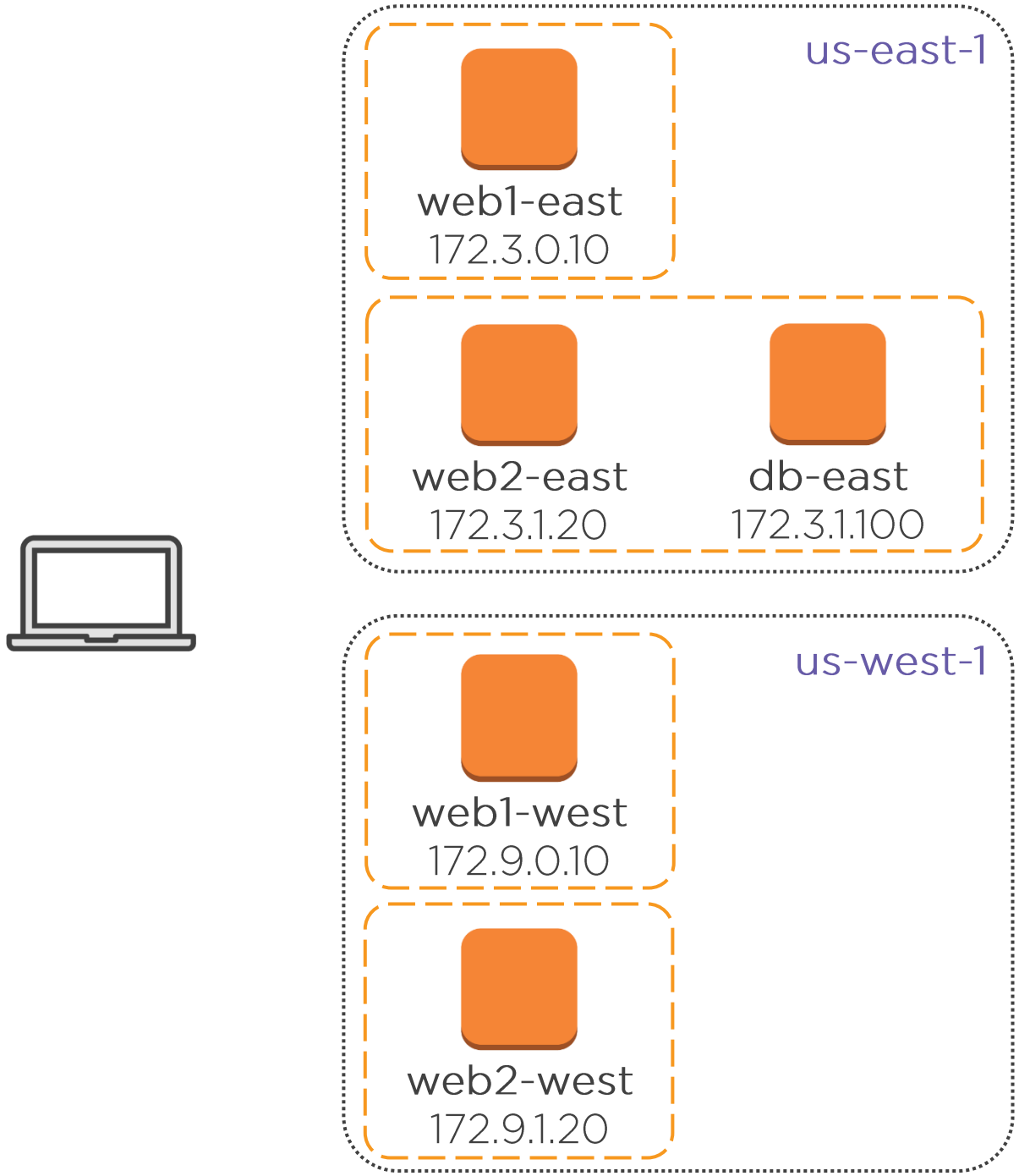
Distributing Traffic with Weighted Records

Ben Piper
AWS CERTIFIED SOLUTIONS ARCHITECT
https://benpiper.com



benpiper.host		Public
Name	**Policy**	**Target**
www	Weighted (25)	web1-east
www	Weighted (25)	web2-east
www	Weighted (25)	web1-west
www	Weighted (25)	web2-west
web1-east	Simple	52.206.88.55
web2-east	Simple	18.208.90.217
web1-west	Simple	54.219.0.218
web2-west	Simple	54.177.105.227

Please Start the Web Application

```
$ sudo docker run --rm -p 80:80 benpiper/r53-ec2-web
```

