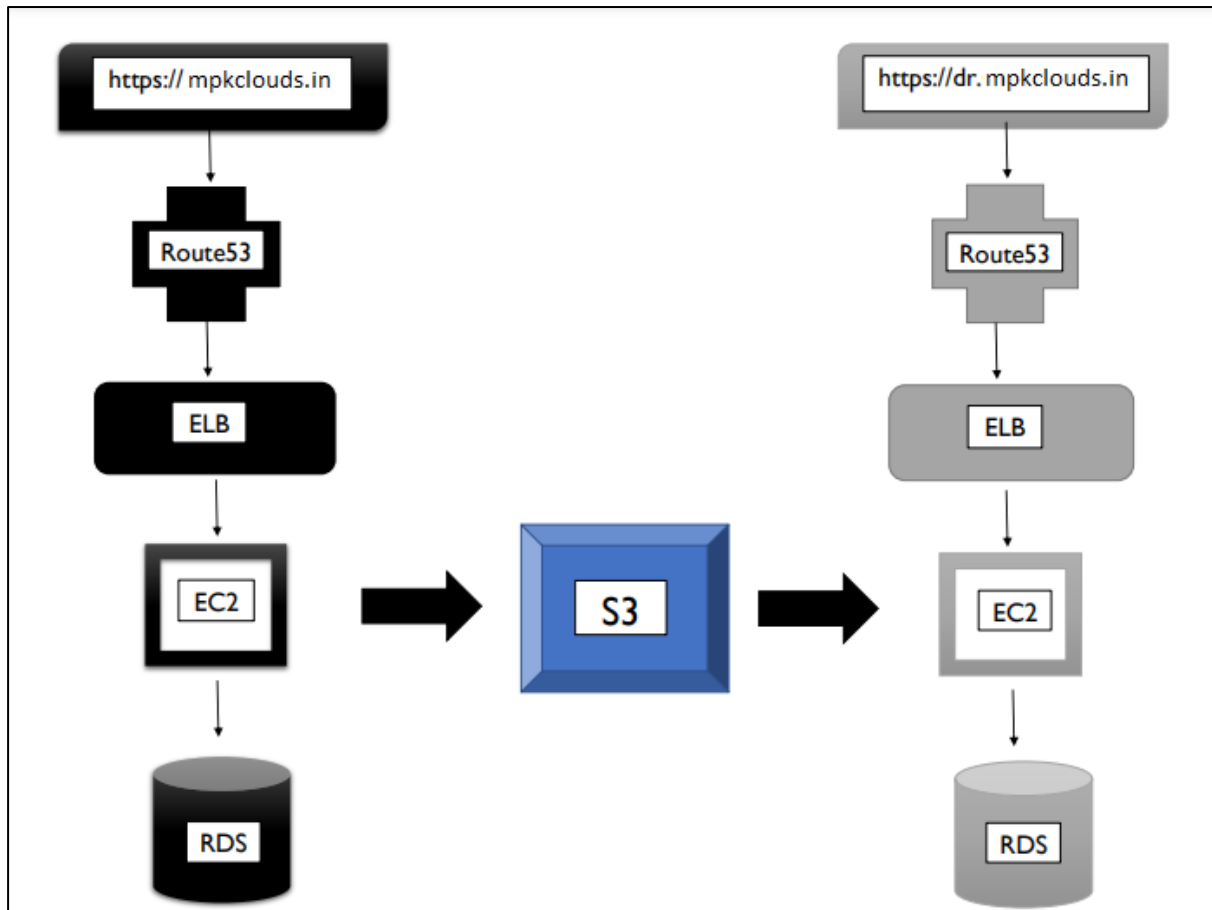


IMPLEMENTATION OF PRODUCTION AND DISASTER RECOVERY ENVIRONMENT FOR A TWO-TIERED APPLICATION DEPLOYMENT USING ACM, ROUTE53, EC2, ELB, RDS, IAM, S3, CLOUD WATCH

ARCHITECTURE

This project done by using AWS - ACM , ROUTE 53, ELB, EC2, S3, RDS and IAM and CLOUD WATCH



ACM:

AWS Certificate Manager is a service that lets you easily provision, manage, and deploy public and private Secure Sockets Layer/Transport Layer Security (SSL/TLS) certificates for use with AWS services and your internal connected resources.

ROUTE 53:

It is a highly available and scalable Domain Name System (DNS) web service. It is designed for developers and corporates to route the end users to Internet applications by translating human readable names like `www.mydomain.com`, into the numeric IP addresses like `192.0.2.1` that computers use to connect to each other.

EC2:

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) Cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

ELB:

Elastic Load Balancing (ELB) automatically distributes incoming application traffic across multiple targets and virtual appliances in one or more Availability Zones (AZs).

IAM:

AWS Identity and Access Management (IAM) is a web service that helps you securely control access to AWS resources. You use IAM to control who is authenticated (signed in) and authorized (has permissions) to use resources.

S3:

Amazon Simple Storage Service is a scalable, high-speed, web-based cloud storage service. The service is designed for online backup and archiving of data and applications on Amazon Web Services. Amazon S3 was designed with a minimal feature set created to make web-scale computing easier for developers.

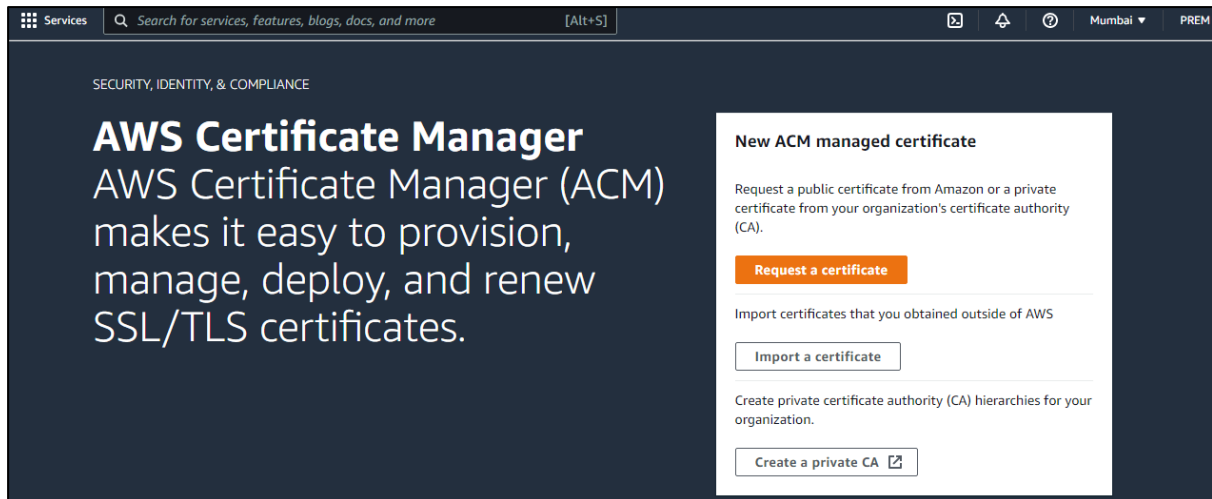
CLOUD WATCH:

CloudWatch enables you to monitor your complete stack (applications, infrastructure, and services) and use alarms, logs, and events data to take automated actions and reduce mean time to resolution (MTTR).

