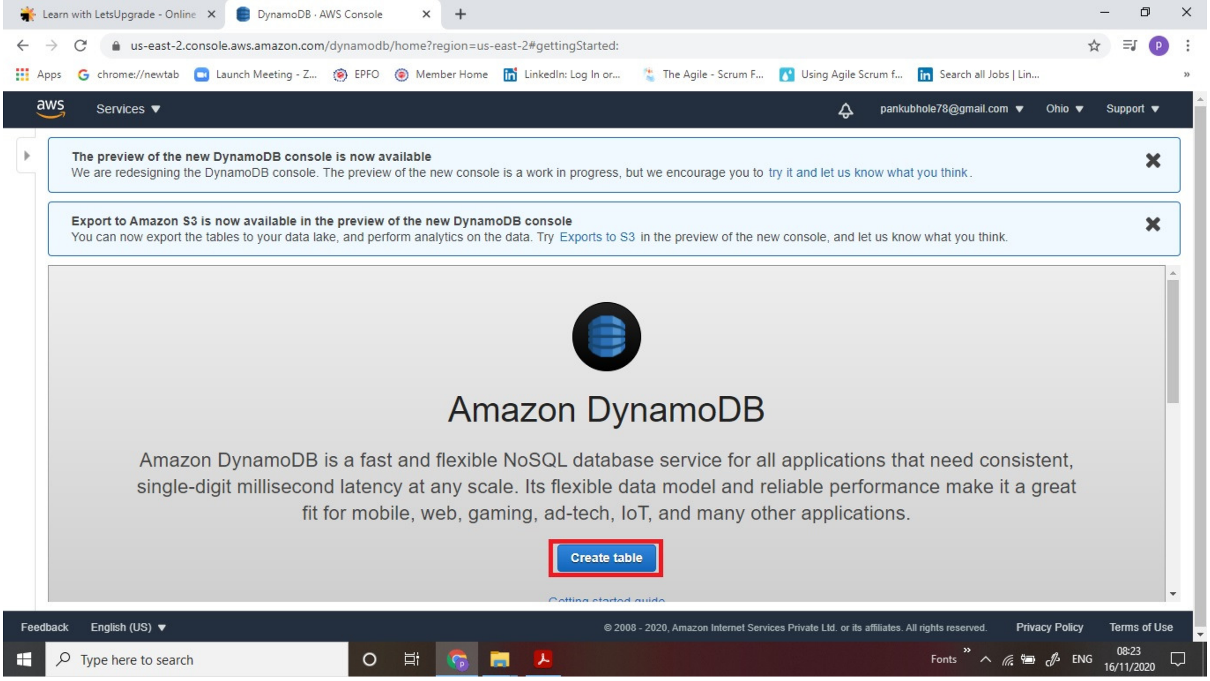
# Assignment Day 12 | 8th November 2020

## Question 1:

Task 1: Create a dynamo DB table with minimum two disaster recovery zones and verify
Replication.
ss1: Disaster recovery regions with the table

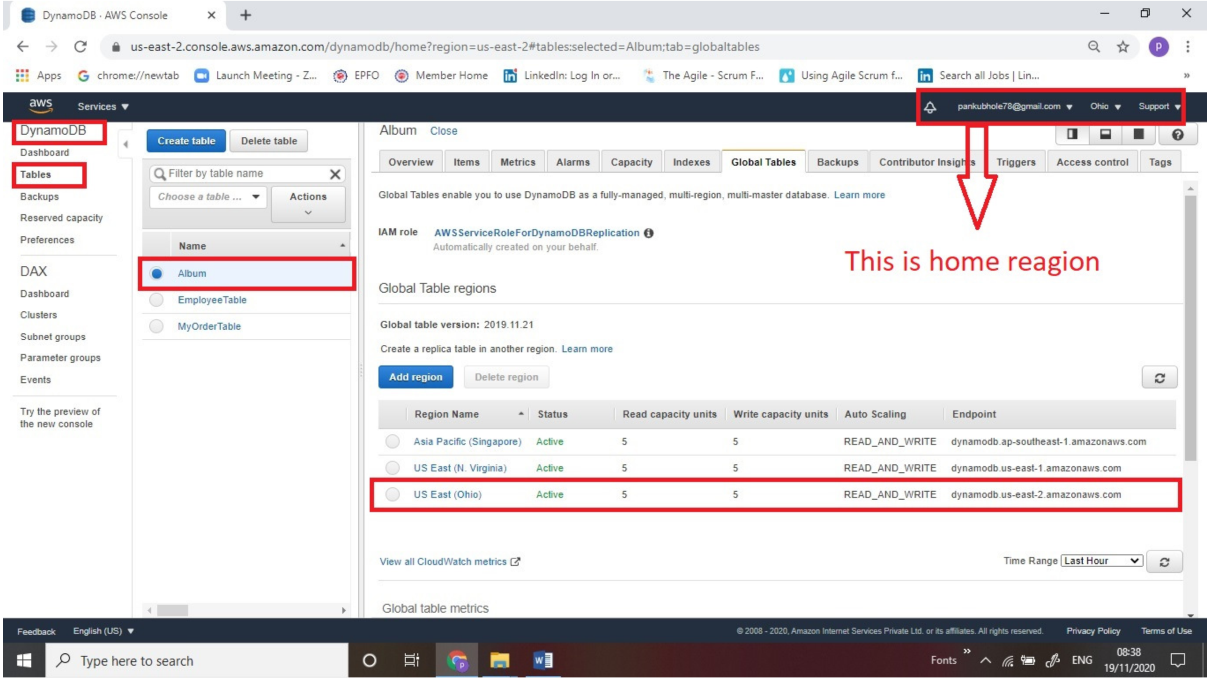


**The preview of the new DynamoDB console is now available**
We are redesigning the DynamoDB console. The preview of the new console is a work in progress, but we encourage you to try it and let us know what you think.

**Export to Amazon S3 is now available in the preview of the new DynamoDB console**
You can now export the tables to your data lake, and perform analytics on the data. Try Exports to S3 in the preview of the new console, and let us know what you think.

Amazon DynamoDB

Amazon DynamoDB is a fast and flexible NoSQL database service for all applications that need consistent, single-digit millisecond latency at any scale. Its flexible data model and reliable performance make it a great fit for mobile, web, gaming, ad-tech, IoT, and many other applications.



Global Tables enable you to use DynamoDB as a fully-managed, multi-region, multi-master database. Learn more

IAM role AWSServiceRoleForDynamoDBReplication
Automatically created on your behalf.