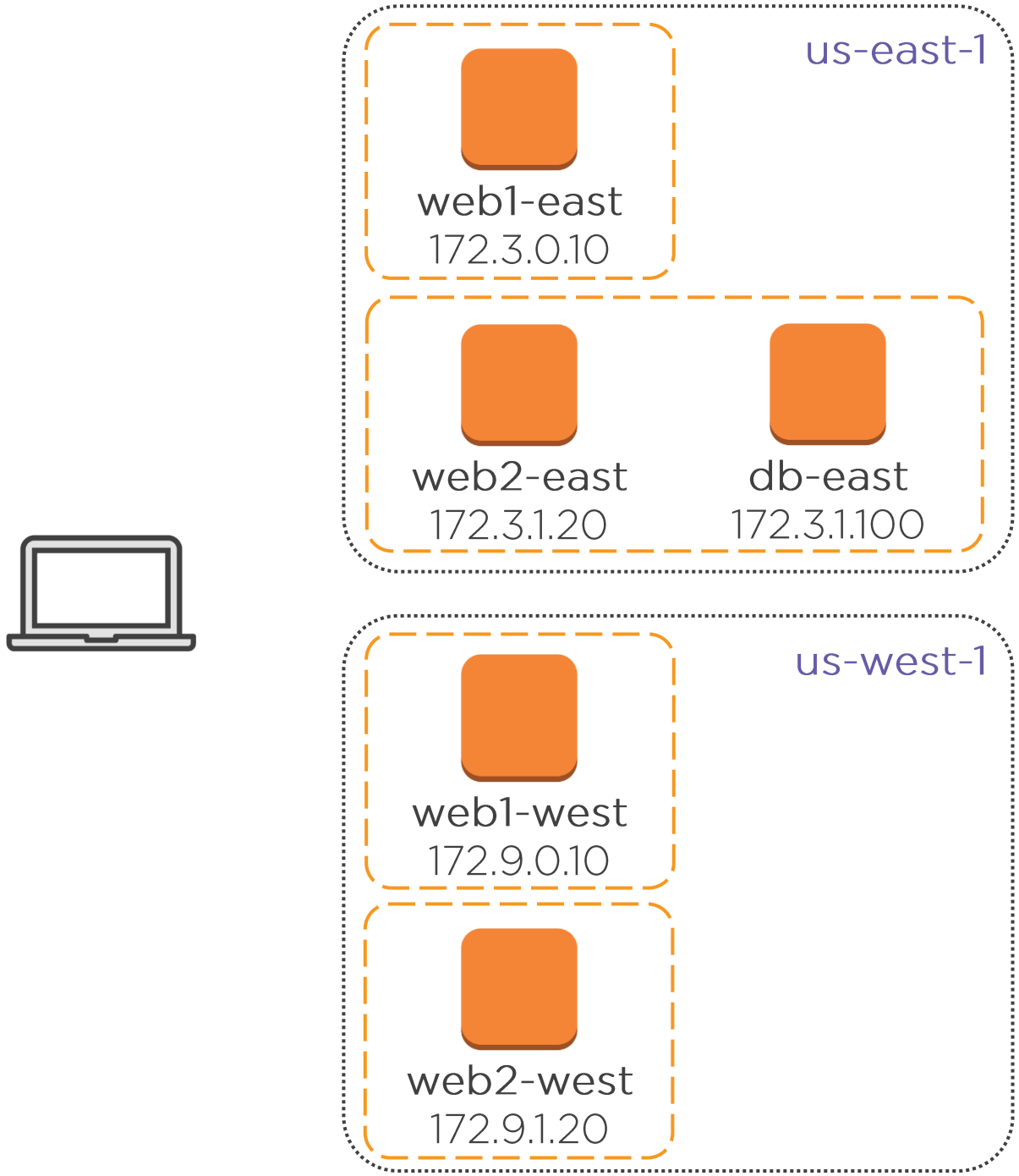
Creating Weighted Records

Demo

Reduce TTL to 30 seconds

Create four weighted records with a weight of 25

Route 53 should serve each record about 25% of the time



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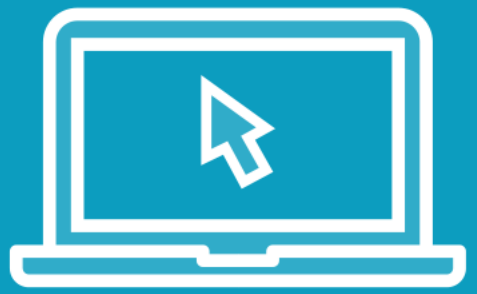
Uneven Weight Distribution

Demo



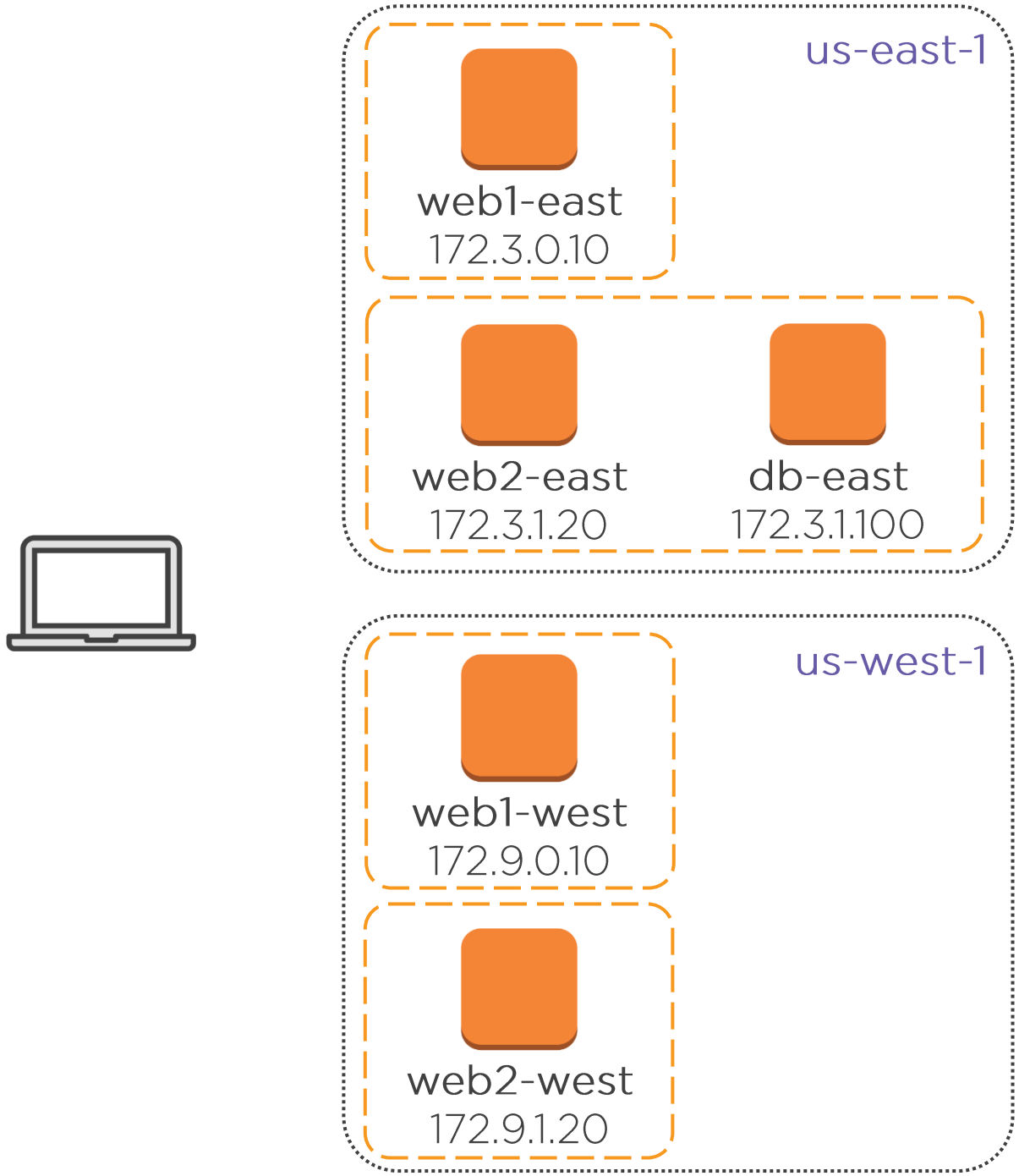
Reconfigure Route 53 to respond with IP addresses of instances in the us-west-1 region twice as often as instances in the us-east-1 region

