

Lilly

AWS Project

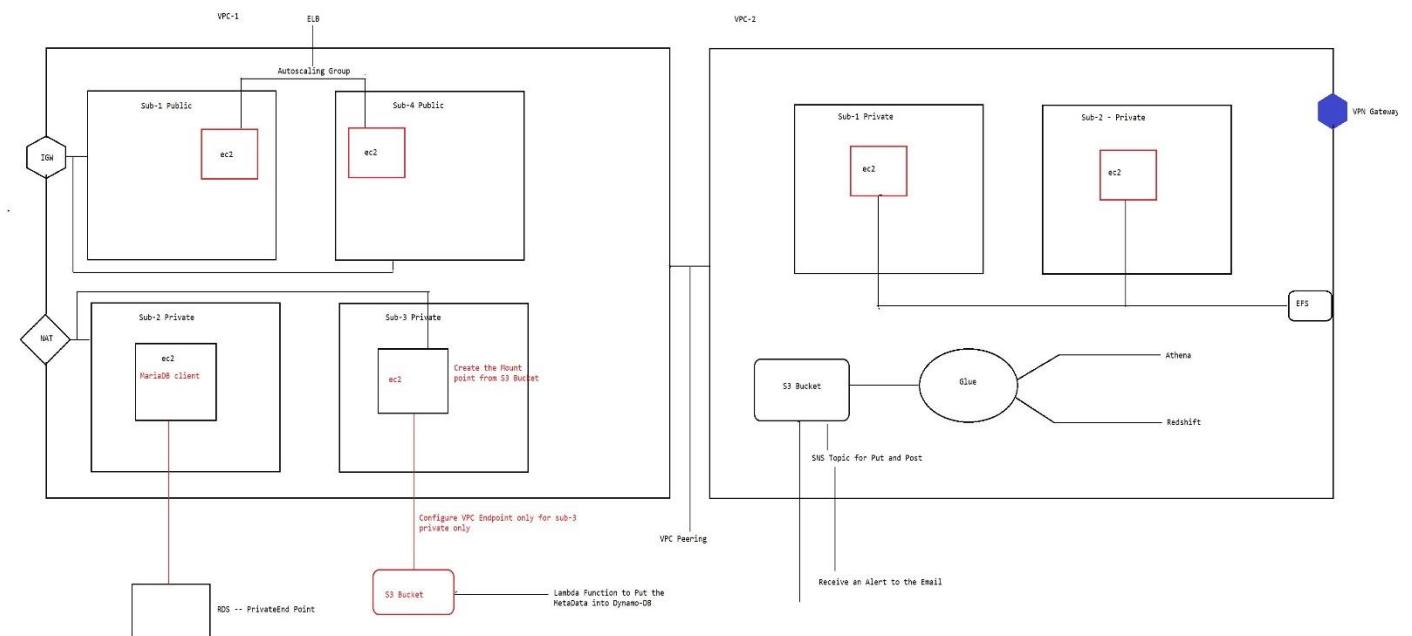
Group: 404!

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1. Creating VPC 1 + its Subnets, Route Tables, and Gateways

The screenshot shows the 'Create VPC' wizard in the AWS VPC Management Console. The 'VPC settings' step is selected. Under 'Resources to create', 'VPC only' is chosen. A name tag '404-VPC-1' is specified. The IPv4 CIDR block is set to '192.168.100.0/24'. There is no IPv6 CIDR block defined.

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.
404-VPC-1

IPv4 CIDR block [Info](#)
 IPv4 CIDR manual input IPAM-allocated IPv4 CIDR block

IPv4 CIDR
192.168.100.0/24

IPv6 CIDR block [Info](#)
 No IPv6 CIDR block

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The screenshot shows the 'Your VPCs' list in the AWS VPC Management Console. It displays two VPCs: '404-VPC-1' (VPC ID: `vpc-0bececfab2b59b447`, State: Available, IPv4 CIDR: 192.168.100.0/24) and '-' (VPC ID: `vpc-45051d22`, State: Available, IPv4 CIDR: 172.31.0.0/16). The left sidebar shows the 'New VPC Experience' is active, along with links for VPC dashboard, EC2 Global View, Filter by VPC, and various cloud services like Subnets, Route tables, Internet gateways, Egress-only internet gateways, Carrier gateways, DHCP Option Sets, Elastic IPs, and Managed prefix lists.

Your VPCs (2) [Info](#)

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
404-VPC-1	vpc-0bececfab2b59b447	Available	192.168.100.0/24	-
-	vpc-45051d22	Available	172.31.0.0/16	-

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VPC Management Console

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#CreateSubnet:

aws Services Search for services, features, blogs, docs, and more [Alt+S] Tokyo aws_aads_learning_env_learner/038516 @ 9344-6797-8614

Subnet 1 of 4

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 CIDR block [Info](#)
 X

Tags - optional

Key	Value - optional
<input type="text" value="Name"/> X	<input type="text" value="404-VPC1-Sub1-Pub"/> X

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

[Remove](#)

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VPC Management Console

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#CreateSubnet:

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Subnet 4 of 4

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 CIDR block [Info](#)
 X

Tags - optional

Key	Value - optional
<input type="text" value="Name"/> X	<input type="text" value="404-VPC1-Sub4-Pub"/> X

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

[Remove](#)

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Subnets | VPC Management Con x VPC Management Console x +

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#subnets:SubnetId=subnet-02b...

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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 Managed prefix lists

You have successfully created 4 subnets: subnet-02b6eba9bf4b08979, subnet-0bf15b3e8eaacb19c, subnet-0dba7405e27f8451e, subnet-023587a5847a921a1

Subnets (4) Info Actions Create subnet

Filter subnets

Subnet ID: subnet-02b6eba9bf4b08979 Subnet ID: subnet-0bf15b3e8eaacb19c

Subnet ID: subnet-0dba7405e27f8451e Subnet ID: subnet-023587a5847a921a1 Clear filters

Name	Subnet ID	State	VPC	IPv4 CIDR
404-VPC1-Sub1-Pub	subnet-02b6eba9bf4b08979	Available	vpc-0bececcfa22b59b447 404...	192.168.100...
404-VPC1-Sub2-Pri	subnet-0bf15b3e8eaacb19c	Available	vpc-0bececcfa22b59b447 404...	192.168.100...
404-VPC1-Sub4-Pub	subnet-023587a5847a921a1	Available	vpc-0bececcfa22b59b447 404...	192.168.100...
404-VPC1-Sub3-Pri	subnet-0dba7405e27f8451e	Available	vpc-0bececcfa22b59b447 404...	192.168.100...

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VPC Management Console x VPC Management Console x +

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#RouteTableDetails:RouteTableId=rtb-0b55b6b5ce50107c8

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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 Managed prefix lists

Route table rtb-0b55b6b5ce50107c8 | 404-VPC1-Pri-RT was created successfully.

VPC > Route tables > rtb-0b55b6b5ce50107c8

rtb-0b55b6b5ce50107c8 / 404-VPC1-Pri-RT Actions

You can now check network connectivity with Reachability Analyzer Run Reachability Analyzer

Details Info

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-0b55b6b5ce50107c8	No	-	-
VPC	Owner ID		
vpc-0bececcfa22b59b447 404-VPC-1	934467978614		

Routes Subnet associations Edge associations Route propagation Tags

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VPC Management Console | VPC Management Console | https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#RouteTableDetails:RouteTableId... | +

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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 Managed prefix lists

Route table rtb-0f5ffdc18b63c49b | 404-VPC1-Pub-RT was created successfully.

VPC > Route tables > rtb-0f5ffdc18b63c49b

rtb-0f5ffdc18b63c49b / 404-VPC1-Pub-RT Actions

You can now check network connectivity with Reachability Analyzer Run Reachability Analyzer

Details Info

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-0f5ffdc18b63c49b	No	-	-
VPC	Owner ID		
vpc-0becefca22b59b447 404-VPC-1	934467978614		

Route Subnet associations Edge associations Route propagation Tags

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Route tables | VPC Management | VPC Management Console | https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#RouteTables: | +

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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 Managed prefix lists

Route tables (7) Info Create route table

Filter route tables

Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC
404-VPC2-Route1	rtb-08ae27781a3623388	-	-	No	vpc-
-	rtb-0771f6512149e7541	-	-	Yes	vpc-
404-VPC2-Route2	rtb-0284a96c3fb0d07db7	-	-	No	vpc-
-	rtb-63bdcc05	-	-	Yes	vpc-
404-VPC1-Pub-RT	rtb-0f5ffdc18b63c49b	-	-	No	vpc-
404-VPC1-Pri-RT	rtb-0b55b6b5ce50107c8	-	-	No	vpc-
-	rtb-0bf0d006bec5c00d4	-	-	Yes	vpc-

Select a route table

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Route tables | VPC Management VPC Management Console Create internet gateway | VPC M... <https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#CreateInternetGateway>

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for the gateway below.

Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.
404-igw-VPC1

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
Q Name	Q 404-igw-VPC1

Add new tag
You can add 49 more tags.

Cancel **Create internet gateway**

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Route tables | VPC Management VPC Management Console + <https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#InternetGateway:internetGateway>

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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 Managed prefix lists

The following internet gateway was created: igw-0dd93aa85444d8be4 - 404-igw-VPC1. You can now attach to a VPC to enable the VPC to communicate with the internet. **Attach to a VPC**

VPC > Internet gateways > igw-0dd93aa85444d8be4

igw-0dd93aa85444d8be4 / 404-igw-VPC1

Actions

Details Info

Internet gateway ID	State	VPC ID	Owner
igw-0dd93aa85444d8be4	Detached	-	934467978614

Tags Manage tags

Key	Value
Name	404-igw-VPC1

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Route tables | VPC Management VPC Management Console VPC Management Console

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1>EditRouteTableSubnetAssociations

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VPC > Route tables > rtb-0b55b6b5ce50107c8 > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (2/4)

<input type="checkbox"/>	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input type="checkbox"/>	404-VPC1-Sub1-Pub	subnet-02b6eba9bf4b08979	192.168.100.0/26	-	rtb-0f5ffdcb18b63c49b / 404-VPC1-Pub-RT
<input checked="" type="checkbox"/>	404-VPC1-Sub2-Pri	subnet-0bf15b3e8eaacb19c	192.168.100.64/26	-	Main (rtb-0771f6512149e7541)
<input type="checkbox"/>	404-VPC1-Sub4-Pub	subnet-023587a5847a921a1	192.168.100.192/26	-	rtb-0f5ffdcb18b63c49b / 404-VPC1-Pub-RT
<input checked="" type="checkbox"/>	404-VPC1-Sub3-Pri	subnet-0dba7405e27f8451e	192.168.100.128/26	-	Main (rtb-0771f6512149e7541)

Selected subnets

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Route tables | VPC Management Route tables | VPC Management VPC Management Console

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#RouteTables:

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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 Managed prefix lists

You have successfully updated subnet associations for rtb-0b55b6b5ce50107c8 / 404-VPC1-Pri-RT.

Route tables (7) Info

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associations	Edge associations	Main	VPC
<input type="checkbox"/>	404-VPC2-Route1	rtb-08ae27781a3623388	subnet-06f781adcc853e...	-	No	vpc-
<input type="checkbox"/>	-	rtb-0771f6512149e7541	-	-	Yes	vpc-
<input type="checkbox"/>	404-VPC2-Route2	rtb-0284a96c3fb0d07db7	subnet-0a8947dd1fa1fc...	-	No	vpc-
<input type="checkbox"/>	-	rtb-63bdcc05	-	-	Yes	vpc-
<input type="checkbox"/>	404-VPC1-Pub-RT	rtb-0f5ffdcb18b63c49b	2 subnets	-	No	vpc-
<input type="checkbox"/>	404-VPC1-Pri-RT	rtb-0b55b6b5ce50107c8	2 subnets	-	No	vpc-
<input type="checkbox"/>	-	rtb-0bf0d006bec5c00d4	-	-	Yes	vpc-

Select a route table

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Route tables | VPC Management VPC Management Console VPC Management Console

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#CreateNatGateway:

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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

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11:36 06-10-2022

Route tables | VPC Management VPC Management Console VPC Management Console

https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#NatGatewayDetails:natGateway... A

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New VPC Experience Tell us what you think

VPC dashboard
EC2 Global View New
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

NAT gateway nat-04af962187e3429b6 | 404-VPC1-Nat-gw was created successfully.

VPC > NAT gateways > nat-04af962187e3429b6

nat-04af962187e3429b6 / 404-VPC1-Nat-gw Delete

Details Info

NAT gateway ID	Connectivity type	State	State message <small>Info</small>
<input type="text" value="nat-04af962187e3429b6"/>	Public	<small>Pending</small>	-
NAT gateway ARN	Elastic IP address	Private IP address	Network interface ID
<input type="text" value="arn:aws:ec2:ap-northeast-1:934467978614:natgateway/nat-04af962187e3429b6"/>	-	-	-
VPC	Subnet	Created	Deleted
<input type="text" value="vpc-0becceca22b59b447 / 404-VPC-1"/>	<input type="text" value="subnet-02b6eba9bf4b08979 / 404-VPC1-Sub1-Pub"/>	<small>Thursday, October 6, 2022 at 11:36:45 GMT+5:30</small>	-

Waiting for ap-northeast-1.console.aws.amazon.com... Settings Z

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11:36 06-10-2022

The screenshot shows the AWS EC2 Management Console with a green success message: "Security group (sg-05042e54497c50444 | 404-VPC-1) was created successfully". The navigation bar includes tabs for Route tables, VPC Management Console, Launch an instance, and EC2 Management Console. The search bar contains the URL https://ap-northeast-1.console.aws.amazon.com/ec2/home?region=ap-northeast-1#SecurityGroup:groupId=s... The sidebar on the left lists services like EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances (with sub-options for Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, and Capacity Reservations), and Images. The main content area shows the details of the newly created security group "sg-05042e54497c50444 - 404-VPC-1". The "Details" tab is selected, displaying information such as Security group name (404-VPC-1), Security group ID (sg-05042e54497c50444), Description (security group for exams), VPC ID (vpc-0bececfab2b59b447), Owner (934467978614), Inbound rules count (1 Permission entry), and Outbound rules count (1 Permission entry). Below the details, there are tabs for Inbound rules, Outbound rules, and Tags, with Inbound rules being the active tab.

