

**Akhila Nair**

**Cloud Computing – Sec 031**

**Exercise #2**

### **INDIAN TIFFIN SERVICE:**

Exercise two in Cloud Computing class gave me an opportunity to work with Amazon AWS. I had always heard about it and never had tried it myself. I started with what is AWS. Amazon web services is a platform where you can create, develop and put in use different cloud computing services according to specific need and demands. I started with reading different papers of previous students. This helped me understand the registering process, though it had some minor changes this year, it was easy to achieve. With the UMass Lowell code you get 100\$ credit to use the services.

If you are new to the Cloud Computing I would suggest, start with reading the book: Amazon Web Services in a Month of Lunches. It explains the very basic step of understanding how to create an instance. I played with creating an instance or two and checked uses of different Operating systems that can be used.

### **Project Objective:**

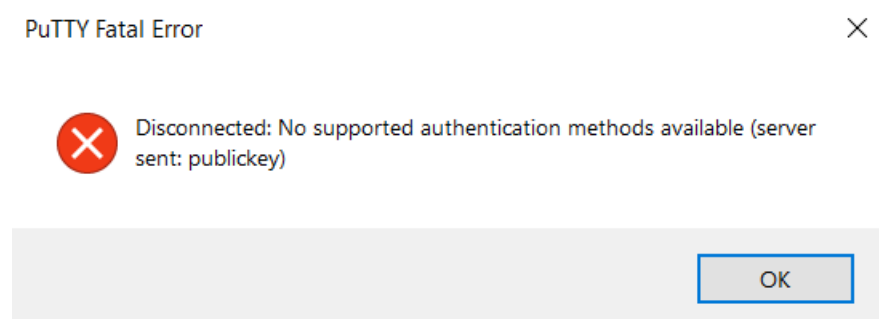
The project aims at using different services, with end product being a functional website. Being an international student and missing home food, I grabbed this opportunity to make a Website where we can get Indian home cooked Food. The product Site will be called Indian Tiffin Services. The list of Amazon web Services that I have used for this project are:

- 1) EC2 – Tier 1
- 2) Elastic Ip – Tier 2
- 3) S3 – Tier 1
- 4) Cloud Formation – Tier 1
- 5) IAM – Tier 1
- 6) CloudWatch – Tier 2
- 7) Billing Alarm – Tier 1
- 8) SNS – Tier 2
- 9) Trusted Advisor – Tier 1 (New)

### **Prerequisite:**

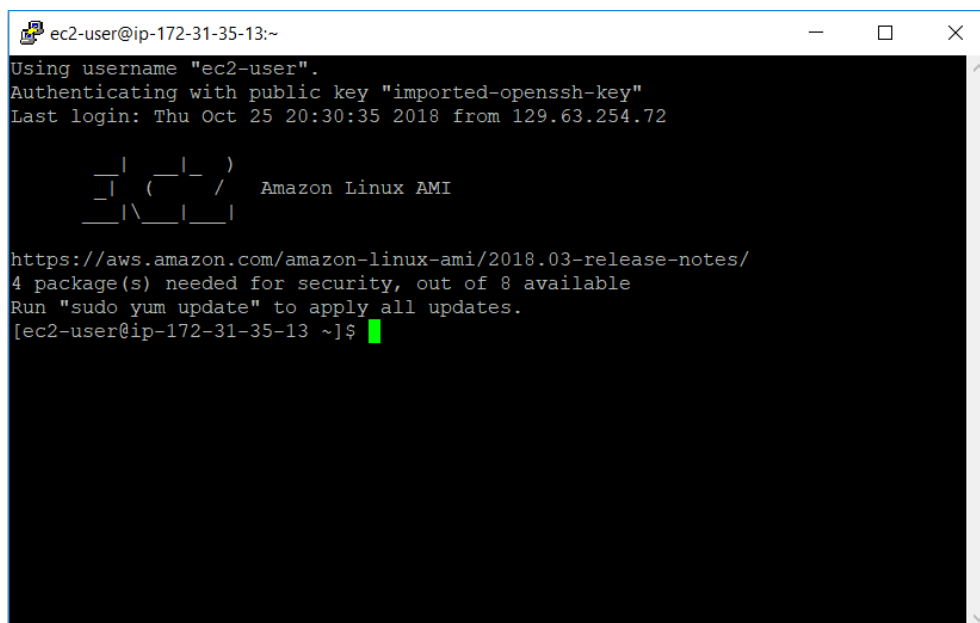
If you are a windows user, I would recommend downloading the latest version of Putty. This will help one access the instance remotely.

This is an important step and I was stuck in this step for a considerable amount of time. I got an error called “Putty Fatal Error”. This meant that my authentication was not correct and hence couldn’t remotely SSH to my instance. So, I am putting down the steps before hand for future reference.



The steps to access an ec2 instance are:

- 1) Save the Key pair (.pem) file in your home directory.
- 2) To convert it to .ppk file open the Putty Generator (and not Putty Terminal).
- 3) Click on “Load” and choose the parameter as RSA.
- 4) Select all files and load your key pair.
- 5) After converting it to .ppk file, open the Putty terminal.
- 6) Put the Hostname as `ec2-user@publicIp_Addr_of_Your_Instance` (For example: [ec2-user@18.225.1.54](#) )
- 7) On the left Navigation Panel click on “SSH” and double Click on “Auth”.
- 8) Browse the Private Key file you converted in step 5 and click on “Open”.
- 9) The first time you log in to an instance it will ask if you trust this address, click on “yes” and continue.
- 10) This should open a Putty terminal window as shown below.