us-west-1: 66

- web1-west: 33
- web2-west: 33

us-east-1: 33

- web1-east: 16
- web2-east: 17



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Name	**Policy**	**Target**
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www	Weighted (20)	web2-west
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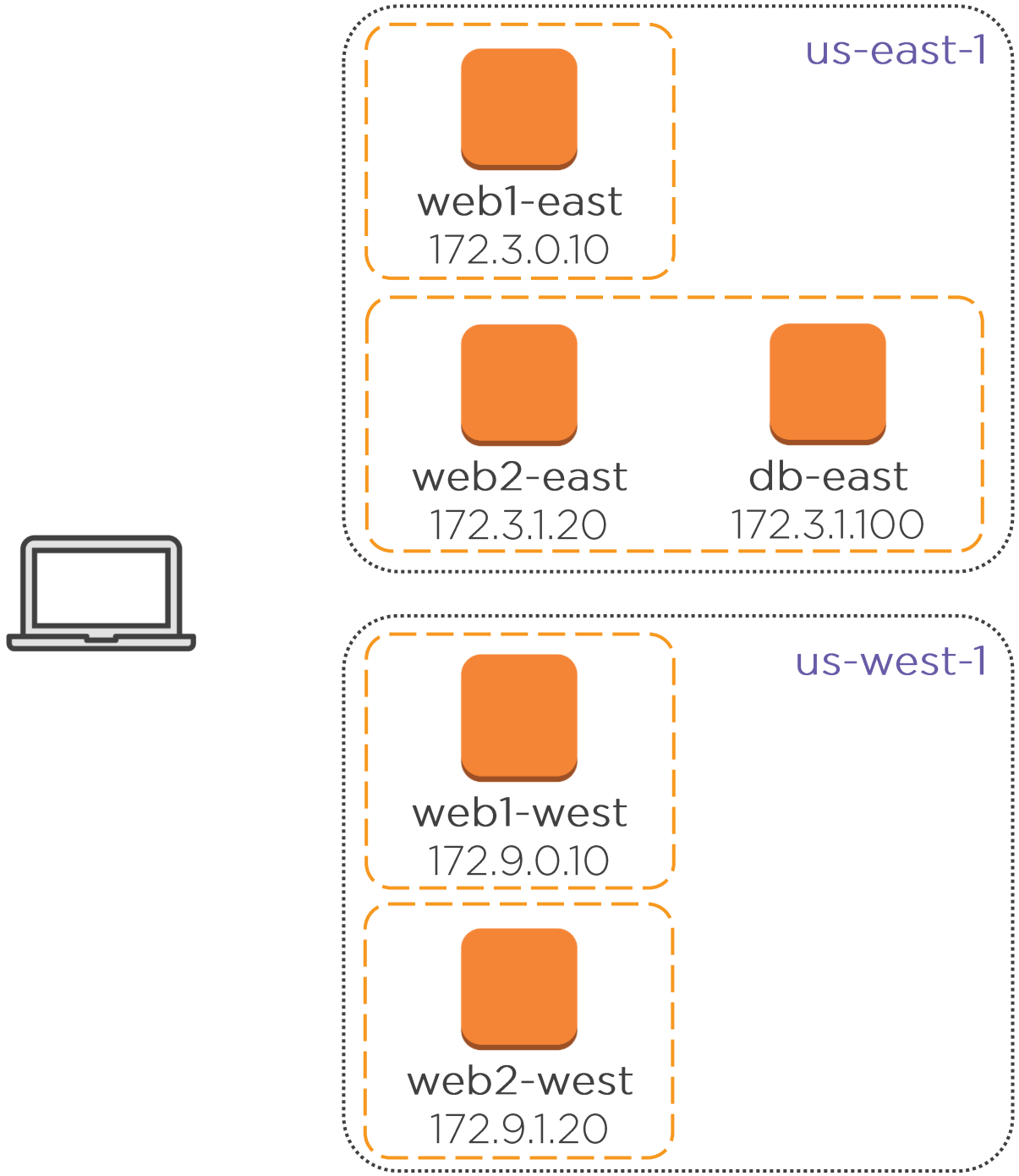

