

Lab 1 AWS

Add user-1 to the S3-Support Group

[IAM](#) > [User groups](#) > [S3-Support](#)

S3-Support

Delete

Summary

Edit

User group name S3-Support	Creation time April 16, 2023, 17:57 (UTC-07:00)	ARN arn:aws:iam::986423934217:group/spl66/S3-Support
-------------------------------	--	---

Users

Permissions

Access Advisor

Users in this group (1)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.



Remove users

Add users

Search

< 1 > ⚙

<input type="checkbox"/>	User name ↗	Groups	Last activity	Creation time
<input type="checkbox"/>	user-1	1	None	6 minutes ago

Add user-2 to the EC2-Support Group

[IAM](#) > [User groups](#) > [EC2-Support](#)

EC2-Support

Delete

Summary

Edit

User group name EC2-Support	Creation time April 16, 2023, 17:57 (UTC-07:00)	ARN arn:aws:iam::986423934217:group/spl66/EC2-Support
--------------------------------	--	--

Users

Permissions

Access Advisor

Users in this group (1)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.



Remove users

Add users

Search

< 1 > ⚙

<input type="checkbox"/>	User name ↗	Groups	Last activity	Creation time
<input type="checkbox"/>	user-2	1	None	7 minutes ago

Add user-3 to the EC2-Admin Group

EC2-Admin

Delete

Summary

Edit

User group name

Creation time

ARN

EC2-Admin

April 16, 2023, 17:57 (UTC-07:00)

arn:aws:iam:986423934217:group/spl66/EC2-Admin

Users

Permissions

Access Advisor

Users in this group (1)

Remove users

Add users

Search

< 1 >

User name

Groups

Last activity

Creation time

user-3

1

None

8 minutes ago

sign-in as user-1, who has been hired as your Amazon S3 storage support staff.

Amazon S3 > Buckets

Account snapshot

View Storage Lens dashboard

Total storage

Object count

Average object size

You can enable advanced metrics in the "default-account-dashboard" configuration.

Pending

Pending

Pending

Buckets (1)

Info

Copy ARN

Empty

Delete

Create bucket

Find buckets by name

< 1 >

Name

AWS Region

Access

Creation date

samplebucket--b26625e0

US East (N. Virginia) us-east-1

Objects can be public

April 16, 2023, 17:56:39 (UTC-07:00)

Instances

Info

Connect

Instance state

Actions

Launch instances

Find instance by attribute or tag (case-sensitive)

< 1 >

Name

Instance ID

Instance state

Instance type

Status check

Alarm status

Availability Zone

Public IPv4 DNS

Public IPv4 ...

Elastic IP

IF

You are not authorized to perform this operation.

sign-in as user-2, who has been hired as your Amazon EC2 support person.

Failed to stop the instance i-05bc24ccbc18dba0b
You are not authorized to perform this operation. Encoded authorization failure message: DaoF9Fmp-LVN3JuzGVQrQ6fc-Ir1EYjKXJj4COKCUp5VFXCT_w5lkyN528zGXhhtbrcHyvQWmN4Bw9HJDW5I47MT5o6v5XzRzRx2PzwOGmgyDyIHfWfy2d0Lj2i-odwdBG4eml0zWxq1-Xjn_k1zTEaA07ZznRn_NjhY-V6DKpg-30dJ75SwSc_UppW_t66ZR4kAsWEWnkQaky1s5ZFNTHyV0nXsdH_36DCwJQk6P1WXlBFFmUz-uP7U2edxxUP4BZDrZfpdx7u8EdUs6OKNl3BPEPIJdqfcolUCQekgTzCxQERcd_zSzhdbvQq6YL04GyoScN8rxPqfa2N4kAZQus8O6MVMV-Sx2AZEIfIPubzKXOxSlyJf7I9p6AgF2YBcd4GoEAzwB8PpAkzFIIN3O1Gz2pYkxb9YppnE1r_sdyCAJgmGPmbFKtaApVBhK8QYdh_-SP5ZL8Sn8hSa8ablFF2F8NWHCr9NOJhI9NnecOPVbwmGjwmT4CgCcsyu9EJmQF4T8plez_RcOHmlUR85JHPFqWAdFiscclO_hlqphUf-gT8lkbYBHNxwQsE4rfeWmQkWydmhEsEm_7nGN_mps5dZ22gd7kwJNgK1USxe6VdmsOWsX1bubWT1Hs2MdkZuZPOfW-YeFv--_FBgyfFZjQarJBreeBK3Q15o6H50YEcDVJASXXy93DdNHEN6Scig6J3fV17GgQTYGkxhiUJfNluMkbHpOaleOEaeQUH5Nxr7a8ZDyRjRzjYZLbKfx-ZxJrWky7L3tqoZJm9eGdghaj5_QKzFJZ75_G8l06dqdElmmMYO4c_HV9egCS28JBxPJBw2oQISQURa2UgaxVFEGO6-YVOGePwLJseyAag54VFAYzBzlmfK6r16qiApuMeoZRpLpDm8fo89xg7APOTHObRUl_rN7kt0kjiPP5wYhuCTgN8nfZaHu_cB71IKtu2nlu_xL0cDqsmJtg-Y9g7Xr3TSv