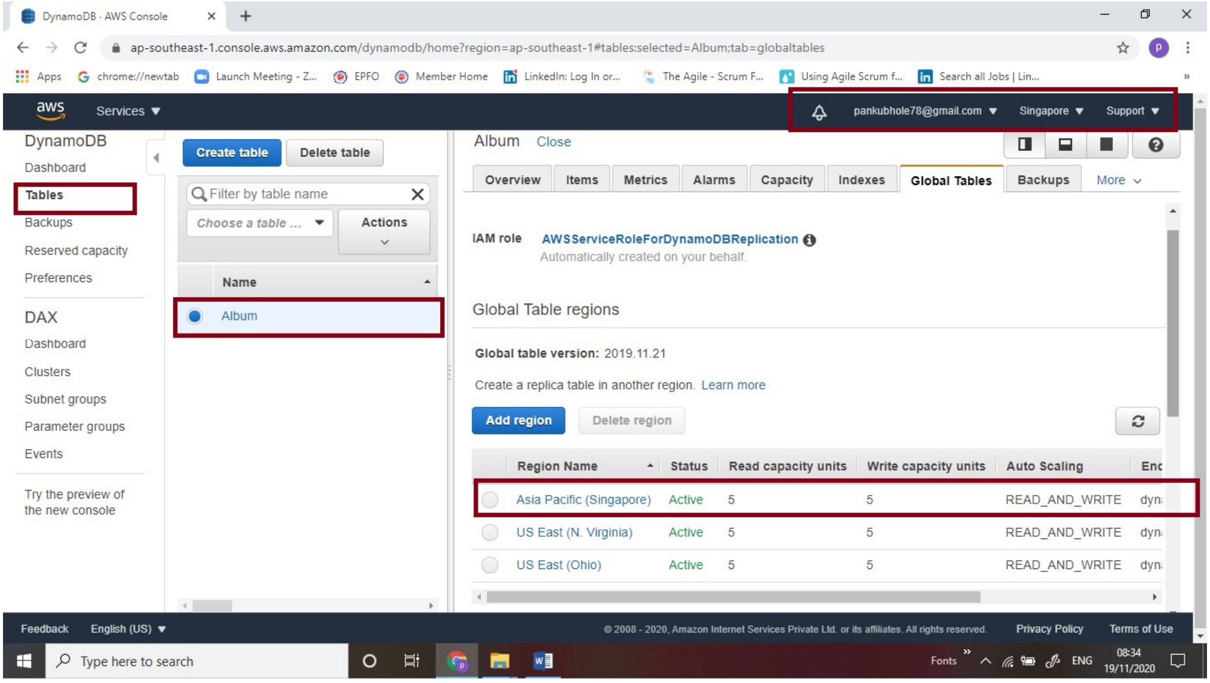
This is home reagion

Global Table regions

Global table version: 2019.11.21

Create a replica table in another region. Learn more

| | Region Name | Status | Read capacity units | Write capacity units | Auto Scaling | Endpoint |
|---|---|---|---|---|---|---|
| ○ | Asia Pacific (Singapore) | Active | 5 | 5 | READ_AND_WRITE | dynamodb.ap-southeast-1.amazonaws.com |
| ○ | US East (N. Virginia) | Active | 5 | 5 | READ_AND_WRITE | dynamodb.us-east-1.amazonaws.com |
| ○ | US East (Ohio) | Active | 5 | 5 | READ_AND_WRITE | dynamodb.us-east-2.amazonaws.com |



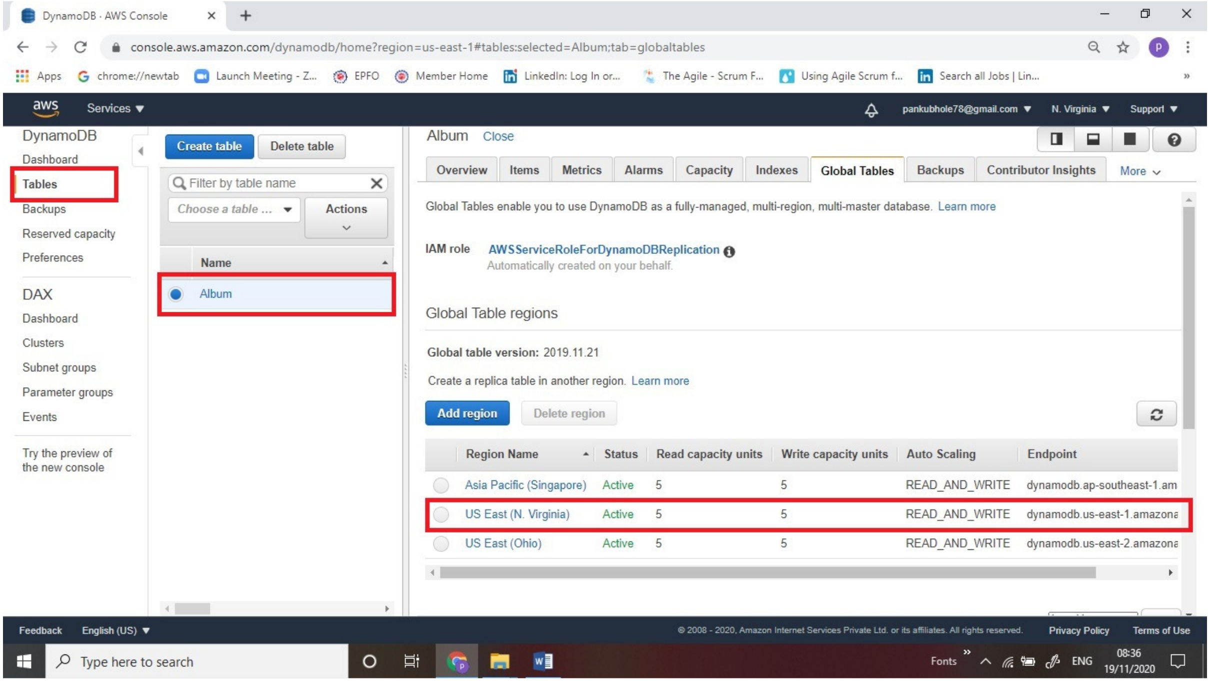
IAM role AWSServiceRoleForDynamoDBReplication
Automatically created on your behalf.

Global Table regions

Global table version: 2019.11.21

Create a replica table in another region. Learn more

| Region Name | Status | Read capacity units | Write capacity units | Auto Scaling | Enc |
|---|---|---|---|---|---|
| ○ Asia Pacific (Singapore) | Active | 5 | 5 | READ_AND_WRITE | dyn |
| ○ US East (N. Virginia) | Active | 5 | 5 | READ_AND_WRITE | dyn |
| ○ US East (Ohio) | Active | 5 | 5 | READ_AND_WRITE | dyn |



Global Tables enable you to use DynamoDB as a fully-managed, multi-region, multi-master database. Learn more

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Global Table regions

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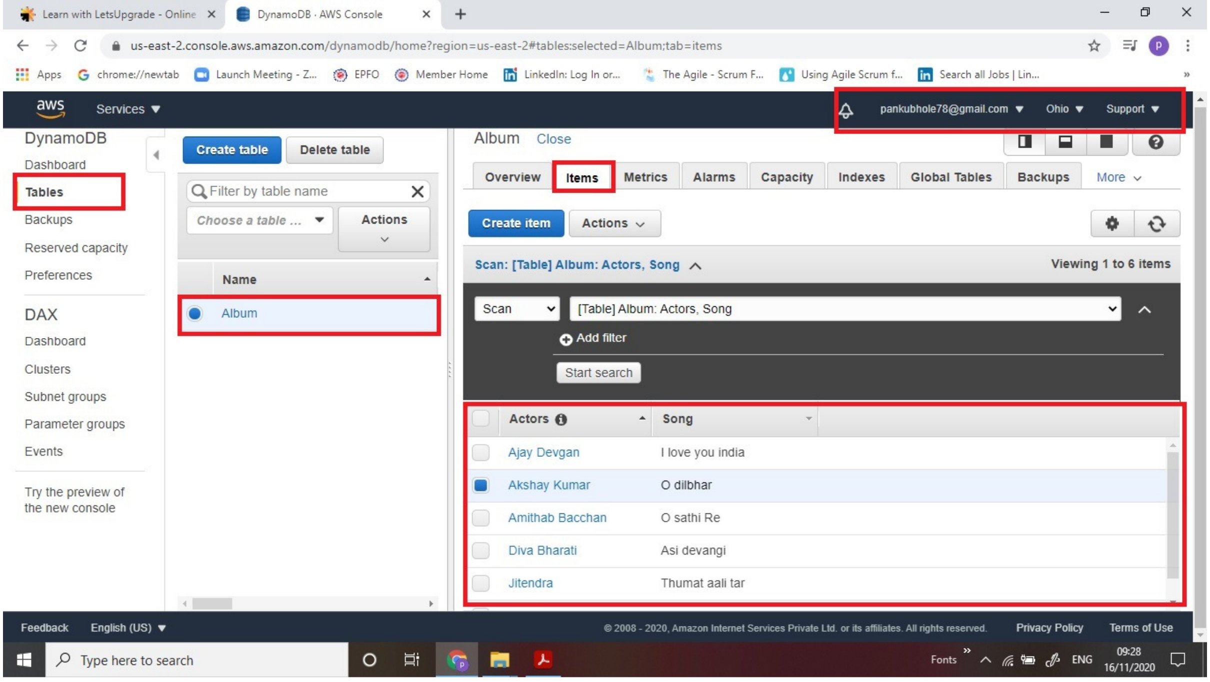
Create a replica table in another region. Learn more

