



Despliegue FullStack Flash Gaming Hub en AWS

FUNDACIÓN SAN VALERO
SEAS, Centro de Formación Abierta
ZARAGOZA

· Autores y centro de estudios al que pertenecen

Iván Segura Romero

Guillermo García Serrano

Centro San Valero

- Tutor docente y, en su caso, tutor empresarial

Santos Pardos Gotor

Centro San Valero

- Link al AWS Academy Learner Lab donde se implementó la solución.

<https://awsacademy.instructure.com/courses/85320>

- **Un video de máximo 5 minutos en donde se muestre la solución.**

El video está subido al repositorio de Github.

- **Breve reseña, de no más de 100 palabras, describiendo el Trabajo.**

Se ha realizado el despliegue del aplicativo Flash Gaming Hub en la nube de AWS. Las tecnologías utilizadas ha sido Vue, javascript para la parte del Frontend y para la parte de Backend se ha desarrollado en .Net. La base de datos utilizada ha sido Microsoft SQL Server.

A nivel de arquitectura, podemos ver todos los servicios utilizados en posteriores apartados. Destacar que se ha desplegado el aplicativo en alta disponibilidad primero en una región y posteriormente en multi-región.

La tecnología principal para esta arquitectura de microservicios ha sido Elastic Kubernete Services (EKS) si bien han sido cerca de 20 servicios los utilizados para el total despliegue de la solución.

• Número y listado de servicios AWS empleados

1. Servicio Route 53. Política de Failover para tener datacenter principal y de backup. Las entradas están realizadas en el dominio retocsv.es cuenta real de internet del colegio Centro San Valero por ser un servicio que no funciona completamente en cuentas de AWS Academy.

2. Web Application Firewall para proteger el Frontend de la aplicación. Están activados los controles gratuitos que funcionan en AWS Academy.

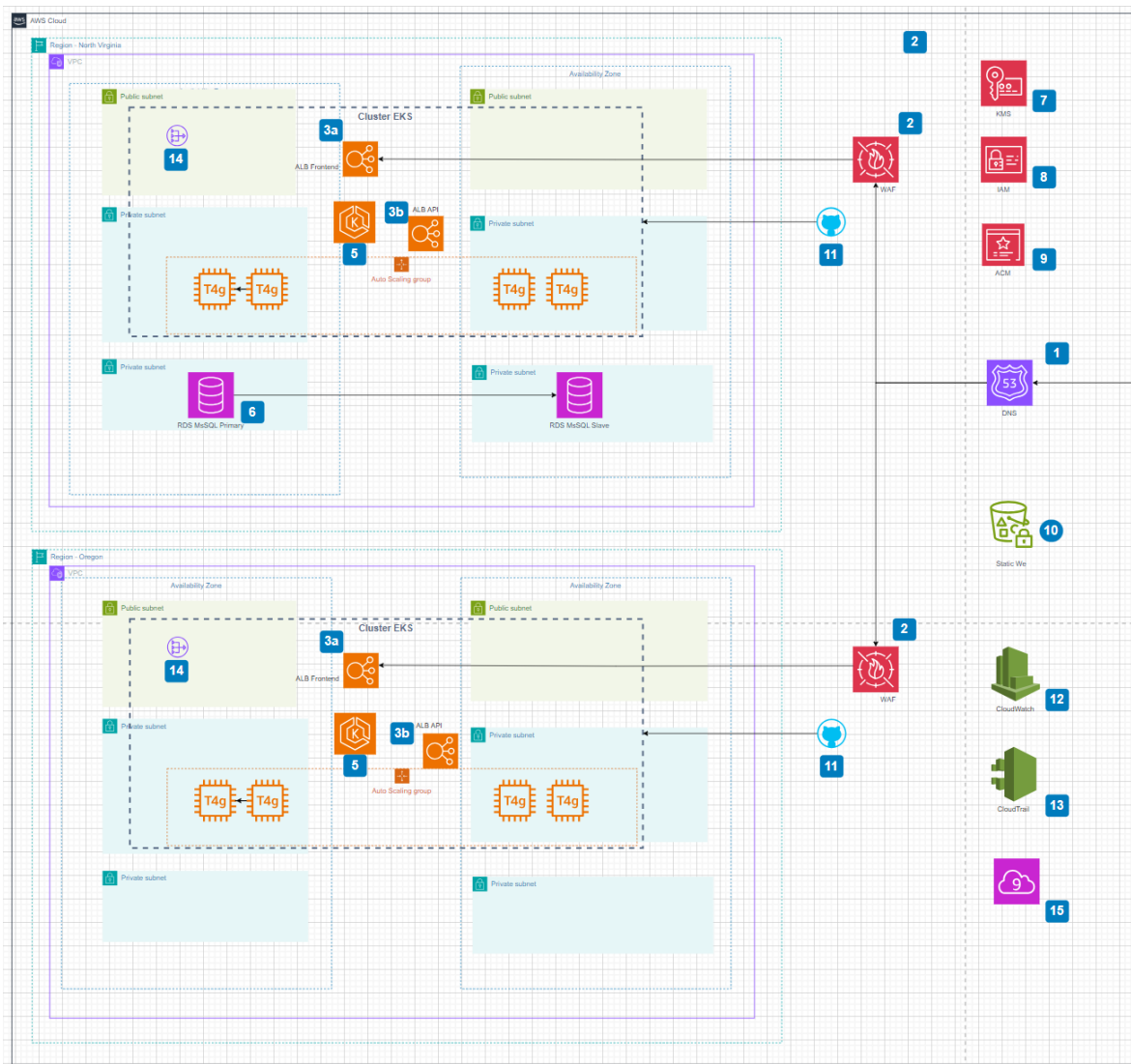
3a. ALB, balanceador público para el frontend de la aplicación.

3b. ALB, balanceador interno para la API de la aplicación

4. Grupo de auto escalado para el fronted de la aplicación
5. Cluster de EKS. Contiene un grupo de autoescalado y un balanceador para la API del backend.
6. AWS RDS con Microsoft SQL server con principal y secundaria.
7. Servicio KMS que se ha utilizado tanto en la parte estática utilizada en un bucket de S3 como en AWS RDS para la base de datos.
8. Servicio de gestión de usuarios. Servicio muy recortado y donde hemos utilizado las credenciales del usuario, cambiantes cada vez que entramos en AW Academy así como el Role LabRole que nos da la plataforma.
9. Servicio ACM de certificados para poder SSL tanto en el frontend como en el backend del despliegue fullstack.
10. Servicio de fichero en objetos S3 para las partes estáticas de la aplicación.
11. Canalización CI/CD con Github Actions para el cluster EKS. (debido a que CodePipeline no funciona en AWS Academy lo hemos realizado con Github actions).
12. Servicio de monitorización y observabilidad para todos los servicios utilizados.
13. Servicio de auditoría para conocer los cambios a nivel de API de servicios de AWS.
14. Servicio NAT GW para salida a internet de las redes privadas
15. Cloud9 para creación de contenedores y manifiestos de EKS

- Documentación detallada de la arquitectura, que explique la lógica y componentes utilizados en la solución propuesta.

El diseño de arquitectura en AWS Academy de la solución es el que se puede ver en la siguiente figura:



Hemos desarrollado un marketplace de videojuegos con estilo cyberpunk. El frontend ha sido desarrollado con Vue y el backend con .NET. Antes de explicar la solución implementada en la nube, es importante aclarar que hemos utilizado una cuenta denominada "academy", la cual nos limita el acceso a varios recursos. El esquema mostrado en la parte superior representa cómo nos hubiera gustado implementar la web, pero debido a las limitaciones mencionadas, hemos tenido que ajustarnos y dejarla lo más parecida posible.