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input type="checkbox"/>	Bastion Host	i-0690498bb786baf5f	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-3-216-36-98.comp...	3.216.36.98	-
<input checked="" type="checkbox"/>	LabHost	i-05bc24ccbc18dba0b	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-44-204-205-196.co...	44.204.205.196	-

Instance: i-05bc24ccbc18dba0b (LabHost)

DetailsSecurityNetworkingStorageStatus checksMonitoringTags

Amazon S3 > Buckets

Account snapshot

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

View Storage Lens dashboard

Buckets Info

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

Find buckets by name

Copy ARNEmptyDeleteCreate bucket

1

Name	AWS Region	Access	Creation date
<div><div></div>You don't have permissions to list buckets After you or your AWS administrator have updated your permissions to allow the s3:ListAllMyBuckets action, refresh this page. Learn more about Identity and access management in Amazon S3</div>			

sign-in as user-3, who has been hired as your Amazon EC2 administrator.

Successfully stopped i-05bc24ccbc18dba0b

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input type="checkbox"/>	Bastion Host	i-0690498bb786baf5f	Running	t2.micro	2/2 checks passed	User: arn:aws:iam::us-east-1a	us-east-1a	ec2-3-216-36-98.comp...	3.216.36.98	-
<input checked="" type="checkbox"/>	LabHost	i-05bc24ccbc18dba0b	Stopping	t2.micro	2/2 checks passed	User: arn:aws:iam::us-east-1a	us-east-1a	ec2-44-204-205-196.co...	44.204.205.196	-

Credentials

Cloud Access

AWS CLI:

Show

Cloud Labs

Remaining session time: 01:42:28(103 minutes)
Session started at: 2023-04-16T17:56:34-0700
Session to end at: 2023-04-16T19:56:34-0700

Accumulated lab time: 00:46:00 (46 minutes)

(1) (2)

SSH key

Show

Download PEM

Download PPK

AWS SSO

Download URL

LabHostId	i-05bc24ccbc18dba0b
BastionHost	3.216.36.98
Region	us-east-1
User1AccessSecretKey	Access Key: ARIA6LK3SXUESIGXVKNM Secret Access Key: qJ6gxAMf9S6VTaziZsugc/Rq+kPks5MIfdAWHQFT
User2AccessSecretKey	Access Key: ARIA6LK3SXUEQN5VR6MM Secret Access Key: ZLi+NV7q43tv1j+NFuLJBDYQgfwwD7Icwdpq7NtJ
User3AccessSecretKey	Access Key: ARIA6LK3SXUEV5NHC272 Secret Access Key: FVxN990SkJ4EWBaWouj3jK2M2q+MrOI2pGgRhgzU

Lab 2

Task 1: Create Your VPC

aws Services Search [Alt+S]

VPC > Your VPCs > Create VPC > Create VPC resources

Create VPC workflow

Success

Details

- ✓ Create VPC: [vpc-000f74bd1d46d4b45](#)
- ✓ Enable DNS hostnames
- ✓ Enable DNS resolution
- ✓ Verifying VPC creation: [vpc-000f74bd1d46d4b45](#)
- ✓ Create subnet: [subnet-027595fc829c013e2](#)
- ✓ Create subnet: [subnet-094dda273af887784](#)
- ✓ Create internet gateway: [igw-08c47d828df6696d1](#)
- ✓ Attach internet gateway to the VPC
- ✓ Create route table: [rtb-066260b4b1de02512](#)
- ✓ Create route
- ✓ Associate route table
- ✓ Allocate elastic IP: [eipalloc-05e234489f9993943](#)
- ✓ Create NAT gateway: [nat-061a0f0e5a978cf93](#)
- ✓ Wait for NAT Gateways to activate
- ✓ Create route table: [rtb-01790d0eed67dfd4f](#)
- ✓ Create route
- ✓ Associate route table
- ✓ Verifying route table creation

[View VPC](#)

Task 2: Create Additional Subnets

✓ You have successfully created 1 subnet: [subnet-0c42791f2b8e3a930](#)

Subnets (1) Info

Filter subnets

Subnet ID: [subnet-0c42791f2b8e3a930](#) Clear filters

	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	Available IPv4 addresses	Avail
<input type="checkbox"/>	lab-subnet-public2	subnet-0c42791f2b8e3a930	Available	vpc-000f74bd1d46d4b45 lab...	10.0.2.0/24	-	251	us-e...

✓ You have successfully created 1 subnet: [subnet-0ec1c34005df738e5](#)

Subnets (1) Info

Filter subnets

Subnet ID: [subnet-0ec1c34005df738e5](#) Clear filters

	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	Available IPv4 addresses	Avail
<input type="checkbox"/>	lab-subnet-private2	subnet-0ec1c34005df738e5	Available	vpc-000f74bd1d46d4b45 lab...	10.0.3.0/24	-	251	us-e...

