

# DNS load balancing for HA using AWS Route 53

681 Nesvin KN February 23, 2024 [General](#) 249

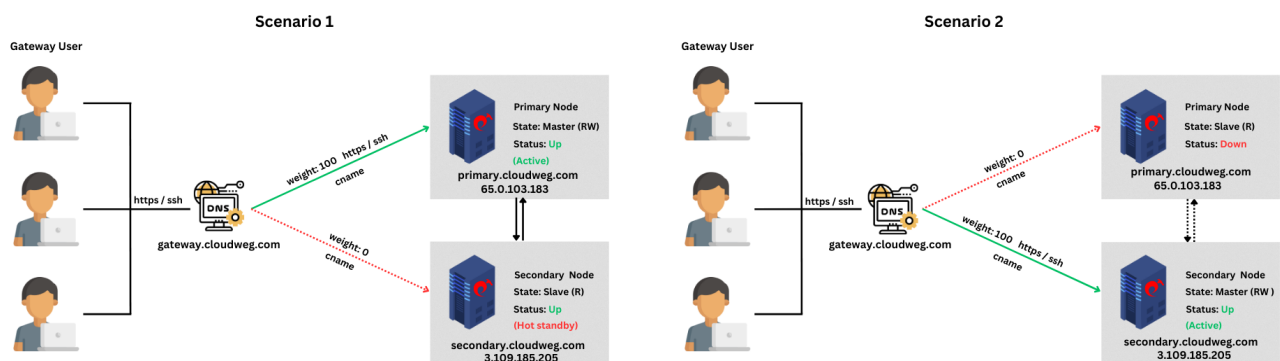
## Implementing DNS load balancing in [Ezeelogin cluster](#) for high availability (HA)

In the following example we will configure the hostname **gateway.cloudweg.com** to point to the primary node (**primary.cloudweg.com/65.0.103.183**) using weights in the DNS load balancer (Route 53). In the event of failure of the primary node the traffic would be directed to the secondary node (**secondary.cloudweg.com/3.109.185.205**) which is in the hot standby mode.

The node **secondary.cloudweg.com** needs to be switched to the master state to perform read/write operations.

Refer article to [switch the node states](#).

Diagram explaining DNS weight distribution:

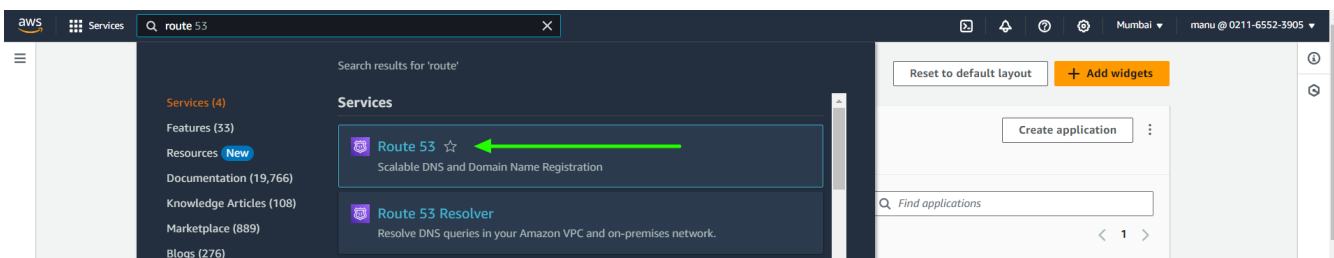


Scenario 1: **Primary node is in active state and secondary is in the hot standby mode.** Traffic is routed to the primary node.