2. Setting up Auto Scaling Groups to create instances

The screenshot shows the AWS EC2 console with the "Launch templates" section selected. A success message indicates that the "404-Launch-Template (lt-0c22b25ddcb1d0f02)" was successfully created. Below this, there are sections for "Next steps" and "Launch an instance". The "Launch an instance" section provides information about On-Demand Instances and includes a link to "Launch instance from this template". Another link, "Create an Auto Scaling group from your template", leads to the Auto Scaling groups creation page.

The screenshot shows the AWS EC2 console with the "Auto Scaling groups" section selected. It is in the "Create Auto Scaling group" wizard, currently at Step 1: "Choose launch template or configuration". The "Configure advanced options" section is expanded, showing options for load balancing and health checks. Under "Load balancing - optional", three options are available: "No load balancer" (selected), "Attach to an existing load balancer", and "Attach to a new load balancer". Under "Health checks - optional", there is a section for adding notifications and tags.

Route tables | VPC | VPC Management | Create launch temp | Create Auto Scaling | Instances | EC2 Mar | +

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Volumes New
Snapshots New
Lifecycle Manager New

Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces

Load Balancing
Load Balancers
Target Groups New

Auto Scaling
Launch Configurations
Auto Scaling Groups

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1 Choose launch template or configuration
Step 2 Choose instance launch options
Step 3 (optional) Configure advanced options
Step 4 (optional) Configure group size and scaling policies
Step 5 (optional) Add notifications
Step 6 (optional) Add tags

Configure group size and scaling policies [Info](#)

Set the desired, minimum, and maximum capacity of your Auto Scaling group. You can optionally add a scaling policy to dynamically scale the number of instances in the group.

Group size - optional [Info](#)

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity: 2
Minimum capacity: 2
Maximum capacity: 5

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This screenshot shows the 'Create Auto Scaling group' wizard at Step 4. It's titled 'Configure group size and scaling policies'. It asks for the desired capacity (set to 2), minimum capacity (set to 2), and maximum capacity (set to 5). Below this, there's a note about specifying capacity limits. The left sidebar shows the navigation path: EC2 > Auto Scaling groups > Create Auto Scaling group.

Route tables | VPC | VPC Management | Create launch temp | Auto Scaling group | Instances | EC2 Mar | +

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Volumes New
Snapshots New
Lifecycle Manager New

Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces

Load Balancing
Load Balancers
Target Groups New

Auto Scaling
Launch Configurations
Auto Scaling Groups

EC2 > Auto Scaling groups

Safely and Securely Replace Instances [Learn more](#)

Configure a maximum amount of time instances in your EC2 Auto Scaling Group can run for with Maximum Instance Lifetime.

404 created successfully

Auto Scaling groups (1) [Info](#) Edit Delete Create an Auto Scaling group

Name	Launch template/configuration	Instances	Status	Desired capacity
404	404-Launch-Template Version Default	0	Updating capacity	2

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This screenshot shows the 'Auto Scaling groups' list page. It displays one group named '404' with a status of 'Updating capacity' and a desired capacity of 2. The group was created using the '404-Launch-Template'. The left sidebar shows the navigation path: EC2 > Auto Scaling groups.

Route tables | VPC Manager | VPC Manager | Auto Scaling | Auto Scaling | VPC Manager | Connect to ins... | +

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Volumes New Snapshots New Lifecycle Manager New

Network & Security

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

Load Balancing

- Load Balancers
- Target Groups New

Auto Scaling

- Launch Configurations
- Auto Scaling Groups

Dynamic scaling policies (1) Info Actions Create dynamic scaling policy < 1 >

Target Tracking Policy

Policy type: Target tracking scaling

Enabled or disabled? Enabled

Execute policy when: As required to maintain Average CPU utilization at 60

Take the action: Add or remove capacity units as required

Instances need: 300 seconds to warm up before including in metric

Scale in: Enabled

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Type here to search 12:39 06-10-2022

This screenshot shows the AWS Auto Scaling console. A success message at the top right states "Dynamic scaling policy created or edited successfully." Below this, the "Dynamic scaling policies" section shows one entry: "Target Tracking Policy". The configuration details include: Policy type: Target tracking scaling, Enabled or disabled?: Enabled, Execute policy when: As required to maintain Average CPU utilization at 60, Take the action: Add or remove capacity units as required, Instances need: 300 seconds to warm up before including in metric, and Scale in: Enabled. The navigation bar at the bottom includes links for Feedback, Unified Settings, Privacy, Terms, and Cookie preferences.

Route tables | VPC Manager | VPC Manager | Auto Scaling | Auto Scaling | VPC Manager | Instances | EC2 | +

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Volumes New Snapshots New Lifecycle Manager New

Network & Security

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

Load Balancing

- Load Balancers
- Target Groups New

Auto Scaling

- Launch Configurations
- Auto Scaling Groups

EC2 > Auto Scaling groups > 404

Details Activity Automatic scaling Instance management Monitoring Instance refresh

Instances (4)

Instance ID	Lifecycle	Instance type	Weighted capacity	Launch template/
i-05b5c1f7f2b20cfa2	InService	t2.micro	-	404-Launch-Template
i-0bb009f02ed95a561	Pending	t2.micro	-	404-Launch-Template
i-0c217ac30e0040060	InService	t2.micro	-	404-Launch-Template
i-0cf77c7182b4b630d	Pending	t2.micro	-	404-Launch-Template

Lifecycle hooks (0) Info Actions Create lifecycle hook

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Type here to search 12:40 06-10-2022

This screenshot shows the AWS EC2 Auto Scaling groups page. It displays four instances: i-05b5c1f7f2b20cfa2 (InService, t2.micro, - capacity, 404-Launch-Template), i-0bb009f02ed95a561 (Pending, t2.micro, - capacity, 404-Launch-Template), i-0c217ac30e0040060 (InService, t2.micro, - capacity, 404-Launch-Template), and i-0cf77c7182b4b630d (Pending, t2.micro, - capacity, 404-Launch-Template). The "Instance management" tab is selected. Below the instance table, there is a section for "Lifecycle hooks (0)" with a "Create lifecycle hook" button. The navigation bar at the bottom includes links for Feedback, Unified Settings, Privacy, Terms, and Cookie preferences.

Instances (8) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
Linux-ops	i-07bba90bd21116479	Terminated	t2.micro	-	No alarms
Linux	i-0ae87e761f7899378	Terminated	t2.micro	-	No alarms
404-VPC1-EC2-1	i-090a3929d5656ebd1	Terminated	t2.micro	-	No alarms
-	i-0bb009f02ed95a561	Running	t2.micro	Initializing	No alarms
-	i-0cf77c7182b4b630d	Running	t2.micro	Initializing	No alarms
404-VPC1-EC2-2	i-0470ecd490e6fb744	Terminated	t2.micro	-	No alarms
404-VPC1-ec2-4	i-05b5c1f7f2b20cfa2	Running	t2.micro	2/2 checks passed	No alarms
404-VPC1-ec2-1	i-0c217ac30e0040060	Running	t2.micro	2/2 checks passed	No alarms

Select an instance

3. Creating Target Groups, Load Balancers

Step 1 Specify group details

Step 2 Register targets

Register targets

This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register your targets.

Available instances (5)

Instance ID	Name	State	Security groups	Zone	Subnet ID
i-0bb009f02ed95a561		running	404-VPC-1	ap-northeast-1a	subnet-023587a584:
i-0cf77c7182b4b630d		running	404-VPC-1	ap-northeast-1a	subnet-023587a584:
i-06450050f3b58f8e2		running	404-VPC-1	ap-northeast-1a	subnet-023587a584:
i-05b5c1f7f2b20cfa2	404-VPC1-ec2-4	running	404-VPC-1	ap-northeast-1a	subnet-023587a584:
i-0c217ac30e0040060	404-VPC1-ec2-1	running	404-VPC-1	ap-northeast-1a	subnet-023587a584:

0 selected

Screenshot of the AWS Lambda console showing the creation of a new function named "HelloWorld".

The Lambda function configuration:

- Function name:** HelloWorld
- Runtime:** Python 3.8
- Handler:** app.lambda_handler
- Memory size:** 128 MB
- Timeout:** 3 seconds
- Environment:** No environment variables are defined.
- Logs:** CloudWatch Logs

The Lambda function code (app.py):```python# coding: utf-8import jsondef lambda_handler(event, context): print("Received event: " + json.dumps(event)) response = { "statusCode": 200, "body": json.dumps("Hello from Lambda!") } return response```

Screenshot of the AWS Lambda console showing the creation of a new function named "HelloWorld".

The Lambda function configuration:

- Function name:** HelloWorld
- Runtime:** Python 3.8
- Handler:** app.lambda_handler
- Memory size:** 128 MB
- Timeout:** 3 seconds
- Environment:** No environment variables are defined.
- Logs:** CloudWatch Logs

The Lambda function code (app.py):```python# coding: utf-8import jsondef lambda_handler(event, context): print("Received event: " + json.dumps(event)) response = { "statusCode": 200, "body": json.dumps("Hello from Lambda!") } return response```

Route tables | VPC Manager | VPC Manager | Connect to ins... | Target groups | Load balancers | +

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Successfully created load balancer: 404-LoadB
Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.

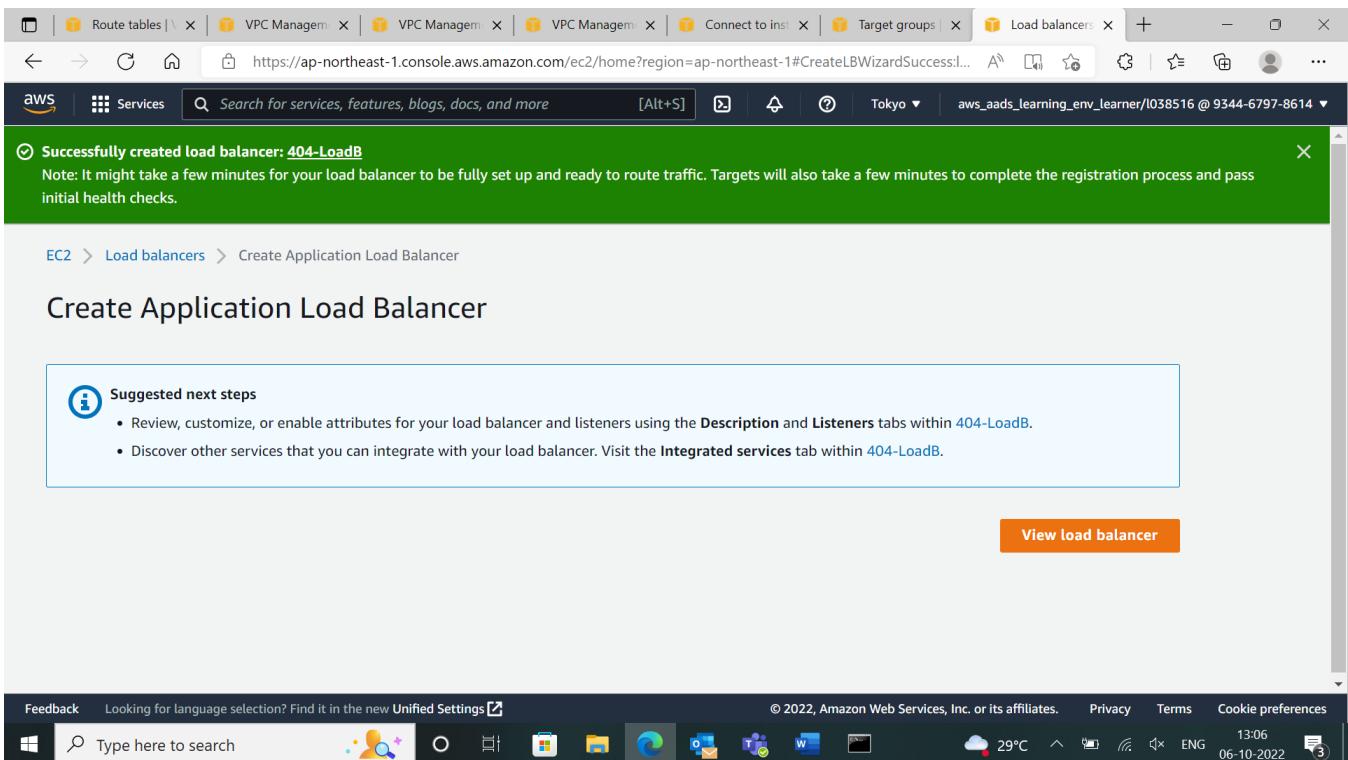
EC2 > Load balancers > Create Application Load Balancer

Create Application Load Balancer

Suggested next steps

- Review, customize, or enable attributes for your load balancer and listeners using the **Description** and **Listeners** tabs within 404-LoadB.
- Discover other services that you can integrate with your load balancer. Visit the **Integrated services** tab within 404-LoadB.

View load balancer



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Type here to search 29°C 13:06 06-10-2022

Route tables | VPC Manager | VPC Manager | VPC Manager | Connect to ins... | Target groups | EC2 Manager | +

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Events

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Limits

Instances

Instances New

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Launch Templates

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Reserved Instances New

Dedicated Hosts

Capacity Reservations

Images

Create Load Balancer Actions

search : 404-LoadB Add filter 1 to 1 of 1

Name	DNS name	State	VPC ID	Availability Zones
404-LoadB	404-LoadB-930723620.ap-n...	Provisioning	vpc-0bececfca22b59b447	ap-northeast-1c, ap-nor...