| Region Name | Status | Read capacity units | Write capacity units | Auto Scaling | Endpoint |
|---|---|---|---|---|---|
| ○ Asia Pacific (Singapore) | Active | 5 | 5 | READ_AND_WRITE | dynamodb.ap-southeast-1.am |
| ○ US East (N. Virginia) | Active | 5 | 5 | READ_AND_WRITE | dynamodb.us-east-1.amazona |
| ○ US East (Ohio) | Active | 5 | 5 | READ_AND_WRITE | dynamodb.us-east-2.amazona |

ss2: Home region with all items displayed



us-east-2.console.aws.amazon.com/dynamodb/home?region=us-east-2#tables:selected=Album;tab=items

pankubhole78@gmail.com ▼ Ohio ▼ Support ▼

Album Close

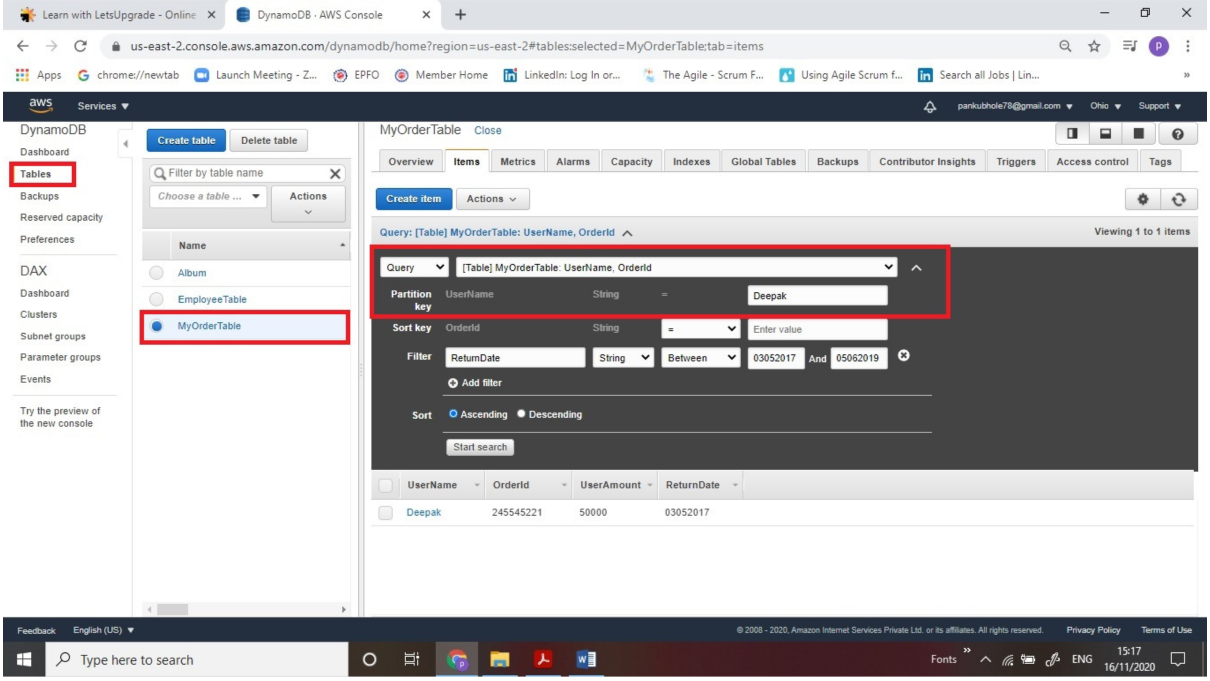
Scan: [Table] Album: Actors, Song

Viewing 1 to 6 items

Scan | [Table] Album: Actors, Song

| ☐ | Actors | Song |
|---|---|---|
| ☐ | Ajay Devgan | I love you india |
| ☑ | Akshay Kumar | O dilbhar |
| ☐ | Amithab Bacchan | O sathi Re |
| ☐ | Diva Bharati | Asi devangi |
| ☐ | Jitendra | Thumat aali tar |

ss3: Use query to fetch few items



us-east-2.console.aws.amazon.com/dynamodb/home?region=us-east-2#tables:selected=MyOrderTable;tab=items

MyOrderTable Close

Query: [Table] MyOrderTable: UserName, OrderId

Viewing 1 to 1 items

Query | [Table] MyOrderTable: UserName, OrderId

Partition key UserName String = Deepak

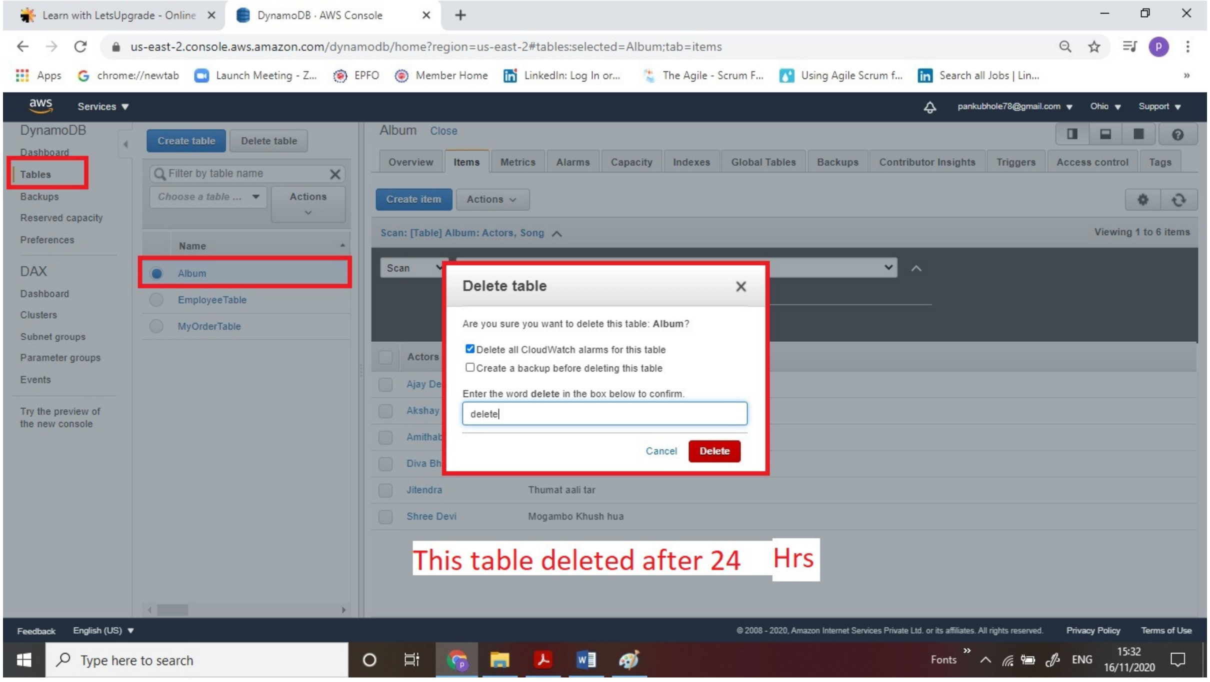
Sort key OrderId String = Enter value

Filter ReturnDate String Between 03052017 And 05062019

Sort ● Ascending ○ Descending

| ☐ | UserName | OrderId | UserAmount | ReturnDate |
|---|---|---|---|---|
| ☐ | Deepak | 245545221 | 50000 | 03052017 |

ss4: deletion and verification



**Delete table**

Are you sure you want to delete this table: **Album**?

☑ Delete all CloudWatch alarms for this table

☐ Create a backup before deleting this table

Enter the word **delete** in the box below to confirm.

