

UNIVERSIDAD CENTRAL DEL ECUADOR
FACULTAD DE INGENIERIAS Y CIENCIAS APLICADAS
SISTEMAS DE INFORMACIÓN
PROGRAMACIÓN DISTRIBUIDA



Auto Scaling Group and Load Balancer

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Paralelo:

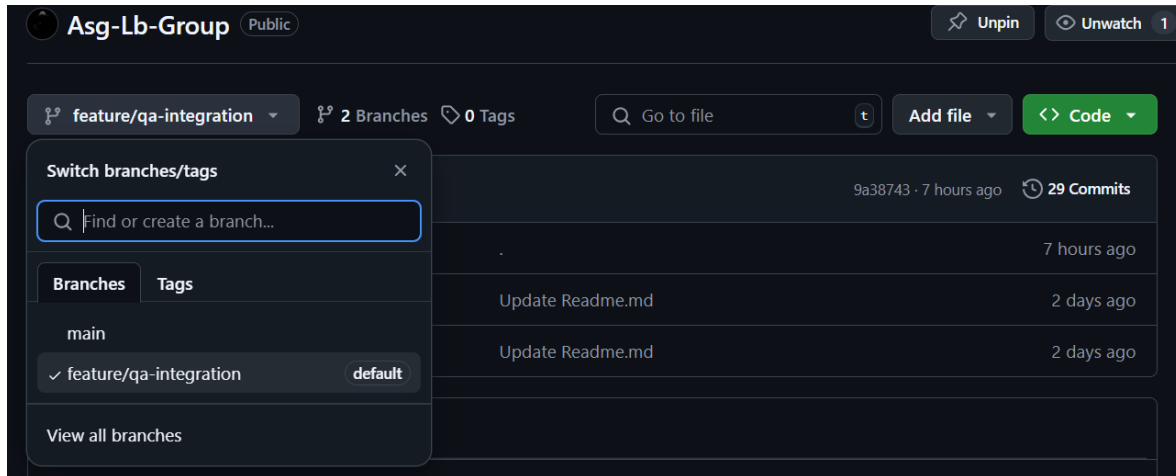
SIS8-003

Fecha:

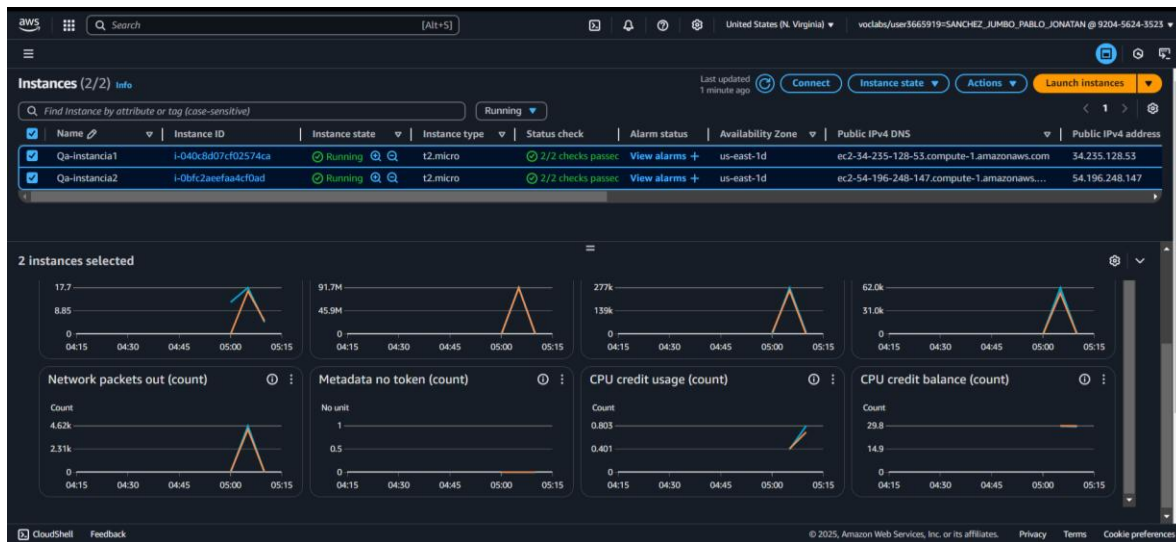
Quito, 18 de enero de 2025

Auto Scaling Group and Load Balancer

- ❑ We create two branches, one for QA and another called Main.



- ❑ In our AWS, we create two instances for QA in which the web page will be reflected.



- ❑ We create a Load Balancer for QA.