En primer lugar, hemos utilizado el IDE Cloud9 con Docker para lanzar el servicio EKS. Tenemos dos regiones de disponibilidad: una en North Virginia y otra en Oregón, aunque no se puede realizar completamente en el laboratorio debido a que el Multi A-Z en AWS Academy no permite esto sobre la base de datos. Dentro de cada región, hay un clúster de Kubernetes con un grupo de autoescalado de hasta 4 nodos de trabajo y dos balanceadores de carga tanto para la API como para la web. Además, hay una base de datos en RDS, aunque solo en North Virginia debido al problema mencionado anteriormente.

Nuestra intención era añadir un WAF de nivel 7, como se muestra en el diagrama, para evitar ataques de inyección SQL, entre otras amenazas. En el laboratorio está creado, pero no asociado al balanceador de carga ya que el tipo de balanceador de carga que genera Academy mediante Cloud9 es Classic, no ALB, el cual sí permite la conexión entre el WAF y el balanceador de carga.

Hemos utilizado Route 53 como servicio DNS y ACM para solicitar los certificados SSL.

Debido a que CodePipeline en Academy no funciona, hemos decidido implementar GitHub Actions, que funciona de una forma similar.

Se está haciendo uso de KMS en la base de datos.

IAM se ha configurado al nivel permitido por Academy, dado que solo hay un usuario.

Todo lo hemos gestionado a nivel de monitorización con CloudWatch y CloudTrail.

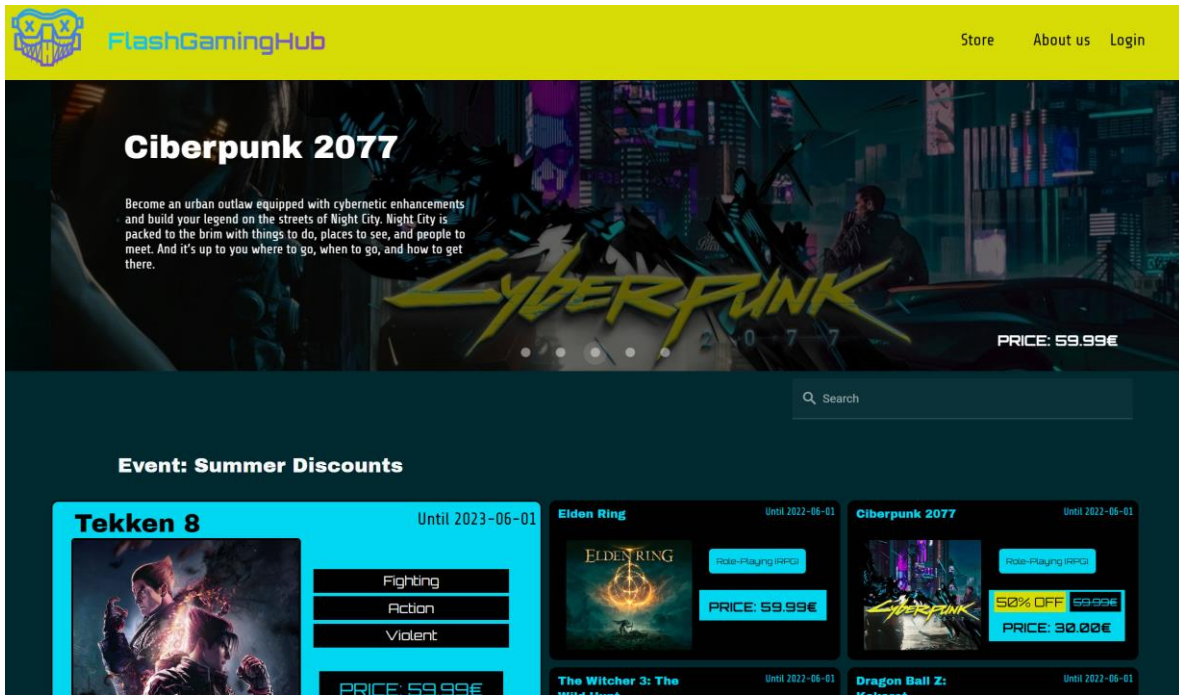
Además para que la web tenga imágenes de los videojuegos y los estudios puedan crear su propios juegos con imágenes de estos, tenemos un S3 bucket, el cual almacena estas imágenes y se conectan con el frontend, en otro laboratorio “academy”. En lo que también entra el uso del CloudWatch, ya que nos dieron errores al principio con la conexión establecida entre el front y el S3 Bucket.

· Presentación explicativa que describa la problemática abordada, la solución propuesta y los resultados obtenidos.

La solución propuesta soluciona la problemática de alta disponibilidad, recuperación ante desastres y resiliencia de una arquitectura de microservicios de un aplicativo desplegado en nube pública.

- Link al trabajo

<https://w3bflashgaminghub.retocsv.es/>



The screenshot shows the FlashGamingHub website. The header is yellow with the FlashGamingHub logo and navigation links: Store, About us, and Login. The main banner features a Cyberpunk 2077 advertisement with the text: "Ciberpunk 2077. Become an urban outlaw equipped with cybernetic enhancements and build your legend on the streets of Night City. Night City is packed to the brim with things to do, places to see, and people to meet. And it's up to you where to go, when to go, and how to get there." The price is listed as 59.99€. Below the banner is a search bar. The "Event: Summer Discounts" section displays several game cards:

- Tekken 8**: Until 2023-06-01. Price: 59.99€. Categories: Fighting, Action, Violent.
- Elden Ring**: Until 2022-06-01. Price: 59.99€.
- Ciberpunk 2077**: Until 2022-06-01. Price: 59.99€. 50% OFF. Price: 30.00€.
- The Witcher 3: The Wild Hunt**: Until 2022-06-01.
- Dragon Ball Z: Kakarot**: Until 2022-06-01.

• Anexo

Presentamos a continuación algunas pantallas de configuración de la arquitectura en caso de que no se pueda consultar. A fecha de entrega del proyecto están consumidos 44 euros del AWS Academy Learning Lab.

1 Route 53

Public
retocsv.es
Info
Delete zone
Test record
Configure query logging

Hosted zone details
Edit hosted zone

Records (11)
DNSSEC signing
Hosted zone tags (0)

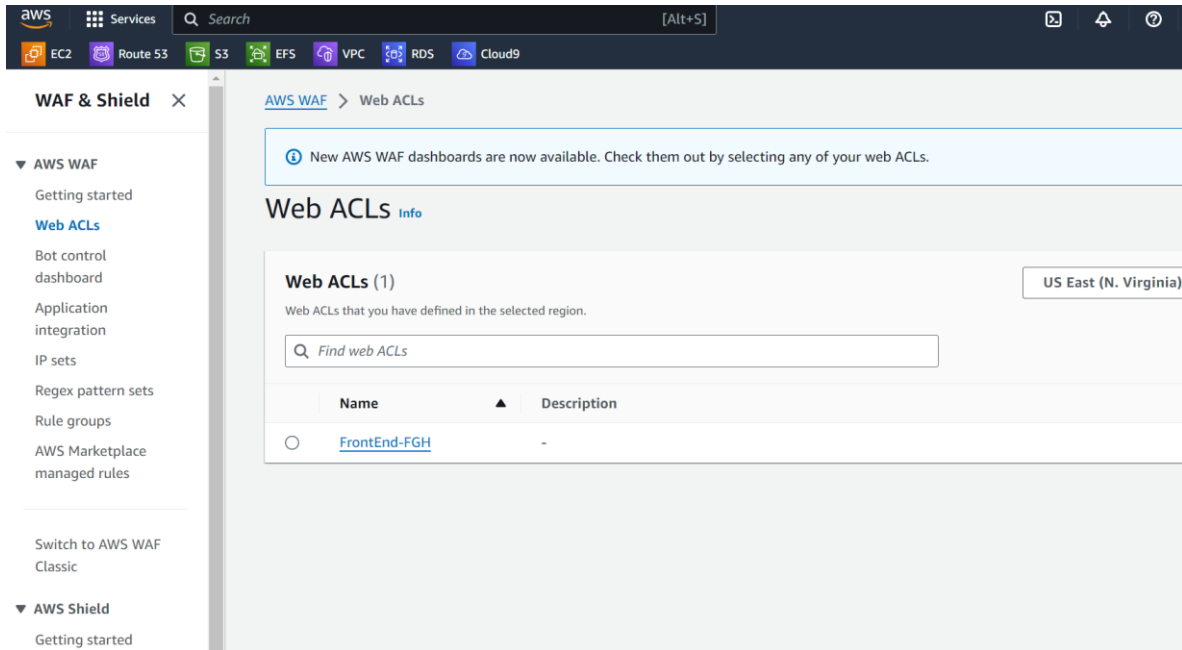
Records (11) Info
Delete record
Import zone file
Create record