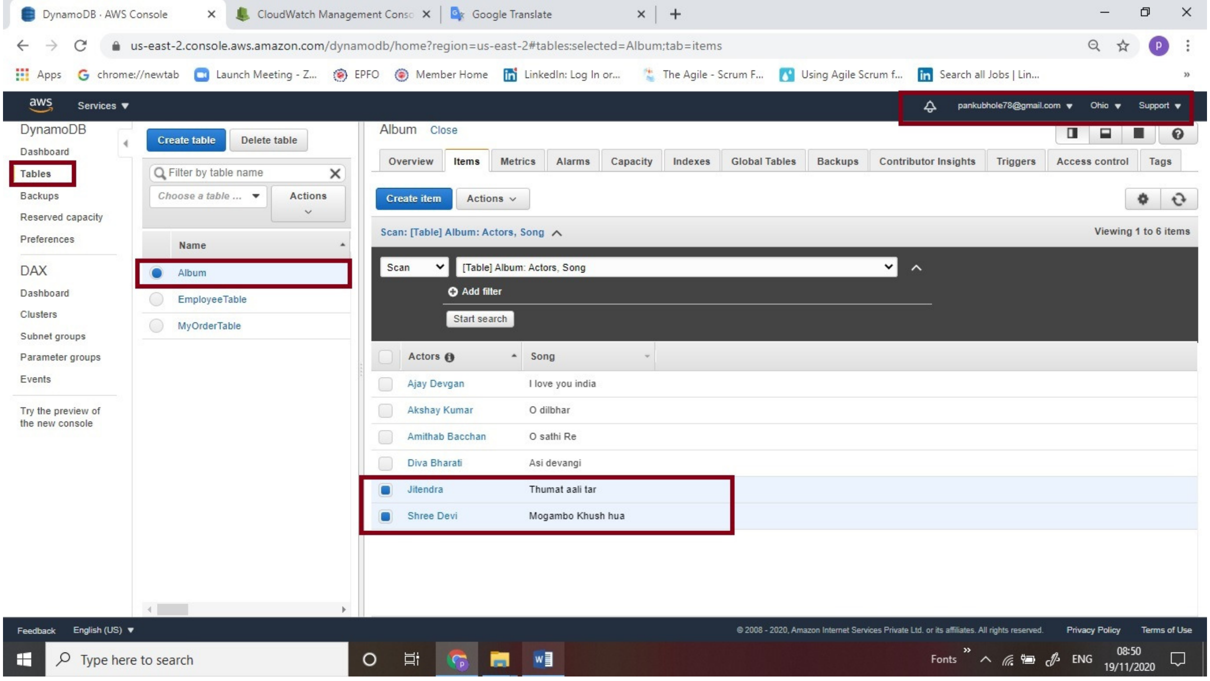
delete

Cancel **Delete**

| Actors | |
|---|---|
| Ajay De | |
| Akshay | |
| Amithab | |
| Diva Bh | |
| Jitendra | Thumat aali tar |
| Shree Devi | Mogambo Khush hua |

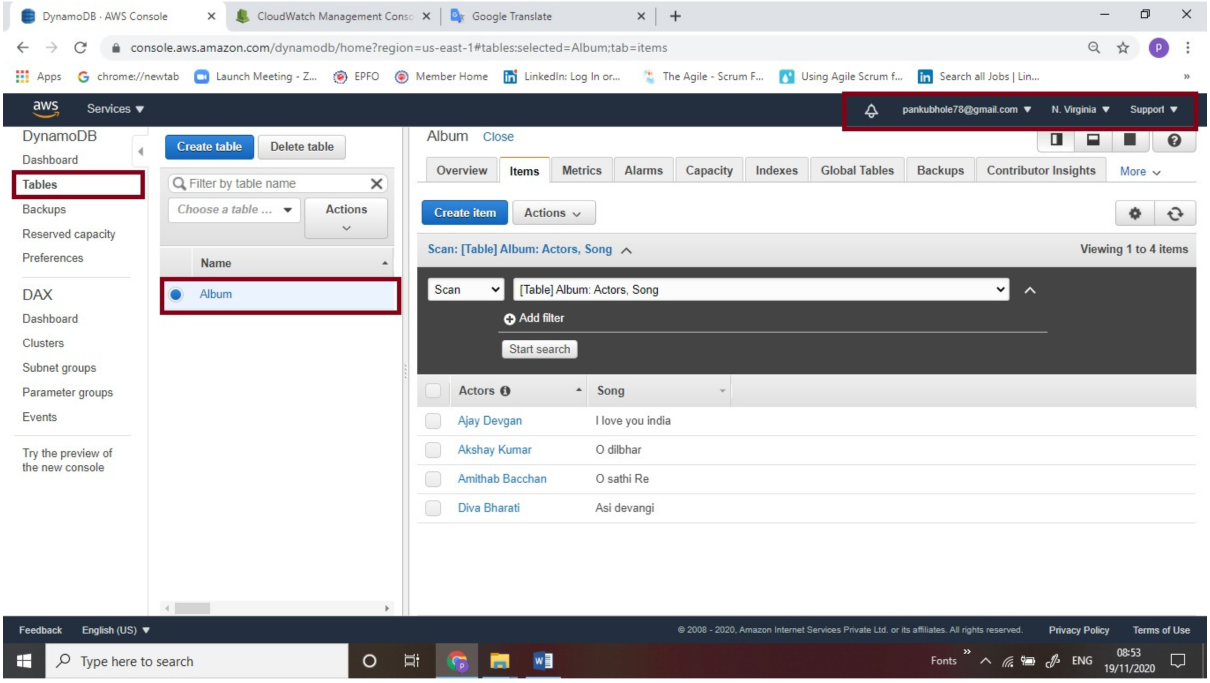
This table deleted after 24 Hrs

Please verify after deleted home regions table filed and another region table filed below screen shot.
This screen is showing table filed in this screen selected fields was deleted.

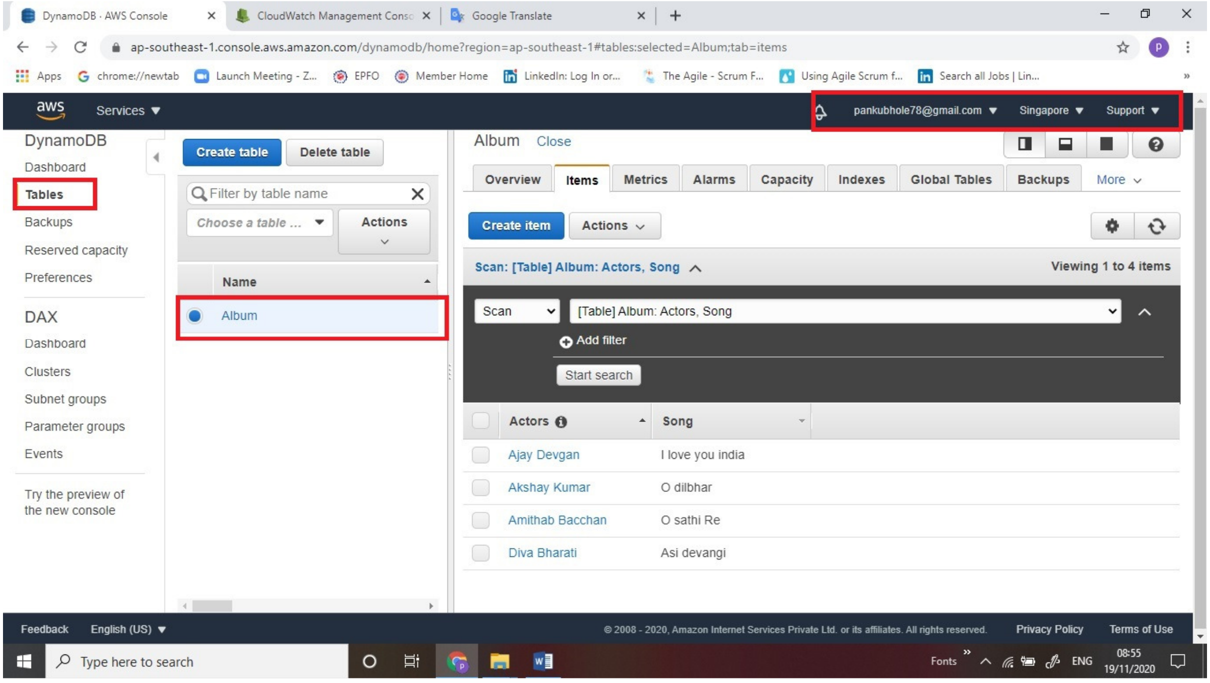


| Actors | Song |
|---|---|
| Ajay Devgan | I love you india |
| Akshay Kumar | O dilbhar |
| Amithab Bacchan | O sathi Re |
| Diva Bharati | Asi devangi |
| Jitendra | Thumat aali tar |
| Shree Devi | Mogambo Khush hua |

Match above screen ( home region fields ) and another two region replica fields that is deleated.