The screenshot shows the AWS Management Console 'Load balancers' page. Two load balancers are listed: 'Qa-LB' and 'Main-LB', both in an 'Active' state. The table provides details such as DNS name, VPC ID, Availability Zones, Type, and Date created.

Name	DNS name	State	VPC ID	Availability Zones	Type	Date created
Qa-LB	Qa-LB-176839556.us-east-1.elb.amazonaws.com	Active	vpc-0e279458535167f7cf	6 Availability Zones	application	January 18, 2025, 08:17 (UTC-05:00)
Main-LB	Main-LB-1699593169.us-east-1.elb.amazonaws.com	Active	vpc-0e279458535167f7cf	6 Availability Zones	application	January 18, 2025, 09:51 (UTC-05:00)

	Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
<input type="checkbox"/>	Main-tg	arn:aws:elasticloadbalancing...	80	HTTP	Instance	Main-LB	vpc-0e279458535167fcf
<input checked="" type="checkbox"/>	Qa-tg	arn:aws:elasticloadbalancing...	80	HTTP	Instance	Qa-LB	vpc-0e279458535167fcf

Target group: Qa-tg

IP address type

IPv4

Load balancer

Qa-LB

2

Total targets

2

Healthy

0

Unhealthy

0

Unused

0

Initial

0

Draining

0

Anomalous

☐ We verify that the two instances created are linked to the Load Balancer.

Target group: Qa-tg

Registered targets (2)

Info

Anomaly mitigation: Not applicable

Deregister

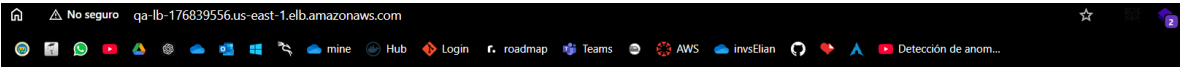
Register targets

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

Filter targets

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status details	Admini...	Overri...	Launch...	Anomaly detection result
<input type="checkbox"/>	i-0e8bbfcca130d3a81	Qa-Instancia1	80	us-east-1d (us...	Healthy	-	No override	No overri...	January 1...	Normal
<input type="checkbox"/>	i-0f9a1534dc5145501	Qa-Instancia2	80	us-east-1d (us...	Healthy	-	No override	No overri...	January 1...	Normal

☐ We check that the web page is running with the public IP.



Dataset-Servidor

<div>Juan Pérez</div> <div>Calle Mayor 1, Madrid, España</div>	<div>María Gómez</div> <div>Avenida Libertador 1234, Buenos Aires, Argentina</div>	<div>Ana Rodríguez</div> <div>Calle 50 No. 20, Bogotá, Colombia</div>
<div>Carlos Sánchez</div> <div>Passeig de Gràcia 45, Barcelona, España</div>	<div>Lucía Fernández</div> <div>Avenida Insurgentes Sur 3000, Ciudad de México, México</div>	<div>Pedro Martínez</div> <div>Calle 8 No. 27, Lima, Perú</div>
<div>Sofía López</div> <div>Calle Ocho 18, Quito, Ecuador</div>	<div>Miguel Torres</div> <div>Calle San Martín 123, Montevideo, Uruguay</div>	<div>Elena Ruiz</div> <div>Carrera 15 No. 85-50, Bogotá, Colombia</div>
<div>Luis Ramírez</div> <div>Calle 25 de Mayo 456, Asunción, Paraguay</div>	<div>Marta Flores</div> <div>Calle 72 No. 5-15, Medellín, Colombia</div>	<div>José Aguilar</div> <div>Calle Goya 89, Madrid, España</div>

☐ We create an image from our main instance and bind it to a target group for the Main.

	Name	ARN	Port	Protocol	Target type	Load balancer	VPC ID
<input checked="" type="checkbox"/>	Main-tg	arn:aws:elasticloadbalancing...	80	HTTP	Instance	Main-LB	vpc-0e279458535167fcf
<input type="checkbox"/>	Qa-tg	arn:aws:elasticloadbalancing...	80	HTTP	Instance	Qa-LB	vpc-0e279458535167fcf

☐ We create the Load Balancer for Main.