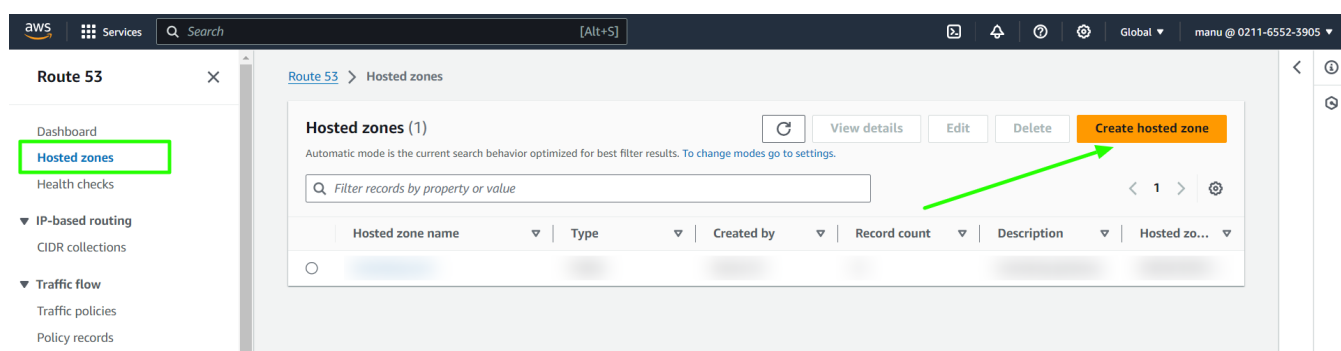
Scenario 2: **Primary node is down and secondary node is in the active state.** Traffic is routed to the secondary node.

Steps to set the DNS in AWS Route 53:

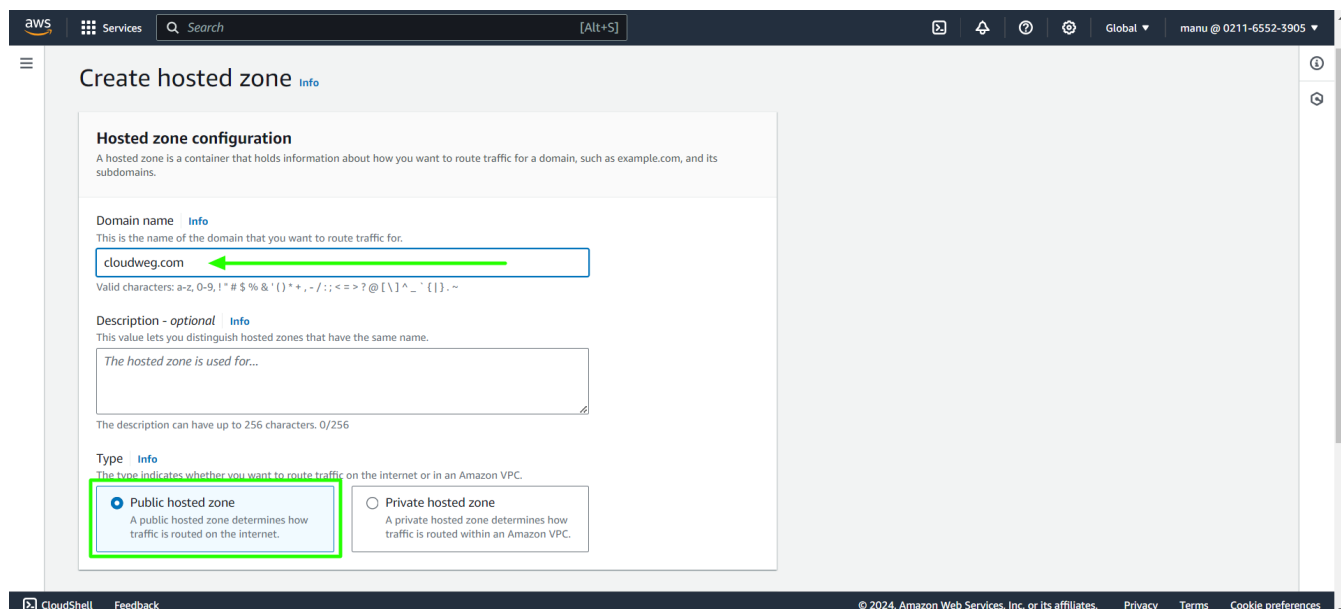
1. Login to **AWS account** and search for **Route 53**