WORKING PROCEDURE:**1. AWS CERTIFICATE MANAGER CREATION:**

Request public certificates as per the registered domains. ACM certifications can be used to establish secure access to communications over the Internet or within an internal network.

Go to aws certificate manager – request a certificate – request of public certificate.



Domain name : mpkclouds.in

Subdomain name: *.mpkclouds.in

Validation method:

There are two types of validations exist.

1. DNS validation
2. Email validation

Choose DNS validation. DNS validation is the SSL/TSL certificates in Route 53 service. Route 53 requires validation of this certificate.

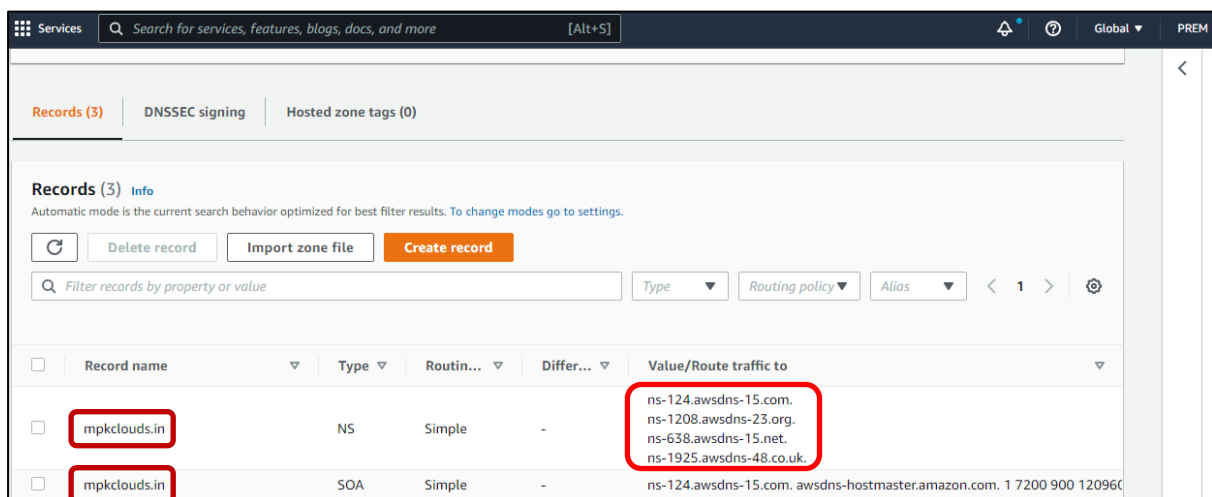
2. AWS ROUTE53 SETUP & LINK TO GODADDY DOMAIN DNS MGMT:

A. Create Hosted Zone:

Go to route53 – create hosted zone.

Purchase a domain from godaddy .

Domain name: mpkclouds.in (Default two record sets will be created)



2.Map The N-S Under Godaddy Domain:

Copy these name servers and paste it under godaddy's name server .

- ns-124.awsdns-15.com
- ns-1208.awsdns-23.org
- ns-638.awsdns-15.net
- ns-1925.awsdns-48.co.uk

✕

Edit Nameservers

Enter My Own Nameservers

Changing nameservers is risky, and change could potentially lead to your website disappearing from public view.

ns-124.awsdns-15.com

✕

🗑

ns-1208.awsdns-23.org

✕

🗑

ns-638.awsdns-15.net

✕

🗑

ns-1925.awsdns-48.co.uk

✕

🗑

+

[Add Nameserver](#)

Cancel

Back

Save

3.CREATE RECORD SET FROM ACM

Go to ACM – select existing certificate ID – domains – create records in Route53 (Now three number of record set is available in route 53)

<input type="checkbox"/>	Record name ▾	Type ▾	Routin... ▾	Differ... ▾	Value/Route traffic to ▾
<input type="checkbox"/>	mpkclouds.in	NS	Simple	-	ns-124.awsdns-15.com. ns-1208.awsdns-23.org. ns-638.awsdns-15.net. ns-1925.awsdns-48.co.uk.
<input type="checkbox"/>	mpkclouds.in	SOA	Simple	-	ns-124.awsdns-15.com. awsdns-hostmaster.amazon.com. 1 7200 900 120960
<input type="checkbox"/>	<u>_11f82c6002eb5daa2486e667b.</u>	CNAME	Simple	-	_4ce9718c2a403a4339197e5ce1c50d39.qvwhjqbvbg.acm-validations.aws.

Go to ACM – It shows Certificates validation is success. Status shows issued.

Certificates (1)							<input type="button" value="Delete"/> <input type="button" value="Manage expiry events"/> <input type="button" value="Import"/> <input type="button" value="Request"/>
	Certificate ID	Domain name	Type	Status	In use?	Renewal eligibility	
	898faee4-824f-4962-9113-461fdf809fd9	mpkclouds.in	Amazon Issued	Issued	No	Ineligible	

3. AWS RDS SETUP:

create two number of data base.

i) production db - In this data base security group make as all traffic

ii) dr db – In this data base security group make as all traffic

MySQL data base engine is used for both data bases.

RDS > Databases									
Databases									
	DB identifier	Role	Engine	Region & AZ	Size	Status	CPU	Current acti	
	drdb	Instance	MySQL Community	ap-south-1b	db.t3.micro	Available	-		
	proddb	Instance	MySQL Community	ap-south-1c	db.t3.micro	Available	-		

4. AWS IAM ROLE

Create an iam role with full access.

Roles

Policies

Identity providers

Account settings

▼ Access reports

Access analyzer

Archive rules

Analyzers

Settings

Credential report

Permissions

Trust relationships

Tags

Access Advisor

Revoke sessions

Permissions policies (1)

You can attach up to 10 managed policies.

↺

Simulate

Remove

Add permissions ▼

🔍 Filter policies by property or policy name and press enter

< 1 >

⚙

<input type="checkbox"/>	Policy name ↗	Type	Description
<input type="checkbox"/>	<div><div>+</div><div><div>AdministratorAccess</div></div></div>	AWS managed - job function	Provides full access to AWS services and resources.

