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IIIT Dharwad
End Semester Examination
Cloud Computing - CS360

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ECE

7. The EC_2 'Stopped' indicates that an instance is shutdown and can't be used. Basically, it's a temporary shutdown for when you are not using an instance, but you will need it later. And also when we stop an EC_2 instance, the instance will be shutdown and the virtual machine that was provisioned for you will be permanantly taken away and you will no longer be charged for instance usage. And terminate it when we no longer use that instance.

8. To recover access to AWS EC_2 instance after losing a keypair

→ Gather config. details of the original instance.

→ Power off the original EC_2 instance of which you want to regain access.

→ Launch new (recovery) instance and generate a new key pair.

→ Login via ssh to the new recovery instance.

→ Detach the primary Ebs volume from original instance.

→ Attach the previously detached volume to the new instance.

→ copy the authorized keys from recovery instance to the mounted volume.

→ Now, unmount target volume from recovery instance and reattach back to original instance using configs. noted earlier.

→ Start the original instance and login with new key pair.

→ Now Delete temporary (recovery) instance.

Now, this process requires a Stop & Start of your AWS instance and thus it can be only be done on an EBS backed instance. If it's not possible go the 'root device type' set the value to the 'ebs' then you have an ebs backed instance and you can proceed. further.

④ Example:

Bucket Name: Swarup

Region: eu-west-3 and us-east-1

→ Create a bucket.

→ Enable website hosting.

→ Select your bucket that you want to, choose to host a website.

my case: swarup.

→ Click on properties tab.

→ Click on option "Static website hosting" and then choose "use this bucket to host a website"

→ Index documents & folders where it ~~&~~ contains web page which appears when a user requests the home URL.

Ex:- https://example-sample-domain.com/.

④ → Next Configuring error

→ you can configure the error page at the time of enabling The static website hosting

→ But for custom error pages you can set redirection rules.

1. 301 - moved permanently.
2. 403 - Access Forbidden.
3. 500 - Service error.
4. 503 - Service not available. etc.

→ Next. Website access permission.

For That copy & paste The code

```
{ "version": "2019-02-15",
"Statement" : [{"sid" :"Allow public Read",
                "Effect": "Allow", "principal" :{
                        "AWS" : "*"},
"Action" :"S3:Get object",
"Resource" : ' arn: aws: s3::: journaldev/* "
}]}.
```

→ Next Traffic. logging.

It's typically The HTTP access logs.

→ Go to bucket → properties → Serveraccess logging → target buc

. i.e:, bswamp → save.

Then Redirect Them.

6 DDOS (Distributed denail of Service). attacks are sometimes used by malicious users in an attempt to flood a network, system, or application with more traffic.

So, Now in case of XYZ DDOS, is Creating multiple sessions and denies access to other legitimate users who can't access the service.

So, To minimise this the XYZ used to protect the web application against DDOS attacks, for that XYZ ~~the~~ should use "AWS sheild", a DDOS protection service that AWS provides automatically to all AWS customers at no additional charge.

Even XYZ should also use Elastic load Balancing (ELB) allows you to use achieve greater fault tolerance by automatically routing inbound traffic accross multiple Amazon EC2 instances.

It allows you to reduce you attack surface by receiving requests on behalf of webapplication & automatically scaling to handle capacity demands.

Even the Edge services can also help this.

3 a Amazon Cloud watch Service allows user to create custom graphical views/logs which will display metrics as per user monitoring needs.

b It can also create alarms and take actions based on the thresholds.

2 In This example you create a simple API using a Amazon API Gateway. An Amazon API Gateway is a collection of resources and methods. In This we are integrating java based Aws lambda fn. with Aws API Gateway using post method (for this we have to ~~[illegible]~~ create an resource DynamoDB manager).
And this method is backed by lambda fn.

→ The post method on The DynamoDB manager resource supports the following DB operations.
1. Create, update & delete an item.
2. Read an item.
3. Scan an item.
4. And other operations not related to DB for testing.

→ Create an IAM and execution role
* ~~No~~ the Amazon Resource Name (ARN) of the execution role for later use.

→ Create a lambda fn ('java'):-
→ Create a sample code and deployment package.
→ Now for the role parameter, enter the ARN role of the execution role that you created earlier.

→ Test the lambda fn ~~usi~~ by deploying the sample code.

→ Create an API using Amazon API Gateway.
→ Create an API
→ Create a resource in the API
→ Now link the DynamoDB manager to resource
→ Now create a post method / put method on the DynamoDB manager resource in the API.
Now specify the None for the -- authorization type parameter, which means that unauthenticated requests

for this method are supported.

→ Now set the lambda fn' as the destination for the post/put method.

Then deploy the API and grant invoke permission t the API

→ Now for the dynamodB table ~~t~~ trigger the fn' with an HTTP request.

now, you are ready. to send an HTTP request to th post method endpoint.

The lambda fn Supports using the Create operation to create an item in the DynamoDB table.

InThis the major steps are.

→ Creating DB table

→ Creanting an IAm Role.

→ Creating an lambda fn.

→ Creating an API Gateway

→ Resource

→ method.

(5) Various modes of accessing AWS cloud.

→ AWS CLI (Command line Interface)

→ AWS Console

→ AWS SDK. (software development kit)

AWS CLI:-

Amazon 'AWS CLI', Through Command line interface we can access to the cloud services. Through commands we can just launch our insta buckets, tables, fn's etc. with the help of this just o tool to download & configure and also you control multiple things like installing, updating etc.

Aws Console:-

It's an management console brings the unmatched breadth, and depth of Aws right to your computer or phone with a secure and easy to access and also manage all the things which are going/running on.

Aws SdK:-

It's an popular Integrated development environment (IDE's) to author, debug, develop and deploy your Code on Aws.
It's also used for developing various kind of developments on C++, javascript, PHP etc. and also using this we can easily run our Codes on cloud and also ~~to~~ secure.

①
```
import json
def lambdahandler(event, Context):
    #TODO implement
            a= (name 1) input;     d= input(name 8);
            b= (name 2) input;
             if (c = a)
                  for i in range (1,10)
                         k= 1
                          k=k+i
                       return k;
          elseif (C=d)
                print ("welcome", d);
          else
                Print (" wrong input");
return {
    'Status code':200, 'body': json.dumps('Helo from lamb
```