

# Route 53 Routing Policies

## Part 1

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TECHNICAL INSTRUCTOR

# Routing Policies

# Routing Policies

Routing policies determine how to respond to queries. We can set a routing policy whenever we create a record set in Route 53.



# Routing Policies

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Weighted	Percentage routing
Latency-based	Fastest connection routing
Failover	One-or-the-other routing

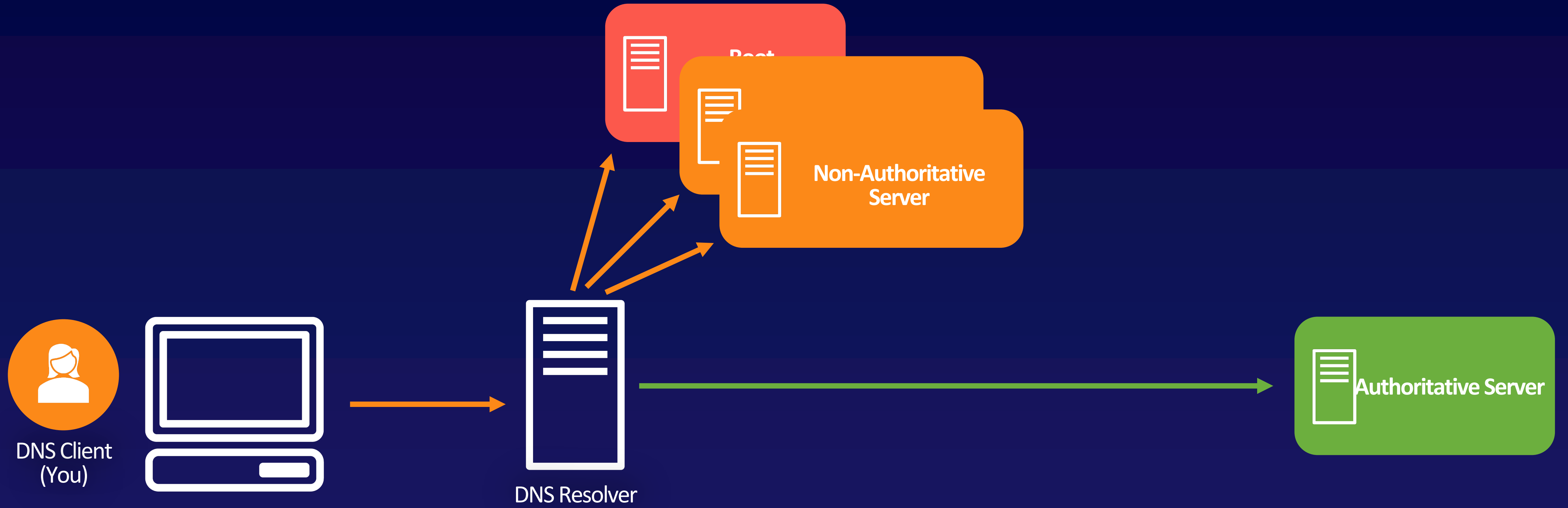
# Routing Policies

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Simple	Plain and simple routing
Weighted	Percentage routing
Latency-based	Fastest connection routing
Failover	One-or-the-other routing
Geolocation	Location-based routing

# Routing Policies

Routing Policies	Purpose
Simple	Plain and simple routing
Weighted	Percentage routing
Latency-based	Fastest connection routing
Failover	One-or-the-other routing
Geolocation	Location-based routing
Multi-value Response Routing Policy	Responds with multiple hosts

# Simple Routing Policy



Query : HOST test.advnetsec.com



# Simple Routing Policy

The screenshot displays the AWS Route 53 Management Console. The main view shows a list of record sets for the domain 'advnetspec.com'. One record set is highlighted with an orange border:

Name	Type	Value	Evaluate Target Health
advnetspec.com.	NS	ns-187.awsdns-23.com. ns-1658.awsdns-15.co.uk. ns-853.awsdns-42.net. ns-1173.awsdns-18.org.	-
advnetspec.com.	SOA	ns-187.awsdns-23.com. awsdns-hostmaster.amazor	-
test.advnetspec.com.	A	1.1.1.1 2.2.2.2	-

The 'Edit Record Set' panel on the right shows the configuration for the selected record set:

- Name:** test.advnetspec.com.
- Type:** A - IPv4 address
- Alias:**  Yes  No
- TTL (Seconds):** 300
- Value:** 1.1.1.1  
2.2.2.2
- Routing Policy:** Simple

The 'Save Record Set' button is visible at the bottom of the edit panel.