Automatic mode is the current search behavior optimized for best filter results. [To change modes go to settings.](#)

Filter records by property or value
Type
Routing policy
Alias
1

	Record name	Type	Routin...	Differ...	Alias	Value/Route traffic to	TTL (s...	Health ...
<input type="checkbox"/>	retocsv.es	A	Simple	-	Yes	microservicios-359527117.e...	-	-
<input type="checkbox"/>	retocsv.es	NS	Simple	-	No	ns-542.awsdns-03.net. ns-1310.awsdns-35.org. ns-1824.awsdns-36.co.uk. ns-17.awsdns-02.com.	172800	-
<input type="checkbox"/>	retocsv.es	SOA	Simple	-	No	ns-542.awsdns-03.net. awsd...	900	-
<input type="checkbox"/>	4p1flashgaminghub.retocsv.es	A	Simple	-	Yes	aad5b1c6859e94b239789d9...	-	-
<input type="checkbox"/>	apiflashgaminghub.retocsv.es	A	Simple	-	Yes	aeb8b524ffc0c441681112a6...	-	-
<input type="checkbox"/>	cafe.retocsv.es	A	Simple	-	Yes	af96d4d31f1584df0893567...	-	-
<input type="checkbox"/>	echo1.retocsv.es	A	Simple	-	Yes	a1bba674dae054aecb93350...	-	-
<input type="checkbox"/>	echo2.retocsv.es	A	Simple	-	Yes	a1bba674dae054aecb93350...	-	-
<input type="checkbox"/>	w3bflashgaminghub.retocsv.es	A	Failover	Primary	Yes	a7d729d1a62854a8789f231...	-	-
<input type="checkbox"/>	w3bflashgaminghub.retocsv.es	A	Failover	Secondary	Yes	a5d729a580475483aa2e26e...	-	-
<input type="checkbox"/>	web.retocsv.es	A	Simple	-	No	34.247.79.221	60	-

2 WAF

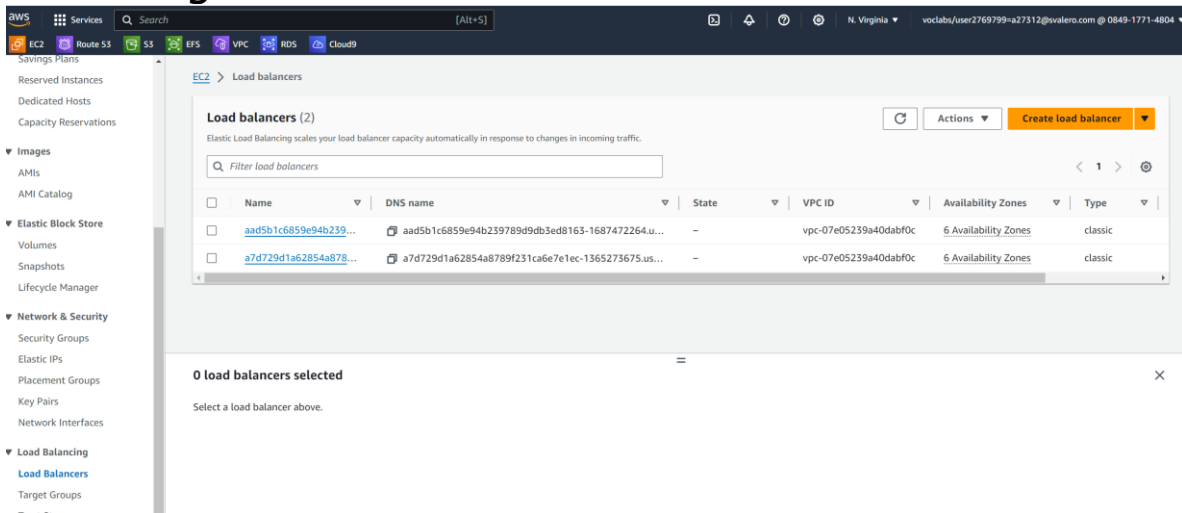


The screenshot shows the AWS WAF console interface. The top navigation bar includes the AWS logo, a search bar, and a list of services: EC2, Route 53, S3, EFS, VPC, RDS, and Cloud9. The left sidebar is titled 'WAF & Shield' and contains a tree view with 'AWS WAF' expanded, showing options like 'Getting started', 'Web ACLs', 'Bot control dashboard', 'Application integration', 'IP sets', 'Regex pattern sets', 'Rule groups', and 'AWS Marketplace managed rules'. The main content area is titled 'Web ACLs' and shows a notification about new WAF dashboards. Below this, it displays 'Web ACLs (1)' for the 'US East (N. Virginia)' region, with a search bar and a table listing the ACLs.

Name	Description
FrontEnd-FGH	-

3 ALB

North Virginia

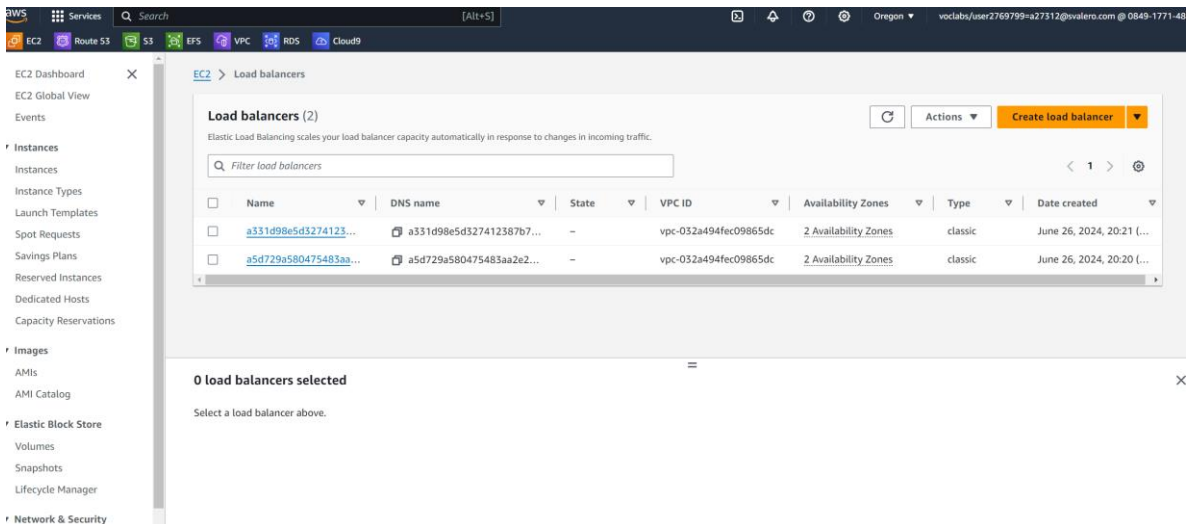


The screenshot shows the AWS Management Console for the North Virginia region. The left sidebar contains navigation links for various services. The main content area displays the 'Load balancers (2)' page. A table lists two load balancers:

Name	DNS name	State	VPC ID	Availability Zones	Type
aad5b1c6859e94b239...	aad5b1c6859e94b239789d9db5ed8163-1687472264.u...	-	vpc-07e05239a40dabf0c	6 Availability Zones	classic
a7d729d1a62854a878...	a7d729d1a62854a8789f231ca6e7e1ec-1365273675.us...	-	vpc-07e05239a40dabf0c	6 Availability Zones	classic

Below the table, it states '0 load balancers selected' and 'Select a load balancer above.'