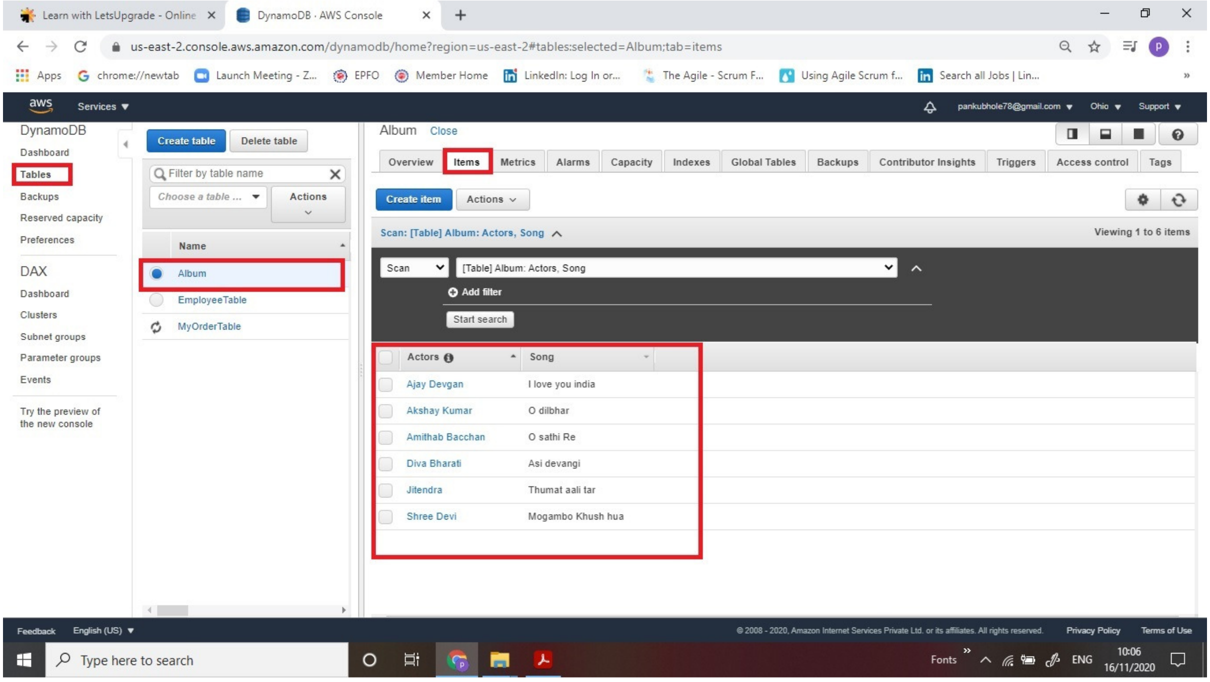
| Actors | Song |
|---|---|
| Ajay Devgan | I love you india |
| Akshay Kumar | O dilbhar |
| Amithab Bacchan | O sathi Re |
| Diva Bharati | Asi devangi |



| Actors | Song |
|---|---|
| Ajay Devgan | I love you india |
| Akshay Kumar | O dilbhar |
| Amithab Bacchan | O sathi Re |
| Diva Bharati | Asi devangi |

Task 2: Creating a dynamo DB table with global secondary indexes and fetching data using global Secondary indexes.

ss1: Table with its items displayed



us-east-2.console.aws.amazon.com/dynamodb/home?region=us-east-2#tables:selected=Album;tab=items

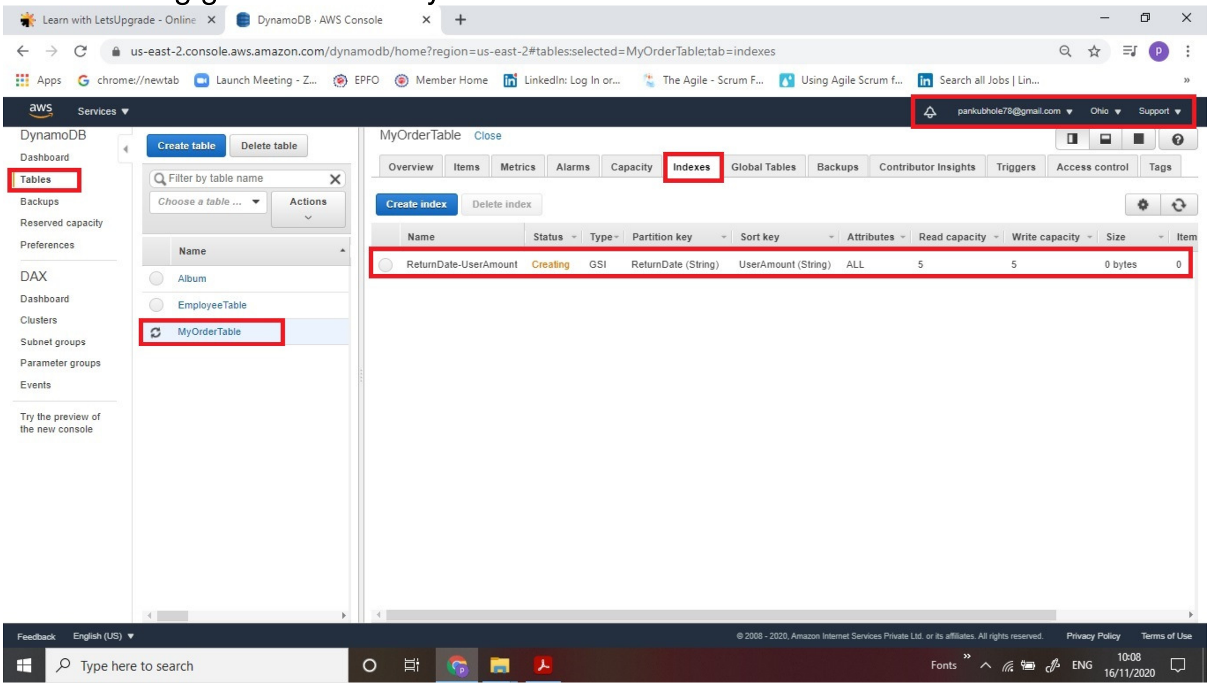
Album Close

Scan: [Table] Album: Actors, Song — Viewing 1 to 6 items

Scan [Table] Album: Actors, Song

| Actors | Song |
|---|---|
| Ajay Devgan | I love you india |
| Akshay Kumar | O dilbhar |
| Amithab Bacchan | O sathi Re |
| Diva Bharati | Asi devangi |
| Jitendra | Thumat aali tar |
| Shree Devi | Mogambo Khush hua |

