

Create And Configure Basic VPC Components in AWS:

LAB:

The first screenshot shows the AWS Management Console VPC dashboard for the us-east-1 region. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC components like Subnets, Route tables, and Internet gateways. The main content area displays 'Resources by Region' for US East 0, showing counts for VPCs, Subnets, Route Tables, Internet Gateways, NAT Gateways, VPC Peering Connections, Network ACLs, and Security Groups. A 'Service Health' section indicates that Amazon EC2 - US East is operating normally. A 'Settings' section includes links for Zones and Console Experiments. An 'Additional Information' section provides links to VPC Documentation, All VPC Resources, Forums, and Report an Issue.

The second screenshot shows the 'Create VPC' wizard. The 'VPC settings' section on the left allows users to choose between creating 'VPC only' or 'VPC and more' (selected). It also includes a 'Name tag auto-generation' section with a checkbox for 'Auto-generate' (checked) and a text input field containing 'MyVPC'. The 'Preview' section on the right shows a diagram of the VPC structure, including the VPC 'MyVPC-vpc' and four subnets: 'MyVPC-subnet-public1-us-east-1a', 'MyVPC-subnet-private1-us-east-1a', 'MyVPC-subnet-public2-us-east-1b', and 'MyVPC-subnet-private2-us-east-1b'.

us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#CreateVpccreateMode=vpcWithResources

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Lambda EC2

IPv4 CIDR block [Info](#)
Determine the starting IP and the size of your VPC using CIDR notation.
10.0.0.0/16 65,536 IPs

IPv6 CIDR block [Info](#)
☒ No IPv6 CIDR block
☐ Amazon-provided IPv6 CIDR block

Tenancy [Info](#)
Default

Number of Availability Zones (AZs) [Info](#)
Choose the number of AZs in which to provision subnets. We recommend at least two AZs for high availability.
1 2 3
▶ Customize AZs

Number of public subnets [Info](#)
The number of public subnets to add to your VPC. Use public subnets for web applications that need to be publicly accessible over the internet.

Preview

VPC [Show details](#)
Your AWS virtual network
MyVPC-vpc

Subnets (4)
Subnets within this VPC

us-east-1a
MyVPC-subnet-public1-us-east-1a
MyVPC-subnet-private1-us-east-1a

us-east-1b
MyVPC-subnet-public2-us-east-1b
MyVPC-subnet-private2-us-east-1b

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

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VPC > Your VPCs > Create VPC > Create VPC resources

Create VPC workflow

Creating VPC Resources ×
Thank you for using the new create VPC experience. [Let us know what you think.](#)

✓ Success

▼ Details

- ✓ Create VPC: [vpc-003afbaca78e4d0f8](#)
- ✓ Enable DNS hostnames
- ✓ Enable DNS resolution
- ✓ Verifying VPC creation: [vpc-003afbaca78e4d0f8](#)
- ✓ Create S3 endpoint: [vpce-06be62bb6222462ca](#)
- ✓ Create subnet: [subnet-0fd4e1a8b820cef2c](#)
- ✓ Create subnet: [subnet-0200e014d365a79b5](#)
- ✓ Create subnet: [subnet-0981bca9c2aedffe1](#)
- ✓ Create subnet: [subnet-0ad0ab324d467dc08](#)

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us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#VpcDetails:VpcId=vpc-003afbaca78e4d0f8

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New VPC Experience Tell us what you think

VPC dashboard
EC2 Global View New
Filter by VPC:
Select a VPC

Virtual private cloud

Your VPCs

Subnets
Route tables
Internet gateways
Egress-only internet gateways
Carrier gateways
DHCP Option Sets
Elastic IPs

vpc-003afbaca78e4d0f8 / MyVPC-vpc

Actions

Details Info

VPC ID vpc-003afbaca78e4d0f8	State Available	DNS hostnames Enabled	DNS resolution Enabled
Tenancy Default	DHCP options set dopt-0b1b56acae69afada	Main route table rtb-0223b0e13cad63c0c	Main network ACL acl-0e43d705d438b092e
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Route 53 Resolver DNS Firewall rule groups Failed to load rule groups	Owner ID 867383919004		

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Internet Gateway:

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

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New VPC Experience Tell us what you think

VPC dashboard
EC2 Global View New
Filter by VPC:
Select a VPC

Virtual private cloud

Your VPCs
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Carrier gateways
DHCP Option Sets
Elastic IPs

Internet gateways (1/1) Info

Filter internet gateways

1

Create internet gateway

<input checked="" type="checkbox"/>	Name	Internet gateway ID	State	VPC ID
<input checked="" type="checkbox"/>	MyVPC-igw	igw-094d1ef82822ea0f9	Attached	vpc-003afbaca78e4d0f8 MyVPC-vpc

igw-094d1ef82822ea0f9 / MyVPC-igw

Details Tags

Details

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

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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.