Oregon

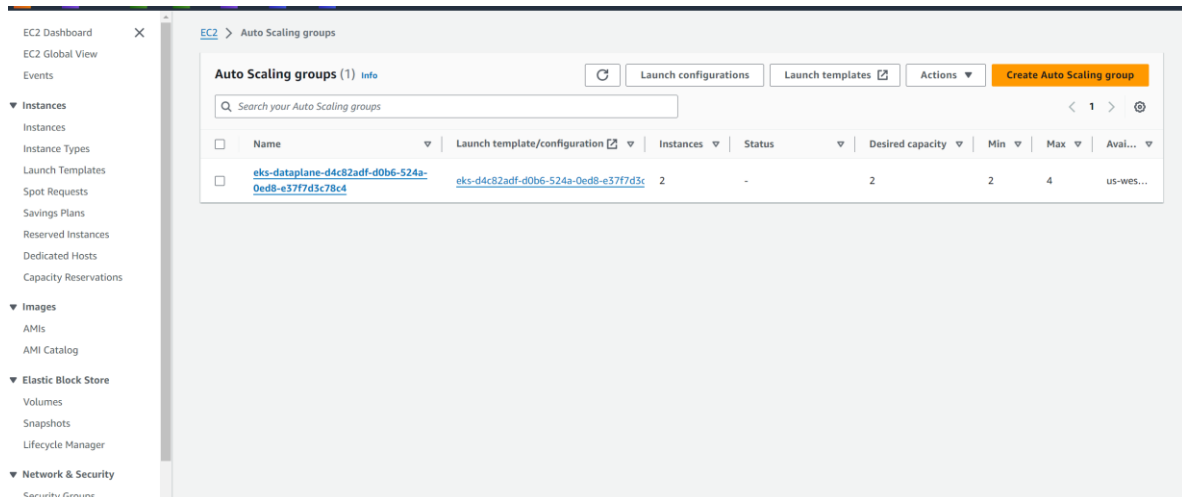


The screenshot shows the AWS Management Console for the Oregon region. The left sidebar contains navigation links for various services. The main content area displays the 'Load balancers (2)' page. A table lists two load balancers:

Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
a331d98e5d3274123...	a331d98e5d327412387b7...	-	vpc-032a494fec09865dc	2 Availability Zones	classic	June 26, 2024, 20:21 (...)
a5d729a580475483aa...	a5d729a580475483aa2e2...	-	vpc-032a494fec09865dc	2 Availability Zones	classic	June 26, 2024, 20:20 (...)

Below the table, it states '0 load balancers selected' and 'Select a load balancer above.'

4 ASG



EC2 Dashboard
EC2 Global View
Events

▼ Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations

▼ Images
AMIs
AMI Catalog

▼ Elastic Block Store
Volumes
Snapshots
Lifecycle Manager

▼ Network & Security
Security Groups

EC2 > Auto Scaling groups

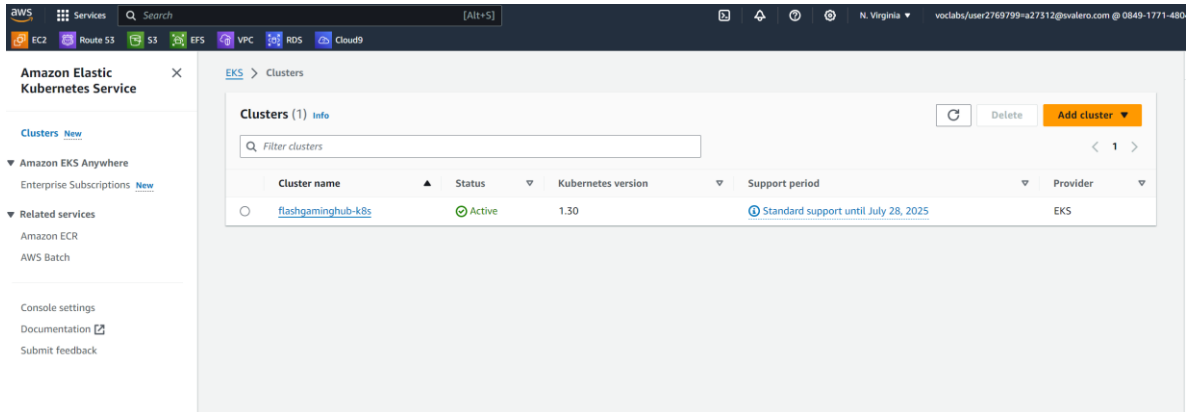
Auto Scaling groups (1) Info

Launch configurations Launch templates Actions Create Auto Scaling group

Search your Auto Scaling groups

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Avail...
<input type="checkbox"/>	eks-dataplane-d4c82adf-d0b6-524a-0ed8-e37f7d3c78c4	eks-d4c82adf-d0b6-524a-0ed8-e37f7d3c	2	-	2	2	4	us-wes...

5 EKS

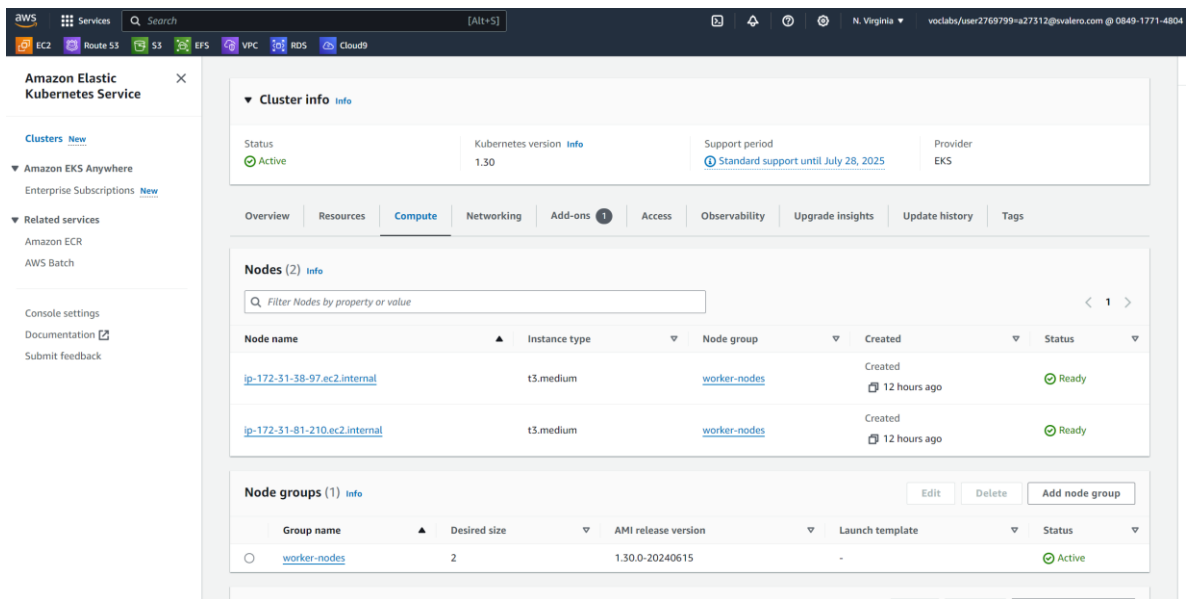


Amazon Elastic Kubernetes Service

Clusters (1) [Info](#)

Filter clusters

Cluster name	Status	Kubernetes version	Support period	Provider
flashgaminghub-k8s	Active	1.30	Standard support until July 28, 2025	EKS



