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### Elastic Beanstack

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=> End to end web application management service.

=> It provides platform as a service (PaaS).

=> AWS will provide ready made platform to run our application when we go for Beanstack.

Note: Upload your code and run your application, aws will take care of infrastructure and platform to run your application.

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### Web Application

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=> The application which runs in the server is called as web application.

=> Web application works based on client-server architecture.

=> Server is a software which is used to run our application.

Ex: httpd, tomcat, weblogic, web sphere, jboss, IIS...

=> Client is a software which is used to send the request to server and get response from server.

Ex: browsers (chrome, firefox....)

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### Web application types

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1) Static web applications

2) Dynamic web application

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### Static website hosting

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=> We can deploy static website very easily with below options

1) Using httpd server

2) Using s3 bucket

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### Dynamic Web App - Deployment process

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=> To develop dynamic web applications we will use below technologies

Ex: Java, Python, Dot Net, Node JS, PHP etc...

=> We need to perform below tasks to deploy one dynamic web application in aws cloud.

Step-1) Create Network (VPC, Subnets, RT, IGW, NATGW)

Step-2) Create EC2 Instances

Step-3) Install Required softwares to run application

Ex: Java, Tomcat...

Step-4) Create Target Group and Load Balancer

Step-5) Setup Auto Scaling Group

Step-6) Deploy our application code

Note: We are responsible for "infra setup + platform setup + app deployment"

### Note: When we use AWS Elastic Beanstalk service then AWS will take care of first 5 steps, we just need to upload our code.

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Elastic Beanstalk Pricing Model  
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=> No additional charges for elastic bean stack.

=> We need to pay the amount for the resources which are created by bean stack.

Ex: EC2 instances, S3 buckets, LBR, ASG etc...

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Lab Task on Elastic Beanstalk  
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Step-1) Create IAM Role with below 3 policies

- AWSElasticBeanstalkMulticontainerDocker
- AWSElasticBeanstalkWebTier
- AWSElasticBeanstalkWorkerTier

Ex : Role Name : ashokit\_beanstalk\_role

Step-2) Create Application using Beanstalk

Step-3) Create Environment for the application by choosing required Runtime.

Ex: Java or Python or Dot Net

Note: Once environment is created it will generate DNS to access our application.

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Uploading Java SpringBoot Web App  
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=> Take jar file of java springboot web app

=> Go to Elastic Beanstalk environment and upload your jar and give version number for your application

Ex: v1.0

=> Go To environment Properties and set SERVER\_PORT as 5000

Ex : SERVER\_PORT = 5000

- Select Environment
- Go to Configuration
- Edit "Updates, monitoring, and logging" option
- Set Environment Property and apply

=> After environment got re-started, we can access our application by using DNS url.