## IAM Role:

One of the requirements of the project was to create an Administrator access for Prof Bob.

To go about it, Select IAM services form the list of services of AWS. Click on “Add User”. Give the User name and define the access you would like to give and choose custom password. Next click on “Permissions” to grant access to the user. Here Choose “Set Permissions boundary” and then select – Use a permissions boundary to control the maximum user permissions. From the List of permissions, choose administrator access for this user. This will provide Prof. Bob full access of your AWS account and resources. Click on “Review” and then “Finish”.

This should create a user ID and Password for the user.

User ID: profbob

Password: myproject1

The URL to sign in is:

<https://872047570494.signin.aws.amazon.com/console>

### Summary

[Delete user](#)

User ARN    `arn:aws:iam::872047570494:user/profbob`

Path    `/`

Creation time    2018-10-12 16:33 EDT

Permissions   Groups   Security credentials   Access Advisor

▼ Permissions policies (1 policy applied)

[Add permissions](#)

[Add inline policy](#)

Policy name ▼	Policy type ▼
Attached directly	
▶ <a href="#">IAMUserChangePassword</a>	AWS managed policy

▼ Permissions boundary (set)

Set a permissions boundary to control the maximum permissions this user can have. This is not a common setting but can be used to delegate permission management to others. [Learn more](#)

[Change boundary](#)

[Remove boundary](#)

▶ [AdministratorAccess](#) (Job function policy)

## CloudFormation:

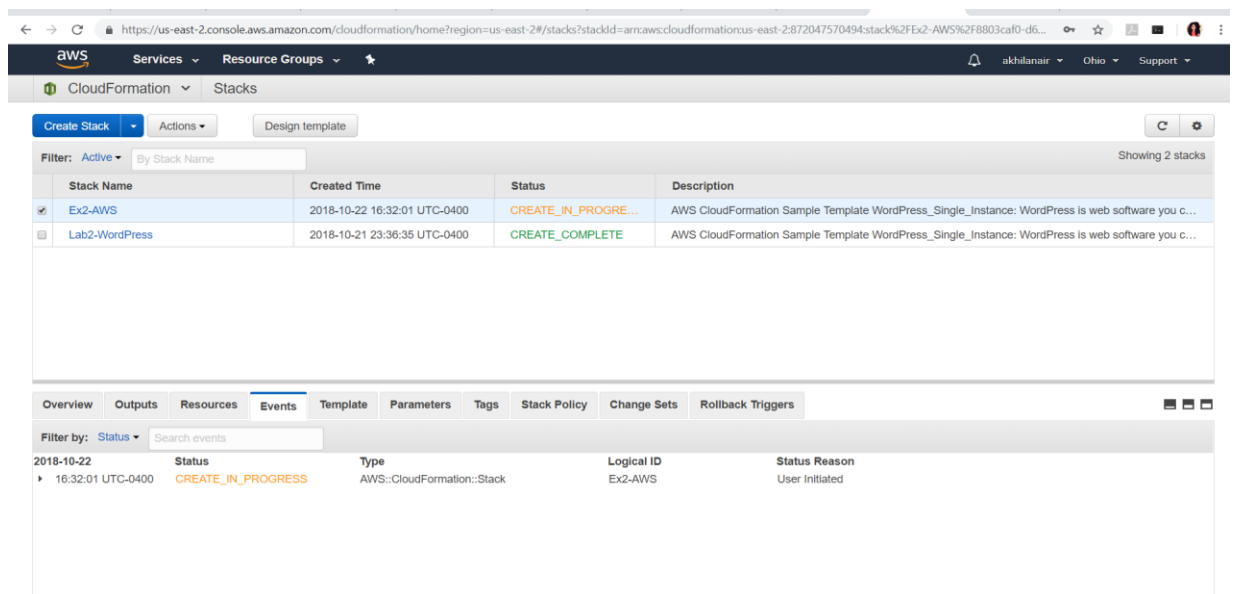
Version Control and keeping track of changes can be challenging. Things get even harder if you must develop your infrastructure stack multiple times for testing purposes. CloudFormation creates and manages the infrastructure stack and application stack in a control and predictable way. It provisions and manages information stacks of AWS resources of templates the user wants to create and modify. It is easy to manage anything, be it a single EC2 instance or a multi-level application. It creates a blue-print of the template.

The reason I tried CloudFormation is that by default creates an ec2 instance with WordPress blog as template.