Cluster info [Info](#)

Status: Active | Kubernetes version: 1.30 | Support period: Standard support until July 28, 2025 | Provider: EKS

Overview | Resources | **Compute** | Networking | Add-ons | Access | Observability | Upgrade insights | Update history | Tags

Nodes (2) [Info](#)

Filter Nodes by property or value

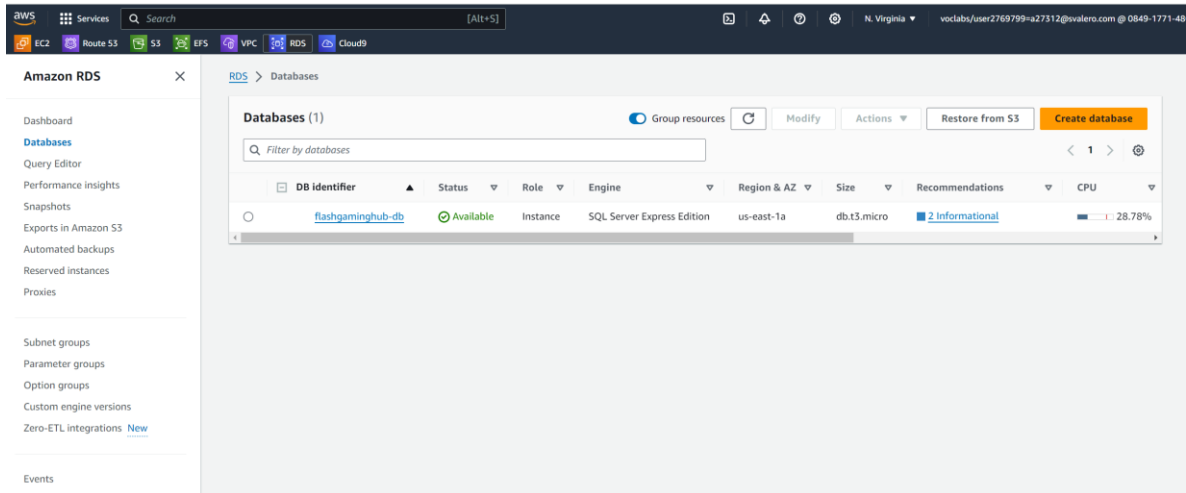
Node name	Instance type	Node group	Created	Status
ip-172-31-38-97.ec2.internal	t3.medium	worker-nodes	Created 12 hours ago	Ready
ip-172-31-81-210.ec2.internal	t3.medium	worker-nodes	Created 12 hours ago	Ready

Node groups (1) [Info](#)

Edit | Delete | Add node group

Group name	Desired size	AMI release version	Launch template	Status
worker-nodes	2	1.30.0-20240615	-	Active

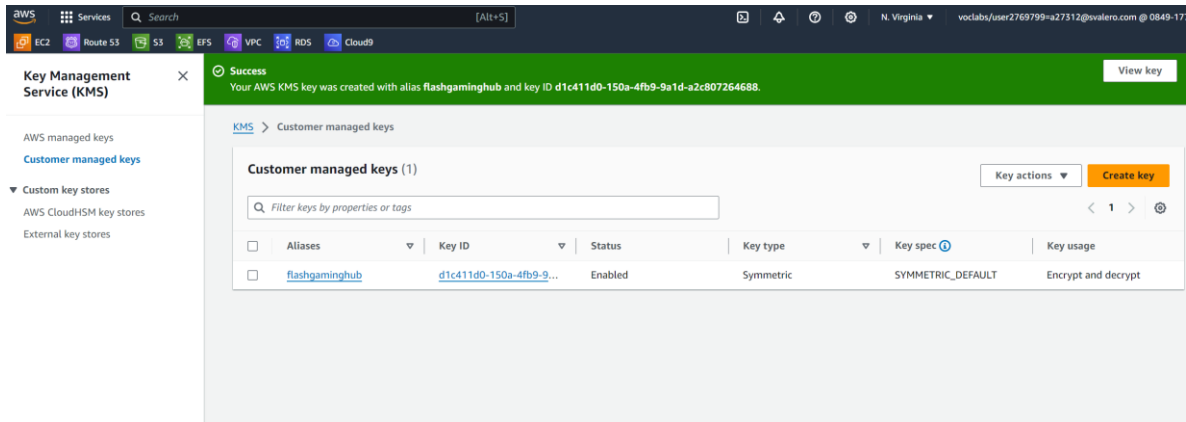
6 RDS



The screenshot shows the AWS Management Console interface for Amazon RDS. The left sidebar contains navigation links for various AWS services, including EC2, Route 53, S3, EFS, VPC, RDS, and Cloud9. The main content area is titled 'Amazon RDS' and shows the 'Databases (1)' page. A table lists the database instances, with the following data:

DB Identifier	Status	Role	Engine	Region & AZ	Size	Recommendations	CPU
flashgaminghub-db	Available	Instance	SQL Server Express Edition	us-east-1a	db.t3.micro	2 Informational	28.78%

7 KMS



aws Services Search [Alt+5]

EC2 Route 53 S3 EFS VPC RDS Cloud9

Key Management Service (KMS)

AWS managed keys
Customer managed keys

▼ Custom key stores
AWS CloudHSM key stores
External key stores

Success
Your AWS KMS key was created with alias `flashgaminghub` and key ID `d1c411d0-150a-4fb9-9a1d-a2c807264688`. [View key](#)

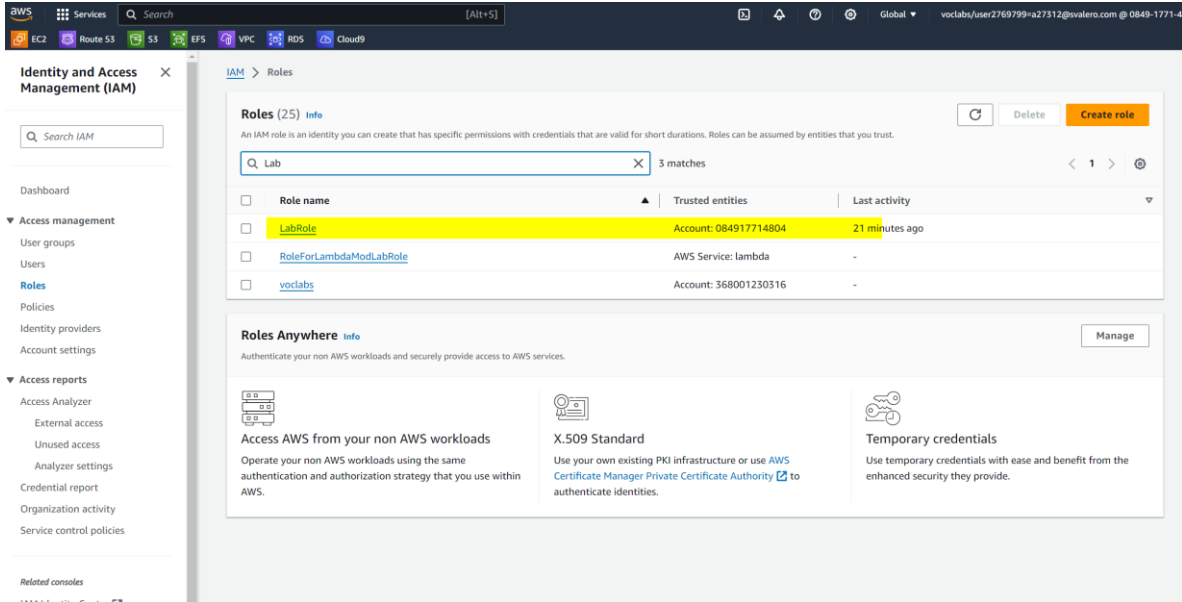
KMS > Customer managed keys

Customer managed keys (1) [Key actions](#) [Create key](#)

