

Choose the AWS region that is most responsive to your locale

Currently there are 16 AWS regions available for us to select, unless you are required to use AWS GovCloud (US). Since the geographical distance is not the same the actual connection route distance (longer) and the response time is also related to the transmission speed and the traffic, it is better to use the network measurement tool such ping to measure the round trip time for selecting the region that is most responsive to your locale.

To measure the round trip times to these 16 AWS region, first we need to find the domain names of these 16 AWS region servers. The list is available at

<http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.RegionsAndAvailabilityZones.html>

See Figure 1.

Region	Name	Endpoint
US West (Oregon) Region	us-west-2	https://rds.us-west-2.amazonaws.com
US West (N. California) Region	us-west-1	https://rds.us-west-1.amazonaws.com
US East (Ohio) Region	us-east-2	https://rds.us-east-2.amazonaws.com
US East (N. Virginia) Region	us-east-1	https://rds.us-east-1.amazonaws.com
Asia Pacific (Mumbai) Region	ap-south-1	https://rds.ap-south-1.amazonaws.com
Asia Pacific (Seoul) Region	ap-northeast-2	https://rds.ap-northeast-2.amazonaws.com
Asia Pacific (Singapore) Region	ap-southeast-1	https://rds.ap-southeast-1.amazonaws.com
Asia Pacific (Sydney) Region	ap-southeast-2	https://rds.ap-southeast-2.amazonaws.com
Asia Pacific (Tokyo) Region	ap-northeast-1	https://rds.ap-northeast-1.amazonaws.com

Canada (Central) Region	ca-central-1	https://rds.ca-central-1.amazonaws.com
China (Beijing) Region	cn-north-1	https://rds.cn-north-1.amazonaws.com.cn
EU (Frankfurt) Region	eu-central-1	https://rds.eu-central-1.amazonaws.com
EU (Ireland) Region	eu-west-1	https://rds.eu-west-1.amazonaws.com
EU (London) Region	eu-west-2	https://rds.eu-west-2.amazonaws.com
South America (São Paulo) Region	sa-east-1	https://rds.sa-east-1.amazonaws.com

Figure 1. The 16 AWS Regions and their endpoints with domain names of rds servers.

Try to select 3-4 regions from the above list which are geographically closer to you. Then try to ping the related domain names in the 3rd column. The region with the lowest average response time will be your choice. Since the internet traffic changes all the time, there could be potential errors. You can try this exercise a few times to settle down on a choice.

