

5



ARTICLE HISTORY

Paper Nomenclature: View Point (VP)**Paper Code:** CYBNMV2N9SEP2020VP1**Submission Online:** 01-Sep-2020**Manuscript Acknowledged:** 06-Sep-2020**Originality Check:** 07-Sep-2020**Originality Test Ratio:** 8% (Drillbit)**Peer Reviewers Comment:** 18-Sep-2020**Blind Reviewers Remarks:** 20-Sep-2020**Author Revert:** 25-Sep-2020**Camera-Ready-Copy:** 26-Sep-2020**Editorial Board Citation:** 29-Sep-2020**Published Online First:** 30-Sep-2020

Extending Cloud Computing through Edge Computing

– Arushi Verma

B.Tech Biotechnology*, Amity University, India

<https://orcid.org/0000-0002-0303-8368>
arushiverman16@gmail.com

We have been evident to the successively increasing speed of the internet, networking, etc. in our daily life, with 3G to 4G and now 5G. Also all this is happening without any compromise in storage. This is because cloud computing has offered a helping hand. Through cloud and edge computing, we are able to access any webpage, software, and download it in a matter of seconds. Today, a good network allows us to download any application within half to a minute via a good internet connection. Let us look at it.

Keywords

- Internet
- Cloud Computing
- Edge Computing

Introduction

In simple words, cloud computing can be put as on-demand delivery of IT resources via the internet, through paying along the way. Today for accessing technological services, we do not need to buy and maintain a physical server or data center, i.e. investments for infrastructure are reduced. We can get them on an as-needed basis from a cloud provider. There are many cloud providers in the market like AWS (Amazon Web Services), Microsoft Azure, Google Cloud, IBM cloud, etc.

Currently, numerous industries, organizations, and companies are utilizing cloud computing for several purposes, storage being the obvious one. Some of them are as follows:-

- Disaster recovery
- Data backup
- Big data analytics
- Customer-facing web applications
- Virtual desktops
- E-mails
- Software development and testing



Lately, healthcare companies are using the cloud for devising a method of more personalized treatment of patients, financial servicing companies are using the cloud for detection of real-time fraud and prevention, game developers for delivering games

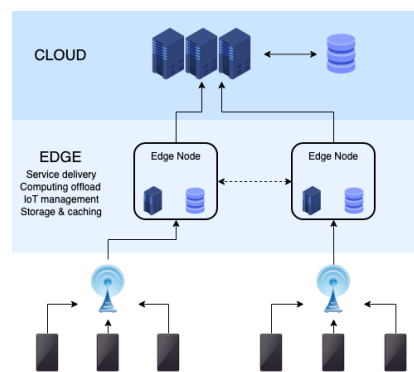
to several players online itself; in the business sector, it is employed for customer engagement with personalized themes using AI and ML, deployment and expansion worldwide also becomes much easier. In the days of the pandemic, Cloud has proved to become very useful for almost every work sphere. Sharing work and connecting it with other people has become a lot easier. It helps the system to become more agile, cost-friendly, scaled and deployment has become much easier. Cloud gives us access to a vast array of technologies instantly, without hassle. This makes innovation and creation to become faster and allows developers to become more free and diverse in their approach. Internet of things, machine learning, infrastructure services (compute storage, etc.), data analytics, etc. So, now going from idea to implementation is not hard, rather just a few clicks away.

The cloud providers are generally set up at multiple locations globally. Having applications in close proximity/ near to several users/clients reduces lag and improves their experience.

Edge Computing

Edge Computing can be explained as computing that occurs at the edge of

corporate networks. So, how can we define this 'edge'. It can be termed as a place where end devices access the rest of the network- phones, sensors, laptops, etc. So since these devices are connected to the 'edge', they can deliver their data here along with receiving instructions and software download/update. It acts as a centrally located data center. Edge computing aids by providing faster response time for requisite apps and reducing the growth of costly, longer connections to storage centers.



With IoT coming into the picture, the problem of large data pool or collection appears. This requires much costlier and bigger connections to the cloud. Also with the type of work that IoT devices do require much faster connections and speed for gaining appropriate outcomes. Edge

computing allows the processing on the devices itself.

One of the main concerns is the security of the edge devices and the devices connected to these edge devices. Since edge devices perform sorting, management, and storage of really crucial data, its exploitation can lead to serious problems. So with edge computing becoming so crucial in our daily life, it is necessary to make sure that edge devices do not become the primary failure point.

There are two types of edge computing:-

1. Cloud edge: In the cloud edge computing, the expansion of public cloud to point-of-presence locations.
2. Device edge: In device edge computing, the software functions on the existing hardware.

References:-

1. <https://www.simplilearn.com/edge-computing-vs-cloud-computing-article#:~:text=Edge%20computing%20is%20used%20to,connectivity%20to%20a%20centralized%20location.>
2. <https://www.youtube.com/watch?v=dH0yz-Osy54>



Arushi Verma is a student of third year; currently pursuing B.tech in Biotechnology from Amity University (Noida). She is interested in exploring technology and the internet, as it has a lot to offer. She likes reading and painting as well. She believes that cybernetics and the internet is like a ball of strings which acts like a mediator, and connects several disciplines of our society. As a result, we can all relate to each other better and help different people through our own knowledge.

arushiverman16@gmail.com

Annexure I

Submission Date	Submission Id	Word Count	Character Count
07-Sep-2020	167252	843	3863

Note: The Cybernomics had used the DrillBit plagiarism [https://www.drillbitplagiarism.com/] tool to check the originality.



Reviewers Comment

Reviewer's Comment 1: The article depicts that today is the era of Cloud Computing technology, and the various uses of it. It seeks attention on the huge technology revolution and how the introduction of cloud computing has made work easy for everyone in today's generation.

Reviewer's Comment 2: Overall the Article is very helpful, as it gives full information and benefits of cloud computing and edge computing. As many people are still unaware about this concept so it will be useful and helpful for people to understand the uses and benefits of it.

Reviewer's Comment 3: The article is comprehensive in nature. It gives a handful of knowledge on how cloud computing and edge computing are contributing towards technology revolution.



Editorial Excerpt

The article has 8% plagiarism which is an acceptable percentage for publication. The comments related to this manuscript are noticeably related to the theme of "Cloud Computing". The article explains about the contributions of cloud computing and edge computing towards the technology revolution. It explains how edge computing is an extension of cloud computing, which supports the former to bring about functions more fast and effectively. It tells about how cloud computing functions, what domains it is valuable in; and how edge computing is 'edging' better than cloud computing. After the editorial remarks the article has been earmarked and finalized under the "View Point" category.

Acknowledgement

The author is highly indebted to Scholastic Seed Inc. a publisher of Cybernomics Magazine & editorial team including Resident Associate Editors (Ms. Sonakshi Jaiswal, Ms. Jyoti & Ms. Shailza), for making the write-up in the shape of an article.

Disclaimer

All the views expressed in this paper are my own, of which some of the content is taken from open source websites for knowledge purpose. The content drawn from different sources have been mentioned above in the references section.



Citation

Arushi Verma
"Extending Cloud Computing
through Edge Computing"
Volume-2, Issue-9, September 2020.
(www.cybernomics.in)

Frequency: Monthly, Published: 2020
Conflict of Interest: Author of a Paper
had no conflict neither financially
nor academically.