5. AWS EC2 CREATION

- create two no of ec2 server with iam roles enabled & add user data under advanced section
- add the below details in the advanced section,

USER DATA:

```
#!/bin/bash
```

```

yum install httpd php-mysql -y
amazon-linux-extras install -y php7.3
cd /var/www/html
echo "healthy" > healthy.html
wget https://wordpress.org/latest.tar.gz
tar -xzf latest.tar.gz
cp -r wordpress/* /var/www/html/
rm -rf wordpress
rm -rf latest.tar.gz
chmod -R 755 wp-content
chown -R apache:apache wp-content
wget https://s3.amazonaws.com/bucketforwordpresslab-donotdelete/htaccess.txt
mv htaccess.txt .htaccess
chkconfig httpd on
service httpd start

```

Placement group ⓘ ☐ Add instance to placement group

Capacity Reservation ⓘ Open


Domain join directory ⓘ No directory [Create new directory](#)

IAM role ⓘ **all-service-access** [Create new IAM role](#)

Instances (2) Info								
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>								
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	
prod_server	i-01a2d92ca704c0483	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-13-232-72-25	
dr_server	i-0e43f8ca246873529	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-13-232-71-10	


7. ADD THE DB DETAILS UNDER WORDPRESS APPLICATION FOR BOTH DR & PRODUCTION

Hit the browser by production ip and dr server ip to access word press web page.



Below you should enter your database connection details. If you're not sure about these, contact your host.

Database Name	<input type="text" value="proddb"/>	The name of the database you want to use with WordPress.
Username	<input type="text" value="prodadmin"/>	Your database username.
Password	<input type="text" value="prodadmin123"/>	Your database password.
Database Host	<input type="text" value="uth-1.rds.amazonaws.com:3306"/>	You should be able to get this info from your web host, if localhost doesn't work.
Table Prefix	<input type="text" value="wp_"/>	If you want to run multiple WordPress installations in a single database, change this.



Below you should enter your database connection details. If you're not sure about these, contact your host.

Database Name	<input type="text" value="drdb"/>	The name of the database you want to use with WordPress.
Username	<input type="text" value="dradmin"/>	Your database username.
Password	<input type="text" value="dradmin123"/>	Your database password.
Database Host	<input type="text" value="uth-1.rds.amazonaws.com:3306"/>	You should be able to get this info from your web host, if localhost doesn't work.
Table Prefix	<input type="text" value="wp_"/>	If you want to run multiple WordPress installations in a single database, change this.

```
# cd /var/www/html
```

```
# create & edit the wp-config.php file in both the ec2s
```

```
# php file is missing. So you have to create wp-config.php file.
```

```
# Copy the content from hosted application page and paste it inside the wp-config.php file and run the installation
```

```
[root@ip-172-31-44-230 ~]# cd /var/www/html/
[root@ip-172-31-44-230 html]# ls -lrt
total 216
-rw-r--r--  1 root    root      8 Apr  1 06:19 healthy.html
-rw-r--r--  1 root    root    7165 Apr  1 06:19 wp-activate.php
-rw-r--r--  1 root    root   7437 Apr  1 06:19 readme.html
-rw-r--r--  1 root    root  19915 Apr  1 06:19 license.txt
-rw-r--r--  1 root    root   405 Apr  1 06:19 index.php
-rw-r--r--  1 root    root   3001 Apr  1 06:19 wp-config-sample.php
-rw-r--r--  1 root    root   2338 Apr  1 06:19 wp-comments-post.php
-rw-r--r--  1 root    root   351 Apr  1 06:19 wp-blog-header.php
drwxr-xr-x  9 root    root   4096 Apr  1 06:19 wp-admin
-rw-r--r--  1 root    root   3939 Apr  1 06:19 wp-cron.php
-rw-r--r--  1 root    root  47916 Apr  1 06:19 wp-login.php
-rw-r--r--  1 root    root   3900 Apr  1 06:19 wp-load.php
-rw-r--r--  1 root    root   2496 Apr  1 06:19 wp-links-opml.php
drwxr-xr-x 26 root    root  12288 Apr  1 06:19 wp-includes
-rw-r--r--  1 root    root   3236 Apr  1 06:19 xmlrpc.php
-rw-r--r--  1 root    root   4747 Apr  1 06:19 wp-trackback.php
-rw-r--r--  1 root    root  31959 Apr  1 06:19 wp-signup.php
-rw-r--r--  1 root    root  23025 Apr  1 06:19 wp-settings.php
-rw-r--r--  1 root    root   8582 Apr  1 06:19 wp-mail.php
drwxr-xr-x  4 apache  apache    52 Apr  1 06:39 wp-content
[root@ip-172-31-44-230 html]#
```


vi wp-config.php

```
define( 'WP_DEBUG', true );

/**#@-*/

/**
 * WordPress database table prefix.
 *
 * You can have multiple installations in one database if you give each
 * a unique prefix. Only numbers, letters, and underscores please!
 */
$table_prefix = 'wp_';

/**
 * For developers: WordPress debugging mode.
 *
 * Change this to true to enable the display of notices during development.
 * It is strongly recommended that plugin and theme developers use WP_DEBUG
 * in their development environments.
 *
 * For information on other constants that can be used for debugging,
 * visit the documentation.
 *
 * @link https://wordpress.org/support/article/debugging-in-wordpress/
 */
define( 'WP_DEBUG', false );

/* Add any custom values between this line and the "stop editing" line. */


/* That's all, stop editing! Happy publishing. */

/** Absolute path to the WordPress directory. */
if ( ! defined( 'ABSPATH' ) ) {
    define( 'ABSPATH', __DIR__ . '/' );
}

/** Sets up WordPress vars and included files. */
require_once ABSPATH . 'wp-settings.php';
```

