f2a3934f | aws-nwg was created successfully.

Route tables (1/7) info

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
dev-private-RT	rtb-04frf16bc8fb42caf	subnet-074f9fe97c5b45b...	-	No	vpc-05d55d9add05d3f20 dev...	637423404772
-	rtb-0d92bfdf5fb095	-	-	Yes	vpc-05d55d9add05d3f20 dev...	637423404772
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d506e6be3b	637423404772
dev-public-RT	rtb-0aa8ed031a4e82a1f6	subnet-0806fc147c8db6...	-	No	vpc-05d55d9add05d3f20 dev...	637423404772
aws-public-RT	rtb-0a9a18b6d9ee6fbdf	-	-	No	vpc-034b60b291269a920 aws...	637423404772
-	rtb-0977b9f95bd75588d	-	-	Yes	vpc-034b60b291269a920 aws...	637423404772
aws-private-RT	rtb-063f65c14e6eee3d1	-	-	No	vpc-034b60b291269a920 aws...	637423404772

NAT gateway nat-0618f6505f2a3934f | aws-nwg was created successfully.

Route tables (1/7) info

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
dev-private-RT	rtb-04frf16bc8fb42caf	subnet-074f9fe97c5b45b...	-	No	vpc-05d55d9add05d3f20 dev...	637423404772
-	rtb-0d92bfdf5fb095	-	-	Yes	vpc-05d55d9add05d3f20 dev...	637423404772
-	rtb-079c7d1bafe1be56b	-	-	Yes	vpc-031a983d506e6be3b	637423404772
dev-public-RT	rtb-0aa8ed031a4e82a1f6	subnet-0806fc147c8db6...	-	No	vpc-05d55d9add05d3f20 dev...	637423404772
aws-public-RT	rtb-0a9a18b6d9ee6fbdf	-	-	No	vpc-034b60b291269a920 aws...	637423404772
-	rtb-0977b9f95bd75588d	-	-	Yes	vpc-034b60b291269a920 aws...	637423404772
aws-private-RT	rtb-063f65c14e6eee3d1	-	-	No	vpc-034b60b291269a920 aws...	637423404772

rtb-0a9a18b6d9ee6fbdf / aws-public-RT

Routes (1)

Destination	Target	Status	Propagated
172.10.0.0/16	local	Active	No

Edit routes

Destination	Target	Status	Propagated
172.10.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway		No
	igw-0dd58122e7c5fef9d		
	igw-0dd58122e7c5fef9d (aws-igw)		

Add route

Cancel **Preview** **Save changes**

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2)					
Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID	
<input checked="" type="checkbox"/> aws-public-subnet-1a	subnet-0ae55717cc028d002	172.10.1.0/24	-	Main (rtb-0977b9f95bd75588d)	
<input type="checkbox"/> aws-private-subnet-1b	subnet-0c38c22e9215eee75	172.10.2.0/24	-	Main (rtb-0977b9f95bd75588d)	

Selected subnets

subnet-0ae55717cc028d002 / aws-public-subnet-1a

Actions: Cancel **Save associations**

You have successfully updated subnet associations for rtb-0a9a18b6d9ee6fbdf / aws-public-RT.

Route tables (1/7) Info

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/> dev-private-RT	rtb-04f116bcbfb42cadf	subnet-07419fe97c5b45b...	-	No	vpc-05d5d9add05d3f20 dev-...	637423404772
<input type="checkbox"/> -	rtb-0d92bfff0ff57b095	-	-	Yes	vpc-05d5d9add05d3f20 dev-...	637423404772
<input type="checkbox"/> -	rtb-07977d1bafe1be56b	-	-	Yes	vpc-031a983d5066eb63b	637423404772
<input type="checkbox"/> dev-public-RT	rtb-0aa8edd3b4e82a1f6	subnet-0806fc147c8db6...	-	No	vpc-05d5d9add05d3f20 dev-...	637423404772
<input type="checkbox"/> aws-public-RT	rtb-09a18b6d9ee6fbdf	subnet-0ae55717cc028d...	-	No	vpc-034b60b291269a920 aws...	637423404772
<input type="checkbox"/> -	rtb-0977b9f95bd75588d	-	-	Yes	vpc-034b60b291269a920 aws...	637423404772
<input checked="" type="checkbox"/> aws-private-RT	rtb-063f65c14e6eee3d1	-	-	No	vpc-034b60b291269a920 aws...	637423404772

rtb-063f65c14e6eee3d1 / aws-private-RT

Routes (1)