For example, if I were in Taipei, Taiwan, I will envision Tokyo, Seoul, Beijing, Singapore will be my four choices.

```
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 rds.ap-northeast-1.amazonaws.com
PING rds.ap-northeast-1.amazonaws.com (52.95.34.92): 56 data bytes
64 bytes from 52.95.34.92: icmp_seq=0 ttl=236 time=47.200 ms
64 bytes from 52.95.34.92: icmp_seq=1 ttl=236 time=47.044 ms
64 bytes from 52.95.34.92: icmp_seq=2 ttl=236 time=53.453 ms

--- rds.ap-northeast-1.amazonaws.com ping statistics ---
3 packets transmitted, 3 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 47.044/49.232/53.453/2.985 ms
```

```
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 ap-northeast-2.amazonaws.com
ping: cannot resolve ap-northeast-2.amazonaws.com: Unknown host
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 rds.ap-northeast-2.amazonaws.com
PING rds.ap-northeast-2.amazonaws.com (52.95.193.148): 56 data bytes
64 bytes from 52.95.193.148: icmp_seq=0 ttl=236 time=70.359 ms
64 bytes from 52.95.193.148: icmp_seq=1 ttl=236 time=69.765 ms
```

```
64 bytes from 52.95.193.148: icmp_seq=2 ttl=236 time=87.323 ms
```

```
--- rds.ap-northeast-2.amazonaws.com ping statistics ---
```

```
3 packets transmitted, 3 packets received, 0.0% packet loss
```

```
round-trip min/avg/max/stddev = 69.765/75.816/87.323/8.141 ms
```

```
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 rds.cn-north-1.amazonaws.com.cn
```

```
PING rds.cn-north-1.amazonaws.com.cn (54.222.17.91): 56 data bytes
```

```
64 bytes from 54.222.17.91: icmp_seq=0 ttl=238 time=59.776 ms
```

```
64 bytes from 54.222.17.91: icmp_seq=1 ttl=238 time=62.661 ms
```

```
64 bytes from 54.222.17.91: icmp_seq=2 ttl=238 time=59.239 ms
```

```
--- rds.cn-north-1.amazonaws.com.cn ping statistics ---
```

```
3 packets transmitted, 3 packets received, 0.0% packet loss
```

```
round-trip min/avg/max/stddev = 59.239/60.559/62.661/1.503 ms
```

```
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 rds.ap-southeast-1.amazonaws.com
```

```
PING rds.ap-southeast-1.amazonaws.com (52.95.35.145): 56 data bytes
```

```
64 bytes from 52.95.35.145: icmp_seq=0 ttl=237 time=102.472 ms
```

```
64 bytes from 52.95.35.145: icmp_seq=1 ttl=237 time=103.438 ms
```

```
64 bytes from 52.95.35.145: icmp_seq=2 ttl=237 time=108.360 ms
```

```
--- rds.ap-southeast-1.amazonaws.com ping statistics ---
```

```
3 packets transmitted, 3 packets received, 0.0% packet loss
```

```
round-trip min/avg/max/stddev = 102.472/104.757/108.360/2.578 ms
```

From the above ping results, Tokyo will be the best choice with the lowest average round trip time of 49.232 followed by Beijing, Seoul, and Singapore. In the following I also ping the California, Oregon, and Ohio. Their round trip times are at least twice slow than Singapore, and not suitable for interactive application, such as running commands and configuring services.

```
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 rds.us-west-1.amazonaws.com
```

```
PING rds.us-west-1.amazonaws.com (176.32.118.201): 56 data bytes
```

```
64 bytes from 176.32.118.201: icmp_seq=0 ttl=233 time=269.023 ms
```

```
64 bytes from 176.32.118.201: icmp_seq=1 ttl=233 time=188.562 ms
```

```
64 bytes from 176.32.118.201: icmp_seq=2 ttl=233 time=209.300 ms
```

```
--- rds.us-west-1.amazonaws.com ping statistics ---
```

```
3 packets transmitted, 3 packets received, 0.0% packet loss
```

```
round-trip min/avg/max/stddev = 188.562/222.295/269.023/34.109 ms
```

```
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 rds.us-west-2.amazonaws.com
PING rds.us-west-2.amazonaws.com (54.240.253.127): 56 data bytes
64 bytes from 54.240.253.127: icmp_seq=0 ttl=224 time=203.483 ms
64 bytes from 54.240.253.127: icmp_seq=1 ttl=224 time=226.540 ms
64 bytes from 54.240.253.127: icmp_seq=2 ttl=224 time=352.329 ms
```

```
--- rds.us-west-2.amazonaws.com ping statistics ---
3 packets transmitted, 3 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 203.483/260.784/352.329/65.413 ms
```

```
[en186-macl6:coursera/ec2/pkey] cchow% ping -c 3 rds.us-east-2.amazonaws.com
PING rds.us-east-2.amazonaws.com (52.95.18.89): 56 data bytes
64 bytes from 52.95.18.89: icmp_seq=0 ttl=230 time=305.930 ms
64 bytes from 52.95.18.89: icmp_seq=1 ttl=230 time=327.004 ms
64 bytes from 52.95.18.89: icmp_seq=2 ttl=230 time=246.868 ms
```

```
--- rds.us-east-2.amazonaws.com ping statistics ---
3 packets transmitted, 3 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 246.868/293.267/327.004/33.919 ms
```

You can conduct similar experiments to find out which AWS region is closest to you.