AWS

VPC

Virtual private cloud

Security group

Subnet

Learn to deploy our spring boot application in Elastic Beanstalk

1. We have create a spring boot rest api now 14-jun-aws-rest-1
2. To generate jar file: right click project -> Run As -> Maven Build -> goals: clean install
3. Now, the .jar file is present in target folder

Steps for deploying this .jar in AWS Elastic Beanstalk:

1. Login to aws.amazon.com management console
2. Search for “Elastic Beanstalk”
3. Create an application (ideally same name as the project name)
4. Create environment:

Platform: Java (for .jar and tomcat for .war)

We have chosen java platform now

Choose sample application and deploy (later we can upload jar)

<http://ust-demo-1-env.eba-jgtkx6u6.ap-south-1.elasticbeanstalk.com/hello>

this is working:

Now, Task:

1. Create a spring boot application with rest controller and getmappings
2. server.port=5000

In aws, management console:

AWS official documentation for create vpc: (as on 14-Jun-2023)

<https://docs.aws.amazon.com/vpc/latest/userguide/create-vpc.html>

###### To create a VPC, subnets, and other VPC resources using the console

1. Open the Amazon VPC console at <https://console.aws.amazon.com/vpc/>.
2. On the VPC dashboard, choose **Create VPC**.
3. For **Resources to create**, choose **VPC and more**.
4. Keep **Name tag auto-generation** selected to create Name tags for the VPC resources, or clear it to provide your own Name tags for the VPC resources.
5. For **IPv4 CIDR block**, enter an IPv4 address range for the VPC. A VPC must have an IPv4 address range.
6. (Optional) To support IPv6 traffic, choose **IPv6 CIDR block**, **Amazon-provided IPv6 CIDR block**.
7. Choose a **Tenancy** option. This option defines if EC2 instances that you launch into the VPC will run on hardware that's shared with other AWS accounts or on hardware that's dedicated for your use only. If you choose the tenancy of the VPC to be Default, EC2 instances launched into this VPC will use the tenancy attribute specified when you launch the instance -- For more information, see [Launch an instance using defined parameters](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-launch-instance-wizard.html) in the Amazon EC2 User Guide for Linux Instances. If you choose the tenancy of the VPC to be Dedicated, the instances will always run as [Dedicated Instances](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/dedicated-instance.html) on hardware that's dedicated for your use. If you're using AWS Outposts, your Outpost requires private connectivity; you must use Default tenancy.
8. For **Number of Availability Zones (AZs)**, we recommend that you provision subnets in at least two Availability Zones for a production environment. To choose the AZs for your subnets, expand **Customize AZs**. Otherwise, let AWS choose them for you.
9. To configure your subnets, choose values for **Number of public subnets** and **Number of private subnets**. To choose the IP address ranges for your subnets, expand **Customize subnets CIDR blocks**. Otherwise, let AWS choose them for you.
10. (Optional) If resources in a private subnet need access to the public internet over IPv4, for **NAT gateways**, choose the number of AZs in which to create NAT gateways. In production, we recommend that you deploy a NAT gateway in each AZ with resources that need access to the public internet.
11. (Optional) If resources in a private subnet need access to the public internet over IPv6, for **Egress only internet gateway**, choose **Yes**.
12. (Optional) If you need to access Amazon S3 directly from your VPC, choose **VPC endpoints**, **S3 Gateway**. This creates a gateway VPC endpoint for Amazon S3. For more information, see [Gateway VPC endpoints](https://docs.aws.amazon.com/vpc/latest/privatelink/vpce-gateway.html) in the AWS PrivateLink Guide.
13. (Optional) For **DNS options**, both options for domain name resolution are enabled by default. If the default doesn't meet you needs, you can disable these options.
14. (Optional) To add a tag to your VPC, expand **Additional tags**, choose **Add new tag**, and enter a tag key and a tag value.
15. In the **Preview** pane, you can visualize the relationships between the VPC resources that you've configured. Solid lines represent relationships between resources. Dotted lines represent network traffic to NAT gateways, internet gateways, and gateway endpoints. After you create the VPC, you can visualize the resources in your VPC in this format at any time using the **Resource map** tab. For more information, see [Visualize the resources in your VPC](https://docs.aws.amazon.com/vpc/latest/userguide/modify-vpcs.html#view-vpc-resource-map).
16. When you are finished configuring your VPC, choose **Create VPC**.

Lets create a MVC project and deploy it in Elastic Beanstalk:

Entity:

Employee

id

firstName

lastName

<http://jagindia.ap-south-1.elasticbeanstalk.com/employee>

RDS - Relational Database Service

Steps to configure RDS mysql database and access it from mysql workbench and also from java:-

<https://youtu.be/2Y960jjzjK4>

Task:

Preparation for Module 2 exam.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Document</title>

<script>

function fn1()

{

var list=document.getElementById("list");

fetch('https://jsonplaceholder.typicode.com/todos')

// .then((x)=>x.json())

// .then(x=>console.log(x))

.then(response => response.json())

.then(json =>json.map(x=>list.innerHTML+="<li>"+x.title+"</li>"))

}

</script>

</head>

<body>

<input type="button" value="Click here" onclick="fn1()">

<ul id="list">

</ul>

</body>

</html>