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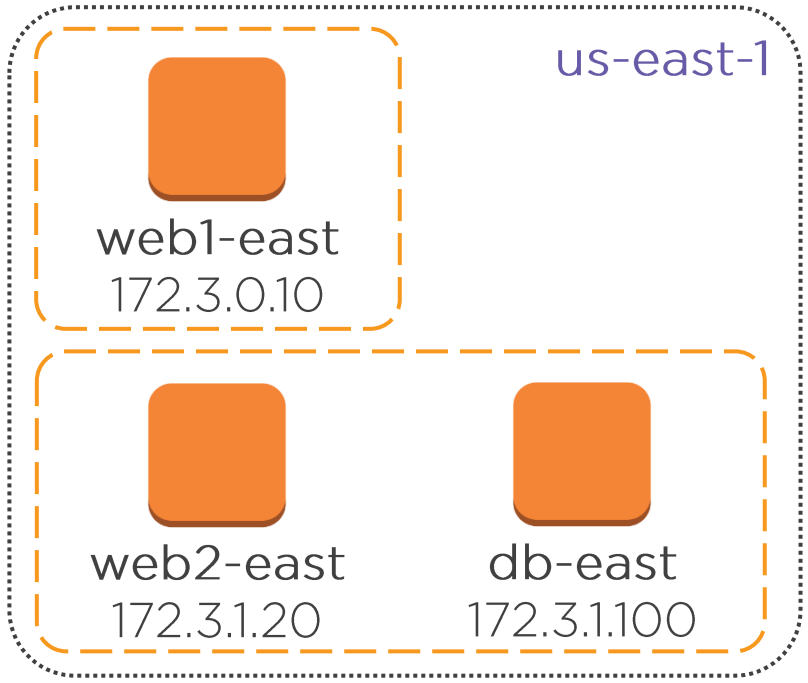

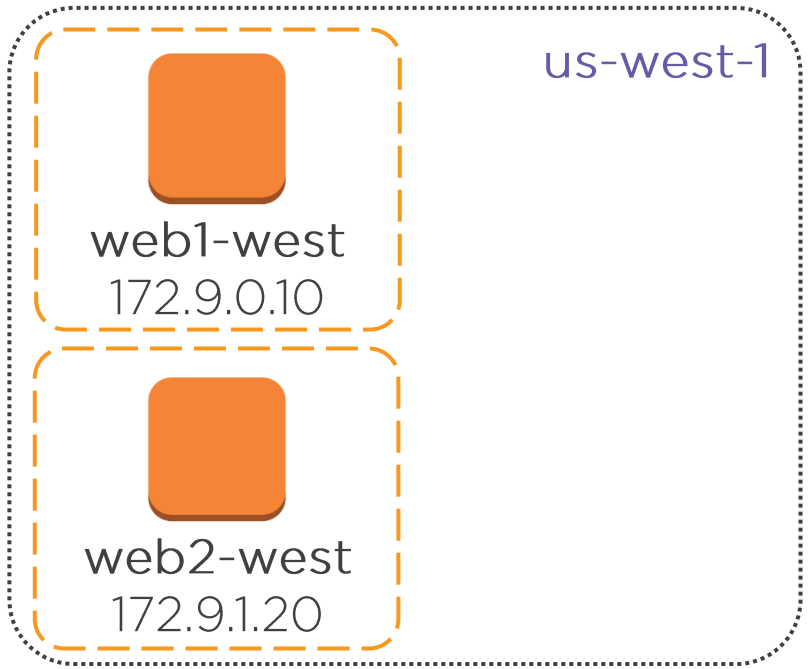

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www	Weighted (10)	web2-east
www	Weighted (20)	web1-west
www	Weighted (20)	web2-west
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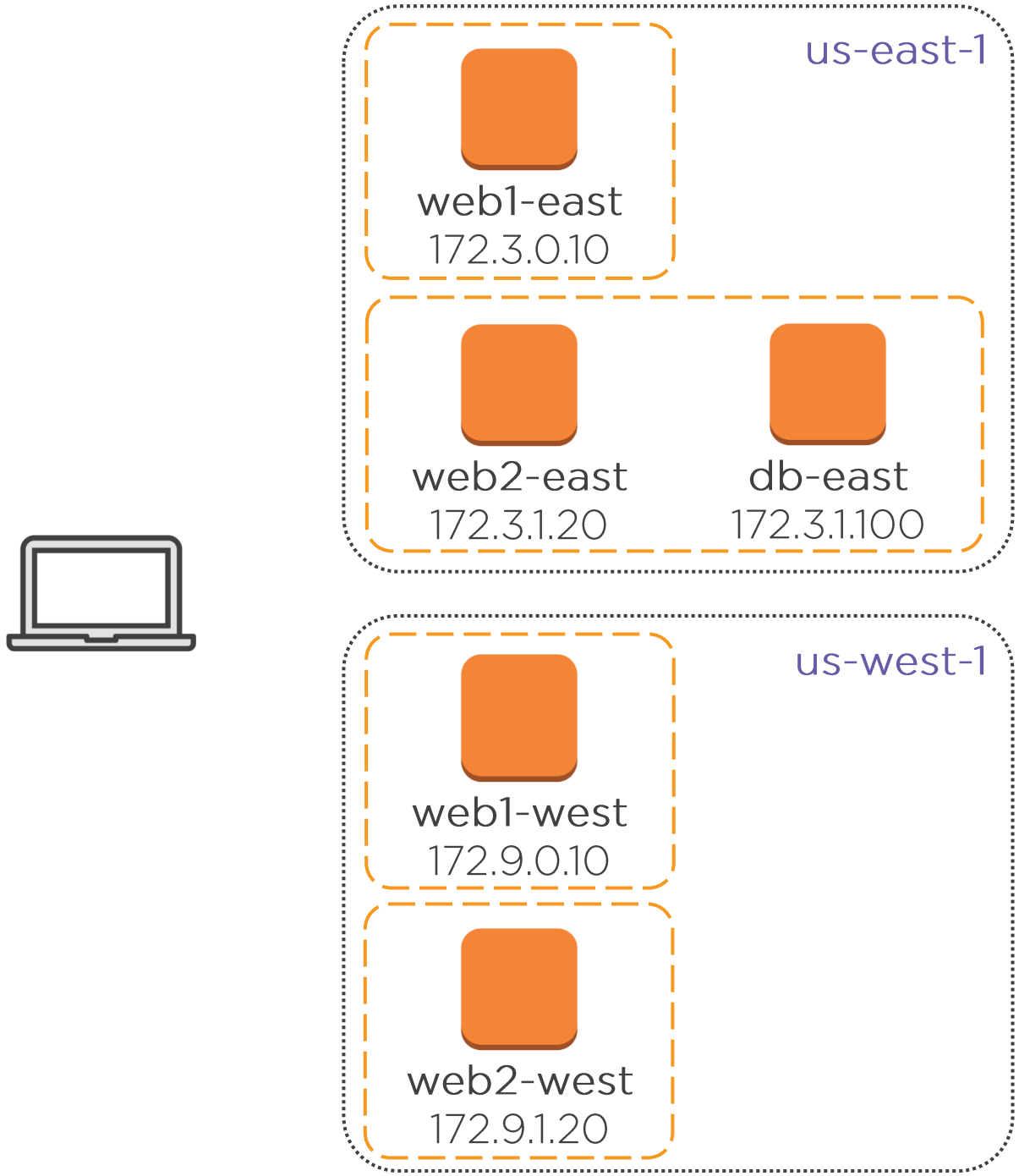
Health Check Failures