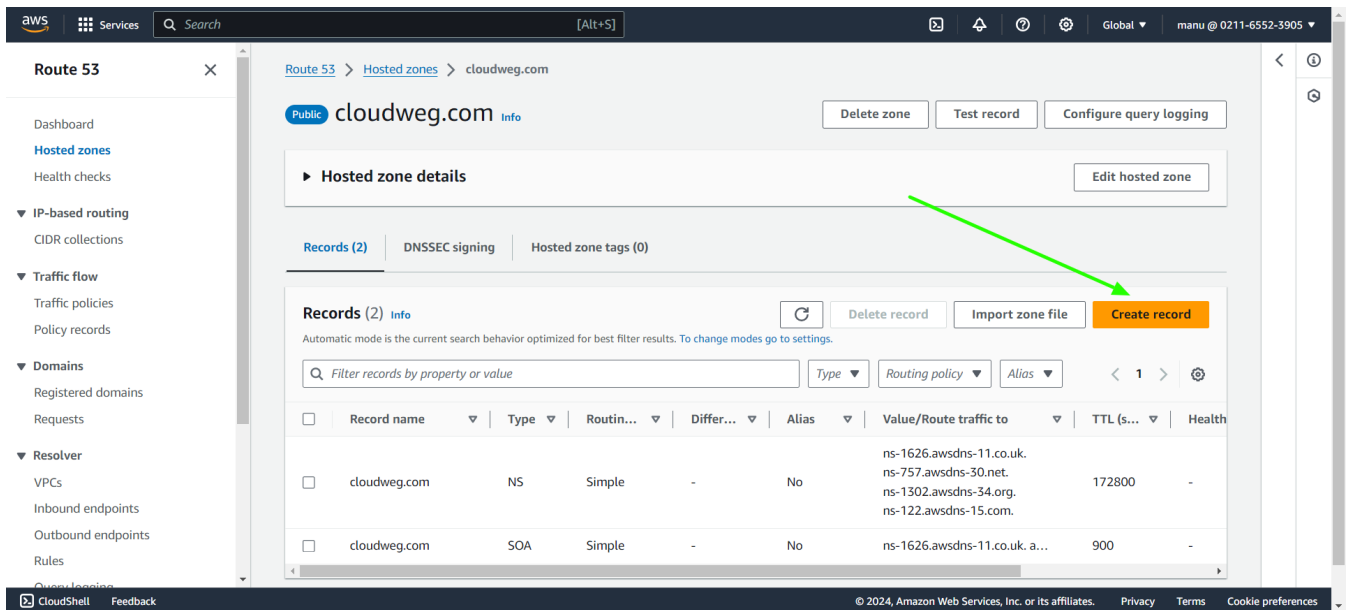
2. Select **Hosted zones** and create new hosted zone.



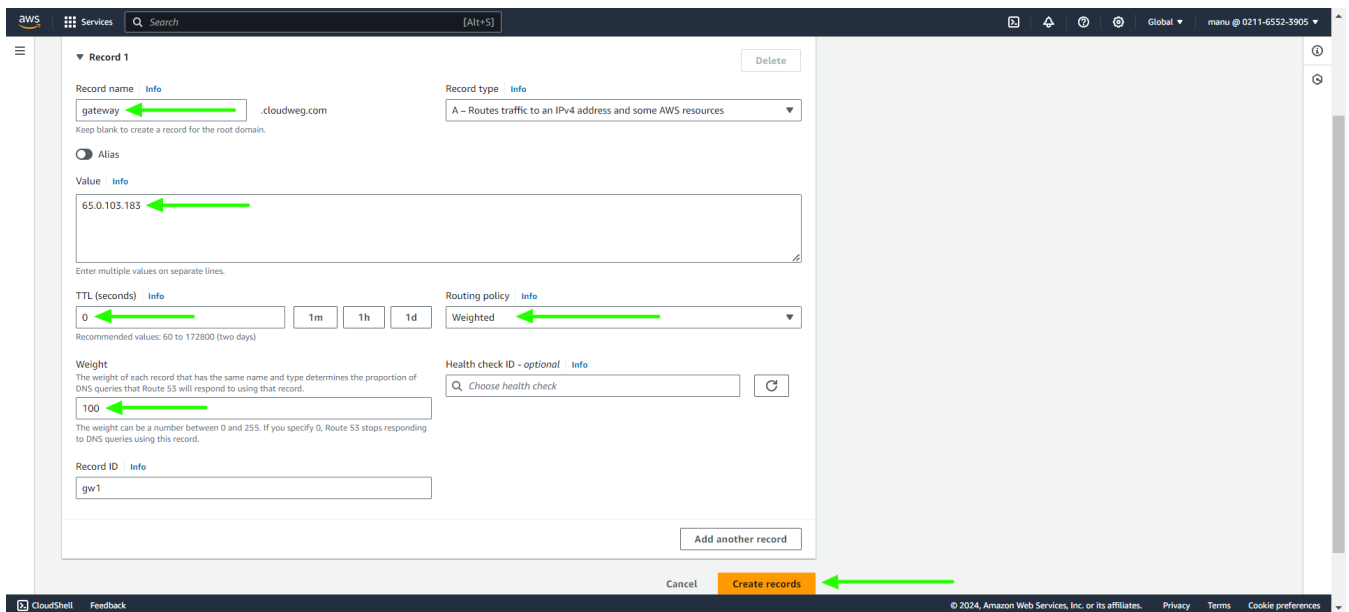
3. Provide **domain name** in hosted zone configuration and select **public hosted zone**.



