

### Elastic Beanstalk – CLI

**AWS Elastic Beanstalk** is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS.


You can simply upload your code and Elastic Beanstalk **automatically handles the deployment**, from capacity provisioning, load balancing, auto-scaling to application health monitoring. At the same time, you retain full control over the AWS resources powering your application and can access the underlying resources at any time.

There is **no additional charge for Elastic Beanstalk** - you pay only for the AWS resources needed to store and run your applications.


#### Duration

This lab will require approximately **40 minutes** to complete.

#### Accessing the AWS Management Console

 **Windows Users:** Please use Chrome or Firefox as your web browser for this lab. The lab instructions are **not compatible with Internet Explorer** due to a difference in the Amazon RDS console.

Sign to the AWS Management Console using your credentials.

 Please do not change the Region during this lab.

#### Task 1: Configure Elastic Beanstalk – CLI

1. After installing the Elastic Beanstalk CLI successfully, Configure aws access key and secret key in CLI (Hope you have installed AWS CLI as well, if not install it first) by enter below command:
  - a. **aws configure**
2. Create one directory called **eb- demo**. Open the directory.
3. Add **index.html** file in the current directory.
4. To initialize Elastic Beanstalk enter “**eb init**” in the Command prompt.
  - a. Choose region
  - b. Enter application Name

## LAB AWS

- c. Select the platform
  - d. Acknowledge if you wish to use CodeCommit/ Git repository for source code.
  - e. Select Key pair if already exists / create new key pair.
2. Refer the below screen shots for your references:

```
Command Prompt - eb init
C:\vidavid\AWS\AWS-May2020\eb-demo>eb init

Select a default region
1) us-east-1 : US East (N. Virginia)
2) us-west-1 : US West (N. California)
3) us-west-2 : US West (Oregon)
4) eu-west-1 : EU (Ireland)
5) eu-central-1 : EU (Frankfurt)
6) ap-south-1 : Asia Pacific (Mumbai)
7) ap-southeast-1 : Asia Pacific (Singapore)
8) ap-southeast-2 : Asia Pacific (Sydney)
9) ap-northeast-1 : Asia Pacific (Tokyo)
10) ap-northeast-2 : Asia Pacific (Seoul)
11) sa-east-1 : South America (Sao Paulo)
12) cn-north-1 : China (Beijing)
13) cn-northwest-1 : China (Ningxia)
14) us-east-2 : US East (Ohio)
15) ca-central-1 : Canada (Central)
16) eu-west-2 : EU (London)
17) eu-west-3 : EU (Paris)
18) eu-north-1 : EU (Stockholm)
19) eu-south-1 : EU (Milano)
20) ap-east-1 : Asia Pacific (Hong Kong)
21) me-south-1 : Middle East (Bahrain)
22) af-south-1 : Africa (Cape Town)
(default is 3): 7

Select an application to use
1) ratnesh-app
2) Sattibabu-application
3) SampleDotNetApplication
4) boot-app-managed-2
```

```
Command Prompt - eb init
Select an application to use
1) ratnesh-app
2) Sattibabu-application
3) SampleDotNetApplication
4) boot-app-managed-2
5) testapplication
6) [ Create new Application ]
(default is 6): 6

Enter Application Name
(default is "eb-demo"):
Application eb-demo has been created.
Select a platform.
1) .NET on Windows Server
2) Docker
3) GlassFish
4) Go
5) Java
6) Node.js
7) PHP
8) Packer
9) Python
10) Ruby
11) Tomcat
(make a selection): 7

Select a platform branch.
1) PHP 7.4 running on 64bit Amazon Linux 2
2) PHP 7.3 running on 64bit Amazon Linux 2
3) PHP 7.2 running on 64bit Amazon Linux 2
4) PHP 7.3 running on 64bit Amazon Linux
5) PHP 7.2 running on 64bit Amazon Linux
6) PHP 7.1 running on 64bit Amazon Linux (Deprecated)
```

## LAB AWS

```
Command Prompt - eb_init
4) PHP 7.3 running on 64bit Amazon Linux
5) PHP 7.2 running on 64bit Amazon Linux
6) PHP 7.1 running on 64bit Amazon Linux (Deprecated)
7) PHP 7.0 running on 64bit Amazon Linux (Deprecated)
8) PHP 5.6 running on 64bit Amazon Linux (Deprecated)
9) PHP 5.5 running on 64bit Amazon Linux (Deprecated)
10) PHP 5.4 running on 64bit Amazon Linux (Deprecated)
(default is 1): 1

Cannot setup CodeCommit because there is no Source Control setup, continuing with initialization
Do you want to set up SSH for your instances?
(Y/n):

Select a keypair.
1) AWS-TRN1NG
2) capg-sig
3) gururaja-sg-keypair
4) gururajan-sg-keypair
5) haritha-aws-singapore
6) haritha-singapore
7) k8-nodes-keypair
8) keypair
9) key_sg_rp1
10) Rajendra_Key_Singapore
11) rg_sg_cg_cg
12) RG_SG_EC2_Ubuntu
13) sgw-ratnesh
14) SSandbox
15) testinstance
16) testvm
17) viknesh_ws_keypair
18) workstation-sg-keypair
19) [ Create new KeyPair ]
(default is 18): 2
```

