Cloudmesh Docker Extension

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This project will be to create a cmd5 based command line interface to docker with commands similar to those currently supported in cloudmeshclient .The client will also be enhanced to integrate to docker swarm.A Benchmark suite will be created to benchmark the deployment of application using the client.

Keywords: Cloud, I524

https://github.com/cloudmesh/classes/blob/master/docs/source/format/report/report.pdf

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> replace the url with your URL on github

1. INTRODUCTION

The project will be to create a cmd5 based command line interface to docker with commands similar to those currently supported in cloudmeshclient .The client will also be enhanced to integrate to docker swarm.A Benchmark suite will be created to benchmark the deployment of application using the client. Ansible scripts will be created for deployment of Docker into the virtual machines and also to deploy docker images for Application/Services

2. TECHNOLOGY USED

- ☐ Cloud Mesh
- ☐ Docker
- ☐ Docker Swarm
- ☐ Ansible

3. DEVELOPMENT

- ☐ Task 1: Develop Ansible Script for Docker Install on Virtual Machine
- ☐ Task 2: Develop Ansible Script for Installing an service(TBD) on a Docker Swarm
- ☐ Task 3: Develop Docker interface to create and provision single containers leveraging Docker Rest API
- ☐ Task 4: Develop commands in cloud mesh using cmd5 to manage Docker Swarm leveraging Docker Rest API
- ☐ Task 5: Develop benchmark script for bechmarking the docker container management options and deployment of application into containers.

4. EXECUTION PLAN

- ☐ Step 1: Create a a group of Virtual Machines in Chameleon cloud using Cloud Mesh
- ☐ Step 2: Run Ansible script to install Docker on all the Virtual Machines provisioned
- ☐ Step 3: Create a Docker Swarm with multipe Nodes in each Virtual Cluster using Cloud Mesh
- ☐ Step 4: Deploy Application (TBD) Docker Images into the Docker nodes using Ansible
- ☐ Step 5: Run Bechmark scripts to bechmark both Application Deployment and Provisioning .

5. DOCOPTS MANUAL PAGE FOR CLOUDMESH DOCKER

> TBD

6. DATA ANALYSIS APPLICATION TO BE DEPLOYED IN DOCKER

> TBD

7. BENCHMARK PROCESS

> TBD

8. BENCHMARK RESULTS

> TBD

9. STEPS TO EXECUTE

TBD

Add a single reference at least to see if the refernce management works

REFERENCES