✓ You have successfully updated subnet associations for [rtb-01790d0eed67dfd4f](#) / [lab-rtb-private1-us-east-1a](#).

Route tables (6) Info

Filter route tables

	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/>	-	rtb-069d7207d2505c312	-	-	Yes	vpc-0f9d26385f73f2e0c Wor...	754902621597
<input type="checkbox"/>	-	rtb-09b89ad88d15e1943	-	-	Yes	vpc-000f74bd1d46d4b45 lab...	754902621597
<input type="checkbox"/>	lab-rtb-private1-us...	rtb-01790d0eed67dfd4f	2 subnets	-	No	vpc-000f74bd1d46d4b45 lab...	754902621597
<input type="checkbox"/>	Work Public Route ...	rtb-0f1b1264dd7cd2fc0	subnet-0bafba73303a2f...	-	No	vpc-0f9d26385f73f2e0c Wor...	754902621597
<input type="checkbox"/>	lab-rtb-public	rtb-066260b4b1de02512	subnet-027595fc829c0...	-	No	vpc-000f74bd1d46d4b45 lab...	754902621597
<input type="checkbox"/>	-	rtb-0b33786986eaa1b3f	-	-	Yes	vpc-09949185cd04c47d1	754902621597

You have successfully updated subnet associations for rtb-066260b4b1de02512 / lab-rtb-public.

Route tables (6) [Info](#)

[Refresh](#) [Actions](#) [Create route table](#)

[<](#) [1](#) [>](#) [Settings](#)

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/>	-	rtb-069d7207d2505c312	-	-	Yes	vpc-0f9d26385f73f2e0c Wor...	754902621597
<input type="checkbox"/>	-	rtb-09b89ad88d15e1943	-	-	Yes	vpc-000f74bd1d46d4b45 lab...	754902621597
<input type="checkbox"/>	lab-rtb-private1-us...	rtb-01790d0eed67dfd4f	2 subnets	-	No	vpc-000f74bd1d46d4b45 lab...	754902621597
<input type="checkbox"/>	Work Public Route ...	rtb-0f1b1264dd7cd2fc0	subnet-0bafba73303a2f...	-	No	vpc-0f9d26385f73f2e0c Wor...	754902621597
<input type="checkbox"/>	lab-rtb-public	rtb-066260b4b1de02512	2 subnets	-	No	vpc-000f74bd1d46d4b45 lab...	754902621597
<input type="checkbox"/>	-	rtb-0b33786986eaa1b3f	-	-	Yes	vpc-09949185cd04c47d1	754902621597

Task 3: Create a VPC Security Group

Security group (sg-0db8d8e950859e762 | Web Security Group) was created successfully

[Details](#)

VPC > Security Groups > sg-0db8d8e950859e762 - Web Security Group

sg-0db8d8e950859e762 - Web Security Group [Actions](#)

Details

Security group name Web Security Group	Security group ID sg-0db8d8e950859e762	Description Enable HTTP access	VPC ID vpc-000f74bd1d46d4b45
Owner 754902621597	Inbound rules count 1 Permission entry	Outbound rules count 1 Permission entry	

[Inbound rules](#) [Outbound rules](#) [Tags](#)

You can now check network connectivity with Reachability Analyzer [Run Reachability Analyzer](#)

Inbound rules (1/1) [Manage tags](#) [Edit inbound rules](#)

<input checked="" type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
<input checked="" type="checkbox"/>	-	sg-0ef044270b649b2...	IPv4	HTTP	TCP	80	0.0.0.0/0	Permit web requests

Task 4: Launch a Web Server Instance

EC2 > Instances > Launch an instance

Success
Successfully initiated launch of instance (i-039e5662705ca3c9b)

[Launch log](#)

Next Steps

Instances (2) [Info](#)

[Refresh](#) [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

[<](#) [1](#) [>](#) [Settings](#)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IF
<input type="checkbox"/>	Web Server 1	i-039e5662705ca3c9b	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-44-202-129-149.co...	44.202.129.149	-	-
<input type="checkbox"/>	Bastion Host	i-028e36cb1f6bce2e	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-3-238-188-83.com...	3.238.188.83	-	-

Technical Essen: x +

Not secure | ec2-44-202-129-149.compute-1.amazonaws.com

Dashboard AWS Canvas synthwave radio...

aws Load Test RDS

Meta-Data	Value
InstanceId	
Availability Zone	

Current CPU Load: 1%

End Lab



Region: us-east-1

Lab ID: arn:aws:cloudformation:us-east-

1:754902621597:stack/c79767a166591913991872t1w754902621597/a3aba5b0-e25b-11ed-a8ca-125e315dc717


Creation Time: 2023-04-23T21:51:13-0700

You may close this message box now. Lab resources are terminating ...