Welcome

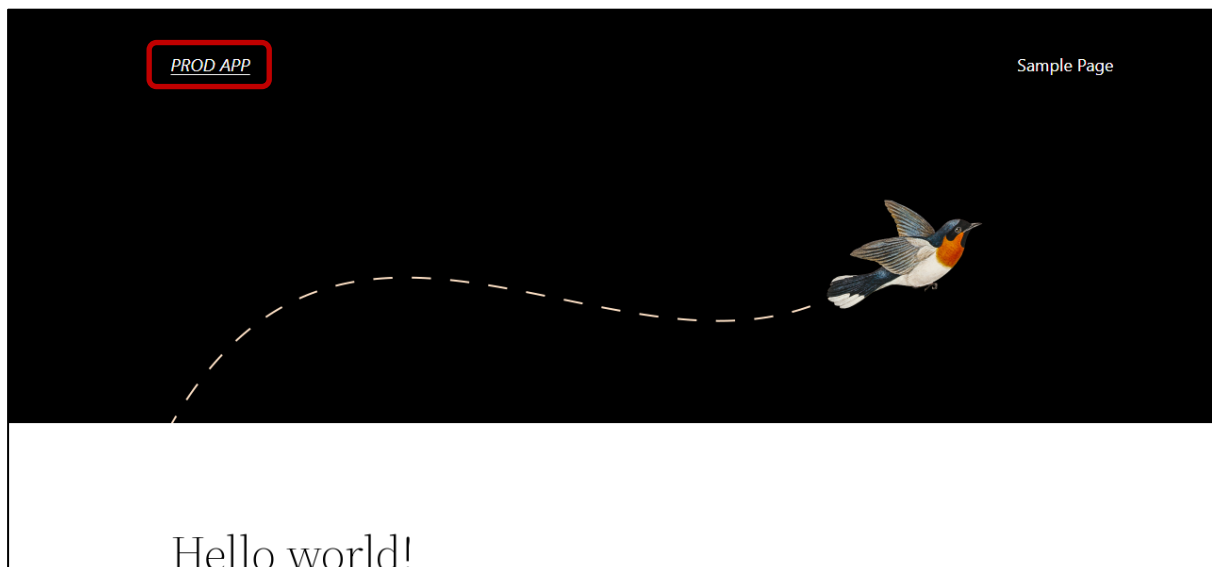
Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

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

Site Title	<input type="text" value="PROD APP"/>
Username	<input type="text" value="prodadmin"/> <small>Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.</small>
Password	<input type="password" value="prodadmin"/> Hide <div>Very weak</div> <p>Important: You will need this password to log in. Please store it in a secure location.</p>
Confirm Password	<input checked="" type="checkbox"/> Confirm use of weak password
Your Email	<input type="text" value="premmmano93@gmail.com"/>

Now the application page will be opened and used by the administrator rather than the end user.



```
[root@ip-172-31-38-1 ~]# cd /var/www/html
[root@ip-172-31-38-1 html]# ls -lrt
total 216
-rw-r--r-- 1 root root      8 Apr  1 06:19 healthy.html
-rw-r--r-- 1 root root    7165 Apr  1 06:19 wp-activate.php
-rw-r--r-- 1 root root    7437 Apr  1 06:19 readme.html
-rw-r--r-- 1 root root   19915 Apr  1 06:19 license.txt
-rw-r--r-- 1 root root     405 Apr  1 06:19 index.php
-rw-r--r-- 1 root root    3001 Apr  1 06:19 wp-config-sample.php
-rw-r--r-- 1 root root    2338 Apr  1 06:19 wp-comments-post.php
-rw-r--r-- 1 root root     351 Apr  1 06:19 wp-blog-header.php
drwxr-xr-x 9 root root    4096 Apr  1 06:19 wp-admin
-rw-r--r-- 1 root root    3939 Apr  1 06:19 wp-cron.php
-rw-r--r-- 1 root root    3236 Apr  1 06:19 xmlrpc.php
-rw-r--r-- 1 root root    4747 Apr  1 06:19 wp-trackback.php
-rw-r--r-- 1 root root   31959 Apr  1 06:19 wp-signup.php
-rw-r--r-- 1 root root   23025 Apr  1 06:19 wp-settings.php
-rw-r--r-- 1 root root    8582 Apr  1 06:19 wp-mail.php
-rw-r--r-- 1 root root   47916 Apr  1 06:19 wp-login.php
-rw-r--r-- 1 root root    3900 Apr  1 06:19 wp-load.php
-rw-r--r-- 1 root root    2496 Apr  1 06:19 wp-links-opml.php
drwxr-xr-x 26 root root   12288 Apr  1 06:19 wp-includes
drwxr-xr-x 4 apache apache    52 Apr  1 07:17 wp-content
[root@ip-172-31-38-1 html]# vi wp-config.php
[root@ip-172-31-38-1 html]#
```

```

/**#@-*/

/**
 * WordPress database table prefix.
 *
 * You can have multiple installations in one database if you give each
 * a unique prefix. Only numbers, letters, and underscores please!
 */
$table_prefix = 'wp_';

/**
 * For developers: WordPress debugging mode.
 *
 * Change this to true to enable the display of notices during development.
 * It is strongly recommended that plugin and theme developers use WP_DEBUG
 * in their development environments.
 *
 * For information on other constants that can be used for debugging,
 * visit the documentation.
 *
 * @link https://wordpress.org/support/article/debugging-in-wordpress/
 */
define( 'WP_DEBUG', false );

/* Add any custom values between this line and the "stop editing" line. */


/* That's all, stop editing! Happy publishing. */

/** Absolute path to the WordPress directory. */
if ( ! defined( 'ABSPATH' ) ) {
    define( 'ABSPATH', __DIR__ . '/' );
}

/** Sets up WordPress vars and included files. */
require_once ABSPATH . 'wp-settings.php';

:wq

```

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

DR APP

Username

dradmin

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

Password

dradmin123

Hide

Very weak

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

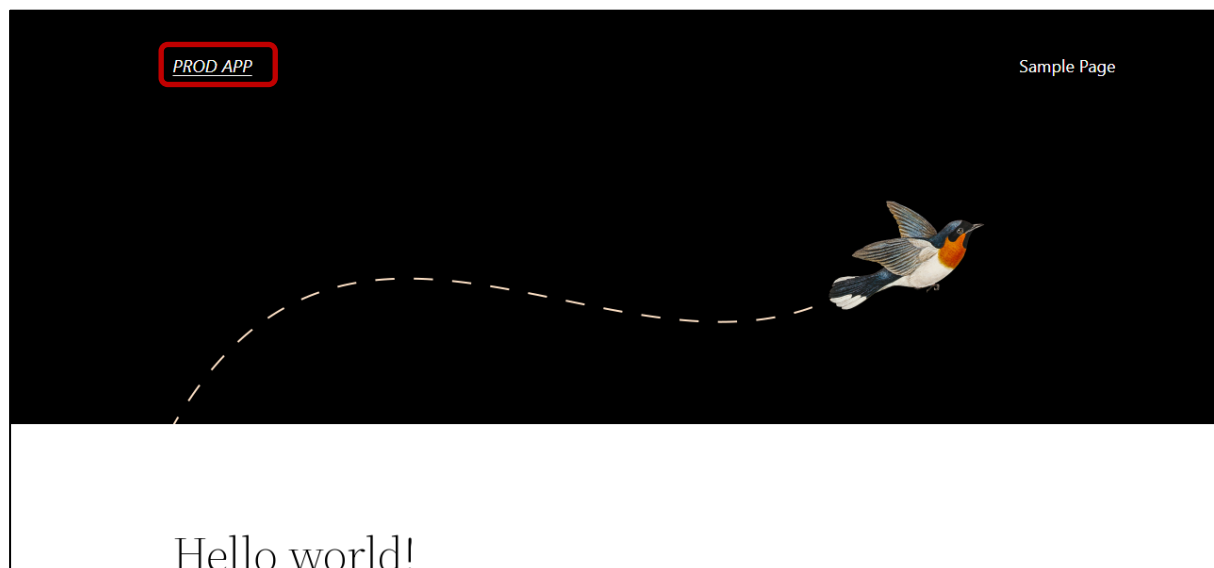
Confirm Password

☒ Confirm use of weak password

Your Email

premmano93@gmail.com

Now the application page will be opened and used by the administrator rather than the end user.