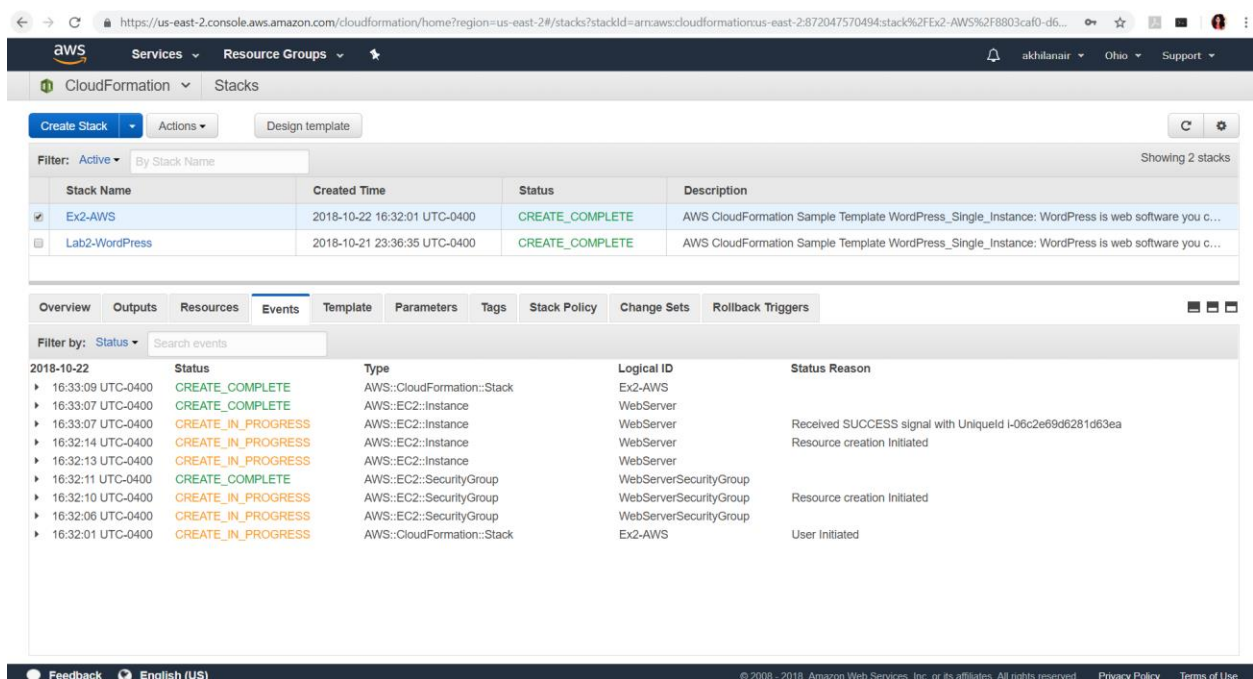
For creating one:

- Search for CloudFormation Service in the AWS dashboard.
- Click on Create Stack and choose “select a sample template”.
- On the Next page:
  - Stack Name:** EX2-AWS
  - DB Name:** wordpressdb
  - DB Password:** AkhilaNair14 (choose this carefully as they have set conventions for Password)
  - DB Root Password:** AkhilaNair14 (choose this carefully as they have set conventions for Password)
  - DB User:** anair
  - Instance type:** t2.micro (Be careful to select this, as yje default selected is not free tier eligible).
  - Key Name:** myawsproject
- In the options page, keep the default values as it is.
- Click on review, check all parameters and create the stack.

At the start it will look something like this:



After a minute or two the page should change to this:



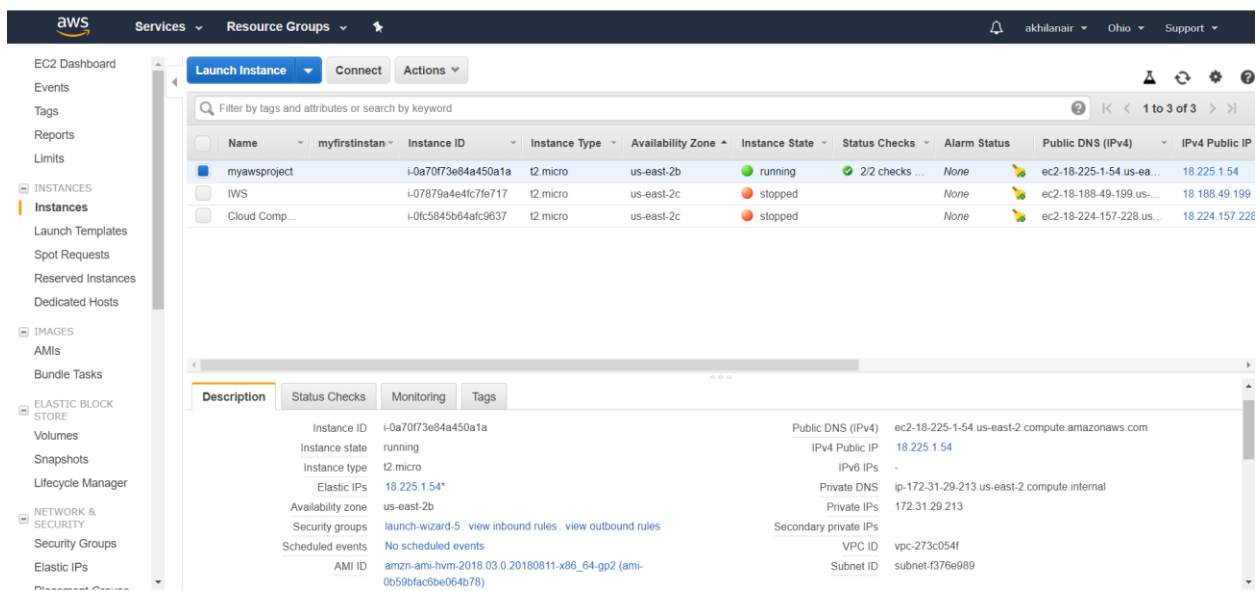
Now when you look into instances tab, you will be able to see an Amazon Linux Instance.

## Elastic IP:

Each time you log in to your Ec2 instance, the public Ip address of your instance is changed. This also means, each time you must SSH with a different IP address. Considering that my website should have a static IP to logon I considered changing the Public Ip to an elastic IP.

This can be achieved in 5 easy steps:

- In the navigation panel search for Elastic IP.
- Click on “Allocate New Address” and then select “Amazon pool”.
- Finally Click on allocate address. A new Elastic Ip will then be created.
- Select that address and click on “Action” and then “Associate address”.
- Finally select the instance you want to allocate the new address to.



