VISVESVARAYA TECHNOLOGICAL UNIVERSITY

SANTI BASTAWAD ROAD, MACHHE, BELGAUM- 590014, KARNATAKA

A Project Report

On

"An Open and Hybrid Cloud Development, Deployment and Orchestration"

SSIT CLOUD CAMPUS: Shaping the promise of Cloud Computing for Better Education

Submitted in partial fulfillment of requirements for the award of degree of

BACHELOR OF ENGINEERING
IN
INFORMATION SCIENCE AND ENGINEERING

Submitted by:

JADE NAGARAJA	1SS08IS020
SHABAJ KUTBUDDIN KADAK	1SS08IS048

Under the Guidance of

Prof. K.Karunakara M.Tech, M.I.S.T.E, (P.hD)

Head

Department of Information Science & Engineering

SSIT, Tumkur

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

SRI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(An Autonomous Institution under the ambit of Visvesvaraya Technological University, Belgaum)

MARALUR, TUMKUR-572105

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ABSTRACT

Objective:

To develop, deploy and orchestrate an Open and Hybrid Cloud which promotes Social Learning. To move the entire Campus into the clouds in terms of Knowledge, Management and other Resources.

Synopsis:

Cloud computing delivers infrastructure, platform, and software that are made available as subscription-based services in a pay-as-you-go model to consumers. These services are referred to as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) in industries.

Clouds aim to power the next generation data centers as the enabling platform for dynamic and flexible application provisioning. This is facilitated by exposing data center's capabilities as a network of virtual services (e.g. hardware, database, user interface, and application logic) so that users are able to access and deploy applications from anywhere in the Internet on demand. Similarly, IT companies with innovative ideas for new application services are no longer required to make large capital outlays in the hardware and software infrastructures. By using clouds as the application hosting platform, IT companies are freed from the trivial task of setting up basic hardware and software infrastructures. Thus they can focus more on innovation and creation of business values for their application services.

In our Project, we deal with Cloud Computing from a different Perspective - "Moving the College Campus to the Clouds – A perspective of Higher Education for Social Learning".

This Project involves:

i. Developing an Open and Hybrid (Public and Private) cloud using Open Source Technologies.
ii. Configure the Cloud CMS with Ubuntu Linux 12.04 LTS Platform.

iii. Allow everyone (Students, Staff and management) to store data in the cloud and access it instantly from anywhere and anytime using any gadget that connects to the cloud.

iv. Provide a Dashboard and a Social Network promoting Social learning.

v. Allow everyone to connect to like-minded people to share knowledge and innovate by creating Spaces (Learning Platform).

vi. Orchestration of Cloud Portal and Infrastructure.

vii. Tracking and Management of Cloud Activity.

viii. Allow students to create their projects on-line in the Cloud and work on them from anywhere and anytime.

ix. An Operating System that runs in a web browser – CloudMe OS

x. A CloudIDE- Code anytime and anywhere- supporting almost all the languages.