Lab 3

Task 1: Launch Your Amazon EC2 Instance

EC2 > Instances > Launch an instance

 **Success**
Successfully initiated launch of instance (i-01af179d548eb78a3)

[Launch log](#)

Next Steps

Instances (2) [info](#)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IF
<input type="checkbox"/>	Web Server	i-01af179d548eb78a3	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-3-238-3-115.comp...	3.238.3.115	-	-
<input type="checkbox"/>	Bastion Host	i-093af7372ca7a833d	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-34-203-194-224.co...	34.203.194.224	-	-

Task 2: Monitor Your Instance

EC2 > Instances > i-01af179d548eb78a3 > Get system log

Get system log [info](#)

When you experience issues with your EC2 instance, reviewing system logs can help you pinpoint the cause.

System log [info](#)

Review system log for instance i-01af179d548eb78a3 as of Sun Apr 23 2023 22:46:02 GMT-0700 (Pacific Daylight Time)

[Copy log](#) [Download](#)

```
[ 27.207690] cloud-init[2031]: Verifying : libbrotli-1.0.9-4.amzn2023.0.2.x86_64 9/12
[ 27.308234] cloud-init[2031]: Verifying : httpd-filesystem-2.4.56-1.amzn2023.noarch 10/12
[ 27.322139] cloud-init[2031]: Verifying : generic-logos-httpd-10.0.0-12.amzn2023.0.3.noarch 11/12
[ 27.477532] cloud-init[2031]: Verifying : mailcap-2.1.40-3.amzn2023.0.3.noarch 12/12
[ 27.502062] cloud-init[2031]: Installed:
[ 27.508976] cloud-init[2031]: apr-1.7.2-2.amzn2023.0.2.x86_64
[ 27.518419] cloud-init[2031]: apr-util-1.6.3-1.amzn2023.0.1.x86_64
[ 27.538210] cloud-init[2031]: apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
[ 27.547079] cloud-init[2031]: generic-logos-httpd-10.0.0-12.amzn2023.0.3.noarch
[ 27.566508] cloud-init[2031]: httpd-2.4.56-1.amzn2023.x86_64
[ 27.577495] cloud-init[2031]: httpd-core-2.4.56-1.amzn2023.x86_64
[ 27.618452] cloud-init[2031]: httpd-filesystem-2.4.56-1.amzn2023.noarch
[ 27.637099] cloud-init[2031]: httpd-tools-2.4.56-1.amzn2023.x86_64
[ 27.638407] cloud-init[2031]: libbrotli-1.0.9-4.amzn2023.0.2.x86_64
[ 27.658120] cloud-init[2031]: mailcap-2.1.40-3.amzn2023.0.3.noarch
[ 27.668445] cloud-init[2031]: mod_httpd-2.0.11-2.amzn2023.x86_64
[ 27.698292] cloud-init[2031]: mod_lua-2.4.56-1.amzn2023.x86_64
[ 27.705470] cloud-init[2031]: Complete!
[ 27.751264] cloud-init[2031]: Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[ 28.131020] systemd-sysv-generator[3143]: Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[ 28.131020] systemd-sysv-generator[3143]: SysV service '/etc/rc.d/init.d/cfn-hup' lacks a native systemd unit file. Automatically generating a unit file for compatibility. Please update package to include a native systemd unit file, in order to make it more safe and robust.
[ 28.131020] systemd-sysv-generator[3143]: SysV service '/etc/rc.d/init.d/cfn-hup' lacks a native systemd unit file. Automatically generating a unit file for compatibility. Please update package to include a native systemd unit file, in order to make it more safe and robust.
```

EC2 > Instances > i-01af179d548eb78a3 > Get instance screenshot

Get instance screenshot [info](#)