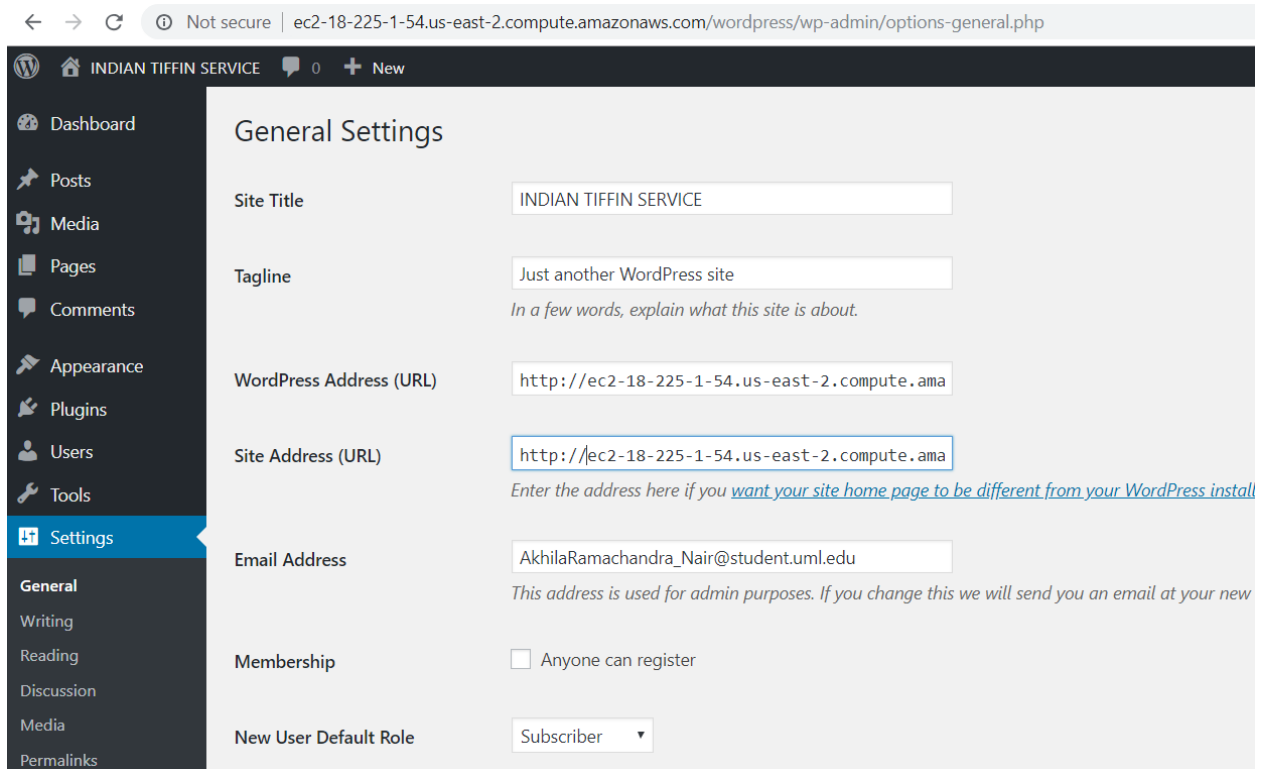
Now when we follow the link of public DNS it should take to the WordPress installation page. The link for my project is:

[ec2-18-225-1-54.us-east-2.compute.amazonaws.com](http://ec2-18-225-1-54.us-east-2.compute.amazonaws.com)

The problem I faced here was that, with this link it took me to the Apache test page and not the WordPress installation page. If I added /wordpress/ along with this link then it directed me to WordPress installation page. After searching and reading number of papers I realized that I had to copy the index.php file to root directory of var/www/html/

The steps to achieve this are:

- Go to your WordPress Dashboard -> General setting.
- Copy the DNS IP address to Site Address URL and add the http:// in the beginning.



- Save the changes.
- Go to var/www/html/wordpress/ folder.
- Copy the index.php file and paste it in var/www/html/ folder.
- Open it with the nano editor and change the following  
`require( dirname( __FILE__ ) . '/wp-blog-header.php' );` to  
`require( dirname( __FILE__ ) . '/wordpress/wp-blog-header.php' );`

```

ec2-user@ip-172-31-35-13:/var/www/html
GNU nano 2.5.3      File: index.php      Modified
<?php
/**
 * Front to the WordPress application. This file doesn't do anything, but loads
 * wp-blog-header.php which does and tells WordPress to load the theme.
 *
 * @package WordPress
 */

/**
 * Tells WordPress to load the WordPress theme and output it.
 *
 * @var bool
 */
define('WP_USE_THEMES', true);

/** Loads the WordPress Environment and Template */
require( dirname( __FILE__ ) . '/wordpress/wp-blog-header.php' );

```

^G Get Help   ^O Write Out   ^W Where Is   ^K Cut Text   ^J Justify   ^C Cur Pos  
 ^X Exit   ^R Read File   ^\ Replace   ^U Uncut Text   ^T To Spell   ^\_ Go To Line

- Save the file and exit.
- Now when you copy the DNS IP as the URL you will now reach the WordPress Installation Page.

Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Don't worry, you can always change these settings later.

Site Title

Username

Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password

Kt6AEwsxb8\$N4rX#dl

Strong

Important: You will need this password to log in. Please store it in a secure location.

Your Email

Double-check your email address before continuing.