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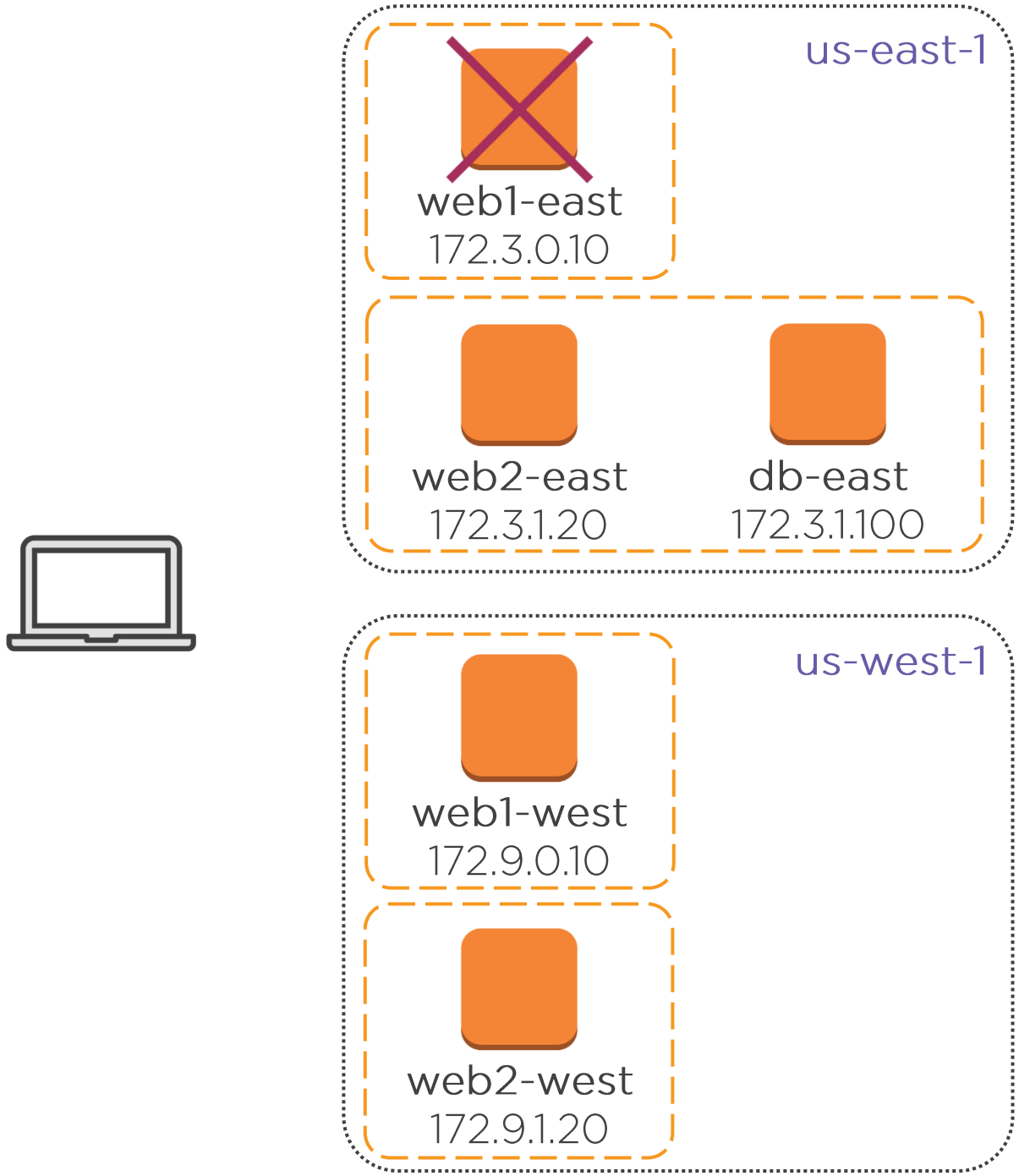

