

How could I determine which AWS location is best for serving customers from a particular region? [closed]

Asked 13 years, 6 months ago Modified 1 year, 3 months ago


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97



Closed. This question is [not about programming or software development](#). It is not currently accepting answers.

 This question does not appear to be about [a specific programming problem, a software algorithm, or software tools primarily used by programmers](#). If you believe the question would be on-topic on [another Stack Exchange site](#), you can leave a comment to explain where the question may be able to be answered.

Closed 12 months ago.

The community reviewed whether to reopen this question 12 months ago and left it closed:

 Original close reason(s) were not resolved

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AWS has several locations for storage and EC2 instances to run upon with different pricing. How could I determine which location is best for a particular region. Is it intuitive (closer to your serving region is the best) or are there any

reliability concerns (particular AWS location facing more outages than others). Is there any data available for making such decision?

I am developing an application that is mainly targeted towards Indian customers. So, I am considering Singapore or Tokyo as an option.



amazon-s3

amazon-ec2

amazon-web-services

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edited Mar 25, 2012 at 14:23



Steffen Opel

64.6k ● 11 ● 195 ● 212

asked Jun 14, 2011 at 6:46



Gagandeep Singh

5,869 ● 4 ● 42 ● 60

- 1 I just made an API to get latencies from a Cloudflare worker to all AWS regions api.cloudping.dev. it averages results for each Cloudflare worker region and caches them so results are more accurate and faster (the first request for a Cloudflare region is super slow then the following requests to that worker region are FAST!) – [Marcus 123](#) May 23 at 15:32



8 Answers

Sorted by:

Highest score (default)



Determining lowest latency AWS location for custom usage

83



The smart and innovative folks from [TurnKey Linux](#) recently open sourced their solution to your problem, see [AWS Regional Data Centers mapping](#) on GitHub:

This project is used to generate the indexes (and [visual map](#) for reference) used by the [TurnKey Hub](#) to **find the closest AWS data center for a user.** *[emphasis mine]*

The algorithm in use is further detailed in [Finding the closest data center using GeoIP and indexing](#) as well as the follow up post [Finding the closest APT package archive using GeoIP and indexing](#).

While a bit of a gimmick, the [visualization](#) is seriously cool and confirms resp. illustrates the reason for the at first sight surprising fact Josh [mentioned](#) already, namely that users in Australia currently tend to get better latency via the US West (Northern California / us-west-1) rather than the Asia Pacific (Singapore / ap-southeast-1) region. (**Tip:** checking *Future Cables* at the bottom right corner reveals this is likely going to change, which is further detailed in [Greg's Cable Map](#), which indicates Australia might jump between both AWS locations latency wise in the years to come ;)

Using lowest latency AWS location automatically via [Amazon Route 53](#)

Meanwhile AWS is providing a helpful map illustrating their [Global Infrastructure](#) for a quick assessment, alongside respective details like e.g. number of availability zones and the API endpoint.

More importantly though, AWS has just announced the geographic DNS support Jahufar [mentioned](#) already, see the introductory post [Multi-Region Latency Based Routing now Available for AWS](#), which *is making available the same latency based routing technology that powers [Amazon CloudFront](#) to users of [Amazon EC2](#), [Elastic Load Balancing](#), and more.*

So in case your environment is comprised of an Auto Scaling EC2 Instances architecture already, simply applying this latency based routing should solve your problem automatically.

While the use case obviously targets offerings spawning multiple AWS regions, the sophisticated features around *Latency Based Routing and Weighted Round Robin Record Sets* might allow you to determine the desired information more easily yourself as well.

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edited Jun 20, 2020 at 9:12



Community Bot

1 • 1

answered Mar 25, 2012 at 16:17



Steffen Opel

64.6k • 11 • 195 • 212

The TurnKey solution is unfortunately wildly inaccurate for a very long tail of smaller locations, because it uses physical distance instead of network distance. – [jbg](#) Nov 22, 2020 at 6:40



Try cloudping.info, it will do HTTPS ping from your browser to each AWS region.

67



Region	Latency
US-East (Virginia)	28 ms
US-West (California)	100 ms
US-West (Oregon)	110 ms
Europe (Ireland)	100 ms
Europe (Frankfurt)	119 ms
Asia Pacific (Singapore)	269 ms
Asia Pacific (Sydney)	239 ms
Asia Pacific (Japan)	209 ms
South America (Brazil)	147 ms

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edited Nov 27, 2020 at 21:25



[Alexey Vazhnov](#)

1,369 ● 18 ● 20

answered Jun 1, 2016 at 18:54



[Alex B](#)

2,353 ● 3 ● 29 ● 39

1 This was useful. For some reason from Tokyo, Beijing is the region with the highest latency. – [Antonio Val](#) Dec 23, 2018 at 4:13

I could able to get the latency within few seconds. – [Nagesh](#) Oct 27, 2020 at 4:42



28

There is also a website for speed test: <https://cloudharmony.com/speedtest> if you easily want to check which region is best for you.