6. AWS ELB CREATION & SETUP

create two number of classic elb & map the appropriate ec2 to it.

Step 7: Review

Please review the load balancer details before continuing

▼ Define Load Balancer

Load Balancer name: **prodlb**
Scheme: internet-facing
Port Configuration: 80 (HTTP) forwarding to 80 (HTTP)

▼ Configure Health Check

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

▼ Add EC2 Instances

Cross-zone load balancing: Enabled
Connection Draining: Enabled, 300 seconds
Instances: i-0d22f7003a859f321 (prod_server)

Step 7: Review

Please review the load balancer details before continuing

▼ Define Load Balancer

Load Balancer name: **drlb**

Scheme: internet-facing

Port Configuration: 80 (HTTP) forwarding to 80 (HTTP)

▼ Configure Health Check

Ping Target: **HTTP:80/healthy.html**

Timeout: 5 seconds

Interval: 30 seconds

Unhealthy threshold: 2

Healthy threshold: 10

▼ Add EC2 Instances

Cross-zone load balancing: Enabled

Connection Draining: Enabled, 300 seconds

Instances: i-0e43f8ca246873529 (dr_server)

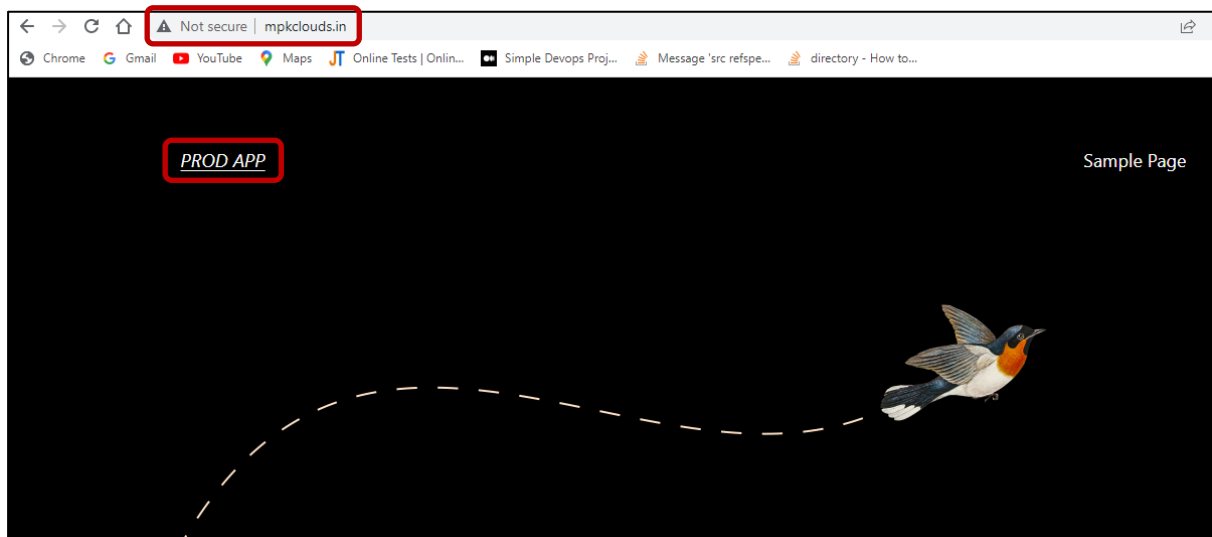
8. LAUNCH THE WORDPRESS PAGE & POST IT WITH APPROPRIATE DR & PROD IMAGES TO GET DIFFERENCE IN THE APPLICATION PAGE.





9. AWS R53 & ELB SYNC:

Hit the browser by following urls <http://mpkclouds.in> and <http://dr.mpkclouds.in> . It shows app is not secured.



refresh the r53

create record set and map the appropriate elb under the alias

Integrating Route 53 with Load Balancer . Now we have to Create Record two domains

1.Record name : mpkclouds.in

Record type – A – Route traffic to an IPV4 address and some AWS resources

Route traffic to Alias is Enable

-Alias to Application and classic Load Balancer

-Asia Pacific (Mumbai) [ap-south-1]

-dualstack.prod1b-125612298.ap-south-1.elb.amazonaws.com

Route policy - simple routing.

2.Record name : dr.mpkclouds.in

Record type – A – Route traffic to an IPV4 address and some AWS resources

-Route traffic to Alias is Enable

-Alias to Application and classic Load Balancer

-Asia Pacific (Mumbai) [ap-south-1]

-dualstack.drlb-2123336171.ap-south-1.elb.amazonaws.com

Route policy - simple routing.

Route 53 > Hosted zones > mpkclouds.in > Create record

Quick create record [Info](#) [Switch to wizard](#)

▼ **Record 1** [Delete](#)

Record name [Info](#)

Record type [Info](#)

Valid characters: a-z, 0-9, ! * # \$ % & ' () * + , - / : ; < = > ? @ [\] ^ _ ` { | } . ~

Route traffic to [Info](#) ☒ Alias

Routing policy [Info](#)

Evaluate target health ☒ Yes

▼ **Record 2** [Delete](#)

▼ Record 2 Delete

Record name [Info](#) Record type [Info](#)
 Valid characters: a-z, 0-9, ! " # \$ % & ' () * + , - / : ; < = > ? @ [\] ^ _ ` { | } . ~
 A – Routes traffic to an IPv4 address and some AWS resources ▼

Route traffic to [Info](#) ☒ Alias
 Alias to Application and Classic Load Balancer ▼
 Asia Pacific (Mumbai) [ap-south-1] ▼
 X

Routing policy [Info](#) ▼ Evaluate target health ☒ Yes

Add another record

Now five number of record set has been created.