Instance screenshot

i-01af179d548eb78a3 (Web Server) on 2023-04-23 at T22:46:51.826 -0700

```
Amazon Linux 2023
Kernel 5.1.23-36.46.amzn2023.x86_64 on an x86_64 (-)

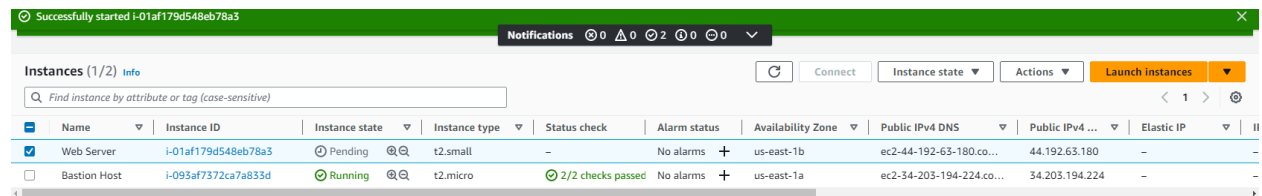
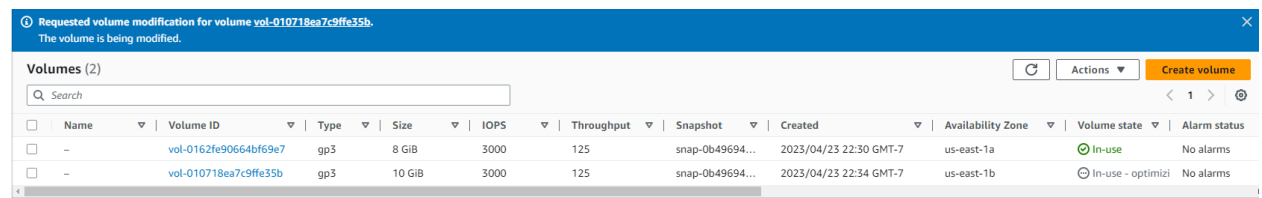
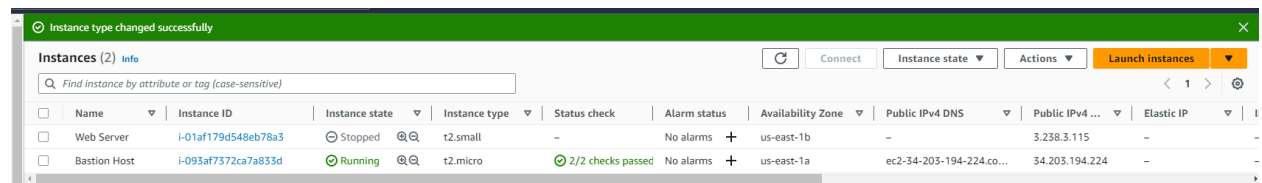
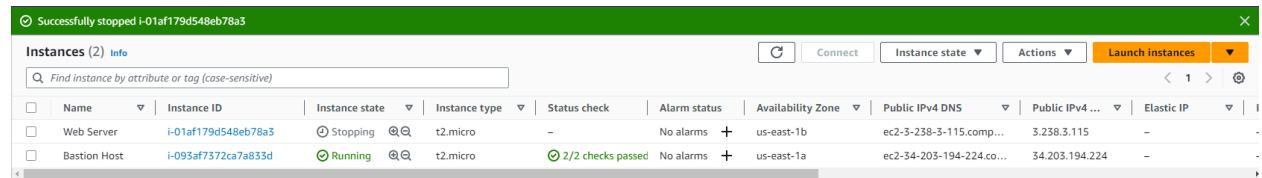
ip-10-0-2-233 login: [ 26.361682] systemd-sysv-generator[2139]: SysV service '/etc/rc.d/init.d/cfn-hup' lacks a native systemd unit file. Automatically generating a unit file for compatibility. Please update package to include a native systemd unit file, in order to make it more safe and robust.
[ 26.131020] systemd-sysv-generator[3143]: SysV service '/etc/rc.d/init.d/cfn-hup' lacks a native systemd unit file. Automatically generating a unit file for compatibility. Please update package to include a native systemd unit file, in order to make it more safe and robust.
```


Task 3: Update Your Security Group and Access the Web Server

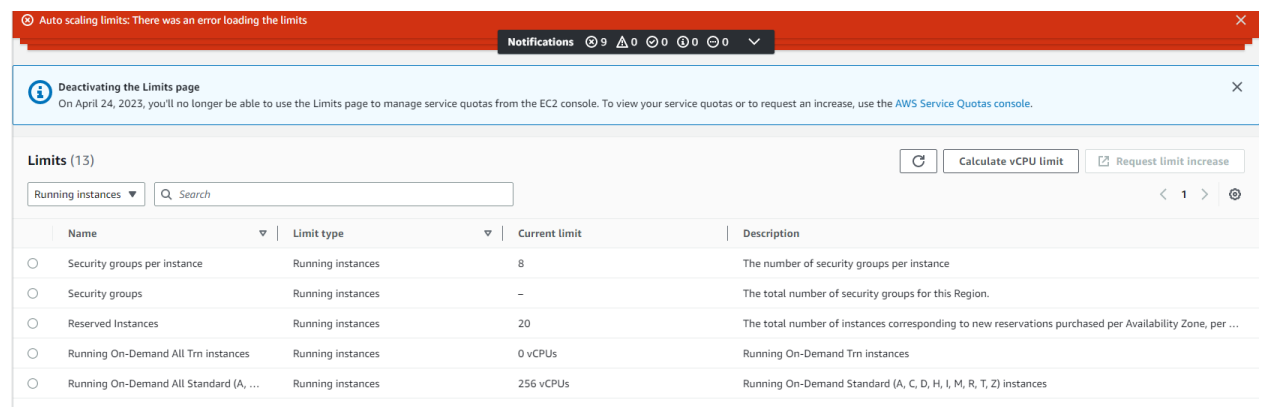


Hello From Your Web Server!

Task 4: Resize Your Instance: Instance Type and EBS Volume



Task 5: Explore EC2 Limits



Task 6: Test Termination Protection

Failed to terminate an instance: The instance i-01af179d548eb78a3 may not be terminated. Modify its 'disableApiTermination' instance attribute and try again.