ss2: Creating global secondary index

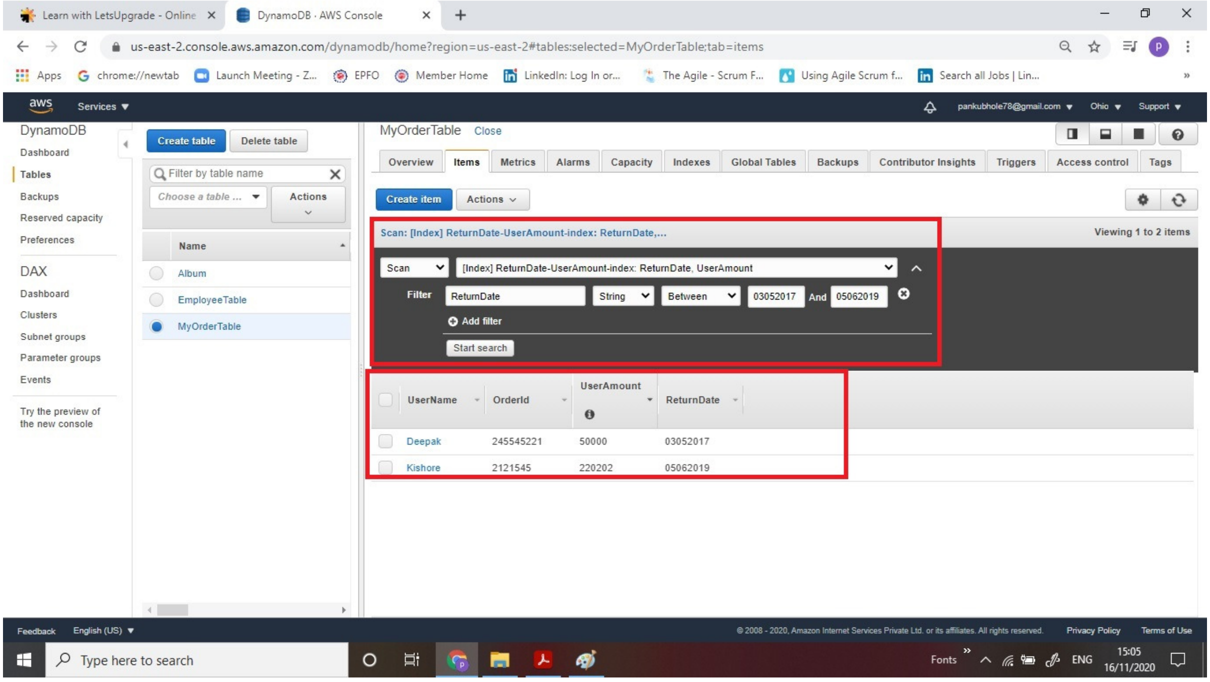


us-east-2.console.aws.amazon.com/dynamodb/home?region=us-east-2#tables:selected=MyOrderTable;tab=indexes

MyOrderTable Close

| Name | Status | Type | Partition key | Sort key | Attributes | Read capacity | Write capacity | Size | Item |
|---|---|---|---|---|---|---|---|---|---|
| ReturnDate-UserAmount | Creating | GSI | ReturnDate (String) | UserAmount (String) | ALL | 5 | 5 | 0 bytes | 0 |

## ss3: scan with global secondary index



us-east-2.console.aws.amazon.com/dynamodb/home?region=us-east-2#tables:selected=MyOrderTable;tab=items

Scan: [Index] ReturnDate-UserAmount-index: ReturnDate,...

Viewing 1 to 2 items

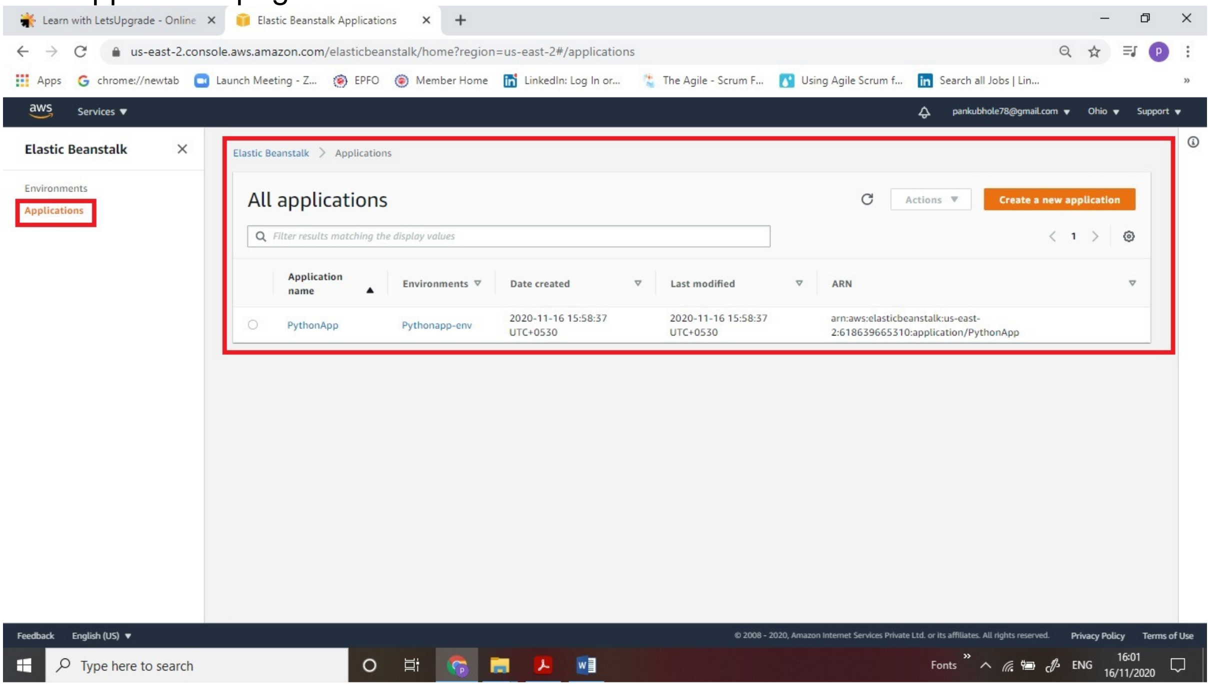
Scan | [Index] ReturnDate-UserAmount-index: ReturnDate, UserAmount

Filter: ReturnDate | String | Between | 03052017 And 05062019

| UserName | OrderId | UserAmount | ReturnDate |
|---|---|---|---|
| Deepak | 245545221 | 50000 | 03052017 |
| Kishore | 2121545 | 220202 | 05062019 |

## Task 3: Deploying a python application in elastic beanstalk

## ss1: Application page

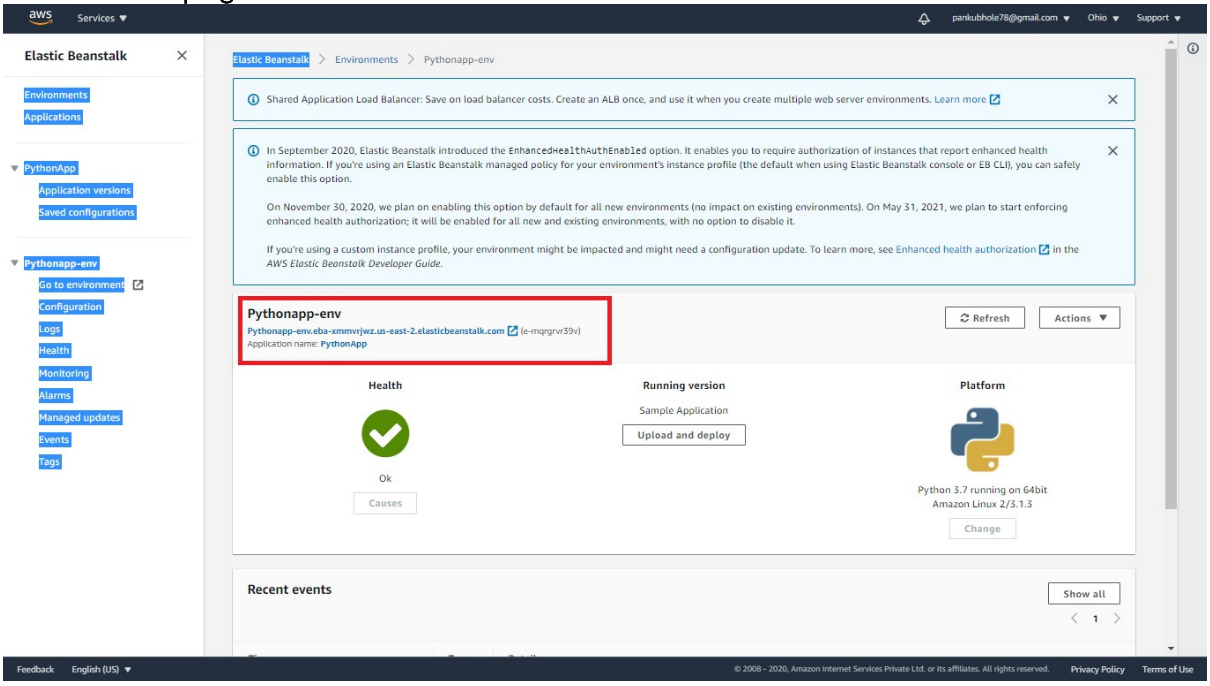

Elastic Beanstalk
Environments
Applications
Elastic Beanstalk > Applications
Actions
Create a new application
Filter results matching the display values

us-east-2.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-2#/applications

All applications

| Application name | Environments | Date created | Last modified | ARN |
|---|---|---|---|---|
| PythonApp | Pythonapp-env | 2020-11-16 15:58:37 UTC+0530 | 2020-11-16 15:58:37 UTC+0530 | arn:aws:elasticbeanstalk:us-east-2:618639665310:application/PythonApp |

# ss2: Env list page



Shared Application Load Balancer: Save on load balancer costs. Create an ALB once, and use it when you create multiple web server environments. Learn more

In September 2020, Elastic Beanstalk introduced the `EnhancedHealthAuthEnabled` option. It enables you to require authorization of instances that report enhanced health information. If you're using an Elastic Beanstalk managed policy for your environment's instance profile (the default when using Elastic Beanstalk console or EB CLI), you can safely enable this option.