Search Engine Visibility

☐ Discourage search engines from indexing this site  
It is up to search engines to honor this request.

Put in the desired information and select “Install WordPress”.

Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Don't worry, you can always change these settings later.

Site Title

INDIAN TIFFIN SERVICE

Username

anair

Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password

Medium

Important: You will need this password to log in. Please store it in a secure location.

Your Email

AkhilaRamachandra\_Nair@stuc

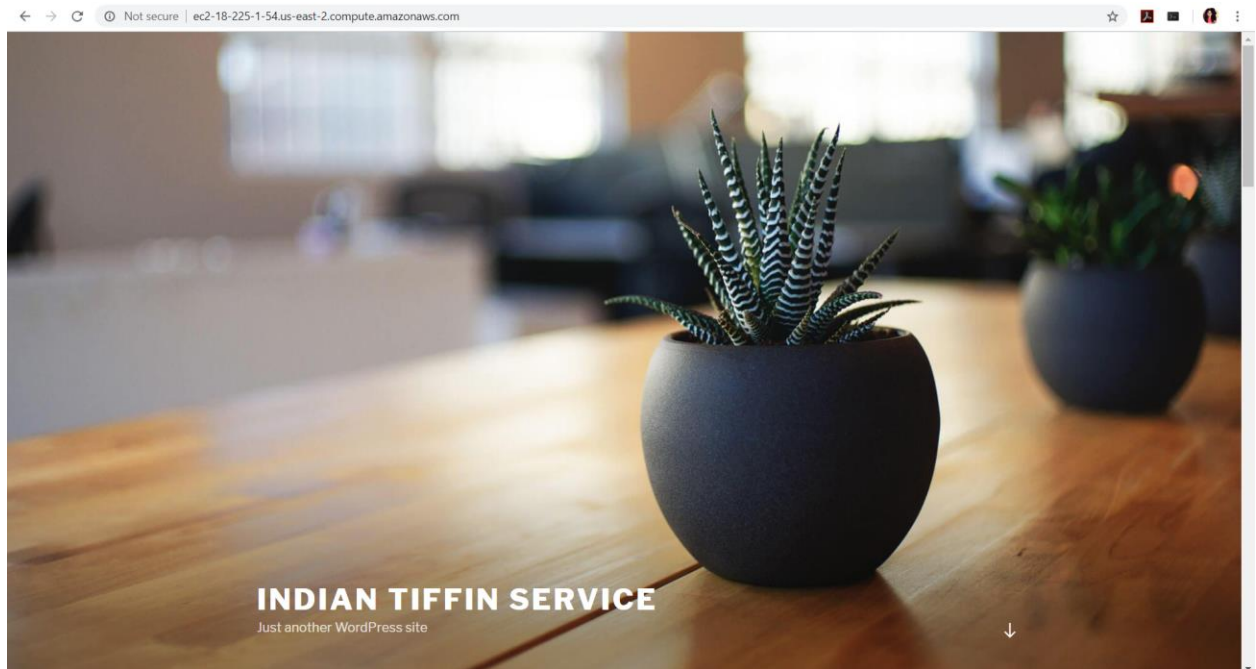
Double-check your email address before continuing.

Search Engine Visibility

☐ Discourage search engines from indexing this site  
It is up to search engines to honor this request.



Finally, when you login with your ID and password you will be able to see your website.



### S3:

As specified by the name, Simple Storage services are used for storing any of your documents or files. This makes computing easier for developers. The data stored in S3 bucket can be retrieved from anywhere and at any given time. This increases the efficiency and accessibility. The storage space of your application also can be used for some other purpose because, you can link the files or images to the S3 bucket. Security measurements can also be added if they want a secure access to the bucket.

The process of creation of the S3 bucket is:

- From the list of Amazon web services, search for S3.
- Click on “Create Bucket” and enter the bucket name.
- Be careful when you choose the Region, it should be in the same region where your instances that are going to access these buckets are deployed. (I created a bucket in different region for test purpose and used the same to link it to my WordPress Website. This didn't fetch my images from the bucket because the regions differed).
- Keep the default configuration parameters for this purpose.
- Set the permissions according to your system needs.
- Click on Review and create.
- You can now add some images or files in this bucket to be accessed later.
- I added pictures of some food that I had taken and saved it in the bucket.
- I then went to my WordPress dashboard and clicked on add a post.
- I entered the title as “Indian Tiffin Service Menu.”

- In the add media section, I selected “Add from URL” (My S3 bucket).
- You can add link test if you want and you can then hit “Post”.
- With this step, I successfully added a bunch of images to my website through the link to my S3 bucket.


← → ↻ ⓘ Not secure | ec2-18-225-1-54.us-east-2.compute.amazonaws.com

WordPress INDIAN TIFFIN SERVICE Customize 0 + New


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OCTOBER 22, 2018 EDIT

## INDIAN TIFFIN SERVICE MENU:



Enjoy your Favorite Thali at 10\$ per plate!



RECENT POSTS:

- INDIAN TIFFIN
- Hello world!