<input type="checkbox"/>	Record name ▼	Type ▼	Routin... ▼	Differ... ▼	Alias ▼	Value/Route traffic to ▼	TTL (... ▼	Health ... ▼	Eval
<input type="checkbox"/>	mpkclouds.in	A	Simple	-	Yes	dualstack.prod-lb-1052391409.ap-...	-	-	Yes
<input type="checkbox"/>	mpkclouds.in	NS	Simple	-	No	ns-124.awsdns-15.com, ns-1208.awsdns-23.org, ns-638.awsdns-15.net, ns-1925.awsdns-48.co.uk.	172800	-	-
<input type="checkbox"/>	mpkclouds.in	SOA	Simple	-	No	ns-124.awsdns-15.com, awsdns-hc	900	-	-
<input type="checkbox"/>	_11f82c6002...	CNAME	Simple	-	No	_4ce9718c2a403a4339197e5ce1c!	300	-	-
<input type="checkbox"/>	dr.mpkclouds.in	A	Simple	-	Yes	dualstack.drlb-1397906197.ap-so	-	-	Yes

INSTALLING THE SSL CERTIFICATE USING ACM AND MAKING THE APP SECURED:

Security will be provided in ELB. Because ELB is the entry point of the architect.

Go to production ELB - listeners – edit – add

Load balancer protocol – https

Load balancer – 443

SSL certificate – Choose a certificate from ACM

Edit listeners X

The following listeners are currently configured for this load balancer:

Load Balancer Protocol	Load Balancer Port	Instance Protocol	Instance Port	Cipher	SSL Certificate
<input checked="" type="radio"/> HTTPS (Secure HTTP) ▼	<input type="text" value="443"/>	<input type="text" value="HTTP"/> ▼	<input type="text" value="80"/>	Change	898faee4-824f-4962-9113-461fd809fd9 (ACM) Change Remove

Add

Select Certificate

AWS Certificate Manager (ACM) is the preferred tool to provision and store server certificates. If you previously stored a server certificate using IAM, you can deploy it to your load balancer. [Learn more](#) about HTTPS/SSL listeners and certificate management.

Certificate type:

☒ Choose a certificate from ACM (recommended)
 ☐ Choose a certificate from IAM
 ☐ Upload a certificate to IAM

Request a new certificate from ACM

AWS Certificate Manager makes it easy to provision, manage, deploy, and renew SSL Certificates on the AWS platform. ACM manages certificate renewals for you. [Learn more](#)

Certificate:

mpkclouds.in (898faee4-824f-4962-9113-461fdf809fd9)

Cancel

Save

Go to dr ELB - listeners – edit – add

Load balancer protocol – https

Load balancer – 443

SSL certificate – Choose a certificate from ACM

Edit listeners

The following listeners are currently configured for this load balancer:

Load Balancer Protocol	Load Balancer Port	Instance Protocol	Instance Port	Cipher	SSL Certificate
HTTPS (Secure HTTP)	443	HTTP	80	Change	898faee4-824f-4962-9113-461fdf809fd9 (ACM) Change Remove

Add

Select Certificate

AWS Certificate Manager (ACM) is the preferred tool to provision and store server certificates. If you previously stored a server certificate using IAM, you can deploy it to your load balancer. [Learn more](#) about HTTPS/SSL listeners and certificate management.

Certificate type:

☒ Choose a certificate from ACM (recommended)
 ☐ Choose a certificate from IAM
 ☐ Upload a certificate to IAM

Request a new certificate from ACM

AWS Certificate Manager makes it easy to provision, manage, deploy, and renew SSL Certificates on the AWS platform. ACM manages certificate renewals for you. [Learn more](#)

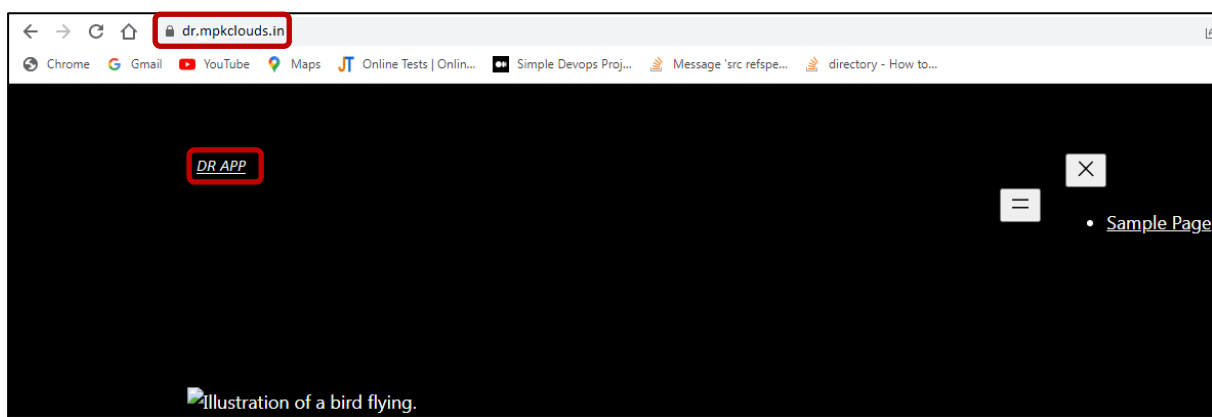
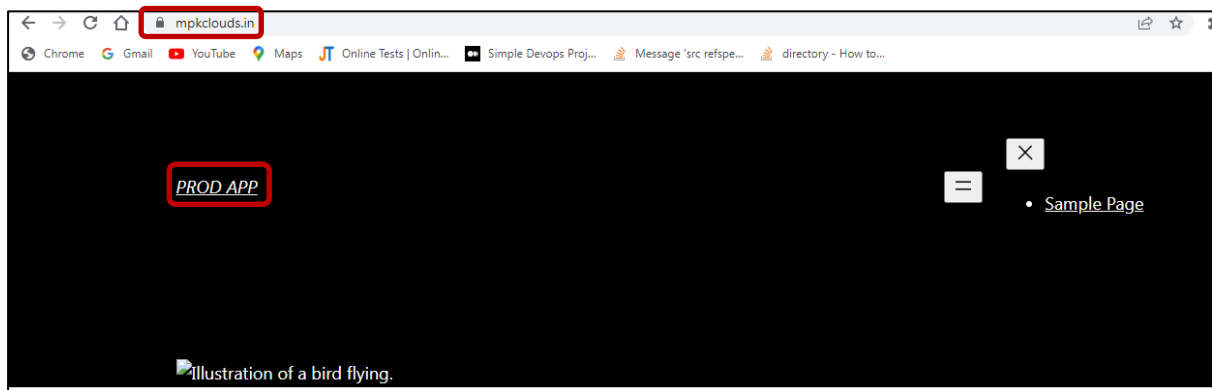
Certificate:

dr.mpkclouds.in (898faee4-824f-4962-9113-461fdf809fd9)

Cancel

Save

Hit the browser by following urls <https://mpkclouds.in> and <https://dr.mpkclouds.in> . It shows app is secured



10. AWS S3 BUCKET CREATION AND SYNCHRONIZATION OF ENVIRONMENTS (PROD&DR)

create two number of s3 buckets.

