



H.K.E. Society's Sir M V College of Engineering
(Affiliated to VTU - Belagavi, Approved by AICTE - New Delhi, Accredited by NAAC)
Yeramarus camp, Raichur - 584135
**Department of Electronics & Communication
Engineering**



A brief report of Three Day SDP on “*Unleashing Microsoft Azure: A Practical Cloud Computing Experience*” conducted from 08-01-2024 to 10-01-2024 organized by Department of Electronics & Communication Engineering

The three day **Student Development Program** was conducted for third year students by Electronics and Communication department of Sir M Visvesvaraya College of Engineering. SDP was scheduled from 08/01/2024 to 10/01/2024 which had 6 sessions, with two sessions of 3 hours on each day. The resource persons were Dr. Phanindra Reddy K , and Dr. Girija Vani. G from **BITM Bellari**.

The inaugural ceremony of the workshop witnessed the presence of **Dr. R Basawaraja, Principal, Dr. Vishwanath P, HOD, Department of Electronics and Communication Engineering** along with the faculty members.

Dr. Vishwanath P, HOD, ECE Department formally welcomed the dignitaries and experts to the SDP with schedule and contents to be covered in the workshop.

Dr. R Basawaraja, Principal, HKES SMVCE in his motivational address emphasized upon the importance of learning new emerging trends for the students.

The outcome of the SDP was to help the students to learn in detail about the concepts of *Microsoft Azure: A Practical Cloud Computing*.

Student Feedback survey was done in the form of “Google Forms”, results were exemplary. Finally, the SDP ended with valedictory session and **Dr. Vishwanath P, HOD, ECE Department** proposed the vote of thanks to all dignitaries present, guests and participants.

Department of Electronics & Communication Engineering
A Three day SDP on “*Unleashing Microsoft Azure: A Practical Cloud Computing Experience*”
From 08-01-2024 to 10-01-2024

Faculty Coordinator: - Jyothi B K, Asst. Prof., E&CE department
Shilpa Patil, Asst. Prof., E&CE department
Bassamma Patil, Asst. Prof., E&CE department

No. of Participants: 33

Session Timings: Morning-9.30AM to 1.00PM
Afternoon-2.00Pm to 5.00PM

CONTENTS

SDP on Exploring Azure Infrastructure as a Service (IaaS): A Hands-On Learning

DAY-1:

A. Prerequisites (Depends on Audience)

1. Operating Systems
2. Computer Network

B. External/Internal Web Server

1. Creation of Virtual Network and Subnets in Azure Cloud
2. Creation of Virtual Machine using Azure Portal
3. Deployment of Public (External) and Private (Internal) Web Server (Public Facing and Internal)
4. Connection to the Public/ Private Web Server Via RDP, SSH, Bastion
5. Testing of the Public/ Private Web Server on the Public and Private IP
6. Deployment & Testing of a sample Web Page (http) on the Public/ Private Web Server
7. Learning Assessment via Quiz
8. Learners to complete the Assigned Task.

DAY-2:

C. Virtual Resources Scalability

1. VM RAM Scalability
2. VM Disk Scalability
3. Disk Management (Portioning, Merging)
4. CPU Scalability
5. Learning Assessment via Quiz
6. Learners to complete the Assigned Task.

D. Load Balancer

1. Creation of Load Balancer
2. Creation of a Public IP for Load Balancer
3. Creation of the Resource Pools
4. Configuration of the Load Balancers (Inbound, Outbound Rules)
5. Testing of Load Balancer via External Traffic on http
6. Learning Assessment via Quiz
7. Learners to complete the Assigned Task

E. Network Peering

1. Creation of Multiple VLANs
2. Creation of Multiple Web Servers

3. Creation and configuring VLAN Connectivity using Local VNET Peering
4. RDP into the Web Servers
5. Web Server Firewall Configuration
6. Connectivity Testing of the Web Servers from different VLANs
7. Verify the Inter-VLAN Connectivity
8. Learning Assessment via Quiz
9. Learners to complete the Assigned Task.

DAY-3:

F. Storage Accounts

1. Introduction to Storage Accounts
2. Types of Storage Accounts
3. Upload a Blob
4. Check for availability of the Blob on the Public Network
5. Download a Blob
6. Container and Blob Permissions
7. File Shares and Azure Storage Explorer
8. Bastion 9. Learning Assessment via Quiz
10. Learners to complete the Assigned Task.

G. Global VNET Peering

1. Transit VNET Peering
2. Global VNET Peering- on Learners Request

New inclusions

1. Resource Tag
2. Resource Locks
3. Introduction to infrastructure as a cloud (IaC) using Bicep Programming Language using Visual Studio Code Editor
4. Web Server deployment through PowerShell

Glimpses of SDP