Filter keys by properties or tags

	Aliases	Key ID	Status	Key type	Key spec	Key usage
<input type="checkbox"/>	flashgaminghub	d1c411d0-150a-4fb9-9a1d-a2c807264688	Enabled	Symmetric	SYMMETRIC_DEFAULT	Encrypt and decrypt

8 IAM



Identity and Access Management (IAM)

Search IAM

Dashboard

▼ Access management

- User groups
- Users
- Roles**
- Policies
- Identity providers
- Account settings

▼ Access reports

- Access Analyzer
- External access
- Unused access
- Analyzer settings
- Credential report
- Organization activity
- Service control policies

Related consoles

IAM Identity Center F2

Roles (25) [Info](#)


An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Search: Lab 3 matches

<input type="checkbox"/>	Role name	Trusted entities	Last activity
<input type="checkbox"/>	LabRole	Account: 084917714804	21 minutes ago
<input type="checkbox"/>	RoleForLambdaModLabRole	AWS Service: lambda	-
<input type="checkbox"/>	voclabs	Account: 368001230316	-


Roles Anywhere [Info](#) [Manage](#)

Authenticate your non AWS workloads and securely provide access to AWS services.




Access AWS from your non AWS workloads

Operate your non AWS workloads using the same authentication and authorization strategy that you use within AWS.



X.509 Standard

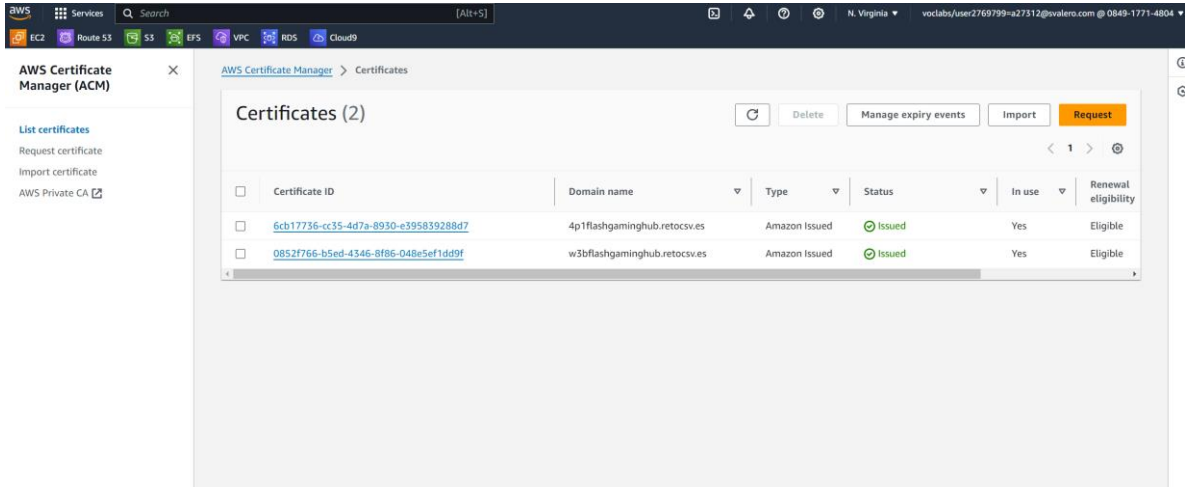
Use your own existing PKI infrastructure or use [AWS Certificate Manager Private Certificate Authority](#) to authenticate identities.



Temporary credentials

Use temporary credentials with ease and benefit from the enhanced security they provide.

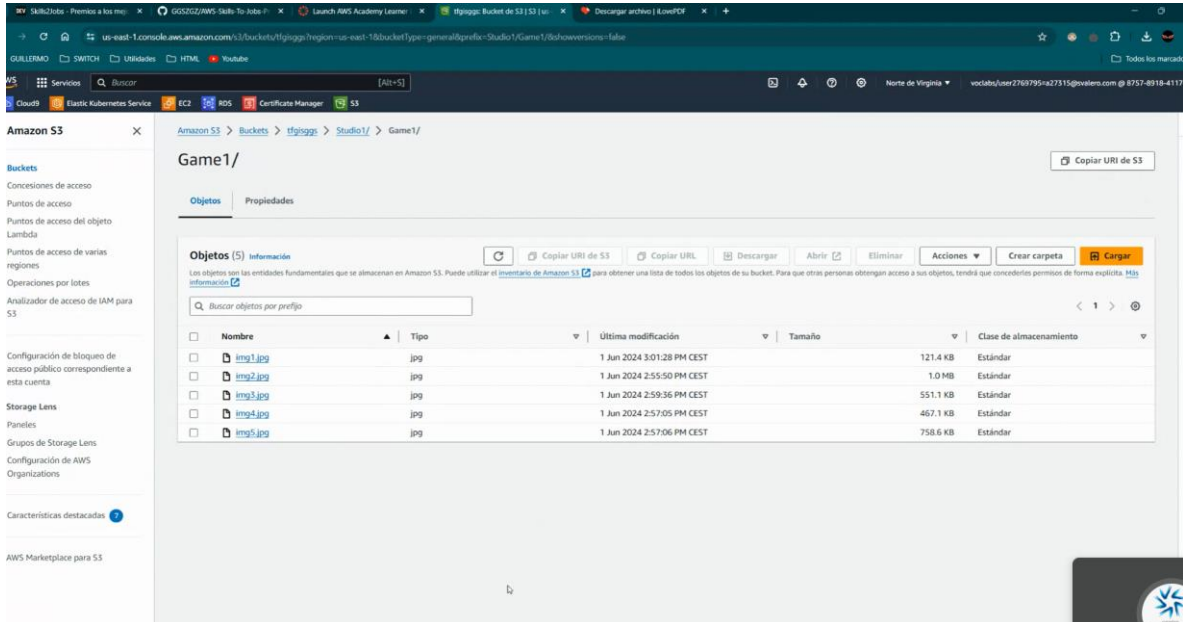
9 ACM



The screenshot shows the AWS Certificate Manager (ACM) console. The left sidebar contains the 'AWS Certificate Manager (ACM)' section with links for 'List certificates', 'Request certificate', 'Import certificate', and 'AWS Private CA'. The main content area is titled 'Certificates (2)' and displays a table with two certificates. The table has columns for Certificate ID, Domain name, Type, Status, In use, and Renewal eligibility. Both certificates are 'Amazon Issued' and have a status of 'Issued'. The first certificate is for '4p1flashgaminghub.retocsv.es' and the second is for 'w3bflashgaminghub.retocsv.es'. Both are 'In use' and 'Eligible' for renewal.

<input type="checkbox"/>	Certificate ID	Domain name	Type	Status	In use	Renewal eligibility
<input type="checkbox"/>	6cb17736-cc35-4d7a-8930-e395839288d7	4p1flashgaminghub.retocsv.es	Amazon Issued	Issued	Yes	Eligible
<input type="checkbox"/>	0852f766-b5ed-4346-8f86-048e5ef1dd9f	w3bflashgaminghub.retocsv.es	Amazon Issued	Issued	Yes	Eligible

10 S3



The screenshot shows the Amazon S3 console interface. The breadcrumb navigation indicates the path: Amazon S3 > Buckets > tfploggs > Studio1/ > Game1/. The 'Objetos' tab is selected, showing a list of 5 objects. The table below summarizes the objects:

Nombre	Tipo	Última modificación	Tamaño	Clase de almacenamiento
img1.jpg	jpg	1 Jun 2024 3:01:28 PM CEST	121.4 KB	Estándar
img2.jpg	jpg	1 Jun 2024 2:55:50 PM CEST	1.0 MB	Estándar
img3.jpg	jpg	1 Jun 2024 2:59:36 PM CEST	551.1 KB	Estándar
img4.jpg	jpg	1 Jun 2024 2:57:05 PM CEST	467.1 KB	Estándar
img5.jpg	jpg	1 Jun 2024 2:57:06 PM CEST	758.6 KB	Estándar