- 1.word-presscode-0104
- 2.wordpress-mediaasset-0104

Buckets (2) Info				
Buckets are containers for data stored in S3. Learn more				
Find buckets by name				
Name	AWS Region	Access	Creation date	
word-presscode-0104	Asia Pacific (Mumbai) ap-south-1	Objects can be public	April 1, 2022, 20:22:16 (UTC+05:30)	
wordpress-mediaasset-0104	Asia Pacific (Mumbai) ap-south-1	Objects can be public	April 1, 2022, 20:23:08 (UTC+05:30)	

set crontab jobs in the ec2 in some small intervals to copy the content from prod to s3 & s3 to dr,

crontab -e

PRODUCTION:

- `*/2 * * * * aws s3 sync --delete /var/www/html/wp-content/uploads s3://wordpress-mediaasset-greens0811`
- `*/2 * * * * aws s3 sync --delete /var/www/html/ s3://wordpress-code-greens0811`

```
[root@ip-172-31-5-238 html]# cd
[root@ip-172-31-5-238 ~]# crontab -e
no crontab for root - using an empty one
crontab: installing new crontab
[root@ip-172-31-5-238 ~]# crontab -l

*/2 * * * * aws s3 sync --delete /var/www/html/wp-content/uploads s3://wordpress-mediaasset-0104
*/2 * * * * aws s3 sync --delete /var/www/html/ s3://word-presscode-0104
[root@ip-172-31-5-238 ~]#
```

DR:

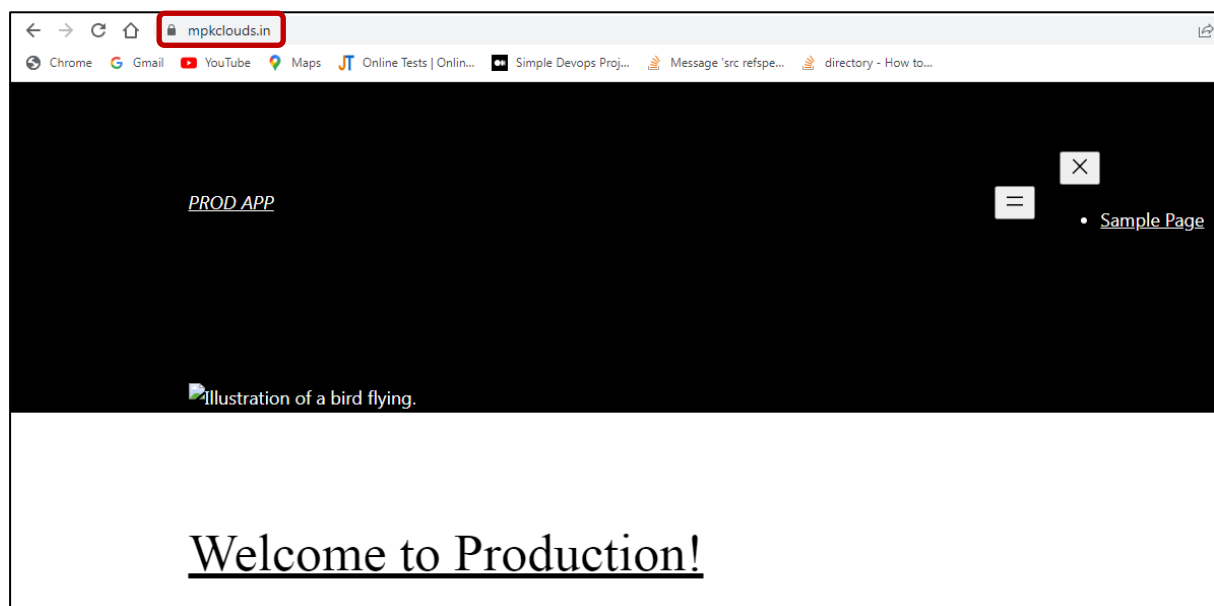
- */2 * * * * aws s3 sync --delete s3://wordpress-mediaasset-greens0811 /var/www/html/wp-content/uploads
- */2 * * * * aws s3 sync --delete s3://wordpress-code-greens0811 /var/www/html/

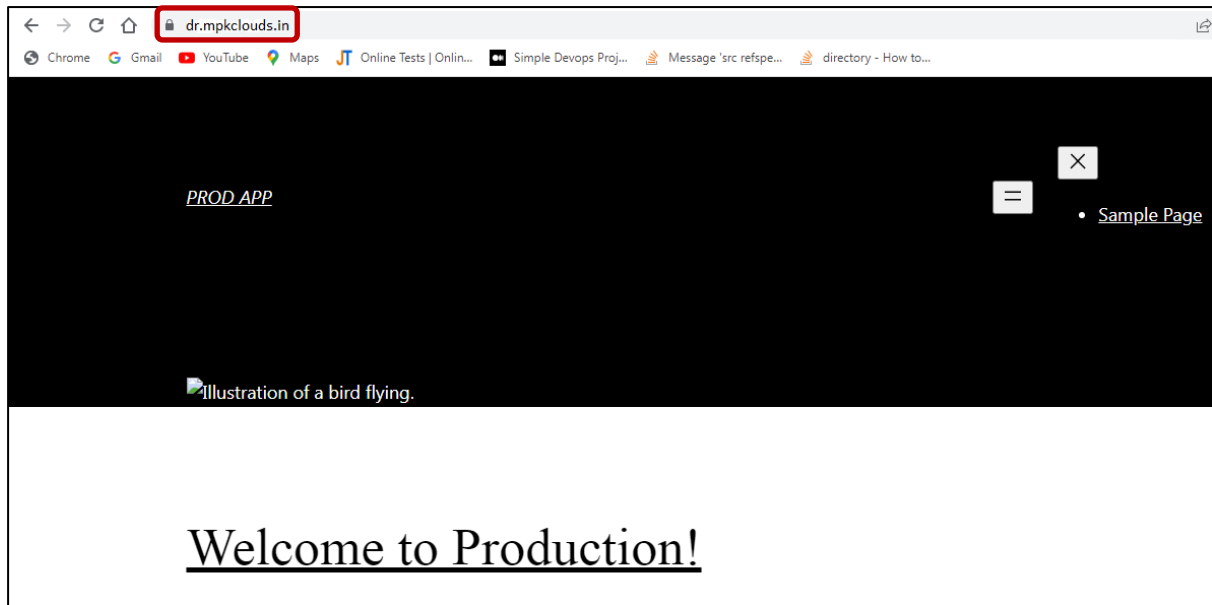
```
[root@ip-172-31-38-1 ~]# crontab -e
-bash: crontab: command not found
[root@ip-172-31-38-1 ~]# crontab -e
no crontab for root - using an empty one
crontab: installing new crontab
[root@ip-172-31-38-1 ~]# crontab -l

*/2 * * * * aws s3 sync --delete s3://wordpress-mediaasset-0104 /var/www/html/wp-content/uploads
*/2 * * * * aws s3 sync --delete s3://word-presscode-0104 /var/www/html/
[root@ip-172-31-38-1 ~]#
```