RECENT COMMENTS:

- A WordPress

ARCHIVES

- October 2018

CATEGORIES:

- Uncategorized


META

- Site Admin


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← → ↻ ⓘ Not secure | ec2-18-225-1-54.us-east-2.compute.amazonaws.com

WordPress INDIAN TIFFIN SERVICE Customize 0 + New



Have a happy ending with Tava Pulao just for 6\$



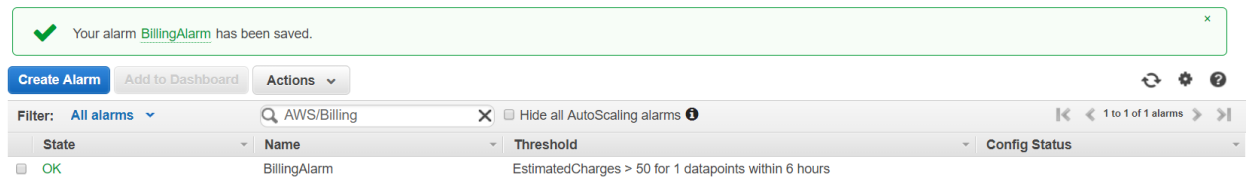
Enjoy Paneer Makhani with Complimentary Rotis at 7\$ per plate! YUMMMYUMMMIA!!!

### Creating a billing alarm:

I love this feature of Amazon, this is far by one of the best services to use. No one wants to be woken up by a surprise with a bill they didn't accept for. AWS allows you to create such billing alerts which can be formulated by yourself. The moment your specified component is above the threshold, it will send you an alert regarding the same in your specified email ID. There are chances that you forgot to stop your instance after the use and you realize it a week later? No problem, Amazon CloudWatch got your back!

For creating a billing alert:

- You have to first activate billing alerts, which can be done by navigating through Account Name → Billing Dashboard → Activate alerts.
- After this step, search for CloudWatch service from the AWS services dashboard and click on Billing and follow the commands to create a billing alarm. It uses SNS service to send a notification to the registered email-id.



### Simple Notification Service

#### Subscription confirmed!

You have subscribed akhilaramachandra\_nair@student.uml.edu to the topic: **NotifyMe**.

Your subscription's id is:

arn:aws:sns:us-east-1:872047570494:NotifyMe:0957be92-a59b-4e0f-88d2-7cfa85272b13

If it was not your intention to subscribe, [click here to unsubscribe](#).

- If you want to create a CPU utilization alert, click on “Alarms” under the CloudWatch page.
- Click on “Create Alarms”, Choose Ec2 metrics and select the instance you are working on.

- Input the threshold, and minimum value.
- Give a suitable name to the alert and click ok.
- You will get a confirmation dialogue box saying that subscription is confirmed.



## Simple Notification Service

### Subscription confirmed!

You have subscribed AkhilaRamachandra\_Nair@student.uml.edu to the topic: **Utilization\_Alert**.

Your subscription's id is:

arn:aws:sns:us-east-2:872047570494:Utilization\_Alert:966ea64a-881c-4b9d-9c72-ea563b700b89

If it was not your intention to subscribe, [click here to unsubscribe](#).

← → ↻ https://us-east-2.console.aws.amazon.com/cloudwatch/home?region=us-east-2#

aws Services Resource Groups

**CloudWatch**

- Dashboards
- Alarms
  - ALARM 0
  - INSUFFICIENT 0
  - OK 1
- Billing
- Events
- Rules
- Event Buses
- Logs
- Metrics
- Favorites

✓ Your alarm **CPU\_Alert** has been saved.

### Metric Summary

Amazon CloudWatch monitors operational and performance metrics for your AWS cloud resources and applications. You currently have **152** CloudWatch metrics available in the US East (Ohio) region.

Browse or search your metrics to get started graphing data and creating alarms.

**Browse Metrics**  X

### Alarm Summary

All your alarms are in **OK** state in US East (Ohio) region. **Create Alarm**

✓ **CPU\_Alert**  
CPUUtilization >= 5 for 1 datapoint...

### Service Health

Current Status	Details
✓ Amazon CloudWatch Service	Service is operating normally
<a href="#">View complete service health details</a>	

I also got an alert when I changed the minimum threshold value for the demonstration purpose:

↩ Reply   ↩ Reply all   → Forward   📁 Archive   🗑 Delete   🚩 Set flag   ⋮

## ALARM: "CPU\_Alert" in US East (Ohio)



Uti\_Alert <no-reply@sns.amazonaws.com>

10:45 PM



To: Nair, AkhilaRamachandra

You are receiving this email because your Amazon CloudWatch Alarm "CPU\_Alert" in the US East (Ohio) region has entered the ALARM state, because "Threshold Crossed: 1 out of the last 1 datapoints [3.13149949059924 (26/10/18 02:35:00)] was greater than or equal to the threshold (0.0) (minimum 1 datapoint for OK -> ALARM transition)." at "Friday 26 October, 2018 02:45:39 UTC".

View this alarm in the AWS Management Console:

[https://urldefense.proofpoint.com/v2/url?u=https-3A\\_console.aws.amazon.com\\_cloudwatch\\_home-3Fregion-3Dus-2Deast-2D2-23s-3DAlarms-26alarm-3DCPU-5FAlert&d=DwlCaQ&c=UycKcnKpT5zzKpcCVf29TA&r=WP7B5E-nd5odmsg650tWKAogOKdpiWrp0PotxMncTwwrBrWUzZLOTTUvdk3hQ2-6&m=APXxZAJI5ml2OF3xvxs4xJwvgSA\\_800ip4ipP7gYy6w&s=1KQVms9clcyHml706yW\\_WlJl3Fzz6TfIMyy0L1Tfy4A&e=](https://urldefense.proofpoint.com/v2/url?u=https-3A_console.aws.amazon.com_cloudwatch_home-3Fregion-3Dus-2Deast-2D2-23s-3DAlarms-26alarm-3DCPU-5FAlert&d=DwlCaQ&c=UycKcnKpT5zzKpcCVf29TA&r=WP7B5E-nd5odmsg650tWKAogOKdpiWrp0PotxMncTwwrBrWUzZLOTTUvdk3hQ2-6&m=APXxZAJI5ml2OF3xvxs4xJwvgSA_800ip4ipP7gYy6w&s=1KQVms9clcyHml706yW_WlJl3Fzz6TfIMyy0L1Tfy4A&e=)