11 GitHub

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

Files

main

Go to file

.github/workflows

cicd.yml

manifests

README.md

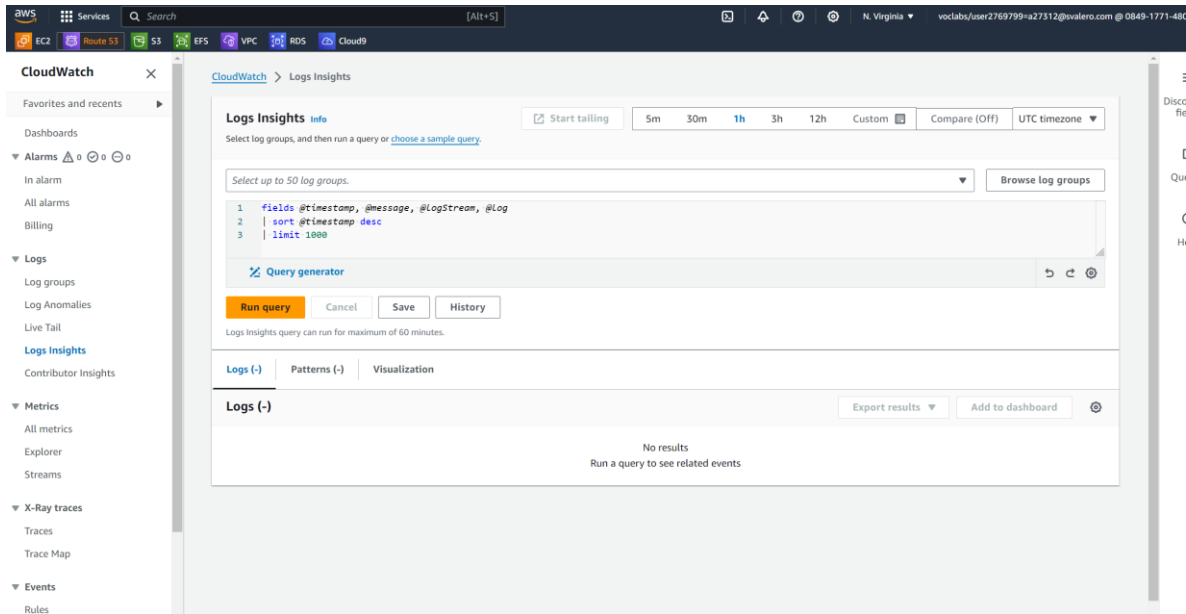
/github/workflows/

Add file

Update cicd.yml ✓ 8320e36 · 5 months ago History

Name	Last commit message	Last commit date
..		
cicd.yml	Update cicd.yml	5 months ago

12 CloudWatch

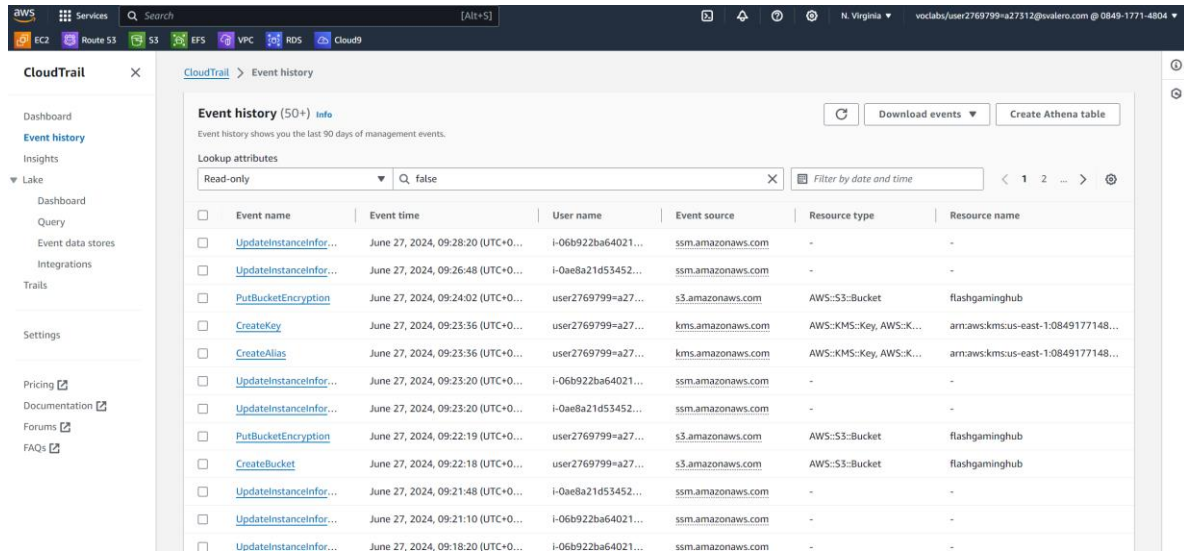


The screenshot shows the AWS CloudWatch Logs Insights console. The left sidebar contains navigation links for CloudWatch, Alarms, Logs, Metrics, X-Ray traces, and Events. The main content area is titled 'Logs Insights' and includes a 'Start tailing' button, a time range selector (set to 1h), and a 'Compare (Off)' dropdown. Below these is a text input field for a query, containing the following JSON query:

```
1 fields @timestamp, @message, @LogStream, @Log
2 | sort @timestamp desc
3 | limit 1000
```

Below the query input is a 'Query generator' button and a 'Run query' button. The results section, titled 'Logs (-)', shows 'No results' and a message 'Run a query to see related events'.

13 CloudTrail



The screenshot shows the AWS CloudTrail console interface. The top navigation bar includes the AWS logo, Services menu, Search bar, and user information. The left sidebar contains navigation links for Dashboard, Event history, Insights, Lake, Dashboard, Query, Event data stores, Integrations, Trails, Settings, Pricing, Documentation, Forums, and FAQs. The main content area is titled 'Event history (50+)' and includes a 'Download events' button and a 'Create Athena table' button. Below this, there is a 'Lookup attributes' section with a dropdown menu set to 'Read-only' and a search bar containing 'false'. A table of events is displayed with the following columns: Event name, Event time, User name, Event source, Resource type, and Resource name. The events listed are:

Event name	Event time	User name	Event source	Resource type	Resource name
UpdateInstanceInfo...	June 27, 2024, 09:28:20 (UTC+0...)	i-06b922ba64021...	ssm.amazonaws.com	-	-
UpdateInstanceInfo...	June 27, 2024, 09:26:48 (UTC+0...)	i-0ae8a21d53452...	ssm.amazonaws.com	-	-
PutBucketEncryption	June 27, 2024, 09:24:02 (UTC+0...)	user2769799=a27...	s3.amazonaws.com	AWS::S3::Bucket	flashgaminghub
CreateKey	June 27, 2024, 09:23:36 (UTC+0...)	user2769799=a27...	kms.amazonaws.com	AWS::KMS::Key, AWS::K...	arn:aws:kms:us-east-1:0849177148...
CreateAlias	June 27, 2024, 09:23:36 (UTC+0...)	user2769799=a27...	kms.amazonaws.com	AWS::KMS::Key, AWS::K...	arn:aws:kms:us-east-1:0849177148...
UpdateInstanceInfo...	June 27, 2024, 09:23:20 (UTC+0...)	i-06b922ba64021...	ssm.amazonaws.com	-	-
UpdateInstanceInfo...	June 27, 2024, 09:23:20 (UTC+0...)	i-0ae8a21d53452...	ssm.amazonaws.com	-	-
PutBucketEncryption	June 27, 2024, 09:22:19 (UTC+0...)	user2769799=a27...	s3.amazonaws.com	AWS::S3::Bucket	flashgaminghub
CreateBucket	June 27, 2024, 09:22:18 (UTC+0...)	user2769799=a27...	s3.amazonaws.com	AWS::S3::Bucket	flashgaminghub
UpdateInstanceInfo...	June 27, 2024, 09:21:48 (UTC+0...)	i-0ae8a21d53452...	ssm.amazonaws.com	-	-
UpdateInstanceInfo...	June 27, 2024, 09:21:10 (UTC+0...)	i-06b922ba64021...	ssm.amazonaws.com	-	-
UpdateInstanceInfo...	June 27, 2024, 09:18:20 (UTC+0...)	i-06b922ba64021...	ssm.amazonaws.com	-	-