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Name	**Policy**	**Target**
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www	Weighted (20)	web2-west
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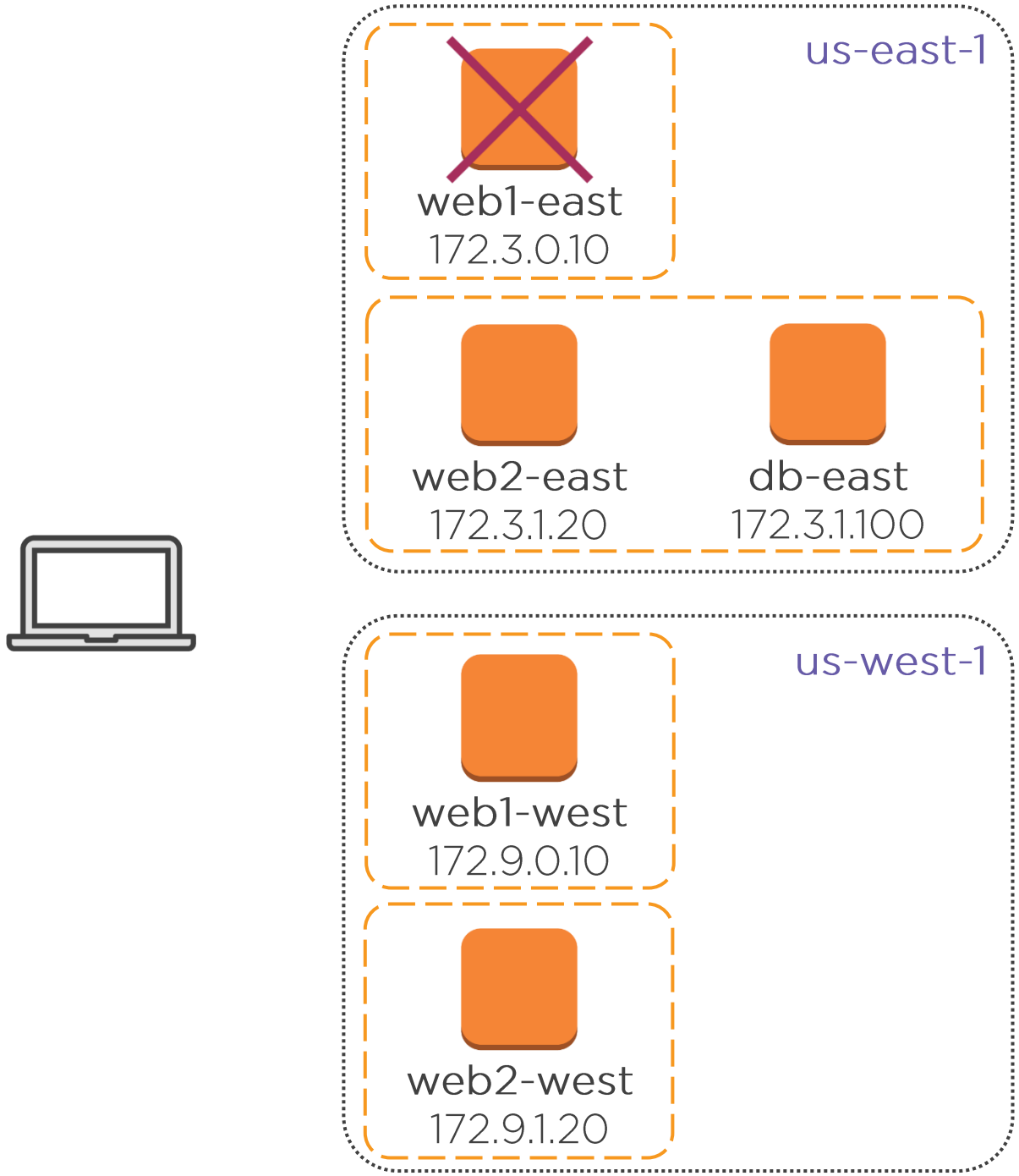