4. Create **new record** under new domain name created.



5. Provide the name of the record to be used for calling Ezeelogin. Paste the public IP of the primary node, set the TTL seconds to 0, choose the routing policy as weighted with a weight of 100, provide the record ID, and then proceed to create the record.



6. Provide the same name of the record to be used for calling Ezeelogin. Paste the public IP of the secondary node, set the TTL seconds to 0, choose the routing policy as weighted with a weight of 0, provide the record ID, and then proceed to create the record.

**Record 1** Delete

Record name [Info](#)  .cloudweg.com

Record type [Info](#) A - Routes traffic to an IPv4 address and some AWS resources

☒ Alias

Value [Info](#)

Enter multiple values on separate lines.

TTL (seconds) [Info](#)  1m 1h 1d Recommended values: 60 to 172800 (two days)

Routing policy [Info](#) Weighted

Weight [Info](#)  The weight of each record that has the same name and type determines the proportion of DNS queries that Route 53 will respond to using that record. The weight can be a number between 0 and 255. If you specify 0, Route 53 stops responding to DNS queries using this record.

Health check ID - optional [Info](#)  Choose health check

Record ID [Info](#)

Add another record

Cancel Create records

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## 7. Create another record for primary with primary public IP.

**Record 1** Delete

Record name [Info](#)  .cloudweg.com

Record type [Info](#) A - Routes traffic to an IPv4 address and some AWS resources

☒ Alias

Value [Info](#)

Enter multiple values on separate lines.

TTL (seconds) [Info](#)  1m 1h 1d Recommended values: 60 to 172800 (two days)

Routing policy [Info](#) Weighted

Weight [Info](#)  The weight of each record that has the same name and type determines the proportion of DNS queries that Route 53 will respond to using that record. The weight can be a number between 0 and 255. If you specify 0, Route 53 stops responding to DNS queries using this record.

Health check ID - optional [Info](#)  Choose health check

Record ID [Info](#)

Add another record

Cancel Create records

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## 8. Create another record for secondary with secondary public IP.

**Record 1**

Record name:  .cloudweg.com

Record type:

Value:

TTL (seconds):  (1m, 1h, 1d)

Routing policy:

Weight:

Health check ID - optional:

Record ID:

[Add another record](#)

[Cancel](#) [Create records](#)

9. Created records can be viewed under hosted zones.

**Hosted zone details**

**Records (6)**

Record name	Type	Routing policy	Differ...	Alias	Value/Route traffic to	TTL (s)	Health ...	Evalua...	
cloudweg.com	NS	Simple	-	No	ns-1626.awsdns-11.co.uk. ns-757.awsdns-30.net. ns-1302.awsdns-34.org. ns-122.awsdns-15.com.	172800	-	-	-
cloudweg.com	SOA	Simple	-	No	ns-1626.awsdns-11.co.uk. a...	900	-	-	-
gateway.cloudweg.com	A	Weighted	100	No	65.0.103.183	0	-	-	g...
gateway.cloudweg.com	A	Weighted	0	No	3.109.185.205	0	-	-	g...
primary.cloudweg.com	A	Weighted	0	No	65.0.103.183	0	-	-	g...
secondary.cloudweg.com	A	Weighted	0	No	3.109.185.205	0	-	-	g...