# Weighted Routing Policy



DNS Client  
(You)



DNS Resolver



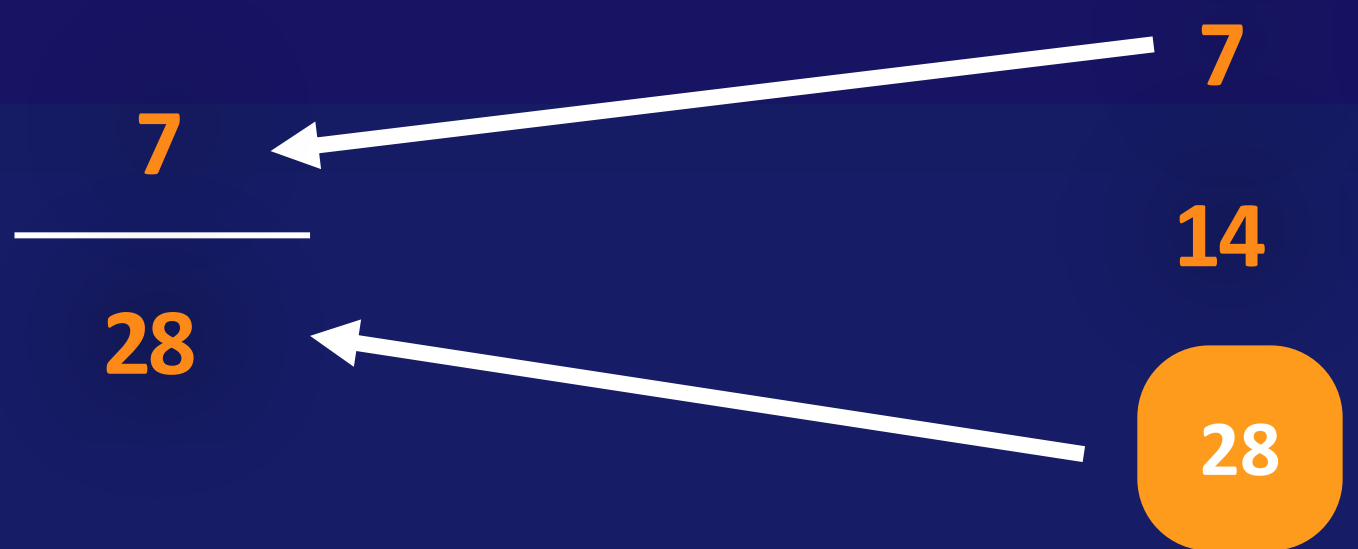
Authoritative Server

- 1 WWW → 1.1.1.1
- 1 WWW → 2.2.2.2
- 1 WWW → 3.3.3.3
- 1 WWW → 4.4.4.4
- 1 WWW → 5.5.5.5
- 1 WWW → 6.6.6.6
- 1 WWW → 7.7.7.7
- 7 WWW → 8.8.8.8
- 14 WWW → 9.9.9.9



The probability of any resource record set being called is determined by the following:

$$\frac{\text{Weight for a Specific Record}}{\text{Sum of the Weights for All Records}}$$



# Weighted Routing Policy



DNS Client (You)