Instances (1/2) [Info](#)
🔍 Connect Instance state ▾ Actions ▾ Launch instances ▾

< 1 > ⌛

<input checked="" type="checkbox"/>	Name ▾	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status	Availability Zone ▾	Public IPv4 DNS ▾	Public IPv4 ... ▾	Elastic IP ▾	IP
<input checked="" type="checkbox"/>	Web Server	i-01af179d548eb78a3	Running	t2.small	Initializing	No alarms +	us-east-1b	ec2-44-192-63-180.co...	44.192.63.180	-	-
<input type="checkbox"/>	Bastion Host	i-095af7372ca7a833d	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	ec2-34-203-194-224.co...	34.203.194.224	-	-

Successfully terminated i-01af179d548eb78a3
Notifications 1 0 2 0 0 0

Instances (1/2) [Info](#)
Find instance by attribute or tag (case-sensitive)
Connect
Instance state ▾
Actions ▾
Launch instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input checked="" type="checkbox"/>	Web Server	i-01af179d548eb78a3	Shutting-down	t2.small	Initializing	No alarms	us-east-1b	ec2-44-192-63-180.co...	44.192.63.180	-
<input type="checkbox"/>	Bastion Host	i-093af7372ca78a33d	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-34-203-194-224.co...	34.203.194.224	-

End Lab

Region: us-east-1

Lab ID: arn:aws:cloudformation:us-east-

```
1:569328863455:stack/c79767a166592113992054t1w569328863455/bc6cfb30-e260-11ed-89a5-0eb19aaeb30f
```

Creation Time: 2023-04-23T22:27:42-0700

You may close this message box now. Lab resources are terminating ...

Lab 4

Task 1: Create a New EBS Volume

Successfully created volume vol-01ff873a23db3fd6f.

Volumes (3)

Actions

Create volume

Q Search

<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm status
<input type="checkbox"/>	-	vol-06ac52fb4e82517	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:50 GMT-7	us-east-1a	In-use	No alarms
<input type="checkbox"/>	-	vol-04a61bb4da1b18cdeb	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:52 GMT-7	us-east-1a	In-use	No alarms
<input checked="" type="checkbox"/>	My Volume	vol-01ff873a23db3fd6f	gp2	1 GiB	100	-	-	2023/04/30 14:52 GMT-7	us-east-1a	Available	No alarms

Task 2: Attach the Volume to an Instance

Successfully attached volume vol-01f873a23db3fdef to instance i-0196134e300a1e215.

Volumes (3)

↺

↻

Actions

Create volume

<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm status
<input type="checkbox"/>	-	vol-066ac52fba4e82517	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:50 GMT-7	us-east-1a	✔ In-use	No alarms
<input type="checkbox"/>	-	vol-04a61bb4da1b18cdb	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:52 GMT-7	us-east-1a	✔ In-use	No alarms
<input type="checkbox"/>	My Volume	vol-01f873a23db3fdef	gp2	1 GiB	100	-	-	2023/04/30 14:52 GMT-7	us-east-1a	✔ In-use	No alarms

Task 3: Connect to Your Amazon EC2 Instance

A screenshot of a terminal window titled "ec2-user@ip-10-1-11-102:~". The terminal shows the following sequence of events:
1. Prompt: "login as: ec2-user"
2. Message: "Authenticating with public key \"imported-openssh-key\""
3. ASCII art logo for Amazon Linux 2023.
4. URL: "https://aws.amazon.com/linux/amazon-linux-2023"
5. A green cursor at the prompt "[ec2-user@ip-10-1-11-102 ~]\$".
The terminal has a black background with white text. The window title bar includes standard OS controls (minimize, maximize, close) and the address bar shows the IP address "ip-10-1-11-102".

Task 4: Create and Configure Your File System

Task 5: Create an Amazon EBS Snapshot

Successfully created snapshot snap-08cc54d0549db2269 from volume vol-01ff873a23db3fd6f. If you need your snapshot to be immediately available consider using Fast Snapshot Restore. [Manage fast snapshot restore](#)

Volumes (3)

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm status
-	vol-066ac52fba4e82517	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:50 GMT-7	us-east-1a	In-use	No alarms
-	vol-04a61bb4da1b18cdb	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:52 GMT-7	us-east-1a	In-use	No alarms
My Volume	vol-01ff873a23db3fd6f	gp2	1 GiB	100	-	-	2023/04/30 14:52 GMT-7	us-east-1a	In-use	No alarms

Snapshots (1)

Owned by me

Name	Snapshot ID	Size	Description	Storage...	Snapshot status	Started	Progress	Encryption	KMS key ID
My Snapshot	snap-08cc54d0549db2269	1 GiB	-	Standard	Completed	2023/04/30 15:05 GMT-7	Available (100%)	Not encrypted	-

```
tmpfs 477M 0 477M 0% /tmp
tmpfs 96M 0 96M 0% /run/user/1000
/dev/xvdf 975M 60K 924M 1% /mnt/data-store
[ec2-user@ip-10-1-11-102 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-102 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-102 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-102 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-102 ~]$
```

Task 6: Restore the Amazon EBS Snapshot

Successfully created volume vol-0c29cf4ad75d1c54.

Snapshots (1)

Owned by me

Name	Snapshot ID	Size	Description	Storage...	Snapshot status	Started	Progress	Encryption	KMS key ID
My Snapshot	snap-08cc54d0549db2269	1 GiB	-	Standard	Completed	2023/04/30 15:05 GMT-7	Available (100%)	Not encrypted	-

Successfully attached volume vol-0c29cf4ad75d1c54 to instance i-0196134e300a1e215.

