**CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING**



**Advanced Computing Training School**

**Course Name:** PG Diploma in Advanced Computing

**Batch:** March 2022

**Module Name: SDM (set 2) Date: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Max Marks: 40 Marks**

**PRN No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Duration: 2 Hours**

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Q.1: Rockwell Automation Inc. has a presence over world with head quarter in London and 17 Offshore development centers. Company has 35000 employees all over world. Previously Rockwell automation had private cloud for their IT Solutions. Due to growth of company in all sectors , company wants to use Amazon Web Services public Cloud like Infrastructure as Service Fabrikam has public Cloud subscription to use it as Infrastructure as a Service ( I-a-a-S) and Platform As A Service

Company wanted to build and host this Information System in public cloud .

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Suggestions:

1.Use AWS Subscription to implement lab.

A.Use your trial version of public Cloud Subscription ( AWS or Google )

B.Use Putty and PuttyGen or browser based linux shell Tools with Amazon Web Services

C.Follow proper steps while using AWS Cloud Services or Google Cloud Platform.

**Steps:**

**(Capture screen shot of each step performed and store it as jpg file for evaluation.)**

1.Login into your github Account using github credentials.

2.Create public git hub repository with name Rockwell to your github subscription.

3.Clone GitHub Rockwell code repository to your Developer machine using git command.

4.Upload Dockerfile, package.json and server.js from local repo to github Rockwell repository.

5.Create Linux Amazon Linux Virtual Server using your free trail AWS Subscription.

6.Access Virtual Server of Linux created in AWS using Linux Shell ( with the help of putty or Browser connect).

7.Update Linux with latest patches and install Docker in Virtual Server.

8.Install git client in Linux Virtual Server.

9.Clone Rockwell public code repository to Virual Server.

10.Install Docker to Linux Virtual Server.

11.Show the status of Docker as running (active).

12.Build Docker Container image for Rockwell application which is cloned to virtual server.

13.Ensure Docker container images are downloaded to Virtual server.

14.Run container instance of Rockwell using docker command.

15.List down container instances running using docker on linux virtual server shell.

16.Allow all traffic to be accepted by setting firewall incomming rule.

17.Access hosted website using your browser and show page of Website.

Don't forget to terminate instane once test is over.

Instructions to test Module end exam performance.

Each Point carries equal mark distribution. Last Point 8 will have 3 Marks.

1.Create github repo and pushing server.js, package.json and docker file

2.Creating virutal server with AmazonLinux Operating system and accessing using browser based remote ssh client

3.Installing Docker and checking status of docker running as Active

4.Clonning Public Code repo into Linux Virtual server

5.Build Docker Container Image and list them using Docker Command

6.Run Docker container instanace for clonned repository and List container instance using Docker Command.

7.Set Firewall inbound rule

8.Access Website remotely from Instructors Machine.

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**Signature of Student** **Signature of Evaluator** **Signature of Coordinator**

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