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Name	**Policy**	**Target**
www	Weighted (0)	web1-east
www	Weighted (10)	web2-east
www	Weighted (20)	web1-west
www	Weighted (20)	web2-west
web1-east	Simple	52.206.88.55
web2-east	Simple	18.208.90.217
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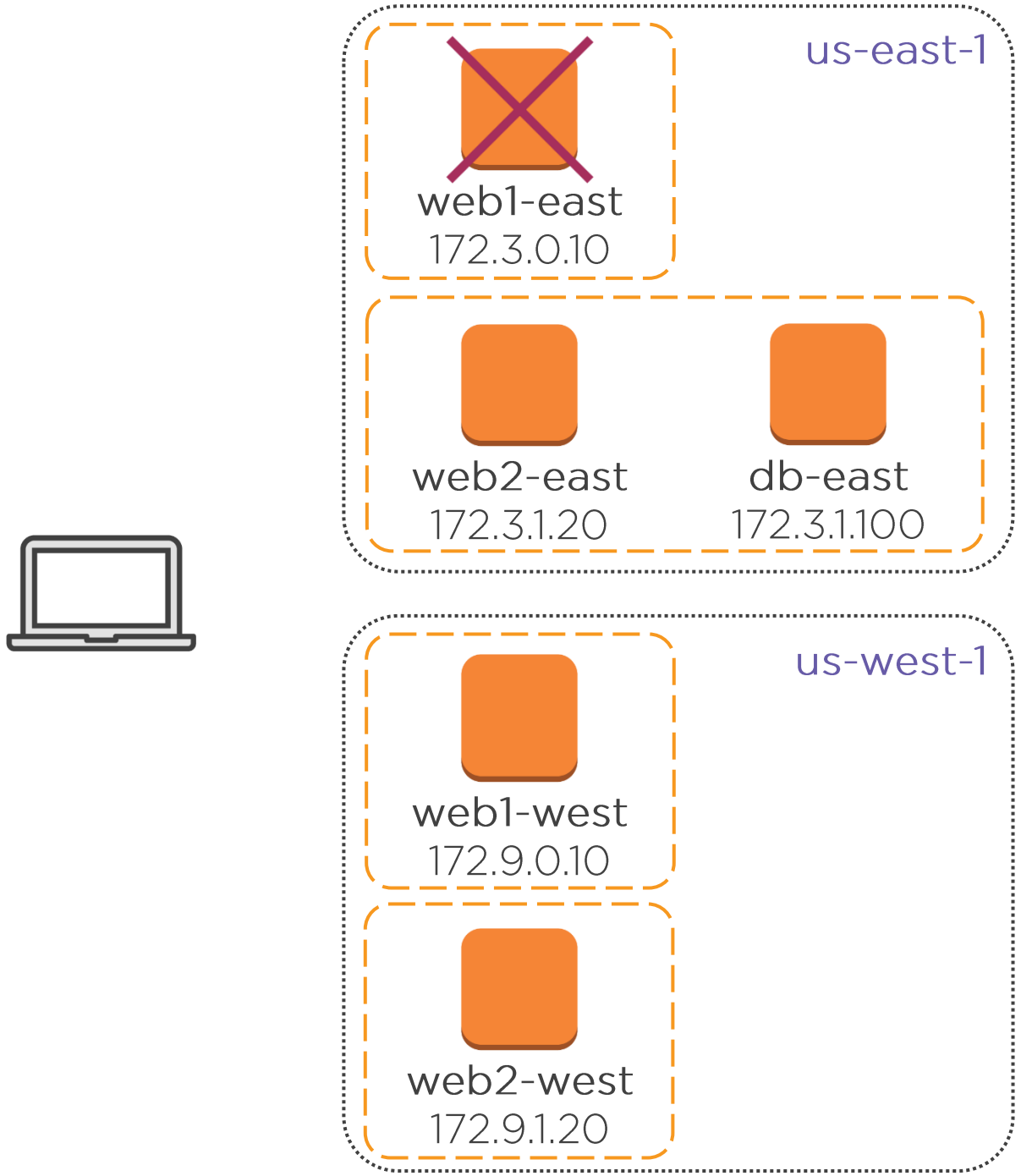

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www	Weighted (20)	web2-west
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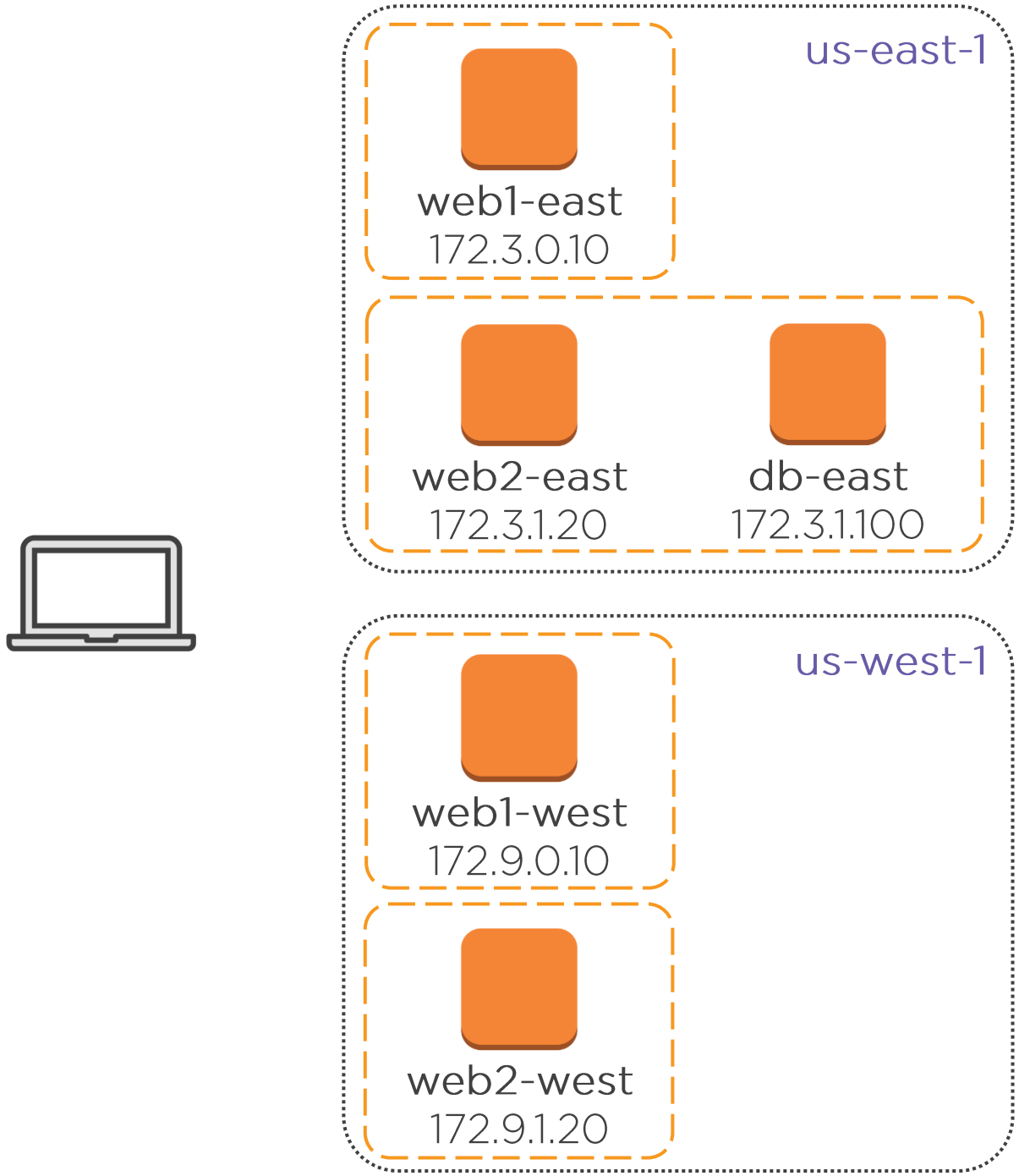
Demo