Destination	Target	Status	Propagated
172.10.0.0/16	local	Active	No

Actions: Both **Edit routes**

Edit routes

Destination	Target	Status	Propagated
172.10.0.0/16	local	Active	No
<input type="text"/> 0.0.0.0/0	NAT Gateway	-	No
	<input type="text"/> nat-0618f6505f2a3934f	-	

Actions: Add route **Cancel** **Preview** **Save changes**

AWS Services Search [Alt+S] N. Virginia MaheshKumar001989

VPC dashboard

EC2 Global View Filter by VPC

Virtual private cloud Your VPCs Subnets

Route tables

- Internet gateways
- Egress-only internet gateways
- Carrier gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- Endpoints
- Endpoint services
- NAT gateways
- Peering connections

Security Network ACLs Security groups

DNS firewall

Updated routes for rtb-063f65c14e6eee3d1 / aws-private-RT successfully

Details Info

Route table ID: rtb-063f65c14e6eee3d1 Main: No Owner ID: vpc-034b60b291269a920 | aws-vpc

Explicit subnet associations Edge associations Route propagation Tags

Subnet associations (0) Find subnet association Edit subnet associations

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
No subnet associations You do not have any subnet associations.			

Subnets without explicit associations (1) Find subnet association Edit subnet associations

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR
aws-private-subnet-1b	subnet-0c38c22e9215eee75	172.10.2.0/24	-

AWS Services Search [Alt+S] N. Virginia MaheshKumar001989

VPC > Route tables > rtb-063f65c14e6eee3d1 > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2) Filter subnet associations

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
aws-public-subnet-1a	subnet-0ae55717cc028d002	172.10.1.0/24	-	rtb-099a186d9ee6fbdf / aws-public-RT
<input checked="" type="checkbox"/> aws-private-subnet-1b	subnet-0c38c22e9215eee75	172.10.2.0/24	-	Main (rtb-0977b9f95bd75588d)

Selected subnets

subnet-0c38c22e9215eee75 / aws-private-subnet-1b
--

Cancel Save associations

Launch another ec2

Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags Info

Name: **aws-ec2** 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.

Recent **Quick Start**

Amazon Linux **macOS** **Ubuntu** **Windows** **Red Hat** **SUSE Li** Including AMIs from AWS, Marketplace and the Community

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million API calls, and 1000 Lambda invocations.

Amazon Machine Image (AMI)

Red Hat Enterprise Linux 9 (HVM), SSD Volume Type Free tier eligible

ami-0583d8c7a9c35822c (64-bit (x86)) / ami-07472131ec292b5da (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Description
Red Hat Enterprise Linux version 9 (HVM), EBS General Purpose (SSD) Volume Type

Provided by Red Hat, Inc.

Architecture: 64-bit (x86) AMI ID: ami-0583d8c7a9c35822c Username: ec2-user Verified provider

Instance type Info | Get advice

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million API calls, and 1000 Lambda invocations.

aws Services Search [Alt+S]

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 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

All generations [Compare instance types](#)

Additional costs apply for AMIs with pre-installed software

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 **aws** [Create new key pair](#)

Network settings [Info](#)

VPC - required [Info](#)

vpc-034b60b291269a920 (aws-vpc) 172.10.0.0/16

Subnet [Info](#)

subnet-0ae55717cc028d002 aws-public-subnet-1a
 VPC: vpc-034b60b291269a920 Owner: 637423404772 Availability Zone: us-east-1a Zone type: Availability Zone IP addresses available: 250 CIDR: 172.10.1.0/24

Summary

Number of instances [Info](#) 1

Software Image (AMI)
 Provided by Red Hat, Inc.
 ami-0583d8c7a9c35822c

Virtual server type (instance type)
 t2.micro

Firewall (security group)
 New security group

Storage (volumes)
 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million API calls per month, and more.

