

**Department of Computer Engineering**

**Academic Term: Jan-May 2022**

**Class: BE COMPUTERS**

**Subject Name: CLOUD COMPUTING LAB**

**Subject Code: CSL803**

<b>Title:</b>	<b>Research Paper Summary</b>
<b>Date of Performance:</b>	<b>20/04/22</b>
<b>Date of Submission:</b>	<b>23/04/2022</b>
<b>Roll No:</b>	<b>8626, 8632, 8639</b>
<b>Name of the Student:</b>	<b>Divita Phadakale, Praditi Rede, Sheetal Sharma</b>

**Evaluation:**

<b>Sr. No</b>	<b>Rubric</b>	<b>Grade</b>
<b>1</b>	<b>On time submission(2)</b>	
<b>2</b>	<b>Preparedness(2)</b>	
<b>3</b>	<b>Output(2)</b>	
<b>4</b>	<b>Post Lab Questions (4)</b>	
	<b>TOTAL</b>	

**Signature of the Teacher:**

# CC Assignment: Research Paper Summary on Cloud Computing

**Prof. Sunil Chaudhary**

*Group members:*

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*8632: Praditi Rede*

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**Ryan, Mark D. (2013). Cloud computing security: The scientific challenge, and a survey of solutions. Journal of Systems and Software, 86(9), 2263–2268. doi: 10.1016/j.jss.2012.12.025**

Link: <https://www.sciencedirect.com/science/article/abs/pii/S0164121212003378>

The article provides a quick overview of cloud computing security challenges. The fact that data is shared with the cloud service provider is regarded as the primary scientific issue that distinguishes cloud computing security from other computer security problems. The study examines three current research directions and compares and contrasts them using a live software-as-a-service sample.

Cloud computing security encompasses all the topics of computing security, including the design of security architectures, minimisation of attack surfaces, protection from malware, and enforcement of access control. However, since cloud computing necessarily puts data outside of the control of the data owner, it inevitably introduces security issues too.

Cloud computing is the idea that data and programs can be stored centrally, in the cloud, and accessed anytime from anywhere through thin clients and lightweight mobile devices. In many ways, it also enhances security: the cloud provider may be able to afford to invest in better and more up-to date security technologies and practices than the data owner can.

Cloud computing security concerns all the aspects of making cloud computing secure.

**Dillon, Tharam; Wu, Chen; Chang, Elizabeth (2010). [IEEE 2010 24th IEEE International Conference on Advanced Information Networking and Applications - Perth, Australia (2010.04.20-2010.04.23)] 2010 24th IEEE International Conference on Advanced Information Networking and Applications - Cloud Computing: Issues and Challenges. , (0), 27–33. doi:10.1109/aina.2010.187**

Link: <https://ieeexplore.ieee.org/abstract/document/5474674>

Many people feel that Cloud will revolutionize the entire ICT business. The goal of this study is to identify the obstacles and issues associated with Cloud computing. In this paper, they looked into two closely linked computing paradigms: Service-Oriented Computing and Grid Computing, as well as their connections to Cloud Computing, the standpoint of Cloud computing adoption to highlight various obstacles, and discussed the Cloud interoperability issue, which requires significant additional study and development.

In the distributed computing field, cloud computing has recently become a buzzword. Many people feel that Cloud computing will revolutionize the IT industry. Cloud computing is a concept for providing on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that may be quickly supplied and released

with no administration effort or service provider contact. Five essential elements of cloud computing are clearly articulated in this paper: On-demand self-service, Broad network access, Resource pooling, Rapid elasticity and Measured Service.

Computing, communication, and integration are all trade-offs that cloud users must consider. While moving to the Cloud can dramatically lower infrastructure costs, it also increases the cost of data communication, i.e. the cost of transferring an organization's data to and from the public and community Cloud, as well as the cost per unit (e.g. a VM) of computing power consumed. This issue is exacerbated if the customer employs a hybrid cloud deployment approach, in which the company's data is spread across multiple public/private (in-house IT infrastructure)/community clouds.

Cloud users have no control over the cloud infrastructure, which frequently uses a multi-tenancy system architecture, in which multiple cloud users' applications are organised in a single logical environment on the SaaS cloud to achieve economies of scale and optimization in terms of speed, security, availability, disaster recovery, and maintenance. Salesforce.com, Google Mail, Google Docs, and other SaaS applications are examples.

**Arunarani, AR.; Manjula, D.; Sugumaran, Vijayan (2019). Task scheduling techniques in cloud computing: A literature survey. Future Generation Computer Systems, 91(), 407–415. doi: 10.1016/j.future.2018.09.014**

Link: <https://www.sciencedirect.com/science/article/abs/pii/S0167739X17321519>

Because cloud computing maintains a range of virtualized resources, scheduling is essential. For each job, a client in the cloud may use thousands of virtualized assets. As a result, manual scheduling is not a viable option. The core concept underlying task scheduling is to schedule work to reduce time waste and optimise output. Several studies have investigated task scheduling in the past. This research provides a thorough examination of work scheduling algorithms and the metrics that go with them that are appropriate for cloud computing settings. It goes through the many challenges with scheduling approaches as well as the constraints that must be addressed. Different scheduling approaches are investigated to determine which qualities should be incorporated in a system and which should be ignored. The literature review is divided into three sections: methodologies, applications, and the parameter-based metrics that were used. Future research questions in cloud computing-based scheduling are also identified.