Instances (1/9) info										less than a minute ago		Connect	Instance state	Actions	Launch instances
Find Instance by attribute or tag (case-sensitive)										All states		< 1 >			
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 address							
<input type="checkbox"/>	i-096959a1109ad1c87	Terminated	t2.micro		View alarms +	us-east-1c	-	-							
<input checked="" type="checkbox"/>	i-0620ed9f29d7854ce	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1c	ec2-3-84-235-198.compute-1.amazonaws.com	3.84.235.198							
Qa-Instancia1	i-0e8bbfcca130d3a81	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1d	ec2-54-87-224-85.compute-1.amazonaws.com	54.87.224.85							
Qa-Instancia2	i-0f9a1534dc3145501	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1d	ec2-3-94-152-73.compute-1.amazonaws.com	3.94.152.73							
<input type="checkbox"/>	i-0aa9fb85a9b936d5c	Terminated	t2.micro	-	View alarms +	us-east-1b	-	-							
<input type="checkbox"/>	i-05bed81a46fd149e6	Terminated	t2.micro	-	View alarms +	us-east-1b	-	-							
<input type="checkbox"/>	i-00c032418dc16cd01	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	ec2-3-234-220-239.compute-1.amazonaws.com	3.234.220.239							
<input type="checkbox"/>	i-0ef46814136ef6835	Terminated	t2.micro	-	View alarms +	us-east-1b	-	-							
<input type="checkbox"/>	i-02c109db1a7848fcc	Terminated	t2.micro	-	View alarms +	us-east-1c	-	-							

Asg-Main Capacity overview

arn:aws:autoScaling-us-east-1:920456243523:autoScalingGroup:b450fa66-dc2a-47fd-8a47-2ff63c3ffb81:autoScalingGroupName/Asg-Main			
Desired capacity 2	Scaling limits (Min - Max) 2 - 4	Desired capacity type Units (number of instances)	Status -

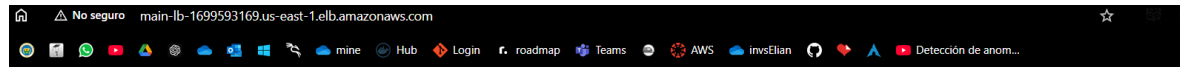
Date created
Sat Jan 18 2025 10:17:59 GMT-0500 (hora de Ecuador)

Instances (1/9) [Info](#) Last updated 12 minutes ago [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

[All states](#)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 address
<input type="checkbox"/>		i-096959a1109ad1c87	Terminated	t2.micro		View alarms	us-east-1c	-	-
<input checked="" type="checkbox"/>		i-0620ed9f29d7864ce	Running	t2.micro	2/2 checks passed	View alarms	us-east-1c	ec2-3-84-235-198.compute-1.amazonaws.com	3.84.235.198
<input type="checkbox"/>	Qa-instancia1	i-0e8bbfcca130d5a81	Running	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-54-87-224-85.compute-1.amazonaws.com	54.87.224.85
<input type="checkbox"/>	Qa-instancia2	i-0f9a1534dc5145501	Running	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-3-94-152-73.compute-1.amazonaws.com	3.94.152.73
<input type="checkbox"/>		i-0aa9fb85a9b936d5c	Terminated	t2.micro		View alarms	us-east-1b	-	-
<input type="checkbox"/>		i-05bed81a46fd149e6	Terminated	t2.micro		View alarms	us-east-1b	-	-
<input type="checkbox"/>		i-00c032418dc16cd01	Running	t2.micro	2/2 checks passed	View alarms	us-east-1b	ec2-3-234-220-239.compute-1.amazonaws.com	3.234.220.239
<input type="checkbox"/>		i-0ef46814136ef6835	Terminated	t2.micro		View alarms	us-east-1b	-	-
<input type="checkbox"/>		i-02c109db1a7848fcc	Terminated	t2.micro		View alarms	us-east-1c	-	-

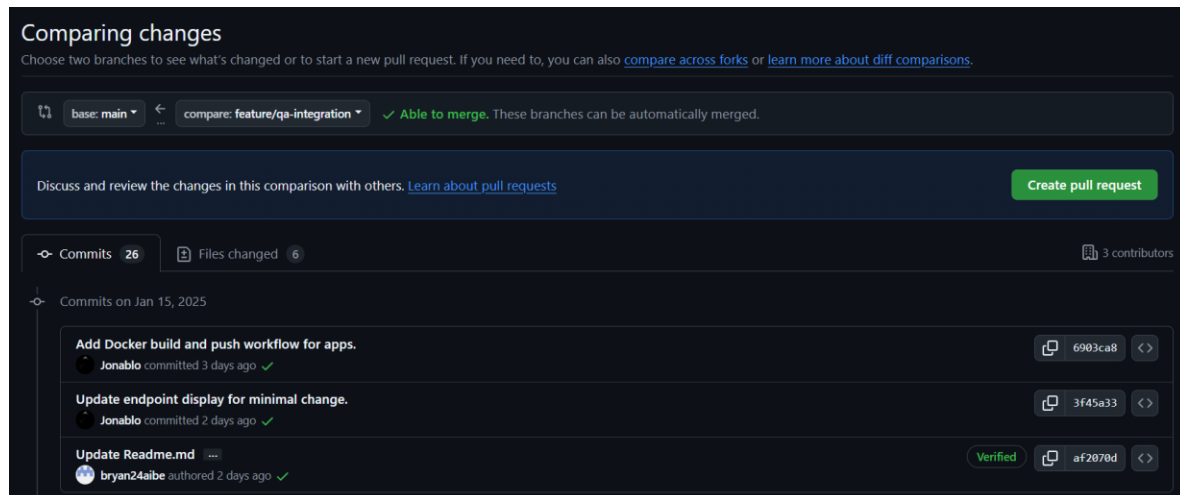
☐ We confirm that the web page runs without issues using the URL provided by the new Load Balancer.