Volumes (4)

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone	Volume state	Alarm status
-	vol-066ac52fba4e82517	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:50 GMT-7	us-east-1a	In-use	No alarms
-	vol-04a61bb4da1b18cdb	gp3	8 GiB	3000	125	snap-0b49694...	2023/04/30 14:52 GMT-7	us-east-1a	In-use	No alarms
My Volume	vol-01ff873a23db3fd6f	gp2	1 GiB	100	-	-	2023/04/30 14:52 GMT-7	us-east-1a	In-use	No alarms
Restored Volu...	vol-0c29cf4ad75d1c54	gp2	1 GiB	100	-	snap-08cc54d...	2023/04/30 15:19 GMT-7	us-east-1a	In-use	No alarms

```
tmpfs 477M 0 477M 0% /tmp
tmpfs 96M 0 96M 0% /run/user/1000
/dev/xvdf 975M 60K 924M 1% /mnt/data-store
[ec2-user@ip-10-1-11-102 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-102 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-102 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-102 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-102 ~]$ sudo mkdir /mnt/data-store2
[ec2-user@ip-10-1-11-102 ~]$ sudo mount /dev/sdg /mnt/data-store2
[ec2-user@ip-10-1-11-102 ~]$ ls /mnt/data-store2/
file.txt lost+found
[ec2-user@ip-10-1-11-102 ~]$
```

End Lab



Region: us-east-1

Lab ID: arn:aws:cloudformation:us-east-

1:275989223821:stack/c79767a166592714031407t1w275989223821/dda735a0-e7a0-11ed-a9f2-12662ecb3025

Creation Time: 2023-04-30T14:49:21-0700

You may close this message box now. Lab resources are terminating ...

Lab 5

Task 1: Create a Security Group for the RDS DB Instance

Security group (sg-08b7b10bafb4605d7 | Db Security Group) was created successfully

Details

VPC > Security Groups > sg-08b7b10bafb4605d7 - Db Security Group

sg-08b7b10bafb4605d7 - Db Security Group

Actions

Details

Security group name Db Security Group	Security group ID sg-08b7b10bafb4605d7	Description Permit access from Web Security Group	VPC ID vpc-0ae3bbdb5cadacdb9
Owner 544414955072	Inbound rules count 1 Permission entry	Outbound rules count 1 Permission entry	

Inbound rules | Outbound rules | Tags

You can now check network connectivity with Reachability Analyzer

Run Reachability Analyzer

Inbound rules (1/1)

Filter security group rules

<input checked="" type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
<input checked="" type="checkbox"/>	-	sgr-092d7f902870a11...	-	MySQL/Aurora	TCP	3306	sg-039db4cab90951a...	-

Task 2: Create a DB Subnet Group

Successfully created DB-Subnet-Group. View subnet group

RDS > Subnet groups

Subnet groups (1)

Filter by subnet group

<input type="checkbox"/>	Name	Description	Status	VPC
<input type="checkbox"/>	db-subnet-group	Db Subnet Group	Complete	vpc-0ae3bbdb5cadacdb9

Task 3: Create an Amazon RDS DB Instance

Successfully created database lab-db

You can use settings from lab-db to simplify configuration of suggested database add-ons while we finish creating your DB for you.

How was your experience creating an Amazon RDS database? Provide feedback

View connection details

RDS > Databases

Consider creating a Blue/Green Deployment to minimize downtime during upgrades

You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. [RDS User Guide](#) [Aurora User Guide](#)

Databases

Group resources

Modify

Actions

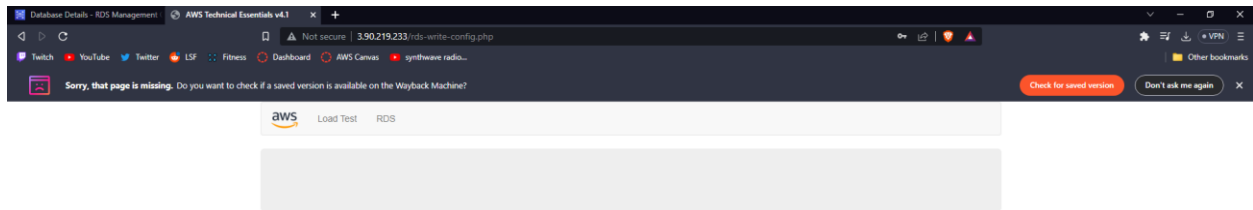
Restore from S3

Create database

Filter by databases

<input type="radio"/>	DB identifier	Role	Engine	Region & AZ	Size	Status	Actions	CPU	Current activity	Maintenance
<input type="radio"/>	lab-db	Instance	MySQL Community	us-east-1a	db.t3.micro	Modifying	4 Actions	-		none

Task 4: Interact with Your Database



End Lab

```
Region: us-east-1
Lab ID: arn:aws:cloudformation:us-east-
1:544414955072:stack/c79767a166592914031471t1w544414955072/ab4884b0-e7a5-11ed-a548-
1240d3575417
Creation Time: 2023-04-30T15:23:44-0700
You may close this message box now. Lab resources are terminating ...
```


Lab 6

Task 1: Create an AMI for Auto Scaling

Currently creating AMI `ami-0fc8d52af7d97b2da` from instance `i-0283bec3adfb4e26f`. Check that the AMI status is 'Available' before deleting the instance or carrying out other actions related to this AMI.