### Alarm Details:

- Name: CPU\_Alert  
- Description: Exceeds 5 percent  
- State Change: OK -> ALARM  
- Reason for State Change: Threshold Crossed: 1 out of the last 1 datapoints [3.13149949059924 (26/10/18 02:35:00)] was greater than or equal to the threshold (0.0) (minimum 1 datapoint for OK -> ALARM transition).  
- Timestamp: Friday 26 October, 2018 02:45:39 UTC  
- AWS Account: 872047570494

### Threshold:

- The alarm is in the ALARM state when the metric is GreaterThanOrEqualToThreshold 0.0 for 300 seconds.

### Monitored Metric:

- MetricNamespace: AWS/EC2  
- MetricName: CPUUtilization  
- Dimensions: [InstanceId = i-06c2e69d6281d63ea]  
- Period: 300 seconds  
- Statistic: Average  
- Unit: not specified

## Elastic Load Balancer:

Load balancer will reduce the traffic at your address and send it to another site which replicates your first instance. It distributes the data network to avoid any cluster in just one particular port or instance. This helps in reducing the response time and thereby increase the efficiency of the network. A load balancer needs two EC2 instances with same security policies.

The steps for creating a load balancer are:

- 1) Create two instances with different names but same security parameters defined.
- 2) Then search for Load Balancer in the left navigation bar of AWS services and click on “Create Elastic Load Balancer”.
- 3) There are three types of balancer, namely Application load balancer, Network Load balancer and Classic Load balancer.
- 4) Application load balancer is used when you have an application and need flexible features to set it up. It can configure routing and application parameters.
- 5) Network Load balancer is used when someone needs high performance or millions of requests per second.
- 6) The one we use is Classic load balancer. This one allows HTTP, HTTPS and TCP Connections.
- 7) Give the load balancer an appropriate name and then click on enable VPC configuration. Then choose at least two subnets from the options given below.
- 8) Select the security group as required. You can create a new security group or choose from existing security group.
- 9) You can skip the step of configuring security setting for this part and click on Health checks.
- 10) Keep the ping path as / so that it directs to index.html page.
- 11) Keep all the other configuration as it is.
- 12) Next step is to add the EC2 instance. Select the two instances and give tags if you need to.
- 13) Click on “review and create”.

← → ↻ https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#CreateELBWizard: ☆ akhilanair Ohio Support

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

### Step 7: Review

Please review the load balancer details before continuing

▼ Define Load Balancer

Load Balancer name: ELB  
Scheme: Internet-facing  
Port Configuration: 80 (HTTP) forwarding to 80 (HTTP)

Edit load balancer definition

▼ Configure Health Check

Ping Target: HTTP:80/  
Timeout: 5 seconds  
Interval: 30 seconds  
Unhealthy threshold: 2  
Healthy threshold: 10

Edit health check

▼ Add EC2 Instances

Cross-Zone Load Balancing: Enabled  
Connection Draining: Enabled, 300 seconds  
Instances: i-03a0fa4bfa3cb96aa (Server1), i-091ac707c90903e00 (Server2)

Edit instances

▼ VPC Information

VPC: vpc-273cd54f  
Subnets: subnet-22e9c84a, subnet-f376e989

Edit subnets

▼ Security groups

Security groups: sg-4191ca2c

Edit security groups

Cancel Previous Create

After creating the load balancer you should get a dialogue box stating:

← → ↻ https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#CreateELBWizard:

aws Services Resource Groups

### Load Balancer Creation Status

✓

**Successfully created load balancer**  
Load balancer **ELB** was successfully created.  
Note: It may take a few minutes for your instances to become active in the new load balancer.

It may take a few minutes to change the status of the instance from Out of Service to active. After its active, you can copy the DNS URL of the elastic load balancer you just created and paste it in the URL section. The load balancer should now work.

← → ↻ <https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LoadBalancers:sort=loadBalancerName> ☆

aws Services Resource Groups

Snapshots  
Lifecycle Manager

NETWORK & SECURITY

Security Groups  
Elastic IPs  
Placement Groups  
Key Pairs  
Network Interfaces

LOAD BALANCING

**Load Balancers**  
Target Groups

AUTO SCALING

Launch Configurations  
Auto Scaling Groups

SYSTEMS MANAGER SERVICES

Run Command  
State Manager  
Configuration Compliance  
Automations  
Patch Compliance  
Patch Baselines

Create Load Balancer Actions

Filter by tags and attributes or search by keyword

Name	DNS name	State	VPC ID	Availability Zones	Type
ELB	ELB-11427979 us-east-2 elb...		vpc-273c054f	us-east-2a, us-east-2b	classic

Basic Configuration

Name:	ELB	Creation time:	October 25, 2018 at 5:19:18 PM UTC-4
* DNS name:	<a href="https://elb-11427979.us-east-2.elb.amazonaws.com">ELB-11427979.us-east-2.elb.amazonaws.com</a> (A Record)	Hosted zone:	Z3AADJGX6KTTL2
Type:	Classic (Migrate Now)	Status:	0 of 2 instances in service
Scheme:	Internet-facing	VPC:	vpc-273c054f
Availability Zones:	subnet-22e9c84a - us-east-2a.		