[Cancel](#) [Launch instance](#) [Preview code](#)

aws Services Search [Alt+S]

VPC - required [Info](#)

vpc-034b60b291269a920 (aws-vpc) 172.10.0.0/16

Subnet [Info](#)

subnet-0ae55717cc028d002 aws-public-subnet-1a
 VPC: vpc-034b60b291269a920 Owner: 637423404772 Availability Zone: us-east-1a Zone type: Availability Zone IP addresses available: 250 CIDR: 172.10.1.0/24

Auto-assign public IP [Info](#)

Enable Additional charges apply when outside of free tier allowance

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](#)

Security group name - required **aws-sg**

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _-~!@#\$%^&_!\$^%`

Description - required [Info](#)

launch-wizard-9 created 2024-10-22T13:21:15.007Z

Inbound Security Group Rules

Security group rule 1 (TCP, 22, 0.0.0.0/0) [Remove](#)

Type	Protocol	Port range	Info
ssh	TCP	22	

Summary

Number of instances [Info](#) 1

Software Image (AMI)
 Provided by Red Hat, Inc.
 ami-0583d8c7a9c35822c

Virtual server type (instance type)
 t2.micro

Firewall (security group)
 New security group

Storage (volumes)
 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million API calls per month, and more.

[Cancel](#) [Launch instance](#) [Preview code](#)

Screenshot of the AWS CloudShell interface showing the creation of a new Amazon Linux 2 AMI instance.

Security group name - required: aws-sg

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _-:/()#@[]+=&;!\$^.

Description - required: Info
launch-wizard-9 created 2024-10-22T13:21:15.007Z

Inbound Security Group Rules:

- Security group rule 1 (TCP, 22, 0.0.0.0/0):** Type: ssh, Protocol: TCP, Port range: 22, Source type: Anywhere, Description: e.g. SSH for admin desktop.
- Security group rule 2 (TCP, 80, 0.0.0.0/0):** Type: HTTP, Protocol: TCP, Port range: 80, Source type: Anywhere, Description: e.g. SSH for admin desktop.

Summary:

- Number of instances: 1
- Software Image (AMI): Provided by Red Hat, Inc. ami-0583d8c7a9c35822c
- Virtual server type (instance type): t2.micro
- Firewall (security group): New security group
- Storage (volumes): 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million API calls per month.

Launch instance

Screenshot of the AWS CloudShell interface showing the creation of a new Amazon Linux 2 AMI instance with user data.

User data - optional: Info
Upload a file with your user data or enter it in the field.

```
#!/bin/bash
yum install nginx -y
systemctl enable nginx
systemctl start nginx
```

Summary:

- Number of instances: 1
- Software Image (AMI): Provided by Red Hat, Inc. ami-0583d8c7a9c35822c
- Virtual server type (instance type): t2.micro
- Firewall (security group): New security group
- Storage (volumes): 1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million API calls per month.

Launch instance

The screenshot shows the AWS EC2 Instances page. A single instance named "aws-ec2" is listed. The instance has the following details:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
aws-ec2	i-05d6c169f4c5220a9	Running	t2.micro	Initializing	View alarms	us-east-1a	-	54.236.102.87	-