Shut down web1-east

Run `dnstest.ps1`

Combining Weighted and Failover Records



benpiper.host		Public
Name	**Policy**	**Target**
www	Failover (primary)	weighted
www	Failover (secondary)	S3 bucket
weighted	Weighted (10)	web1-east
weighted	Weighted (10)	web2-east
weighted	Weighted (20)	web1-west
weighted	Weighted (20)	web2-west
web1-east	Simple	52.206.88.55
web2-east	Simple	18.208.90.217
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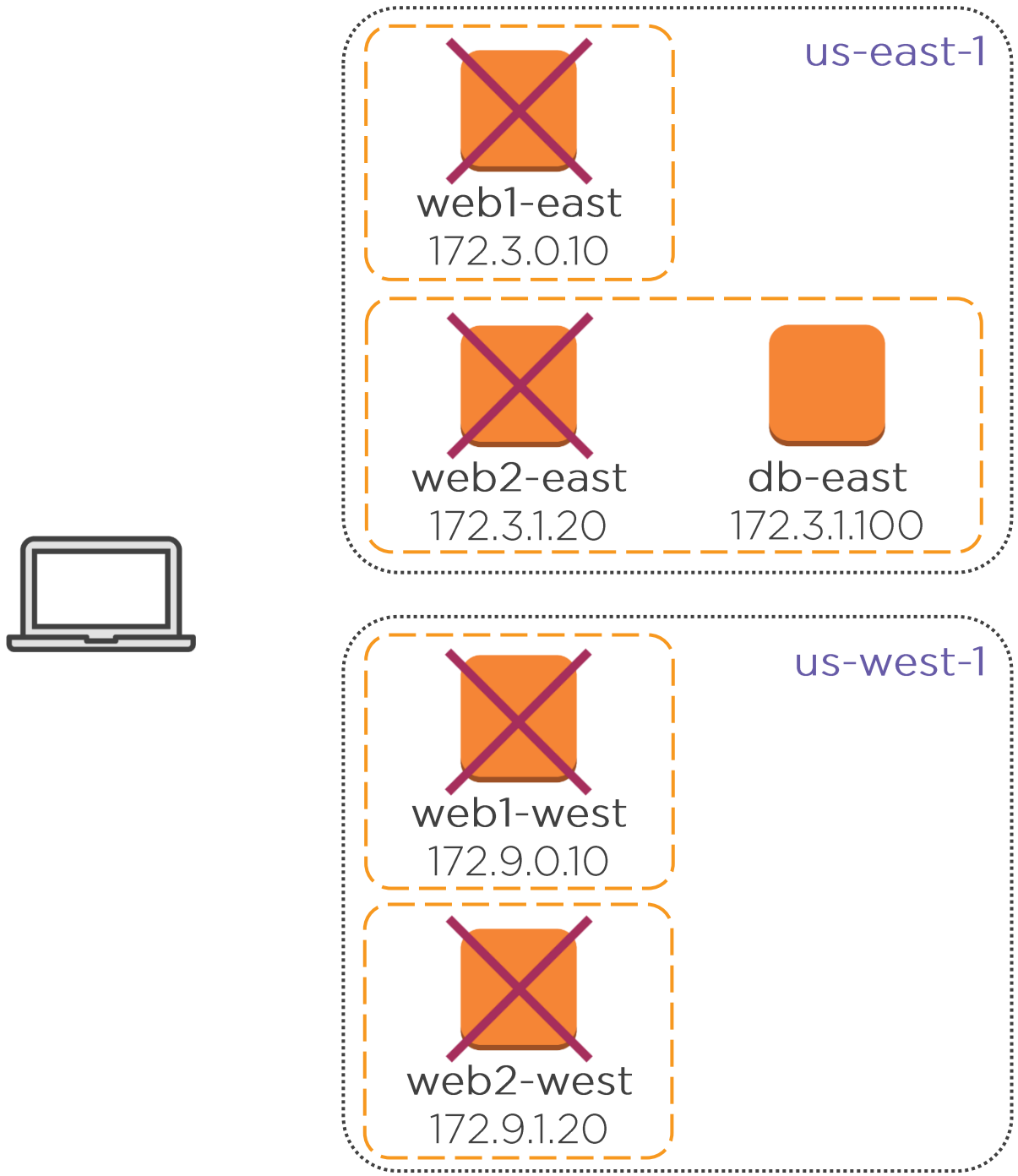

benpiper.host		Public
Name	**Policy**	**Target**
www	Failover (primary)	weighted
www	Failover (secondary)	S3 bucket
weighted	Weighted (10)	web1-east
weighted	Weighted (10)	web2-east
weighted	Weighted (20)	web1-west
weighted	Weighted (20)	web2-west
web1-east	Simple	52.206.88.55
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Demo

Rename `www` records to `weighted`

Create failover records

Summary

Weight values between 0 and 255

A record having a weight of 0 is disabled, unless all of the other records in the set also have a weight of 0

The weight of a record with an unhealthy target is not considered

Weighted and failover records can be chained together

Coming Up Next

Geolocation and latency records