It didn't work for me, I tried it n number of times. I am not able to understand what the error is, but whenever I try to access the DNS of Elastic Load balancer, I get the following message:

elb-11427979.us-east-2.elb.amazonaws.com



This site can't be reached

elb-11427979.us-east-2.elb.amazonaws.com took too long to respond.

- Go to <http://amazonaws.com/>
- Search Google for [elb 11427979 east amazonaws](#)

### Trusted Advisor:

This feature of AWS helps you optimize your cost, performance, security, fault tolerance and service limits.

To create a trusted advisor feature, search for it in the dashboard. Without configuring it looks like this:



aws Services Resource Groups

Dashboard

- Cost Optimization
- Performance
- Security
- Fault Tolerance
- Service Limits
- Preferences

Checks have been refreshed  
Checks with changed status are highlighted.

Cost Optimization	Performance	Security	Fault Tolerance	Service Limits
0 ✓ 0 ⚠ 0 !	0 ✓ 0 ⚠ 0 !	4 ✓ 1 ⚠ 1 !	0 ✓ 0 ⚠ 0 !	40 ✓ 0 ⚠ 1 !

Recommended Actions

- MFA on Root Account**  
Checks the root account and warns if multi-factor authentication (MFA) is not enabled. MFA is not enabled on the root account.  
Refreshed: a few seconds ago  
Previous status: Green
- VPC Elastic IP Address**  
Checks for usage that is more than 80% of the VPC Elastic IP Address Limit. 1 of 15 items have usage that is more than 80% of the service limit.  
Refreshed: a few seconds ago  
Previous status: Green
- Security Groups - Specific Ports Unrestricted**  
Checks security groups for rules that allow unrestricted access (0.0.0.0/0) to specific ports. 8 of 17 security group rules allow unrestricted access to a specific port.  
Refreshed: a few seconds ago  
Previous status: Green
- EBS Cold HDD (sc1) Volume Storage**  
Checks for usage that is more than 80% of the EBS Cold HDD (sc1) Volume Storage limit.  
Refreshed: a few seconds ago  
Previous status: Green

I realized I had consumed all the available IP addresses (maximum is 5). I released addresses which are not in use. This got rid of the VPC Elastic IP address recommended action.

I then created Virtual MFA on my root account by logging in to IAM and creating one. I downloaded the google authenticator app on my android phone. This feature gives a double authentication for logging in to the account keeping it safe from outside world and threats. It asks for barcode scanning and then we have to input two set of unique codes, after which it is authorized.

### Manage MFA device

Choose the type of MFA device to assign:

- ☒ **Virtual MFA device**  
Authenticator app installed on your mobile device or computer
- ☐ **U2F security key**  
YubiKey or any other compliant U2F device
- ☐ **Other hardware MFA device**  
Gemalto token

For more information about supported MFA devices, see [AWS Multi-Factor Authentication](#)


Cancel Continue

Set up virtual MFA device

1. Install a compatible app on your mobile device or computer

See a [list of compatible applications](#)

2. Use your virtual MFA app and your device's camera to scan the QR code



Alternatively, you can type the secret key. [Show secret key](#)

3. Type two consecutive MFA codes below

MFA code 1

MFA code 2

Cancel

Previous

Assign MFA

So, every time you login to the AWS account you have to provide MFA code.

← → ↻

https://console.aws.amazon.com/trustedadvisor/home?region=us-east-2#/dashboard

☆

akhilnair

Global

Support

aws

Services

Resource Groups

★

Dashboard

Cost Optimization

Performance

Security

Fault Tolerance

Service Limits

Preferences

Trusted Advisor Dashboard

Cost Optimization

Performance

Security

Fault Tolerance

Service Limits

0 ✓ 0 ⚠ 0 !

0 ✓ 0 ⚠ 0 !

5 ✓ 1 ⚠ 0 !

0 ✓ 0 ⚠ 0 !

41 ✓ 0 ⚠ 0 !

Recommended Actions

▶ ⚠ Security Groups - Specific Ports Unrestricted

Checks security groups for rules that allow unrestricted access (0.0.0.0/0) to specific ports.  
11 of 25 security group rules allow unrestricted access to a specific port.

Refreshed: 9 minutes ago

▶ ✓ EBS Cold HDD (sc1) Volume Storage

Checks for usage that is more than 80% of the EBS Cold HDD (sc1) Volume Storage Limit.  
0 of 15 items have usage that is more than 80% of the service limit.

Refreshed: 9 minutes ago

▶ ✓ Amazon S3 Bucket Permissions

Checks buckets in Amazon Simple Storage Service (Amazon S3) that have open access permissions or allow access to any authenticated AWS user.  
0 of 3 buckets have permission properties that grant global access.

Refreshed: 9 minutes ago

After all the configuration trusted advisor looks like this.

**Conclusion:**

With this project, I could learn and understand the basic concepts of AWS Services and how it can be implemented for the betterment of any industry.

**References:**

- [1] <https://proquest.safaribooksonline.com/book/web-development/web-services/9781617294440>
- [2] <https://docs.aws.amazon.com/elasticloadbalancing/latest/classic/elb-getting-started.html#getting-started-prerequisites>
- [3] <https://aws.amazon.com/premiumsupport/trustedadvisor/>
- [4] <https://aws.amazon.com/cloudformation/>
- [5] <https://aws.amazon.com/s3/>
- [6] <https://aws.amazon.com/iam/>
- [7] <https://aws.amazon.com/ec2/>
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