Do some changes in prod server it will reflect in dr server.

wait for few mins and check the below things,





CLOUD WATCH:

```
# sudo yum install -y perl-Switch perl-DateTime perl-Sys-Syslog perl-LWP-Protocol-https perl-Digest-SHA.x86_64
# Curl https://awscloudwatch.s3.amazonaws.com/downloads/CloudWatchMonitoringScripts-1.2.2.zip
-O
# unzip CloudWatchMonitoringScripts-1.2.2.zip && \rm CloudWatchMonitoringScripts-1.2.2.zip
&& \
# cd aws-scripts-mon
# mon-put-instance-data.pl
```

```
# ./mon-put-instance-data.pl --mem-util --verify --verbose
```

The above command is used to show the memory utilization of servers. And we have to export this data from ec2 server to cloudwatch using IAM roles.

```
# ./mon-put-instance-data.pl --mem-used-incl-cache-buff --mem-util --mem-used --mem-avail
```

The above command is used to send the data from ec2 server to cloud watch.

```
[root@ip-172-31-5-238 ~]# clear
[root@ip-172-31-5-238 ~]# sudo yum install -y perl-Switch perl-DateTime perl-Sys-Syslog perl-LWP-Protocol-https perl-Digest-SHA.x86_64
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
amzn2extra-docker
amzn2extra-kernel-5.10
amzn2extra-php7.3
Resolving Dependencies
```

```
[root@ip-172-31-5-238 ~]# curl https://aws-cloudwatch.s3.amazonaws.com/downloads/CloudWatchMonitoringScripts-1.2.2.zip -O
% Total    % Received % Xferd Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left   Speed
100 24225  100 24225    0     0    0  24941      0 --:--:-- --:--:-- --:--:-- 24922
[root@ip-172-31-5-238 ~]# ls -lrt
total 24
-rw-r--r-- 1 root root 24225 Apr  1 17:14 CloudWatchMonitoringScripts-1.2.2.zip
[root@ip-172-31-5-238 ~]# unzip CloudWatchMonitoringScripts-1.2.2.zip
Archive: CloudWatchMonitoringScripts-1.2.2.zip
  extracting: aws-scripts-mon/awscreds.template
    inflating: aws-scripts-mon/AwsSignatureV4.pm
    inflating: aws-scripts-mon/CloudWatchClient.pm
    inflating: aws-scripts-mon/LICENSE.txt
    inflating: aws-scripts-mon/mon-get-instance-stats.pl
    inflating: aws-scripts-mon/mon-put-instance-data.pl
    inflating: aws-scripts-mon/NOTICE.txt
[root@ip-172-31-5-238 ~]# ls -lrt
total 24
-rw-r--r-- 1 root root 24225 Apr  1 17:14 CloudWatchMonitoringScripts-1.2.2.zip
drwxr-xr-x 2 root root  185 Apr  1 17:15 aws-scripts-mon
[root@ip-172-31-5-238 ~]#
```

```
[root@ip-172-31-5-238 ~]# unzip CloudWatchMonitoringScripts-1.2.2.zip && \
> rm CloudWatchMonitoringScripts-1.2.2.zip && \
> cd aws-scripts-mon
Archive: CloudWatchMonitoringScripts-1.2.2.zip
  extracting: aws-scripts-mon/awscreds.template
    inflating: aws-scripts-mon/AwsSignatureV4.pm
    inflating: aws-scripts-mon/CloudWatchClient.pm
    inflating: aws-scripts-mon/LICENSE.txt
    inflating: aws-scripts-mon/mon-get-instance-stats.pl
    inflating: aws-scripts-mon/mon-put-instance-data.pl
    inflating: aws-scripts-mon/NOTICE.txt
rm: remove regular file 'CloudWatchMonitoringScripts-1.2.2.zip'?
[root@ip-172-31-5-238 aws-scripts-mon]# ls -lrt
total 96
-rw-r--r-- 1 root root   138 Mar 26  2018 NOTICE.txt
-rwxr-xr-x 1 root root 18144 Mar 26  2018 mon-put-instance-data.pl
-rwxr-xr-x 1 root root  9739 Mar 26  2018 mon-get-instance-stats.pl
-rw-r--r-- 1 root root   9124 Mar 26  2018 LICENSE.txt
-r--r--r-- 1 root root 22519 Mar 26  2018 CloudWatchClient.pm
-r--r--r-- 1 root root 17021 Mar 26  2018 AwsSignatureV4.pm
-rw-r--r-- 1 root root    30 Mar 26  2018 awscreds.template
[root@ip-172-31-5-238 aws-scripts-mon]#
```

```
[root@ip-172-31-5-238 aws-scripts-mon]# ./mon-put-instance-data.pl --mem-util --verify --verbose
MemoryUtilization: 46.9320462195753 (Percent)
No credential methods are specified. Trying default IAM role.
Using IAM role <all-service-access>
Endpoint: https://monitoring.ap-south-1.amazonaws.com
Payload: {"MetricData":[{"Timestamp":1648833869,"Dimensions":[{"Value":"i-03fd02e1af921bb7","Name":"InstanceId"}],"Value":46.9320462195753,"Unit":"Percent","MetricName":"MemoryUtilization"}],"Namespace":"System/Linux","_type":"com.amazonaws.cloudwatch.v2010_08_01#PutMetricDataInput"}
Verification completed successfully. No actual metrics sent to CloudWatch.

[root@ip-172-31-5-238 aws-scripts-mon]# ./mon-put-instance-data.pl --mem-used-incl-cache-buff --mem-util --mem-used --mem-avail
Successfully reported metrics to CloudWatch. Reference Id: f189a1b5-0725-4b2f-a45c-e17e30a97876
```

Go to cloud watch - dashboard – create dash board – name (prod server) – Number – instance id – linux-system papmeter

We can view memory utilization , memory available and memory used by the prod server.