Connect to ec2

```
ec2-user@ip-172-10-1-72:~  
AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~  
$ cd downloads  
AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~/downloads  
$ ssh -i "aws.pem" ec2-user@54.236.102.87  
The authenticity of host '54.236.102.87 (54.236.102.87)' can't be established.  
ED25519 key fingerprint is SHA256:1TjtQMe00Ulh0c1r7ENoG+9s21Ftc6c3mju0Pc2L1t0.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added '54.236.102.87' (ED25519) to the list of known hosts.  
Register this system with Red Hat Insights: insights-client --register  
Create an account or view all your systems at https://red.ht/insights-dashboard  
[ec2-user@ip-172-10-1-72 ~]$ |
```

Checking nginx status

```

AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~
$ cd downloads

AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~/downloads
$ ssh -i "aws.pem" ec2-user@54.236.102.87
The authenticity of host '54.236.102.87' (54.236.102.87) can't be established.
ED25519 key fingerprint is SHA256:TjtQMe00Ulh0c1r7ENoG+9s21Ftc6c3mjw0Pc2Llt0.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '54.236.102.87' (ED25519) to the list of known hosts.
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
[ec2-user@ip-172-10-1-72 ~]$ sudo -i
[root@ip-172-10-1-72 ~]# systemctl status nginx
● nginx.service - The nginx HTTP and reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: disabled)
     Active: active (running) since Tue 2024-10-22 13:27:03 UTC; 15s ago
       Process: 6710 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
      Process: 6715 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=0/SUCCESS)
      Process: 6732 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUCCESS)
    Main PID: 6745 (nginx)
      Tasks: 2 (limit: 4400)
        Memory: 2.0M
          CPU: 20ms
        CGroup: /system.slice/nginx.service
            └─6745 "nginx: master process ./usr/sbin/nginx"
              ├─6750 "nginx: worker process"

Oct 22 13:27:03 ip-172-10-1-72.ec2.internal systemd[1]: Starting The nginx HTTP and reverse proxy server...
Oct 22 13:27:03 ip-172-10-1-72.ec2.internal nginx[6715]: nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
Oct 22 13:27:03 ip-172-10-1-72.ec2.internal nginx[6715]: nginx: configuration file /etc/nginx/nginx.conf test is successful
Oct 22 13:27:03 ip-172-10-1-72.ec2.internal systemd[1]: Started The nginx HTTP and reverse proxy server.
[root@ip-172-10-1-72 ~]#

```

Create a peering connection

The screenshot shows the AWS VPC Peering Connections page. On the left, there's a sidebar with 'VPC dashboard' and a 'Peering connections' section highlighted. The main area displays a table titled 'Peering connections info' with columns for Name, Peering connection ID, Status, Requester VPC, Acceptor VPC, Requester CIDRs, Acceptor CIDRs, and Request. A search bar at the top of the table says 'Find resources by attribute or tag'. Below the table, a message says 'No peering connection found'. At the bottom of the page, there's a note 'Select a peering connection above' and several small icons.

AWS Services Search [Alt+S]

Create peering connection

A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them privately.

Info

Peering connection settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.

my-peering-cn1

Select a local VPC to peer with

VPC ID (Requester)
vpc-05d55d9add05d3f20 (dev-vpc)

VPC CIDRs for vpc-05d55d9add05d3f20 (dev-vpc)

CIDR	Status	Status reason
10.0.0.0/16	Associated	-

Select another VPC to peer with

Account
 My account
 Another account

Region
 This Region (us-east-1)
 Another Region

VPC ID (Acceptor)

CloudShell Feedback

VPC ID (Acceptor)
vpc-034b60b291269a920 (aws-vpc)

VPC CIDRs for vpc-034b60b291269a920 (aws-vpc)

CIDR	Status	Status reason
172.10.0.0/16	Associated	-

Tags
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.

Key Value - *optional*
Name my-peering-cn1 Remove

Add new tag

You can add 49 more tags.

Cancel Create peering connection

CloudShell Feedback

Type here to search kyndryl

A VPC peering connection ppx-03d56c39613faab86 / my-peering-cn1 has been requested.

VPC > Peering connections > ppx-03d56c39613faab86

ppx-03d56c39613faab86 / my-peering-cn1

Pending acceptance

You can accept or reject this peering connection request using the 'Actions' menu. You have until Tuesday, October 29, 2024 at 18:59:17 GMT+5:30 to accept or reject the request, otherwise it expires.