DNS Resolver



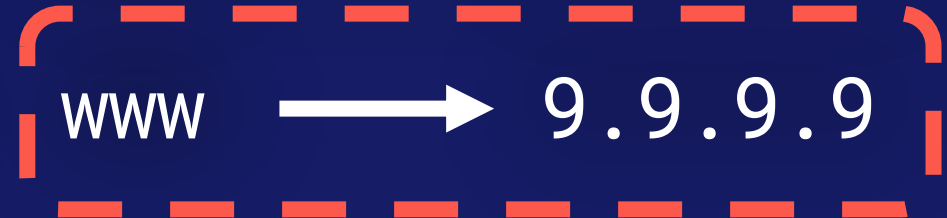
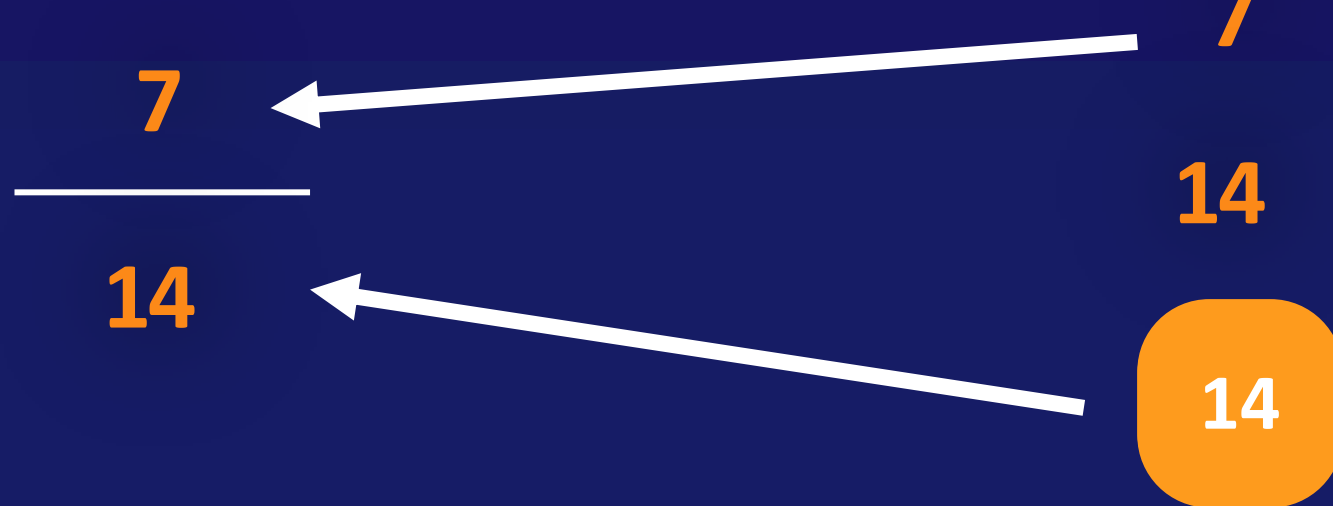
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The probability of any resource record set being called is determined by the following:

$$\frac{\text{Weight for a Specific Record}}{\text{Sum of the Weights for All Records}}$$



# Weighted Routing Policy

The screenshot shows the AWS Route 53 console interface. The main content area displays a table of existing record sets and a form for creating a new one. The form is configured with a 'Weighted' routing policy, a weight of 14, and is associated with a health check named 'example-health-check'. The 'Associate with Health Check' option is selected as 'Yes'.

Name	Type	Value	Evaluate Target
advnetspec.com.	NS	ns-187.awsdns-23.com. ns-1658.awsdns-15.co.uk. ns-853.awsdns-42.net. ns-1173.awsdns-18.org.	-
advnetspec.com.	SOA	ns-187.awsdns-23.com. awsdns-hostmaster.amazor	-
www.advnetspec.com.	A	1.1.1.1	-
www.advnetspec.com.	A	8.8.8.8	-
www.advnetspec.com.	A	2.2.2.2	-
www.advnetspec.com.	A	3.3.3.3	-
www.advnetspec.com.	A	4.4.4.4	-
www.advnetspec.com.	A	5.5.5.5	-
www.advnetspec.com.	A	6.6.6.6	-
www.advnetspec.com.	A	7.7.7.7	-

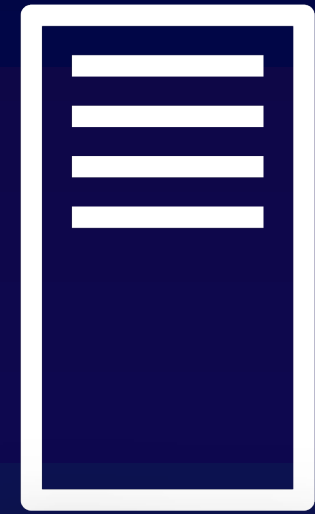
**Form Fields:**

- Value:** 9.9.9.9
- Routing Policy:** Weighted
- Weight:** 14
- Set ID:** Any Unique Value 9.9.9.9
- Associate with Health Check:** Yes
- Health Check to Associate:** example-health-check

# Weighted Routing Policy



DNS Client  
(You)



DNS Resolver



Authoritative Server

0	WWW	→	1.1.1.1
1	WWW	→	2.2.2.2
1	WWW	→	3.3.3.3
1	WWW	→	4.4.4.4
1	WWW	→	5.5.5.5
1	WWW	→	6.6.6.6
1	WWW	→	7.7.7.7
7	WWW	→	8.8.8.8
14	WWW	→	9.9.9.9

27





If a record set is set to 0 it will not be in the pool of active records.

# Weighted Routing Policy



- 0 WWW → 1.1.1.1
- 0 WWW → 2.2.2.2
- 0 WWW → 3.3.3.3
- 0 WWW → 4.4.4.4
- 0 WWW → 5.5.5.5
- 0 WWW → 6.6.6.6
- 0 WWW → 7.7.7.7
- 0 WWW → 8.8.8.8
- 0 WWW → 9.9.9.9

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If all the records are set to a weight of 0, then traffic is distributed equally among all the records.