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[edited Jun 11, 2015 at 16:17](#)

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answered Apr 5, 2015 at 20:04



[LarS](#)

1,378 ● 20 ● 27



9

Here's a console tool that shows the nearest aws region:

- <https://github.com/ekalinin/awsping>



It's written in golang and very easy to use:

```
➔ ./awsping --verbose 1
      Code      Region
Latency
    0 eu-central-1  Europe (Frankfurt)
36.97 ms
    1 eu-west-1    Europe (Ireland)
63.18 ms
    2 us-east-1    US-East (Virginia)
```

```
126.52 ms
    3 ap-south-1      Asia Pacific (Mumbai)
156.98 ms
    4 us-west-1      US-West (California)
192.92 ms
    5 us-west-2      US-West (Oregon)
226.23 ms
    6 sa-east-1      South America (São Paulo)
247.74 ms
    7 ap-northeast-1 Asia Pacific (Tokyo)
312.22 ms
    8 ap-northeast-2 Asia Pacific (Seoul)
329.54 ms
    9 ap-southeast-2 Asia Pacific (Sydney)
337.84 ms
   10 ap-southeast-1 Asia Pacific (Singapore)
395.73 ms
```

Regions are ordered by the latency.

You can run it on any server and determine the nearest region for you.

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answered Sep 22, 2016 at 12:26

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[shortty](#)

2,461 ● 2 ● 17 ● 9

Awesome; much more useful than a website since I'm trying to find the lowest ping from a server instead of a client.

– [rinogo](#) Mar 2, 2021 at 17:59



6

Testing latency to different regions is obviously advisable! I'm located in Australia and many users here get better latency to US West than to Singapore - in part it comes down to local ISPs peering and international connectivity.



It's relatively straightforward to test if you have users in the region you're targeting.



Reliability on the AWS side (i.e. not user network issues) is mostly a consequence of deployment across multiple Availability Zones. There are more choices in US regions than in APAC ones simply because they've been serving those markets longer. A side effect of this is that features are deployed relatively late to Singapore/Tokyo - normally new features start rollout in US East.

As you already have S3 and EC2 in mind as services you'd like to use and they're both available in closer regions, evaluate whether newer web services from AWS are immediately important - if not, shoot for something (latency) close by.

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answered Jun 14, 2011 at 7:02

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Josh

61 ● 2



6

Amazon is now offering the ability to route to a datacenter based on lowest end-user latency. It's Route53's new "Latency Based Routing"!



<http://docs.amazonwebservices.com/Route53/latest/DeveloperGuide/CreatingLatencyRRSets.html>



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edited Apr 29, 2012 at 22:35

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answered Apr 29, 2012 at 22:29



Ming Tsai

307 ● 4 ● 9

1 Is there any way to use the same concept for AWS S3?

– [parsley72](#) Jun 7, 2015 at 3:38



EDIT: Look at Mark Tsai's answer. That's the way to go (Route 53 didn't exist when I wrote this one)

3

This probably belongs in ServerFault but here goes:



What you are basically asking for is Geo DNS.



Right now it's not directly supported in AWS - although



I've seen some talk of it being implemented in some [AWS forum posts](#) - most probably in their [Route 53](#) service.

Until then, you could look into 3rd party solutions such as [Zerigo](#) that would provide you with Geo DNS facility.

Or if you are hardcore you could roll your own by configuring [BIND with IP2Location](#)

EDIT: There is a [post on ServerFault that talks about Geo DNS providers](#)

As for your question regarding performance and AWS reliability: You should consider serving up your site from the nearest AZ to your user - it makes perfect sense in terms of speed and not having all your instances in a single AZ. You could check [AWS Service Health](#)

[Dashboard](#) to get an general idea how reliable Amazon's services are in different AZs. Note that this data is directly from Amazon - I've not seen any independent stats anywhere else.

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edited Apr 13, 2017 at 12:13



Community Bot

1 ● 1

answered Jun 14, 2011 at 7:51



Jay Sidri

6,421 ● 3 ● 46 ● 68

Update: AWS now supports geolocation routing

[docs.aws.amazon.com/Route53/latest/DeveloperGuide/...](https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/)

– [loujaybee](#) Jun 23, 2021 at 6:23



3



Good tool/site to Check Latency from our location

<http://www.cloudwatch.in/>

AWS Region	Service Name	HTTP Ping
N. Virginia	EC2	1365ms
Oregon	EC2	876ms
N. California	EC2	938ms
Frankfurt	EC2	598ms
Ireland	EC2	1487ms
London	EC2	608ms
Singapore	EC2	415ms
Tokyo	EC2	591ms
São Paulo	EC2	2509ms
Australia	EC2	2475ms
Mumbai	EC2	226ms

Check Latency

EC2

SimpleDB

SQS

SNS

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answered Jul 9, 2017 at 6:43

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BJ Patel

6,258 ● 11 ● 50 ● 84

This solution is not reliable. It reports latency which is much different than the one I measure from a terminal using ping. It's also doesn't reflects the right order between which region

is closet and which furthest. – [user1942586](#) Mar 25, 2019 at 14:35



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