Load balancer: 404-LoadB

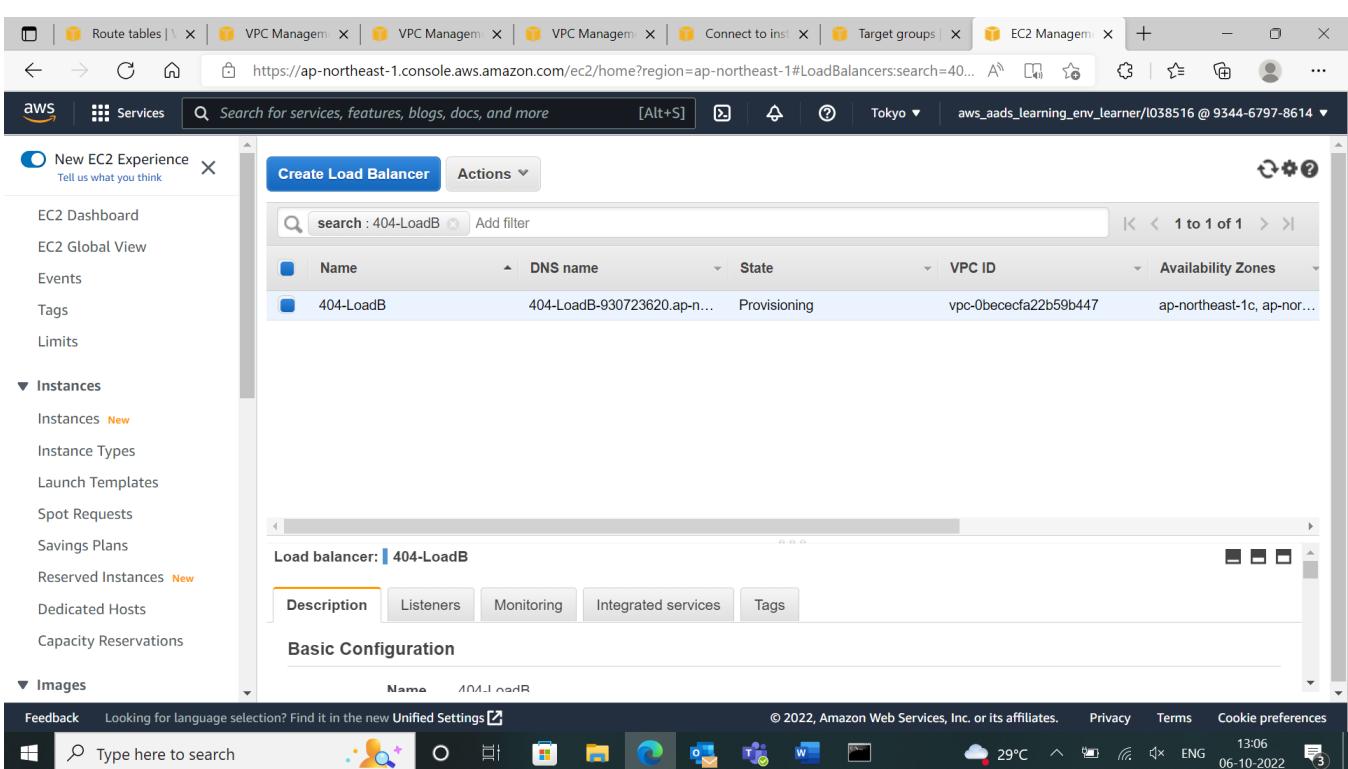
Description Listeners Monitoring Integrated services Tags

Basic Configuration

Name 404-LoadB

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4. Creating RDS and verifying its status by logging into a Private Instance from a Public Instance

Screenshot of the AWS RDS Create Database wizard:

Choose a database creation method

- Standard create
You set all of the configuration options, including ones for availability, security, backups, and maintenance.
- Easy create
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type: [Info](#)

- Amazon Aurora
- MySQL
- MariaDB
- PostgreSQL
- Oracle
- Microsoft SQL Server

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Type here to search

Version
MariaDB 10.6.8

Templates
Choose a sample template to meet your use case.

- Production
Use defaults for high availability and fast, consistent performance.
- Dev/Test
This instance is intended for development use outside of a production environment.
- Free tier
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.
[Info](#)

Settings

DB instance identifier [Info](#)
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS region.
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Type here to search

The screenshot shows the AWS RDS console interface. A new database instance is being created with the following details:

- Initial database name:** VPC-DB
- DB parameter group:** default.mariadb10.6
- Option group:** default:mariadb-10-6

Under the **Backup** section, there is an unchecked checkbox for "Enable automated backups". Under the **Encryption** section, there is an unchecked checkbox for "Enable encryption".

At the bottom, the status bar indicates: "Feedback Looking for language selection? Find it in the new Unified Settings" and "© 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences". The system tray shows the date and time as "06-10-2022 14:38".

The screenshot shows the AWS EC2 console with an SSH session open to an EC2 instance (i-069). The terminal window displays the following command and output:

```
ec2-user@ip-192-168-100-243:~$ ssh -i "Rajath.pem" ec2-user@54.64.144.250
Last login: Thu Oct  6 09:57:18 2022 from azure-ssh02nnn2.ap.lilly.com
[ec2-user@ip-192-168-100-243 ~]$ cd ..
```

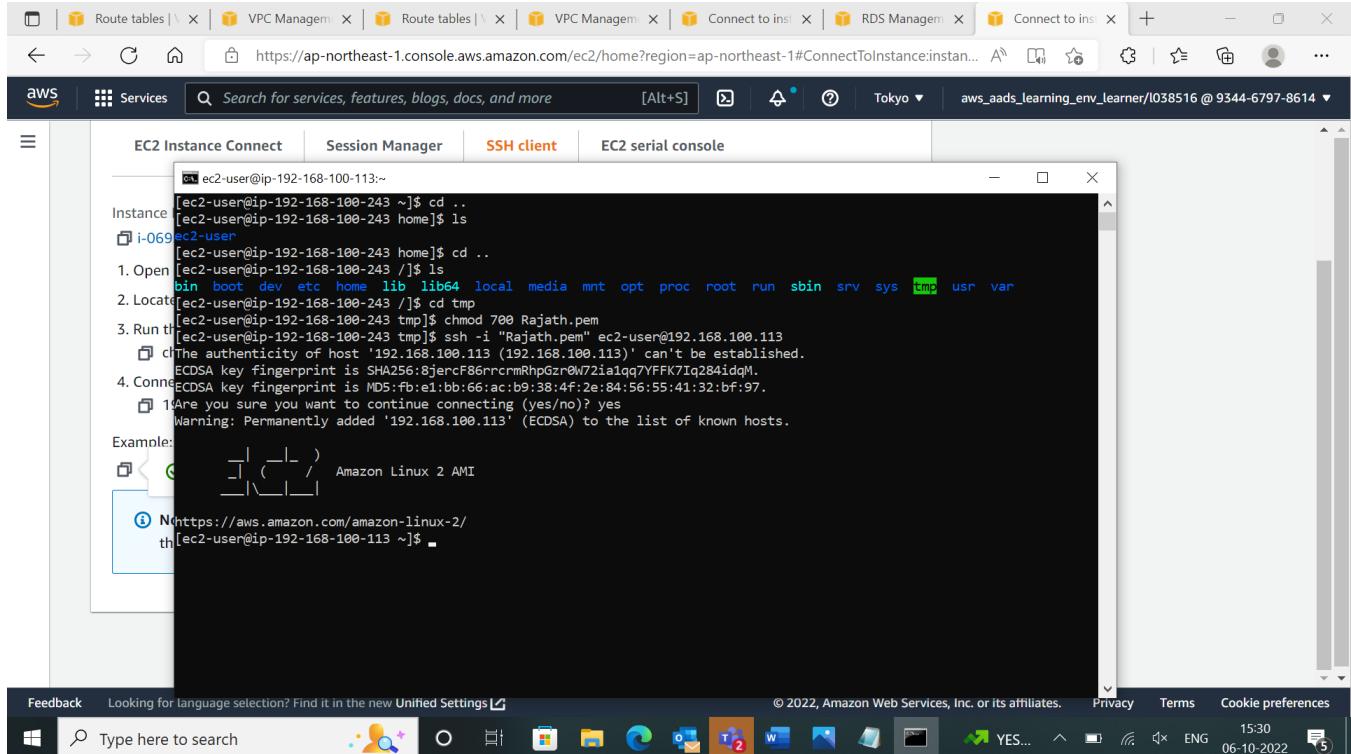
The user then lists the contents of the directory:

```
[ec2-user@ip-192-168-100-243 ~]$ ls
bin  boot  dev  etc  home  lib  lib64  local  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
```

Finally, the user changes the file permissions for "Rajath.pem" and logs out:

```
[ec2-user@ip-192-168-100-243 tmp]$ chmod 700 Rajath.pem
[ec2-user@ip-192-168-100-243 tmp]$ ssh -i "Rajath.pem" ec2-user@192.168.100.113
[ec2-user@ip-192-168-100-243 tmp]$
```

At the bottom, the status bar indicates: "Feedback Looking for language selection? Find it in the new Unified Settings" and "© 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences". The system tray shows the date and time as "06-10-2022 15:30".



```
root@ip-192-168-100-113:~
Downloading packages:
mariadb-5.5.68-1.amzn2.x86_64.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : 1:mariadb-5.5.68-1.amzn2.x86_64
  Verifying : 1:mariadb-5.5.68-1.amzn2.x86_64

Installed:
  mariadb.x86_64 1:5.5.68-1.amzn2

Complete!
[root@ip-192-168-100-113 ~]# mysql -u admin -h private-endpoint-RDS-database -p
Enter password:
ERROR 2005 (HY000): Unknown MySQL server host 'private-endpoint-RDS-database' (2)
[root@ip-192-168-100-113 ~]# mysql -u admin -h database-1.cet5ps7ickhm.ap-northeast-1.rds.amazonaws.com -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 76
Server version: 10.6.8-MariaDB-log managed by https://aws.amazon.com/rds/

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases
-> ;
+-----+
| Database |
+-----+
| Db_404 |
| information_schema |
| innodb |
| mysql |
| performance_schema |
| sys |
+-----+
6 rows in set (0.00 sec)

MariaDB [(none)]>
```

5. Creating VPC Endpoint, Lambda Function, S3 Buckets and Dynamo DB.

The screenshot shows the AWS VPC Management Console. A green success message at the top states "Successfully created VPC endpoint vpce-0e6593d0124cdaf62". Below this, the "Endpoints (1/1)" section displays a single entry:

Name	VPC endpoint ID	VPC ID	Service name
VPC1-EP-404	vpce-0e6593d0124cdaf62	vpc-0bececfab2b59b447 404-VPC-1	com.amazonaws.ap-no

Details for this endpoint are shown in the expanded view below:

vpce-0e6593d0124cdaf62 / VPC1-EP-404

Details | Route tables | Policy | Tags

Details

The screenshot shows the AWS Lambda console. The "Create function" wizard is open, with the "Author from scratch" option selected. The "Basic information" section includes fields for "Function name" (set to "404-Lambda") and "Runtime" (set to "Node.js").

Create function

Choose one of the following options to create your function.

Author from scratch Start with a simple Hello World example.

Use a blueprint Build a Lambda application from sample code and configuration presets for common use cases.

Container image Select a container image to deploy for your function.

Browse serverless app repository Deploy a sample Lambda application from the AWS Serverless Application Repository.

Basic information

Function name
Enter a name that describes the purpose of your function.
404-Lambda

Use only letters, numbers, hyphens, or underscores with no spaces.

Runtime [Info](#)
Choose the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby.

S3 feature spotlight | Instances | EC2 Manager | Endpoints | VPC Manager | Lambda | New tab

https://ap-northeast-1.console.aws.amazon.com/lambda/home?region=ap-northeast-1#/create/function

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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, track your AWS costs, and enforce attribute-based access control.

Enable VPC Info

Connect your function to a VPC to access private resources during invocation.

VPC

Choose a VPC for your function to access.

vpc-0bececfca22b59b447 (192.168.100.0/24)

Subnets

Select the VPC subnets for Lambda to use to set up your VPC configuration.

Choose subnets

subnet-06aefbcf66ab2f426 (192.168.100.0/26) ap-northeast-1c
Name: 404-VPC1-Sub1-Pri

subnet-0bf15b3e8eaacb19c (192.168.100.64/26) ap-northeast-1a
Name: 404-VPC1-Sub2-Pri

Security groups

Choose the VPC security groups for Lambda to use to set up your VPC configuration. The table below shows the inbound and outbound rules for the security groups that you choose.

Choose security groups

sg-05042e54497c50444 (404-VPC-1)
security group for exams

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S3 feature spotlight | Instances | EC2 Manager | Endpoints | VPC Manager | 404-Lambda - Lambda | New tab

https://ap-northeast-1.console.aws.amazon.com/lambda/home?region=ap-northeast-1#/functions/404-Lambda?ne...

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Creating the function 404-Lambda.

Lambda > Functions > 404-Lambda

404-Lambda

Throttle Actions

Function overview

404-Lambda

Description
-

Last modified
5 seconds ago

Function ARN

Function URL

Waiting for ap-northeast-1.console.aws.amazon.com... © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Type here to search 09:50 07-10-2022

S3 feature spotlight | Instances | EC2 Manager | Endpoints | VPC Manager | Lambda | New tab

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Successfully created the function 404-Lambda. You can now change its code and configuration. To invoke your function with a test event, choose "Test".

Lambda > Add trigger

Add trigger

Trigger configuration

S3 aws storage

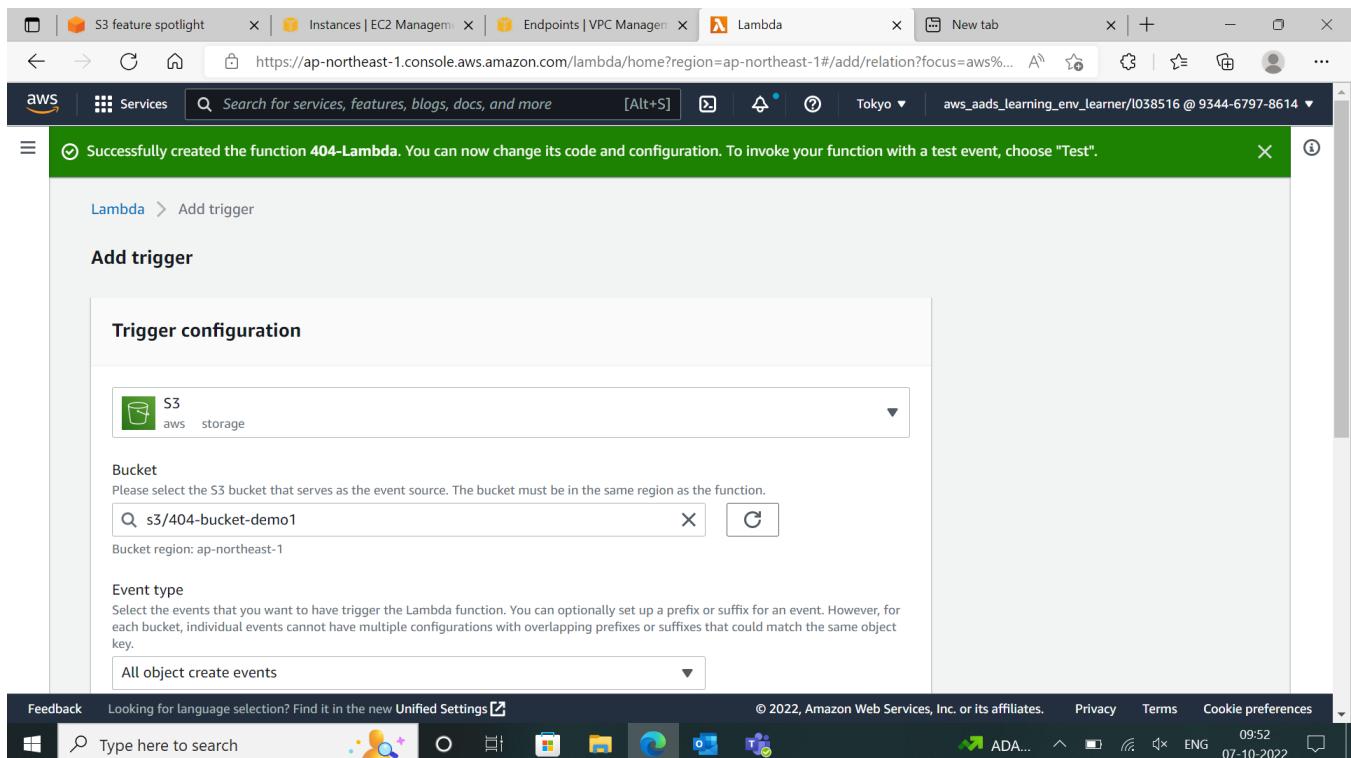
Bucket
Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.

