Date : / /

Page No. :

Assignment -3

Q1 Open source IASS Software ?

Ans CloudStack

- CloudStack is also an open-source IaaS platform that is specially designed for deploying and managing networks. This is now owned and developed by Apache Software Foundation.

CloudStack has an easy to use interface which is web-based. Also, it has been observed by various users that the infrastructure management capability of this IaaS platform is highly scalable.

The CloudStack IaaS platform consists of a management server that helps in managing resources like IP address, storage, etc.

Teacher's Signature _____

Date : / /

Page No. :

Q2 Open source PASS Software ?

Ans : Could Foundry

Cloud Foundry is an open source cloud computing Platform as a service PaaS software developed by Vmware. It offers a faster and easier way to build, test, deploy and scale applications.

It is primarily written in Ruby.

Cloud Foundry supports a wide range of services, and offers a choice of clouds such as vSphere or vCloud, Amazon Web Services, OpenStack, Rackspace, Ubuntu, and more, and runs on either private or public infrastructure.

Cloud Foundry is an open source project and is available through a variety of private cloud distributions and public cloud instances. micro Cloud Foundry is a free downloadable version of Cloud Foundry that can run on a

Teacher's Signature _____

Date: / /
Page No.:

developers laptop, for developers interested in a single instance, personal PaaS on your local machine. micro Cloud Foundry is only available on Cloud Foundry v1 not v2.

Features include

- Includes a self-service application execution engine.
- Automation engine for application deployment and lifecycle management.
Scriptable command line interface CLI.

- Integration with development tools to ease development and deployment processes

- Open architecture for quick development framework integration, application services interface and cloud provider interface.

-Supports applications written in the Jvm based Languages - Java, Ruby, Node.js, Groovy, Scala.

By

Teacher's Signature _____

Date : / /

Page No. :

Supported frameworks include Spring and Play for Java, Lift for Scala, Grails for Groovy, and Rails and Sinatra for Ruby.

Application Services supported JySQL, JongoDB, vFabric Postgres, Redis, and Rabbitmq.

Q3 Open source SASS Software ?

Ans OpenShift

It is one among the family of containerization software developed by Red Hat.

OpenShift container platform is based upon the Kubernetes.

OpenShift Online is offered as a software-as-a-service.

OpenShift includes container images allowing users to deploy frameworks and databases with one click.

By

Teacher's Signature _____

Date: / /
Page No.:

Its user interface allows users to monitor the containers as well as their health.

Some of the products of OpenShift are mentioned as under:

- OpenShift Origin - Supported by application lifecycle management functionality and DevOps tools.

OpenShift Online - Runs on AWS

OpenShift Dedicated - It is Red Hats private cluster offering, available on AWS, GCP, Microsoft Azure.

- Features
continuous integration and release management.
multiple environment support.
Choice of cloud infrastructure.
Pod autoscaling.
Standardized developer workflow.

Teacher's Signature _____

Date: / /
Page No.:

Q4 Open Source Cloud Simulation Software ?

Ans GreenCloud

Greencloud is an energy-aware cloud computing data centers with a focus on cloud communications. It is sophisticated packet-level simulator.

It offers a detailed fine-grained modeling of the energy consumed by the data center IT equipment, such as computing servers, network switches, and communication links.

It is originally built at University of Luxembourg, Luxembourg.

Key-Features

- Focus on cloud networking and energy awareness
- Simulation of CPU, memory, storage and networking resources.
- Independent energy models for each type of resource

Teacher's Signature _____

Date : / /
Page No. :

QS Open Source Distributed System Software ?

Ans Hadoop

The Apache Hadoop project develops open-source software for reliable, scalable, distributed computing.

The Apache Hadoop software library is a framework that allows for the distributed processing of large data sets across clusters of computers using simple programming models.

It is designed to scale up from single servers to thousands of machines, each offering local computation and storage. Rather than rely on hardware to deliver high-availability, the library itself is designed to detect and handle failures at the application layer, so delivering a highly-available service on top of a cluster of computers, each of which may be prone to failures.

Teacher's Signature _____

Date : / /

Page No. :

Hadoop Common - The common utilities that support the other Hadoop modules.

Hadoop Distributed File System a.k.a HDFS - A distributed file system that provides high-throughput access to application data.

Hadoop YARN - A framework for job scheduling and cluster resource management.

Hadoop JapReduce - A YARN-based system for parallel processing of large data sets.

Hadoop Ozone - An object store for Hadoop.

Teacher's Signature _____