IGW

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	
Name	IGW	Remove

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us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#InternetGateway:internetGatewayId=igw-002153f0169f665fa

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New VPC Experience Tell us what you think

VPC dashboard

EC2 Global View [New](#)

Filter by VPC:

Select a VPC

Virtual private cloud

- Your VPCs
- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- Carrier gateways
- DHCP Option Sets
- Elastic IPs

The following internet gateway was created: igw-002153f0169f665fa - IGW. You can now attach to a VPC to enable the VPC to communicate with the internet. [Attach to a VPC](#)

VPC > Internet gateways > igw-002153f0169f665fa

igw-002153f0169f665fa / IGW [Actions](#)

Details [Info](#)

Internet gateway ID	State	VPC ID	Owner
igw-002153f0169f665fa	Detached	-	867383919004

Tags

Search tags

Key	Value
-----	-------

Manage tags

< 1 > ⚙

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

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Lambda EC2

New VPC Experience Tell us what you think

VPC dashboard
EC2 Global View New
Filter by VPC:
Select a VPC

Virtual private cloud
Your VPCs
Subnets
Route tables
Internet gateways
Egress-only internet gateways
Carrier gateways
DHCP Option Sets
Elastic IPs

Internet gateways (1/2) Info

Filter internet gateways

	Name	Internet gateway ID	State
<input checked="" type="checkbox"/>	IGW	igw-002153f0169f665fa	Detached
<input type="checkbox"/>	MyVPC-igw	igw-094d1ef82822ea0f9	Attached

Actions ▲ Create Internet gateway

- View details
- Attach to VPC
- Detach from VPC
- Manage tags
- Delete internet gateway

igw-002153f0169f665fa / IGW

Details Tags

Details

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us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#AttachInternetGateway:internetGatewayId=igw-002153f0169f665fa

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Lambda EC2

VPC > Internet gateways > Attach to VPC (igw-002153f0169f665fa)

Attach to VPC (igw-002153f0169f665fa) 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.

Q vpc-022afab16c39b1597 X

AWS Command Line Interface command

Cancel Attach internet gateway

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us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#InternetGateway:internetGatewayId=igw-002153f0169f665fa

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Lambda EC2

New VPC Experience Tell us what you think

VPC dashboard
EC2 Global View New
Filter by VPC:
Select a VPC

Virtual private cloud
Your VPCs
Subnets
Route tables
Internet gateways
Egress-only internet gateways
Carrier gateways
DHCP Option Sets
Elastic IPs

Internet gateway igw-002153f0169f665fa successfully attached to vpc-022afab16c39b1597

VPC > Internet gateways > igw-002153f0169f665fa

igw-002153f0169f665fa / IGW

Actions ▼

Details Info

Internet gateway ID	State	VPC ID	Owner
igw-002153f0169f665fa	Attached	vpc-022afab16c39b1597 my-vpc	867383919004

Tags

Search tags

Key Value

Manage tags

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Route tables:

The screenshot shows the 'Edit routes' page in the AWS Management Console. The breadcrumb navigation is 'VPC > Route tables > rtb-044c184aa830367cf > Edit routes'. The page title is 'Edit routes'. Below the title is a table with columns: Destination, Target, Status, and Propagated. The first row shows a destination of 10.0.0.0/24 with a target of 'local', which is 'Active' and not propagated. The second row shows a destination of 0.0.0.0/0 with a target of 'igw-002153f0169f665fa', which is not active and not propagated. There is a 'Remove' button next to the second row. Below the table is an 'Add route' button. At the bottom right are 'Cancel', 'Preview', and 'Save changes' buttons.

Destination	Target	Status	Propagated
10.0.0.0/24	local	Active	No
0.0.0.0/0	igw-002153f0169f665fa	-	No

Buttons: Add route, Cancel, Preview, Save changes

NACL:

The screenshot shows the 'Create network ACL' page in the AWS Management Console. The breadcrumb navigation is 'VPC > Network ACLs > Create network ACL'. The page title is 'Create network ACL'. Below the title is a description: 'A network ACL is an optional layer of security that acts as a firewall for controlling traffic in and out of a subnet.' Below this is a form with two sections: 'Network ACL settings' and 'Tags'. The 'Network ACL settings' section has a 'Name - optional' field with the value 'MyNACL' and a 'VPC' dropdown menu with the value 'vpc-022afab16c39b1597 (my-vpc)'. The 'Tags' section has a description: '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.'

Network ACL settings

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

VPC
VPC to use for this network ACL.
vpc-022afab16c39b1597 (my-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.

us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#EditInboundRules:networkAclId=acl-020f8e795b9cf5ddf

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VPC > Network ACLs > acl-020f8e795b9cf5ddf / MyNACL > Edit inbound rules

Edit inbound rules [Info](#)

Inbound rules control the incoming traffic that's allowed to reach the VPC.

Rule number Info	Type Info	Protocol Info	Port range Info	Source Info	Allow/Deny Info	
100	HTTP (80)	TCP (6)	80	0.0.0.0/0	Allow	<button>Remove</button>
*	All traffic	All	All	0.0.0.0/0	Deny	

Add new rule Sort by rule number

Cancel Preview changes Save changes

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us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#EditOutboundRules:networkAclId=acl-020f8e795b9cf5ddf

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VPC > Network ACLs > acl-020f8e795b9cf5ddf / MyNACL > Edit outbound rules

Edit outbound rules [Info](#)

Outbound rules control the outgoing traffic that's allowed to leave the VPC.

Rule number Info	Type Info	Protocol Info	Port range Info	Destination Info	Allow/Deny Info	
100	HTTP (80)	TCP (6)	80	0.0.0.0/0	Allow	<button>Remove</button>
*	All traffic	All	All	0.0.0.0/0	Deny	

Add new rule Sort by rule number

Cancel Preview changes Save changes

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Subnets:

←→↺🏠🔒us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#CreateSubnet:

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Subnet 1 of 1

Subnet name

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

SubnetA

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 CIDR block [Info](#)

10.0.1.0/24

Tags - optional

Key

Value - optional

Q NameX

Q SubnetAX

Remove

Add new tag

You can add 49 more tags.

Feedback

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