Bucket region: ap-northeast-1

Event type
Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for an event. However, for each bucket, individual events cannot have multiple configurations with overlapping prefixes or suffixes that could match the same object key.

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S3 feature spotlight | Instances | EC2 Manager | Endpoints | VPC Manager | 404-Lambda - Lambda | New tab

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Function URL Info

Code Test Monitor Configuration Aliases Versions

Triggers (1)

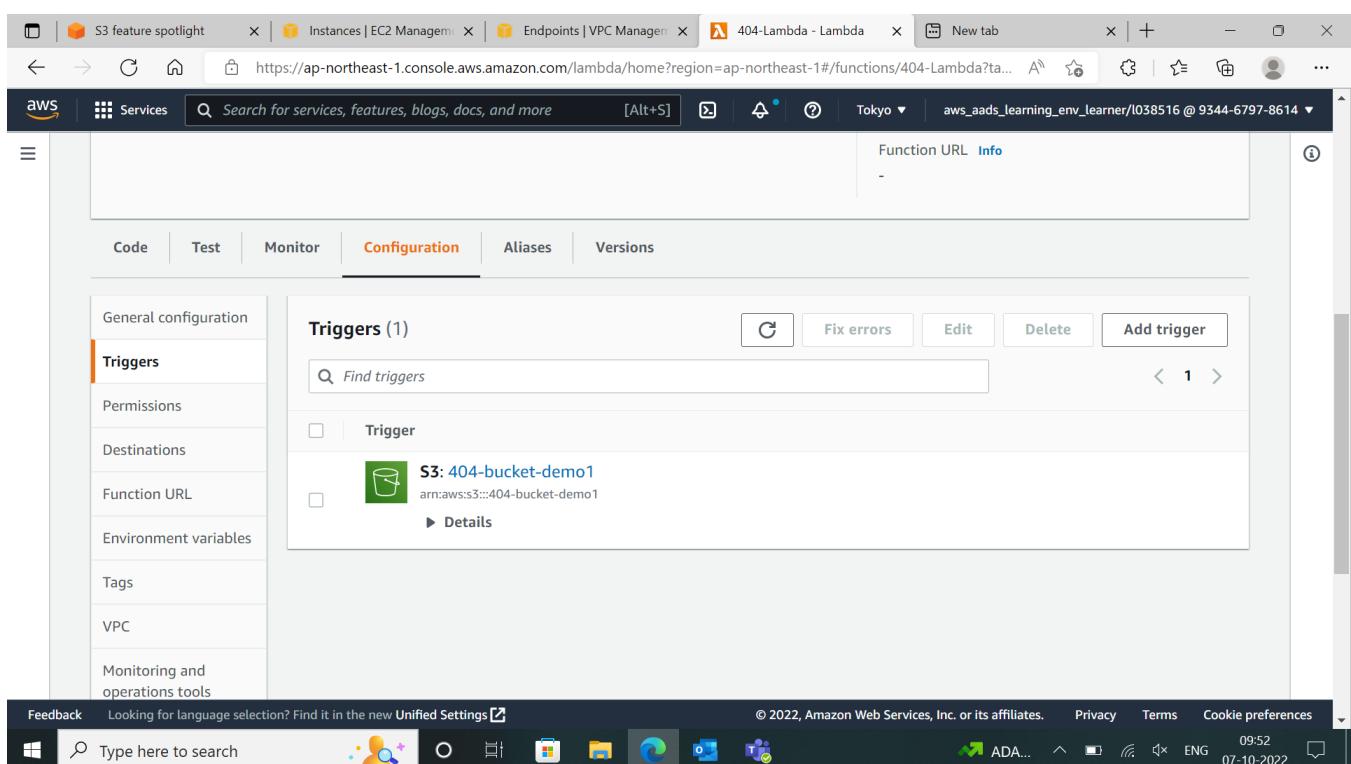
Trigger

S3: 404-bucket-demo1
arn:aws:s3:::404-bucket-demo1

Details

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Type here to search ADA... 09:52 07-10-2022



The trigger 404-bucket-demo1 was successfully added to function 404-Lambda. The function is now receiving events from the trigger.

Function overview

404-Lambda

Description: -

Last modified: 3 minutes ago

Function ARN: arn:aws:lambda:ap-northeast-1:934467978614:function:404-Lambda

Function URL: Info

```
import boto3
from uuid import uuid4
def lambda_handler(event, context):
    s3 = boto3.client("s3")
    dynamodb = boto3.resource('dynamodb')
    for record in event['Records']:
        bucket_name = record['s3']['bucket']['name']
        object_key = record['s3']['object']['key']
        size = record['s3']['object'].get('size', -1)
        event_name = record['eventName']
        event_time = record['eventTime']
        dynamoTable = dynamodb.Table('404-table')
        dynamoTable.put_item(
            Item={'unique': str(uuid4()), 'Bucket': bucket_name, 'Object': object_key, 'Size': size, 'Event': event_name, 'EventTime': event_time}
```

No recommendation available. [View details](#)

Ephemeral storage [Info](#)
You can configure up to 10 GB of ephemeral storage (/tmp) for your function. [View pricing](#)

512 MB
Set ephemeral storage (/tmp) to between 512 MB and 10240 MB.

Timeout
0 min 3 sec

Execution role
Choose a role that defines the permissions of your function. To create a custom role, go to the [IAM console](#).

Use an existing role
 Create a new role from AWS policy templates

Existing role
Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.

service-role/puni-lambda-role-f9dsdar1 [View the service-role/puni-lambda-role-f9dsdar1 role on the IAM console.](#)

[Cancel](#) [Save](#)

The screenshot shows the AWS S3 console with a blue header bar. The URL in the address bar is <https://s3.console.aws.amazon.com/s3/bucket/create?region=ap-northeast-1>. A message at the top says, "We're continuing to improve the S3 console to make it faster and easier to use. If you have feedback on the updated experience, choose [Provide feedback](#)". Below this, the breadcrumb navigation shows "Amazon S3 > Buckets > Create bucket". The main title is "Create bucket" with an "Info" link. A sub-section titled "General configuration" contains fields for "Bucket name" (set to "404-Bucket") and "AWS Region" (set to "Asia Pacific (Tokyo) ap-northeast-1"). A note below says, "Copy settings from existing bucket - optional" and "Only the bucket settings in the following configuration are copied." The bottom of the screen shows the Windows taskbar with the Start button, a search bar, and various pinned icons.

S3 Management Console

zon S3

We're continuing to improve the S3 console to make it faster and easier to use. If you have feedback on the updated experience, choose [Provide feedback](#).

Successfully created bucket "404-bucket-demo1"

To upload files and folders, or to configure additional bucket settings choose [View details](#).

Account snapshot

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

Buckets (10) [Info](#)

Buckets are containers for data stored in S3. [Learn more](#)

Create bucket

Name	AWS Region	Access	Creation date
404-bucket-demo1	Asia Pacific (Tokyo) ap-northeast-1		October 7, 2022, 09:35
c2c-amit-redshift	US East (N. Virginia) us-east-1		October 3, 2022, 11:55

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S3 Management Console

Create table | Amazon DynamoDB

https://ap-northeast-1.console.aws.amazon.com/dynamodbv2/home?region=ap-northeast-1#create-table

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Table details [Info](#)

DynamoDB is a schemaless database that requires only a table name and a primary key when you create the table.

Table name

This will be used to identify your table.

404-table

Between 3 and 255 characters, containing only letters, numbers, underscores (_), hyphens (-), and periods (.)

Partition key

The partition key is part of the table's primary key. It is a hash value that is used to retrieve items from your table and allocate data across hosts for scalability and availability.

unique

String

1 to 255 characters and case sensitive.

Sort key - optional

You can use a sort key as the second part of a table's primary key. The sort key allows you to sort or search among all items sharing the same partition key.

Enter the sort key name

String

1 to 255 characters and case sensitive.

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29°C ENG 09:37 07-10-2022

The screenshot shows the AWS Management Console with the S3 Management Console tab open. The URL in the address bar is <https://ap-northeast-1.console.aws.amazon.com/dynamodbv2/home?region=ap-northeast-1#tables>. The AWS logo and Services navigation bar are visible. A search bar at the top right contains the placeholder text "Search for services, features, blogs, docs, and more". The main content area displays a success message: "The 404-table table was created successfully." Below this, the "Tables" section is shown with a table titled "Tables (1) Info". The table has columns: Name, Status, Partition key, Sort key, Indexes, Read capacity mode, and Write capacity mode. One row is listed: "404-table" (Status: Active, unique (S), -), 0, Provisioned with auto scaling (5), Provisioned with auto scaling (5). The table includes a search bar, a dropdown for "Any table tag", and buttons for Actions, Delete, and Create table.

The screenshot shows the AWS S3 Management Console interface. At the top, there are tabs for 'S3 Management Console', 'List tables | Amazon DynamoDB', 'Instance details | EC2 Management', and a '+' button. Below the tabs, the URL is https://s3.console.aws.amazon.com/s3/upload/404-bucket-demo1?region=ap-northeast-1. The main area has a blue header bar with the word 'feedback.' and a green success message box containing 'Upload succeeded' and 'View details below.' Below this, there are three sections: 's3://404-bucket-demo1' (containing 1 file, 1.1 KB (100.00%)), '0 files, 0 B (0%)', and a 'Configuration' tab. Under 'Files and folders', there is a search bar and a table listing one file: 'employees-test.csv' (text/csv, 1.1 KB, Status: Succeeded). The bottom navigation bar includes links for 'Feedback', 'Unified Settings', '© 2022, Amazon Web Services, Inc. or its affiliates.', 'Privacy', 'Terms', and a search bar.

Screenshot of the AWS IAM Policies list page showing the creation of a new policy.

Identity and Access Management (IAM)

Policies (1297) Info

The policy **404BucketPolicy** has been created.

Policy name	Type	Used as	Description
404BucketPolicy	Customer managed	None	404
Allow-lly-aads-visionsystem-poc-upload	Customer managed	Permissions policy (1)	
Amazon-translate-final	Customer managed	None	Add
Amazon-translate-lilly-japan	Customer managed	None	

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1145 07-10-2022

Screenshot of the AWS IAM Roles creation process for a new role named "404Role".

Creating role 404Role.

Name, review, and create

Role details

Role name
Enter a meaningful name to identify this role.
404Role
Maximum 64 characters. Use alphanumeric and '+,-,@,_' characters.

Description
Add a short explanation for this role.
Allows EC2 instances to call AWS services on your behalf.
Maximum 1000 characters. Use alphanumeric and '+,-,@,_' characters.

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1146 07-10-2022

Screenshot of the AWS DynamoDB console showing the 'Get live item count' dialog.

The dialog title is 'Get live item count'. It contains a message: "When you choose 'Start scan,' you will perform a DynamoDB scan to determine the most-recent item count. This scan might consume additional table read capacity units." A warning message states: "⚠️ It is not recommended to perform this action on very large tables or tables that serve critical production traffic. You can pause the action at any time to avoid consuming extra read capacity."

Item count	Scan status	Last updated
1	Complete	October 07, 2022 10:24:52

Buttons: 'Scan again' (orange), 'Cancel' (gray).

Left sidebar: 'Dashboard', 'Tables', 'Update settings', 'Explore items', 'PartiQL editor', 'Backups', 'Exports to S3', 'Imports from S3', 'Reserved capacity', 'Settings'.

Bottom navigation: Feedback, Type here to search, Windows taskbar with various icons.

Screenshot of the AWS DynamoDB console showing the 'Instance details | EC2 Management' tab.

The tab title is 'Instance details | EC2 Management'. The main content shows '404-table' with a 'Completed' status and 'Read capacity units consumed: 0.5'. The 'Items returned (2)' section lists two items:

unique	Bucket	Event	EventTime	Object
5188282f-fd82-44c2-...	404-bucket...	ObjectCreat...	2022-10-0...	employees....
c8a104a5-3245-44a4...	404-bucket...	ObjectCreat...	2022-10-0...	employees....

Left sidebar: 'Dashboard', 'Tables', 'Update settings', 'Explore items' (highlighted), 'PartiQL editor', 'Backups', 'Exports to S3', 'Imports from S3', 'Reserved capacity', 'Settings'.

Bottom navigation: Feedback, Type here to search, Windows taskbar with various icons.