14 VPC

VPC dashboard

EC2 Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

Security

Network ACLs

Security groups

Subnets (10)

Find resources by attribute or tag

Last updated less than a minute ago

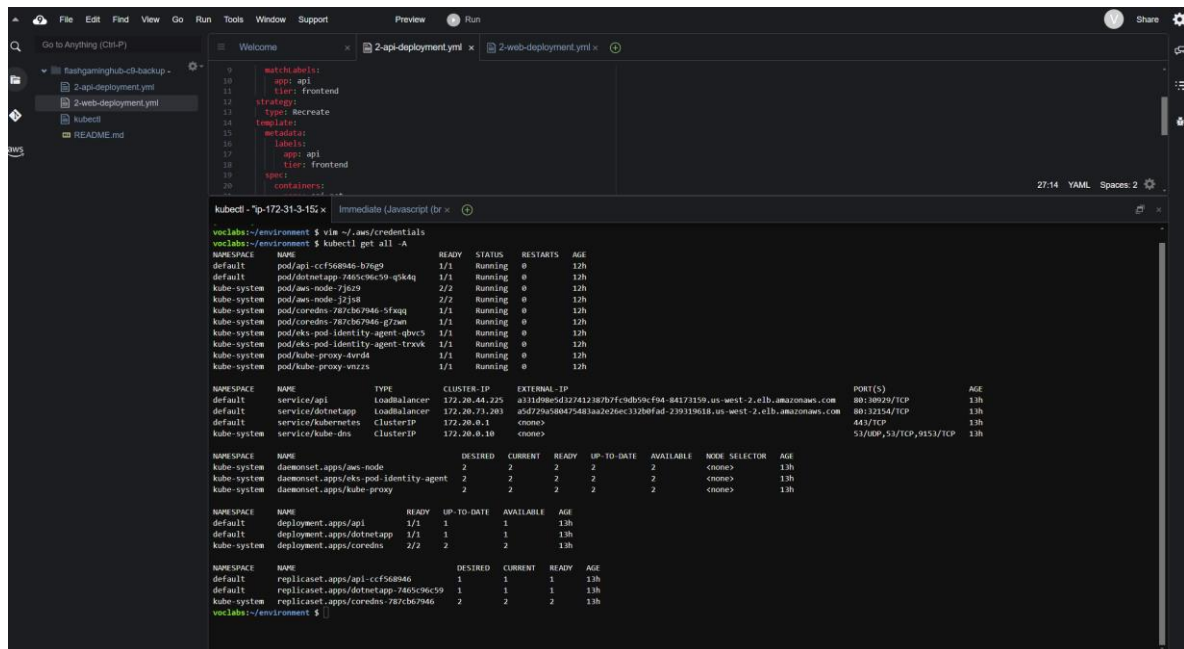
Actions

Create subnet

	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	-	subnet-0af557e11d15425fd	Available	vpc-0faf0070e23fa35b7	172.31.48.0/20	-
<input type="checkbox"/>	PrivadaApp-A	subnet-026c83e68d52f1ec9	Available	vpc-032a494fec09865dc flash...	10.0.2.0/24	-
<input type="checkbox"/>	PrivadaApp-B	subnet-0147cec52f6bbdf71	Available	vpc-032a494fec09865dc flash...	10.0.3.0/24	-
<input type="checkbox"/>	PrivadaBDD-A	subnet-0925fddbc291b173f	Available	vpc-032a494fec09865dc flash...	10.0.4.0/24	-
<input type="checkbox"/>	PrivadaBDD-B	subnet-0320d88b813a8d391	Available	vpc-032a494fec09865dc flash...	10.0.5.0/24	-
<input type="checkbox"/>	Publica-A	subnet-05b724e04fe74c285	Available	vpc-032a494fec09865dc flash...	10.0.0.0/24	-
<input type="checkbox"/>	Publica-B	subnet-096ef84c84edd4ff2	Available	vpc-032a494fec09865dc flash...	10.0.1.0/24	-

Select a subnet

15 Cloud9



The screenshot shows a Cloud9 IDE interface with two tabs: '2-api-deployment.yml' and '2-web-deployment.yml'. The '2-api-deployment.yml' tab is active, displaying a Kubernetes deployment manifest for an API service. The terminal window shows the output of 'kubectl get all -A' and 'kubectl get pods -A', providing a detailed overview of the Kubernetes cluster's state.

```

9  watch.sh:
10  app: api
11  tier: frontend
12  strategy:
13  type: Recreate
14  template:
15  metadata:
16  labels:
17  app: api
18  tier: frontend
19  spec:
20  containers:

```

```

voclabs:~/environment $ vim ~/.aws/credentials
voclabs:~/environment $ kubectl get all -A
NAMESPACE NAME READY STATUS RESTARTS AGE
default pod/api-ccf568946-b7g9 1/1 Running 0 12h
default pod/dotnetapp-7465c96c59-qk4dq 1/1 Running 0 12h
kube-system pod/aws-node-7j6i9 2/2 Running 0 12h
kube-system pod/aws-node-j21s4 2/2 Running 0 12h
kube-system pod/coredns-787cb67946-5f9qj 1/1 Running 0 12h
kube-system pod/coredns-787cb67946-g7zw 1/1 Running 0 12h
kube-system pod/eks-pod-identity-agent-qbvc5 1/1 Running 0 12h
kube-system pod/eks-pod-identity-agent-trwx1 1/1 Running 0 12h
kube-system pod/kube-proxy-4vrd4 1/1 Running 0 12h
kube-system pod/kube-proxy-vnzss 1/1 Running 0 12h

NAMESPACE NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
default service/api LoadBalancer 172.20.44.225 a311d98ed327412387b7fcd59cf94-84173359.us-west-2.elb.amazonaws.com 80:8029/TCP 13h
default service/dotnetapp LoadBalancer 172.20.73.203 a5d229a580475483a2e26ec3320f4d-23933918.us-west-2.elb.amazonaws.com 80:82154/TCP 13h
default service/kubernetes ClusterIP 172.20.0.1 <none> 443/TCP 13h
kube-system service/kube-dns ClusterIP 172.20.0.10 <none> 53/UDP,53/TCP,9153/TCP 13h

NAMESPACE NAME DESIRED CURRENT READY UP-TO-DATE AVAILABLE NODE SELECTOR AGE
kube-system daemonset.apps/aws-node 2 2 2 2 2 <none> 13h
kube-system daemonset.apps/eks-pod-identity-agent 2 2 2 2 2 <none> 13h
kube-system daemonset.apps/kube-proxy 2 2 2 2 2 <none> 13h

NAMESPACE NAME READY UP-TO-DATE AVAILABLE AGE
default deployment.apps/api 1/1 1 1 13h
default deployment.apps/dotnetapp 1/1 1 1 13h
kube-system deployment.apps/coredns 2/2 2 2 13h

NAMESPACE NAME DESIRED CURRENT READY AGE
default replicaset.apps/api-ccf568946 1 1 1 13h
default replicaset.apps/dotnetapp-7465c96c59 1 1 1 13h
kube-system replicaset.apps/coredns-787cb67946 2 2 2 13h
voclabs:~/environment $

```