10. To change the weight, select the secondary record -> edit record -> change weight to 100 and save.

Route 53 > Hosted zones > cloudweg.com

Public cloudweg.com info

Delete zone Test record Configure query logging

Hosted zone details Edit hosted zone

Records (6) DNSSEC signing Hosted zone tags (0)

Records (1/6) info

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

Filter records by property or value

Record name	Type	Routin...	Differ...	Alias	Value/Route traffic to	TT
cloudweg.com	NS	Simple	-	No	ns-1626.awsdns-11.co.uk. ns-757.awsdns-30.net. ns-1302.awsdns-34.org. ns-122.awsdns-15.com.	17
cloudweg.com	SOA	Simple	-	No	ns-1626.awsdns-11.co.uk. a...	90
gateway.cloudweg.com	A	Weighted	100	No	65.0.103.183	0
gateway.cloudweg.com	A	Weighted	0	No	3.109.185.205	0
primary.cloudweg.com	A	Weighted	0	No	65.0.103.183	0
secondary.cloudweg.com	A	Weighted	0	No	3.109.185.205	0

Value info

3.109.185.205

Enter multiple values on separate lines.

TTL (seconds) info

0 1m 1h 1d

Recommended values: 60 to 172800 (two days)

Routing policy info

Weighted

Weight

The weight of each record that has the same name and type determines the proportion of DNS queries that Route 53 will respond to using that record.

100

The weight can be a number between 0 and 255. If you specify 0, Route 53 stops responding to DNS queries using this record.

Health check ID - optional info

Choose health check

Record ID info

gw2

Cancel Save

Select the primary record -> edit record -> change weight to 0 and save.

Route 53 > Hosted zones > cloudweg.com

Public cloudweg.com info

Delete zone Test record Configure query logging

Hosted zone details Edit hosted zone

Records (6) DNSSEC signing Hosted zone tags (0)

Records (1/6) info

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cloudweg.com	SOA	Simple	-	No	ns-1626.awsdns-11.co.uk. a...	90
gateway.cloudweg.com	A	Weighted	100	No	65.0.103.183	0
gateway.cloudweg.com	A	Weighted	0	No	3.109.185.205	0
primary.cloudweg.com	A	Weighted	0	No	65.0.103.183	0
secondary.cloudweg.com	A	Weighted	0	No	3.109.185.205	0

Value info

65.0.103.183

Enter multiple values on separate lines.

TTL (seconds) info

0 1m 1h 1d

Recommended values: 60 to 172800 (two days)

Routing policy info

Weighted

Weight

The weight of each record that has the same name and type determines the proportion of DNS queries that Route 53 will respond to using that record.

0

The weight can be a number between 0 and 255. If you specify 0, Route 53 stops responding to DNS queries using this record.

Health check ID - optional info

Choose health check

Record ID info

gw1

Cancel Save

11. Click on **health checks** and **create new health check** for both primary and secondary.

Dashboard

Hosted zones

Health checks

IP-based routing

CIDR collections

Traffic flow

Traffic policies

Policy records

Create health check Delete health check Edit health check

Filter by keyword

Name	Status	Description	Alarms	ID

Provide a name for the primary health check settings, select the protocol, paste the public IP of the primary node, and then save the settings.

**Step 1: Configure health check**  
Step 2: Get notified when health check fails

### Configure health check

Route 53 health checks let you track the health status of your resources, such as web servers or mail servers, and take action when an outage occurs.