6. Mounting S3

```
[ec2-user@ip-192-168-100-33:~/s3fs-fuse]
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ s3fs -o iam_role="404Role" 404-bucket-demo1/var/s3fs-demosfs
s3fs: BUCKET 404-bucket-demo1/var/s3fs-demosfs -- bucket name contains an illegal character.
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ s3fs -o iam_role="project1-ec2-mount-role" 404-bucket-demo1/mnt/s3
s3fs: missing BUCKET argument.
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ s3fs -o iam_role="404Role" 404-bucket-demo1/var/s3fs-demosfs
s3fs: BUCKET 404-bucket-demo1/var/s3fs-demosfs -- bucket name contains an illegal character.
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ s3fs -o iam_role="404Role" 404-bucket-demo1/var/s3fs-demosfs
s3fs: BUCKET 404-bucket-demo1/var/s3fs-demosfs -- bucket name contains an illegal character.
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ s3fs -o iam_role="404Role" 404-bucket-demo1/mnt/s3
s3fs: BUCKET 404-bucket-demo1/mnt/s3 -- bucket name contains an illegal character.
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ s3fs -o iam_role="404Role" 404-bucket-demo1 /mnt/s3
s3fs: MOUNTPOINT: /mnt/s3 permission denied.
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ sudo s3fs -o iam_role="404Role" 404-bucket-demo1 /mnt/s3
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ df -h
Filesystem      Size   Used  Avail Use% Mounted on
devtmpfs        474M    0     474M  0% /dev
tmpfs          483M    0     483M  0% /dev/shm
tmpfs          483M  476K  483M  1% /run
tmpfs          483M    0     483M  0% /sys/fs/cgroup
/dev/xvda1       8.0G  1.9G  6.2G  23% /
tmpfs          97M    0     97M  0% /run/user/1000
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ sudo s3fs -o iam_role="404Role" 404-bucket-demo1 /var/s3fs-demosfs
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ df -h
Filesystem      Size   Used  Avail Use% Mounted on
devtmpfs        474M    0     474M  0% /dev
tmpfs          483M    0     483M  0% /dev/shm
tmpfs          483M  476K  483M  1% /run
tmpfs          483M    0     483M  0% /sys/fs/cgroup
/dev/xvda1       8.0G  1.9G  6.2G  23% /
tmpfs          97M    0     97M  0% /run/user/1000
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ sudo df -h
Filesystem      Size   Used  Avail Use% Mounted on
devtmpfs        474M    0     474M  0% /dev
tmpfs          483M    0     483M  0% /dev/shm
tmpfs          483M  476K  483M  1% /run
tmpfs          483M    0     483M  0% /sys/fs/cgroup
/dev/xvda1       8.0G  1.9G  6.2G  23% /
tmpfs          97M    0     97M  0% /run/user/1000
s3fs           16E    0     16E  0% /mnt/s3
s3fs           16E    0     16E  0% /var/s3fs-demosfs
[ec2-user@ip-192-168-100-33 s3fs-fuse]$
```

```
[ec2-user@ip-192-168-100-33:~/s3fs-fuse]
-bash: cd: /var/s3fs-demosfs: Permission denied
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ sudo cd /var/s3fs-demosfs
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ ls -l
total 516
-rw-rw-r-- 1 ec2-user ec2-user 45116 Oct  7 05:34 aclocal.m4
-rw-rw-r-- 1 ec2-user ec2-user   493 Oct  7 05:33 AUTHORS
-rwxrwxr-x 1 ec2-user ec2-user 1350 Oct  7 05:33 autogen.sh
drwxr-xr-x 2 ec2-user ec2-user    86 Oct  7 06:22 autom4te.cache
-rw-rw-r-- 1 ec2-user ec2-user 28616 Oct  7 05:33 ChangeLog
-rw-rw-r-- 1 ec2-user ec2-user 2309 Oct  7 05:33 COMPILATION.md
lrwxrwxrwx 1 ec2-user ec2-user    37 Oct  7 05:34 config.guess -> /usr/share/automake-1.13/config.guess
-rw-rw-r-- 1 ec2-user ec2-user 2637 Oct  7 05:34 config.h
-rw-rw-r-- 1 ec2-user ec2-user 2418 Oct  7 05:34 config.h.in
-rw-rw-r-- 1 ec2-user ec2-user 26025 Oct  7 06:29 config.log
-rwxrwxr-x 1 ec2-user ec2-user 34654 Oct  7 06:29 config.status
lrwxrwxrwx 1 ec2-user ec2-user    35 Oct  7 05:34 config.sub -> /usr/share/automake-1.13/config.sub
-rw-rw-r-- 1 ec2-user ec2-user 223725 Oct  7 05:34 configure
-rw-rw-r-- 1 ec2-user ec2-user 10698 Oct  7 05:33 configure.ac
-rw-rw-r-- 1 ec2-user ec2-user 17987 Oct  7 05:33 COPYING
-rw-rw-r-- 1 ec2-user ec2-user    8 Oct  7 06:22 default_commit_hash
lrwxrwxrwx 1 ec2-user ec2-user    32 Oct  7 05:34 depcomp -> /usr/share/automake-1.13/depcomp
drwxrwxr-x 3 ec2-user ec2-user    87 Oct  7 06:29 doc
-rw-rw-r-- 1 ec2-user ec2-user 15576 Oct  7 05:33 INSTALL
lrwxrwxrwx 1 ec2-user ec2-user    35 Oct  7 05:34 install-sh -> /usr/share/automake-1.13/install-sh
-rw-rw-r-- 1 ec2-user ec2-user 27908 Oct  7 06:29 Makefile
-rw-rw-r-- 1 ec2-user ec2-user 2935 Oct  7 05:33 Makefile.am
-rw-rw-r-- 1 ec2-user ec2-user 27645 Oct  7 06:22 Makefile.in
lrwxrwxrwx 1 ec2-user ec2-user    32 Oct  7 05:34 missing -> /usr/share/automake-1.13/missing
-rw-rw-r-- 1 ec2-user ec2-user 5721 Oct  7 05:33 README.md
drwxrwxr-x 3 ec2-user ec2-user 4996 Oct  7 06:29 src
-rw-rw-r-- 1 ec2-user ec2-user    23 Oct  7 06:29 stamp-h1
drwxrwxr-x 3 ec2-user ec2-user 4996 Oct  7 06:29 test
lrwxrwxrwx 1 ec2-user ec2-user    36 Oct  7 05:34 test-driver -> /usr/share/automake-1.13/test-driver
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ ls -l /var/s3fs-demosfs
ls: cannot access /var/s3fs-demosfs: Permission denied
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ sudo ls -l /var/s3fs-demosfs
total 6427
-rw-r----- 1 root root 6575458 Oct  7 05:48 annual-enterprise-survey-2021-financial-year-provisional-csv.csv
-rw-r----- 1 root root   3778 Oct  7 04:52 employees.csv
-rw-r----- 1 root root  1098 Oct  7 04:54 employees-test.csv
[ec2-user@ip-192-168-100-33 s3fs-fuse]$
```

```

ec2-user@ip-192-168-100-33:~/s3fs-fuse
-rw-rw-r-- 1 ec2-user ec2-user 2637 Oct 7 05:34 config.h
-rw-rw-r-- 1 ec2-user ec2-user 2418 Oct 7 05:34 config.h.in
-rw-rw-r-- 1 ec2-user ec2-user 26025 Oct 7 06:29 config.log
-rwxrwxr-x 1 ec2-user ec2-user 34654 Oct 7 06:29 config.status
-rw-rw-r-- 1 ec2-user ec2-user 35 Oct 7 05:34 config.sub -> /usr/share/automake-1.13/config.sub
-rwxrwxr-x 1 ec2-user ec2-user 223725 Oct 7 05:34 configure
-rw-rw-r-- 1 ec2-user ec2-user 10698 Oct 7 05:33 configure.ac
-rw-rw-r-- 1 ec2-user ec2-user 17987 Oct 7 05:33 COPYING
-rw-rw-r-- 1 ec2-user ec2-user 8 Oct 7 06:22 default_commit_hash
-rw-rw-r-- 1 ec2-user ec2-user 32 Oct 7 05:34 depcomp -> /usr/share/automake-1.13/depcomp
drwxrwxr-x 3 ec2-user ec2-user 87 Oct 7 06:29 doc
-rw-rw-r-- 1 ec2-user ec2-user 15576 Oct 7 05:33 INSTALL
drwxrwxrwx 1 ec2-user ec2-user 35 Oct 7 05:34 install-sh -> /usr/share/automake-1.13/install-sh
-rw-rw-r-- 1 ec2-user ec2-user 27908 Oct 7 06:29 Makefile
-rw-rw-r-- 1 ec2-user ec2-user 2935 Oct 7 05:33 Makefile.am
-rw-rw-r-- 1 ec2-user ec2-user 27645 Oct 7 06:22 Makefile.in
drwxrwxrwx 1 ec2-user ec2-user 32 Oct 7 05:34 missing -> /usr/share/automake-1.13/missing
-rw-rw-r-- 1 ec2-user ec2-user 5721 Oct 7 05:33 README.md
drwxrwxr-x 3 ec2-user ec2-user 4996 Oct 7 06:29 src
-rw-rw-r-- 1 ec2-user ec2-user 23 Oct 7 06:29 stamp-h1
drwxrwxr-x 3 ec2-user ec2-user 4996 Oct 7 06:29 test
lrwxrwxrwx 1 ec2-user ec2-user 36 Oct 7 05:34 test-driver -> /usr/share/automake-1.13/test-driver
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ ls -l /var/s3fs-demos
ls: cannot access /var/s3fs-demos: Permission denied
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ sudo ls -l /var/s3fs-demos
total 6427
-rw-r----- 1 root root 6575458 Oct 7 05:48 annual-enterprise-survey-2021-financial-year-provisional-csv.csv
-rw-r----- 1 root root 3778 Oct 7 04:52 employees.csv
-rw-r----- 1 root root 1098 Oct 7 04:54 employees-test.csv
[ec2-user@ip-192-168-100-33 s3fs-fuse]$ sudo ls -l /mnt/s3
total 6429
-rw-r----- 1 root root 6575458 Oct 7 05:48 annual-enterprise-survey-2021-financial-year-provisional-csv.csv
-rw-r----- 1 root root 3778 Oct 7 04:52 employees.csv
-rw-r----- 1 root root 1098 Oct 7 04:54 employees-test.csv
-rw-r----- 1 root root 1710 Oct 7 06:46 Lambda.txt
[ec2-user@ip-192-168-100-33 s3fs-fuse]$
```

7. Creating VPC – 2 + Route Tables and Instances

The screenshot shows the AWS VPC Management Console interface. The URL in the address bar is <https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#CreateVpc:createMode=vpcOnly>. The page title is "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.
Value: 404-VPC-2

IPv4 CIDR block: [Info](#)
 IPv4 CIDR manual input
 IPAM-allocated IPv4 CIDR block
Value: 192.168.101.0/24

IPv6 CIDR block: [Info](#)
 No IPv6 CIDR block
 IPAM-allocated IPv6 CIDR block
 Amazon-provided IPv6 CIDR block

Feedback: Looking for language selection? Find it in the new [Unified Settings](#).

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The screenshot shows the AWS VPC Management Console with a green success message: "You successfully created **vpc-038dfebf2f3edc8ab / 404-VPC-2**". The left sidebar shows the "Virtual private cloud" section with "Your VPCs" selected. The main content area displays the details of the newly created VPC, including its ID, state, and various network settings.

Details	
VPC ID	vpc-038dfebf2f3edc8ab
State	Available
Tenancy	Default
Default VPC	No
Network mapping unit metrics	Disabled
DHCP option set	dopt-27383e40
IPv4 CIDR	192.168.101.0/24
Route 53 Resolver DNS Firewall rule groups	-
DNS hostnames	Disabled
Main route table	rtb-0bf0d006bec5c00d4
IPv6 pool	-
Owner ID	934467978614
DNS resolution	Enabled
Main network ACL	acl-07b9f49acda9488c2
IPv6 CIDR (Network border group)	-

The screenshot shows the AWS VPC Management Console with the URL <https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#CreateSubnet>. The page is titled "Create Subnet" under the "VPC" section. It displays the VPC ID "vpc-038dfebf2f3edc8ab (404-VPC-2)" and the associated IPv4 CIDR "192.168.101.0/24". The "Subnet settings" section is open, showing the "Subnet 1 of 1" configuration. The subnet name is set to "404-VPC2-Sub1", and the availability zone is listed as "Amazon chooses one for you". The bottom navigation bar includes links for Feedback, Unified Settings, Privacy, Terms, and Cookie preferences.

Screenshot of the AWS VPC Management Console showing the creation of a new subnet.

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 CIDR block [Info](#)

Tags - optional

Key	Value - optional
<input type="text" value="Name"/>	<input type="text" value="404-VPC2-Sub2"/>

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

[Remove](#)

Feedback: Looking for language selection? Find it in the new Unified Settings [\[Feedback\]](#)

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Windows taskbar: Type here to search, Start button, File Explorer, Task View, Edge browser, Cloud icon, 25°C, ENG, 11:14, 06-10-2022, Notifications (4)

Screenshot of the AWS VPC Management Console showing the creation of a new 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="404-VPC2-Route1"/>

Feedback: Looking for language selection? Find it in the new Unified Settings [\[Feedback\]](#)

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Windows taskbar: Type here to search, Start button, File Explorer, Task View, Edge browser, Cloud icon, 25°C, ENG, 11:25, 06-10-2022, Notifications (5)

VPC Management Console

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
- Managed prefix lists

Feedback Looking for language selection? Find it in the new Unified Settings

Search bar: Type here to search

Icons: Magnifying glass, User profile, Cloud, Temperature (25°C), Mail, ENG, Date (06-10-2022)

Links: https://ap-northeast-1.console.aws.amazon.com/vpc/home?region=ap-northeast-1#RouteTableDetails:RouteTableId... A Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

Route table rtb-08ae27781a3623388 | 404-VPC2-Route1 was created successfully.

VPC > Route tables > rtb-08ae27781a3623388

rtb-08ae27781a3623388 / 404-VPC2-Route1

Actions ▾

You can now check network connectivity with Reachability Analyzer

Run Reachability Analyzer

Details		Info
Route table ID	rtb-08ae27781a3623388	Main
	No	Explicit subnet associations
VPC	vpc-038dfebf2f3edc8ab 404-VPC-2	Owner ID
		934467978614
		Edge associations
		-

VPC > Route tables > rtb-08ae27781a3623388 > 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 type="checkbox"/>	404-VPC2-Sub2	subnet-0a8947dd1fa1fc475	192.168.101.128/25	-	Main (rtb-0bf0d006bec5c00d4)
<input checked="" type="checkbox"/>	404-VPC2-Sub1	subnet-06f781adcc853ec19	192.168.101.0/25	-	Main (rtb-0bf0d006bec5c00d4)

Selected subnets

subnet-06f781adcc853ec19 / 404-VPC2-Sub1

The screenshot shows the AWS EC2 Instances page. On the left, there's a navigation sidebar with links like EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances (New), Dedicated Hosts, and Capacity Reservations. The main content area displays a table of instances:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
-	i-0884d540rd9zts4cb	Running	t2.micro	2/2 checks passed	No alarms
pri-ec2-vpc1	i-06952f33353f91b8b	Running	t2.micro	2/2 checks passed	No alarms
-	i-09b894be0ad0fffb41	Running	t2.micro	2/2 checks passed	No alarms
404-RHS-Priv1	i-0ede7f7989362c9c8	Pending	t2.micro	-	No alarms

A modal window titled "Select an instance" is open at the bottom, listing the same four running instances.

