

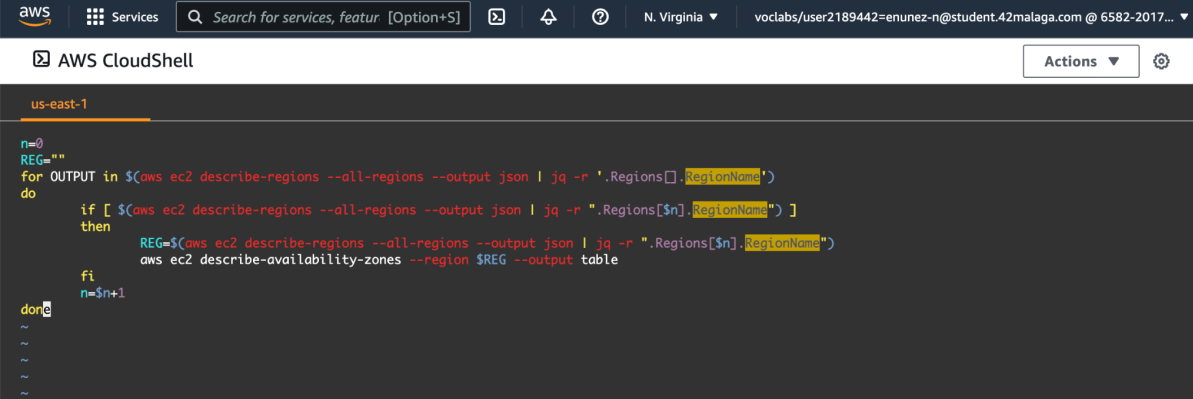
PRACTICE LAB REPORT 1

Task 1 (50 points): Using Cloud Shell you should create a script (Bash + AWS Cli) that shows every region with their associated AWS Availability Zone.

I used `aws ec2 describe-regions` to show the regions with the next flags:

- `--all-regions` → used to show all the regions.
- `--output json` → used to format output in json format, which I'll use to filter results.

Then I used the output in json format and filtered it with `jq -r ".Region[].RegionName"` so it will only show the name of the region, which I'll use as a variable when I list the availability zones associated.



```
aws
Services
Search for services, featur [Option+S]
N. Virginia
voclabs/user2189442=enunez-n@student.42malaga.com @ 6582-2017...
AWS CloudShell
Actions

us-east-1

n=0
REG=""
for OUTPUT in $(aws ec2 describe-regions --all-regions --output json | jq -r '.Regions[].RegionName')
do
  if [ $(aws ec2 describe-regions --all-regions --output json | jq -r ".Regions[$n].RegionName") ]
  then
    REG=$(aws ec2 describe-regions --all-regions --output json | jq -r ".Regions[$n].RegionName")
    aws ec2 describe-availability-zones --region $REG --output table
  fi
  n=$((n+1))
done
```

