

**PART A**  
(PART A: TO BE REFFERED BY STUDENTS)

**Experiment No.08**

**A.1—Aim:**

**Case Study – Role of Network in Cloud Computing**

**A.2--- Prerequisite:**

High speed networks , QoS parameters , Cloud computing basics

**A.3--- Outcome:**

After successful completion of this experiment students will be able to:

- Understand the role of network in cloud computing
- Understand the quality of service parameters for cloud computing network.

**A.5--- Procedure:**

**Task:**

1. Write usage of cross wired and straight wired cable
2. LAN cable using straight and cross wired connections
3. Write the procedure and complete PART B of lab manual
4. Save and close the file and name it as **EXP8\_ your Roll no.**

**(PART - B)**

**(TO BE COMPLETED BY STUDENTS)**

(Students must submit the soft copy as per following segments within two hours of the practical.  
The soft copy must be uploaded on the Blackboard or emailed to the concerned lab in charge  
faculties at the end of the practical in case there is no Black board access available)

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Sem/Year : SEM VI TY	Batch: 1
Date of Experiment: 05-03-22	Date of Submission:28-03-2022
Grade	

**B.1: Summary of the documents read ( not more than 1000 words)**

Cloud Computing is an Internet-based computing. Data and information are created and stored in such a way that is easily accessible to any wireless device in the “cloud” and computing becomes a utility wherein the net becomes the summation of computing resources. The opportunities provided by cloud computing becomes available to individual users and client-enterprises of all sizes that enables them to deliver more scalable and resilient services to employees, partners and customers at lower cost and with higher business agility. Cloud computing change the way of people do computing and manage information. Cloud computing is a large-scale distributed computing paradigm that is driven by economies of scale in which a pool of abstracted, virtualized, dynamically scalable computing functions and services are delivered on demand to external customers over the Internet. Cloud services normally represent remote delivery of computing resources, whether hardware or software, most often via the Internet. This is especially relevant in public cloud environments where customers obtain cloud services from a third-party cloud provider.

Usually this means data crosses multiple networks before it is delivered to the end user. From a service provisioning perspective, cloud services consist of not only computing functions provided by the cloud infrastructure, but also data communications functions offered by the Internet. In addition, networking is also a key element of the cloud infrastructure that provides data communications both inside a cloud data center and among data centers distributed at different locations. Performance have indicated that networking performance has a significant impact on the quality of cloud services, and in many cases data communications become a bottleneck that limits clouds from supporting high-performance applications. As the technology is getting developed day by day, telecommunication and networking systems are facing tremendous challenges for fulfilling the demands of users of deploying new services and performing new functions for enlarge requirements of number of computing applications. This scenario is not only demanding new services and functions; current technology is becoming very old

very soon. Internet architecture is required to change fundamentally to allow various networking systems to cooperate and coexist for supporting large applications.

Networking play's significant role in Cloud computing and also provide platform for management, control, and optimization of both networking and computing resources in a Cloud environment, which leads to a convergence of networking and Cloud computing. Fundamental changes in network architecture and service delivery model are required by the future Internet. Virtualization was first employed in the Internet as an approach to developing virtual test beds for new network architecture and protocols. Network virtualization, which is the future of present network infrastructure, which is expected to become a fundamental characteristic of the future networking pattern, will play a major role in next-generation networks. Service orientation characteristics of SOA facilitates virtualization of computing systems. Service oriented Architecture (SOA) interact with the cloud computing in all aspects. SOA-compliant network services provide facility of encapsulation and virtualization when it is used in the field of networking. Network-as-a-service (Naas) aspect usable by the view of service-oriented network virtualization which allows network infrastructure to be accessed and opened as network services. Network-as-a-service (Naas) pattern facilitate convergence of networking and cloud computing at large extent.