The screenshot shows the "Launch an instance" page. At the top, there's a message: "You've been opted into the new launch experience. You can return to the previous version, but next time you log in, you'll automatically be opted into the new experience. [Find out more](#) or [send us feedback](#). Starting October 1, 2022, we will begin decommissioning the previous version." A "Opt out to the old experience" button is also present.

The main form has a "Name and tags" section where the name "404-RHS-Priv2" is entered. Below it is a "Application and OS Images (Amazon Machine Image)" section, which is currently collapsed. A note says: "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."

At the bottom, there's a feedback banner: "Feedback Looking for language selection? Find it in the new Unified Settings" and the standard Windows taskbar with icons for File Explorer, Task View, Start, and others.

The screenshot shows the AWS EC2 Launch Instances page. At the top, there is a message about using a key pair for secure connection. Below it, a dropdown menu shows 'Key pair name - required' set to 'RJ'. A button to 'Create new key pair' is also present. The 'Network settings' section includes fields for VPC (set to 'vpc-038dfebf2f3edc8ab (404-VPC-2)') and Subnet ('subnet-0a8947dd1fa1fc475'). It also includes options for 'Auto-assign public IP' (set to 'Disable') and 'Firewall (security groups)' (link to info). A note at the bottom of this section states: '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.' Below this, a blue banner informs the user they've been opted into the new launch experience and provides a link to opt out. The main content area shows a 'Success' message: 'Successfully initiated launch of instance (i-0168e0bb7b3b275e6)' with a 'Launch log' link. The 'Next Steps' section includes links to 'Get notified of estimated charges' (with a note about creating billing alerts), 'How to connect to your instance' (with a note about instance launching), and other AWS services like S3, IAM, and EC2.

8. Peering the two VPCs

The screenshot shows the 'Create peering connection' wizard in the AWS VPC Management Console. The top navigation bar includes tabs for S3 Management Console, Items | Amazon DynamoDB Man, EC2 Management Console, and VPC Management Console. The main content area is titled 'Create peering connection' and describes it as a networking connection between two VPCs. A 'Peering connection settings' step is shown, where the 'Name - optional' field contains '404Peer'. Below this, sections for 'Select a local VPC to peer with' and 'Select another VPC to peer with' are present. The 'VPC ID (Requester)' dropdown is set to 'Select a VPC'. Under 'Select another VPC to peer with', the 'Account' dropdown shows 'My account' selected. The bottom of the screen shows the Windows taskbar with various pinned icons and the date/time as 12:33 07-10-2022.

The screenshot shows the details of a VPC peering connection named 'pcx-018e3b7535800a142 / 404Peer'. A prominent green banner at the top states 'A VPC peering connection ppx-018e3b7535800a142 / 404Peer has been requested.' The main content area shows the 'pcx-018e3b7535800a142 / 404Peer' page with an 'Actions' dropdown menu. A 'Pending acceptance' message indicates that acceptance or rejection can be done until Friday, October 14, 2022, at 12:33:37 GMT+5:30. The 'Details' section provides information about the requester and acceptor, including their owner IDs, VPC IDs, and CIDRs. The acceptor's VPC ARN is listed as 'arn:aws:ec2:ap-northeast-1:934467978614:vpc-peering-connection/pcx-018e3b7535800a142'. The requester's VPC ARN is 'vpc-038dfebf2f3edc8ab / 404-VPC-2'. The acceptor's VPC ARN is 'vpc-0bececef22b59b447 / 404-VPC-1'. The bottom of the screen shows the Windows taskbar with various pinned icons and the date/time as 12:33 07-10-2022.

The screenshot shows the AWS Management Console with the VPC Peering Connections page open. A modal dialog titled "Accept VPC peering connection request" is displayed. It contains fields for Requester VPC (vpc-038dfeb2f3edc8ab / 404-VPC-2), Acceptor VPC (vpc-0bececf22b59b447 / 404-VPC-1), Requester CIDRs (empty), Acceptor CIDRs (empty), Requester Region (Tokyo (ap-northeast-1)), Acceptor Region (Tokyo (ap-northeast-1)), Requester owner ID (934467978614 (This account)), and Acceptor owner ID (934467978614 (This account)). At the bottom right of the modal are "Cancel" and "Accept request" buttons.

The screenshot shows the AWS Management Console with the VPC Peering Connections page open. A green success message at the top states: "Your VPC peering connection (pcx-018e3b7535800a142 / 404Peer) has been established. To send and receive traffic across this VPC peering connection, you must add a route to the peered VPC in one or more of your VPC route tables. Info". Below this, the "Peering connections (1/1)" table shows one entry: pcx-018e3b7535800a142 / 404Peer, with columns: Name, Peering connection ID, Status, Requester VPC, and Acceptor VPC. The status is Active. At the bottom of the page, there is a "Details" tab and a "Route tables" tab.

9. Creating EFS with VPC – 2

S3 Management Console | Items | Amazon DynamoDB Man | EC2 Management Console | Amazon EFS

https://ap-northeast-1.console.aws.amazon.com/efs/home?region=ap-northeast-1#/file-systems/create?name=404... [Alt+S] Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

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Step 2 Network access

Step 3 - optional File system policy

Step 4 Review and create

General

Name - optional Name your file system.

404-EFS

Name can include letters, numbers, and +-=_.:/ symbols, up to 256 characters.

Storage class [Learn more](#)

Standard Stores data redundantly across multiple AZs

One Zone Stores data redundantly within a single AZ

Automatic backups Automatically backup your file system data with AWS Backup using recommended settings. Additional pricing applies. [Learn more](#)

Enable automatic backups

⚠ We recommend that you create a backup policy for your file system

Lifecycle management EFS Intelligent-Tiering uses Lifecycle Management to automatically achieve the right price and performance blend for your application by moving your files between the Standard and Standard-Infrequent Access storage classes. [Learn more](#)

Transition into I/O Transition out of I/O

Feedback Looking for language selection? Find it in the new [Unified Settings](#)

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29°C ENG 12:35 07-10-2022

This screenshot shows the 'General' configuration step for creating a new Amazon EFS file system. The file name is set to '404-EFS'. The storage class is selected as 'Standard', which stores data redundantly across multiple Availability Zones (AZs). A note at the bottom recommends creating a backup policy. The sidebar on the left lists steps: Step 2 (Network access), Step 3 (optional: File system policy), and Step 4 (Review and create).

S3 Management Console | Items | Amazon DynamoDB Man | EC2 Management Console | Amazon EFS

https://ap-northeast-1.console.aws.amazon.com/efs/home?region=ap-northeast-1#/file-systems/create?name=404... [Alt+S] Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

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Step 3 - optional File system policy

Step 4 Review and create

Choose the VPC where you want EC2 instances to connect to your file system. [Learn more](#)

vpc-038febf2f3edc8ab
404-VPC-2

Mount targets

A mount target provides an NFSv4 endpoint at which you can mount an Amazon EFS file system. We recommend creating one mount target per Availability Zone. [Learn more](#)

Availability zone	Subnet ID	IP address	Security groups
ap-northeast...	subnet-06f7...	Automatic	Choose security group Remove
ap-northeast...	subnet-0b36...	Automatic	Choose security group Remove
	subnet-0b366e891e80f7c68 404-VPC2-Sub2 - 192.168.101.128/25		

Add mount target

Feedback Looking for language selection? Find it in the new [Unified Settings](#)

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29°C ENG 12:42 07-10-2022

This screenshot shows the 'Mount targets' configuration step for the EFS file system. It lists three existing VPCs and allows adding more. Three specific mount targets are shown, each associated with a specific subnet and security group. The first two are in the 'ap-northeast...' zone, and the third is in the 'ap-northeast...' zone. The 'Add mount target' button is visible at the bottom.

Elastic File System

File systems

File system (fs-0d3edfe2e9e4698e6) is available

Introducing EFS Replication

Keep an up-to-date copy of your file system in a region or availability zone of your choice.

What's new | Documentation | AWS Storage Blog

Name	File system ID	Encrypted	Total size	Size in Standard / One Zone	Size in Standard-IA / One Zone-IA	Provisioned Throughput (MiB/s)
404-EFS	fs-0d3edfe2e9e4698e6		6.00 KiB	6.00 KiB	0 Bytes	-

10.EFS Mounting

```

root@ip-192-168-101-99:~
--make-shared          mark a subtree as shared
--make-slave           mark a subtree as slave
--make-private         mark a subtree as private
--make-unbindable     mark a subtree as unbindable
--make-rshared         recursively mark a whole subtree as shared
--make-rslave          recursively mark a whole subtree as slave
--make-rprivate         recursively mark a whole subtree as private
--make-runbindable    recursively mark a whole subtree as unbindable

For more details see mount(8).
[root@ip-192-168-101-99 ~]# df -kh
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M   0  474M  0% /dev
tmpfs          483M   0  483M  0% /dev/shm
tmpfs          483M  492K  483M  1% /run
tmpfs          483M   0  483M  0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.3G  6.8G  16% /
tmpfs          97M   0  97M  0% /run/user/0
tmpfs          97M   0  97M  0% /run/user/1000
[root@ip-192-168-101-99 ~]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport 192.168.101.47:/ efs
mount.nfs4: Connection timed out
[root@ip-192-168-101-99 ~]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport 192.168.101.47:/ efs
[root@ip-192-168-101-99 ~]# df -kh
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M   0  474M  0% /dev
tmpfs          483M   0  483M  0% /dev/shm
tmpfs          483M  496K  483M  1% /run
tmpfs          483M   0  483M  0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.3G  6.8G  16% /
tmpfs          97M   0  97M  0% /run/user/0
tmpfs          97M   0  97M  0% /run/user/1000
192.168.101.47:/  8.0E   0  8.0E  0% /root/efs
[root@ip-192-168-101-99 ~]#

```

11. Glue and Athena.

The screenshot shows the 'Database details' section of the AWS Glue Data Catalog 'Create database' dialog. The 'Name' field contains '404-db'. The 'Location - optional' field is empty. The 'Description - optional' field contains the placeholder 'Enter text'. At the bottom right are 'Cancel' and 'Create database' buttons. The browser address bar shows the URL <https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#/v2/data-catalog/databases>.

The screenshot shows the 'Databases' list page in the AWS Glue Data Catalog. A blue banner at the top says 'Introducing the new AWS Glue Databases console experience' and 'We've redesigned the AWS Glue Databases console to make it easier to use. Let us know what you think. Continue to use the new console, or use the [old console](#)'. The main table lists two databases: '404-db' and 'default'. The table has columns for Name, Description, Location URI, and Created on (UTC). The '404-db' entry was created on October 9, 2022, at 10:35:51 UTC. The 'default' entry was created on September 30, 2022, at 04:48 UTC. The browser address bar shows the URL <https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#/v2/data-catalog/databases>.

Name	Description	Location URI	Created on (UTC)
404-db	-	-	October 9, 2022 at 10:35:51
default	-	-	September 30, 2022 at 04:48

Instances | EC2 Mar | 404-bucket-demo1 | AWS Glue Console | Athena | IDS C2C_Campus | LillyAssignment.doc | +

https://ap-northeast-1.console.aws.amazon.com/athena/home?region=ap-northeast-1#/workgroups/create

aws Services Search for services, features, blogs, docs, and more [Alt+S] Tokyo aws_aads_learning_env_learner@I038018 @ 9344-6797-8614

Workgroup details

Enter a unique name for your workgroup. To change the workgroup name, delete the workgroup and recreate it with a new name.

Workgroup name: 404-wg

Workgroup names must be unique. Use 1-128 characters. (A-Z,a-z,0-9_,-,.). The name cannot be changed after creation.

Description - optional: 404-wg

Use up to 1024 characters. 1018 characters remaining.

Query engine version

Upgrade query engine:

- Automatic: Let Athena choose when to upgrade your workgroup. [Info](#)
- Manual: Manually choose an engine version now.

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Type here to search [Lilly](#) Upc... ENG 16:26 09-10-2022

Instances | EC2 Mar | 404-bucket-demo1 | AWS Glue Console | Athena | IDS C2C_Campus | LillyAssignment.doc | +

https://ap-northeast-1.console.aws.amazon.com/athena/home?region=ap-northeast-1#/workgroups

aws Services Search for services, features, blogs, docs, and more [Alt+S] Tokyo aws_aads_learning_env_learner@I038018 @ 9344-6797-8614

Amazon Athena

Workgroup created: Workgroup 404-wg was created successfully.

Query editor Workgroups Data sources

Jobs Workflows Powered by Step Functions

Turn on compact mode

Workgroups (2) [Info](#)

Use workgroups to separate users, teams, applications, workloads, and to set limits on amount of data for each query or the entire workgroup process. You can also view query-related metrics in AWS CloudWatch.

Actions Create workgroup

Filter workgroups

Name	Description	Query en...	Query en...	Created on	Status
404-wg	404-wg	Athena engi...	Automatic	2022-10-09...	Turned On
primary	-	Athena engi...	Automatic	2022-07-21...	Current

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Type here to search [Lilly](#) Upc... ENG 16:27 09-10-2022

The screenshot shows the 'Add crawler' wizard in the AWS Glue console. On the left, the navigation menu includes 'Data Catalog' (Databases, Tables, Stream schema registries, Schemas, Connections, Crawlers, Classifiers, Catalog settings), 'Data Integration and ETL' (AWS Glue Studio, Jobs, Interactive Sessions, Notebooks, Data classification tools), and 'Feedback' (language selection). The main panel is titled 'Add crawler' and has a sidebar with steps: 'Crawler info', 'Crawler source type', 'Data store', 'IAM Role', 'Schedule', 'Output', and 'Review all steps'. The 'Crawler name' field contains '404-Crawler'. A note says 'Tags, description, security configuration, and classifiers (optional)'. A 'Next' button is at the bottom right.