Details		Actions	
Requester owner ID	637423404772	Acceptor owner ID	637423404772
Peering connection ID	ppx-03d56c39613faab86	Requester VPC	vpc-05d55d9add05d3f20 / dev-vpc
Status	Pending Acceptance by 637423404772	Requester CIDRs	10.0.0.0/16
Expiration time	Tuesday, October 29, 2024 at 18:59:17 GMT+5:30	Requester Region	N. Virginia (us-east-1)
		Acceptor VPC	vpc-034b60b291269a920 / aws-vpc
		Acceptor CIDRs	-
		Acceptor Region	N. Virginia (us-east-1)

DNS Route tables Tags

DNS settings

Requester VPC (vpc-05d55d9add05d3f20 / dev-vpc) Info

Actions ▾

- Accept request
- Reject request
- Edit DNS settings
- Manage tags
- Delete peering connection

A VPC peering connection ppx-03d56c39613faab86 / my-peering-cn1 has been requested.

VPC > Peering connections > ppx-03d56c39613faab86

ppx-03d56c39613faab86 / my-peering-cn1

Pending acceptance

You can accept or reject this peering connection request using the 'Actions' menu. You have until Tuesday, October 29, 2024 at 18:59:17 GMT+5:30 to accept or reject the request, otherwise it expires.

Details		Actions	
Requester owner ID	637423404772	Acceptor owner ID	637423404772
Peering connection ID	ppx-03d56c39613faab86	Requester VPC	vpc-05d55d9add05d3f20 / dev-vpc
Status	Pending Acceptance by 637423404772	Requester CIDRs	-
Expiration time	Tuesday, October 29, 2024 at 18:59:17 GMT+5:30	Requester Region	N. Virginia (us-east-1)
		Acceptor VPC	vpc-034b60b291269a920 / aws-vpc
		Acceptor CIDRs	-
		Acceptor Region	N. Virginia (us-east-1)

DNS Route tables Tags

DNS settings

Requester VPC (vpc-05d55d9add05d3f20 / dev-vpc) Info

Allow acceptor VPC to resolve DNS of hosts in requester VPC to private IP addresses
Disabled

Actions ▾

Are you sure you want to accept this VPC peering connection request? (ppx-03d56c39613faab86 / my-peering-cn1)

Requester VPC	Acceptor VPC
vpc-05d55d9add05d3f20 / dev-vpc	vpc-034b60b291269a920 / aws-vpc
Requester CIDRs	Requester CIDRs
-	10.0.0.0/16
Requester Region	Requester Region
N. Virginia (us-east-1)	N. Virginia (us-east-1)
Requester owner ID	Acceptor owner ID
637423404772 (This account)	637423404772 (This account)

Modify route table

1)aws-public-RT

2)dev-public-RT

AWS Services Search [Alt+S]

VPC > Route tables > rtb-0a9a18b6d9ee6fbdf > Edit routes

Edit routes

Destination	Target	Status	Propagated
172.10.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway	Active	No
10.0.0.0/16	Peering Connection pcx-03d56c39613faab86	-	No
	Add route		

Cancel Preview Save changes

AWS Services Search [Alt+S]

VPC > Route tables > rtb-0aa8edd3b4e82a1f6 > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway	Active	No
172.10.0.0/16	Peering Connection pcx-03d56c39613faab86	-	No
	Add route		

Cancel Preview Save changes

Unable to ping dev ec2 machine so need to modify the security group

```
root@ip-10-0-1-74:~# [root@ip-10-0-1-74 ~]# ping 10.0.1.74
PING 10.0.1.74 (10.0.1.74) 56(84) bytes of data.
^C
--- 10.0.1.74 ping statistics ---
79 packets transmitted, 0 received, 100% packet loss, time 79906ms
[root@ip-172-10-1-72 ~]#
```