**Name**

**What to monitor**

- ☒ Endpoint
- ☐ Status of other health checks (calculated health check)
- ☐ State of CloudWatch alarm

**Monitor an endpoint**

Multiple Route 53 health checkers will try to establish a TCP connection with the following resource to determine whether it's healthy. [Learn more](#)

**Specify endpoint by** ☒ IP address ☐ Domain name

**Protocol**

**IP address \***

**Host name**

**Port \***

**Path**

► Advanced configuration

URL <https://65.0.103.183/>

Provide a name for the secondary health check settings, select the protocol, paste the public IP of the secondary node, and then save the settings.

**Step 1: Configure health check**  
Step 2: Get notified when health check fails

### Configure health check

Route 53 health checks let you track the health status of your resources, such as web servers or mail servers, and take action when an outage occurs.

**Name**

**What to monitor**

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**Host name**

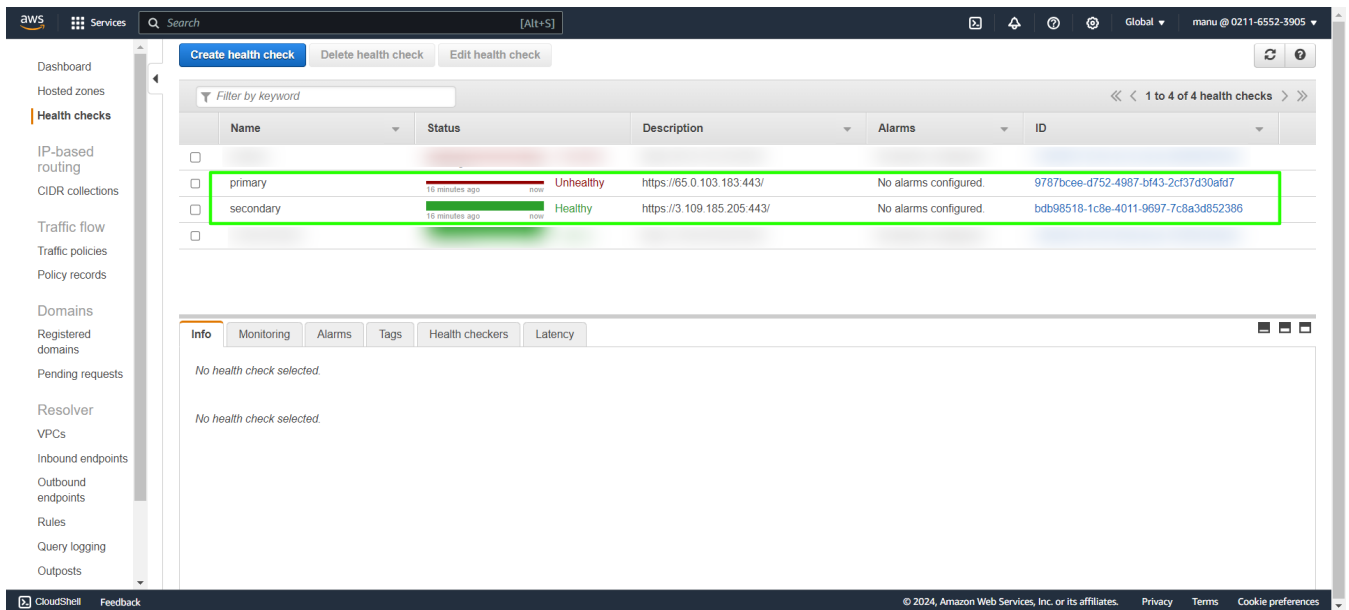
**Port \***

**Path**

► Advanced configuration

URL <https://3.109.185.205/>

12. The health check settings have been created, and their status can be viewed in the health checks tab.



13. Now gateway server can be access with gateway.cloudweg.com and according to the weight distribution the primary or secondary node can be accessed.

## Related Articles

- [Install slave / secondary node for high availability in jump server](#)
- [Cluster \(Master-Slave\) explained in Ezeelogin](#)
- [Switching node states in Ezeelogin Cluster](#)
- [Create load balancer in AWS for Ezeelogin Cluster](#)

Online URL:

<https://www.ezeelogin.com/kb/article/dns-load-balancing-for-ha-using-aws-route-53-681.html>