The screenshot shows the 'Add crawler' wizard in the AWS Glue console, continuing from the previous step. The sidebar now includes 'Crawler info' (404-Crawler selected), 'Crawler source type' (Data stores selected), 'Data store' (S3 selected), and 'Output'. The main panel shows 'Crawl data in' options: 'Specified path in my account' (selected) and 'Specified path in another account'. An 'Include path' input field contains 's3://404-bucket-demo1/'. A note explains: 'All folders and files contained in the include path are crawled. For example, type s3://MyBucket/MyFolder/ to crawl all objects in MyFolder within MyBucket.' A 'Sample size (optional)' input field has 'Enter a number between 1 and 249'. A note says: 'This field sets the number of files in each leaf folder to be crawled. If not set, all the files are crawled.' A 'Exclude patterns (optional)' section is present. 'Back' and 'Next' buttons are at the bottom.

The screenshot shows the 'Add crawler' configuration page in the AWS Glue console. On the left, a sidebar lists various AWS Glue services: Data Catalog, Databases, Tables, Stream schema registries, Schemas, Connections, Crawlers, Classifiers, Catalog settings, Data Integration and ETL, AWS Glue Studio, Jobs, Interactive Sessions, Notebooks, and Data classification tools. The main area is titled 'Add crawler' and contains several configuration sections:

- Crawler info:** 404-Crawler
- Crawler source type:** Data stores
- Data store:** S3: s3://404-bucket-...
- IAM Role:** arn:aws:iam::934467978614:role/service-role/AWSGlueServiceRole-404DemoCrawler1
- Schedule:** Run on demand
- Output:**
- Review all steps:**

Configure the crawler's output

- Database:** 404-db
- Add database**
- Prefix added to tables (optional):** Type a prefix added to table names
- Table threshold (optional):** Enter a number greater than 0. This field sets the maximum number of tables the crawler is allowed to generate. In the event that this number is surpassed, the crawl will fail with an error. If not set, the crawler will automatically generate the number of tables depending on the data schema.
- Grouping behavior for S3 data (optional):**

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The screenshot shows the 'Crawlers' list page in the AWS Glue console. The sidebar is identical to the previous screenshot. The main area displays a message about the new console experience for AWS Crawlers and a table of existing crawlers:

New console experience for AWS Crawlers available! We've redesigned the AWS Crawlers console to make it easier to use. [Switch to the new console](#).

Name	Schedule	Status	Logs	Last runtime	Median runtime	Tables updated	Tables added
404-Crawler		Starting		0 secs	0 secs	0	0

Feedback: Looking for language selection? Find it in the new Unified Settings. © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

AWS Glue

New console experience for AWS Crawlers available! We've redesigned the AWS Crawlers console to make it easier to use. [Switch to the new console](#).

Crawlers

A crawler connects to a data store, progresses through a prioritized list of classifiers to determine the schema for your data, and then creates metadata tables in your data catalog.

Crawler "404-Crawler" completed and made the following changes: 4 tables created, 0 tables updated. See the tables created in database 404-db.

Name	Schedule	Status	Logs	Last runtime	Median runtime	Tables updated	Tables added
404-Crawler		Ready	Logs	1 min	1 min	0	4

Add crawler Run crawler Action Filter by tags and attributes Showing: 1 - 1

Feedback Looking for language selection? Find it in the new Unified Settings [\[Feedback\]](#)

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28°C 16:50 09-10-2022

AWS Glue

Data Source

AwsDataCatalog

Database

404-db

Tables and views

Create Filter tables and views

Tables (4)

- annual_enterprise_survey_2021_financi...
al_year_provisional_csv_csv
- employees_csv
- employees_test_csv
- lambda_txt

Views (0)

SQL Ln 1, Col 1

Run Explain Cancel Save Clear Create

Query results Query stats

Results (0)

Copy Download results Search rows

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Views (0)

Search rows

col0 col1 col2

1

2 20221009_112323_00068_me4us!"

3 hive" a* a2 varchar8 @H P

4 hive" b* b2 varchar8 @H P

5 hive" c* c2 varchar8 @H P

6 "a","b","c"

7 """col0""","col1""","col2""",

8 ""

9 " 20221009_112114_00014_f6kan""",

10 " hive"" col0* col02 varchar8 @H P,""""

12. Glue and Redshift.

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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 Managed prefix lists

Successfully created VPC endpoint vpce-06426d036db637432

Endpoints (2) Info Actions Create endpoint

Filter endpoints

Name	VPC endpoint ID	VPC ID	Service name
VPC1-EP-404	vpce-0e6593d0124cdaf62	vpc-0bececf22b59b447 404-VPC-1	com.amazonaws.ap-north
VPC-2-Endpoint	vpce-06426d036db637432	vpc-038dfebf2f3edc8ab 404-VPC-2	com.amazonaws.ap-north

Select an endpoint

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Type here to search Lilly Rain... 17:03 09-10-2022

Screenshots showing the creation of a Cluster Subnet Group in AWS Redshift:

Create cluster subnet group

Cluster subnet group details

- Name:** fourohfour-cluster-subnet-group-1
- Description:** (Empty)

Add subnets

VPC: 404-VPC-2 (vpc-038dfebf2f3edc8ab)

Feedback: Looking for language selection? Find it in the new Unified Settings.

Cluster subnet groups (2)

Name	Status	VPC ID	Description
default	Complete	vpc-45051d22	default
fourohfour-cluster-subnet-g	Complete	vpc-038dfebf2f3edc8ab	fourohfour-cluster-sub...

Feedback: Looking for language selection? Find it in the new Unified Settings.

The screenshot shows the 'Create cluster' configuration page for Amazon Redshift. The 'Cluster identifier' field contains '404-redshift-cluster-1'. The 'What are you planning to use this cluster for?' section has 'Production' selected. The 'Choose the size of the cluster' section shows 'I'll choose' selected. The status bar at the bottom indicates 'Feedback' and 'Looking for language selection? Find it in the new Unified Settings'.

Create cluster

Cluster configuration

Cluster identifier
This is the unique key that identifies a cluster.
404-redshift-cluster-1
The identifier must be from 1-63 characters. Valid characters are a-z (lowercase only) and - (hyphen).

What are you planning to use this cluster for?

Production
Configure for fast and consistent performance at the best price.

Free trial
Configure for learning about Amazon Redshift. This configuration is free for a limited time if your organization has never created an Amazon Redshift cluster.

Choose the size of the cluster

I'll choose Help me choose

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The screenshot shows the 'Clusters' page for Amazon Redshift. It displays two success messages: 'Successfully created cluster fourohfour-redshift-cluster-1' and 'Successfully loaded sample data'. Below these messages, there's a 'Connect to Redshift clusters' section with three options: 'Query data using Redshift query editor', 'Work with your client tools', and 'Choose your JDBC or ODBC driver'. The status bar at the bottom indicates 'Feedback' and 'Looking for language selection? Find it in the new Unified Settings'.

Amazon Redshift

Clusters

In my account From other accounts

Connect to Redshift clusters

Query data using Redshift query editor
Use the query editor v2 to run queries in your Redshift cluster.
Query data

Work with your client tools
You can connect to Amazon Redshift from your client tools, such as SQL clients, business intelligence (BI) tools, and extract, transform, load (ETL) tools, using JDBC or ODBC drivers.

Choose your JDBC or ODBC driver
Use JDBC or ODBC drivers to connect to Amazon Redshift from your client tools, such as SQL clients, BI tools, and ETL tools. We recommend using the new Amazon Redshift-specific drivers for better performance and scalability.

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AWS Glue Console | Athena | Redshift | S3 Management Console | LillyAssignment.docx | +

https://ap-northeast-1.console.aws.amazon.com/redshiftv2/home?region=ap-northeast-1#clusters

Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

Amazon Redshift

To query the sample data, use the Redshift query editor v2.

Amazon Redshift > Clusters

In my account | From other accounts

Connect to Redshift clusters

Clusters (1) Info

Cluster	Cluster namespace	Status	Storage capacity used	CPU utilization
fourohfour-redshift-cl...	dc2.large 1 node 160 GB	Available		

Filter clusters by property or value

Create cluster

Feedback Looking for language selection? Find it in the new Unified Settings

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Type here to search

Rain... 17:18 09-10-2022

This screenshot shows the AWS Redshift console. The left sidebar has a 'Clusters' section with options like Reserved nodes, Snapshots, Query editor, and Datashares. The main area shows a single cluster named 'fourohfour-redshift-cl...' with details: dc2.large, 1 node, 160 GB, Available status. A 'Create cluster' button is available. The bottom navigation bar includes links for Feedback, Unified Settings, Privacy, Terms, and Cookie preferences, along with system status like Rain, time, and date.

AWS Glue Console | Athena | Redshift | fourohfour-redshift | S3 Management Console | LillyAssignment.docx | +

https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#addEditConnection:

Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

Add connection

Set up your connection's properties.

For more information, see [Working with Connections](#).

Connection name: 404-connection

Connection type: Amazon Redshift

Require SSL connection

When selected, connection fails if unable to connect over SSL.

Description (optional): Enter description...

Next

Feedback Looking for language selection? Find it in the new Unified Settings

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Type here to search

22°C 17:39 09-10-2022

This screenshot shows the AWS Glue 'Add connection' wizard. The left sidebar lists legacy pages such as Workflows, Blueprints, Security configurations, and various jobs and connections. The main area is titled 'Add connection' and 'Set up your connection's properties'. It shows a step-by-step process: Connection properties (selected), Connection access, and Review all steps. The 'Connection name' field is set to '404-connection', 'Connection type' is 'Amazon Redshift', and there is an unchecked checkbox for 'Require SSL connection'. A 'Description (optional)' field is present. A 'Next' button is at the bottom right. The bottom navigation bar includes links for Feedback, Unified Settings, Privacy, Terms, and Cookie preferences, along with system status like weather, temperature, time, and date.

AWS Glue Console | Redshift | VPC Management | fourohfour-redshift | S3 Management | LillyAssignment.doc | ...

https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#addEditConnection:

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Add connection

Legacy pages

- Databases (legacy)
- Tables (legacy)
- Crawlers (legacy)
- Classifiers (legacy)
- Connections (legacy)
- Jobs (legacy)
- Dev endpoints (legacy)
- Notebooks (legacy)

Tutorials

- Add crawler
- Explore table
- Add job
- Resources ↗
- What's new 10+

Connection properties

404-connection
Type: Amazon Redshift

Connection access

Review all steps

Set up access to your data store.

For more information, see [Working with Connections](#).

Cluster: fourohfour-redshift-cluster-1

Database name: dev

Username: awsuser

Password:

Back Next

Feedback Looking for language selection? Find it in the new Unified Settings ↗ © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences Rain... ENG 17:46 09-10-2022

AWS Glue Con X IAM Managem X Redshift X VPC Managem X fourohfour-red X S3 Managem X LillyAssignment X ...

https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#catalog:tab=connections