I went through every region with a counter `<n>` so I parse every region, independently of the level of authorization of the account. A higher level account with more permissions will get more information than one with less permissions, but the script will attempt to access every region. An error will prompt in case that access is denied.

```
[cloudshell-user@ip-10-0-169-39 ~]$ bash list-az.sh

An error occurred (AuthFailure) when calling the DescribeAvailabilityZones operation: AWS was not able to validate the provided access credentials
An error occurred (UnauthorizedOperation) when calling the DescribeAvailabilityZones operation: You are not authorized to perform this operation.
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```

To show the availability zones of every region I used `aws ec2 describe-availability-zones` command with these flags:

- `--region <region-name>` → Show the availability zones of specified region.
- `--output table` → format output as a table, so you can see all the info in a glance.

This is the result of running the script (with all the errors too):

aws

Services

Search for services, f.e. [Option+S]

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N. Virgini

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aws CloudShell

Actions

us-east-1

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-east-1	us-east-1	opt-in-not-required	us-east-1	available	us-east-1a	us-east-1a	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-east-1	us-east-1	opt-in-not-required	us-east-1	available	us-east-1b	us-east-1b	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-east-1	us-east-1	opt-in-not-required	us-east-1	available	us-east-1c	us-east-1c	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-east-1	us-east-1	opt-in-not-required	us-east-1	available	us-east-1d	us-east-1d	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-east-1	us-east-1	opt-in-not-required	us-east-1	available	us-east-1e	us-east-1e	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-east-1	us-east-1	opt-in-not-required	us-east-1	available	us-east-1f	us-east-1f	availability-zone

An error occurred (UnauthorizedOperation) when calling the DescribeAvailabilityZones operation: You are not authorized to perform this operation.

An error occurred (UnauthorizedOperation) when calling the DescribeAvailabilityZones operation: You are not authorized to perform this operation.

DescribeAvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-west-2	us-west-2	opt-in-not-required	us-west-2	available	us-west-2a	us-west-2a	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-west-2	us-west-2	opt-in-not-required	us-west-2	available	us-west-2b	us-west-2b	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-west-2	us-west-2	opt-in-not-required	us-west-2	available	us-west-2c	us-west-2c	availability-zone

AvailabilityZones

GroupName	NetworkBorderGroup	OptInStatus	RegionName	State	ZoneId	ZoneName	ZoneType
us-west-2	us-west-2	opt-in-not-required	us-west-2	available	us-west-2d	us-west-2d	availability-zone

cloudshell-user@ip-10-0-169-39 ~\$

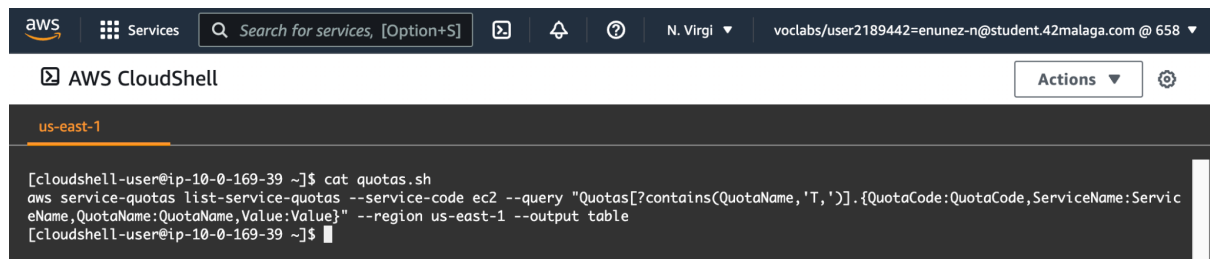
Task 2 (50 points): Create another script that shows the max. number of EC2 T instances that we are allowed to create in the North Virginia region.

With the `aws service-quotas list-service-quotas --service-code ec2` commands I get the listed information of EC2 service.

Then I filter the information with the `--query` flag and the expression indicated to search for the T kind instances.

The `--region` flag lets me delimit the search to the region I want the information from, in this case "us-east-1".

I format the output into a table with the `--output` flag.

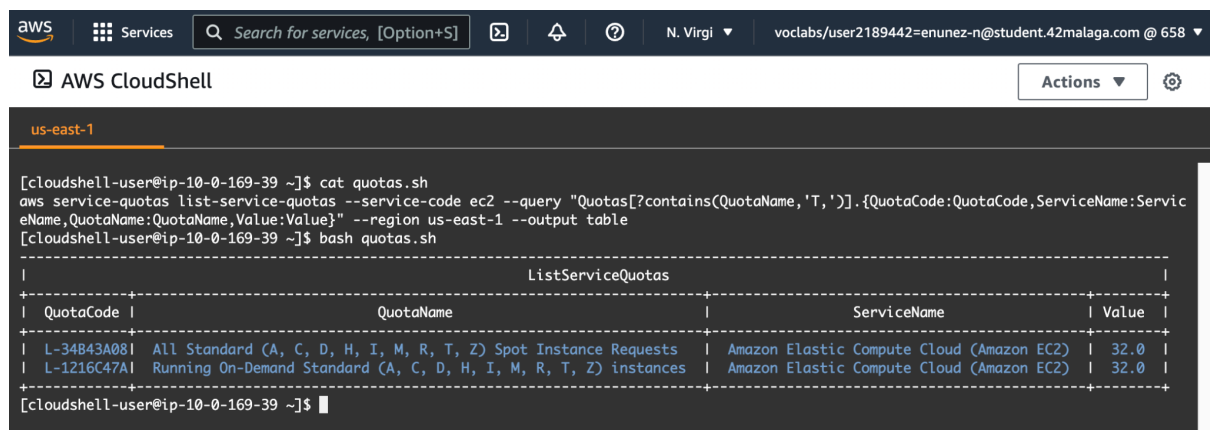


```
aws
Services
Search for services, [Option+S]
N. Virgi
voclabs/user2189442=enunez-n@student.42malaga.com @ 658

AWS CloudShell
us-east-1

[cloudshell-user@ip-10-0-169-39 ~]$ cat quotas.sh
aws service-quotas list-service-quotas --service-code ec2 --query "Quotas[?contains(QuotaName,'T')].{QuotaCode:QuotaCode,ServiceName:ServiceName,QuotaName:QuotaName,Value:Value}" --region us-east-1 --output table
[cloudshell-user@ip-10-0-169-39 ~]$
```

This is the result of running the script:



```
aws
Services
Search for services, [Option+S]
N. Virgi
voclabs/user2189442=enunez-n@student.42malaga.com @ 658

AWS CloudShell
us-east-1

[cloudshell-user@ip-10-0-169-39 ~]$ cat quotas.sh
aws service-quotas list-service-quotas --service-code ec2 --query "Quotas[?contains(QuotaName,'T')].{QuotaCode:QuotaCode,ServiceName:ServiceName,QuotaName:QuotaName,Value:Value}" --region us-east-1 --output table
[cloudshell-user@ip-10-0-169-39 ~]$ bash quotas.sh
-----
|                                     ListServiceQuotas                                     |
|-----|-----|-----|-----|
| QuotaCode | QuotaName | ServiceName | Value |
|-----|-----|-----|-----|
| L-34B43A08 | All Standard (A, C, D, H, I, M, R, T, Z) Spot Instance Requests | Amazon Elastic Compute Cloud (Amazon EC2) | 32.0 |
| L-1216C47A | Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances | Amazon Elastic Compute Cloud (Amazon EC2) | 32.0 |
|-----|-----|-----|-----|
[cloudshell-user@ip-10-0-169-39 ~]$
```