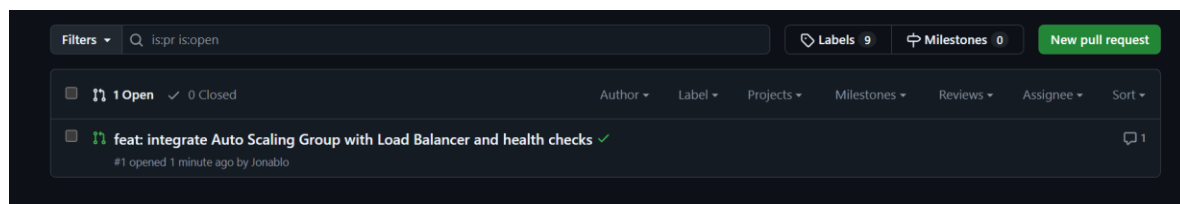
Dataset-Servidor

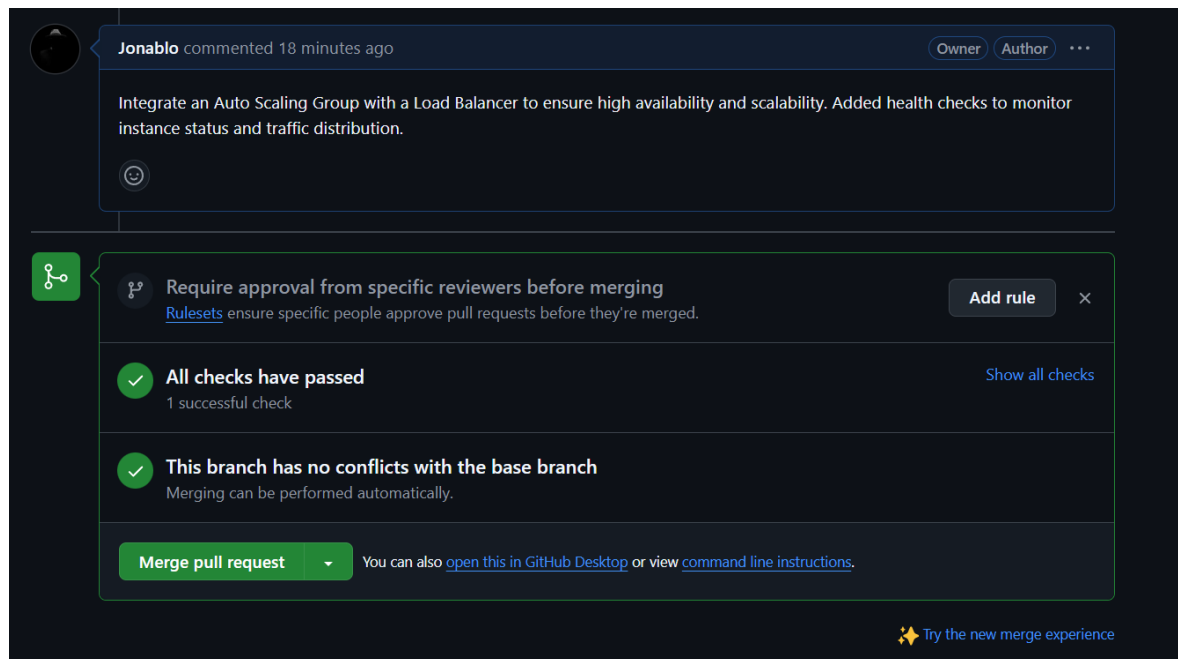
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- ☐ We make changes in QA and send Pull Requests to merge those changes into Main.



- ☐ We review and process the Pull Requests.





- GitHub Link

<https://github.com/Jonablo/Asg-Lb-Group>