On November 30, 2020, we plan on enabling this option by default for all new environments (no impact on existing environments). On May 31, 2021, we plan to start enforcing enhanced health authorization; it will be enabled for all new and existing environments, with no option to disable it.

If you're using a custom instance profile, your environment might be impacted and might need a configuration update. To learn more, see Enhanced health authorization in the *AWS Elastic Beanstalk Developer Guide*.

**Pythonapp-env**
Pythonapp-env.eba-xmmvrjwz.us-east-2.elasticbeanstalk.com (e-mqrgrvr39v)
Application name: PythonApp

| Health | Running version | Platform |
|---|---|---|
| Ok | Sample Application | Python 3.7 running on 64bit Amazon Linux 2/3.1.3 |

**Recent events**

1

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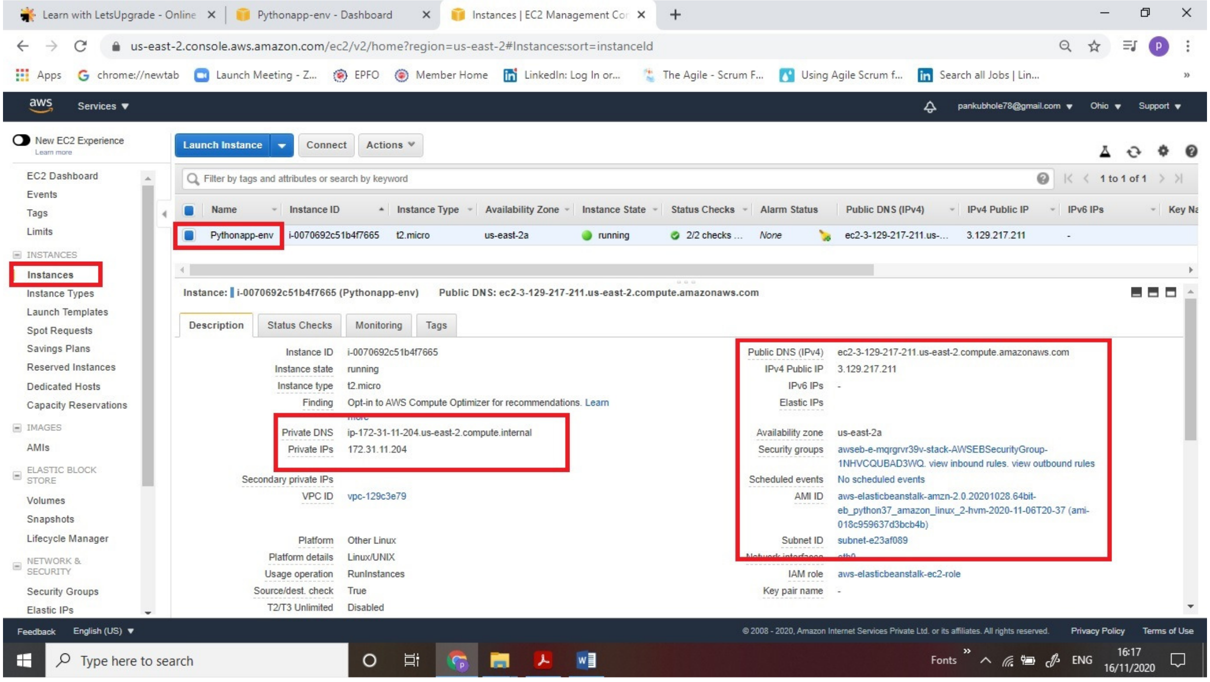

| Name | Instance ID | Instance Type | Availability Zone | Instance State | Status Checks | Alarm Status | Public DNS (IPv4) | IPv4 Public IP | IPv6 IPs | Key Na |
|---|---|---|---|---|---|---|---|---|---|---|
| Pythonapp-env | i-0070692c51b4f7665 | t2.micro | us-east-2a | running | 2/2 checks ... | None | ec2-3-129-217-211.us-... | 3.129.217.211 | - | |

Instance: i-0070692c51b4f7665 (Pythonapp-env) Public DNS: ec2-3-129-217-211.us-east-2.compute.amazonaws.com

| | | | |
|---|---|---|---|
| Instance ID | i-0070692c51b4f7665 | Public DNS (IPv4) | ec2-3-129-217-211.us-east-2.compute.amazonaws.com |
| Instance state | running | IPv4 Public IP | 3.129.217.211 |
| Instance type | t2.micro | IPv6 IPs | - |
| Finding | Opt-in to AWS Compute Optimizer for recommendations. Learn more | Elastic IPs | |
| Private DNS | ip-172-31-11-204.us-east-2.compute.internal | Availability zone | us-east-2a |
| Private IPs | 172.31.11.204 | Security groups | awseb-e-mqrgrvr39v-stack-AWSEBSecurityGroup-1NHVCQUBAD3WQ. view inbound rules. view outbound rules |
| Secondary private IPs | | Scheduled events | No scheduled events |
| VPC ID | vpc-129c3e79 | AMI ID | aws-elasticbeanstalk-amzn-2.0.20201028.64bit-eb_python37_amazon_linux_2-hvm-2020-11-06T20-37 (ami-018c959637d3bcb4b) |
| Platform | Other Linux | Subnet ID | subnet-e23af089 |
| Platform details | Linux/UNIX | Network interfaces | eth0 |
| Usage operation | RunInstances | IAM role | aws-elasticbeanstalk-ec2-role |
| Source/dest. check | True | Key pair name | - |
| T2/T3 Unlimited | Disabled | | |