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Connections

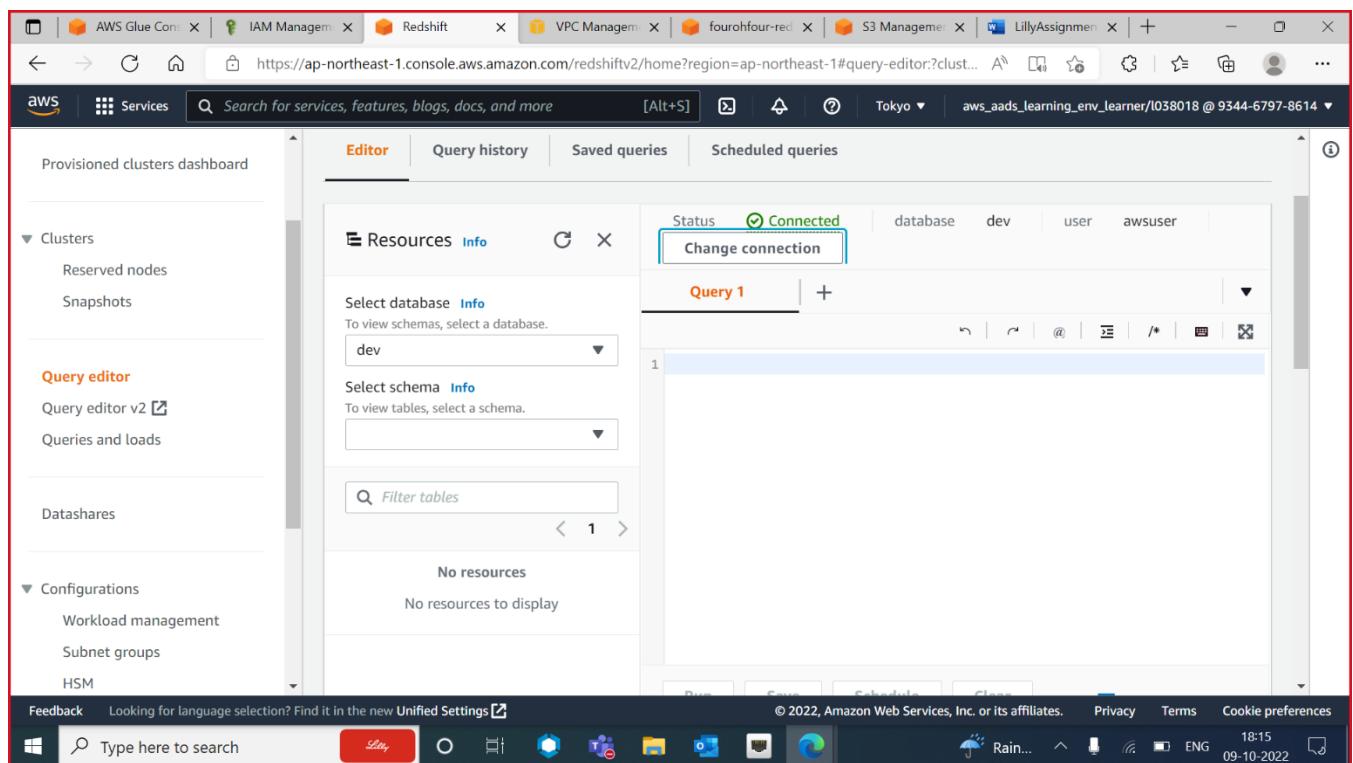
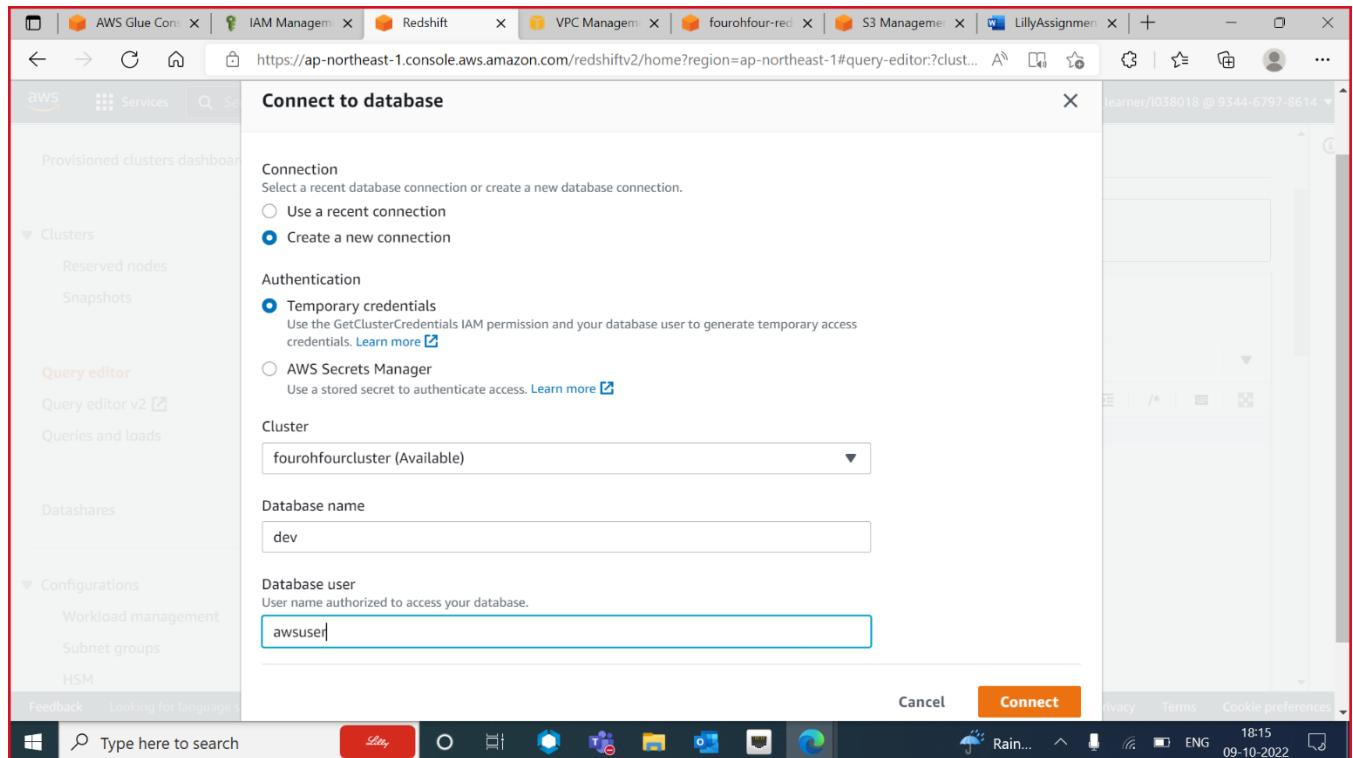
A connection contains the properties needed to connect to your data.

404-connection connected successfully to your instance.

Add connection Test connection Action ▾ Showing: 1 - 1 ⌂ ⓘ

Name	Type	Date created	Last updated	Updated by
404-connection	JDBC	9 October 2022 6:12 PM ...	9 October 2022 6:12 PM ...	

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AWS Glue Con... IAM Managem... Redshift VPC Manager... fourohfour-red S3 Manager... LillyAssignment... https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#addCrawler: Services Search for services, features, blogs, docs, and more [Alt+S] Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

Legacy pages

- Databases (legacy)
- Tables (legacy)
- Crawlers (legacy)
- Classifiers (legacy)
- Connections (legacy)
- Jobs (legacy)
- Dev endpoints (legacy)
- Notebooks (legacy)

Tutorials

- Add crawler
- Explore table
- Add job
- Resources ↗
- What's new 10+

Add crawler

Add information about your crawler

Crawler name
404-crawler-2

▶ Tags, description, security configuration, and classifiers (optional)

Next

Feedback Looking for language selection? Find it in the new Unified Settings © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences Rain... 18:14 09-10-2022

Type here to search

AWS Glue Con... IAM Managem... Redshift VPC Manager... fourohfour-red S3 Manager... LillyAssignment... https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#addCrawler: Services Search for services, features, blogs, docs, and more [Alt+S] Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

Legacy pages

- Databases (legacy)
- Tables (legacy)
- Crawlers (legacy)
- Classifiers (legacy)
- Connections (legacy)
- Jobs (legacy)
- Dev endpoints (legacy)
- Notebooks (legacy)

Tutorials

- Add crawler
- Explore table
- Add job
- Resources ↗
- What's new 10+

Add crawler

Add a data store

Choose a data store
JDBC

Connection
404-connection

Add connection

Include path
dev/public/employee_test

You can substitute the percent (%) character for a schema or table. For databases that support schemas, enter MyDatabase/MySchema% to match all tables in MySchema within MyDatabase. Oracle Database and MySQL don't support schema in the path; instead, enter MyDatabase%. For Oracle Database, MyDatabase is the system identifier (SID). For information about which JDBC data stores support schema in the path, see [Crawler Properties](#).

▶ Exclude patterns (optional)

Feedback Looking for language selection? Find it in the new Unified Settings © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences Rain... 18:18 09-10-2022

Type here to search

AWS Glue C AWS Glue C IAM Manag Redshift VPC Manag fourohfour S3 Manage LillyAssignn https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#catalog:tab=crawlers [Alt+S] Tokyo aws_aads_learning_env_learner/l038018 @ 9344-6797-8614

AWS Glue

Data Catalog Databases [New](#) Tables [New](#) Stream schema registries Schemas Connections [New](#) Crawlers [New](#) Classifiers [New](#) Catalog settings

Data Integration and ETL AWS Glue Studio Jobs [New](#) Interactive Sessions Notebooks [New](#) Data classification tools

New console experience for AWS Crawlers available! We've redesigned the AWS Crawlers console to make it easier to use. [Switch to the new console](#).

Crawlers

A crawler connects to a data store, progresses through a prioritized list of classifiers to determine the schema for your data, and then creates metadata tables in your data catalog.

Crawler "404-crawler" is now running.

Add crawler Run crawler Action Filter by tags and attributes Showing: 1 - 2 User preferences

Name	Schedule	Status	Logs	Last runtime	Median runtime	Tables updated	Tables added
404-Crawler		Ready	Logs	1 min	1 min	0	4
404-crawler		Starting		0 secs	0 secs	0	0

Feedback Looking for language selection? Find it in the new Unified Settings [\[Settings\]](#) © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Type here to search Rain... ENG 18:24 09-10-2022

The screenshot shows the AWS Glue Crawlers console. It features a sidebar with navigation links for Data Catalog, Data Integration and ETL, and AWS Glue Studio. The main area displays a message about the new console experience for crawlers, followed by a section titled 'Crawlers' with a brief description. Below this is a table listing two crawlers: '404-Crawler' (Ready, Logs, 1 min runtime, 4 added tables) and '404-crawler' (Starting). At the bottom, there's a feedback link, copyright information, and system status indicators.

AWS Glue C AWS Glue C IAM Manag Redshift VPC Manag fourohfour S3 Manage LillyAssignn https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#/v2/data-catalog/tables [Alt+S] Tokyo aws_aads_learning_env_learner/l038018 @ 9344-6797-8614

AWS Glue

Data Catalog Databases [New](#) Tables [New](#) Stream schema registries Schemas Connections [New](#) Crawlers [New](#) Classifiers [New](#) Catalog settings

Data Integration and ETL AWS Glue Studio Jobs [New](#) Interactive Sessions Notebooks [New](#) Data classification tools

definition. Last updated: October 9, 2022 at 12:57:21 (UTC)

Tables (7)

View and manage all available tables.

Filter tables

Name	Database	Location	Classification	Deprecated
annual_enterprise_survey_2021_financial	404-db	s3://404-bucket-d	csv	-
dev_public_employee_test	404-db	dev.public.employee	redshift	-
employee-test	404-db	s3://404-bucket-d	-	-
employees_csv	404-db	s3://404-bucket-d	csv	-
employees_test_csv	404-db	s3://404-bucket-d	csv	-
lambda_txt	404-db	s3://404-bucket-d	UNKNOWN	-
test	404-db	s3://404-bucket-d	-	-

https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#/v2/data-catalog/tables [Settings] © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

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The screenshot shows the AWS Glue Data Catalog Tables page. It features a sidebar with navigation links for Data Catalog, Data Integration and ETL, and AWS Glue Studio. The main area displays a table of seven tables, each with columns for Name, Database, Location, Classification, and Deprecated status. The tables listed are 'annual_enterprise_survey_2021_financial', 'dev_public_employee_test', 'employee-test', 'employees_csv', 'employees_test_csv', 'lambda_txt', and 'test'. At the bottom, there's a settings link, copyright information, and system status indicators.

AWS Glue | AWS Glue | IAM Manager | Redshift | VPC Manager | fourohfour | S3 Manager | LillyAssignment | +

https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#addJob:

aws Services Search for services, features, blogs, docs, and more [Alt+S] Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-8614

Add job

Job properties (selected)

Type: Spark

Glue version: Spark 2.4, Python 3 (Glue Version 2.0)

This job runs:

- A proposed script generated by AWS Glue
- An existing script that you provide
- A new script to be authored by you

Script file name: 404-job

S3 path where the script is stored: s3://aws-glue-scripts-934467978614-ap-northeast-1/ad

Temporary directory: s3://aws-glue-temporary-934467978614-ap-northeast-1/ad

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https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#addJob:

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Add job

Job properties (selected)

Choose a data source

Filter by attributes or search by keyword

Name	Database	Location	Classification
employee-test	404-db	s3://404-bucket-demo1/...	Unknown
employees_test_csv	404-db	s3://404-bucket-demo1/...	csv
lambda_txt	404-db	s3://404-bucket-demo1/...	Unknown
dev_public_employee_t...	404-db	dev.public.employee_test	redshift
employees_csv	404-db	s3://404-bucket-demo1/...	csv
annual_enterprise_surv...	404-db	s3://404-bucket-demo1/...	csv

Showing: 1 - 7 < >

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AWS Glue

Add job

Data Catalog
Databases New
Tables New
Stream schema registries
Schemas
Connections ↗ New
Crawlers New
Classifiers New
Catalog settings

Data Integration and ETL
AWS Glue Studio
Jobs ↗ New
Interactive Sessions
Notebooks ↗ New
Data classification tools

Choose a data target

Create tables in your data target
 Use tables in the data catalog and update your data target

Filter by attributes or search by keyword

Name	Database	Location	Classification
lambda_txt	404-db	s3://404-bucket-demo1/L...	Unknown
dev_public_employee_test	404-db	dev.public.employee_test	redshift
employees_csv	404-db	s3://404-bucket-demo1/e...	csv
annual_enterprise_surve...	404-db	s3://404-bucket-demo1/a...	csv
test	404-db	s3://404-bucket-demo1/	Unknown

Showing: 1 - 7 < >

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AWS Glue C AWS Glue C IAM Manag X Redshift X VPC Manag X fourohfour X 404-bucket X LillyAssignn X + https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#editJob:isNewlyCreated=true;jobName=404-job: Services Search for services, features, blogs, docs, and more [Alt+S] Tokyo aws_aads_learning_env_learner@038018 @ 9344-6797-5614

AWS Glue

Job: 404-job

Action ▾ Save Run job Insert template at cursor ⓘ Source Target Target Location Transform Spigot

Database Name 404-db Table Name employees_test_csv

Transform Name ApplyMapping

```
import sys
from awsglue.transforms import *
from awsglue.utils import getResolvedOptions
from pyspark.context import SparkContext
from awsglue.context import GlueContext
from awsglue.job import Job
## @params: [TempDir, JOB_NAME]
args = getResolvedOptions(sys.argv, ['TempDir','JOB_NAME'])
```

Logs Schema

Transform Name SelectFields

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https://ap-northeast-1.console.aws.amazon.com/glue/home?region=ap-northeast-1#etl:tab=jobs

Tokyo | aws_aads_learning_env_learner@038018 @ 9344-6797-8614

Add job Action Filter by tags and attributes User preferences Showing: 1 - 1

Name	Type	ETL language	Script location	Last modified	Job bookmark
404-job	Spark	python	s3://aws-gl...	9 October 2022 6:...	Disable

View run metrics Rewind job bookmark Showing: 1 - 1

Run ID	Retry Run attempt status	Error logs	Output logs	Glue versi	Maxি	Triggered capac	Start by	End time	Execut	Job run	
jr_b9908...	Succ eeded	Logs	Error logs	2.0	10	9 ...	9 ...	18 secs	2 mins	2880 mins	s3://aws-...

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Data classification tools Sensitive data detection Record Matching Triggers Workflows Blueprints Security configurations Legacy pages Databases (legacy) Tables (legacy) Crawlers (legacy) Classifiers (legacy) Connections (legacy) Jobs (legacy) Dev endpoints (legacy) Notebooks (legacy) Tutorials Add crawler Feedback Looking for language selection? Find it in the new Unified Settings © 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences Rain... 18:34 09-10-2022

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https://ap-northeast-1.console.aws.amazon.com/redshiftv2/home?region=ap-northeast-1#query-editor?clusterId=...

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Provisioned clusters dashboard Clusters Reserved nodes Snapshots Query editor Query editor v2 Queries and loads Datashares Configurations Workload management Subnet groups HSM

Query 349 Execution Data Visualize

Completed, started on October 09, 2022 at 18:34:52 ELAPSED TIME: 00 m 02 s

Rows returned (51) Export

first_name	last_name	email
LAST_NAME	EMAIL	FIRST_NAME
OConnell	DOCONNEL	Donald
Grant	DGRANT	Douglas
Whalen	JWHALEN	Jennifer
Hartstein	MHARTSTE	Michael
Fay	PFAY	Pat

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