The screenshot shows the AWS Management Console interface for managing security group inbound rules. The top navigation bar includes 'Services', a search bar, and account information ('N. Virginia' and 'MahechKumar001989'). The main content area is titled 'Edit inbound rules' with a 'Info' link. A sub-header states: 'Inbound rules control the incoming traffic that's allowed to reach the instance.' Below this, a table lists three rules:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-09a1ba8a98e0c7aa1	HTTP	TCP	80	Custom	0.0.0.0/0
sgr-05c5b533b6976934d	SSH	TCP	22	Custom	0.0.0.0/0
-	Custom ICMP - IPv4	All	All	Anywhere-IPv4	0.0.0.0/0

Buttons at the bottom include 'Add rule', 'Cancel', 'Preview changes', and a highlighted 'Save rules' button.

Now I am able to ping the dev ec2 machine

```
root@ip-172-10-1-72:~# ping 10.0.1.74
PING 10.0.1.74 (10.0.1.74) 56(84) bytes of data.
^C
--- 10.0.1.74 ping statistics ---
79 packets transmitted, 0 received, 100% packet loss, time 79906ms

[root@ip-172-10-1-72 ~]# ping 10.0.1.74
PING 10.0.1.74 (10.0.1.74) 56(84) bytes of data.
64 bytes from 10.0.1.74: icmp_seq=1 ttl=64 time=0.865 ms
64 bytes from 10.0.1.74: icmp_seq=2 ttl=64 time=0.687 ms
64 bytes from 10.0.1.74: icmp_seq=3 ttl=64 time=1.25 ms
64 bytes from 10.0.1.74: icmp_seq=4 ttl=64 time=1.66 ms
64 bytes from 10.0.1.74: icmp_seq=5 ttl=64 time=1.13 ms
64 bytes from 10.0.1.74: icmp_seq=6 ttl=64 time=1.22 ms
64 bytes from 10.0.1.74: icmp_seq=7 ttl=64 time=1.25 ms
64 bytes from 10.0.1.74: icmp_seq=8 ttl=64 time=1.54 ms
^C
--- 10.0.1.74 ping statistics ---
8 packets transmitted, 8 received, 0% packet loss, time 7041ms
rtt min/avg/max/mdev = 0.687/1.199/1.661/0.298 ms
[root@ip-172-10-1-72 ~]# |
```

Inbound rules [Info](#)

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-0c3557ccfa2473b76	HTTP	TCP	80	Custom	0.0.0.0/0
sgr-03553c1a33a7ba290	SSH	TCP	22	Custom	0.0.0.0/0
-	Custom ICMP - IPv4	All	All	Anywhere-IPv4	0.0.0.0/0

Add rule

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

Cancel [Preview changes](#) [Save rules](#)

I am also able to ping the aws ec2 machine

```
[root@ip-10-0-1-74 ~]# [root@ip-10-0-1-74 ~]# ping 172.10.1.72
PING 172.10.1.72 (172.10.1.72) 56(84) bytes of data.
^C
--- 172.10.1.72 ping statistics ---
3 packets transmitted, 0 received, 100% packet loss, time 2076ms

[root@ip-10-0-1-74 ~]# ping 172.10.1.72
PING 172.10.1.72 (172.10.1.72) 56(84) bytes of data.
64 bytes from 172.10.1.72: icmp_seq=1 ttl=64 time=1.54 ms
64 bytes from 172.10.1.72: icmp_seq=2 ttl=64 time=1.53 ms
64 bytes from 172.10.1.72: icmp_seq=3 ttl=64 time=1.67 ms
64 bytes from 172.10.1.72: icmp_seq=4 ttl=64 time=0.750 ms
64 bytes from 172.10.1.72: icmp_seq=5 ttl=64 time=1.12 ms
^C
--- 172.10.1.72 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4066ms
rtt min/avg/max/mdev = 0.750/1.321/1.665/0.339 ms
[root@ip-10-0-1-74 ~]# |
```