## Task 2: Create EB environment:

1. Enter “**eb create**” command
2. Enter the name as “**eb-demo-dev-xxxx**” (**eb-demo-dev-capg**), it has to be unique.
3. Select the load balancer type as “**application load balancer**”
4. Confirm if you need SPOT instance, here I have not given spot, hence Reserved Instance will be created.
5. Below screen shot will help you about environment creation.

```

Command Prompt - eb create
(default is eb-demo-dev): eb-demo-dev-capg
Enter DNS CNAME prefix
(default is eb-demo-dev-capg):

Select a load balancer type
1) classic
2) application
3) network
(default is 2):

Would you like to enable Spot Fleet requests for this environment?
(y/N):
NOTE: The current directory does not contain any source code. Elastic Beanstalk is launching the sample application instead.
Do you want to download the sample application into the current directory?
(Y/n):
INFO: Downloading sample application to the current directory.
INFO: Download complete.
Environment details for: eb-demo-dev-capg
  Application name: eb-demo
  Region: ap-southeast-1
  Deployed Version: Sample Application
  Environment ID: e-vp9r53bpjt
  Platform: ann:aws:elasticbeanstalk:ap-southeast-1::platform/PHP 7.4 running on 64bit Amazon Linux 2/3.0.1
  Tier: WebServer-Standard-1.0
  CNAME: eb-demo-dev-capg.ap-southeast-1.elasticbeanstalk.com
  Updated: 2020-05-25 13:41:49.003000+00:00
Printing Status:
2020-05-25 13:41:47 INFO createEnvironment is starting.
2020-05-25 13:41:49 INFO Using elasticbeanstalk-ap-southeast-1-307527793847 as Amazon S3 storage bucket for environment data.
2020-05-25 13:42:11 INFO Created target group named: arn:aws:elasticloadbalancing:ap-southeast-1:307527793847:targetgroup/awseb-AWSEB-1R3X37E8LC6G/347948e6fb8cf5c6
2020-05-25 13:42:11 INFO Created security group named: sg-07b890a8d1f7ed010
-- Events -- (safe to Ctrl+C)

```

6. Now enter “**eb list**”, to list all environments available under your current region.

## Task 3: Update the source code and check EB environment:

1. Update your index.html file and check your environment again.
2. Check all changes reflected in the environment.

## Few commands which you can try:

- eb config
- eb logs
- eb health
- eb events
- eb status
- eb open
- eb terminate

```

C:\vidavid\AWS\AWS-May2020\eb\eb-demo>eb terminate
The environment "eb-demo-dev-capg" and all associated instances will be terminated.
To confirm, type the environment name: eb-demo-dev-capg
2020-05-25 13:53:52 INFO terminateEnvironment is starting.
2020-05-25 13:54:10 INFO Deleted Load Balancer listener named: arn:aws:elasticloadbalancing:ap-southeast-1:307527793847:listener/app/awseb-
AWSEB-13925FFNS8HP2/f2ffe4c0df1372e1/ffca24e427a69b1b
2020-05-25 13:54:10 INFO Deleted CloudWatch alarm named: awseb-e-vp9r53bpjt-stack-AWSEBCloudwatchAlarmHigh-1FT9TL31SNFMR
2020-05-25 13:54:10 INFO Deleted CloudWatch alarm named: awseb-e-vp9r53bpjt-stack-AWSEBCloudwatchAlarmLow-10UYPD03YVSVB
2020-05-25 13:54:10 INFO Deleted load balancer named: arn:aws:elasticloadbalancing:ap-southeast-1:307527793847:loadbalancer/app/awseb-AWSEB
-13925FFNS8HP2/f2ffe4c0df1372e1
2020-05-25 13:54:10 INFO Deleted Auto Scaling group policy named: arn:aws:autoscaling:ap-southeast-1:307527793847:scalingPolicy:939231f1-53
be-46fb-9fea-766f4a3c8932:autoScalingGroupName/awseb-e-vp9r53bpjt-stack-AWSEBAutoScalingGroup-II44WG171NR4:policyName/awseb-e-vp9r53bpjt-stack-AW
SEBAutoScalingScaleUpPolicy-VCXLBMOXJUN1
2020-05-25 13:54:10 INFO Deleted Auto Scaling group policy named: arn:aws:autoscaling:ap-southeast-1:307527793847:scalingPolicy:e5e9c68e-5c
ab-40dd-bb2f-dd4f199b59f3:autoScalingGroupName/awseb-e-vp9r53bpjt-stack-AWSEBAutoScalingGroup-II44WG171NR4:policyName/awseb-e-vp9r53bpjt-stack-AW
SEBAutoScalingScaleDownPolicy-1GAY0ENJUQTKT
2020-05-25 13:54:10 INFO Waiting for EC2 instances to terminate. This may take a few minutes.
2020-05-25 13:56:43 INFO Deleted Auto Scaling group named: awseb-e-vp9r53bpjt-stack-AWSEBAutoScalingGroup-II44WG171NR4
2020-05-25 13:56:43 INFO Deleted target group named: arn:aws:elasticloadbalancing:ap-southeast-1:307527793847:targetgroup/awseb-AWSEB-1R3X3
7E8LC6G/347948e6fb8cf5c6
2020-05-25 13:56:43 INFO Deleted Auto Scaling launch configuration named: awseb-e-vp9r53bpjt-stack-AWSEBAutoScalingLaunchConfiguration-1N4W
MR2V1ATJZ
2020-05-25 13:56:43 INFO Deleted security group named: awseb-e-vp9r53bpjt-stack-AWSEBSecurityGroup-GPL69EIZHVWU
2020-05-25 13:56:58 INFO Deleted security group named: sg-07b890a8d1f7ed010
2020-05-25 13:57:03 INFO Deleting SNS topic for environment eb-demo-dev-capg.
2020-05-25 13:57:04 INFO terminateEnvironment completed successfully.

C:\vidavid\AWS\AWS-May2020\eb\eb-demo>

```

**Note :** S3 bucket will not be deleted automatically, due to bucket policy. Hence go to S3 bucket, delete bucket policy and then delete bucket.

## Lab Complete

Congratulations! You have completed the lab. Clean up your lab environment.