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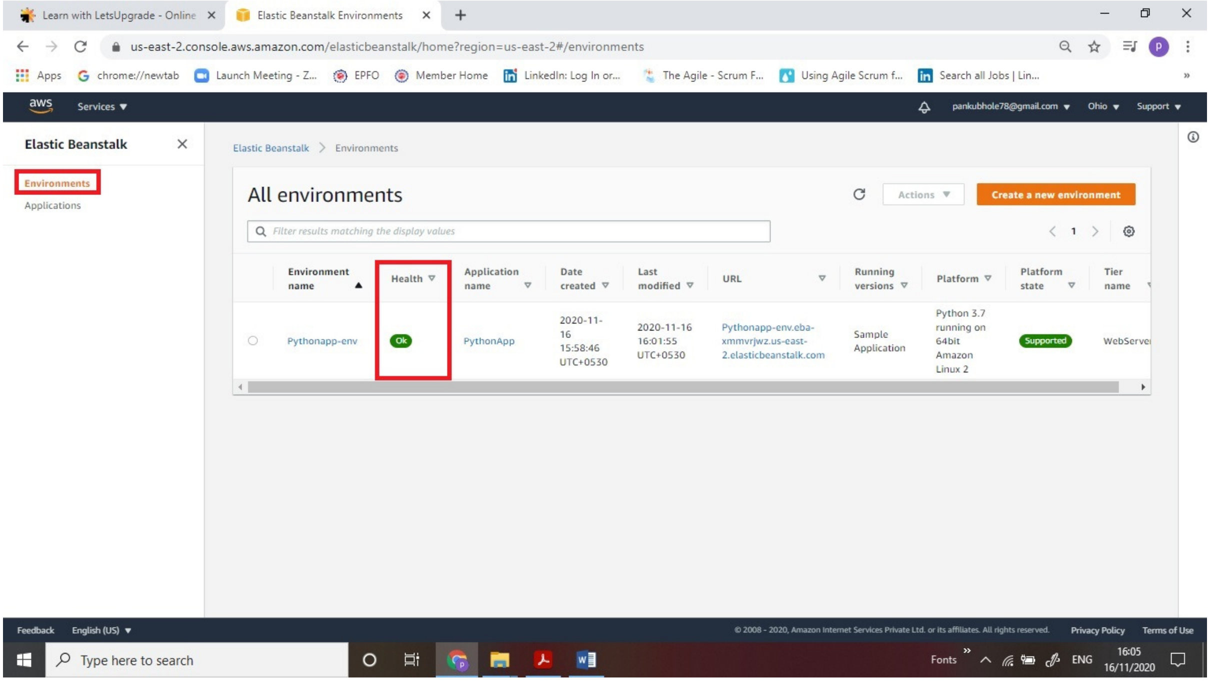
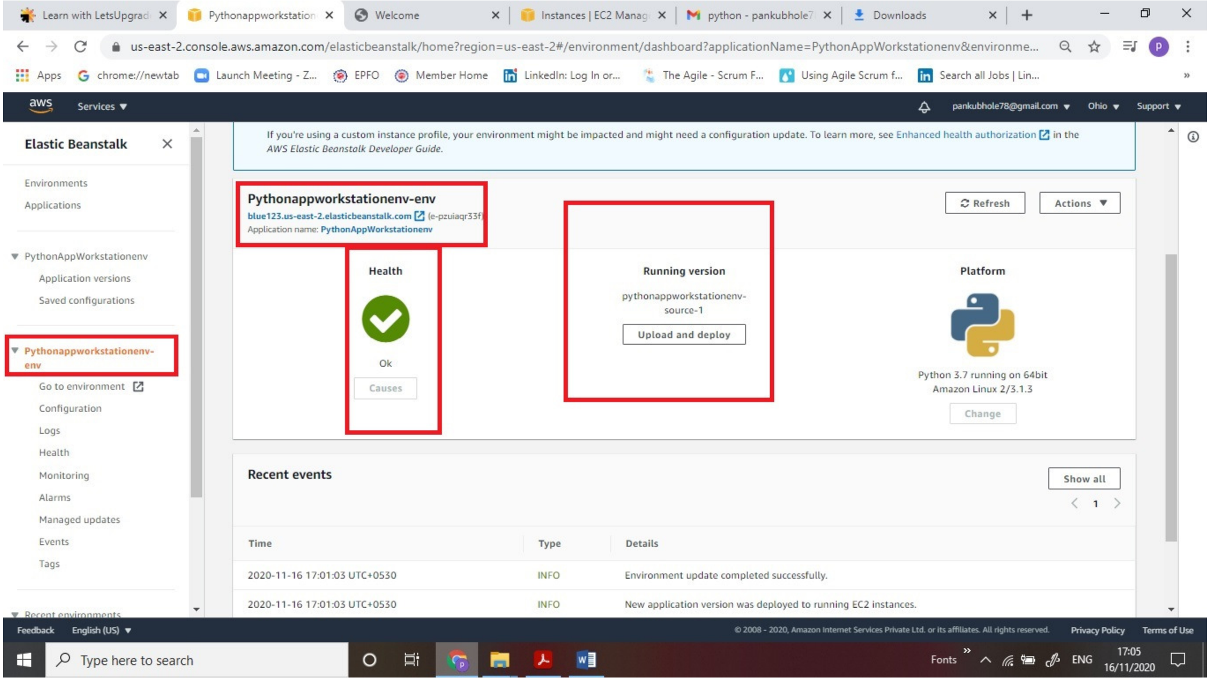
## ss3: Env health status page



All environments

| | Environment name | Health | Application name | Date created | Last modified | URL | Running versions | Platform | Platform state | Tier name |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | Pythonapp-env | Ok | PythonApp | 2020-11-16 15:58:46 UTC+0530 | 2020-11-16 16:01:55 UTC+0530 | Pythonapp-env.eba-xmmvrjwz.us-east-2.elasticbeanstalk.com | Sample Application | Python 3.7 running on 64bit Amazon Linux 2 | Supported | WebServer |

## ss4: Web page launched using the elastic beanstalk env



If you're using a custom instance profile, your environment might be impacted and might need a configuration update. To learn more, see Enhanced health authorization in the *AWS Elastic Beanstalk Developer Guide.*

Pythonappworkstationenv-env

blue123.us-east-2.elasticbeanstalk.com (e-pzuiaqr33f)

Application name: PythonAppWorkstationenv

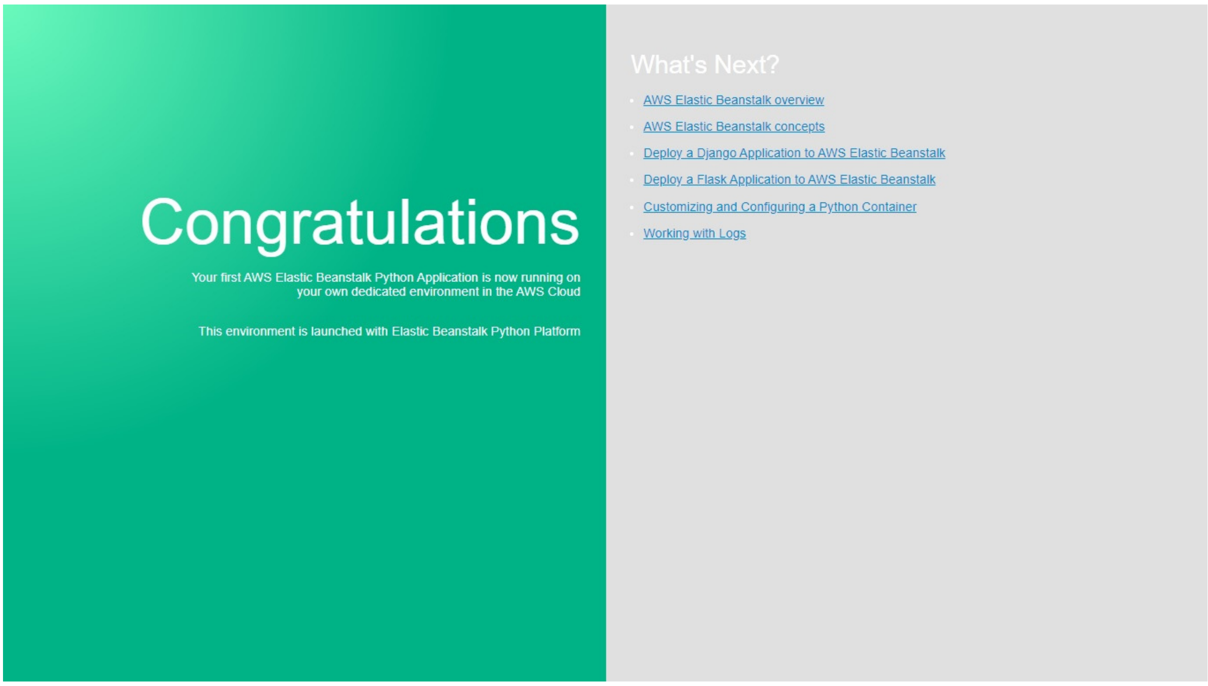
Health: Ok

Running version: pythonappworkstationenv-source-1

Platform: Python 3.7 running on 64bit Amazon Linux 2/3.1.3

Recent events

| Time | Type | Details |
|---|---|---|
| 2020-11-16 17:01:03 UTC+0530 | INFO | Environment update completed successfully. |
| 2020-11-16 17:01:03 UTC+0530 | INFO | New application version was deployed to running EC2 instances. |



Congratulations

Your first AWS Elastic Beanstalk Python Application is now running on your own dedicated environment in the AWS Cloud

This environment is launched with Elastic Beanstalk Python Platform

What's Next?

- AWS Elastic Beanstalk overview
- AWS Elastic Beanstalk concepts
- Deploy a Django Application to AWS Elastic Beanstalk
- Deploy a Flask Application to AWS Elastic Beanstalk
- Customizing and Configuring a Python Container
- Working with Logs