Instances (2) [Info](#)

Find instance by attribute or tag (case-sensitive)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IF
<input type="checkbox"/>	Bastion Host	i-017ccd460bc60aca7	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	-	44.203.229.182	-	-
<input type="checkbox"/>	Web Server 1	i-0283bec3adfb4e26f	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1a	-	44.200.250.200	-	-

Task 2: Create a Load Balancer

Successfully created target group: `LabGroup`

EC2 > Target groups

Target groups (1) [Info](#)

Search or filter target groups

<input type="checkbox"/>	Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
<input type="checkbox"/>	LabGroup	arn:aws:elasticloadbalanci...	80	HTTP	Instance	None associated	vpc-02fe12e36a45a16b5

Successfully created load balancer: `LabELB`

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 > LabELB > 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 `LabELB`.
- Discover other services that you can integrate with your load balancer. Visit the **Integrated services** tab within `LabELB`.

[View load balancer](#)

EC2 > Load balancers

Load balancers (1)

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter by property or value

search: LabELB [X](#) [Clear filters](#)

<input type="checkbox"/>	Name	DNS name	State	VPC ID	Availability Zones	Type	Date created	Instance ID
<input type="checkbox"/>	LabELB	LabELB-20687850.us-east...	Provisioning	vpc-02fe12e36a45a16b5	2 Availability Zones	application	May 7, 2023, 16:02 (UTC-07:00)	-

Task 3: Create a Launch Configuration and an Auto Scaling Group

Successfully created launch configuration: LabConfig

EC2 > Launch configurations

Launch configurations (1) Info

Search launch configurations

Actions Copy to launch template Create launch configuration

<input type="checkbox"/>	Name	AMI ID	Instance type	Spot price	Creation time
<input type="checkbox"/>	LabConfig	ami-0fc8d52af7d...	t3.micro	-	Sun May 07 2023 16:06:41 GMT-0700 (Pacific Daylight Time)

Lab Auto Scaling Group, 1 Scaling policy created successfully. Group metrics collection is enabled.

EC2 > Auto Scaling groups

Auto Scaling groups (1) Info

Search your Auto Scaling groups

Edit Delete Create an Auto Scaling group

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input type="checkbox"/>	Lab Auto Scaling Group	LabConfig	0	Updating capacity...	2	2	6	us-east-1a, us-east-1b

Task 4: Verify that Load Balancing is Working

Cloud Four x +

Not secure | labelb-20687850.us-east-1.elb.amazonaws.com

Dashboard AWS Canvas synthwave radio...

aws Load Test RDS

Meta-Data	Value
InstanceId	i-0dac0f8505c2e2f81
Availability Zone	us-east-1b

Current CPU Load: 0%

Task 5: Test Auto Scaling

Instances (5) Info											
<input type="text" value="Find instance by attribute or tag (case-sensitive)"/>											
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IF
<input type="checkbox"/>	Bastion Host	i-017ccd460bc60aca7	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	44.203.229.182	-	-
<input type="checkbox"/>	Web Server 1	i-0283bec3adfb4e26f	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	44.200.250.200	-	-
<input type="checkbox"/>	Lab Instance	i-03bc4ad298bb3b085	Running	t3.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-	-
<input type="checkbox"/>	Lab Instance	i-0792cdd520d94d9a7	Running	t3.micro	Initializing	No alarms	us-east-1a	-	-	-	-
<input type="checkbox"/>	Lab Instance	i-0dac0f8505c2e2f81	Running	t3.micro	2/2 checks passed	No alarms	us-east-1b	-	-	-	-

Task 6: Terminate Web Server 1

Successfully terminated i-0283bec3adfb4e26f											
Instances (1/5) Info											
<input type="text" value="Find instance by attribute or tag (case-sensitive)"/>											
<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IF
<input type="checkbox"/>	Bastion Host	i-017ccd460bc60aca7	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	44.203.229.182	-	-
<input checked="" type="checkbox"/>	Web Server 1	i-0283bec3adfb4e26f	Shutting-down	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	44.200.250.200	-	-
<input type="checkbox"/>	Lab Instance	i-03bc4ad298bb3b085	Running	t3.micro	2/2 checks passed	No alarms	us-east-1a	-	-	-	-

End Lab

Region: us-east-1
Lab ID: arn:aws:cloudformation:us-east-1:897312554372:stack/c79767a166593114066934t1w897312554372/8a9bf450-ed26-11ed-ae63-0a18c8383ba3
Creation Time: 2023-05-07T15:28:51-0700
You may close this message box now. Lab resources are terminating ...